

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude <sup>⊙</sup>	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-3000	1,575242E+09	1,575263E+09	3,462191E+09	3,462110E+09	3,150505E+09	6,924301E+09	1,007481E+10
-2999	1,575187E+09	1,575236E+09	3,462141E+09	3,462159E+09	3,150423E+09	6,924301E+09	1,007472E+10
-2998	1,575313E+09	1,575302E+09	3,462105E+09	3,462157E+09	3,150616E+09	6,924262E+09	1,007488E+10
-2997	1,575294E+09	1,575347E+09	3,462144E+09	3,461989E+09	3,150641E+09	6,924133E+09	1,007477E+10
-2996	1,575329E+09	1,575306E+09	3,462069E+09	3,462119E+09	3,150635E+09	6,924188E+09	1,007482E+10
-2995	1,575443E+09	1,575409E+09	3,462061E+09	3,462046E+09	3,150852E+09	6,924107E+09	1,007496E+10
-2994	1,575365E+09	1,575424E+09	3,462038E+09	3,461973E+09	3,150789E+09	6,924011E+09	1,007480E+10
-2993	1,575437E+09	1,575398E+09	3,461961E+09	3,462107E+09	3,150836E+09	6,924068E+09	1,007490E+10
-2992	1,575469E+09	1,575476E+09	3,462020E+09	3,461965E+09	3,150945E+09	6,923985E+09	1,007493E+10
-2991	1,575375E+09	1,575405E+09	3,462032E+09	3,461996E+09	3,150780E+09	6,924028E+09	1,007481E+10
-2990	1,575453E+09	1,575399E+09	3,462021E+09	3,462079E+09	3,150851E+09	6,924101E+09	1,007495E+10
-2989	1,575392E+09	1,575421E+09	3,462103E+09	3,461970E+09	3,150813E+09	6,924073E+09	1,007489E+10
-2988	1,575313E+09	1,575320E+09	3,462076E+09	3,462144E+09	3,150633E+09	6,924220E+09	1,007485E+10
-2987	1,575367E+09	1,575349E+09	3,462115E+09	3,462143E+09	3,150716E+09	6,924258E+09	1,007497E+10
-2986	1,575248E+09	1,575314E+09	3,462174E+09	3,462054E+09	3,150562E+09	6,924228E+09	1,007479E+10
-2985	1,575264E+09	1,575220E+09	3,462112E+09	3,462211E+09	3,150483E+09	6,924323E+09	1,007481E+10
-2984	1,575320E+09	1,575283E+09	3,462153E+09	3,462116E+09	3,150603E+09	6,924269E+09	1,007487E+10
-2983	1,575213E+09	1,575245E+09	3,462147E+09	3,462102E+09	3,150459E+09	6,924250E+09	1,007471E+10
-2982	1,575295E+09	1,575261E+09	3,462064E+09	3,462185E+09	3,150556E+09	6,924250E+09	1,007481E+10
-2981	1,575310E+09	1,575351E+09	3,462121E+09	3,462020E+09	3,150661E+09	6,924141E+09	1,007480E+10
-2980	1,575264E+09	1,575300E+09	3,462077E+09	3,462085E+09	3,150564E+09	6,924161E+09	1,007473E+10
-2979	1,575402E+09	1,575364E+09	3,462067E+09	3,462071E+09	3,150766E+09	6,924138E+09	1,007490E+10
-2978	1,575370E+09	1,575423E+09	3,462094E+09	3,461927E+09	3,150792E+09	6,924021E+09	1,007481E+10
-2977	1,575403E+09	1,575382E+09	3,461968E+09	3,462068E+09	3,150785E+09	6,924036E+09	1,007482E+10
-2976	1,575516E+09	1,575496E+09	3,461966E+09	3,461996E+09	3,151012E+09	6,923962E+09	1,007497E+10
-2975	1,575429E+09	1,575495E+09	3,461975E+09	3,461917E+09	3,150924E+09	6,923893E+09	1,007482E+10
-2974	1,575500E+09	1,575471E+09	3,461894E+09	3,462011E+09	3,150971E+09	6,923905E+09	1,007488E+10
-2973	1,575542E+09	1,575540E+09	3,461984E+09	3,461879E+09	3,151082E+09	6,923863E+09	1,007495E+10
-2972	1,575439E+09	1,575452E+09	3,461982E+09	3,461953E+09	3,150891E+09	6,923935E+09	1,007483E+10
-2971	1,575504E+09	1,575455E+09	3,461984E+09	3,462037E+09	3,150959E+09	6,924021E+09	1,007498E+10
-2970	1,575427E+09	1,575485E+09	3,462060E+09	3,461941E+09	3,150912E+09	6,924001E+09	1,007491E+10
-2969	1,575354E+09	1,575360E+09	3,462000E+09	3,462097E+09	3,150714E+09	6,924097E+09	1,007481E+10
-2968	1,575427E+09	1,575388E+09	3,462051E+09	3,462088E+09	3,150815E+09	6,924139E+09	1,007495E+10
-2967	1,575314E+09	1,575345E+09	3,462122E+09	3,462001E+09	3,150659E+09	6,924123E+09	1,007478E+10
-2966	1,575328E+09	1,575282E+09	3,462025E+09	3,462131E+09	3,150609E+09	6,924156E+09	1,007477E+10
-2965	1,575390E+09	1,575367E+09	3,462079E+09	3,462043E+09	3,150757E+09	6,924122E+09	1,007488E+10
-2964	1,575276E+09	1,575323E+09	3,462073E+09	3,462046E+09	3,150598E+09	6,924119E+09	1,007472E+10
-2963	1,575357E+09	1,575340E+09	3,462031E+09	3,462101E+09	3,150698E+09	6,924131E+09	1,007483E+10
-2962	1,575371E+09	1,575427E+09	3,462095E+09	3,461945E+09	3,150798E+09	6,924040E+09	1,007484E+10
-2961	1,575338E+09	1,575356E+09	3,462011E+09	3,462020E+09	3,150695E+09	6,924031E+09	1,007473E+10
-2960	1,575486E+09	1,575432E+09	3,461985E+09	3,462025E+09	3,150918E+09	6,924010E+09	1,007493E+10
-2959	1,575444E+09	1,575493E+09	3,462005E+09	3,461893E+09	3,150938E+09	6,923898E+09	1,007484E+10
-2958	1,575473E+09	1,575473E+09	3,461851E+09	3,461991E+09	3,150946E+09	6,923842E+09	1,007479E+10
-2957	1,575596E+09	1,575580E+09	3,461886E+09	3,461899E+09	3,151176E+09	6,923785E+09	1,007496E+10
-2956	1,575508E+09	1,575555E+09	3,461915E+09	3,461835E+09	3,151064E+09	6,923750E+09	1,007481E+10
-2955	1,575576E+09	1,575531E+09	3,461872E+09	3,461921E+09	3,151107E+09	6,923793E+09	1,007490E+10
-2954	1,575595E+09	1,575607E+09	3,461958E+09	3,461826E+09	3,151202E+09	6,923785E+09	1,007499E+10
-2953	1,575485E+09	1,575509E+09	3,461920E+09	3,461924E+09	3,150994E+09	6,923845E+09	1,007484E+10
-2952	1,575548E+09	1,575511E+09	3,461924E+09	3,462011E+09	3,151059E+09	6,923935E+09	1,007499E+10

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	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude <sup>⊙</sup>	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2951	1,575468E+09	1,575522E+09	3,462017E+09	3,461912E+09	3,150990E+09	6,923930E+09	1,007492E+10
-2950	1,575406E+09	1,575406E+09	3,461930E+09	3,462023E+09	3,150812E+09	6,923953E+09	1,007477E+10
-2949	1,575499E+09	1,575434E+09	3,461990E+09	3,462012E+09	3,150933E+09	6,924002E+09	1,007494E+10
-2948	1,575382E+09	1,575395E+09	3,462043E+09	3,461950E+09	3,150778E+09	6,923993E+09	1,007477E+10
-2947	1,575388E+09	1,575356E+09	3,461964E+09	3,462056E+09	3,150744E+09	6,924021E+09	1,007476E+10
-2946	1,575436E+09	1,575454E+09	3,462027E+09	3,461975E+09	3,150890E+09	6,924002E+09	1,007489E+10
-2945	1,575332E+09	1,575389E+09	3,462007E+09	3,461975E+09	3,150721E+09	6,923982E+09	1,007470E+10
-2944	1,575428E+09	1,575401E+09	3,461980E+09	3,462033E+09	3,150829E+09	6,924013E+09	1,007484E+10
-2943	1,575447E+09	1,575480E+09	3,462046E+09	3,461899E+09	3,150928E+09	6,923945E+09	1,007487E+10
-2942	1,575416E+09	1,575435E+09	3,461911E+09	3,461951E+09	3,150851E+09	6,923862E+09	1,007471E+10
-2941	1,575574E+09	1,575523E+09	3,461890E+09	3,461959E+09	3,151096E+09	6,923849E+09	1,007495E+10
-2940	1,575526E+09	1,575575E+09	3,461912E+09	3,461831E+09	3,151102E+09	6,923743E+09	1,007484E+10
-2939	1,575551E+09	1,575555E+09	3,461804E+09	3,461886E+09	3,151105E+09	6,923690E+09	1,007480E+10
-2938	1,575666E+09	1,575656E+09	3,461859E+09	3,461808E+09	3,151322E+09	6,923667E+09	1,007499E+10
-2937	1,575577E+09	1,575607E+09	3,461860E+09	3,461767E+09	3,151184E+09	6,923627E+09	1,007481E+10
-2936	1,575636E+09	1,575589E+09	3,461815E+09	3,461884E+09	3,151225E+09	6,923700E+09	1,007492E+10
-2935	1,575641E+09	1,575662E+09	3,461896E+09	3,461817E+09	3,151303E+09	6,923713E+09	1,007502E+10
-2934	1,575527E+09	1,575570E+09	3,461828E+09	3,461875E+09	3,151096E+09	6,923703E+09	1,007480E+10
-2933	1,575610E+09	1,575561E+09	3,461857E+09	3,461946E+09	3,151171E+09	6,923803E+09	1,007497E+10
-2932	1,575536E+09	1,575554E+09	3,461953E+09	3,461851E+09	3,151091E+09	6,923804E+09	1,007489E+10
-2931	1,575475E+09	1,575456E+09	3,461889E+09	3,461933E+09	3,150932E+09	6,923822E+09	1,007475E+10
-2930	1,575553E+09	1,575507E+09	3,461944E+09	3,461946E+09	3,151060E+09	6,923890E+09	1,007495E+10
-2929	1,575431E+09	1,575467E+09	3,461973E+09	3,461897E+09	3,150898E+09	6,923870E+09	1,007477E+10
-2928	1,575435E+09	1,575432E+09	3,461918E+09	3,462003E+09	3,150867E+09	6,923921E+09	1,007479E+10
-2927	1,575484E+09	1,575512E+09	3,462000E+09	3,461929E+09	3,150996E+09	6,923929E+09	1,007493E+10
-2926	1,575394E+09	1,575449E+09	3,461949E+09	3,461900E+09	3,150843E+09	6,923849E+09	1,007469E+10
-2925	1,575515E+09	1,575459E+09	3,461915E+09	3,461968E+09	3,150974E+09	6,923883E+09	1,007486E+10
-2924	1,575532E+09	1,575543E+09	3,461951E+09	3,461858E+09	3,151075E+09	6,923809E+09	1,007488E+10
-2923	1,575501E+09	1,575523E+09	3,461822E+09	3,461871E+09	3,151024E+09	6,923693E+09	1,007472E+10
-2922	1,575646E+09	1,575617E+09	3,461808E+09	3,461872E+09	3,151262E+09	6,923679E+09	1,007494E+10
-2921	1,575604E+09	1,575648E+09	3,461829E+09	3,461737E+09	3,151253E+09	6,923566E+09	1,007482E+10
-2920	1,575632E+09	1,575621E+09	3,461753E+09	3,461796E+09	3,151253E+09	6,923549E+09	1,007480E+10
-2919	1,575732E+09	1,575713E+09	3,461820E+09	3,461757E+09	3,151446E+09	6,923577E+09	1,007502E+10
-2918	1,575635E+09	1,575681E+09	3,461785E+09	3,461715E+09	3,151316E+09	6,923500E+09	1,007482E+10
-2917	1,575695E+09	1,575661E+09	3,461747E+09	3,461845E+09	3,151356E+09	6,923593E+09	1,007495E+10
-2916	1,575694E+09	1,575717E+09	3,461829E+09	3,461787E+09	3,151411E+09	6,923616E+09	1,007503E+10
-2915	1,575586E+09	1,575623E+09	3,461788E+09	3,461794E+09	3,151209E+09	6,923582E+09	1,007479E+10
-2914	1,575666E+09	1,575611E+09	3,461823E+09	3,461869E+09	3,151277E+09	6,923692E+09	1,007497E+10
-2913	1,575597E+09	1,575594E+09	3,461889E+09	3,461789E+09	3,151191E+09	6,923678E+09	1,007487E+10
-2912	1,575529E+09	1,575515E+09	3,461831E+09	3,461882E+09	3,151043E+09	6,923713E+09	1,007476E+10
-2911	1,575592E+09	1,575570E+09	3,461891E+09	3,461915E+09	3,151162E+09	6,923805E+09	1,007497E+10
-2910	1,575474E+09	1,575537E+09	3,461899E+09	3,461830E+09	3,151011E+09	6,923729E+09	1,007474E+10
-2909	1,575501E+09	1,575490E+09	3,461868E+09	3,461934E+09	3,150991E+09	6,923801E+09	1,007479E+10
-2908	1,575560E+09	1,575556E+09	3,461942E+09	3,461875E+09	3,151117E+09	6,923818E+09	1,007493E+10
-2907	1,575479E+09	1,575513E+09	3,461892E+09	3,461817E+09	3,150991E+09	6,923709E+09	1,007470E+10
-2906	1,575593E+09	1,575545E+09	3,461841E+09	3,461904E+09	3,151138E+09	6,923744E+09	1,007488E+10
-2905	1,575610E+09	1,575625E+09	3,461846E+09	3,461792E+09	3,151235E+09	6,923637E+09	1,007487E+10
-2904	1,575575E+09	1,575613E+09	3,461748E+09	3,461789E+09	3,151187E+09	6,923537E+09	1,007472E+10
-2903	1,575714E+09	1,575693E+09	3,461759E+09	3,461796E+09	3,151407E+09	6,923555E+09	1,007496E+10

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	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2902	1,575676E+09	1,575721E+09	3,461761E+09	3,461644E+09	3,151398E+09	6,923405E+09	1,007480E+10
-2901	1,575712E+09	1,575689E+09	3,461695E+09	3,461733E+09	3,151401E+09	6,923428E+09	1,007483E+10
-2900	1,575797E+09	1,575776E+09	3,461744E+09	3,461729E+09	3,151573E+09	6,923473E+09	1,007505E+10
-2899	1,575696E+09	1,575755E+09	3,461720E+09	3,461656E+09	3,151452E+09	6,923375E+09	1,007483E+10
-2898	1,575748E+09	1,575729E+09	3,461692E+09	3,461783E+09	3,151477E+09	6,923475E+09	1,007495E+10
-2897	1,575755E+09	1,575758E+09	3,461762E+09	3,461719E+09	3,151513E+09	6,923481E+09	1,007499E+10
-2896	1,575652E+09	1,575666E+09	3,461745E+09	3,461721E+09	3,151317E+09	6,923466E+09	1,007478E+10
-2895	1,575719E+09	1,575656E+09	3,461780E+09	3,461824E+09	3,151376E+09	6,923604E+09	1,007498E+10
-2894	1,575643E+09	1,575661E+09	3,461815E+09	3,461734E+09	3,151305E+09	6,923548E+09	1,007485E+10
-2893	1,575581E+09	1,575585E+09	3,461775E+09	3,461835E+09	3,151166E+09	6,923610E+09	1,007478E+10
-2892	1,575636E+09	1,575627E+09	3,461845E+09	3,461874E+09	3,151264E+09	6,923720E+09	1,007498E+10
-2891	1,575535E+09	1,575598E+09	3,461873E+09	3,461749E+09	3,151133E+09	6,923622E+09	1,007476E+10
-2890	1,575566E+09	1,575546E+09	3,461829E+09	3,461862E+09	3,151112E+09	6,923691E+09	1,007480E+10
-2889	1,575635E+09	1,575607E+09	3,461857E+09	3,461822E+09	3,151242E+09	6,923679E+09	1,007492E+10
-2888	1,575555E+09	1,575588E+09	3,461799E+09	3,461760E+09	3,151143E+09	6,923559E+09	1,007470E+10
-2887	1,575658E+09	1,575628E+09	3,461746E+09	3,461851E+09	3,151286E+09	6,923597E+09	1,007488E+10
-2886	1,575680E+09	1,575713E+09	3,461742E+09	3,461696E+09	3,151393E+09	6,923438E+09	1,007483E+10
-2885	1,575664E+09	1,575690E+09	3,461679E+09	3,461688E+09	3,151354E+09	6,923368E+09	1,007472E+10
-2884	1,575796E+09	1,575757E+09	3,461701E+09	3,461720E+09	3,151553E+09	6,923422E+09	1,007497E+10
-2883	1,575758E+09	1,575802E+09	3,461712E+09	3,461559E+09	3,151560E+09	6,923271E+09	1,007483E+10
-2882	1,575777E+09	1,575776E+09	3,461642E+09	3,461679E+09	3,151553E+09	6,923320E+09	1,007487E+10
-2881	1,575857E+09	1,575845E+09	3,461668E+09	3,461688E+09	3,151702E+09	6,923357E+09	1,007506E+10
-2880	1,575756E+09	1,575817E+09	3,461671E+09	3,461600E+09	3,151574E+09	6,923272E+09	1,007485E+10
-2879	1,575803E+09	1,575775E+09	3,461652E+09	3,461734E+09	3,151578E+09	6,923387E+09	1,007496E+10
-2878	1,575815E+09	1,575800E+09	3,461693E+09	3,461647E+09	3,151615E+09	6,923340E+09	1,007496E+10
-2877	1,575719E+09	1,575716E+09	3,461681E+09	3,461668E+09	3,151435E+09	6,923349E+09	1,007478E+10
-2876	1,575769E+09	1,575714E+09	3,461707E+09	3,461793E+09	3,151483E+09	6,923500E+09	1,007498E+10
-2875	1,575692E+09	1,575735E+09	3,461755E+09	3,461665E+09	3,151427E+09	6,923420E+09	1,007485E+10
-2874	1,575628E+09	1,575653E+09	3,461737E+09	3,461767E+09	3,151281E+09	6,923504E+09	1,007479E+10
-2873	1,575695E+09	1,575669E+09	3,461789E+09	3,461807E+09	3,151364E+09	6,923596E+09	1,007496E+10
-2872	1,575605E+09	1,575644E+09	3,461829E+09	3,461684E+09	3,151249E+09	6,923512E+09	1,007476E+10
-2871	1,575630E+09	1,575606E+09	3,461766E+09	3,461822E+09	3,151236E+09	6,923588E+09	1,007482E+10
-2870	1,575700E+09	1,575685E+09	3,461750E+09	3,461760E+09	3,151384E+09	6,923511E+09	1,007489E+10
-2869	1,575633E+09	1,575677E+09	3,461708E+09	3,461691E+09	3,151310E+09	6,923399E+09	1,007471E+10
-2868	1,575730E+09	1,575707E+09	3,461673E+09	3,461774E+09	3,151437E+09	6,923447E+09	1,007488E+10
-2867	1,575764E+09	1,575797E+09	3,461693E+09	3,461581E+09	3,151561E+09	6,923274E+09	1,007484E+10
-2866	1,575745E+09	1,575768E+09	3,461643E+09	3,461598E+09	3,151513E+09	6,923240E+09	1,007475E+10
-2865	1,575869E+09	1,575823E+09	3,461630E+09	3,461664E+09	3,151692E+09	6,923294E+09	1,007499E+10
-2864	1,575828E+09	1,575879E+09	3,461646E+09	3,461518E+09	3,151707E+09	6,923163E+09	1,007487E+10
-2863	1,575832E+09	1,575847E+09	3,461571E+09	3,461649E+09	3,151679E+09	6,923220E+09	1,007490E+10
-2862	1,575917E+09	1,575905E+09	3,461581E+09	3,461622E+09	3,151822E+09	6,923203E+09	1,007502E+10
-2861	1,575838E+09	1,575867E+09	3,461603E+09	3,461529E+09	3,151705E+09	6,923132E+09	1,007484E+10
-2860	1,575872E+09	1,575817E+09	3,461588E+09	3,461675E+09	3,151689E+09	6,923264E+09	1,007495E+10
-2859	1,575882E+09	1,575868E+09	3,461635E+09	3,461570E+09	3,151750E+09	6,923205E+09	1,007495E+10
-2858	1,575768E+09	1,575793E+09	3,461633E+09	3,461608E+09	3,151562E+09	6,923240E+09	1,007480E+10
-2857	1,575806E+09	1,575777E+09	3,461652E+09	3,461743E+09	3,151583E+09	6,923395E+09	1,007498E+10
-2856	1,575739E+09	1,575792E+09	3,461732E+09	3,461607E+09	3,151530E+09	6,923340E+09	1,007487E+10
-2855	1,575673E+09	1,575695E+09	3,461712E+09	3,461724E+09	3,151368E+09	6,923436E+09	1,007480E+10
-2854	1,575752E+09	1,575709E+09	3,461720E+09	3,461750E+09	3,151461E+09	6,923470E+09	1,007493E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2853	1,575682E+09	1,575699E+09	3,461740E+09	3,461639E+09	3,151380E+09	6,923379E+09	1,007476E+10
-2852	1,575698E+09	1,575675E+09	3,461661E+09	3,461778E+09	3,151372E+09	6,923440E+09	1,007481E+10
-2851	1,575777E+09	1,575775E+09	3,461657E+09	3,461663E+09	3,151552E+09	6,923320E+09	1,007487E+10
-2850	1,575713E+09	1,575766E+09	3,461646E+09	3,461583E+09	3,151479E+09	6,923229E+09	1,007471E+10
-2849	1,575812E+09	1,575776E+09	3,461610E+09	3,461674E+09	3,151588E+09	6,923284E+09	1,007487E+10
-2848	1,575850E+09	1,575870E+09	3,461653E+09	3,461499E+09	3,151720E+09	6,923152E+09	1,007487E+10
-2847	1,575813E+09	1,575846E+09	3,461591E+09	3,461561E+09	3,151660E+09	6,923153E+09	1,007481E+10
-2846	1,575931E+09	1,575904E+09	3,461541E+09	3,461619E+09	3,151835E+09	6,923160E+09	1,007499E+10
-2845	1,575902E+09	1,575956E+09	3,461566E+09	3,461477E+09	3,151859E+09	6,923043E+09	1,007490E+10
-2844	1,575900E+09	1,575909E+09	3,461502E+09	3,461598E+09	3,151809E+09	6,923100E+09	1,007491E+10
-2843	1,575994E+09	1,575965E+09	3,461518E+09	3,461525E+09	3,151960E+09	6,923043E+09	1,007500E+10
-2842	1,575911E+09	1,575928E+09	3,461552E+09	3,461447E+09	3,151838E+09	6,922999E+09	1,007484E+10
-2841	1,575929E+09	1,575873E+09	3,461513E+09	3,461614E+09	3,151801E+09	6,923127E+09	1,007493E+10
-2840	1,575930E+09	1,575934E+09	3,461582E+09	3,461519E+09	3,151864E+09	6,923102E+09	1,007497E+10
-2839	1,575801E+09	1,575855E+09	3,461595E+09	3,461575E+09	3,151656E+09	6,923169E+09	1,007482E+10
-2838	1,575843E+09	1,575820E+09	3,461598E+09	3,461681E+09	3,151664E+09	6,923279E+09	1,007494E+10
-2837	1,575805E+09	1,575829E+09	3,461683E+09	3,461557E+09	3,151633E+09	6,923239E+09	1,007487E+10
-2836	1,575737E+09	1,575734E+09	3,461648E+09	3,461682E+09	3,151471E+09	6,923330E+09	1,007480E+10
-2835	1,575825E+09	1,575777E+09	3,461637E+09	3,461679E+09	3,151602E+09	6,923316E+09	1,007492E+10
-2834	1,575753E+09	1,575786E+09	3,461663E+09	3,461568E+09	3,151539E+09	6,923231E+09	1,007477E+10
-2833	1,575763E+09	1,575756E+09	3,461581E+09	3,461697E+09	3,151519E+09	6,923278E+09	1,007480E+10
-2832	1,575852E+09	1,575855E+09	3,461617E+09	3,461570E+09	3,151707E+09	6,923187E+09	1,007489E+10
-2831	1,575782E+09	1,575838E+09	3,461614E+09	3,461511E+09	3,151620E+09	6,923126E+09	1,007475E+10
-2830	1,575880E+09	1,575843E+09	3,461543E+09	3,461605E+09	3,151723E+09	6,923147E+09	1,007487E+10
-2829	1,575932E+09	1,575947E+09	3,461567E+09	3,461464E+09	3,151879E+09	6,923031E+09	1,007491E+10
-2828	1,575881E+09	1,575923E+09	3,461495E+09	3,461531E+09	3,151804E+09	6,923026E+09	1,007483E+10
-2827	1,576009E+09	1,575987E+09	3,461449E+09	3,461539E+09	3,151996E+09	6,922987E+09	1,007498E+10
-2826	1,575987E+09	1,576028E+09	3,461495E+09	3,461381E+09	3,152015E+09	6,922877E+09	1,007489E+10
-2825	1,575979E+09	1,575962E+09	3,461427E+09	3,461504E+09	3,151941E+09	6,922932E+09	1,007487E+10
-2824	1,576071E+09	1,576024E+09	3,461471E+09	3,461445E+09	3,152096E+09	6,922916E+09	1,007501E+10
-2823	1,575960E+09	1,575996E+09	3,461506E+09	3,461404E+09	3,151956E+09	6,922910E+09	1,007487E+10
-2822	1,575964E+09	1,575939E+09	3,461452E+09	3,461565E+09	3,151902E+09	6,923017E+09	1,007492E+10
-2821	1,575978E+09	1,575993E+09	3,461535E+09	3,461484E+09	3,151971E+09	6,923019E+09	1,007499E+10
-2820	1,575846E+09	1,575895E+09	3,461560E+09	3,461538E+09	3,151741E+09	6,923098E+09	1,007484E+10
-2819	1,575906E+09	1,575862E+09	3,461552E+09	3,461609E+09	3,151768E+09	6,923160E+09	1,007493E+10
-2818	1,575875E+09	1,575877E+09	3,461627E+09	3,461496E+09	3,151752E+09	6,923123E+09	1,007487E+10
-2817	1,575801E+09	1,575792E+09	3,461552E+09	3,461629E+09	3,151593E+09	6,923181E+09	1,007477E+10
-2816	1,575893E+09	1,575853E+09	3,461558E+09	3,461614E+09	3,151745E+09	6,923172E+09	1,007492E+10
-2815	1,575811E+09	1,575868E+09	3,461600E+09	3,461503E+09	3,151679E+09	6,923103E+09	1,007478E+10
-2814	1,575827E+09	1,575824E+09	3,461514E+09	3,461600E+09	3,151651E+09	6,923114E+09	1,007477E+10
-2813	1,575936E+09	1,575923E+09	3,461559E+09	3,461496E+09	3,151859E+09	6,923055E+09	1,007491E+10
-2812	1,575860E+09	1,575907E+09	3,461555E+09	3,461462E+09	3,151767E+09	6,923017E+09	1,007478E+10
-2811	1,575957E+09	1,575930E+09	3,461459E+09	3,461534E+09	3,151887E+09	6,922993E+09	1,007488E+10
-2810	1,576010E+09	1,576040E+09	3,461491E+09	3,461401E+09	3,152050E+09	6,922892E+09	1,007494E+10
-2809	1,575956E+09	1,576000E+09	3,461409E+09	3,461457E+09	3,151956E+09	6,922866E+09	1,007482E+10
-2808	1,576091E+09	1,576053E+09	3,461398E+09	3,461449E+09	3,152144E+09	6,922847E+09	1,007499E+10
-2807	1,576059E+09	1,576089E+09	3,461450E+09	3,461312E+09	3,152148E+09	6,922762E+09	1,007491E+10
-2806	1,576041E+09	1,576016E+09	3,461355E+09	3,461431E+09	3,152056E+09	6,922786E+09	1,007484E+10
-2805	1,576133E+09	1,576091E+09	3,461394E+09	3,461406E+09	3,152224E+09	6,922800E+09	1,007502E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2804	1,576005E+09	1,576060E+09	3,461442E+09	3,461375E+09	3,152065E+09	6,922817E+09	1,007488E+10
-2803	1,576012E+09	1,576002E+09	3,461396E+09	3,461494E+09	3,152014E+09	6,922890E+09	1,007490E+10
-2802	1,576038E+09	1,576044E+09	3,461499E+09	3,461415E+09	3,152082E+09	6,922914E+09	1,007500E+10
-2801	1,575909E+09	1,575931E+09	3,461504E+09	3,461475E+09	3,151839E+09	6,922979E+09	1,007482E+10
-2800	1,575975E+09	1,575909E+09	3,461503E+09	3,461553E+09	3,151884E+09	6,923056E+09	1,007494E+10
-2799	1,575928E+09	1,575945E+09	3,461565E+09	3,461459E+09	3,151873E+09	6,923024E+09	1,007490E+10
-2798	1,575848E+09	1,575866E+09	3,461472E+09	3,461564E+09	3,151714E+09	6,923036E+09	1,007475E+10
-2797	1,575958E+09	1,575930E+09	3,461491E+09	3,461551E+09	3,151888E+09	6,923043E+09	1,007493E+10
-2796	1,575875E+09	1,575933E+09	3,461554E+09	3,461433E+09	3,151808E+09	6,922987E+09	1,007479E+10
-2795	1,575904E+09	1,575893E+09	3,461461E+09	3,461504E+09	3,151797E+09	6,922965E+09	1,007476E+10
-2794	1,576018E+09	1,575995E+09	3,461495E+09	3,461424E+09	3,152014E+09	6,922919E+09	1,007493E+10
-2793	1,575933E+09	1,575983E+09	3,461456E+09	3,461408E+09	3,151915E+09	6,922864E+09	1,007478E+10
-2792	1,576037E+09	1,576011E+09	3,461380E+09	3,461470E+09	3,152049E+09	6,922850E+09	1,007490E+10
-2791	1,576082E+09	1,576118E+09	3,461420E+09	3,461335E+09	3,152200E+09	6,922754E+09	1,007495E+10
-2790	1,576034E+09	1,576063E+09	3,461328E+09	3,461360E+09	3,152097E+09	6,922688E+09	1,007478E+10
-2789	1,576182E+09	1,576115E+09	3,461319E+09	3,461374E+09	3,152297E+09	6,922693E+09	1,007499E+10
-2788	1,576131E+09	1,576155E+09	3,461382E+09	3,461258E+09	3,152286E+09	6,922640E+09	1,007493E+10
-2787	1,576103E+09	1,576100E+09	3,461285E+09	3,461359E+09	3,152202E+09	6,922643E+09	1,007485E+10
-2786	1,576188E+09	1,576171E+09	3,461348E+09	3,461348E+09	3,152359E+09	6,922696E+09	1,007506E+10
-2785	1,576053E+09	1,576119E+09	3,461398E+09	3,461322E+09	3,152172E+09	6,922720E+09	1,007489E+10
-2784	1,576070E+09	1,576045E+09	3,461380E+09	3,461432E+09	3,152115E+09	6,922812E+09	1,007493E+10
-2783	1,576089E+09	1,576084E+09	3,461470E+09	3,461378E+09	3,152173E+09	6,922848E+09	1,007502E+10
-2782	1,575959E+09	1,575971E+09	3,461429E+09	3,461426E+09	3,151930E+09	6,922855E+09	1,007478E+10
-2781	1,576033E+09	1,575969E+09	3,461406E+09	3,461521E+09	3,152003E+09	6,922927E+09	1,007493E+10
-2780	1,575980E+09	1,576012E+09	3,461484E+09	3,461415E+09	3,151992E+09	6,922899E+09	1,007489E+10
-2779	1,575911E+09	1,575938E+09	3,461400E+09	3,461460E+09	3,151849E+09	6,922860E+09	1,007471E+10
-2778	1,576033E+09	1,575997E+09	3,461447E+09	3,461448E+09	3,152030E+09	6,922896E+09	1,007493E+10
-2777	1,575952E+09	1,575994E+09	3,461494E+09	3,461352E+09	3,151946E+09	6,922846E+09	1,007479E+10
-2776	1,575982E+09	1,575963E+09	3,461411E+09	3,461437E+09	3,151945E+09	6,922849E+09	1,007479E+10
-2775	1,576081E+09	1,576082E+09	3,461432E+09	3,461386E+09	3,152163E+09	6,922817E+09	1,007498E+10
-2774	1,575997E+09	1,576061E+09	3,461368E+09	3,461344E+09	3,152059E+09	6,922712E+09	1,007477E+10
-2773	1,576121E+09	1,576089E+09	3,461294E+09	3,461408E+09	3,152210E+09	6,922702E+09	1,007491E+10
-2772	1,576165E+09	1,576184E+09	3,461353E+09	3,461263E+09	3,152349E+09	6,922615E+09	1,007496E+10
-2771	1,576120E+09	1,576136E+09	3,461252E+09	3,461257E+09	3,152256E+09	6,922509E+09	1,007477E+10
-2770	1,576261E+09	1,576196E+09	3,461250E+09	3,461295E+09	3,152457E+09	6,922545E+09	1,007500E+10
-2769	1,576191E+09	1,576235E+09	3,461299E+09	3,461203E+09	3,152426E+09	6,922502E+09	1,007493E+10
-2768	1,576160E+09	1,576172E+09	3,461242E+09	3,461301E+09	3,152332E+09	6,922544E+09	1,007488E+10
-2767	1,576232E+09	1,576232E+09	3,461320E+09	3,461300E+09	3,152463E+09	6,922620E+09	1,007508E+10
-2766	1,576104E+09	1,576154E+09	3,461353E+09	3,461260E+09	3,152258E+09	6,922613E+09	1,007487E+10
-2765	1,576137E+09	1,576083E+09	3,461317E+09	3,461396E+09	3,152220E+09	6,922713E+09	1,007493E+10
-2764	1,576144E+09	1,576127E+09	3,461399E+09	3,461347E+09	3,152272E+09	6,922746E+09	1,007502E+10
-2763	1,576015E+09	1,576041E+09	3,461343E+09	3,461356E+09	3,152056E+09	6,922699E+09	1,007476E+10
-2762	1,576094E+09	1,576046E+09	3,461341E+09	3,461442E+09	3,152140E+09	6,922783E+09	1,007492E+10
-2761	1,576039E+09	1,576077E+09	3,461425E+09	3,461334E+09	3,152116E+09	6,922759E+09	1,007488E+10
-2760	1,575983E+09	1,575997E+09	3,461380E+09	3,461373E+09	3,151980E+09	6,922753E+09	1,007473E+10
-2759	1,576092E+09	1,576059E+09	3,461415E+09	3,461390E+09	3,152151E+09	6,922805E+09	1,007496E+10
-2758	1,576014E+09	1,576057E+09	3,461415E+09	3,461300E+09	3,152070E+09	6,922716E+09	1,007479E+10
-2757	1,576055E+09	1,576043E+09	3,461306E+09	3,461405E+09	3,152098E+09	6,922711E+09	1,007481E+10
-2756	1,576151E+09	1,576160E+09	3,461338E+09	3,461339E+09	3,152311E+09	6,922676E+09	1,007499E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2755	1,576085E+09	1,576144E+09	3,461273E+09	3,461238E+09	3,152229E+09	6,922511E+09	1,007474E+10
-2754	1,576220E+09	1,576168E+09	3,461220E+09	3,461298E+09	3,152387E+09	6,922519E+09	1,007491E+10
-2753	1,576255E+09	1,576258E+09	3,461273E+09	3,461174E+09	3,152513E+09	6,922447E+09	1,007496E+10
-2752	1,576202E+09	1,576218E+09	3,461204E+09	3,461178E+09	3,152420E+09	6,922381E+09	1,007480E+10
-2751	1,576310E+09	1,576287E+09	3,461209E+09	3,461248E+09	3,152597E+09	6,922458E+09	1,007505E+10
-2750	1,576237E+09	1,576304E+09	3,461250E+09	3,461152E+09	3,152541E+09	6,922402E+09	1,007494E+10
-2749	1,576216E+09	1,576226E+09	3,461196E+09	3,461264E+09	3,152442E+09	6,922460E+09	1,007490E+10
-2748	1,576288E+09	1,576265E+09	3,461282E+09	3,461266E+09	3,152553E+09	6,922548E+09	1,007510E+10
-2747	1,576170E+09	1,576192E+09	3,461279E+09	3,461194E+09	3,152362E+09	6,922473E+09	1,007483E+10
-2746	1,576202E+09	1,576137E+09	3,461232E+09	3,461339E+09	3,152339E+09	6,922572E+09	1,007491E+10
-2745	1,576199E+09	1,576190E+09	3,461301E+09	3,461294E+09	3,152390E+09	6,922595E+09	1,007498E+10
-2744	1,576075E+09	1,576108E+09	3,461289E+09	3,461275E+09	3,152183E+09	6,922565E+09	1,007475E+10
-2743	1,576142E+09	1,576114E+09	3,461311E+09	3,461363E+09	3,152256E+09	6,922674E+09	1,007493E+10
-2742	1,576098E+09	1,576128E+09	3,461379E+09	3,461253E+09	3,152226E+09	6,922631E+09	1,007486E+10
-2741	1,576053E+09	1,576057E+09	3,461318E+09	3,461329E+09	3,152110E+09	6,922647E+09	1,007476E+10
-2740	1,576152E+09	1,576126E+09	3,461346E+09	3,461362E+09	3,152279E+09	6,922709E+09	1,007499E+10
-2739	1,576082E+09	1,576143E+09	3,461321E+09	3,461236E+09	3,152225E+09	6,922557E+09	1,007478E+10
-2738	1,576136E+09	1,576133E+09	3,461223E+09	3,461328E+09	3,152269E+09	6,922551E+09	1,007482E+10
-2737	1,576237E+09	1,576236E+09	3,461256E+09	3,461249E+09	3,152473E+09	6,922505E+09	1,007498E+10
-2736	1,576184E+09	1,576217E+09	3,461226E+09	3,461133E+09	3,152400E+09	6,922359E+09	1,007476E+10
-2735	1,576296E+09	1,576248E+09	3,461170E+09	3,461217E+09	3,152544E+09	6,922387E+09	1,007493E+10
-2734	1,576320E+09	1,576334E+09	3,461192E+09	3,461110E+09	3,152654E+09	6,922302E+09	1,007496E+10
-2733	1,576268E+09	1,576301E+09	3,461122E+09	3,461145E+09	3,152569E+09	6,922267E+09	1,007484E+10
-2732	1,576362E+09	1,576350E+09	3,461151E+09	3,461208E+09	3,152712E+09	6,922359E+09	1,007507E+10
-2731	1,576304E+09	1,576358E+09	3,461185E+09	3,461076E+09	3,152662E+09	6,922261E+09	1,007492E+10
-2730	1,576295E+09	1,576273E+09	3,461137E+09	3,461191E+09	3,152568E+09	6,922328E+09	1,007490E+10
-2729	1,576357E+09	1,576309E+09	3,461201E+09	3,461211E+09	3,152665E+09	6,922412E+09	1,007508E+10
-2728	1,576238E+09	1,576253E+09	3,461218E+09	3,461132E+09	3,152491E+09	6,922350E+09	1,007484E+10
-2727	1,576243E+09	1,576215E+09	3,461179E+09	3,461283E+09	3,152457E+09	6,922462E+09	1,007492E+10
-2726	1,576241E+09	1,576254E+09	3,461244E+09	3,461226E+09	3,152495E+09	6,922470E+09	1,007497E+10
-2725	1,576131E+09	1,576169E+09	3,461249E+09	3,461219E+09	3,152300E+09	6,922467E+09	1,007477E+10
-2724	1,576192E+09	1,576161E+09	3,461285E+09	3,461313E+09	3,152353E+09	6,922597E+09	1,007495E+10
-2723	1,576162E+09	1,576185E+09	3,461313E+09	3,461190E+09	3,152346E+09	6,922504E+09	1,007485E+10
-2722	1,576123E+09	1,576129E+09	3,461234E+09	3,461278E+09	3,152252E+09	6,922512E+09	1,007476E+10
-2721	1,576221E+09	1,576200E+09	3,461243E+09	3,461313E+09	3,152421E+09	6,922555E+09	1,007498E+10
-2720	1,576170E+09	1,576219E+09	3,461249E+09	3,461147E+09	3,152389E+09	6,922397E+09	1,007479E+10
-2719	1,576215E+09	1,576215E+09	3,461167E+09	3,461230E+09	3,152430E+09	6,922397E+09	1,007483E+10
-2718	1,576325E+09	1,576304E+09	3,461182E+09	3,461152E+09	3,152628E+09	6,922334E+09	1,007496E+10
-2717	1,576272E+09	1,576297E+09	3,461146E+09	3,461066E+09	3,152568E+09	6,922212E+09	1,007478E+10
-2716	1,576360E+09	1,576332E+09	3,461105E+09	3,461170E+09	3,152691E+09	6,922275E+09	1,007497E+10
-2715	1,576385E+09	1,576421E+09	3,461111E+09	3,461043E+09	3,152806E+09	6,922154E+09	1,007496E+10
-2714	1,576337E+09	1,576378E+09	3,461063E+09	3,461080E+09	3,152715E+09	6,922143E+09	1,007486E+10
-2713	1,576430E+09	1,576404E+09	3,461092E+09	3,461148E+09	3,152834E+09	6,922241E+09	1,007507E+10
-2712	1,576385E+09	1,576403E+09	3,461144E+09	3,461004E+09	3,152788E+09	6,922148E+09	1,007494E+10
-2711	1,576353E+09	1,576332E+09	3,461081E+09	3,461136E+09	3,152684E+09	6,922216E+09	1,007490E+10
-2710	1,576407E+09	1,576365E+09	3,461108E+09	3,461160E+09	3,152772E+09	6,922268E+09	1,007504E+10
-2709	1,576290E+09	1,576322E+09	3,461133E+09	3,461090E+09	3,152612E+09	6,922223E+09	1,007484E+10
-2708	1,576284E+09	1,576273E+09	3,461134E+09	3,461225E+09	3,152556E+09	6,922360E+09	1,007492E+10
-2707	1,576298E+09	1,576307E+09	3,461196E+09	3,461138E+09	3,152605E+09	6,922334E+09	1,007494E+10



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2706	1,576202E+09	1,576222E+09	3,461208E+09	3,461148E+09	3,152424E+09	6,922356E+09	1,007478E+10
-2705	1,576254E+09	1,576214E+09	3,461220E+09	3,461265E+09	3,152469E+09	6,922485E+09	1,007495E+10
-2704	1,576234E+09	1,576254E+09	3,461256E+09	3,461137E+09	3,152488E+09	6,922393E+09	1,007488E+10
-2703	1,576182E+09	1,576215E+09	3,461173E+09	3,461220E+09	3,152397E+09	6,922392E+09	1,007479E+10
-2702	1,576290E+09	1,576270E+09	3,461162E+09	3,461237E+09	3,152559E+09	6,922399E+09	1,007496E+10
-2701	1,576259E+09	1,576293E+09	3,461176E+09	3,461073E+09	3,152552E+09	6,922250E+09	1,007480E+10
-2700	1,576296E+09	1,576279E+09	3,461106E+09	3,461152E+09	3,152576E+09	6,922258E+09	1,007483E+10
-2699	1,576406E+09	1,576382E+09	3,461088E+09	3,461066E+09	3,152788E+09	6,922154E+09	1,007494E+10
-2698	1,576353E+09	1,576391E+09	3,461054E+09	3,460999E+09	3,152744E+09	6,922054E+09	1,007480E+10
-2697	1,576424E+09	1,576415E+09	3,461016E+09	3,461112E+09	3,152840E+09	6,922128E+09	1,007497E+10
-2696	1,576465E+09	1,576495E+09	3,461061E+09	3,460964E+09	3,152959E+09	6,922025E+09	1,007498E+10
-2695	1,576406E+09	1,576445E+09	3,461023E+09	3,461003E+09	3,152850E+09	6,922026E+09	1,007488E+10
-2694	1,576501E+09	1,576449E+09	3,461025E+09	3,461081E+09	3,152950E+09	6,922105E+09	1,007506E+10
-2693	1,576457E+09	1,576463E+09	3,461065E+09	3,460962E+09	3,152920E+09	6,922028E+09	1,007495E+10
-2692	1,576399E+09	1,576396E+09	3,461018E+09	3,461095E+09	3,152796E+09	6,922113E+09	1,007491E+10
-2691	1,576454E+09	1,576434E+09	3,461036E+09	3,461093E+09	3,152888E+09	6,922130E+09	1,007502E+10
-2690	1,576346E+09	1,576389E+09	3,461093E+09	3,461018E+09	3,152734E+09	6,922111E+09	1,007485E+10
-2689	1,576336E+09	1,576320E+09	3,461103E+09	3,461161E+09	3,152655E+09	6,922264E+09	1,007492E+10
-2688	1,576367E+09	1,576351E+09	3,461175E+09	3,461072E+09	3,152718E+09	6,922247E+09	1,007496E+10
-2687	1,576253E+09	1,576283E+09	3,461165E+09	3,461104E+09	3,152536E+09	6,922269E+09	1,007481E+10
-2686	1,576309E+09	1,576273E+09	3,461129E+09	3,461228E+09	3,152582E+09	6,922356E+09	1,007494E+10
-2685	1,576302E+09	1,576325E+09	3,461158E+09	3,461093E+09	3,152626E+09	6,922251E+09	1,007488E+10
-2684	1,576249E+09	1,576283E+09	3,461101E+09	3,461148E+09	3,152531E+09	6,922249E+09	1,007478E+10
-2683	1,576377E+09	1,576337E+09	3,461072E+09	3,461129E+09	3,152714E+09	6,922201E+09	1,007491E+10
-2682	1,576355E+09	1,576373E+09	3,461095E+09	3,460976E+09	3,152728E+09	6,922071E+09	1,007480E+10
-2681	1,576376E+09	1,576364E+09	3,461023E+09	3,461077E+09	3,152740E+09	6,922100E+09	1,007484E+10
-2680	1,576487E+09	1,576476E+09	3,461026E+09	3,460988E+09	3,152963E+09	6,922014E+09	1,007498E+10
-2679	1,576413E+09	1,576491E+09	3,461009E+09	3,460931E+09	3,152904E+09	6,921941E+09	1,007484E+10
-2678	1,576489E+09	1,576484E+09	3,460957E+09	3,461044E+09	3,152973E+09	6,922001E+09	1,007497E+10
-2677	1,576544E+09	1,576555E+09	3,461005E+09	3,460910E+09	3,153099E+09	6,921915E+09	1,007501E+10
-2676	1,576475E+09	1,576493E+09	3,460971E+09	3,460953E+09	3,152968E+09	6,921924E+09	1,007489E+10
-2675	1,576568E+09	1,576505E+09	3,460927E+09	3,461019E+09	3,153073E+09	6,921947E+09	1,007502E+10
-2674	1,576524E+09	1,576535E+09	3,460971E+09	3,460908E+09	3,153059E+09	6,921879E+09	1,007494E+10
-2673	1,576451E+09	1,576460E+09	3,460944E+09	3,461032E+09	3,152911E+09	6,921976E+09	1,007489E+10
-2672	1,576518E+09	1,576492E+09	3,461007E+09	3,461006E+09	3,153009E+09	6,922013E+09	1,007502E+10
-2671	1,576401E+09	1,576447E+09	3,461079E+09	3,460943E+09	3,152848E+09	6,922022E+09	1,007487E+10
-2670	1,576389E+09	1,576360E+09	3,461055E+09	3,461108E+09	3,152749E+09	6,922162E+09	1,007491E+10
-2669	1,576427E+09	1,576409E+09	3,461109E+09	3,461049E+09	3,152836E+09	6,922158E+09	1,007499E+10
-2668	1,576301E+09	1,576346E+09	3,461098E+09	3,461073E+09	3,152647E+09	6,922171E+09	1,007482E+10
-2667	1,576367E+09	1,576340E+09	3,461034E+09	3,461161E+09	3,152707E+09	6,922195E+09	1,007490E+10
-2666	1,576382E+09	1,576400E+09	3,461081E+09	3,461009E+09	3,152782E+09	6,922091E+09	1,007487E+10
-2665	1,576329E+09	1,576348E+09	3,461034E+09	3,461054E+09	3,152677E+09	6,922088E+09	1,007477E+10
-2664	1,576469E+09	1,576411E+09	3,461017E+09	3,461027E+09	3,152881E+09	6,922044E+09	1,007493E+10
-2663	1,576426E+09	1,576469E+09	3,461033E+09	3,460896E+09	3,152895E+09	6,921929E+09	1,007482E+10
-2662	1,576440E+09	1,576449E+09	3,460935E+09	3,461015E+09	3,152889E+09	6,921950E+09	1,007484E+10
-2661	1,576558E+09	1,576562E+09	3,460952E+09	3,460936E+09	3,153120E+09	6,921888E+09	1,007501E+10
-2660	1,576482E+09	1,576557E+09	3,460962E+09	3,460870E+09	3,153039E+09	6,921832E+09	1,007487E+10
-2659	1,576572E+09	1,576539E+09	3,460879E+09	3,460965E+09	3,153111E+09	6,921844E+09	1,007496E+10
-2658	1,576636E+09	1,576618E+09	3,460923E+09	3,460843E+09	3,153254E+09	6,921765E+09	1,007502E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2657	1,576547E+09	1,576561E+09	3,460885E+09	3,460896E+09	3,153108E+09	6,921781E+09	1,007489E+10
-2656	1,576638E+09	1,576583E+09	3,460862E+09	3,460946E+09	3,153221E+09	6,921808E+09	1,007503E+10
-2655	1,576570E+09	1,576619E+09	3,460935E+09	3,460835E+09	3,153189E+09	6,921770E+09	1,007496E+10
-2654	1,576499E+09	1,576515E+09	3,460909E+09	3,460966E+09	3,153014E+09	6,921875E+09	1,007489E+10
-2653	1,576574E+09	1,576537E+09	3,460978E+09	3,460957E+09	3,153111E+09	6,921934E+09	1,007505E+10
-2652	1,576447E+09	1,576486E+09	3,461049E+09	3,460911E+09	3,152933E+09	6,921960E+09	1,007489E+10
-2651	1,576439E+09	1,576408E+09	3,460965E+09	3,461068E+09	3,152847E+09	6,922033E+09	1,007488E+10
-2650	1,576486E+09	1,576474E+09	3,461008E+09	3,461007E+09	3,152961E+09	6,922015E+09	1,007498E+10
-2649	1,576362E+09	1,576409E+09	3,461009E+09	3,461007E+09	3,152771E+09	6,922016E+09	1,007479E+10
-2648	1,576452E+09	1,576405E+09	3,460970E+09	3,461053E+09	3,152857E+09	6,922023E+09	1,007488E+10
-2647	1,576462E+09	1,576478E+09	3,461033E+09	3,460902E+09	3,152940E+09	6,921935E+09	1,007488E+10
-2646	1,576408E+09	1,576420E+09	3,460963E+09	3,460967E+09	3,152828E+09	6,921931E+09	1,007476E+10
-2645	1,576543E+09	1,576501E+09	3,460949E+09	3,460968E+09	3,153044E+09	6,921917E+09	1,007496E+10
-2644	1,576486E+09	1,576558E+09	3,460981E+09	3,460850E+09	3,153044E+09	6,921830E+09	1,007487E+10
-2643	1,576505E+09	1,576529E+09	3,460859E+09	3,460949E+09	3,153034E+09	6,921808E+09	1,007484E+10
-2642	1,576644E+09	1,576637E+09	3,460882E+09	3,460871E+09	3,153280E+09	6,921753E+09	1,007503E+10
-2641	1,576571E+09	1,576614E+09	3,460891E+09	3,460803E+09	3,153185E+09	6,921694E+09	1,007488E+10
-2640	1,576667E+09	1,576604E+09	3,460804E+09	3,460886E+09	3,153271E+09	6,921690E+09	1,007496E+10
-2639	1,576707E+09	1,576706E+09	3,460843E+09	3,460773E+09	3,153413E+09	6,921617E+09	1,007503E+10
-2638	1,576605E+09	1,576635E+09	3,460792E+09	3,460829E+09	3,153240E+09	6,921621E+09	1,007486E+10
-2637	1,576694E+09	1,576655E+09	3,460805E+09	3,460881E+09	3,153349E+09	6,921687E+09	1,007504E+10
-2636	1,576619E+09	1,576671E+09	3,460912E+09	3,460772E+09	3,153290E+09	6,921684E+09	1,007497E+10
-2635	1,576552E+09	1,576553E+09	3,460859E+09	3,460902E+09	3,153105E+09	6,921761E+09	1,007487E+10
-2634	1,576635E+09	1,576588E+09	3,460916E+09	3,460918E+09	3,153223E+09	6,921834E+09	1,007506E+10
-2633	1,576499E+09	1,576538E+09	3,460977E+09	3,460879E+09	3,153037E+09	6,921857E+09	1,007489E+10
-2632	1,576500E+09	1,576474E+09	3,460895E+09	3,461007E+09	3,152974E+09	6,921902E+09	1,007488E+10
-2631	1,576543E+09	1,576551E+09	3,460955E+09	3,460927E+09	3,153093E+09	6,921882E+09	1,007497E+10
-2630	1,576430E+09	1,576469E+09	3,460947E+09	3,460918E+09	3,152899E+09	6,921866E+09	1,007476E+10
-2629	1,576531E+09	1,576470E+09	3,460921E+09	3,460972E+09	3,153001E+09	6,921893E+09	1,007489E+10
-2628	1,576528E+09	1,576547E+09	3,460984E+09	3,460842E+09	3,153076E+09	6,921826E+09	1,007490E+10
-2627	1,576472E+09	1,576498E+09	3,460870E+09	3,460909E+09	3,152970E+09	6,921779E+09	1,007475E+10
-2626	1,576614E+09	1,576591E+09	3,460854E+09	3,460915E+09	3,153205E+09	6,921768E+09	1,007497E+10
-2625	1,576561E+09	1,576634E+09	3,460905E+09	3,460787E+09	3,153195E+09	6,921692E+09	1,007489E+10
-2624	1,576603E+09	1,576601E+09	3,460792E+09	3,460855E+09	3,153204E+09	6,921647E+09	1,007485E+10
-2623	1,576734E+09	1,576714E+09	3,460820E+09	3,460779E+09	3,153448E+09	6,921598E+09	1,007505E+10
-2622	1,576658E+09	1,576686E+09	3,460799E+09	3,460730E+09	3,153345E+09	6,921529E+09	1,007487E+10
-2621	1,576743E+09	1,576689E+09	3,460719E+09	3,460822E+09	3,153432E+09	6,921540E+09	1,007497E+10
-2620	1,576758E+09	1,576787E+09	3,460788E+09	3,460717E+09	3,153544E+09	6,921505E+09	1,007505E+10
-2619	1,576655E+09	1,576702E+09	3,460733E+09	3,460757E+09	3,153357E+09	6,921490E+09	1,007485E+10
-2618	1,576752E+09	1,576713E+09	3,460764E+09	3,460817E+09	3,153464E+09	6,921582E+09	1,007505E+10
-2617	1,576678E+09	1,576709E+09	3,460877E+09	3,460728E+09	3,153387E+09	6,921605E+09	1,007499E+10
-2616	1,576617E+09	1,576599E+09	3,460803E+09	3,460849E+09	3,153216E+09	6,921653E+09	1,007487E+10
-2615	1,576684E+09	1,576653E+09	3,460846E+09	3,460871E+09	3,153338E+09	6,921717E+09	1,007506E+10
-2614	1,576553E+09	1,576595E+09	3,460884E+09	3,460827E+09	3,153148E+09	6,921711E+09	1,007486E+10
-2613	1,576565E+09	1,576536E+09	3,460828E+09	3,460934E+09	3,153101E+09	6,921762E+09	1,007486E+10
-2612	1,576607E+09	1,576608E+09	3,460914E+09	3,460850E+09	3,153215E+09	6,921763E+09	1,007498E+10
-2611	1,576502E+09	1,576528E+09	3,460877E+09	3,460833E+09	3,153030E+09	6,921710E+09	1,007474E+10
-2610	1,576605E+09	1,576551E+09	3,460845E+09	3,460909E+09	3,153156E+09	6,921754E+09	1,007491E+10
-2609	1,576596E+09	1,576631E+09	3,460910E+09	3,460795E+09	3,153226E+09	6,921705E+09	1,007493E+10



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2608	1,576546E+09	1,576589E+09	3,460802E+09	3,460839E+09	3,153135E+09	6,921641E+09	1,007478E+10
-2607	1,576686E+09	1,576684E+09	3,460802E+09	3,460835E+09	3,153370E+09	6,921637E+09	1,007501E+10
-2606	1,576648E+09	1,576700E+09	3,460831E+09	3,460706E+09	3,153347E+09	6,921538E+09	1,007488E+10
-2605	1,576698E+09	1,576669E+09	3,460724E+09	3,460779E+09	3,153367E+09	6,921503E+09	1,007487E+10
-2604	1,576811E+09	1,576786E+09	3,460744E+09	3,460718E+09	3,153597E+09	6,921463E+09	1,007506E+10
-2603	1,576725E+09	1,576764E+09	3,460686E+09	3,460661E+09	3,153490E+09	6,921348E+09	1,007484E+10
-2602	1,576808E+09	1,576775E+09	3,460626E+09	3,460754E+09	3,153583E+09	6,921380E+09	1,007496E+10
-2601	1,576821E+09	1,576849E+09	3,460733E+09	3,460649E+09	3,153669E+09	6,921382E+09	1,007505E+10
-2600	1,576729E+09	1,576758E+09	3,460697E+09	3,460672E+09	3,153487E+09	6,921369E+09	1,007486E+10
-2599	1,576813E+09	1,576770E+09	3,460734E+09	3,460748E+09	3,153584E+09	6,921481E+09	1,007506E+10
-2598	1,576738E+09	1,576758E+09	3,460810E+09	3,460688E+09	3,153496E+09	6,921498E+09	1,007499E+10
-2597	1,576673E+09	1,576661E+09	3,460740E+09	3,460813E+09	3,153333E+09	6,921553E+09	1,007489E+10
-2596	1,576726E+09	1,576713E+09	3,460794E+09	3,460831E+09	3,153440E+09	6,921625E+09	1,007507E+10
-2595	1,576606E+09	1,576650E+09	3,460812E+09	3,460758E+09	3,153256E+09	6,921570E+09	1,007483E+10
-2594	1,576634E+09	1,576598E+09	3,460766E+09	3,460858E+09	3,153232E+09	6,921623E+09	1,007486E+10
-2593	1,576678E+09	1,576663E+09	3,460861E+09	3,460787E+09	3,153341E+09	6,921648E+09	1,007499E+10
-2592	1,576578E+09	1,576604E+09	3,460808E+09	3,460761E+09	3,153182E+09	6,921570E+09	1,007475E+10
-2591	1,576663E+09	1,576644E+09	3,460774E+09	3,460840E+09	3,153307E+09	6,921613E+09	1,007492E+10
-2590	1,576663E+09	1,576709E+09	3,460822E+09	3,460733E+09	3,153372E+09	6,921556E+09	1,007493E+10
-2589	1,576629E+09	1,576661E+09	3,460737E+09	3,460758E+09	3,153290E+09	6,921495E+09	1,007479E+10
-2588	1,576768E+09	1,576746E+09	3,460747E+09	3,460759E+09	3,153514E+09	6,921505E+09	1,007502E+10
-2587	1,576739E+09	1,576765E+09	3,460734E+09	3,460626E+09	3,153504E+09	6,921360E+09	1,007486E+10
-2586	1,576787E+09	1,576756E+09	3,460618E+09	3,460709E+09	3,153543E+09	6,921327E+09	1,007487E+10
-2585	1,576886E+09	1,576871E+09	3,460658E+09	3,460658E+09	3,153757E+09	6,921315E+09	1,007507E+10
-2584	1,576800E+09	1,576855E+09	3,460618E+09	3,460573E+09	3,153655E+09	6,921191E+09	1,007485E+10
-2583	1,576869E+09	1,576859E+09	3,460595E+09	3,460662E+09	3,153728E+09	6,921256E+09	1,007498E+10
-2582	1,576890E+09	1,576902E+09	3,460690E+09	3,460584E+09	3,153791E+09	6,921274E+09	1,007507E+10
-2581	1,576798E+09	1,576805E+09	3,460662E+09	3,460625E+09	3,153603E+09	6,921287E+09	1,007489E+10
-2580	1,576861E+09	1,576821E+09	3,460682E+09	3,460725E+09	3,153682E+09	6,921408E+09	1,007509E+10
-2579	1,576784E+09	1,576811E+09	3,460710E+09	3,460653E+09	3,153595E+09	6,921362E+09	1,007496E+10
-2578	1,576728E+09	1,576726E+09	3,460647E+09	3,460761E+09	3,153454E+09	6,921409E+09	1,007486E+10
-2577	1,576789E+09	1,576762E+09	3,460732E+09	3,460765E+09	3,153551E+09	6,921497E+09	1,007505E+10
-2576	1,576682E+09	1,576709E+09	3,460758E+09	3,460661E+09	3,153391E+09	6,921418E+09	1,007481E+10
-2575	1,576702E+09	1,576672E+09	3,460725E+09	3,460767E+09	3,153373E+09	6,921493E+09	1,007487E+10
-2574	1,576744E+09	1,576732E+09	3,460787E+09	3,460726E+09	3,153476E+09	6,921514E+09	1,007499E+10
-2573	1,576641E+09	1,576684E+09	3,460755E+09	3,460706E+09	3,153325E+09	6,921461E+09	1,007479E+10
-2572	1,576715E+09	1,576720E+09	3,460729E+09	3,460788E+09	3,153435E+09	6,921517E+09	1,007495E+10
-2571	1,576732E+09	1,576771E+09	3,460746E+09	3,460663E+09	3,153503E+09	6,921409E+09	1,007491E+10
-2570	1,576720E+09	1,576731E+09	3,460655E+09	3,460685E+09	3,153451E+09	6,921340E+09	1,007479E+10
-2569	1,576861E+09	1,576807E+09	3,460661E+09	3,460695E+09	3,153668E+09	6,921356E+09	1,007502E+10
-2568	1,576832E+09	1,576854E+09	3,460626E+09	3,460542E+09	3,153686E+09	6,921168E+09	1,007485E+10
-2567	1,576862E+09	1,576861E+09	3,460529E+09	3,460615E+09	3,153723E+09	6,921145E+09	1,007487E+10
-2566	1,576959E+09	1,576954E+09	3,460575E+09	3,460575E+09	3,153913E+09	6,921150E+09	1,007506E+10
-2565	1,576877E+09	1,576926E+09	3,460585E+09	3,460488E+09	3,153803E+09	6,921073E+09	1,007488E+10
-2564	1,576929E+09	1,576916E+09	3,460575E+09	3,460601E+09	3,153846E+09	6,921176E+09	1,007502E+10
-2563	1,576951E+09	1,576951E+09	3,460623E+09	3,460542E+09	3,153902E+09	6,921164E+09	1,007507E+10
-2562	1,576860E+09	1,576870E+09	3,460579E+09	3,460596E+09	3,153730E+09	6,921174E+09	1,007490E+10
-2561	1,576913E+09	1,576876E+09	3,460610E+09	3,460698E+09	3,153789E+09	6,921309E+09	1,007510E+10
-2560	1,576845E+09	1,576877E+09	3,460640E+09	3,460581E+09	3,153722E+09	6,921221E+09	1,007494E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2559	1,576786E+09	1,576792E+09	3,460607E+09	3,460662E+09	3,153577E+09	6,921269E+09	1,007485E+10
-2558	1,576857E+09	1,576810E+09	3,460680E+09	3,460686E+09	3,153666E+09	6,921366E+09	1,007503E+10
-2557	1,576753E+09	1,576764E+09	3,460719E+09	3,460591E+09	3,153517E+09	6,921311E+09	1,007483E+10
-2556	1,576746E+09	1,576738E+09	3,460676E+09	3,460724E+09	3,153484E+09	6,921400E+09	1,007488E+10
-2555	1,576793E+09	1,576800E+09	3,460695E+09	3,460681E+09	3,153593E+09	6,921376E+09	1,007497E+10
-2554	1,576708E+09	1,576758E+09	3,460666E+09	3,460649E+09	3,153466E+09	6,921315E+09	1,007478E+10
-2553	1,576796E+09	1,576774E+09	3,460660E+09	3,460723E+09	3,153571E+09	6,921383E+09	1,007495E+10
-2552	1,576833E+09	1,576841E+09	3,460660E+09	3,460565E+09	3,153674E+09	6,921225E+09	1,007490E+10
-2551	1,576814E+09	1,576823E+09	3,460573E+09	3,460583E+09	3,153637E+09	6,921156E+09	1,007479E+10
-2550	1,576950E+09	1,576899E+09	3,460556E+09	3,460619E+09	3,153849E+09	6,921175E+09	1,007502E+10
-2549	1,576913E+09	1,576953E+09	3,460561E+09	3,460459E+09	3,153866E+09	6,921021E+09	1,007489E+10
-2548	1,576919E+09	1,576952E+09	3,460495E+09	3,460543E+09	3,153871E+09	6,921038E+09	1,007491E+10
-2547	1,577021E+09	1,577020E+09	3,460523E+09	3,460503E+09	3,154041E+09	6,921026E+09	1,007507E+10
-2546	1,576952E+09	1,576988E+09	3,460535E+09	3,460438E+09	3,153940E+09	6,920973E+09	1,007491E+10
-2545	1,576997E+09	1,576961E+09	3,460519E+09	3,460575E+09	3,153958E+09	6,921094E+09	1,007505E+10
-2544	1,577015E+09	1,577015E+09	3,460529E+09	3,460495E+09	3,154030E+09	6,921024E+09	1,007505E+10
-2543	1,576917E+09	1,576945E+09	3,460498E+09	3,460527E+09	3,153862E+09	6,921025E+09	1,007489E+10
-2542	1,576975E+09	1,576927E+09	3,460523E+09	3,460625E+09	3,153902E+09	6,921148E+09	1,007505E+10
-2541	1,576915E+09	1,576926E+09	3,460602E+09	3,460489E+09	3,153841E+09	6,921091E+09	1,007493E+10
-2540	1,576840E+09	1,576845E+09	3,460585E+09	3,460587E+09	3,153685E+09	6,921172E+09	1,007486E+10
-2539	1,576908E+09	1,576863E+09	3,460616E+09	3,460628E+09	3,153771E+09	6,921244E+09	1,007502E+10
-2538	1,576808E+09	1,576840E+09	3,460648E+09	3,460555E+09	3,153648E+09	6,921203E+09	1,007485E+10
-2537	1,576796E+09	1,576802E+09	3,460616E+09	3,460693E+09	3,153598E+09	6,921310E+09	1,007491E+10
-2536	1,576858E+09	1,576874E+09	3,460622E+09	3,460610E+09	3,153732E+09	6,921232E+09	1,007496E+10
-2535	1,576788E+09	1,576835E+09	3,460608E+09	3,460553E+09	3,153623E+09	6,921161E+09	1,007478E+10
-2534	1,576890E+09	1,576836E+09	3,460574E+09	3,460643E+09	3,153726E+09	6,921217E+09	1,007494E+10
-2533	1,576929E+09	1,576919E+09	3,460587E+09	3,460482E+09	3,153848E+09	6,921069E+09	1,007492E+10
-2532	1,576884E+09	1,576919E+09	3,460498E+09	3,460510E+09	3,153802E+09	6,921008E+09	1,007481E+10
-2531	1,577014E+09	1,576990E+09	3,460457E+09	3,460542E+09	3,154004E+09	6,920999E+09	1,007500E+10
-2530	1,576989E+09	1,577042E+09	3,460486E+09	3,460384E+09	3,154031E+09	6,920871E+09	1,007490E+10
-2529	1,576995E+09	1,577010E+09	3,460454E+09	3,460481E+09	3,154005E+09	6,920935E+09	1,007494E+10
-2528	1,577105E+09	1,577085E+09	3,460460E+09	3,460431E+09	3,154190E+09	6,920891E+09	1,007508E+10
-2527	1,577029E+09	1,577060E+09	3,460468E+09	3,460370E+09	3,154089E+09	6,920838E+09	1,007493E+10
-2526	1,577067E+09	1,577023E+09	3,460426E+09	3,460532E+09	3,154090E+09	6,920957E+09	1,007505E+10
-2525	1,577082E+09	1,577080E+09	3,460469E+09	3,460430E+09	3,154162E+09	6,920898E+09	1,007506E+10
-2524	1,576962E+09	1,577009E+09	3,460460E+09	3,460455E+09	3,153971E+09	6,920915E+09	1,007489E+10
-2523	1,577027E+09	1,576976E+09	3,460466E+09	3,460549E+09	3,154003E+09	6,921016E+09	1,007502E+10
-2522	1,576979E+09	1,576981E+09	3,460547E+09	3,460433E+09	3,153959E+09	6,920980E+09	1,007494E+10
-2521	1,576894E+09	1,576893E+09	3,460536E+09	3,460557E+09	3,153786E+09	6,921093E+09	1,007488E+10
-2520	1,576959E+09	1,576936E+09	3,460532E+09	3,460577E+09	3,153895E+09	6,921109E+09	1,007500E+10
-2519	1,576864E+09	1,576920E+09	3,460580E+09	3,460486E+09	3,153784E+09	6,921066E+09	1,007485E+10
-2518	1,576866E+09	1,576860E+09	3,460538E+09	3,460626E+09	3,153726E+09	6,921163E+09	1,007489E+10
-2517	1,576946E+09	1,576931E+09	3,460574E+09	3,460519E+09	3,153877E+09	6,921093E+09	1,007497E+10
-2516	1,576867E+09	1,576907E+09	3,460556E+09	3,460472E+09	3,153774E+09	6,921027E+09	1,007480E+10
-2515	1,576969E+09	1,576914E+09	3,460474E+09	3,460568E+09	3,153883E+09	6,921042E+09	1,007493E+10
-2514	1,577009E+09	1,577021E+09	3,460492E+09	3,460419E+09	3,154029E+09	6,920911E+09	1,007494E+10
-2513	1,576954E+09	1,577005E+09	3,460438E+09	3,460451E+09	3,153960E+09	6,920889E+09	1,007485E+10
-2512	1,577086E+09	1,577077E+09	3,460392E+09	3,460449E+09	3,154163E+09	6,920841E+09	1,007500E+10
-2511	1,577072E+09	1,577122E+09	3,460445E+09	3,460293E+09	3,154194E+09	6,920738E+09	1,007493E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2510	1,577081E+09	1,577063E+09	3,460382E+09	3,460423E+09	3,154145E+09	6,920805E+09	1,007495E+10
-2509	1,577186E+09	1,577146E+09	3,460392E+09	3,460375E+09	3,154332E+09	6,920767E+09	1,007510E+10
-2508	1,577086E+09	1,577136E+09	3,460392E+09	3,460323E+09	3,154223E+09	6,920715E+09	1,007494E+10
-2507	1,577120E+09	1,577086E+09	3,460322E+09	3,460469E+09	3,154206E+09	6,920791E+09	1,007500E+10
-2506	1,577147E+09	1,577144E+09	3,460392E+09	3,460360E+09	3,154291E+09	6,920752E+09	1,007504E+10
-2505	1,577025E+09	1,577052E+09	3,460422E+09	3,460389E+09	3,154077E+09	6,920811E+09	1,007489E+10
-2504	1,577087E+09	1,577036E+09	3,460409E+09	3,460470E+09	3,154123E+09	6,920879E+09	1,007500E+10
-2503	1,577038E+09	1,577055E+09	3,460498E+09	3,460368E+09	3,154093E+09	6,920866E+09	1,007496E+10
-2502	1,576946E+09	1,576956E+09	3,460467E+09	3,460521E+09	3,153903E+09	6,920988E+09	1,007489E+10
-2501	1,577015E+09	1,577001E+09	3,460493E+09	3,460519E+09	3,154016E+09	6,921013E+09	1,007503E+10
-2500	1,576917E+09	1,576985E+09	3,460548E+09	3,460420E+09	3,153901E+09	6,920968E+09	1,007487E+10
-2499	1,576936E+09	1,576911E+09	3,460466E+09	3,460553E+09	3,153847E+09	6,921018E+09	1,007487E+10
-2498	1,577034E+09	1,576997E+09	3,460490E+09	3,460457E+09	3,154030E+09	6,920947E+09	1,007498E+10
-2497	1,576945E+09	1,576977E+09	3,460472E+09	3,460420E+09	3,153922E+09	6,920893E+09	1,007481E+10
-2496	1,577044E+09	1,577013E+09	3,460363E+09	3,460485E+09	3,154057E+09	6,920848E+09	1,007490E+10
-2495	1,577089E+09	1,577121E+09	3,460407E+09	3,460319E+09	3,154210E+09	6,920725E+09	1,007494E+10
-2494	1,577040E+09	1,577078E+09	3,460363E+09	3,460367E+09	3,154118E+09	6,920729E+09	1,007485E+10
-2493	1,577178E+09	1,577145E+09	3,460352E+09	3,460356E+09	3,154323E+09	6,920708E+09	1,007503E+10
-2492	1,577149E+09	1,577196E+09	3,460397E+09	3,460228E+09	3,154344E+09	6,920625E+09	1,007497E+10
-2491	1,577152E+09	1,577135E+09	3,460284E+09	3,460374E+09	3,154288E+09	6,920658E+09	1,007495E+10
-2490	1,577256E+09	1,577228E+09	3,460296E+09	3,460333E+09	3,154484E+09	6,920628E+09	1,007511E+10
-2489	1,577146E+09	1,577201E+09	3,460328E+09	3,460274E+09	3,154348E+09	6,920602E+09	1,007495E+10
-2488	1,577180E+09	1,577156E+09	3,460253E+09	3,460377E+09	3,154336E+09	6,920630E+09	1,007497E+10
-2487	1,577216E+09	1,577207E+09	3,460354E+09	3,460268E+09	3,154423E+09	6,920622E+09	1,007505E+10
-2486	1,577090E+09	1,577098E+09	3,460372E+09	3,460336E+09	3,154188E+09	6,920708E+09	1,007490E+10
-2485	1,577142E+09	1,577094E+09	3,460371E+09	3,460416E+09	3,154236E+09	6,920787E+09	1,007502E+10
-2484	1,577075E+09	1,577126E+09	3,460452E+09	3,460331E+09	3,154201E+09	6,920783E+09	1,007498E+10
-2483	1,576992E+09	1,577010E+09	3,460388E+09	3,460471E+09	3,154002E+09	6,920859E+09	1,007486E+10
-2482	1,577082E+09	1,577054E+09	3,460425E+09	3,460463E+09	3,154136E+09	6,920887E+09	1,007502E+10
-2481	1,576995E+09	1,577029E+09	3,460492E+09	3,460364E+09	3,154024E+09	6,920855E+09	1,007488E+10
-2480	1,577017E+09	1,576983E+09	3,460368E+09	3,460464E+09	3,154000E+09	6,920832E+09	1,007483E+10
-2479	1,577120E+09	1,577091E+09	3,460400E+09	3,460371E+09	3,154210E+09	6,920771E+09	1,007498E+10
-2478	1,577025E+09	1,577066E+09	3,460378E+09	3,460348E+09	3,154091E+09	6,920726E+09	1,007482E+10
-2477	1,577118E+09	1,577104E+09	3,460314E+09	3,460387E+09	3,154222E+09	6,920701E+09	1,007492E+10
-2476	1,577158E+09	1,577210E+09	3,460374E+09	3,460234E+09	3,154368E+09	6,920608E+09	1,007498E+10
-2475	1,577117E+09	1,577142E+09	3,460295E+09	3,460295E+09	3,154260E+09	6,920591E+09	1,007485E+10
-2474	1,577263E+09	1,577215E+09	3,460272E+09	3,460310E+09	3,154479E+09	6,920582E+09	1,007506E+10
-2473	1,577225E+09	1,577263E+09	3,460311E+09	3,460197E+09	3,154488E+09	6,920508E+09	1,007500E+10
-2472	1,577221E+09	1,577221E+09	3,460166E+09	3,460303E+09	3,154442E+09	6,920469E+09	1,007491E+10
-2471	1,577332E+09	1,577309E+09	3,460212E+09	3,460240E+09	3,154641E+09	6,920452E+09	1,007509E+10
-2470	1,577223E+09	1,577257E+09	3,460260E+09	3,460189E+09	3,154479E+09	6,920450E+09	1,007493E+10
-2469	1,577255E+09	1,577210E+09	3,460229E+09	3,460281E+09	3,154465E+09	6,920509E+09	1,007497E+10
-2468	1,577271E+09	1,577273E+09	3,460328E+09	3,460208E+09	3,154543E+09	6,920536E+09	1,007508E+10
-2467	1,577137E+09	1,577158E+09	3,460309E+09	3,460302E+09	3,154294E+09	6,920611E+09	1,007491E+10
-2466	1,577189E+09	1,577160E+09	3,460311E+09	3,460393E+09	3,154348E+09	6,920704E+09	1,007505E+10
-2465	1,577122E+09	1,577173E+09	3,460408E+09	3,460303E+09	3,154295E+09	6,920712E+09	1,007501E+10
-2464	1,577053E+09	1,577067E+09	3,460313E+09	3,460396E+09	3,154119E+09	6,920710E+09	1,007483E+10
-2463	1,577167E+09	1,577110E+09	3,460352E+09	3,460377E+09	3,154277E+09	6,920729E+09	1,007501E+10
-2462	1,577080E+09	1,577087E+09	3,460397E+09	3,460299E+09	3,154166E+09	6,920695E+09	1,007486E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2461	1,577096E+09	1,577068E+09	3,460290E+09	3,460376E+09	3,154164E+09	6,920666E+09	1,007483E+10
-2460	1,577180E+09	1,577192E+09	3,460330E+09	3,460289E+09	3,154372E+09	6,920619E+09	1,007499E+10
-2459	1,577091E+09	1,577149E+09	3,460299E+09	3,460264E+09	3,154241E+09	6,920563E+09	1,007480E+10
-2458	1,577197E+09	1,577180E+09	3,460255E+09	3,460309E+09	3,154377E+09	6,920565E+09	1,007494E+10
-2457	1,577240E+09	1,577271E+09	3,460325E+09	3,460181E+09	3,154511E+09	6,920506E+09	1,007502E+10
-2456	1,577201E+09	1,577223E+09	3,460198E+09	3,460225E+09	3,154424E+09	6,920423E+09	1,007485E+10
-2455	1,577352E+09	1,577305E+09	3,460177E+09	3,460243E+09	3,154657E+09	6,920419E+09	1,007508E+10
-2454	1,577306E+09	1,577342E+09	3,460215E+09	3,460139E+09	3,154648E+09	6,920353E+09	1,007500E+10
-2453	1,577297E+09	1,577300E+09	3,460116E+09	3,460201E+09	3,154596E+09	6,920317E+09	1,007491E+10
-2452	1,577395E+09	1,577383E+09	3,460184E+09	3,460151E+09	3,154778E+09	6,920334E+09	1,007511E+10
-2451	1,577287E+09	1,577308E+09	3,460211E+09	3,460121E+09	3,154595E+09	6,920332E+09	1,007493E+10
-2450	1,577311E+09	1,577268E+09	3,460179E+09	3,460244E+09	3,154579E+09	6,920423E+09	1,007500E+10
-2449	1,577316E+09	1,577327E+09	3,460274E+09	3,460200E+09	3,154643E+09	6,920474E+09	1,007512E+10
-2448	1,577180E+09	1,577221E+09	3,460216E+09	3,460253E+09	3,154401E+09	6,920469E+09	1,007487E+10
-2447	1,577251E+09	1,577215E+09	3,460239E+09	3,460324E+09	3,154466E+09	6,920564E+09	1,007503E+10
-2446	1,577198E+09	1,577211E+09	3,460334E+09	3,460234E+09	3,154409E+09	6,920569E+09	1,007498E+10
-2445	1,577133E+09	1,577122E+09	3,460259E+09	3,460295E+09	3,154255E+09	6,920554E+09	1,007481E+10
-2444	1,577235E+09	1,577191E+09	3,460291E+09	3,460298E+09	3,154426E+09	6,920589E+09	1,007502E+10
-2443	1,577144E+09	1,577170E+09	3,460307E+09	3,460230E+09	3,154314E+09	6,920537E+09	1,007485E+10
-2442	1,577158E+09	1,577160E+09	3,460225E+09	3,460310E+09	3,154318E+09	6,920535E+09	1,007485E+10
-2441	1,577242E+09	1,577267E+09	3,460290E+09	3,460230E+09	3,154509E+09	6,920520E+09	1,007503E+10
-2440	1,577165E+09	1,577224E+09	3,460233E+09	3,460177E+09	3,154389E+09	6,920410E+09	1,007480E+10
-2439	1,577291E+09	1,577249E+09	3,460189E+09	3,460234E+09	3,154540E+09	6,920423E+09	1,007496E+10
-2438	1,577334E+09	1,577336E+09	3,460228E+09	3,460133E+09	3,154670E+09	6,920360E+09	1,007503E+10
-2437	1,577290E+09	1,577311E+09	3,460105E+09	3,460146E+09	3,154602E+09	6,920251E+09	1,007485E+10
-2436	1,577426E+09	1,577400E+09	3,460091E+09	3,460161E+09	3,154826E+09	6,920252E+09	1,007508E+10
-2435	1,577381E+09	1,577416E+09	3,460128E+09	3,460050E+09	3,154798E+09	6,920178E+09	1,007498E+10
-2434	1,577375E+09	1,577368E+09	3,460065E+09	3,460117E+09	3,154743E+09	6,920182E+09	1,007493E+10
-2433	1,577460E+09	1,577436E+09	3,460149E+09	3,460098E+09	3,154896E+09	6,920247E+09	1,007514E+10
-2432	1,577344E+09	1,577378E+09	3,460141E+09	3,460067E+09	3,154721E+09	6,920207E+09	1,007493E+10
-2431	1,577369E+09	1,577338E+09	3,460113E+09	3,460200E+09	3,154706E+09	6,920312E+09	1,007502E+10
-2430	1,577367E+09	1,577381E+09	3,460204E+09	3,460167E+09	3,154748E+09	6,920372E+09	1,007512E+10
-2429	1,577239E+09	1,577277E+09	3,460175E+09	3,460173E+09	3,154517E+09	6,920347E+09	1,007486E+10
-2428	1,577310E+09	1,577270E+09	3,460200E+09	3,460245E+09	3,154580E+09	6,920445E+09	1,007502E+10
-2427	1,577266E+09	1,577257E+09	3,460262E+09	3,460165E+09	3,154524E+09	6,920427E+09	1,007495E+10
-2426	1,577200E+09	1,577190E+09	3,460187E+09	3,460234E+09	3,154390E+09	6,920422E+09	1,007481E+10
-2425	1,577289E+09	1,577266E+09	3,460222E+09	3,460254E+09	3,154556E+09	6,920476E+09	1,007503E+10
-2424	1,577201E+09	1,577258E+09	3,460215E+09	3,460151E+09	3,154459E+09	6,920366E+09	1,007482E+10
-2423	1,577235E+09	1,577236E+09	3,460162E+09	3,460222E+09	3,154471E+09	6,920384E+09	1,007485E+10
-2422	1,577329E+09	1,577325E+09	3,460225E+09	3,460161E+09	3,154654E+09	6,920386E+09	1,007504E+10
-2421	1,577261E+09	1,577297E+09	3,460174E+09	3,460085E+09	3,154559E+09	6,920259E+09	1,007482E+10
-2420	1,577376E+09	1,577341E+09	3,460114E+09	3,460166E+09	3,154717E+09	6,920280E+09	1,007500E+10
-2419	1,577416E+09	1,577425E+09	3,460121E+09	3,460070E+09	3,154841E+09	6,920192E+09	1,007503E+10
-2418	1,577367E+09	1,577404E+09	3,460027E+09	3,460072E+09	3,154772E+09	6,920099E+09	1,007487E+10
-2417	1,577496E+09	1,577476E+09	3,460041E+09	3,460092E+09	3,154972E+09	6,920133E+09	1,007510E+10
-2416	1,577453E+09	1,577487E+09	3,460056E+09	3,459956E+09	3,154940E+09	6,920012E+09	1,007495E+10
-2415	1,577452E+09	1,577430E+09	3,460010E+09	3,460046E+09	3,154883E+09	6,920056E+09	1,007494E+10
-2414	1,577524E+09	1,577492E+09	3,460077E+09	3,460064E+09	3,155016E+09	6,920141E+09	1,007516E+10
-2413	1,577401E+09	1,577447E+09	3,460078E+09	3,460007E+09	3,154848E+09	6,920084E+09	1,007493E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude <sup>⊙</sup>	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2412	1,577416E+09	1,577406E+09	3,460057E+09	3,460141E+09	3,154822E+09	6,920198E+09	1,007502E+10
-2411	1,577425E+09	1,577423E+09	3,460133E+09	3,460100E+09	3,154848E+09	6,920233E+09	1,007508E+10
-2410	1,577308E+09	1,577323E+09	3,460124E+09	3,460099E+09	3,154631E+09	6,920222E+09	1,007485E+10
-2409	1,577374E+09	1,577318E+09	3,460146E+09	3,460193E+09	3,154692E+09	6,920340E+09	1,007503E+10
-2408	1,577327E+09	1,577332E+09	3,460171E+09	3,460096E+09	3,154659E+09	6,920267E+09	1,007493E+10
-2407	1,577267E+09	1,577275E+09	3,460116E+09	3,460169E+09	3,154542E+09	6,920285E+09	1,007483E+10
-2406	1,577350E+09	1,577339E+09	3,460160E+09	3,460195E+09	3,154689E+09	6,920355E+09	1,007504E+10
-2405	1,577275E+09	1,577336E+09	3,460179E+09	3,460055E+09	3,154612E+09	6,920234E+09	1,007485E+10
-2404	1,577311E+09	1,577311E+09	3,460122E+09	3,460141E+09	3,154622E+09	6,920263E+09	1,007489E+10
-2403	1,577413E+09	1,577389E+09	3,460141E+09	3,460102E+09	3,154802E+09	6,920243E+09	1,007504E+10
-2402	1,577349E+09	1,577382E+09	3,460083E+09	3,460031E+09	3,154731E+09	6,920114E+09	1,007485E+10
-2401	1,577451E+09	1,577427E+09	3,460014E+09	3,460116E+09	3,154878E+09	6,920131E+09	1,007501E+10
-2400	1,577492E+09	1,577516E+09	3,460008E+09	3,459976E+09	3,155008E+09	6,919983E+09	1,007499E+10
-2399	1,577459E+09	1,577483E+09	3,459950E+09	3,459965E+09	3,154943E+09	6,919915E+09	1,007486E+10
-2398	1,577578E+09	1,577537E+09	3,459978E+09	3,460008E+09	3,155114E+09	6,919986E+09	1,007510E+10
-2397	1,577534E+09	1,577562E+09	3,460010E+09	3,459866E+09	3,155096E+09	6,919877E+09	1,007497E+10
-2396	1,577512E+09	1,577512E+09	3,459962E+09	3,459991E+09	3,155024E+09	6,919952E+09	1,007498E+10
-2395	1,577575E+09	1,577559E+09	3,460005E+09	3,460027E+09	3,155134E+09	6,920032E+09	1,007517E+10
-2394	1,577455E+09	1,577508E+09	3,460031E+09	3,459959E+09	3,154963E+09	6,919990E+09	1,007495E+10
-2393	1,577467E+09	1,577450E+09	3,460019E+09	3,460096E+09	3,154916E+09	6,920115E+09	1,007503E+10
-2392	1,577486E+09	1,577467E+09	3,460061E+09	3,460027E+09	3,154953E+09	6,920088E+09	1,007504E+10
-2391	1,577382E+09	1,577376E+09	3,460053E+09	3,460033E+09	3,154758E+09	6,920086E+09	1,007484E+10
-2390	1,577435E+09	1,577381E+09	3,460061E+09	3,460148E+09	3,154816E+09	6,920209E+09	1,007503E+10
-2389	1,577389E+09	1,577419E+09	3,460099E+09	3,460014E+09	3,154808E+09	6,920113E+09	1,007492E+10
-2388	1,577324E+09	1,577361E+09	3,460067E+09	3,460089E+09	3,154685E+09	6,920155E+09	1,007484E+10
-2387	1,577418E+09	1,577401E+09	3,460099E+09	3,460118E+09	3,154819E+09	6,920217E+09	1,007504E+10
-2386	1,577356E+09	1,577399E+09	3,460131E+09	3,459982E+09	3,154756E+09	6,920113E+09	1,007487E+10
-2385	1,577389E+09	1,577379E+09	3,460056E+09	3,460097E+09	3,154768E+09	6,920153E+09	1,007492E+10
-2384	1,577492E+09	1,577474E+09	3,460022E+09	3,460033E+09	3,154966E+09	6,920056E+09	1,007502E+10
-2383	1,577438E+09	1,577477E+09	3,459978E+09	3,459955E+09	3,154915E+09	6,919932E+09	1,007485E+10
-2382	1,577533E+09	1,577512E+09	3,459927E+09	3,460035E+09	3,155045E+09	6,919962E+09	1,007501E+10
-2381	1,577581E+09	1,577603E+09	3,459950E+09	3,459855E+09	3,155184E+09	6,919805E+09	1,007499E+10
-2380	1,577541E+09	1,577564E+09	3,459912E+09	3,459869E+09	3,155105E+09	6,919781E+09	1,007489E+10
-2379	1,577649E+09	1,577601E+09	3,459911E+09	3,459946E+09	3,155250E+09	6,919858E+09	1,007511E+10
-2378	1,577600E+09	1,577636E+09	3,459949E+09	3,459827E+09	3,155236E+09	6,919776E+09	1,007501E+10
-2377	1,577562E+09	1,577579E+09	3,459896E+09	3,459968E+09	3,155141E+09	6,919864E+09	1,007500E+10
-2376	1,577628E+09	1,577616E+09	3,459916E+09	3,459965E+09	3,155245E+09	6,919880E+09	1,007512E+10
-2375	1,577532E+09	1,577556E+09	3,459962E+09	3,459887E+09	3,155088E+09	6,919849E+09	1,007494E+10
-2374	1,577538E+09	1,577491E+09	3,459950E+09	3,460032E+09	3,155029E+09	6,919982E+09	1,007501E+10
-2373	1,577559E+09	1,577536E+09	3,459997E+09	3,459942E+09	3,155094E+09	6,919939E+09	1,007503E+10
-2372	1,577441E+09	1,577463E+09	3,459999E+09	3,459965E+09	3,154904E+09	6,919964E+09	1,007487E+10
-2371	1,577482E+09	1,577457E+09	3,459998E+09	3,460089E+09	3,154939E+09	6,920087E+09	1,007503E+10
-2370	1,577446E+09	1,577493E+09	3,460069E+09	3,459951E+09	3,154939E+09	6,920021E+09	1,007496E+10
-2369	1,577381E+09	1,577416E+09	3,460036E+09	3,460037E+09	3,154797E+09	6,920072E+09	1,007487E+10
-2368	1,577486E+09	1,577454E+09	3,460023E+09	3,460049E+09	3,154940E+09	6,920073E+09	1,007501E+10
-2367	1,577448E+09	1,577464E+09	3,460037E+09	3,459925E+09	3,154912E+09	6,919962E+09	1,007487E+10
-2366	1,577470E+09	1,577455E+09	3,459940E+09	3,460045E+09	3,154925E+09	6,919984E+09	1,007491E+10
-2365	1,577580E+09	1,577574E+09	3,459916E+09	3,459932E+09	3,155154E+09	6,919849E+09	1,007500E+10
-2364	1,577525E+09	1,577575E+09	3,459902E+09	3,459842E+09	3,155100E+09	6,919744E+09	1,007484E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2363	1,577619E+09	1,577588E+09	3,459854E+09	3,459928E+09	3,155207E+09	6,919782E+09	1,007499E+10
-2362	1,577670E+09	1,577679E+09	3,459907E+09	3,459768E+09	3,155350E+09	6,919674E+09	1,007502E+10
-2361	1,577610E+09	1,577639E+09	3,459865E+09	3,459828E+09	3,155249E+09	6,919692E+09	1,007494E+10
-2360	1,577707E+09	1,577680E+09	3,459826E+09	3,459901E+09	3,155387E+09	6,919726E+09	1,007511E+10
-2359	1,577668E+09	1,577710E+09	3,459873E+09	3,459786E+09	3,155378E+09	6,919660E+09	1,007504E+10
-2358	1,577623E+09	1,577636E+09	3,459829E+09	3,459921E+09	3,155259E+09	6,919750E+09	1,007501E+10
-2357	1,577702E+09	1,577674E+09	3,459858E+09	3,459873E+09	3,155376E+09	6,919730E+09	1,007511E+10
-2356	1,577603E+09	1,577615E+09	3,459914E+09	3,459807E+09	3,155218E+09	6,919720E+09	1,007494E+10
-2355	1,577600E+09	1,577548E+09	3,459874E+09	3,459971E+09	3,155148E+09	6,919845E+09	1,007499E+10
-2354	1,577614E+09	1,577607E+09	3,459937E+09	3,459887E+09	3,155221E+09	6,919824E+09	1,007505E+10
-2353	1,577482E+09	1,577533E+09	3,459950E+09	3,459925E+09	3,155015E+09	6,919875E+09	1,007489E+10
-2352	1,577529E+09	1,577514E+09	3,459929E+09	3,460013E+09	3,155043E+09	6,919942E+09	1,007499E+10
-2351	1,577522E+09	1,577543E+09	3,460009E+09	3,459883E+09	3,155064E+09	6,919892E+09	1,007496E+10
-2350	1,577459E+09	1,577466E+09	3,459962E+09	3,459982E+09	3,154926E+09	6,919944E+09	1,007487E+10
-2349	1,577575E+09	1,577532E+09	3,459931E+09	3,459967E+09	3,155106E+09	6,919897E+09	1,007500E+10
-2348	1,577533E+09	1,577563E+09	3,459947E+09	3,459846E+09	3,155096E+09	6,919793E+09	1,007489E+10
-2347	1,577550E+09	1,577548E+09	3,459841E+09	3,459958E+09	3,155098E+09	6,919799E+09	1,007490E+10
-2346	1,577665E+09	1,577666E+09	3,459861E+09	3,459833E+09	3,155331E+09	6,919694E+09	1,007503E+10
-2345	1,577602E+09	1,577656E+09	3,459861E+09	3,459763E+09	3,155258E+09	6,919625E+09	1,007488E+10
-2344	1,577692E+09	1,577660E+09	3,459783E+09	3,459846E+09	3,155351E+09	6,919630E+09	1,007498E+10
-2343	1,577754E+09	1,577757E+09	3,459825E+09	3,459724E+09	3,155511E+09	6,919549E+09	1,007506E+10
-2342	1,577678E+09	1,577715E+09	3,459774E+09	3,459798E+09	3,155392E+09	6,919572E+09	1,007496E+10
-2341	1,577778E+09	1,577761E+09	3,459741E+09	3,459826E+09	3,155539E+09	6,919567E+09	1,007511E+10
-2340	1,577745E+09	1,577780E+09	3,459812E+09	3,459702E+09	3,155525E+09	6,919514E+09	1,007504E+10
-2339	1,577696E+09	1,577684E+09	3,459759E+09	3,459836E+09	3,155380E+09	6,919595E+09	1,007498E+10
-2338	1,577778E+09	1,577728E+09	3,459812E+09	3,459799E+09	3,155506E+09	6,919611E+09	1,007512E+10
-2337	1,577656E+09	1,577679E+09	3,459862E+09	3,459761E+09	3,155335E+09	6,919623E+09	1,007496E+10
-2336	1,577639E+09	1,577616E+09	3,459801E+09	3,459912E+09	3,155255E+09	6,919712E+09	1,007497E+10
-2335	1,577669E+09	1,577675E+09	3,459880E+09	3,459839E+09	3,155344E+09	6,919719E+09	1,007506E+10
-2334	1,577534E+09	1,577584E+09	3,459906E+09	3,459876E+09	3,155118E+09	6,919782E+09	1,007490E+10
-2333	1,577598E+09	1,577570E+09	3,459879E+09	3,459930E+09	3,155169E+09	6,919809E+09	1,007498E+10
-2332	1,577602E+09	1,577603E+09	3,459949E+09	3,459813E+09	3,155205E+09	6,919762E+09	1,007497E+10
-2331	1,577536E+09	1,577535E+09	3,459857E+09	3,459921E+09	3,155071E+09	6,919779E+09	1,007485E+10
-2330	1,577657E+09	1,577620E+09	3,459837E+09	3,459897E+09	3,155276E+09	6,919735E+09	1,007501E+10
-2329	1,577605E+09	1,577656E+09	3,459865E+09	3,459774E+09	3,155261E+09	6,919639E+09	1,007490E+10
-2328	1,577625E+09	1,577630E+09	3,459758E+09	3,459848E+09	3,155255E+09	6,919605E+09	1,007486E+10
-2327	1,577760E+09	1,577742E+09	3,459793E+09	3,459742E+09	3,155502E+09	6,919535E+09	1,007504E+10
-2326	1,577687E+09	1,577730E+09	3,459798E+09	3,459702E+09	3,155417E+09	6,919500E+09	1,007492E+10
-2325	1,577774E+09	1,577752E+09	3,459706E+09	3,459772E+09	3,155526E+09	6,919478E+09	1,007500E+10
-2324	1,577830E+09	1,577853E+09	3,459756E+09	3,459666E+09	3,155682E+09	6,919422E+09	1,007510E+10
-2323	1,577749E+09	1,577791E+09	3,459695E+09	3,459737E+09	3,155540E+09	6,919432E+09	1,007497E+10
-2322	1,577856E+09	1,577821E+09	3,459693E+09	3,459748E+09	3,155677E+09	6,919441E+09	1,007512E+10
-2321	1,577813E+09	1,577833E+09	3,459768E+09	3,459639E+09	3,155645E+09	6,919407E+09	1,007505E+10
-2320	1,577758E+09	1,577732E+09	3,459682E+09	3,459759E+09	3,155489E+09	6,919441E+09	1,007493E+10
-2319	1,577841E+09	1,577790E+09	3,459728E+09	3,459753E+09	3,155631E+09	6,919480E+09	1,007511E+10
-2318	1,577704E+09	1,577745E+09	3,459788E+09	3,459726E+09	3,155450E+09	6,919514E+09	1,007496E+10
-2317	1,577691E+09	1,577688E+09	3,459737E+09	3,459832E+09	3,155379E+09	6,919569E+09	1,007495E+10
-2316	1,577732E+09	1,577737E+09	3,459839E+09	3,459760E+09	3,155469E+09	6,919598E+09	1,007507E+10
-2315	1,577605E+09	1,577631E+09	3,459844E+09	3,459805E+09	3,155235E+09	6,919649E+09	1,007488E+10



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2314	1,577678E+09	1,577626E+09	3,459825E+09	3,459865E+09	3,155304E+09	6,919690E+09	1,007499E+10
-2313	1,577668E+09	1,577681E+09	3,459876E+09	3,459769E+09	3,155349E+09	6,919645E+09	1,007499E+10
-2312	1,577598E+09	1,577621E+09	3,459759E+09	3,459845E+09	3,155219E+09	6,919603E+09	1,007482E+10
-2311	1,577736E+09	1,577710E+09	3,459753E+09	3,459823E+09	3,155446E+09	6,919576E+09	1,007502E+10
-2310	1,577683E+09	1,577736E+09	3,459805E+09	3,459692E+09	3,155419E+09	6,919497E+09	1,007492E+10
-2309	1,577713E+09	1,577713E+09	3,459700E+09	3,459740E+09	3,155426E+09	6,919440E+09	1,007487E+10
-2308	1,577850E+09	1,577826E+09	3,459737E+09	3,459663E+09	3,155676E+09	6,919400E+09	1,007508E+10
-2307	1,577766E+09	1,577810E+09	3,459706E+09	3,459647E+09	3,155575E+09	6,919353E+09	1,007493E+10
-2306	1,577853E+09	1,577835E+09	3,459631E+09	3,459716E+09	3,155689E+09	6,919347E+09	1,007504E+10
-2305	1,577899E+09	1,577927E+09	3,459684E+09	3,459608E+09	3,155826E+09	6,919291E+09	1,007512E+10
-2304	1,577820E+09	1,577847E+09	3,459609E+09	3,459644E+09	3,155668E+09	6,919253E+09	1,007492E+10
-2303	1,577943E+09	1,577877E+09	3,459613E+09	3,459674E+09	3,155819E+09	6,919287E+09	1,007511E+10
-2302	1,577883E+09	1,577890E+09	3,459695E+09	3,459584E+09	3,155773E+09	6,919279E+09	1,007505E+10
-2301	1,577819E+09	1,577813E+09	3,459609E+09	3,459683E+09	3,155632E+09	6,919292E+09	1,007492E+10
-2300	1,577895E+09	1,577872E+09	3,459679E+09	3,459688E+09	3,155767E+09	6,919367E+09	1,007513E+10
-2299	1,577753E+09	1,577810E+09	3,459740E+09	3,459667E+09	3,155563E+09	6,919407E+09	1,007497E+10
-2298	1,577750E+09	1,577739E+09	3,459718E+09	3,459766E+09	3,155489E+09	6,919485E+09	1,007497E+10
-2297	1,577788E+09	1,577784E+09	3,459806E+09	3,459714E+09	3,155571E+09	6,919521E+09	1,007509E+10
-2296	1,577664E+09	1,577679E+09	3,459762E+09	3,459746E+09	3,155343E+09	6,919508E+09	1,007485E+10
-2295	1,577752E+09	1,577695E+09	3,459718E+09	3,459822E+09	3,155447E+09	6,919540E+09	1,007499E+10
-2294	1,577737E+09	1,577760E+09	3,459779E+09	3,459716E+09	3,155496E+09	6,919494E+09	1,007499E+10
-2293	1,577678E+09	1,577712E+09	3,459674E+09	3,459731E+09	3,155389E+09	6,919405E+09	1,007479E+10
-2292	1,577824E+09	1,577794E+09	3,459698E+09	3,459708E+09	3,155618E+09	6,919406E+09	1,007502E+10
-2291	1,577774E+09	1,577810E+09	3,459739E+09	3,459601E+09	3,155584E+09	6,919340E+09	1,007492E+10
-2290	1,577803E+09	1,577791E+09	3,459646E+09	3,459663E+09	3,155594E+09	6,919310E+09	1,007490E+10
-2289	1,577919E+09	1,577918E+09	3,459668E+09	3,459621E+09	3,155837E+09	6,919289E+09	1,007513E+10
-2288	1,577835E+09	1,577893E+09	3,459612E+09	3,459583E+09	3,155728E+09	6,919195E+09	1,007492E+10
-2287	1,577935E+09	1,577912E+09	3,459542E+09	3,459656E+09	3,155847E+09	6,919199E+09	1,007505E+10
-2286	1,577979E+09	1,577991E+09	3,459615E+09	3,459541E+09	3,155970E+09	6,919156E+09	1,007513E+10
-2285	1,577904E+09	1,577916E+09	3,459534E+09	3,459542E+09	3,155820E+09	6,919076E+09	1,007490E+10
-2284	1,578019E+09	1,577951E+09	3,459545E+09	3,459594E+09	3,155970E+09	6,919139E+09	1,007511E+10
-2283	1,577943E+09	1,577966E+09	3,459611E+09	3,459527E+09	3,155909E+09	6,919138E+09	1,007505E+10
-2282	1,577874E+09	1,577885E+09	3,459566E+09	3,459622E+09	3,155758E+09	6,919189E+09	1,007495E+10
-2281	1,577936E+09	1,577935E+09	3,459650E+09	3,459637E+09	3,155871E+09	6,919287E+09	1,007516E+10
-2280	1,577804E+09	1,577849E+09	3,459693E+09	3,459596E+09	3,155653E+09	6,919289E+09	1,007494E+10
-2279	1,577820E+09	1,577781E+09	3,459655E+09	3,459722E+09	3,155601E+09	6,919377E+09	1,007498E+10
-2278	1,577853E+09	1,577835E+09	3,459732E+09	3,459680E+09	3,155687E+09	6,919412E+09	1,007510E+10
-2277	1,577733E+09	1,577761E+09	3,459668E+09	3,459671E+09	3,155494E+09	6,919339E+09	1,007483E+10
-2276	1,577826E+09	1,577787E+09	3,459643E+09	3,459740E+09	3,155613E+09	6,919382E+09	1,007500E+10
-2275	1,577810E+09	1,577840E+09	3,459705E+09	3,459625E+09	3,155650E+09	6,919330E+09	1,007498E+10
-2274	1,577763E+09	1,577785E+09	3,459642E+09	3,459631E+09	3,155548E+09	6,919274E+09	1,007482E+10
-2273	1,577897E+09	1,577867E+09	3,459656E+09	3,459634E+09	3,155764E+09	6,919291E+09	1,007505E+10
-2272	1,577845E+09	1,577882E+09	3,459652E+09	3,459535E+09	3,155727E+09	6,919187E+09	1,007491E+10
-2271	1,577883E+09	1,577878E+09	3,459537E+09	3,459627E+09	3,155762E+09	6,919164E+09	1,007493E+10
-2270	1,577993E+09	1,578000E+09	3,459568E+09	3,459574E+09	3,155994E+09	6,919143E+09	1,007514E+10
-2269	1,577923E+09	1,577979E+09	3,459515E+09	3,459480E+09	3,155901E+09	6,918995E+09	1,007490E+10
-2268	1,578033E+09	1,577988E+09	3,459468E+09	3,459548E+09	3,156020E+09	6,919016E+09	1,007504E+10
-2267	1,578067E+09	1,578058E+09	3,459534E+09	3,459451E+09	3,156125E+09	6,918985E+09	1,007511E+10
-2266	1,577985E+09	1,577991E+09	3,459484E+09	3,459461E+09	3,155976E+09	6,918946E+09	1,007492E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2265	1,578066E+09	1,578036E+09	3,459501E+09	3,459543E+09	3,156102E+09	6,919044E+09	1,007515E+10
-2264	1,577985E+09	1,578035E+09	3,459558E+09	3,459472E+09	3,156019E+09	6,919030E+09	1,007505E+10
-2263	1,577928E+09	1,577941E+09	3,459521E+09	3,459582E+09	3,155869E+09	6,919103E+09	1,007497E+10
-2262	1,577990E+09	1,577974E+09	3,459614E+09	3,459601E+09	3,155963E+09	6,919215E+09	1,007518E+10
-2261	1,577873E+09	1,577895E+09	3,459626E+09	3,459529E+09	3,155768E+09	6,919155E+09	1,007492E+10
-2260	1,577893E+09	1,577840E+09	3,459571E+09	3,459663E+09	3,155733E+09	6,919234E+09	1,007497E+10
-2259	1,577921E+09	1,577906E+09	3,459624E+09	3,459625E+09	3,155826E+09	6,919249E+09	1,007508E+10
-2258	1,577808E+09	1,577839E+09	3,459596E+09	3,459581E+09	3,155647E+09	6,919177E+09	1,007482E+10
-2257	1,577888E+09	1,577868E+09	3,459590E+09	3,459647E+09	3,155756E+09	6,919237E+09	1,007499E+10
-2256	1,577884E+09	1,577907E+09	3,459640E+09	3,459524E+09	3,155791E+09	6,919165E+09	1,007496E+10
-2255	1,577847E+09	1,577857E+09	3,459569E+09	3,459569E+09	3,155704E+09	6,919138E+09	1,007484E+10
-2254	1,577969E+09	1,577947E+09	3,459582E+09	3,459594E+09	3,155915E+09	6,919176E+09	1,007509E+10
-2253	1,577924E+09	1,577979E+09	3,459555E+09	3,459463E+09	3,155903E+09	6,919019E+09	1,007492E+10
-2252	1,577970E+09	1,577975E+09	3,459454E+09	3,459548E+09	3,155945E+09	6,919002E+09	1,007495E+10
-2251	1,578082E+09	1,578080E+09	3,459483E+09	3,459488E+09	3,156162E+09	6,918972E+09	1,007513E+10
-2250	1,578021E+09	1,578050E+09	3,459465E+09	3,459375E+09	3,156071E+09	6,918840E+09	1,007491E+10
-2249	1,578108E+09	1,578063E+09	3,459416E+09	3,459467E+09	3,156172E+09	6,918883E+09	1,007505E+10
-2248	1,578132E+09	1,578129E+09	3,459451E+09	3,459382E+09	3,156260E+09	6,918833E+09	1,007509E+10
-2247	1,578046E+09	1,578071E+09	3,459404E+09	3,459427E+09	3,156117E+09	6,918830E+09	1,007495E+10
-2246	1,578112E+09	1,578101E+09	3,459447E+09	3,459507E+09	3,156214E+09	6,918954E+09	1,007517E+10
-2245	1,578045E+09	1,578092E+09	3,459502E+09	3,459397E+09	3,156137E+09	6,918899E+09	1,007504E+10
-2244	1,578003E+09	1,577989E+09	3,459472E+09	3,459513E+09	3,155992E+09	6,918985E+09	1,007498E+10
-2243	1,578061E+09	1,578015E+09	3,459534E+09	3,459545E+09	3,156076E+09	6,919079E+09	1,007515E+10
-2242	1,577948E+09	1,577956E+09	3,459560E+09	3,459465E+09	3,155903E+09	6,919025E+09	1,007493E+10
-2241	1,577945E+09	1,577923E+09	3,459502E+09	3,459601E+09	3,155868E+09	6,919103E+09	1,007497E+10
-2240	1,577974E+09	1,577979E+09	3,459547E+09	3,459543E+09	3,155953E+09	6,919090E+09	1,007504E+10
-2239	1,577877E+09	1,577915E+09	3,459537E+09	3,459511E+09	3,155792E+09	6,919048E+09	1,007484E+10
-2238	1,577952E+09	1,577931E+09	3,459549E+09	3,459579E+09	3,155883E+09	6,919129E+09	1,007501E+10
-2237	1,577962E+09	1,577979E+09	3,459568E+09	3,459444E+09	3,155941E+09	6,919012E+09	1,007495E+10
-2236	1,577931E+09	1,577941E+09	3,459482E+09	3,459506E+09	3,155872E+09	6,918989E+09	1,007486E+10
-2235	1,578048E+09	1,578032E+09	3,459472E+09	3,459538E+09	3,156080E+09	6,919009E+09	1,007509E+10
-2234	1,578019E+09	1,578065E+09	3,459477E+09	3,459374E+09	3,156083E+09	6,918851E+09	1,007493E+10
-2233	1,578055E+09	1,578060E+09	3,459387E+09	3,459450E+09	3,156115E+09	6,918837E+09	1,007495E+10
-2232	1,578172E+09	1,578148E+09	3,459401E+09	3,459385E+09	3,156319E+09	6,918787E+09	1,007511E+10
-2231	1,578113E+09	1,578129E+09	3,459382E+09	3,459306E+09	3,156242E+09	6,918688E+09	1,007493E+10
-2230	1,578173E+09	1,578146E+09	3,459350E+09	3,459419E+09	3,156319E+09	6,918769E+09	1,007509E+10
-2229	1,578196E+09	1,578219E+09	3,459376E+09	3,459318E+09	3,156414E+09	6,918694E+09	1,007511E+10
-2228	1,578110E+09	1,578148E+09	3,459354E+09	3,459365E+09	3,156258E+09	6,918719E+09	1,007498E+10
-2227	1,578173E+09	1,578155E+09	3,459395E+09	3,459451E+09	3,156328E+09	6,918846E+09	1,007517E+10
-2226	1,578122E+09	1,578133E+09	3,459465E+09	3,459326E+09	3,156256E+09	6,918791E+09	1,007505E+10
-2225	1,578059E+09	1,578043E+09	3,459414E+09	3,459457E+09	3,156102E+09	6,918871E+09	1,007497E+10
-2224	1,578116E+09	1,578071E+09	3,459434E+09	3,459491E+09	3,156187E+09	6,918925E+09	1,007511E+10
-2223	1,578008E+09	1,578030E+09	3,459461E+09	3,459418E+09	3,156038E+09	6,918878E+09	1,007492E+10
-2222	1,577996E+09	1,577993E+09	3,459440E+09	3,459535E+09	3,155990E+09	6,918975E+09	1,007497E+10
-2221	1,578043E+09	1,578048E+09	3,459484E+09	3,459440E+09	3,156090E+09	6,918924E+09	1,007501E+10
-2220	1,577960E+09	1,577983E+09	3,459488E+09	3,459421E+09	3,155942E+09	6,918909E+09	1,007485E+10
-2219	1,578028E+09	1,577998E+09	3,459477E+09	3,459517E+09	3,156025E+09	6,918994E+09	1,007502E+10
-2218	1,578046E+09	1,578061E+09	3,459503E+09	3,459378E+09	3,156107E+09	6,918882E+09	1,007499E+10
-2217	1,578000E+09	1,578040E+09	3,459412E+09	3,459444E+09	3,156039E+09	6,918856E+09	1,007489E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2216	1,578125E+09	1,578112E+09	3,459383E+09	3,459457E+09	3,156237E+09	6,918839E+09	1,007508E+10
-2215	1,578113E+09	1,578147E+09	3,459397E+09	3,459299E+09	3,156260E+09	6,918696E+09	1,007496E+10
-2214	1,578141E+09	1,578132E+09	3,459324E+09	3,459373E+09	3,156273E+09	6,918697E+09	1,007497E+10
-2213	1,578257E+09	1,578228E+09	3,459310E+09	3,459297E+09	3,156485E+09	6,918607E+09	1,007509E+10
-2212	1,578196E+09	1,578222E+09	3,459295E+09	3,459240E+09	3,156418E+09	6,918535E+09	1,007495E+10
-2211	1,578237E+09	1,578227E+09	3,459260E+09	3,459360E+09	3,156464E+09	6,918620E+09	1,007508E+10
-2210	1,578269E+09	1,578289E+09	3,459328E+09	3,459240E+09	3,156557E+09	6,918568E+09	1,007513E+10
-2209	1,578173E+09	1,578210E+09	3,459316E+09	3,459290E+09	3,156383E+09	6,918606E+09	1,007499E+10
-2208	1,578238E+09	1,578193E+09	3,459329E+09	3,459381E+09	3,156431E+09	6,918710E+09	1,007514E+10
-2207	1,578192E+09	1,578188E+09	3,459386E+09	3,459287E+09	3,156381E+09	6,918672E+09	1,007505E+10
-2206	1,578110E+09	1,578107E+09	3,459343E+09	3,459416E+09	3,156217E+09	6,918759E+09	1,007498E+10
-2205	1,578170E+09	1,578146E+09	3,459350E+09	3,459418E+09	3,156316E+09	6,918768E+09	1,007508E+10
-2204	1,578074E+09	1,578106E+09	3,459406E+09	3,459336E+09	3,156180E+09	6,918742E+09	1,007492E+10
-2203	1,578059E+09	1,578053E+09	3,459395E+09	3,459454E+09	3,156113E+09	6,918849E+09	1,007496E+10
-2202	1,578124E+09	1,578105E+09	3,459455E+09	3,459355E+09	3,156229E+09	6,918811E+09	1,007504E+10
-2201	1,578025E+09	1,578056E+09	3,459437E+09	3,459362E+09	3,156081E+09	6,918798E+09	1,007488E+10
-2200	1,578093E+09	1,578070E+09	3,459378E+09	3,459466E+09	3,156164E+09	6,918844E+09	1,007501E+10
-2199	1,578125E+09	1,578149E+09	3,459398E+09	3,459332E+09	3,156274E+09	6,918730E+09	1,007500E+10
-2198	1,578077E+09	1,578121E+09	3,459331E+09	3,459372E+09	3,156198E+09	6,918704E+09	1,007490E+10
-2197	1,578223E+09	1,578191E+09	3,459288E+09	3,459348E+09	3,156414E+09	6,918636E+09	1,007505E+10
-2196	1,578220E+09	1,578229E+09	3,459311E+09	3,459195E+09	3,156449E+09	6,918507E+09	1,007496E+10
-2195	1,578228E+09	1,578217E+09	3,459236E+09	3,459291E+09	3,156446E+09	6,918527E+09	1,007497E+10
-2194	1,578342E+09	1,578321E+09	3,459245E+09	3,459213E+09	3,156663E+09	6,918458E+09	1,007512E+10
-2193	1,578254E+09	1,578319E+09	3,459248E+09	3,459171E+09	3,156573E+09	6,918419E+09	1,007499E+10
-2192	1,578294E+09	1,578295E+09	3,459206E+09	3,459293E+09	3,156589E+09	6,918499E+09	1,007509E+10
-2191	1,578339E+09	1,578345E+09	3,459277E+09	3,459191E+09	3,156685E+09	6,918468E+09	1,007515E+10
-2190	1,578235E+09	1,578253E+09	3,459269E+09	3,459247E+09	3,156488E+09	6,918516E+09	1,007500E+10
-2189	1,578303E+09	1,578243E+09	3,459235E+09	3,459322E+09	3,156546E+09	6,918557E+09	1,007510E+10
-2188	1,578259E+09	1,578258E+09	3,459290E+09	3,459231E+09	3,156517E+09	6,918521E+09	1,007504E+10
-2187	1,578165E+09	1,578175E+09	3,459258E+09	3,459349E+09	3,156341E+09	6,918608E+09	1,007495E+10
-2186	1,578239E+09	1,578211E+09	3,459309E+09	3,459319E+09	3,156450E+09	6,918628E+09	1,007508E+10
-2185	1,578135E+09	1,578175E+09	3,459381E+09	3,459246E+09	3,156310E+09	6,918627E+09	1,007494E+10
-2184	1,578123E+09	1,578106E+09	3,459340E+09	3,459382E+09	3,156229E+09	6,918722E+09	1,007495E+10
-2183	1,578193E+09	1,578177E+09	3,459384E+09	3,459321E+09	3,156371E+09	6,918705E+09	1,007508E+10
-2182	1,578086E+09	1,578136E+09	3,459366E+09	3,459328E+09	3,156221E+09	6,918694E+09	1,007492E+10
-2181	1,578165E+09	1,578152E+09	3,459279E+09	3,459397E+09	3,156317E+09	6,918675E+09	1,007499E+10
-2180	1,578218E+09	1,578235E+09	3,459314E+09	3,459247E+09	3,156453E+09	6,918561E+09	1,007501E+10
-2179	1,578171E+09	1,578195E+09	3,459249E+09	3,459271E+09	3,156366E+09	6,918520E+09	1,007489E+10
-2178	1,578326E+09	1,578269E+09	3,459221E+09	3,459236E+09	3,156594E+09	6,918457E+09	1,007505E+10
-2177	1,578300E+09	1,578328E+09	3,459240E+09	3,459108E+09	3,156628E+09	6,918347E+09	1,007498E+10
-2176	1,578296E+09	1,578305E+09	3,459142E+09	3,459221E+09	3,156600E+09	6,918362E+09	1,007496E+10
-2175	1,578412E+09	1,578410E+09	3,459169E+09	3,459162E+09	3,156822E+09	6,918331E+09	1,007515E+10
-2174	1,578319E+09	1,578385E+09	3,459202E+09	3,459113E+09	3,156704E+09	6,918315E+09	1,007502E+10
-2173	1,578370E+09	1,578346E+09	3,459135E+09	3,459216E+09	3,156716E+09	6,918351E+09	1,007507E+10
-2172	1,578426E+09	1,578401E+09	3,459199E+09	3,459128E+09	3,156826E+09	6,918327E+09	1,007515E+10
-2171	1,578305E+09	1,578314E+09	3,459181E+09	3,459190E+09	3,156618E+09	6,918371E+09	1,007499E+10
-2170	1,578374E+09	1,578317E+09	3,459164E+09	3,459249E+09	3,156691E+09	6,918413E+09	1,007510E+10
-2169	1,578310E+09	1,578343E+09	3,459244E+09	3,459153E+09	3,156653E+09	6,918397E+09	1,007505E+10
-2168	1,578216E+09	1,578238E+09	3,459215E+09	3,459271E+09	3,156454E+09	6,918486E+09	1,007494E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2167	1,578301E+09	1,578270E+09	3,459276E+09	3,459262E+09	3,156572E+09	6,918538E+09	1,007511E+10
-2166	1,578190E+09	1,578227E+09	3,459350E+09	3,459207E+09	3,156417E+09	6,918557E+09	1,007497E+10
-2165	1,578184E+09	1,578168E+09	3,459252E+09	3,459337E+09	3,156352E+09	6,918589E+09	1,007494E+10
-2164	1,578266E+09	1,578254E+09	3,459278E+09	3,459272E+09	3,156520E+09	6,918550E+09	1,007507E+10
-2163	1,578160E+09	1,578212E+09	3,459264E+09	3,459256E+09	3,156372E+09	6,918521E+09	1,007489E+10
-2162	1,578264E+09	1,578228E+09	3,459201E+09	3,459280E+09	3,156492E+09	6,918481E+09	1,007497E+10
-2161	1,578310E+09	1,578321E+09	3,459250E+09	3,459128E+09	3,156630E+09	6,918378E+09	1,007501E+10
-2160	1,578261E+09	1,578275E+09	3,459167E+09	3,459171E+09	3,156535E+09	6,918338E+09	1,007487E+10
-2159	1,578408E+09	1,578365E+09	3,459142E+09	3,459169E+09	3,156773E+09	6,918310E+09	1,007508E+10
-2158	1,578364E+09	1,578424E+09	3,459182E+09	3,459057E+09	3,156788E+09	6,918239E+09	1,007503E+10
-2157	1,578362E+09	1,578389E+09	3,459067E+09	3,459154E+09	3,156751E+09	6,918221E+09	1,007497E+10
-2156	1,578492E+09	1,578485E+09	3,459106E+09	3,459097E+09	3,156977E+09	6,918203E+09	1,007518E+10
-2155	1,578401E+09	1,578440E+09	3,459139E+09	3,459050E+09	3,156840E+09	6,918188E+09	1,007503E+10
-2154	1,578459E+09	1,578401E+09	3,459067E+09	3,459139E+09	3,156860E+09	6,918205E+09	1,007507E+10
-2153	1,578491E+09	1,578479E+09	3,459121E+09	3,459062E+09	3,156970E+09	6,918183E+09	1,007515E+10
-2152	1,578361E+09	1,578386E+09	3,459086E+09	3,459124E+09	3,156747E+09	6,918209E+09	1,007496E+10
-2151	1,578429E+09	1,578393E+09	3,459101E+09	3,459185E+09	3,156822E+09	6,918286E+09	1,007511E+10
-2150	1,578361E+09	1,578403E+09	3,459218E+09	3,459089E+09	3,156765E+09	6,918307E+09	1,007507E+10
-2149	1,578275E+09	1,578284E+09	3,459163E+09	3,459198E+09	3,156559E+09	6,918361E+09	1,007492E+10
-2148	1,578370E+09	1,578328E+09	3,459213E+09	3,459212E+09	3,156697E+09	6,918425E+09	1,007512E+10
-2147	1,578254E+09	1,578289E+09	3,459269E+09	3,459163E+09	3,156543E+09	6,918432E+09	1,007497E+10
-2146	1,578258E+09	1,578242E+09	3,459171E+09	3,459265E+09	3,156500E+09	6,918436E+09	1,007494E+10
-2145	1,578336E+09	1,578343E+09	3,459210E+09	3,459186E+09	3,156679E+09	6,918396E+09	1,007508E+10
-2144	1,578241E+09	1,578284E+09	3,459186E+09	3,459156E+09	3,156525E+09	6,918342E+09	1,007487E+10
-2143	1,578357E+09	1,578306E+09	3,459134E+09	3,459191E+09	3,156663E+09	6,918326E+09	1,007499E+10
-2142	1,578391E+09	1,578400E+09	3,459188E+09	3,459057E+09	3,156791E+09	6,918245E+09	1,007504E+10
-2141	1,578337E+09	1,578362E+09	3,459066E+09	3,459100E+09	3,156699E+09	6,918166E+09	1,007486E+10
-2140	1,578486E+09	1,578464E+09	3,459043E+09	3,459108E+09	3,156950E+09	6,918151E+09	1,007510E+10
-2139	1,578441E+09	1,578507E+09	3,459102E+09	3,458990E+09	3,156948E+09	6,918092E+09	1,007504E+10
-2138	1,578458E+09	1,578461E+09	3,459005E+09	3,459059E+09	3,156919E+09	6,918064E+09	1,007498E+10
-2137	1,578578E+09	1,578558E+09	3,459048E+09	3,459007E+09	3,157136E+09	6,918055E+09	1,007519E+10
-2136	1,578482E+09	1,578504E+09	3,459051E+09	3,458979E+09	3,156987E+09	6,918030E+09	1,007502E+10
-2135	1,578532E+09	1,578481E+09	3,458985E+09	3,459086E+09	3,157013E+09	6,918071E+09	1,007508E+10
-2134	1,578540E+09	1,578556E+09	3,459067E+09	3,459014E+09	3,157096E+09	6,918081E+09	1,007518E+10
-2133	1,578411E+09	1,578453E+09	3,459027E+09	3,459054E+09	3,156864E+09	6,918082E+09	1,007495E+10
-2132	1,578488E+09	1,578453E+09	3,459057E+09	3,459115E+09	3,156941E+09	6,918172E+09	1,007511E+10
-2131	1,578423E+09	1,578446E+09	3,459178E+09	3,459033E+09	3,156868E+09	6,918211E+09	1,007508E+10
-2130	1,578347E+09	1,578334E+09	3,459107E+09	3,459135E+09	3,156681E+09	6,918241E+09	1,007492E+10
-2129	1,578425E+09	1,578400E+09	3,459138E+09	3,459156E+09	3,156825E+09	6,918294E+09	1,007512E+10
-2128	1,578317E+09	1,578358E+09	3,459167E+09	3,459104E+09	3,156674E+09	6,918271E+09	1,007495E+10
-2127	1,578334E+09	1,578318E+09	3,459089E+09	3,459190E+09	3,156651E+09	6,918278E+09	1,007493E+10
-2126	1,578413E+09	1,578413E+09	3,459153E+09	3,459101E+09	3,156826E+09	6,918254E+09	1,007508E+10
-2125	1,578328E+09	1,578355E+09	3,459101E+09	3,459056E+09	3,156684E+09	6,918157E+09	1,007484E+10
-2124	1,578445E+09	1,578397E+09	3,459045E+09	3,459110E+09	3,156842E+09	6,918155E+09	1,007500E+10
-2123	1,578470E+09	1,578495E+09	3,459102E+09	3,458995E+09	3,156965E+09	6,918097E+09	1,007506E+10
-2122	1,578420E+09	1,578461E+09	3,458994E+09	3,459018E+09	3,156882E+09	6,918012E+09	1,007489E+10
-2121	1,578559E+09	1,578564E+09	3,458992E+09	3,459023E+09	3,157123E+09	6,918015E+09	1,007514E+10
-2120	1,578527E+09	1,578578E+09	3,459035E+09	3,458911E+09	3,157105E+09	6,917946E+09	1,007505E+10
-2119	1,578548E+09	1,578528E+09	3,458943E+09	3,458993E+09	3,157077E+09	6,917936E+09	1,007501E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2118	1,578653E+09	1,578624E+09	3,458981E+09	3,458958E+09	3,157277E+09	6,917939E+09	1,007522E+10
-2117	1,578549E+09	1,578574E+09	3,458940E+09	3,458916E+09	3,157123E+09	6,917856E+09	1,007498E+10
-2116	1,578596E+09	1,578562E+09	3,458888E+09	3,459020E+09	3,157158E+09	6,917909E+09	1,007507E+10
-2115	1,578603E+09	1,578617E+09	3,459003E+09	3,458941E+09	3,157220E+09	6,917943E+09	1,007516E+10
-2114	1,578484E+09	1,578507E+09	3,458987E+09	3,458959E+09	3,156991E+09	6,917946E+09	1,007494E+10
-2113	1,578549E+09	1,578514E+09	3,459024E+09	3,459037E+09	3,157063E+09	6,918061E+09	1,007512E+10
-2112	1,578485E+09	1,578499E+09	3,459107E+09	3,458984E+09	3,156983E+09	6,918091E+09	1,007507E+10
-2111	1,578408E+09	1,578404E+09	3,459036E+09	3,459096E+09	3,156812E+09	6,918132E+09	1,007494E+10
-2110	1,578478E+09	1,578470E+09	3,459076E+09	3,459113E+09	3,156948E+09	6,918190E+09	1,007514E+10
-2109	1,578382E+09	1,578425E+09	3,459083E+09	3,459027E+09	3,156807E+09	6,918110E+09	1,007492E+10
-2108	1,578417E+09	1,578393E+09	3,459012E+09	3,459103E+09	3,156810E+09	6,918115E+09	1,007492E+10
-2107	1,578500E+09	1,578480E+09	3,459083E+09	3,459020E+09	3,156980E+09	6,918104E+09	1,007508E+10
-2106	1,578420E+09	1,578442E+09	3,459022E+09	3,458966E+09	3,156862E+09	6,917988E+09	1,007485E+10
-2105	1,578516E+09	1,578503E+09	3,458967E+09	3,459026E+09	3,157020E+09	6,917994E+09	1,007501E+10
-2104	1,578545E+09	1,578587E+09	3,459012E+09	3,458925E+09	3,157132E+09	6,917936E+09	1,007507E+10
-2103	1,578508E+09	1,578546E+09	3,458932E+09	3,458943E+09	3,157053E+09	6,917876E+09	1,007493E+10
-2102	1,578641E+09	1,578630E+09	3,458942E+09	3,458952E+09	3,157271E+09	6,917894E+09	1,007517E+10
-2101	1,578618E+09	1,578640E+09	3,458943E+09	3,458836E+09	3,157258E+09	6,917779E+09	1,007504E+10
-2100	1,578638E+09	1,578607E+09	3,458835E+09	3,458926E+09	3,157245E+09	6,917761E+09	1,007501E+10
-2099	1,578726E+09	1,578702E+09	3,458887E+09	3,458899E+09	3,157427E+09	6,917786E+09	1,007521E+10
-2098	1,578621E+09	1,578659E+09	3,458869E+09	3,458828E+09	3,157281E+09	6,917696E+09	1,007498E+10
-2097	1,578651E+09	1,578643E+09	3,458854E+09	3,458925E+09	3,157295E+09	6,917779E+09	1,007507E+10
-2096	1,578666E+09	1,578671E+09	3,458961E+09	3,458871E+09	3,157338E+09	6,917832E+09	1,007517E+10
-2095	1,578551E+09	1,578556E+09	3,458955E+09	3,458910E+09	3,157106E+09	6,917864E+09	1,007497E+10
-2094	1,578596E+09	1,578565E+09	3,458975E+09	3,459011E+09	3,157161E+09	6,917986E+09	1,007515E+10
-2093	1,578535E+09	1,578557E+09	3,459005E+09	3,458946E+09	3,157092E+09	6,917951E+09	1,007504E+10
-2092	1,578471E+09	1,578477E+09	3,458933E+09	3,459039E+09	3,156948E+09	6,917972E+09	1,007492E+10
-2091	1,578552E+09	1,578530E+09	3,458999E+09	3,459038E+09	3,157081E+09	6,918036E+09	1,007512E+10
-2090	1,578474E+09	1,578494E+09	3,459013E+09	3,458914E+09	3,156968E+09	6,917927E+09	1,007490E+10
-2089	1,578499E+09	1,578480E+09	3,458956E+09	3,458994E+09	3,156979E+09	6,917950E+09	1,007493E+10
-2088	1,578581E+09	1,578566E+09	3,459001E+09	3,458944E+09	3,157146E+09	6,917945E+09	1,007509E+10
-2087	1,578496E+09	1,578538E+09	3,458961E+09	3,458904E+09	3,157034E+09	6,917865E+09	1,007490E+10
-2086	1,578579E+09	1,578594E+09	3,458921E+09	3,458973E+09	3,157173E+09	6,917894E+09	1,007507E+10
-2085	1,578622E+09	1,578660E+09	3,458932E+09	3,458851E+09	3,157281E+09	6,917783E+09	1,007506E+10
-2084	1,578603E+09	1,578619E+09	3,458847E+09	3,458870E+09	3,157222E+09	6,917717E+09	1,007494E+10
-2083	1,578740E+09	1,578690E+09	3,458852E+09	3,458887E+09	3,157430E+09	6,917739E+09	1,007517E+10
-2082	1,578714E+09	1,578722E+09	3,458832E+09	3,458751E+09	3,157436E+09	6,917583E+09	1,007502E+10
-2081	1,578711E+09	1,578709E+09	3,458742E+09	3,458834E+09	3,157421E+09	6,917576E+09	1,007500E+10
-2080	1,578795E+09	1,578783E+09	3,458799E+09	3,458816E+09	3,157578E+09	6,917614E+09	1,007519E+10
-2079	1,578693E+09	1,578731E+09	3,458833E+09	3,458744E+09	3,157424E+09	6,917578E+09	1,007500E+10
-2078	1,578707E+09	1,578699E+09	3,458838E+09	3,458862E+09	3,157406E+09	6,917700E+09	1,007511E+10
-2077	1,578723E+09	1,578718E+09	3,458899E+09	3,458821E+09	3,157442E+09	6,917720E+09	1,007516E+10
-2076	1,578611E+09	1,578620E+09	3,458873E+09	3,458879E+09	3,157232E+09	6,917751E+09	1,007498E+10
-2075	1,578652E+09	1,578622E+09	3,458899E+09	3,458979E+09	3,157274E+09	6,917878E+09	1,007515E+10
-2074	1,578603E+09	1,578627E+09	3,458929E+09	3,458870E+09	3,157230E+09	6,917799E+09	1,007503E+10
-2073	1,578538E+09	1,578555E+09	3,458883E+09	3,458935E+09	3,157093E+09	6,917818E+09	1,007491E+10
-2072	1,578630E+09	1,578591E+09	3,458936E+09	3,458949E+09	3,157222E+09	6,917885E+09	1,007511E+10
-2071	1,578558E+09	1,578565E+09	3,458967E+09	3,458837E+09	3,157123E+09	6,917804E+09	1,007493E+10
-2070	1,578558E+09	1,578559E+09	3,458900E+09	3,458939E+09	3,157118E+09	6,917839E+09	1,007496E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2069	1,578642E+09	1,578648E+09	3,458901E+09	3,458888E+09	3,157290E+09	6,917788E+09	1,007508E+10
-2068	1,578575E+09	1,578625E+09	3,458862E+09	3,458839E+09	3,157200E+09	6,917701E+09	1,007490E+10
-2067	1,578667E+09	1,578658E+09	3,458843E+09	3,458901E+09	3,157325E+09	6,917744E+09	1,007507E+10
-2066	1,578729E+09	1,578735E+09	3,458843E+09	3,458749E+09	3,157463E+09	6,917592E+09	1,007506E+10
-2065	1,578701E+09	1,578711E+09	3,458760E+09	3,458765E+09	3,157412E+09	6,917526E+09	1,007494E+10
-2064	1,578830E+09	1,578780E+09	3,458742E+09	3,458810E+09	3,157610E+09	6,917553E+09	1,007516E+10
-2063	1,578795E+09	1,578819E+09	3,458762E+09	3,458671E+09	3,157614E+09	6,917433E+09	1,007505E+10
-2062	1,578766E+09	1,578797E+09	3,458706E+09	3,458762E+09	3,157563E+09	6,917468E+09	1,007503E+10
-2061	1,578852E+09	1,578848E+09	3,458748E+09	3,458742E+09	3,157700E+09	6,917490E+09	1,007519E+10
-2060	1,578762E+09	1,578789E+09	3,458786E+09	3,458690E+09	3,157551E+09	6,917476E+09	1,007503E+10
-2059	1,578770E+09	1,578740E+09	3,458787E+09	3,458832E+09	3,157510E+09	6,917619E+09	1,007513E+10
-2058	1,578788E+09	1,578779E+09	3,458810E+09	3,458772E+09	3,157567E+09	6,917583E+09	1,007515E+10
-2057	1,578668E+09	1,578697E+09	3,458791E+09	3,458811E+09	3,157365E+09	6,917601E+09	1,007497E+10
-2056	1,578719E+09	1,578682E+09	3,458808E+09	3,458908E+09	3,157401E+09	6,917717E+09	1,007512E+10
-2055	1,578681E+09	1,578685E+09	3,458883E+09	3,458778E+09	3,157367E+09	6,917660E+09	1,007503E+10
-2054	1,578606E+09	1,578618E+09	3,458850E+09	3,458853E+09	3,157224E+09	6,917703E+09	1,007493E+10
-2053	1,578698E+09	1,578655E+09	3,458856E+09	3,458873E+09	3,157353E+09	6,917730E+09	1,007508E+10
-2052	1,578629E+09	1,578654E+09	3,458878E+09	3,458784E+09	3,157283E+09	6,917662E+09	1,007495E+10
-2051	1,578624E+09	1,578639E+09	3,458827E+09	3,458893E+09	3,157264E+09	6,917719E+09	1,007498E+10
-2050	1,578719E+09	1,578736E+09	3,458819E+09	3,458805E+09	3,157455E+09	6,917624E+09	1,007508E+10
-2049	1,578663E+09	1,578716E+09	3,458800E+09	3,458738E+09	3,157378E+09	6,917537E+09	1,007492E+10
-2048	1,578768E+09	1,578727E+09	3,458753E+09	3,458817E+09	3,157496E+09	6,917570E+09	1,007507E+10
-2047	1,578831E+09	1,578815E+09	3,458767E+09	3,458666E+09	3,157646E+09	6,917433E+09	1,007508E+10
-2046	1,578776E+09	1,578807E+09	3,458680E+09	3,458693E+09	3,157583E+09	6,917373E+09	1,007496E+10
-2045	1,578896E+09	1,578870E+09	3,458637E+09	3,458730E+09	3,157766E+09	6,917368E+09	1,007513E+10
-2044	1,578869E+09	1,578908E+09	3,458682E+09	3,458596E+09	3,157777E+09	6,917278E+09	1,007506E+10
-2043	1,578838E+09	1,578854E+09	3,458666E+09	3,458695E+09	3,157692E+09	6,917361E+09	1,007505E+10
-2042	1,578929E+09	1,578908E+09	3,458694E+09	3,458666E+09	3,157837E+09	6,917359E+09	1,007520E+10
-2041	1,578833E+09	1,578859E+09	3,458731E+09	3,458624E+09	3,157692E+09	6,917355E+09	1,007505E+10
-2040	1,578834E+09	1,578800E+09	3,458702E+09	3,458794E+09	3,157634E+09	6,917495E+09	1,007513E+10
-2039	1,578853E+09	1,578845E+09	3,458754E+09	3,458719E+09	3,157698E+09	6,917473E+09	1,007517E+10
-2038	1,578717E+09	1,578762E+09	3,458749E+09	3,458742E+09	3,157479E+09	6,917491E+09	1,007497E+10
-2037	1,578777E+09	1,578735E+09	3,458741E+09	3,458828E+09	3,157512E+09	6,917568E+09	1,007508E+10
-2036	1,578756E+09	1,578748E+09	3,458813E+09	3,458708E+09	3,157504E+09	6,917521E+09	1,007503E+10
-2035	1,578672E+09	1,578675E+09	3,458787E+09	3,458802E+09	3,157347E+09	6,917590E+09	1,007494E+10
-2034	1,578762E+09	1,578741E+09	3,458762E+09	3,458805E+09	3,157503E+09	6,917568E+09	1,007507E+10
-2033	1,578696E+09	1,578751E+09	3,458798E+09	3,458701E+09	3,157447E+09	6,917500E+09	1,007495E+10
-2032	1,578704E+09	1,578713E+09	3,458739E+09	3,458816E+09	3,157418E+09	6,917556E+09	1,007497E+10
-2031	1,578817E+09	1,578806E+09	3,458763E+09	3,458709E+09	3,157623E+09	6,917472E+09	1,007510E+10
-2030	1,578751E+09	1,578794E+09	3,458740E+09	3,458650E+09	3,157546E+09	6,917390E+09	1,007494E+10
-2029	1,578856E+09	1,578809E+09	3,458644E+09	3,458737E+09	3,157665E+09	6,917381E+09	1,007505E+10
-2028	1,578918E+09	1,578918E+09	3,458659E+09	3,458597E+09	3,157836E+09	6,917256E+09	1,007509E+10
-2027	1,578851E+09	1,578896E+09	3,458611E+09	3,458628E+09	3,157747E+09	6,917238E+09	1,007499E+10
-2026	1,578970E+09	1,578960E+09	3,458572E+09	3,458634E+09	3,157930E+09	6,917205E+09	1,007514E+10
-2025	1,578948E+09	1,578990E+09	3,458646E+09	3,458503E+09	3,157938E+09	6,917150E+09	1,007509E+10
-2024	1,578919E+09	1,578907E+09	3,458608E+09	3,458641E+09	3,157826E+09	6,917248E+09	1,007507E+10
-2023	1,579004E+09	1,578964E+09	3,458639E+09	3,458618E+09	3,157968E+09	6,917256E+09	1,007522E+10
-2022	1,578886E+09	1,578929E+09	3,458661E+09	3,458587E+09	3,157815E+09	6,917249E+09	1,007506E+10
-2021	1,578886E+09	1,578859E+09	3,458593E+09	3,458735E+09	3,157746E+09	6,917328E+09	1,007507E+10



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2020	1,578918E+09	1,578908E+09	3,458666E+09	3,458648E+09	3,157826E+09	6,917314E+09	1,007514E+10
-2019	1,578787E+09	1,578810E+09	3,458699E+09	3,458667E+09	3,157597E+09	6,917366E+09	1,007496E+10
-2018	1,578847E+09	1,578800E+09	3,458672E+09	3,458733E+09	3,157648E+09	6,917404E+09	1,007505E+10
-2017	1,578825E+09	1,578834E+09	3,458753E+09	3,458627E+09	3,157660E+09	6,917380E+09	1,007504E+10
-2016	1,578736E+09	1,578752E+09	3,458709E+09	3,458751E+09	3,157489E+09	6,917460E+09	1,007495E+10
-2015	1,578828E+09	1,578821E+09	3,458716E+09	3,458738E+09	3,157649E+09	6,917455E+09	1,007510E+10
-2014	1,578759E+09	1,578831E+09	3,458760E+09	3,458630E+09	3,157590E+09	6,917391E+09	1,007498E+10
-2013	1,578784E+09	1,578777E+09	3,458660E+09	3,458735E+09	3,157560E+09	6,917395E+09	1,007496E+10
-2012	1,578915E+09	1,578880E+09	3,458671E+09	3,458641E+09	3,157795E+09	6,917311E+09	1,007511E+10
-2011	1,578843E+09	1,578870E+09	3,458647E+09	3,458589E+09	3,157713E+09	6,917237E+09	1,007495E+10
-2010	1,578940E+09	1,578913E+09	3,458524E+09	3,458647E+09	3,157853E+09	6,917171E+09	1,007502E+10
-2009	1,579003E+09	1,579027E+09	3,458571E+09	3,458495E+09	3,158030E+09	6,917066E+09	1,007510E+10
-2008	1,578936E+09	1,578974E+09	3,458539E+09	3,458543E+09	3,157910E+09	6,917081E+09	1,007499E+10
-2007	1,579058E+09	1,579029E+09	3,458541E+09	3,458545E+09	3,158087E+09	6,917086E+09	1,007517E+10
-2006	1,579020E+09	1,579058E+09	3,458606E+09	3,458441E+09	3,158078E+09	6,917047E+09	1,007513E+10
-2005	1,578983E+09	1,578970E+09	3,458515E+09	3,458595E+09	3,157953E+09	6,917110E+09	1,007506E+10
-2004	1,579070E+09	1,579039E+09	3,458541E+09	3,458581E+09	3,158108E+09	6,917121E+09	1,007523E+10
-2003	1,578943E+09	1,578988E+09	3,458592E+09	3,458540E+09	3,157931E+09	6,917133E+09	1,007506E+10
-2002	1,578947E+09	1,578928E+09	3,458518E+09	3,458644E+09	3,157875E+09	6,917162E+09	1,007504E+10
-2001	1,578990E+09	1,578975E+09	3,458619E+09	3,458549E+09	3,157965E+09	6,917168E+09	1,007513E+10
-2000	1,578859E+09	1,578863E+09	3,458640E+09	3,458601E+09	3,157722E+09	6,917242E+09	1,007496E+10
-1999	1,578912E+09	1,578867E+09	3,458626E+09	3,458666E+09	3,157779E+09	6,917292E+09	1,007507E+10
-1998	1,578873E+09	1,578916E+09	3,458698E+09	3,458577E+09	3,157789E+09	6,917274E+09	1,007506E+10
-1997	1,578792E+09	1,578820E+09	3,458620E+09	3,458691E+09	3,157613E+09	6,917311E+09	1,007492E+10
-1996	1,578907E+09	1,578888E+09	3,458635E+09	3,458671E+09	3,157795E+09	6,917307E+09	1,007510E+10
-1995	1,578850E+09	1,578887E+09	3,458694E+09	3,458563E+09	3,157737E+09	6,917256E+09	1,007499E+10
-1994	1,578881E+09	1,578859E+09	3,458553E+09	3,458639E+09	3,157740E+09	6,917192E+09	1,007493E+10
-1993	1,579013E+09	1,578985E+09	3,458572E+09	3,458547E+09	3,157998E+09	6,917119E+09	1,007512E+10
-1992	1,578934E+09	1,578971E+09	3,458547E+09	3,458514E+09	3,157905E+09	6,917061E+09	1,007497E+10
-1991	1,579023E+09	1,579012E+09	3,458470E+09	3,458546E+09	3,158034E+09	6,917016E+09	1,007505E+10
-1990	1,579074E+09	1,579121E+09	3,458538E+09	3,458409E+09	3,158195E+09	6,916947E+09	1,007514E+10
-1989	1,579013E+09	1,579038E+09	3,458473E+09	3,458469E+09	3,158052E+09	6,916941E+09	1,007499E+10
-1988	1,579138E+09	1,579094E+09	3,458465E+09	3,458498E+09	3,158231E+09	6,916963E+09	1,007519E+10
-1987	1,579091E+09	1,579119E+09	3,458527E+09	3,458414E+09	3,158210E+09	6,916941E+09	1,007515E+10
-1986	1,579046E+09	1,579048E+09	3,458399E+09	3,458529E+09	3,158094E+09	6,916928E+09	1,007502E+10
-1985	1,579140E+09	1,579116E+09	3,458455E+09	3,458494E+09	3,158256E+09	6,916949E+09	1,007520E+10
-1984	1,579018E+09	1,579042E+09	3,458521E+09	3,458456E+09	3,158060E+09	6,916977E+09	1,007504E+10
-1983	1,579022E+09	1,578983E+09	3,458489E+09	3,458542E+09	3,158005E+09	6,917031E+09	1,007504E+10
-1982	1,579048E+09	1,579044E+09	3,458588E+09	3,458479E+09	3,158092E+09	6,917067E+09	1,007516E+10
-1981	1,578910E+09	1,578929E+09	3,458569E+09	3,458552E+09	3,157839E+09	6,917122E+09	1,007496E+10
-1980	1,578964E+09	1,578944E+09	3,458557E+09	3,458632E+09	3,157909E+09	6,917189E+09	1,007510E+10
-1979	1,578930E+09	1,578977E+09	3,458648E+09	3,458539E+09	3,157907E+09	6,917187E+09	1,007509E+10
-1978	1,578863E+09	1,578892E+09	3,458540E+09	3,458610E+09	3,157755E+09	6,917150E+09	1,007490E+10
-1977	1,579003E+09	1,578960E+09	3,458561E+09	3,458581E+09	3,157963E+09	6,917142E+09	1,007511E+10
-1976	1,578949E+09	1,578956E+09	3,458593E+09	3,458492E+09	3,157905E+09	6,917085E+09	1,007499E+10
-1975	1,578974E+09	1,578953E+09	3,458466E+09	3,458547E+09	3,157928E+09	6,917013E+09	1,007494E+10
-1974	1,579087E+09	1,579094E+09	3,458486E+09	3,458457E+09	3,158181E+09	6,916943E+09	1,007512E+10
-1973	1,579008E+09	1,579061E+09	3,458454E+09	3,458419E+09	3,158069E+09	6,916873E+09	1,007494E+10
-1972	1,579106E+09	1,579095E+09	3,458404E+09	3,458461E+09	3,158201E+09	6,916865E+09	1,007507E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1971	1,579158E+09	1,579182E+09	3,458489E+09	3,458349E+09	3,158340E+09	6,916837E+09	1,007518E+10
-1970	1,579096E+09	1,579116E+09	3,458381E+09	3,458399E+09	3,158211E+09	6,916780E+09	1,007499E+10
-1969	1,579222E+09	1,579178E+09	3,458375E+09	3,458434E+09	3,158399E+09	6,916808E+09	1,007521E+10
-1968	1,579167E+09	1,579191E+09	3,458432E+09	3,458361E+09	3,158359E+09	6,916793E+09	1,007515E+10
-1967	1,579119E+09	1,579121E+09	3,458347E+09	3,458435E+09	3,158240E+09	6,916782E+09	1,007502E+10
-1966	1,579200E+09	1,579187E+09	3,458422E+09	3,458405E+09	3,158387E+09	6,916827E+09	1,007521E+10
-1965	1,579082E+09	1,579093E+09	3,458466E+09	3,458382E+09	3,158174E+09	6,916847E+09	1,007502E+10
-1964	1,579083E+09	1,579043E+09	3,458433E+09	3,458494E+09	3,158126E+09	6,916927E+09	1,007505E+10
-1963	1,579099E+09	1,579104E+09	3,458530E+09	3,458458E+09	3,158203E+09	6,916988E+09	1,007519E+10
-1962	1,578962E+09	1,579005E+09	3,458474E+09	3,458498E+09	3,157967E+09	6,916973E+09	1,007494E+10
-1961	1,579033E+09	1,579015E+09	3,458484E+09	3,458558E+09	3,158048E+09	6,917042E+09	1,007509E+10
-1960	1,579016E+09	1,579031E+09	3,458572E+09	3,458468E+09	3,158047E+09	6,917040E+09	1,007509E+10
-1959	1,578958E+09	1,578957E+09	3,458477E+09	3,458503E+09	3,157915E+09	6,916981E+09	1,007490E+10
-1958	1,579086E+09	1,579049E+09	3,458486E+09	3,458494E+09	3,158135E+09	6,916981E+09	1,007512E+10
-1957	1,579029E+09	1,579048E+09	3,458484E+09	3,458410E+09	3,158078E+09	6,916895E+09	1,007497E+10
-1956	1,579049E+09	1,579056E+09	3,458382E+09	3,458468E+09	3,158105E+09	6,916850E+09	1,007496E+10
-1955	1,579159E+09	1,579181E+09	3,458437E+09	3,458388E+09	3,158339E+09	6,916825E+09	1,007516E+10
-1954	1,579088E+09	1,579145E+09	3,458385E+09	3,458326E+09	3,158233E+09	6,916710E+09	1,007494E+10
-1953	1,579200E+09	1,579170E+09	3,458343E+09	3,458381E+09	3,158370E+09	6,916724E+09	1,007509E+10
-1952	1,579250E+09	1,579246E+09	3,458398E+09	3,458302E+09	3,158497E+09	6,916700E+09	1,007520E+10
-1951	1,579181E+09	1,579198E+09	3,458294E+09	3,458326E+09	3,158379E+09	6,916620E+09	1,007500E+10
-1950	1,579289E+09	1,579267E+09	3,458291E+09	3,458361E+09	3,158556E+09	6,916652E+09	1,007521E+10
-1949	1,579236E+09	1,579258E+09	3,458341E+09	3,458275E+09	3,158494E+09	6,916616E+09	1,007511E+10
-1948	1,579192E+09	1,579185E+09	3,458291E+09	3,458351E+09	3,158377E+09	6,916642E+09	1,007502E+10
-1947	1,579265E+09	1,579237E+09	3,458386E+09	3,458347E+09	3,158503E+09	6,916733E+09	1,007524E+10
-1946	1,579139E+09	1,579164E+09	3,458395E+09	3,458320E+09	3,158303E+09	6,916716E+09	1,007502E+10
-1945	1,579142E+09	1,579121E+09	3,458371E+09	3,458445E+09	3,158263E+09	6,916816E+09	1,007508E+10
-1944	1,579154E+09	1,579166E+09	3,458460E+09	3,458423E+09	3,158320E+09	6,916883E+09	1,007520E+10
-1943	1,579028E+09	1,579070E+09	3,458431E+09	3,458418E+09	3,158099E+09	6,916849E+09	1,007495E+10
-1942	1,579103E+09	1,579079E+09	3,458435E+09	3,458474E+09	3,158182E+09	6,916908E+09	1,007509E+10
-1941	1,579096E+09	1,579085E+09	3,458485E+09	3,458388E+09	3,158181E+09	6,916872E+09	1,007505E+10
-1940	1,579041E+09	1,579036E+09	3,458388E+09	3,458431E+09	3,158077E+09	6,916819E+09	1,007490E+10
-1939	1,579158E+09	1,579134E+09	3,458398E+09	3,458436E+09	3,158292E+09	6,916834E+09	1,007513E+10
-1938	1,579101E+09	1,579150E+09	3,458376E+09	3,458318E+09	3,158252E+09	6,916694E+09	1,007495E+10
-1937	1,579137E+09	1,579147E+09	3,458309E+09	3,458367E+09	3,158284E+09	6,916676E+09	1,007496E+10
-1936	1,579252E+09	1,579249E+09	3,458368E+09	3,458308E+09	3,158502E+09	6,916676E+09	1,007518E+10
-1935	1,579189E+09	1,579223E+09	3,458327E+09	3,458231E+09	3,158412E+09	6,916558E+09	1,007497E+10
-1934	1,579285E+09	1,579261E+09	3,458270E+09	3,458312E+09	3,158546E+09	6,916582E+09	1,007513E+10
-1933	1,579330E+09	1,579332E+09	3,458290E+09	3,458243E+09	3,158662E+09	6,916533E+09	1,007520E+10
-1932	1,579256E+09	1,579287E+09	3,458211E+09	3,458258E+09	3,158543E+09	6,916469E+09	1,007501E+10
-1931	1,579355E+09	1,579338E+09	3,458238E+09	3,458297E+09	3,158693E+09	6,916535E+09	1,007523E+10
-1930	1,579305E+09	1,579328E+09	3,458273E+09	3,458185E+09	3,158633E+09	6,916459E+09	1,007509E+10
-1929	1,579265E+09	1,579247E+09	3,458244E+09	3,458278E+09	3,158513E+09	6,916522E+09	1,007503E+10
-1928	1,579328E+09	1,579294E+09	3,458322E+09	3,458311E+09	3,158622E+09	6,916633E+09	1,007525E+10
-1927	1,579198E+09	1,579234E+09	3,458335E+09	3,458257E+09	3,158432E+09	6,916592E+09	1,007502E+10
-1926	1,579189E+09	1,579193E+09	3,458312E+09	3,458384E+09	3,158382E+09	6,916697E+09	1,007508E+10
-1925	1,579216E+09	1,579215E+09	3,458382E+09	3,458350E+09	3,158431E+09	6,916732E+09	1,007516E+10
-1924	1,579104E+09	1,579124E+09	3,458367E+09	3,458338E+09	3,158228E+09	6,916705E+09	1,007493E+10
-1923	1,579179E+09	1,579135E+09	3,458370E+09	3,458414E+09	3,158314E+09	6,916784E+09	1,007510E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1922	1,579172E+09	1,579170E+09	3,458378E+09	3,458307E+09	3,158341E+09	6,916684E+09	1,007503E+10
-1921	1,579122E+09	1,579135E+09	3,458302E+09	3,458350E+09	3,158257E+09	6,916651E+09	1,007491E+10
-1920	1,579232E+09	1,579223E+09	3,458322E+09	3,458362E+09	3,158455E+09	6,916685E+09	1,007514E+10
-1919	1,579186E+09	1,579242E+09	3,458332E+09	3,458210E+09	3,158428E+09	6,916542E+09	1,007497E+10
-1918	1,579220E+09	1,579233E+09	3,458267E+09	3,458278E+09	3,158453E+09	6,916545E+09	1,007500E+10
-1917	1,579341E+09	1,579319E+09	3,458283E+09	3,458241E+09	3,158660E+09	6,916524E+09	1,007518E+10
-1916	1,579278E+09	1,579310E+09	3,458235E+09	3,458178E+09	3,158588E+09	6,916413E+09	1,007500E+10
-1915	1,579362E+09	1,579346E+09	3,458172E+09	3,458269E+09	3,158708E+09	6,916441E+09	1,007515E+10
-1914	1,579404E+09	1,579422E+09	3,458177E+09	3,458156E+09	3,158826E+09	6,916333E+09	1,007516E+10
-1913	1,579344E+09	1,579366E+09	3,458139E+09	3,458157E+09	3,158710E+09	6,916295E+09	1,007501E+10
-1912	1,579435E+09	1,579393E+09	3,458177E+09	3,458213E+09	3,158829E+09	6,916390E+09	1,007522E+10
-1911	1,579384E+09	1,579397E+09	3,458229E+09	3,458095E+09	3,158781E+09	6,916324E+09	1,007510E+10
-1910	1,579324E+09	1,579325E+09	3,458195E+09	3,458218E+09	3,158649E+09	6,916412E+09	1,007506E+10
-1909	1,579376E+09	1,579358E+09	3,458246E+09	3,458267E+09	3,158734E+09	6,916513E+09	1,007525E+10
-1908	1,579252E+09	1,579299E+09	3,458284E+09	3,458209E+09	3,158551E+09	6,916493E+09	1,007504E+10
-1907	1,579244E+09	1,579241E+09	3,458269E+09	3,458337E+09	3,158484E+09	6,916606E+09	1,007509E+10
-1906	1,579284E+09	1,579268E+09	3,458302E+09	3,458273E+09	3,158552E+09	6,916575E+09	1,007513E+10
-1905	1,579191E+09	1,579186E+09	3,458287E+09	3,458261E+09	3,158377E+09	6,916548E+09	1,007492E+10
-1904	1,579256E+09	1,579208E+09	3,458270E+09	3,458355E+09	3,158463E+09	6,916625E+09	1,007509E+10
-1903	1,579250E+09	1,579270E+09	3,458290E+09	3,458212E+09	3,158520E+09	6,916502E+09	1,007502E+10
-1902	1,579193E+09	1,579236E+09	3,458237E+09	3,458253E+09	3,158429E+09	6,916490E+09	1,007492E+10
-1901	1,579310E+09	1,579300E+09	3,458251E+09	3,458269E+09	3,158610E+09	6,916520E+09	1,007513E+10
-1900	1,579277E+09	1,579319E+09	3,458279E+09	3,458127E+09	3,158597E+09	6,916406E+09	1,007500E+10
-1899	1,579305E+09	1,579308E+09	3,458202E+09	3,458229E+09	3,158613E+09	6,916432E+09	1,007504E+10
-1898	1,579425E+09	1,579411E+09	3,458169E+09	3,458176E+09	3,158835E+09	6,916345E+09	1,007518E+10
-1897	1,579370E+09	1,579406E+09	3,458133E+09	3,458106E+09	3,158776E+09	6,916239E+09	1,007502E+10
-1896	1,579445E+09	1,579429E+09	3,458084E+09	3,458196E+09	3,158874E+09	6,916280E+09	1,007515E+10
-1895	1,579493E+09	1,579504E+09	3,458117E+09	3,458038E+09	3,158996E+09	6,916155E+09	1,007515E+10
-1894	1,579421E+09	1,579441E+09	3,458099E+09	3,458059E+09	3,158862E+09	6,916158E+09	1,007502E+10
-1893	1,579503E+09	1,579453E+09	3,458111E+09	3,458146E+09	3,158955E+09	6,916258E+09	1,007521E+10
-1892	1,579445E+09	1,579467E+09	3,458168E+09	3,458053E+09	3,158912E+09	6,916221E+09	1,007513E+10
-1891	1,579369E+09	1,579389E+09	3,458132E+09	3,458196E+09	3,158758E+09	6,916328E+09	1,007509E+10
-1890	1,579426E+09	1,579418E+09	3,458156E+09	3,458207E+09	3,158843E+09	6,916363E+09	1,007521E+10
-1889	1,579328E+09	1,579351E+09	3,458214E+09	3,458135E+09	3,158679E+09	6,916348E+09	1,007503E+10
-1888	1,579322E+09	1,579286E+09	3,458193E+09	3,458269E+09	3,158608E+09	6,916462E+09	1,007507E+10
-1887	1,579368E+09	1,579340E+09	3,458227E+09	3,458177E+09	3,158708E+09	6,916404E+09	1,007511E+10
-1886	1,579261E+09	1,579283E+09	3,458217E+09	3,458179E+09	3,158544E+09	6,916396E+09	1,007494E+10
-1885	1,579317E+09	1,579297E+09	3,458188E+09	3,458277E+09	3,158615E+09	6,916465E+09	1,007508E+10
-1884	1,579320E+09	1,579361E+09	3,458244E+09	3,458134E+09	3,158681E+09	6,916379E+09	1,007506E+10
-1883	1,579262E+09	1,579310E+09	3,458202E+09	3,458192E+09	3,158572E+09	6,916394E+09	1,007497E+10
-1882	1,579387E+09	1,579369E+09	3,458175E+09	3,458194E+09	3,158757E+09	6,916369E+09	1,007513E+10
-1881	1,579378E+09	1,579395E+09	3,458190E+09	3,458068E+09	3,158773E+09	6,916257E+09	1,007503E+10
-1880	1,579397E+09	1,579387E+09	3,458083E+09	3,458178E+09	3,158784E+09	6,916261E+09	1,007504E+10
-1879	1,579519E+09	1,579510E+09	3,458057E+09	3,458077E+09	3,159030E+09	6,916134E+09	1,007516E+10
-1878	1,579461E+09	1,579504E+09	3,458047E+09	3,457993E+09	3,158965E+09	6,916040E+09	1,007500E+10
-1877	1,579530E+09	1,579502E+09	3,458001E+09	3,458084E+09	3,159032E+09	6,916086E+09	1,007512E+10
-1876	1,579580E+09	1,579578E+09	3,458069E+09	3,457949E+09	3,159158E+09	6,916018E+09	1,007518E+10
-1875	1,579487E+09	1,579511E+09	3,458053E+09	3,458015E+09	3,158998E+09	6,916068E+09	1,007507E+10
-1874	1,579554E+09	1,579529E+09	3,458030E+09	3,458099E+09	3,159084E+09	6,916129E+09	1,007521E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1873	1,579508E+09	1,579540E+09	3,458098E+09	3,458012E+09	3,159048E+09	6,916110E+09	1,007516E+10
-1872	1,579427E+09	1,579444E+09	3,458068E+09	3,458151E+09	3,158871E+09	6,916219E+09	1,007509E+10
-1871	1,579499E+09	1,579476E+09	3,458099E+09	3,458116E+09	3,158975E+09	6,916215E+09	1,007519E+10
-1870	1,579403E+09	1,579412E+09	3,458160E+09	3,458048E+09	3,158815E+09	6,916209E+09	1,007502E+10
-1869	1,579391E+09	1,579347E+09	3,458107E+09	3,458198E+09	3,158739E+09	6,916304E+09	1,007504E+10
-1868	1,579436E+09	1,579423E+09	3,458155E+09	3,458112E+09	3,158859E+09	6,916267E+09	1,007513E+10
-1867	1,579315E+09	1,579368E+09	3,458157E+09	3,458128E+09	3,158683E+09	6,916285E+09	1,007497E+10
-1866	1,579376E+09	1,579375E+09	3,458114E+09	3,458192E+09	3,158751E+09	6,916306E+09	1,007506E+10
-1865	1,579407E+09	1,579428E+09	3,458181E+09	3,458055E+09	3,158834E+09	6,916235E+09	1,007507E+10
-1864	1,579353E+09	1,579370E+09	3,458126E+09	3,458131E+09	3,158723E+09	6,916257E+09	1,007498E+10
-1863	1,579488E+09	1,579453E+09	3,458077E+09	3,458105E+09	3,158941E+09	6,916182E+09	1,007512E+10
-1862	1,579471E+09	1,579499E+09	3,458090E+09	3,457984E+09	3,158970E+09	6,916074E+09	1,007504E+10
-1861	1,579483E+09	1,579485E+09	3,457974E+09	3,458089E+09	3,158967E+09	6,916063E+09	1,007503E+10
-1860	1,579608E+09	1,579604E+09	3,457991E+09	3,457977E+09	3,159212E+09	6,915968E+09	1,007518E+10
-1859	1,579538E+09	1,579585E+09	3,458003E+09	3,457913E+09	3,159124E+09	6,915916E+09	1,007504E+10
-1858	1,579602E+09	1,579573E+09	3,457931E+09	3,457999E+09	3,159175E+09	6,915930E+09	1,007511E+10
-1857	1,579660E+09	1,579652E+09	3,457994E+09	3,457901E+09	3,159312E+09	6,915895E+09	1,007521E+10
-1856	1,579551E+09	1,579581E+09	3,457968E+09	3,457988E+09	3,159132E+09	6,915956E+09	1,007509E+10
-1855	1,579619E+09	1,579606E+09	3,457949E+09	3,458027E+09	3,159225E+09	6,915976E+09	1,007520E+10
-1854	1,579577E+09	1,579607E+09	3,458039E+09	3,457930E+09	3,159185E+09	6,915970E+09	1,007515E+10
-1853	1,579499E+09	1,579491E+09	3,457994E+09	3,458065E+09	3,158990E+09	6,916060E+09	1,007505E+10
-1852	1,579578E+09	1,579530E+09	3,458046E+09	3,458040E+09	3,159108E+09	6,916086E+09	1,007519E+10
-1851	1,579465E+09	1,579481E+09	3,458102E+09	3,458000E+09	3,158946E+09	6,916102E+09	1,007505E+10
-1850	1,579442E+09	1,579427E+09	3,458023E+09	3,458131E+09	3,158869E+09	6,916153E+09	1,007502E+10
-1849	1,579503E+09	1,579506E+09	3,458089E+09	3,458054E+09	3,159009E+09	6,916142E+09	1,007515E+10
-1848	1,579382E+09	1,579433E+09	3,458101E+09	3,458067E+09	3,158815E+09	6,916168E+09	1,007498E+10
-1847	1,579457E+09	1,579445E+09	3,458055E+09	3,458096E+09	3,158902E+09	6,916151E+09	1,007505E+10
-1846	1,579498E+09	1,579502E+09	3,458114E+09	3,457973E+09	3,159001E+09	6,916086E+09	1,007509E+10
-1845	1,579442E+09	1,579447E+09	3,458012E+09	3,458061E+09	3,158889E+09	6,916073E+09	1,007496E+10
-1844	1,579581E+09	1,579550E+09	3,457973E+09	3,458033E+09	3,159131E+09	6,916006E+09	1,007514E+10
-1843	1,579552E+09	1,579598E+09	3,457997E+09	3,457910E+09	3,159150E+09	6,915907E+09	1,007506E+10
-1842	1,579563E+09	1,579573E+09	3,457879E+09	3,457975E+09	3,159137E+09	6,915854E+09	1,007499E+10
-1841	1,579706E+09	1,579684E+09	3,457919E+09	3,457880E+09	3,159390E+09	6,915799E+09	1,007519E+10
-1840	1,579624E+09	1,579657E+09	3,457939E+09	3,457845E+09	3,159282E+09	6,915785E+09	1,007507E+10
-1839	1,579682E+09	1,579662E+09	3,457860E+09	3,457921E+09	3,159343E+09	6,915781E+09	1,007512E+10
-1838	1,579729E+09	1,579743E+09	3,457931E+09	3,457841E+09	3,159473E+09	6,915772E+09	1,007524E+10
-1837	1,579614E+09	1,579652E+09	3,457894E+09	3,457931E+09	3,159266E+09	6,915825E+09	1,007509E+10
-1836	1,579689E+09	1,579665E+09	3,457908E+09	3,457958E+09	3,159354E+09	6,915866E+09	1,007522E+10
-1835	1,579640E+09	1,579658E+09	3,458000E+09	3,457876E+09	3,159298E+09	6,915876E+09	1,007517E+10
-1834	1,579561E+09	1,579541E+09	3,457920E+09	3,457993E+09	3,159102E+09	6,915913E+09	1,007501E+10
-1833	1,579647E+09	1,579593E+09	3,457958E+09	3,457989E+09	3,159241E+09	6,915947E+09	1,007519E+10
-1832	1,579523E+09	1,579553E+09	3,458017E+09	3,457957E+09	3,159076E+09	6,915974E+09	1,007505E+10
-1831	1,579505E+09	1,579509E+09	3,457945E+09	3,458037E+09	3,159014E+09	6,915982E+09	1,007500E+10
-1830	1,579575E+09	1,579580E+09	3,458035E+09	3,457958E+09	3,159155E+09	6,915993E+09	1,007515E+10
-1829	1,579463E+09	1,579494E+09	3,458030E+09	3,457983E+09	3,158956E+09	6,916012E+09	1,007497E+10
-1828	1,579548E+09	1,579512E+09	3,457993E+09	3,458021E+09	3,159060E+09	6,916014E+09	1,007507E+10
-1827	1,579577E+09	1,579589E+09	3,458033E+09	3,457923E+09	3,159166E+09	6,915956E+09	1,007512E+10
-1826	1,579517E+09	1,579544E+09	3,457899E+09	3,457980E+09	3,159061E+09	6,915879E+09	1,007494E+10
-1825	1,579671E+09	1,579648E+09	3,457876E+09	3,457952E+09	3,159319E+09	6,915828E+09	1,007515E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1824	1,579640E+09	1,579684E+09	3,457925E+09	3,457824E+09	3,159324E+09	6,915748E+09	1,007507E+10
-1823	1,579657E+09	1,579660E+09	3,457815E+09	3,457857E+09	3,159318E+09	6,915672E+09	1,007499E+10
-1822	1,579796E+09	1,579769E+09	3,457863E+09	3,457791E+09	3,159566E+09	6,915655E+09	1,007522E+10
-1821	1,579703E+09	1,579736E+09	3,457852E+09	3,457788E+09	3,159439E+09	6,915640E+09	1,007508E+10
-1820	1,579755E+09	1,579744E+09	3,457793E+09	3,457870E+09	3,159498E+09	6,915663E+09	1,007516E+10
-1819	1,579791E+09	1,579817E+09	3,457868E+09	3,457797E+09	3,159608E+09	6,915665E+09	1,007527E+10
-1818	1,579678E+09	1,579706E+09	3,457813E+09	3,457848E+09	3,159384E+09	6,915662E+09	1,007505E+10
-1817	1,579774E+09	1,579714E+09	3,457830E+09	3,457891E+09	3,159488E+09	6,915721E+09	1,007521E+10
-1816	1,579715E+09	1,579709E+09	3,457921E+09	3,457818E+09	3,159424E+09	6,915739E+09	1,007516E+10
-1815	1,579628E+09	1,579621E+09	3,457837E+09	3,457907E+09	3,159249E+09	6,915744E+09	1,007499E+10
-1814	1,579708E+09	1,579683E+09	3,457898E+09	3,457912E+09	3,159391E+09	6,915810E+09	1,007520E+10
-1813	1,579579E+09	1,579627E+09	3,457957E+09	3,457885E+09	3,159206E+09	6,915842E+09	1,007505E+10
-1812	1,579571E+09	1,579575E+09	3,457921E+09	3,457961E+09	3,159146E+09	6,915882E+09	1,007503E+10
-1811	1,579639E+09	1,579640E+09	3,457998E+09	3,457904E+09	3,159279E+09	6,915902E+09	1,007518E+10
-1810	1,579533E+09	1,579554E+09	3,457943E+09	3,457915E+09	3,159088E+09	6,915858E+09	1,007495E+10
-1809	1,579635E+09	1,579591E+09	3,457879E+09	3,457972E+09	3,159227E+09	6,915851E+09	1,007508E+10
-1808	1,579659E+09	1,579677E+09	3,457921E+09	3,457863E+09	3,159336E+09	6,915784E+09	1,007512E+10
-1807	1,579608E+09	1,579645E+09	3,457800E+09	3,457858E+09	3,159253E+09	6,915658E+09	1,007491E+10
-1806	1,579769E+09	1,579741E+09	3,457809E+09	3,457825E+09	3,159510E+09	6,915634E+09	1,007514E+10
-1805	1,579736E+09	1,579765E+09	3,457852E+09	3,457722E+09	3,159501E+09	6,915573E+09	1,007507E+10
-1804	1,579751E+09	1,579744E+09	3,457766E+09	3,457778E+09	3,159495E+09	6,915544E+09	1,007504E+10
-1803	1,579864E+09	1,579862E+09	3,457804E+09	3,457753E+09	3,159725E+09	6,915557E+09	1,007528E+10
-1802	1,579767E+09	1,579820E+09	3,457768E+09	3,457734E+09	3,159587E+09	6,915502E+09	1,007509E+10
-1801	1,579830E+09	1,579814E+09	3,457711E+09	3,457819E+09	3,159644E+09	6,915530E+09	1,007517E+10
-1800	1,579864E+09	1,579871E+09	3,457800E+09	3,457739E+09	3,159736E+09	6,915540E+09	1,007528E+10
-1799	1,579760E+09	1,579767E+09	3,457737E+09	3,457747E+09	3,159527E+09	6,915484E+09	1,007501E+10
-1798	1,579849E+09	1,579782E+09	3,457757E+09	3,457806E+09	3,159630E+09	6,915564E+09	1,007519E+10
-1797	1,579777E+09	1,579784E+09	3,457830E+09	3,457756E+09	3,159561E+09	6,915586E+09	1,007515E+10
-1796	1,579686E+09	1,579699E+09	3,457785E+09	3,457838E+09	3,159385E+09	6,915623E+09	1,007501E+10
-1795	1,579752E+09	1,579756E+09	3,457862E+09	3,457852E+09	3,159508E+09	6,915714E+09	1,007522E+10
-1794	1,579636E+09	1,579680E+09	3,457902E+09	3,457803E+09	3,159316E+09	6,915705E+09	1,007502E+10
-1793	1,579650E+09	1,579626E+09	3,457852E+09	3,457905E+09	3,159277E+09	6,915757E+09	1,007503E+10
-1792	1,579717E+09	1,579700E+09	3,457915E+09	3,457861E+09	3,159417E+09	6,915776E+09	1,007519E+10
-1791	1,579618E+09	1,579646E+09	3,457835E+09	3,457829E+09	3,159264E+09	6,915664E+09	1,007493E+10
-1790	1,579724E+09	1,579694E+09	3,457787E+09	3,457879E+09	3,159418E+09	6,915666E+09	1,007508E+10
-1789	1,579748E+09	1,579771E+09	3,457833E+09	3,457763E+09	3,159519E+09	6,915596E+09	1,007512E+10
-1788	1,579703E+09	1,579733E+09	3,457760E+09	3,457749E+09	3,159437E+09	6,915509E+09	1,007495E+10
-1787	1,579849E+09	1,579827E+09	3,457768E+09	3,457748E+09	3,159676E+09	6,915515E+09	1,007519E+10
-1786	1,579813E+09	1,579843E+09	3,457768E+09	3,457651E+09	3,159656E+09	6,915419E+09	1,007508E+10
-1785	1,579833E+09	1,579832E+09	3,457663E+09	3,457743E+09	3,159666E+09	6,915406E+09	1,007507E+10
-1784	1,579937E+09	1,579942E+09	3,457704E+09	3,457711E+09	3,159880E+09	6,915415E+09	1,007529E+10
-1783	1,579850E+09	1,579900E+09	3,457671E+09	3,457635E+09	3,159750E+09	6,915305E+09	1,007506E+10
-1782	1,579921E+09	1,579883E+09	3,457639E+09	3,457714E+09	3,159805E+09	6,915353E+09	1,007516E+10
-1781	1,579948E+09	1,579929E+09	3,457718E+09	3,457650E+09	3,159878E+09	6,915368E+09	1,007525E+10
-1780	1,579837E+09	1,579837E+09	3,457687E+09	3,457666E+09	3,159674E+09	6,915353E+09	1,007503E+10
-1779	1,579895E+09	1,579866E+09	3,457709E+09	3,457754E+09	3,159761E+09	6,915462E+09	1,007522E+10
-1778	1,579819E+09	1,579857E+09	3,457771E+09	3,457693E+09	3,159676E+09	6,915464E+09	1,007514E+10
-1777	1,579743E+09	1,579762E+09	3,457736E+09	3,457793E+09	3,159505E+09	6,915529E+09	1,007503E+10
-1776	1,579810E+09	1,579802E+09	3,457821E+09	3,457807E+09	3,159612E+09	6,915629E+09	1,007524E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1775	1,579713E+09	1,579735E+09	3,457834E+09	3,457726E+09	3,159448E+09	6,915560E+09	1,007501E+10
-1774	1,579734E+09	1,579695E+09	3,457765E+09	3,457836E+09	3,159429E+09	6,915601E+09	1,007503E+10
-1773	1,579797E+09	1,579782E+09	3,457798E+09	3,457798E+09	3,159579E+09	6,915596E+09	1,007517E+10
-1772	1,579706E+09	1,579740E+09	3,457753E+09	3,457736E+09	3,159447E+09	6,915489E+09	1,007494E+10
-1771	1,579799E+09	1,579790E+09	3,457722E+09	3,457782E+09	3,159588E+09	6,915504E+09	1,007509E+10
-1770	1,579832E+09	1,579852E+09	3,457759E+09	3,457653E+09	3,159684E+09	6,915412E+09	1,007510E+10
-1769	1,579800E+09	1,579812E+09	3,457680E+09	3,457674E+09	3,159612E+09	6,915355E+09	1,007497E+10
-1768	1,579929E+09	1,579910E+09	3,457689E+09	3,457698E+09	3,159839E+09	6,915387E+09	1,007523E+10
-1767	1,579897E+09	1,579944E+09	3,457669E+09	3,457575E+09	3,159841E+09	6,915244E+09	1,007509E+10
-1766	1,579918E+09	1,579927E+09	3,457579E+09	3,457665E+09	3,159846E+09	6,915244E+09	1,007509E+10
-1765	1,580021E+09	1,580019E+09	3,457620E+09	3,457631E+09	3,160040E+09	6,915251E+09	1,007529E+10
-1764	1,579944E+09	1,579966E+09	3,457622E+09	3,457537E+09	3,159909E+09	6,915159E+09	1,007507E+10
-1763	1,579993E+09	1,579951E+09	3,457586E+09	3,457639E+09	3,159944E+09	6,915225E+09	1,007517E+10
-1762	1,580011E+09	1,579994E+09	3,457634E+09	3,457581E+09	3,160005E+09	6,915214E+09	1,007522E+10
-1761	1,579898E+09	1,579914E+09	3,457603E+09	3,457627E+09	3,159811E+09	6,915230E+09	1,007504E+10
-1760	1,579942E+09	1,579933E+09	3,457649E+09	3,457712E+09	3,159875E+09	6,915361E+09	1,007524E+10
-1759	1,579881E+09	1,579921E+09	3,457709E+09	3,457609E+09	3,159802E+09	6,915318E+09	1,007512E+10
-1758	1,579820E+09	1,579817E+09	3,457685E+09	3,457713E+09	3,159637E+09	6,915398E+09	1,007504E+10
-1757	1,579889E+09	1,579853E+09	3,457741E+09	3,457746E+09	3,159742E+09	6,915486E+09	1,007523E+10
-1756	1,579797E+09	1,579806E+09	3,457765E+09	3,457658E+09	3,159603E+09	6,915423E+09	1,007503E+10
-1755	1,579800E+09	1,579791E+09	3,457688E+09	3,457775E+09	3,159591E+09	6,915462E+09	1,007505E+10
-1754	1,579866E+09	1,579868E+09	3,457705E+09	3,457710E+09	3,159733E+09	6,915415E+09	1,007515E+10
-1753	1,579790E+09	1,579829E+09	3,457679E+09	3,457655E+09	3,159619E+09	6,915334E+09	1,007495E+10
-1752	1,579878E+09	1,579865E+09	3,457666E+09	3,457700E+09	3,159743E+09	6,915365E+09	1,007511E+10
-1751	1,579922E+09	1,579934E+09	3,457677E+09	3,457556E+09	3,159856E+09	6,915233E+09	1,007509E+10
-1750	1,579892E+09	1,579904E+09	3,457593E+09	3,457602E+09	3,159796E+09	6,915195E+09	1,007499E+10
-1749	1,580011E+09	1,580001E+09	3,457578E+09	3,457639E+09	3,160012E+09	6,915216E+09	1,007523E+10
-1748	1,579990E+09	1,580033E+09	3,457593E+09	3,457490E+09	3,160023E+09	6,915084E+09	1,007511E+10
-1747	1,579999E+09	1,580011E+09	3,457513E+09	3,457575E+09	3,160010E+09	6,915088E+09	1,007510E+10
-1746	1,580106E+09	1,580080E+09	3,457537E+09	3,457531E+09	3,160186E+09	6,915068E+09	1,007525E+10
-1745	1,580032E+09	1,580036E+09	3,457538E+09	3,457470E+09	3,160069E+09	6,915008E+09	1,007508E+10
-1744	1,580056E+09	1,580026E+09	3,457516E+09	3,457588E+09	3,160082E+09	6,915104E+09	1,007519E+10
-1743	1,580072E+09	1,580082E+09	3,457556E+09	3,457510E+09	3,160154E+09	6,915066E+09	1,007522E+10
-1742	1,579960E+09	1,579992E+09	3,457555E+09	3,457560E+09	3,159952E+09	6,915115E+09	1,007507E+10
-1741	1,579999E+09	1,579991E+09	3,457601E+09	3,457653E+09	3,159990E+09	6,915253E+09	1,007524E+10
-1740	1,579958E+09	1,579970E+09	3,457682E+09	3,457539E+09	3,159927E+09	6,915221E+09	1,007515E+10
-1739	1,579881E+09	1,579875E+09	3,457631E+09	3,457660E+09	3,159755E+09	6,915290E+09	1,007505E+10
-1738	1,579953E+09	1,579914E+09	3,457637E+09	3,457689E+09	3,159867E+09	6,915326E+09	1,007519E+10
-1737	1,579872E+09	1,579889E+09	3,457649E+09	3,457605E+09	3,159761E+09	6,915254E+09	1,007501E+10
-1736	1,579866E+09	1,579872E+09	3,457602E+09	3,457698E+09	3,159738E+09	6,915300E+09	1,007504E+10
-1735	1,579950E+09	1,579952E+09	3,457623E+09	3,457589E+09	3,159902E+09	6,915212E+09	1,007511E+10
-1734	1,579887E+09	1,579909E+09	3,457616E+09	3,457545E+09	3,159795E+09	6,915160E+09	1,007496E+10
-1733	1,579966E+09	1,579944E+09	3,457586E+09	3,457621E+09	3,159910E+09	6,915207E+09	1,007512E+10
-1732	1,580016E+09	1,580026E+09	3,457609E+09	3,457482E+09	3,160042E+09	6,915090E+09	1,007513E+10
-1731	1,579967E+09	1,580009E+09	3,457519E+09	3,457540E+09	3,159976E+09	6,915059E+09	1,007504E+10
-1730	1,580091E+09	1,580085E+09	3,457486E+09	3,457560E+09	3,160176E+09	6,915046E+09	1,007522E+10
-1729	1,580085E+09	1,580114E+09	3,457509E+09	3,457419E+09	3,160199E+09	6,914928E+09	1,007513E+10
-1728	1,580085E+09	1,580079E+09	3,457446E+09	3,457501E+09	3,160164E+09	6,914946E+09	1,007511E+10
-1727	1,580192E+09	1,580155E+09	3,457445E+09	3,457440E+09	3,160347E+09	6,914884E+09	1,007523E+10



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1726	1,580112E+09	1,580124E+09	3,457454E+09	3,457400E+09	3,160236E+09	6,914854E+09	1,007509E+10
-1725	1,580116E+09	1,580108E+09	3,457431E+09	3,457530E+09	3,160225E+09	6,914962E+09	1,007519E+10
-1724	1,580139E+09	1,580154E+09	3,457516E+09	3,457435E+09	3,160293E+09	6,914950E+09	1,007524E+10
-1723	1,580018E+09	1,580056E+09	3,457525E+09	3,457491E+09	3,160074E+09	6,915017E+09	1,007509E+10
-1722	1,580063E+09	1,580029E+09	3,457537E+09	3,457581E+09	3,160092E+09	6,915118E+09	1,007521E+10
-1721	1,580031E+09	1,580023E+09	3,457599E+09	3,457498E+09	3,160055E+09	6,915097E+09	1,007515E+10
-1720	1,579941E+09	1,579943E+09	3,457547E+09	3,457614E+09	3,159884E+09	6,915161E+09	1,007504E+10
-1719	1,580019E+09	1,579997E+09	3,457535E+09	3,457606E+09	3,160017E+09	6,915141E+09	1,007516E+10
-1718	1,579951E+09	1,579978E+09	3,457578E+09	3,457512E+09	3,159928E+09	6,915090E+09	1,007502E+10
-1717	1,579943E+09	1,579947E+09	3,457541E+09	3,457602E+09	3,159890E+09	6,915142E+09	1,007503E+10
-1716	1,580043E+09	1,580025E+09	3,457585E+09	3,457489E+09	3,160068E+09	6,915074E+09	1,007514E+10
-1715	1,579963E+09	1,579995E+09	3,457560E+09	3,457474E+09	3,159958E+09	6,915034E+09	1,007499E+10
-1714	1,580040E+09	1,580026E+09	3,457483E+09	3,457560E+09	3,160066E+09	6,915044E+09	1,007511E+10
-1713	1,580102E+09	1,580123E+09	3,457498E+09	3,457436E+09	3,160224E+09	6,914933E+09	1,007516E+10
-1712	1,580050E+09	1,580095E+09	3,457430E+09	3,457469E+09	3,160145E+09	6,914899E+09	1,007504E+10
-1711	1,580190E+09	1,580165E+09	3,457387E+09	3,457449E+09	3,160355E+09	6,914835E+09	1,007519E+10
-1710	1,580193E+09	1,580195E+09	3,457424E+09	3,457314E+09	3,160388E+09	6,914738E+09	1,007513E+10
-1709	1,580172E+09	1,580161E+09	3,457358E+09	3,457419E+09	3,160333E+09	6,914777E+09	1,007511E+10
-1708	1,580274E+09	1,580247E+09	3,457386E+09	3,457360E+09	3,160521E+09	6,914746E+09	1,007527E+10
-1707	1,580166E+09	1,580218E+09	3,457410E+09	3,457336E+09	3,160384E+09	6,914746E+09	1,007513E+10
-1706	1,580167E+09	1,580173E+09	3,457381E+09	3,457465E+09	3,160340E+09	6,914846E+09	1,007519E+10
-1705	1,580206E+09	1,580208E+09	3,457464E+09	3,457387E+09	3,160414E+09	6,914852E+09	1,007527E+10
-1704	1,580079E+09	1,580096E+09	3,457476E+09	3,457446E+09	3,160174E+09	6,914922E+09	1,007510E+10
-1703	1,580132E+09	1,580079E+09	3,457442E+09	3,457518E+09	3,160211E+09	6,914960E+09	1,007517E+10
-1702	1,580106E+09	1,580095E+09	3,457496E+09	3,457436E+09	3,160201E+09	6,914932E+09	1,007513E+10
-1701	1,580007E+09	1,580021E+09	3,457447E+09	3,457540E+09	3,160029E+09	6,914987E+09	1,007502E+10
-1700	1,580101E+09	1,580076E+09	3,457477E+09	3,457497E+09	3,160177E+09	6,914974E+09	1,007515E+10
-1699	1,580024E+09	1,580061E+09	3,457537E+09	3,457408E+09	3,160085E+09	6,914944E+09	1,007503E+10
-1698	1,580020E+09	1,580014E+09	3,457474E+09	3,457512E+09	3,160034E+09	6,914986E+09	1,007502E+10
-1697	1,580125E+09	1,580109E+09	3,457504E+09	3,457439E+09	3,160235E+09	6,914943E+09	1,007518E+10
-1696	1,580036E+09	1,580087E+09	3,457481E+09	3,457432E+09	3,160123E+09	6,914913E+09	1,007504E+10
-1695	1,580122E+09	1,580121E+09	3,457379E+09	3,457485E+09	3,160243E+09	6,914864E+09	1,007511E+10
-1694	1,580199E+09	1,580217E+09	3,457412E+09	3,457348E+09	3,160417E+09	6,914760E+09	1,007518E+10
-1693	1,580148E+09	1,580177E+09	3,457348E+09	3,457373E+09	3,160325E+09	6,914721E+09	1,007505E+10
-1692	1,580295E+09	1,580243E+09	3,457323E+09	3,457341E+09	3,160538E+09	6,914663E+09	1,007520E+10
-1691	1,580274E+09	1,580290E+09	3,457357E+09	3,457231E+09	3,160564E+09	6,914587E+09	1,007515E+10
-1690	1,580238E+09	1,580244E+09	3,457265E+09	3,457346E+09	3,160482E+09	6,914611E+09	1,007509E+10
-1689	1,580338E+09	1,580331E+09	3,457309E+09	3,457310E+09	3,160670E+09	6,914619E+09	1,007529E+10
-1688	1,580225E+09	1,580282E+09	3,457365E+09	3,457280E+09	3,160506E+09	6,914645E+09	1,007515E+10
-1687	1,580236E+09	1,580220E+09	3,457314E+09	3,457386E+09	3,160456E+09	6,914700E+09	1,007516E+10
-1686	1,580287E+09	1,580260E+09	3,457393E+09	3,457324E+09	3,160546E+09	6,914717E+09	1,007526E+10
-1685	1,580149E+09	1,580154E+09	3,457385E+09	3,457390E+09	3,160303E+09	6,914776E+09	1,007508E+10
-1684	1,580207E+09	1,580155E+09	3,457365E+09	3,457443E+09	3,160361E+09	6,914808E+09	1,007517E+10
-1683	1,580164E+09	1,580186E+09	3,457438E+09	3,457355E+09	3,160351E+09	6,914793E+09	1,007514E+10
-1682	1,580067E+09	1,580094E+09	3,457389E+09	3,457448E+09	3,160161E+09	6,914837E+09	1,007500E+10
-1681	1,580173E+09	1,580149E+09	3,457431E+09	3,457425E+09	3,160322E+09	6,914856E+09	1,007518E+10
-1680	1,580093E+09	1,580126E+09	3,457494E+09	3,457350E+09	3,160219E+09	6,914844E+09	1,007506E+10
-1679	1,580093E+09	1,580089E+09	3,457381E+09	3,457450E+09	3,160182E+09	6,914831E+09	1,007501E+10
-1678	1,580210E+09	1,580202E+09	3,457396E+09	3,457383E+09	3,160411E+09	6,914779E+09	1,007519E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1677	1,580120E+09	1,580177E+09	3,457374E+09	3,457360E+09	3,160297E+09	6,914734E+09	1,007503E+10
-1676	1,580230E+09	1,580206E+09	3,457300E+09	3,457373E+09	3,160436E+09	6,914673E+09	1,007511E+10
-1675	1,580299E+09	1,580305E+09	3,457342E+09	3,457230E+09	3,160604E+09	6,914572E+09	1,007518E+10
-1674	1,580243E+09	1,580255E+09	3,457259E+09	3,457266E+09	3,160498E+09	6,914525E+09	1,007502E+10
-1673	1,580384E+09	1,580337E+09	3,457234E+09	3,457269E+09	3,160721E+09	6,914503E+09	1,007522E+10
-1672	1,580339E+09	1,580383E+09	3,457290E+09	3,457177E+09	3,160723E+09	6,914466E+09	1,007519E+10
-1671	1,580302E+09	1,580328E+09	3,457191E+09	3,457278E+09	3,160630E+09	6,914468E+09	1,007510E+10
-1670	1,580411E+09	1,580404E+09	3,457251E+09	3,457245E+09	3,160815E+09	6,914496E+09	1,007531E+10
-1669	1,580299E+09	1,580334E+09	3,457308E+09	3,457220E+09	3,160633E+09	6,914528E+09	1,007516E+10
-1668	1,580320E+09	1,580270E+09	3,457254E+09	3,457312E+09	3,160590E+09	6,914566E+09	1,007516E+10
-1667	1,580351E+09	1,580331E+09	3,457317E+09	3,457260E+09	3,160682E+09	6,914577E+09	1,007526E+10
-1666	1,580207E+09	1,580227E+09	3,457283E+09	3,457322E+09	3,160434E+09	6,914605E+09	1,007504E+10
-1665	1,580268E+09	1,580236E+09	3,457285E+09	3,457375E+09	3,160505E+09	6,914659E+09	1,007516E+10
-1664	1,580224E+09	1,580257E+09	3,457396E+09	3,457279E+09	3,160481E+09	6,914675E+09	1,007516E+10
-1663	1,580138E+09	1,580154E+09	3,457329E+09	3,457357E+09	3,160293E+09	6,914686E+09	1,007498E+10
-1662	1,580252E+09	1,580219E+09	3,457366E+09	3,457358E+09	3,160471E+09	6,914724E+09	1,007519E+10
-1661	1,580169E+09	1,580204E+09	3,457413E+09	3,457299E+09	3,160373E+09	6,914712E+09	1,007509E+10
-1660	1,580179E+09	1,580176E+09	3,457300E+09	3,457376E+09	3,160355E+09	6,914676E+09	1,007503E+10
-1659	1,580290E+09	1,580301E+09	3,457323E+09	3,457298E+09	3,160592E+09	6,914622E+09	1,007521E+10
-1658	1,580212E+09	1,580258E+09	3,457284E+09	3,457255E+09	3,160470E+09	6,914540E+09	1,007501E+10
-1657	1,580330E+09	1,580289E+09	3,457219E+09	3,457280E+09	3,160619E+09	6,914499E+09	1,007512E+10
-1656	1,580387E+09	1,580388E+09	3,457271E+09	3,457152E+09	3,160775E+09	6,914423E+09	1,007520E+10
-1655	1,580324E+09	1,580343E+09	3,457154E+09	3,457186E+09	3,160667E+09	6,914340E+09	1,007501E+10
-1654	1,580461E+09	1,580437E+09	3,457136E+09	3,457204E+09	3,160898E+09	6,914340E+09	1,007524E+10
-1653	1,580413E+09	1,580467E+09	3,457211E+09	3,457111E+09	3,160880E+09	6,914322E+09	1,007520E+10
-1652	1,580389E+09	1,580396E+09	3,457137E+09	3,457186E+09	3,160786E+09	6,914323E+09	1,007511E+10
-1651	1,580489E+09	1,580471E+09	3,457201E+09	3,457160E+09	3,160960E+09	6,914361E+09	1,007532E+10
-1650	1,580374E+09	1,580389E+09	3,457224E+09	3,457149E+09	3,160763E+09	6,914374E+09	1,007514E+10
-1649	1,580390E+09	1,580344E+09	3,457168E+09	3,457263E+09	3,160734E+09	6,914431E+09	1,007516E+10
-1648	1,580403E+09	1,580408E+09	3,457252E+09	3,457210E+09	3,160811E+09	6,914463E+09	1,007527E+10
-1647	1,580262E+09	1,580300E+09	3,457215E+09	3,457244E+09	3,160562E+09	6,914459E+09	1,007502E+10
-1646	1,580334E+09	1,580308E+09	3,457236E+09	3,457296E+09	3,160643E+09	6,914531E+09	1,007517E+10
-1645	1,580294E+09	1,580314E+09	3,457351E+09	3,457212E+09	3,160608E+09	6,914563E+09	1,007517E+10
-1644	1,580222E+09	1,580216E+09	3,457275E+09	3,457285E+09	3,160438E+09	6,914560E+09	1,007500E+10
-1643	1,580321E+09	1,580301E+09	3,457286E+09	3,457294E+09	3,160622E+09	6,914580E+09	1,007520E+10
-1642	1,580244E+09	1,580285E+09	3,457300E+09	3,457233E+09	3,160528E+09	6,914533E+09	1,007506E+10
-1641	1,580268E+09	1,580265E+09	3,457201E+09	3,457297E+09	3,160533E+09	6,914497E+09	1,007503E+10
-1640	1,580379E+09	1,580380E+09	3,457248E+09	3,457206E+09	3,160759E+09	6,914454E+09	1,007521E+10
-1639	1,580311E+09	1,580337E+09	3,457187E+09	3,457145E+09	3,160649E+09	6,914331E+09	1,007498E+10
-1638	1,580430E+09	1,580385E+09	3,457120E+09	3,457187E+09	3,160815E+09	6,914307E+09	1,007512E+10
-1637	1,580474E+09	1,580488E+09	3,457179E+09	3,457081E+09	3,160962E+09	6,914260E+09	1,007522E+10
-1636	1,580411E+09	1,580445E+09	3,457083E+09	3,457101E+09	3,160856E+09	6,914184E+09	1,007504E+10
-1635	1,580529E+09	1,580537E+09	3,457090E+09	3,457120E+09	3,161066E+09	6,914209E+09	1,007528E+10
-1634	1,580491E+09	1,580536E+09	3,457151E+09	3,457035E+09	3,161027E+09	6,914186E+09	1,007521E+10
-1633	1,580472E+09	1,580457E+09	3,457080E+09	3,457125E+09	3,160929E+09	6,914206E+09	1,007513E+10
-1632	1,580557E+09	1,580527E+09	3,457138E+09	3,457116E+09	3,161085E+09	6,914254E+09	1,007534E+10
-1631	1,580439E+09	1,580454E+09	3,457117E+09	3,457090E+09	3,160893E+09	6,914208E+09	1,007510E+10
-1630	1,580453E+09	1,580424E+09	3,457070E+09	3,457201E+09	3,160878E+09	6,914271E+09	1,007515E+10
-1629	1,580468E+09	1,580476E+09	3,457185E+09	3,457139E+09	3,160944E+09	6,914324E+09	1,007527E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1628	1,580340E+09	1,580360E+09	3,457172E+09	3,457142E+09	3,160700E+09	6,914314E+09	1,007501E+10
-1627	1,580401E+09	1,580376E+09	3,457199E+09	3,457206E+09	3,160777E+09	6,914406E+09	1,007518E+10
-1626	1,580366E+09	1,580375E+09	3,457272E+09	3,457148E+09	3,160741E+09	6,914420E+09	1,007516E+10
-1625	1,580293E+09	1,580295E+09	3,457192E+09	3,457237E+09	3,160588E+09	6,914430E+09	1,007502E+10
-1624	1,580385E+09	1,580384E+09	3,457213E+09	3,457245E+09	3,160769E+09	6,914458E+09	1,007523E+10
-1623	1,580321E+09	1,580365E+09	3,457203E+09	3,457148E+09	3,160686E+09	6,914351E+09	1,007504E+10
-1622	1,580363E+09	1,580352E+09	3,457111E+09	3,457203E+09	3,160715E+09	6,914314E+09	1,007503E+10
-1621	1,580478E+09	1,580458E+09	3,457166E+09	3,457115E+09	3,160937E+09	6,914281E+09	1,007522E+10
-1620	1,580414E+09	1,580429E+09	3,457102E+09	3,457042E+09	3,160843E+09	6,914143E+09	1,007499E+10
-1619	1,580509E+09	1,580497E+09	3,457037E+09	3,457096E+09	3,161006E+09	6,914132E+09	1,007514E+10
-1618	1,580552E+09	1,580585E+09	3,457083E+09	3,457003E+09	3,161137E+09	6,914087E+09	1,007522E+10
-1617	1,580496E+09	1,580532E+09	3,457020E+09	3,457028E+09	3,161028E+09	6,914048E+09	1,007508E+10
-1616	1,580607E+09	1,580602E+09	3,457045E+09	3,457051E+09	3,161209E+09	6,914095E+09	1,007530E+10
-1615	1,580575E+09	1,580592E+09	3,457068E+09	3,456963E+09	3,161167E+09	6,914030E+09	1,007520E+10
-1614	1,580557E+09	1,580529E+09	3,456981E+09	3,457068E+09	3,161087E+09	6,914049E+09	1,007514E+10
-1613	1,580628E+09	1,580599E+09	3,457044E+09	3,457065E+09	3,161228E+09	6,914110E+09	1,007534E+10
-1612	1,580513E+09	1,580536E+09	3,457044E+09	3,457007E+09	3,161049E+09	6,914052E+09	1,007510E+10
-1611	1,580512E+09	1,580507E+09	3,457027E+09	3,457102E+09	3,161019E+09	6,914130E+09	1,007515E+10
-1610	1,580533E+09	1,580535E+09	3,457134E+09	3,457057E+09	3,161067E+09	6,914192E+09	1,007526E+10
-1609	1,580412E+09	1,580417E+09	3,457133E+09	3,457082E+09	3,160829E+09	6,914216E+09	1,007505E+10
-1608	1,580455E+09	1,580434E+09	3,457146E+09	3,457169E+09	3,160889E+09	6,914315E+09	1,007520E+10
-1607	1,580426E+09	1,580444E+09	3,457166E+09	3,457101E+09	3,160870E+09	6,914267E+09	1,007514E+10
-1606	1,580367E+09	1,580381E+09	3,457078E+09	3,457176E+09	3,160748E+09	6,914255E+09	1,007500E+10
-1605	1,580471E+09	1,580457E+09	3,457121E+09	3,457163E+09	3,160928E+09	6,914285E+09	1,007521E+10
-1604	1,580428E+09	1,580445E+09	3,457123E+09	3,457025E+09	3,160873E+09	6,914148E+09	1,007502E+10
-1603	1,580459E+09	1,580447E+09	3,457043E+09	3,457080E+09	3,160906E+09	6,914123E+09	1,007503E+10
-1602	1,580570E+09	1,580552E+09	3,457072E+09	3,457024E+09	3,161122E+09	6,914096E+09	1,007522E+10
-1601	1,580500E+09	1,580534E+09	3,457030E+09	3,456970E+09	3,161034E+09	6,914000E+09	1,007503E+10
-1600	1,580574E+09	1,580595E+09	3,456987E+09	3,457038E+09	3,161169E+09	6,914025E+09	1,007519E+10
-1599	1,580628E+09	1,580665E+09	3,457010E+09	3,456932E+09	3,161292E+09	6,913942E+09	1,007523E+10
-1598	1,580586E+09	1,580607E+09	3,456945E+09	3,456964E+09	3,161193E+09	6,913909E+09	1,007510E+10
-1597	1,580700E+09	1,580658E+09	3,456968E+09	3,456996E+09	3,161358E+09	6,913964E+09	1,007532E+10
-1596	1,580668E+09	1,580662E+09	3,456966E+09	3,456885E+09	3,161330E+09	6,913851E+09	1,007518E+10
-1595	1,580627E+09	1,580622E+09	3,456887E+09	3,456982E+09	3,161248E+09	6,913869E+09	1,007512E+10
-1594	1,580695E+09	1,580677E+09	3,456947E+09	3,456983E+09	3,161372E+09	6,913930E+09	1,007530E+10
-1593	1,580581E+09	1,580607E+09	3,456998E+09	3,456920E+09	3,161188E+09	6,913918E+09	1,007511E+10
-1592	1,580567E+09	1,580565E+09	3,457006E+09	3,457031E+09	3,161132E+09	6,914037E+09	1,007517E+10
-1591	1,580593E+09	1,580585E+09	3,457070E+09	3,456995E+09	3,161178E+09	6,914065E+09	1,007524E+10
-1590	1,580478E+09	1,580487E+09	3,457049E+09	3,457043E+09	3,160965E+09	6,914092E+09	1,007506E+10
-1589	1,580520E+09	1,580501E+09	3,457062E+09	3,457132E+09	3,161021E+09	6,914194E+09	1,007521E+10
-1588	1,580504E+09	1,580524E+09	3,457082E+09	3,457019E+09	3,161028E+09	6,914101E+09	1,007513E+10
-1587	1,580446E+09	1,580472E+09	3,457014E+09	3,457066E+09	3,160918E+09	6,914080E+09	1,007500E+10
-1586	1,580564E+09	1,580531E+09	3,457041E+09	3,457061E+09	3,161095E+09	6,914101E+09	1,007520E+10
-1585	1,580527E+09	1,580527E+09	3,457060E+09	3,456934E+09	3,161054E+09	6,913994E+09	1,007505E+10
-1584	1,580534E+09	1,580538E+09	3,456977E+09	3,457010E+09	3,161072E+09	6,913988E+09	1,007506E+10
-1583	1,580642E+09	1,580647E+09	3,456967E+09	3,456957E+09	3,161289E+09	6,913924E+09	1,007521E+10
-1582	1,580585E+09	1,580635E+09	3,456933E+09	3,456906E+09	3,161220E+09	6,913840E+09	1,007506E+10
-1581	1,580664E+09	1,580667E+09	3,456912E+09	3,456968E+09	3,161332E+09	6,913880E+09	1,007521E+10
-1580	1,580735E+09	1,580739E+09	3,456928E+09	3,456835E+09	3,161474E+09	6,913763E+09	1,007524E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1579	1,580684E+09	1,580692E+09	3,456859E+09	3,456862E+09	3,161375E+09	6,913721E+09	1,007510E+10
-1578	1,580787E+09	1,580737E+09	3,456855E+09	3,456920E+09	3,161525E+09	6,913775E+09	1,007530E+10
-1577	1,580746E+09	1,580753E+09	3,456889E+09	3,456811E+09	3,161499E+09	6,913700E+09	1,007520E+10
-1576	1,580678E+09	1,580705E+09	3,456846E+09	3,456910E+09	3,161383E+09	6,913756E+09	1,007514E+10
-1575	1,580748E+09	1,580742E+09	3,456897E+09	3,456905E+09	3,161490E+09	6,913801E+09	1,007529E+10
-1574	1,580648E+09	1,580668E+09	3,456951E+09	3,456862E+09	3,161315E+09	6,913813E+09	1,007513E+10
-1573	1,580630E+09	1,580608E+09	3,456959E+09	3,456993E+09	3,161238E+09	6,913952E+09	1,007519E+10
-1572	1,580661E+09	1,580648E+09	3,456986E+09	3,456941E+09	3,161309E+09	6,913926E+09	1,007524E+10
-1571	1,580541E+09	1,580570E+09	3,456962E+09	3,456971E+09	3,161111E+09	6,913933E+09	1,007504E+10
-1570	1,580594E+09	1,580570E+09	3,456960E+09	3,457056E+09	3,161165E+09	6,914016E+09	1,007518E+10
-1569	1,580594E+09	1,580594E+09	3,457020E+09	3,456920E+09	3,161189E+09	6,913940E+09	1,007513E+10
-1568	1,580526E+09	1,580547E+09	3,456968E+09	3,456970E+09	3,161073E+09	6,913938E+09	1,007501E+10
-1567	1,580646E+09	1,580609E+09	3,456952E+09	3,456972E+09	3,161255E+09	6,913924E+09	1,007518E+10
-1566	1,580610E+09	1,580630E+09	3,456963E+09	3,456871E+09	3,161240E+09	6,913834E+09	1,007507E+10
-1565	1,580612E+09	1,580632E+09	3,456900E+09	3,456958E+09	3,161244E+09	6,913858E+09	1,007510E+10
-1564	1,580729E+09	1,580743E+09	3,456884E+09	3,456869E+09	3,161472E+09	6,913753E+09	1,007522E+10
-1563	1,580676E+09	1,580731E+09	3,456869E+09	3,456804E+09	3,161406E+09	6,913673E+09	1,007508E+10
-1562	1,580766E+09	1,580737E+09	3,456823E+09	3,456883E+09	3,161504E+09	6,913706E+09	1,007521E+10
-1561	1,580836E+09	1,580812E+09	3,456851E+09	3,456754E+09	3,161648E+09	6,913605E+09	1,007525E+10
-1560	1,580756E+09	1,580780E+09	3,456778E+09	3,456794E+09	3,161536E+09	6,913572E+09	1,007511E+10
-1559	1,580851E+09	1,580821E+09	3,456744E+09	3,456844E+09	3,161672E+09	6,913588E+09	1,007526E+10
-1558	1,580816E+09	1,580840E+09	3,456805E+09	3,456737E+09	3,161656E+09	6,913542E+09	1,007520E+10
-1557	1,580747E+09	1,580761E+09	3,456805E+09	3,456839E+09	3,161508E+09	6,913644E+09	1,007515E+10
-1556	1,580823E+09	1,580799E+09	3,456846E+09	3,456820E+09	3,161621E+09	6,913665E+09	1,007529E+10
-1555	1,580718E+09	1,580736E+09	3,456900E+09	3,456789E+09	3,161454E+09	6,913688E+09	1,007514E+10
-1554	1,580696E+09	1,580670E+09	3,456870E+09	3,456949E+09	3,161366E+09	6,913819E+09	1,007519E+10
-1553	1,580730E+09	1,580720E+09	3,456921E+09	3,456885E+09	3,161450E+09	6,913806E+09	1,007526E+10
-1552	1,580599E+09	1,580647E+09	3,456911E+09	3,456902E+09	3,161246E+09	6,913813E+09	1,007506E+10
-1551	1,580663E+09	1,580637E+09	3,456883E+09	3,456970E+09	3,161300E+09	6,913853E+09	1,007515E+10
-1550	1,580683E+09	1,580672E+09	3,456942E+09	3,456844E+09	3,161355E+09	6,913786E+09	1,007514E+10
-1549	1,580609E+09	1,580616E+09	3,456896E+09	3,456906E+09	3,161226E+09	6,913801E+09	1,007503E+10
-1548	1,580727E+09	1,580705E+09	3,456851E+09	3,456889E+09	3,161432E+09	6,913740E+09	1,007517E+10
-1547	1,580691E+09	1,580740E+09	3,456872E+09	3,456776E+09	3,161431E+09	6,913648E+09	1,007508E+10
-1546	1,580699E+09	1,580718E+09	3,456803E+09	3,456873E+09	3,161417E+09	6,913676E+09	1,007509E+10
-1545	1,580830E+09	1,580823E+09	3,456824E+09	3,456771E+09	3,161653E+09	6,913596E+09	1,007525E+10
-1544	1,580768E+09	1,580809E+09	3,456809E+09	3,456716E+09	3,161577E+09	6,913525E+09	1,007510E+10
-1543	1,580855E+09	1,580815E+09	3,456714E+09	3,456804E+09	3,161670E+09	6,913518E+09	1,007519E+10
-1542	1,580923E+09	1,580910E+09	3,456739E+09	3,456690E+09	3,161833E+09	6,913429E+09	1,007526E+10
-1541	1,580830E+09	1,580865E+09	3,456704E+09	3,456730E+09	3,161694E+09	6,913434E+09	1,007513E+10
-1540	1,580922E+09	1,580908E+09	3,456678E+09	3,456748E+09	3,161830E+09	6,913426E+09	1,007526E+10
-1539	1,580889E+09	1,580920E+09	3,456770E+09	3,456641E+09	3,161809E+09	6,913411E+09	1,007522E+10
-1538	1,580821E+09	1,580812E+09	3,456752E+09	3,456780E+09	3,161633E+09	6,913532E+09	1,007517E+10
-1537	1,580894E+09	1,580853E+09	3,456799E+09	3,456770E+09	3,161747E+09	6,913568E+09	1,007532E+10
-1536	1,580768E+09	1,580806E+09	3,456836E+09	3,456753E+09	3,161574E+09	6,913589E+09	1,007516E+10
-1535	1,580750E+09	1,580736E+09	3,456763E+09	3,456895E+09	3,161485E+09	6,913659E+09	1,007514E+10
-1534	1,580801E+09	1,580791E+09	3,456827E+09	3,456818E+09	3,161592E+09	6,913645E+09	1,007524E+10
-1533	1,580680E+09	1,580705E+09	3,456850E+09	3,456821E+09	3,161385E+09	6,913671E+09	1,007506E+10
-1532	1,580751E+09	1,580710E+09	3,456799E+09	3,456859E+09	3,161461E+09	6,913658E+09	1,007512E+10
-1531	1,580767E+09	1,580768E+09	3,456865E+09	3,456743E+09	3,161535E+09	6,913608E+09	1,007514E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1530	1,580689E+09	1,580708E+09	3,456803E+09	3,456836E+09	3,161397E+09	6,913639E+09	1,007504E+10
-1529	1,580804E+09	1,580799E+09	3,456793E+09	3,456810E+09	3,161603E+09	6,913603E+09	1,007521E+10
-1528	1,580762E+09	1,580833E+09	3,456828E+09	3,456700E+09	3,161596E+09	6,913527E+09	1,007512E+10
-1527	1,580785E+09	1,580791E+09	3,456719E+09	3,456789E+09	3,161575E+09	6,913508E+09	1,007508E+10
-1526	1,580933E+09	1,580901E+09	3,456730E+09	3,456702E+09	3,161834E+09	6,913431E+09	1,007527E+10
-1525	1,580865E+09	1,580884E+09	3,456714E+09	3,456655E+09	3,161750E+09	6,913368E+09	1,007512E+10
-1524	1,580943E+09	1,580914E+09	3,456590E+09	3,456713E+09	3,161858E+09	6,913303E+09	1,007516E+10
-1523	1,581007E+09	1,581018E+09	3,456645E+09	3,456588E+09	3,162025E+09	6,913233E+09	1,007526E+10
-1522	1,580912E+09	1,580943E+09	3,456629E+09	3,456641E+09	3,161855E+09	6,913270E+09	1,007512E+10
-1521	1,581003E+09	1,580975E+09	3,456651E+09	3,456655E+09	3,161979E+09	6,913306E+09	1,007528E+10
-1520	1,580955E+09	1,580987E+09	3,456741E+09	3,456579E+09	3,161942E+09	6,913319E+09	1,007526E+10
-1519	1,580880E+09	1,580872E+09	3,456671E+09	3,456737E+09	3,161751E+09	6,913408E+09	1,007516E+10
-1518	1,580957E+09	1,580928E+09	3,456706E+09	3,456742E+09	3,161885E+09	6,913449E+09	1,007533E+10
-1517	1,580829E+09	1,580866E+09	3,456764E+09	3,456709E+09	3,161695E+09	6,913474E+09	1,007517E+10
-1516	1,580818E+09	1,580807E+09	3,456681E+09	3,456803E+09	3,161625E+09	6,913484E+09	1,007511E+10
-1515	1,580883E+09	1,580866E+09	3,456766E+09	3,456709E+09	3,161749E+09	6,913475E+09	1,007522E+10
-1514	1,580763E+09	1,580766E+09	3,456777E+09	3,456737E+09	3,161530E+09	6,913515E+09	1,007504E+10
-1513	1,580829E+09	1,580788E+09	3,456743E+09	3,456776E+09	3,161617E+09	6,913519E+09	1,007514E+10
-1512	1,580828E+09	1,580864E+09	3,456798E+09	3,456679E+09	3,161691E+09	6,913478E+09	1,007517E+10
-1511	1,580755E+09	1,580791E+09	3,456705E+09	3,456767E+09	3,161546E+09	6,913472E+09	1,007502E+10
-1510	1,580891E+09	1,580882E+09	3,456704E+09	3,456739E+09	3,161772E+09	6,913443E+09	1,007522E+10
-1509	1,580861E+09	1,580899E+09	3,456757E+09	3,456625E+09	3,161760E+09	6,913383E+09	1,007514E+10
-1508	1,580890E+09	1,580876E+09	3,456609E+09	3,456689E+09	3,161766E+09	6,913298E+09	1,007506E+10
-1507	1,581037E+09	1,581006E+09	3,456623E+09	3,456602E+09	3,162043E+09	6,913225E+09	1,007527E+10
-1506	1,580959E+09	1,580985E+09	3,456604E+09	3,456575E+09	3,161945E+09	6,913179E+09	1,007512E+10
-1505	1,581027E+09	1,581015E+09	3,456532E+09	3,456613E+09	3,162042E+09	6,913145E+09	1,007519E+10
-1504	1,581073E+09	1,581113E+09	3,456616E+09	3,456504E+09	3,162186E+09	6,913119E+09	1,007530E+10
-1503	1,580982E+09	1,581008E+09	3,456575E+09	3,456572E+09	3,161990E+09	6,913147E+09	1,007514E+10
-1502	1,581075E+09	1,581036E+09	3,456587E+09	3,456614E+09	3,162111E+09	6,913201E+09	1,007531E+10
-1501	1,581022E+09	1,581039E+09	3,456672E+09	3,456556E+09	3,162061E+09	6,913228E+09	1,007529E+10
-1500	1,580943E+09	1,580943E+09	3,456554E+09	3,456675E+09	3,161887E+09	6,913229E+09	1,007512E+10
-1499	1,581026E+09	1,581003E+09	3,456612E+09	3,456655E+09	3,162030E+09	6,913267E+09	1,007530E+10
-1498	1,580908E+09	1,580924E+09	3,456681E+09	3,456621E+09	3,161832E+09	6,913301E+09	1,007513E+10
-1497	1,580901E+09	1,580867E+09	3,456637E+09	3,456691E+09	3,161768E+09	6,913328E+09	1,007510E+10
-1496	1,580952E+09	1,580943E+09	3,456723E+09	3,456625E+09	3,161895E+09	6,913348E+09	1,007524E+10
-1495	1,580828E+09	1,580843E+09	3,456692E+09	3,456673E+09	3,161672E+09	6,913365E+09	1,007504E+10
-1494	1,580894E+09	1,580881E+09	3,456660E+09	3,456729E+09	3,161775E+09	6,913389E+09	1,007516E+10
-1493	1,580897E+09	1,580942E+09	3,456738E+09	3,456631E+09	3,161839E+09	6,913369E+09	1,007521E+10
-1492	1,580838E+09	1,580876E+09	3,456618E+09	3,456677E+09	3,161715E+09	6,913295E+09	1,007501E+10
-1491	1,580995E+09	1,580966E+09	3,456625E+09	3,456640E+09	3,161962E+09	6,913265E+09	1,007523E+10
-1490	1,580971E+09	1,580975E+09	3,456652E+09	3,456546E+09	3,161946E+09	6,913199E+09	1,007514E+10
-1489	1,580992E+09	1,580973E+09	3,456518E+09	3,456593E+09	3,161965E+09	6,913111E+09	1,007508E+10
-1488	1,581116E+09	1,581120E+09	3,456535E+09	3,456515E+09	3,162236E+09	6,913051E+09	1,007529E+10
-1487	1,581034E+09	1,581080E+09	3,456509E+09	3,456484E+09	3,162114E+09	6,912993E+09	1,007511E+10
-1486	1,581108E+09	1,581100E+09	3,456470E+09	3,456532E+09	3,162209E+09	6,913002E+09	1,007521E+10
-1485	1,581155E+09	1,581169E+09	3,456572E+09	3,456441E+09	3,162324E+09	6,913013E+09	1,007534E+10
-1484	1,581060E+09	1,581075E+09	3,456491E+09	3,456502E+09	3,162135E+09	6,912993E+09	1,007513E+10
-1483	1,581153E+09	1,581113E+09	3,456501E+09	3,456551E+09	3,162266E+09	6,913052E+09	1,007532E+10
-1482	1,581093E+09	1,581105E+09	3,456575E+09	3,456507E+09	3,162198E+09	6,913082E+09	1,007528E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1481	1,581012E+09	1,581015E+09	3,456499E+09	3,456587E+09	3,162027E+09	6,913086E+09	1,007511E+10
-1480	1,581087E+09	1,581076E+09	3,456571E+09	3,456567E+09	3,162163E+09	6,913139E+09	1,007530E+10
-1479	1,580975E+09	1,580980E+09	3,456617E+09	3,456539E+09	3,161955E+09	6,913156E+09	1,007511E+10
-1478	1,580970E+09	1,580935E+09	3,456573E+09	3,456632E+09	3,161906E+09	6,913205E+09	1,007511E+10
-1477	1,581013E+09	1,581012E+09	3,456657E+09	3,456588E+09	3,162025E+09	6,913245E+09	1,007527E+10
-1476	1,580891E+09	1,580933E+09	3,456589E+09	3,456607E+09	3,161824E+09	6,913196E+09	1,007502E+10
-1475	1,580972E+09	1,580968E+09	3,456577E+09	3,456643E+09	3,161940E+09	6,913220E+09	1,007516E+10
-1474	1,580992E+09	1,581010E+09	3,456653E+09	3,456550E+09	3,162002E+09	6,913203E+09	1,007521E+10
-1473	1,580945E+09	1,580953E+09	3,456551E+09	3,456565E+09	3,161899E+09	6,913116E+09	1,007501E+10
-1472	1,581090E+09	1,581062E+09	3,456546E+09	3,456550E+09	3,162152E+09	6,913096E+09	1,007525E+10
-1471	1,581062E+09	1,581074E+09	3,456537E+09	3,456464E+09	3,162136E+09	6,913002E+09	1,007514E+10
-1470	1,581076E+09	1,581081E+09	3,456422E+09	3,456515E+09	3,162157E+09	6,912937E+09	1,007509E+10
-1469	1,581193E+09	1,581209E+09	3,456479E+09	3,456443E+09	3,162402E+09	6,912922E+09	1,007532E+10
-1468	1,581117E+09	1,581165E+09	3,456437E+09	3,456385E+09	3,162282E+09	6,912822E+09	1,007510E+10
-1467	1,581197E+09	1,581174E+09	3,456412E+09	3,456446E+09	3,162371E+09	6,912857E+09	1,007523E+10
-1466	1,581242E+09	1,581229E+09	3,456489E+09	3,456394E+09	3,162471E+09	6,912883E+09	1,007535E+10
-1465	1,581140E+09	1,581148E+09	3,456410E+09	3,456435E+09	3,162288E+09	6,912845E+09	1,007513E+10
-1464	1,581214E+09	1,581196E+09	3,456419E+09	3,456487E+09	3,162410E+09	6,912906E+09	1,007532E+10
-1463	1,581158E+09	1,581170E+09	3,456479E+09	3,456427E+09	3,162327E+09	6,912906E+09	1,007523E+10
-1462	1,581085E+09	1,581080E+09	3,456434E+09	3,456502E+09	3,162165E+09	6,912936E+09	1,007510E+10
-1461	1,581157E+09	1,581129E+09	3,456527E+09	3,456500E+09	3,162287E+09	6,913028E+09	1,007531E+10
-1460	1,581042E+09	1,581056E+09	3,456537E+09	3,456461E+09	3,162098E+09	6,912998E+09	1,007510E+10
-1459	1,581037E+09	1,581023E+09	3,456502E+09	3,456566E+09	3,162061E+09	6,913068E+09	1,007513E+10
-1458	1,581079E+09	1,581088E+09	3,456580E+09	3,456539E+09	3,162168E+09	6,913119E+09	1,007529E+10
-1457	1,580967E+09	1,581013E+09	3,456542E+09	3,456520E+09	3,161980E+09	6,913063E+09	1,007504E+10
-1456	1,581050E+09	1,581048E+09	3,456529E+09	3,456559E+09	3,162098E+09	6,913088E+09	1,007519E+10
-1455	1,581083E+09	1,581076E+09	3,456564E+09	3,456467E+09	3,162159E+09	6,913031E+09	1,007519E+10
-1454	1,581042E+09	1,581040E+09	3,456454E+09	3,456492E+09	3,162082E+09	6,912946E+09	1,007503E+10
-1453	1,581176E+09	1,581152E+09	3,456444E+09	3,456485E+09	3,162328E+09	6,912928E+09	1,007526E+10
-1452	1,581144E+09	1,581182E+09	3,456414E+09	3,456364E+09	3,162325E+09	6,912778E+09	1,007510E+10
-1451	1,581169E+09	1,581181E+09	3,456341E+09	3,456404E+09	3,162350E+09	6,912746E+09	1,007510E+10
-1450	1,581287E+09	1,581281E+09	3,456409E+09	3,456355E+09	3,162568E+09	6,912764E+09	1,007533E+10
-1449	1,581215E+09	1,581241E+09	3,456388E+09	3,456290E+09	3,162456E+09	6,912677E+09	1,007513E+10
-1448	1,581276E+09	1,581258E+09	3,456347E+09	3,456381E+09	3,162534E+09	6,912728E+09	1,007526E+10
-1447	1,581313E+09	1,581307E+09	3,456386E+09	3,456342E+09	3,162620E+09	6,912728E+09	1,007535E+10
-1446	1,581209E+09	1,581232E+09	3,456326E+09	3,456378E+09	3,162441E+09	6,912703E+09	1,007514E+10
-1445	1,581276E+09	1,581261E+09	3,456363E+09	3,456427E+09	3,162537E+09	6,912790E+09	1,007533E+10
-1444	1,581225E+09	1,581238E+09	3,456408E+09	3,456335E+09	3,162463E+09	6,912742E+09	1,007521E+10
-1443	1,581161E+09	1,581144E+09	3,456383E+09	3,456416E+09	3,162305E+09	6,912799E+09	1,007510E+10
-1442	1,581225E+09	1,581189E+09	3,456460E+09	3,456450E+09	3,162413E+09	6,912910E+09	1,007532E+10
-1441	1,581109E+09	1,581135E+09	3,456476E+09	3,456392E+09	3,162244E+09	6,912867E+09	1,007511E+10
-1440	1,581091E+09	1,581109E+09	3,456441E+09	3,456502E+09	3,162200E+09	6,912943E+09	1,007514E+10
-1439	1,581149E+09	1,581153E+09	3,456498E+09	3,456465E+09	3,162302E+09	6,912963E+09	1,007527E+10
-1438	1,581055E+09	1,581079E+09	3,456468E+09	3,456436E+09	3,162134E+09	6,912905E+09	1,007504E+10
-1437	1,581142E+09	1,581110E+09	3,456452E+09	3,456490E+09	3,162253E+09	6,912942E+09	1,007520E+10
-1436	1,581176E+09	1,581168E+09	3,456440E+09	3,456375E+09	3,162344E+09	6,912815E+09	1,007516E+10
-1435	1,581137E+09	1,581149E+09	3,456348E+09	3,456395E+09	3,162285E+09	6,912743E+09	1,007503E+10
-1434	1,581263E+09	1,581252E+09	3,456352E+09	3,456401E+09	3,162515E+09	6,912753E+09	1,007527E+10
-1433	1,581236E+09	1,581283E+09	3,456361E+09	3,456249E+09	3,162519E+09	6,912610E+09	1,007513E+10



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1432	1,581252E+09	1,581274E+09	3,456301E+09	3,456312E+09	3,162527E+09	6,912612E+09	1,007514E+10
-1431	1,581373E+09	1,581352E+09	3,456331E+09	3,456287E+09	3,162725E+09	6,912617E+09	1,007534E+10
-1430	1,581300E+09	1,581322E+09	3,456303E+09	3,456241E+09	3,162622E+09	6,912544E+09	1,007517E+10
-1429	1,581347E+09	1,581335E+09	3,456255E+09	3,456345E+09	3,162682E+09	6,912600E+09	1,007528E+10
-1428	1,581382E+09	1,581390E+09	3,456270E+09	3,456262E+09	3,162772E+09	6,912532E+09	1,007530E+10
-1427	1,581290E+09	1,581307E+09	3,456251E+09	3,456277E+09	3,162597E+09	6,912528E+09	1,007512E+10
-1426	1,581355E+09	1,581315E+09	3,456301E+09	3,456341E+09	3,162671E+09	6,912642E+09	1,007531E+10
-1425	1,581305E+09	1,581305E+09	3,456366E+09	3,456239E+09	3,162610E+09	6,912605E+09	1,007521E+10
-1424	1,581221E+09	1,581226E+09	3,456338E+09	3,456353E+09	3,162447E+09	6,912692E+09	1,007514E+10
-1423	1,581276E+09	1,581260E+09	3,456382E+09	3,456402E+09	3,162536E+09	6,912784E+09	1,007532E+10
-1422	1,581168E+09	1,581211E+09	3,456419E+09	3,456342E+09	3,162380E+09	6,912762E+09	1,007514E+10
-1421	1,581155E+09	1,581166E+09	3,456389E+09	3,456449E+09	3,162321E+09	6,912838E+09	1,007516E+10
-1420	1,581227E+09	1,581215E+09	3,456407E+09	3,456379E+09	3,162442E+09	6,912786E+09	1,007523E+10
-1419	1,581154E+09	1,581153E+09	3,456378E+09	3,456348E+09	3,162307E+09	6,912725E+09	1,007503E+10
-1418	1,581235E+09	1,581191E+09	3,456339E+09	3,456419E+09	3,162425E+09	6,912758E+09	1,007518E+10
-1417	1,581269E+09	1,581278E+09	3,456339E+09	3,456270E+09	3,162546E+09	6,912609E+09	1,007516E+10
-1416	1,581217E+09	1,581263E+09	3,456271E+09	3,456290E+09	3,162480E+09	6,912561E+09	1,007504E+10
-1415	1,581345E+09	1,581340E+09	3,456273E+09	3,456297E+09	3,162685E+09	6,912570E+09	1,007526E+10
-1414	1,581331E+09	1,581368E+09	3,456306E+09	3,456161E+09	3,162699E+09	6,912467E+09	1,007517E+10
-1413	1,581340E+09	1,581347E+09	3,456240E+09	3,456258E+09	3,162687E+09	6,912498E+09	1,007518E+10
-1412	1,581455E+09	1,581440E+09	3,456219E+09	3,456222E+09	3,162895E+09	6,912442E+09	1,007534E+10
-1411	1,581389E+09	1,581414E+09	3,456203E+09	3,456172E+09	3,162803E+09	6,912375E+09	1,007518E+10
-1410	1,581426E+09	1,581412E+09	3,456167E+09	3,456279E+09	3,162837E+09	6,912446E+09	1,007528E+10
-1409	1,581466E+09	1,581469E+09	3,456215E+09	3,456153E+09	3,162935E+09	6,912368E+09	1,007530E+10
-1408	1,581363E+09	1,581381E+09	3,456215E+09	3,456182E+09	3,162744E+09	6,912398E+09	1,007514E+10
-1407	1,581422E+09	1,581373E+09	3,456238E+09	3,456273E+09	3,162795E+09	6,912511E+09	1,007531E+10
-1406	1,581369E+09	1,581376E+09	3,456301E+09	3,456192E+09	3,162745E+09	6,912493E+09	1,007524E+10
-1405	1,581270E+09	1,581293E+09	3,456270E+09	3,456326E+09	3,162563E+09	6,912597E+09	1,007516E+10
-1404	1,581330E+09	1,581329E+09	3,456284E+09	3,456335E+09	3,162659E+09	6,912620E+09	1,007528E+10
-1403	1,581250E+09	1,581273E+09	3,456341E+09	3,456258E+09	3,162523E+09	6,912599E+09	1,007512E+10
-1402	1,581244E+09	1,581221E+09	3,456305E+09	3,456373E+09	3,162465E+09	6,912677E+09	1,007514E+10
-1401	1,581325E+09	1,581295E+09	3,456322E+09	3,456273E+09	3,162621E+09	6,912595E+09	1,007522E+10
-1400	1,581239E+09	1,581260E+09	3,456294E+09	3,456253E+09	3,162499E+09	6,912548E+09	1,007505E+10
-1399	1,581311E+09	1,581294E+09	3,456240E+09	3,456329E+09	3,162605E+09	6,912569E+09	1,007517E+10
-1398	1,581350E+09	1,581383E+09	3,456279E+09	3,456181E+09	3,162733E+09	6,912460E+09	1,007519E+10
-1397	1,581295E+09	1,581348E+09	3,456230E+09	3,456219E+09	3,162643E+09	6,912450E+09	1,007509E+10
-1396	1,581428E+09	1,581418E+09	3,456196E+09	3,456212E+09	3,162847E+09	6,912409E+09	1,007526E+10
-1395	1,581433E+09	1,581447E+09	3,456223E+09	3,456096E+09	3,162880E+09	6,912319E+09	1,007520E+10
-1394	1,581432E+09	1,581426E+09	3,456129E+09	3,456211E+09	3,162858E+09	6,912340E+09	1,007520E+10
-1393	1,581546E+09	1,581536E+09	3,456114E+09	3,456134E+09	3,163082E+09	6,912249E+09	1,007533E+10
-1392	1,581473E+09	1,581510E+09	3,456122E+09	3,456073E+09	3,162984E+09	6,912195E+09	1,007518E+10
-1391	1,581506E+09	1,581479E+09	3,456083E+09	3,456174E+09	3,162985E+09	6,912257E+09	1,007524E+10
-1390	1,581549E+09	1,581537E+09	3,456165E+09	3,456066E+09	3,163086E+09	6,912230E+09	1,007532E+10
-1389	1,581429E+09	1,581444E+09	3,456167E+09	3,456132E+09	3,162873E+09	6,912300E+09	1,007517E+10
-1388	1,581471E+09	1,581448E+09	3,456152E+09	3,456217E+09	3,162919E+09	6,912369E+09	1,007529E+10
-1387	1,581431E+09	1,581453E+09	3,456230E+09	3,456145E+09	3,162884E+09	6,912374E+09	1,007526E+10
-1386	1,581331E+09	1,581352E+09	3,456202E+09	3,456278E+09	3,162683E+09	6,912480E+09	1,007516E+10
-1385	1,581408E+09	1,581394E+09	3,456225E+09	3,456242E+09	3,162802E+09	6,912467E+09	1,007527E+10
-1384	1,581333E+09	1,581343E+09	3,456281E+09	3,456167E+09	3,162677E+09	6,912448E+09	1,007512E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1383	1,581326E+09	1,581290E+09	3,456207E+09	3,456290E+09	3,162616E+09	6,912498E+09	1,007511E+10
-1382	1,581409E+09	1,581389E+09	3,456233E+09	3,456198E+09	3,162798E+09	6,912431E+09	1,007523E+10
-1381	1,581309E+09	1,581357E+09	3,456215E+09	3,456187E+09	3,162666E+09	6,912402E+09	1,007507E+10
-1380	1,581382E+09	1,581387E+09	3,456148E+09	3,456228E+09	3,162769E+09	6,912376E+09	1,007515E+10
-1379	1,581447E+09	1,581466E+09	3,456208E+09	3,456086E+09	3,162914E+09	6,912294E+09	1,007521E+10
-1378	1,581395E+09	1,581418E+09	3,456155E+09	3,456150E+09	3,162813E+09	6,912305E+09	1,007512E+10
-1377	1,581535E+09	1,581508E+09	3,456107E+09	3,456125E+09	3,163043E+09	6,912232E+09	1,007527E+10
-1376	1,581528E+09	1,581552E+09	3,456128E+09	3,456019E+09	3,163080E+09	6,912147E+09	1,007523E+10
-1375	1,581519E+09	1,581521E+09	3,456017E+09	3,456132E+09	3,163040E+09	6,912150E+09	1,007519E+10
-1374	1,581635E+09	1,581626E+09	3,456041E+09	3,456041E+09	3,163260E+09	6,912082E+09	1,007534E+10
-1373	1,581548E+09	1,581585E+09	3,456072E+09	3,455994E+09	3,163133E+09	6,912066E+09	1,007520E+10
-1372	1,581575E+09	1,581547E+09	3,456012E+09	3,456084E+09	3,163123E+09	6,912096E+09	1,007522E+10
-1371	1,581625E+09	1,581606E+09	3,456094E+09	3,456009E+09	3,163231E+09	6,912103E+09	1,007533E+10
-1370	1,581490E+09	1,581511E+09	3,456088E+09	3,456102E+09	3,163001E+09	6,912190E+09	1,007519E+10
-1369	1,581534E+09	1,581525E+09	3,456074E+09	3,456145E+09	3,163059E+09	6,912219E+09	1,007528E+10
-1368	1,581497E+09	1,581525E+09	3,456171E+09	3,456063E+09	3,163022E+09	6,912234E+09	1,007526E+10
-1367	1,581405E+09	1,581405E+09	3,456125E+09	3,456190E+09	3,162810E+09	6,912315E+09	1,007512E+10
-1366	1,581495E+09	1,581453E+09	3,456164E+09	3,456159E+09	3,162948E+09	6,912323E+09	1,007527E+10
-1365	1,581408E+09	1,581418E+09	3,456211E+09	3,456109E+09	3,162826E+09	6,912319E+09	1,007514E+10
-1364	1,581391E+09	1,581382E+09	3,456105E+09	3,456209E+09	3,162773E+09	6,912313E+09	1,007509E+10
-1363	1,581488E+09	1,581487E+09	3,456151E+09	3,456123E+09	3,162975E+09	6,912275E+09	1,007525E+10
-1362	1,581389E+09	1,581441E+09	3,456152E+09	3,456116E+09	3,162829E+09	6,912268E+09	1,007510E+10
-1361	1,581472E+09	1,581473E+09	3,456091E+09	3,456124E+09	3,162946E+09	6,912216E+09	1,007516E+10
-1360	1,581546E+09	1,581553E+09	3,456147E+09	3,456002E+09	3,163099E+09	6,912149E+09	1,007525E+10
-1359	1,581491E+09	1,581498E+09	3,456042E+09	3,456080E+09	3,162989E+09	6,912122E+09	1,007511E+10
-1358	1,581631E+09	1,581604E+09	3,456001E+09	3,456056E+09	3,163235E+09	6,912057E+09	1,007529E+10
-1357	1,581612E+09	1,581650E+09	3,456026E+09	3,455950E+09	3,163261E+09	6,911976E+09	1,007524E+10
-1356	1,581597E+09	1,581608E+09	3,455912E+09	3,456019E+09	3,163205E+09	6,911931E+09	1,007514E+10
-1355	1,581729E+09	1,581703E+09	3,455966E+09	3,455941E+09	3,163432E+09	6,911907E+09	1,007534E+10
-1354	1,581632E+09	1,581651E+09	3,456008E+09	3,455922E+09	3,163283E+09	6,911930E+09	1,007521E+10
-1353	1,581651E+09	1,581630E+09	3,455946E+09	3,456002E+09	3,163280E+09	6,911948E+09	1,007523E+10
-1352	1,581690E+09	1,581694E+09	3,456034E+09	3,455948E+09	3,163384E+09	6,911982E+09	1,007537E+10
-1351	1,581548E+09	1,581580E+09	3,456015E+09	3,456046E+09	3,163129E+09	6,912061E+09	1,007519E+10
-1350	1,581601E+09	1,581586E+09	3,456031E+09	3,456080E+09	3,163187E+09	6,912111E+09	1,007530E+10
-1349	1,581563E+09	1,581577E+09	3,456127E+09	3,456006E+09	3,163139E+09	6,912133E+09	1,007527E+10
-1348	1,581473E+09	1,581460E+09	3,456040E+09	3,456110E+09	3,162934E+09	6,912150E+09	1,007508E+10
-1347	1,581578E+09	1,581525E+09	3,456067E+09	3,456098E+09	3,163103E+09	6,912164E+09	1,007527E+10
-1346	1,581480E+09	1,581502E+09	3,456113E+09	3,456056E+09	3,162982E+09	6,912168E+09	1,007515E+10
-1345	1,581469E+09	1,581482E+09	3,456019E+09	3,456107E+09	3,162951E+09	6,912126E+09	1,007508E+10
-1344	1,581572E+09	1,581580E+09	3,456090E+09	3,456016E+09	3,163151E+09	6,912106E+09	1,007526E+10
-1343	1,581481E+09	1,581515E+09	3,456075E+09	3,456021E+09	3,162996E+09	6,912097E+09	1,007509E+10
-1342	1,581574E+09	1,581551E+09	3,456022E+09	3,456041E+09	3,163125E+09	6,912063E+09	1,007519E+10
-1341	1,581632E+09	1,581644E+09	3,456059E+09	3,455946E+09	3,163276E+09	6,912006E+09	1,007528E+10
-1340	1,581573E+09	1,581600E+09	3,455921E+09	3,455997E+09	3,163173E+09	6,911918E+09	1,007509E+10
-1339	1,581725E+09	1,581703E+09	3,455896E+09	3,455975E+09	3,163428E+09	6,911871E+09	1,007530E+10
-1338	1,581700E+09	1,581735E+09	3,455950E+09	3,455865E+09	3,163436E+09	6,911814E+09	1,007525E+10
-1337	1,581690E+09	1,581694E+09	3,455849E+09	3,455900E+09	3,163384E+09	6,911749E+09	1,007513E+10
-1336	1,581815E+09	1,581784E+09	3,455916E+09	3,455849E+09	3,163599E+09	6,911765E+09	1,007536E+10
-1335	1,581706E+09	1,581724E+09	3,455928E+09	3,455864E+09	3,163430E+09	6,911792E+09	1,007522E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1334	1,581717E+09	1,581707E+09	3,455884E+09	3,455952E+09	3,163424E+09	6,911836E+09	1,007526E+10
-1333	1,581743E+09	1,581765E+09	3,455974E+09	3,455908E+09	3,163508E+09	6,911882E+09	1,007539E+10
-1332	1,581608E+09	1,581635E+09	3,455934E+09	3,455966E+09	3,163243E+09	6,911899E+09	1,007514E+10
-1331	1,581683E+09	1,581636E+09	3,455955E+09	3,456011E+09	3,163319E+09	6,911965E+09	1,007528E+10
-1330	1,581643E+09	1,581632E+09	3,456047E+09	3,455948E+09	3,163275E+09	6,911996E+09	1,007527E+10
-1329	1,581551E+09	1,581547E+09	3,455952E+09	3,456018E+09	3,163098E+09	6,911970E+09	1,007507E+10
-1328	1,581650E+09	1,581627E+09	3,455996E+09	3,456012E+09	3,163276E+09	6,912008E+09	1,007528E+10
-1327	1,581550E+09	1,581590E+09	3,456036E+09	3,455970E+09	3,163140E+09	6,912006E+09	1,007515E+10
-1326	1,581546E+09	1,581562E+09	3,455981E+09	3,456018E+09	3,163108E+09	6,911999E+09	1,007511E+10
-1325	1,581647E+09	1,581654E+09	3,456044E+09	3,455950E+09	3,163301E+09	6,911995E+09	1,007530E+10
-1324	1,581562E+09	1,581586E+09	3,455981E+09	3,455943E+09	3,163148E+09	6,911924E+09	1,007507E+10
-1323	1,581671E+09	1,581637E+09	3,455905E+09	3,455987E+09	3,163309E+09	6,911892E+09	1,007520E+10
-1322	1,581724E+09	1,581737E+09	3,455939E+09	3,455885E+09	3,163461E+09	6,911825E+09	1,007529E+10
-1321	1,581671E+09	1,581706E+09	3,455812E+09	3,455875E+09	3,163377E+09	6,911687E+09	1,007506E+10
-1320	1,581826E+09	1,581800E+09	3,455821E+09	3,455846E+09	3,163626E+09	6,911667E+09	1,007529E+10
-1319	1,581798E+09	1,581814E+09	3,455872E+09	3,455756E+09	3,163612E+09	6,911628E+09	1,007524E+10
-1318	1,581782E+09	1,581774E+09	3,455801E+09	3,455817E+09	3,163556E+09	6,911618E+09	1,007517E+10
-1317	1,581879E+09	1,581871E+09	3,455859E+09	3,455808E+09	3,163750E+09	6,911667E+09	1,007542E+10
-1316	1,581762E+09	1,581805E+09	3,455846E+09	3,455811E+09	3,163567E+09	6,911657E+09	1,007522E+10
-1315	1,581786E+09	1,581777E+09	3,455810E+09	3,455908E+09	3,163563E+09	6,911718E+09	1,007528E+10
-1314	1,581811E+09	1,581819E+09	3,455913E+09	3,455859E+09	3,163630E+09	6,911773E+09	1,007540E+10
-1313	1,581689E+09	1,581697E+09	3,455864E+09	3,455871E+09	3,163386E+09	6,911735E+09	1,007512E+10
-1312	1,581764E+09	1,581703E+09	3,455880E+09	3,455924E+09	3,163467E+09	6,911805E+09	1,007527E+10
-1311	1,581714E+09	1,581708E+09	3,455947E+09	3,455879E+09	3,163422E+09	6,911826E+09	1,007525E+10
-1310	1,581621E+09	1,581634E+09	3,455884E+09	3,455938E+09	3,163255E+09	6,911822E+09	1,007508E+10
-1309	1,581703E+09	1,581711E+09	3,455943E+09	3,455938E+09	3,163414E+09	6,911881E+09	1,007530E+10
-1308	1,581617E+09	1,581659E+09	3,455970E+09	3,455874E+09	3,163276E+09	6,911844E+09	1,007512E+10
-1307	1,581636E+09	1,581626E+09	3,455907E+09	3,455948E+09	3,163263E+09	6,911855E+09	1,007512E+10
-1306	1,581736E+09	1,581724E+09	3,455957E+09	3,455899E+09	3,163460E+09	6,911856E+09	1,007532E+10
-1305	1,581659E+09	1,581687E+09	3,455867E+09	3,455853E+09	3,163346E+09	6,911720E+09	1,007507E+10
-1304	1,581769E+09	1,581747E+09	3,455804E+09	3,455890E+09	3,163516E+09	6,911694E+09	1,007521E+10
-1303	1,581820E+09	1,581836E+09	3,455841E+09	3,455783E+09	3,163656E+09	6,911624E+09	1,007528E+10
-1302	1,581771E+09	1,581798E+09	3,455764E+09	3,455760E+09	3,163568E+09	6,911523E+09	1,007509E+10
-1301	1,581907E+09	1,581886E+09	3,455777E+09	3,455762E+09	3,163793E+09	6,911540E+09	1,007533E+10
-1300	1,581874E+09	1,581892E+09	3,455793E+09	3,455682E+09	3,163766E+09	6,911474E+09	1,007524E+10
-1299	1,581859E+09	1,581859E+09	3,455709E+09	3,455783E+09	3,163718E+09	6,911492E+09	1,007521E+10
-1298	1,581945E+09	1,581950E+09	3,455771E+09	3,455778E+09	3,163895E+09	6,911548E+09	1,007544E+10
-1297	1,581837E+09	1,581882E+09	3,455759E+09	3,455723E+09	3,163719E+09	6,911482E+09	1,007520E+10
-1296	1,581870E+09	1,581841E+09	3,455744E+09	3,455811E+09	3,163711E+09	6,911555E+09	1,007527E+10
-1295	1,581896E+09	1,581870E+09	3,455827E+09	3,455770E+09	3,163766E+09	6,911597E+09	1,007536E+10
-1294	1,581769E+09	1,581763E+09	3,455804E+09	3,455784E+09	3,163533E+09	6,911588E+09	1,007512E+10
-1293	1,581818E+09	1,581789E+09	3,455818E+09	3,455864E+09	3,163608E+09	6,911681E+09	1,007529E+10
-1292	1,581765E+09	1,581790E+09	3,455871E+09	3,455803E+09	3,163555E+09	6,911674E+09	1,007523E+10
-1291	1,581686E+09	1,581711E+09	3,455825E+09	3,455880E+09	3,163397E+09	6,911705E+09	1,007510E+10
-1290	1,581771E+09	1,581772E+09	3,455895E+09	3,455881E+09	3,163543E+09	6,911776E+09	1,007532E+10
-1289	1,581704E+09	1,581729E+09	3,455898E+09	3,455784E+09	3,163434E+09	6,911682E+09	1,007512E+10
-1288	1,581732E+09	1,581706E+09	3,455817E+09	3,455870E+09	3,163439E+09	6,911687E+09	1,007513E+10
-1287	1,581830E+09	1,581814E+09	3,455830E+09	3,455828E+09	3,163643E+09	6,911658E+09	1,007530E+10
-1286	1,581758E+09	1,581791E+09	3,455771E+09	3,455755E+09	3,163549E+09	6,911526E+09	1,007508E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1285	1,581854E+09	1,581851E+09	3,455724E+09	3,455788E+09	3,163706E+09	6,911512E+09	1,007522E+10
-1284	1,581910E+09	1,581925E+09	3,455756E+09	3,455664E+09	3,163834E+09	6,911420E+09	1,007525E+10
-1283	1,581871E+09	1,581883E+09	3,455687E+09	3,455680E+09	3,163754E+09	6,911367E+09	1,007512E+10
-1282	1,581987E+09	1,581970E+09	3,455706E+09	3,455712E+09	3,163957E+09	6,911417E+09	1,007537E+10
-1281	1,581956E+09	1,581993E+09	3,455705E+09	3,455611E+09	3,163949E+09	6,911316E+09	1,007526E+10
-1280	1,581939E+09	1,581948E+09	3,455633E+09	3,455711E+09	3,163887E+09	6,911344E+09	1,007523E+10
-1279	1,582021E+09	1,582019E+09	3,455690E+09	3,455705E+09	3,164039E+09	6,911396E+09	1,007544E+10
-1278	1,581925E+09	1,581941E+09	3,455712E+09	3,455631E+09	3,163866E+09	6,911343E+09	1,007521E+10
-1277	1,581937E+09	1,581901E+09	3,455688E+09	3,455738E+09	3,163838E+09	6,911426E+09	1,007526E+10
-1276	1,581958E+09	1,581932E+09	3,455739E+09	3,455697E+09	3,163890E+09	6,911436E+09	1,007533E+10
-1275	1,581834E+09	1,581841E+09	3,455713E+09	3,455738E+09	3,163676E+09	6,911450E+09	1,007513E+10
-1274	1,581870E+09	1,581865E+09	3,455748E+09	3,455813E+09	3,163735E+09	6,911562E+09	1,007530E+10
-1273	1,581834E+09	1,581867E+09	3,455802E+09	3,455707E+09	3,163701E+09	6,911509E+09	1,007521E+10
-1272	1,581770E+09	1,581777E+09	3,455770E+09	3,455787E+09	3,163547E+09	6,911557E+09	1,007510E+10
-1271	1,581859E+09	1,581833E+09	3,455810E+09	3,455808E+09	3,163692E+09	6,911618E+09	1,007531E+10
-1270	1,581800E+09	1,581810E+09	3,455821E+09	3,455706E+09	3,163610E+09	6,911527E+09	1,007514E+10
-1269	1,581810E+09	1,581811E+09	3,455727E+09	3,455803E+09	3,163621E+09	6,911529E+09	1,007515E+10
-1268	1,581910E+09	1,581913E+09	3,455725E+09	3,455734E+09	3,163823E+09	6,911459E+09	1,007528E+10
-1267	1,581852E+09	1,581891E+09	3,455688E+09	3,455669E+09	3,163743E+09	6,911356E+09	1,007510E+10
-1266	1,581943E+09	1,581937E+09	3,455664E+09	3,455703E+09	3,163880E+09	6,911367E+09	1,007525E+10
-1265	1,582007E+09	1,582013E+09	3,455676E+09	3,455561E+09	3,164020E+09	6,911237E+09	1,007526E+10
-1264	1,581966E+09	1,581975E+09	3,455606E+09	3,455604E+09	3,163941E+09	6,911210E+09	1,007515E+10
-1263	1,582070E+09	1,582058E+09	3,455596E+09	3,455651E+09	3,164128E+09	6,911248E+09	1,007538E+10
-1262	1,582043E+09	1,582077E+09	3,455630E+09	3,455530E+09	3,164120E+09	6,911160E+09	1,007528E+10
-1261	1,582012E+09	1,582026E+09	3,455568E+09	3,455630E+09	3,164039E+09	6,911197E+09	1,007524E+10
-1260	1,582099E+09	1,582072E+09	3,455606E+09	3,455609E+09	3,164171E+09	6,911215E+09	1,007539E+10
-1259	1,582010E+09	1,582004E+09	3,455626E+09	3,455566E+09	3,164015E+09	6,911193E+09	1,007521E+10
-1258	1,582002E+09	1,581972E+09	3,455611E+09	3,455686E+09	3,163974E+09	6,911297E+09	1,007527E+10
-1257	1,582022E+09	1,582022E+09	3,455653E+09	3,455619E+09	3,164044E+09	6,911272E+09	1,007532E+10
-1256	1,581901E+09	1,581927E+09	3,455659E+09	3,455661E+09	3,163828E+09	6,911320E+09	1,007515E+10
-1255	1,581932E+09	1,581933E+09	3,455693E+09	3,455741E+09	3,163865E+09	6,911435E+09	1,007530E+10
-1254	1,581915E+09	1,581928E+09	3,455772E+09	3,455626E+09	3,163843E+09	6,911397E+09	1,007524E+10
-1253	1,581841E+09	1,581845E+09	3,455714E+09	3,455726E+09	3,163686E+09	6,911439E+09	1,007513E+10
-1252	1,581933E+09	1,581904E+09	3,455702E+09	3,455744E+09	3,163838E+09	6,911446E+09	1,007528E+10
-1251	1,581889E+09	1,581905E+09	3,455700E+09	3,455653E+09	3,163794E+09	6,911353E+09	1,007515E+10
-1250	1,581890E+09	1,581905E+09	3,455629E+09	3,455725E+09	3,163795E+09	6,911354E+09	1,007515E+10
-1249	1,582008E+09	1,582009E+09	3,455632E+09	3,455607E+09	3,164017E+09	6,911239E+09	1,007526E+10
-1248	1,581960E+09	1,581979E+09	3,455616E+09	3,455545E+09	3,163940E+09	6,911161E+09	1,007510E+10
-1247	1,582038E+09	1,582021E+09	3,455577E+09	3,455611E+09	3,164059E+09	6,911189E+09	1,007525E+10
-1246	1,582105E+09	1,582108E+09	3,455606E+09	3,455480E+09	3,164213E+09	6,911086E+09	1,007530E+10
-1245	1,582039E+09	1,582078E+09	3,455531E+09	3,455545E+09	3,164118E+09	6,911076E+09	1,007519E+10
-1244	1,582142E+09	1,582141E+09	3,455508E+09	3,455578E+09	3,164283E+09	6,911087E+09	1,007537E+10
-1243	1,582131E+09	1,582153E+09	3,455550E+09	3,455468E+09	3,164283E+09	6,911017E+09	1,007530E+10
-1242	1,582091E+09	1,582088E+09	3,455503E+09	3,455563E+09	3,164178E+09	6,911066E+09	1,007524E+10
-1241	1,582181E+09	1,582141E+09	3,455516E+09	3,455520E+09	3,164322E+09	6,911036E+09	1,007536E+10
-1240	1,582088E+09	1,582085E+09	3,455542E+09	3,455492E+09	3,164173E+09	6,911034E+09	1,007521E+10
-1239	1,582062E+09	1,582054E+09	3,455522E+09	3,455623E+09	3,164116E+09	6,911145E+09	1,007526E+10
-1238	1,582090E+09	1,582099E+09	3,455607E+09	3,455534E+09	3,164189E+09	6,911142E+09	1,007533E+10
-1237	1,581959E+09	1,581999E+09	3,455625E+09	3,455585E+09	3,163958E+09	6,911210E+09	1,007517E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1236	1,581999E+09	1,581981E+09	3,455630E+09	3,455663E+09	3,163981E+09	6,911293E+09	1,007527E+10
-1235	1,581997E+09	1,581991E+09	3,455690E+09	3,455581E+09	3,163987E+09	6,911271E+09	1,007526E+10
-1234	1,581914E+09	1,581924E+09	3,455624E+09	3,455681E+09	3,163838E+09	6,911304E+09	1,007514E+10
-1233	1,582017E+09	1,581998E+09	3,455587E+09	3,455655E+09	3,164015E+09	6,911242E+09	1,007526E+10
-1232	1,581983E+09	1,582005E+09	3,455612E+09	3,455550E+09	3,163988E+09	6,911162E+09	1,007515E+10
-1231	1,581983E+09	1,581993E+09	3,455548E+09	3,455615E+09	3,163976E+09	6,911163E+09	1,007514E+10
-1230	1,582111E+09	1,582093E+09	3,455581E+09	3,455491E+09	3,164204E+09	6,911072E+09	1,007528E+10
-1229	1,582046E+09	1,582074E+09	3,455555E+09	3,455464E+09	3,164120E+09	6,911020E+09	1,007514E+10
-1228	1,582117E+09	1,582109E+09	3,455474E+09	3,455544E+09	3,164226E+09	6,911018E+09	1,007524E+10
-1227	1,582191E+09	1,582209E+09	3,455496E+09	3,455437E+09	3,164399E+09	6,910933E+09	1,007533E+10
-1226	1,582121E+09	1,582165E+09	3,455442E+09	3,455482E+09	3,164285E+09	6,910925E+09	1,007521E+10
-1225	1,582236E+09	1,582217E+09	3,455412E+09	3,455471E+09	3,164453E+09	6,910883E+09	1,007534E+10
-1224	1,582233E+09	1,582226E+09	3,455468E+09	3,455365E+09	3,164460E+09	6,910833E+09	1,007529E+10
-1223	1,582175E+09	1,582161E+09	3,455413E+09	3,455478E+09	3,164336E+09	6,910892E+09	1,007523E+10
-1222	1,582260E+09	1,582226E+09	3,455456E+09	3,455437E+09	3,164486E+09	6,910892E+09	1,007538E+10
-1221	1,582140E+09	1,582179E+09	3,455497E+09	3,455426E+09	3,164320E+09	6,910923E+09	1,007524E+10
-1220	1,582109E+09	1,582123E+09	3,455473E+09	3,455554E+09	3,164232E+09	6,911027E+09	1,007526E+10
-1219	1,582155E+09	1,582161E+09	3,455563E+09	3,455489E+09	3,164316E+09	6,911052E+09	1,007537E+10
-1218	1,582023E+09	1,582045E+09	3,455579E+09	3,455542E+09	3,164068E+09	6,911121E+09	1,007519E+10
-1217	1,582076E+09	1,582038E+09	3,455536E+09	3,455598E+09	3,164114E+09	6,911134E+09	1,007525E+10
-1216	1,582084E+09	1,582068E+09	3,455578E+09	3,455512E+09	3,164152E+09	6,911090E+09	1,007524E+10
-1215	1,581993E+09	1,582011E+09	3,455505E+09	3,455598E+09	3,164005E+09	6,911102E+09	1,007511E+10
-1214	1,582112E+09	1,582090E+09	3,455510E+09	3,455536E+09	3,164202E+09	6,911046E+09	1,007525E+10
-1213	1,582068E+09	1,582100E+09	3,455554E+09	3,455432E+09	3,164168E+09	6,910986E+09	1,007515E+10
-1212	1,582070E+09	1,582072E+09	3,455472E+09	3,455509E+09	3,164142E+09	6,910981E+09	1,007512E+10
-1211	1,582203E+09	1,582187E+09	3,455494E+09	3,455431E+09	3,164390E+09	6,910925E+09	1,007531E+10
-1210	1,582125E+09	1,582173E+09	3,455474E+09	3,455418E+09	3,164298E+09	6,910891E+09	1,007519E+10
-1209	1,582202E+09	1,582208E+09	3,455370E+09	3,455468E+09	3,164410E+09	6,910838E+09	1,007525E+10
-1208	1,582287E+09	1,582302E+09	3,455412E+09	3,455350E+09	3,164590E+09	6,910762E+09	1,007535E+10
-1207	1,582215E+09	1,582244E+09	3,455359E+09	3,455390E+09	3,164459E+09	6,910749E+09	1,007521E+10
-1206	1,582339E+09	1,582288E+09	3,455349E+09	3,455365E+09	3,164627E+09	6,910714E+09	1,007534E+10
-1205	1,582310E+09	1,582312E+09	3,455401E+09	3,455284E+09	3,164623E+09	6,910686E+09	1,007531E+10
-1204	1,582238E+09	1,582240E+09	3,455325E+09	3,455408E+09	3,164479E+09	6,910732E+09	1,007521E+10
-1203	1,582320E+09	1,582311E+09	3,455381E+09	3,455390E+09	3,164631E+09	6,910771E+09	1,007540E+10
-1202	1,582197E+09	1,582246E+09	3,455455E+09	3,455374E+09	3,164442E+09	6,910829E+09	1,007527E+10
-1201	1,582179E+09	1,582172E+09	3,455407E+09	3,455471E+09	3,164351E+09	6,910878E+09	1,007523E+10
-1200	1,582238E+09	1,582213E+09	3,455490E+09	3,455419E+09	3,164451E+09	6,910909E+09	1,007536E+10
-1199	1,582102E+09	1,582108E+09	3,455479E+09	3,455479E+09	3,164210E+09	6,910958E+09	1,007517E+10
-1198	1,582161E+09	1,582119E+09	3,455446E+09	3,455515E+09	3,164280E+09	6,910961E+09	1,007524E+10
-1197	1,582154E+09	1,582170E+09	3,455503E+09	3,455425E+09	3,164325E+09	6,910928E+09	1,007525E+10
-1196	1,582066E+09	1,582098E+09	3,455429E+09	3,455492E+09	3,164165E+09	6,910921E+09	1,007509E+10
-1195	1,582197E+09	1,582178E+09	3,455449E+09	3,455451E+09	3,164375E+09	6,910900E+09	1,007527E+10
-1194	1,582150E+09	1,582180E+09	3,455501E+09	3,455362E+09	3,164330E+09	6,910863E+09	1,007519E+10
-1193	1,582155E+09	1,582157E+09	3,455377E+09	3,455433E+09	3,164312E+09	6,910810E+09	1,007512E+10
-1192	1,582295E+09	1,582288E+09	3,455387E+09	3,455367E+09	3,164582E+09	6,910754E+09	1,007534E+10
-1191	1,582215E+09	1,582269E+09	3,455363E+09	3,455344E+09	3,164485E+09	6,910707E+09	1,007519E+10
-1190	1,582309E+09	1,582296E+09	3,455291E+09	3,455358E+09	3,164605E+09	6,910649E+09	1,007525E+10
-1189	1,582385E+09	1,582390E+09	3,455345E+09	3,455238E+09	3,164775E+09	6,910583E+09	1,007536E+10
-1188	1,582307E+09	1,582317E+09	3,455274E+09	3,455287E+09	3,164623E+09	6,910560E+09	1,007518E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1187	1,582424E+09	1,582377E+09	3,455264E+09	3,455303E+09	3,164801E+09	6,910567E+09	1,007537E+10
-1186	1,582373E+09	1,582400E+09	3,455335E+09	3,455235E+09	3,164773E+09	6,910570E+09	1,007534E+10
-1185	1,582298E+09	1,582321E+09	3,455253E+09	3,455339E+09	3,164619E+09	6,910592E+09	1,007521E+10
-1184	1,582389E+09	1,582381E+09	3,455326E+09	3,455321E+09	3,164770E+09	6,910647E+09	1,007542E+10
-1183	1,582266E+09	1,582297E+09	3,455398E+09	3,455310E+09	3,164563E+09	6,910708E+09	1,007527E+10
-1182	1,582262E+09	1,582223E+09	3,455350E+09	3,455395E+09	3,164485E+09	6,910745E+09	1,007523E+10
-1181	1,582305E+09	1,582284E+09	3,455412E+09	3,455354E+09	3,164590E+09	6,910766E+09	1,007536E+10
-1180	1,582167E+09	1,582186E+09	3,455368E+09	3,455406E+09	3,164353E+09	6,910775E+09	1,007513E+10
-1179	1,582235E+09	1,582210E+09	3,455349E+09	3,455443E+09	3,164445E+09	6,910791E+09	1,007524E+10
-1178	1,582227E+09	1,582253E+09	3,455443E+09	3,455337E+09	3,164480E+09	6,910780E+09	1,007526E+10
-1177	1,582152E+09	1,582173E+09	3,455357E+09	3,455382E+09	3,164325E+09	6,910739E+09	1,007506E+10
-1176	1,582289E+09	1,582260E+09	3,455376E+09	3,455361E+09	3,164549E+09	6,910737E+09	1,007529E+10
-1175	1,582238E+09	1,582270E+09	3,455412E+09	3,455296E+09	3,164508E+09	6,910707E+09	1,007522E+10
-1174	1,582251E+09	1,582256E+09	3,455292E+09	3,455352E+09	3,164507E+09	6,910644E+09	1,007515E+10
-1173	1,582379E+09	1,582396E+09	3,455311E+09	3,455284E+09	3,164775E+09	6,910595E+09	1,007537E+10
-1172	1,582310E+09	1,582357E+09	3,455274E+09	3,455246E+09	3,164667E+09	6,910521E+09	1,007519E+10
-1171	1,582411E+09	1,582380E+09	3,455210E+09	3,455274E+09	3,164791E+09	6,910484E+09	1,007527E+10
-1170	1,582475E+09	1,582468E+09	3,455274E+09	3,455166E+09	3,164943E+09	6,910440E+09	1,007538E+10
-1169	1,582390E+09	1,582399E+09	3,455167E+09	3,455203E+09	3,164789E+09	6,910370E+09	1,007516E+10
-1168	1,582498E+09	1,582472E+09	3,455165E+09	3,455233E+09	3,164970E+09	6,910398E+09	1,007537E+10
-1167	1,582442E+09	1,582484E+09	3,455254E+09	3,455168E+09	3,164926E+09	6,910422E+09	1,007535E+10
-1166	1,582379E+09	1,582387E+09	3,455203E+09	3,455246E+09	3,164765E+09	6,910449E+09	1,007521E+10
-1165	1,582459E+09	1,582446E+09	3,455281E+09	3,455238E+09	3,164905E+09	6,910519E+09	1,007542E+10
-1164	1,582339E+09	1,582350E+09	3,455318E+09	3,455238E+09	3,164689E+09	6,910556E+09	1,007524E+10
-1163	1,582334E+09	1,582296E+09	3,455261E+09	3,455346E+09	3,164630E+09	6,910608E+09	1,007524E+10
-1162	1,582365E+09	1,582365E+09	3,455337E+09	3,455303E+09	3,164730E+09	6,910640E+09	1,007537E+10
-1161	1,582233E+09	1,582267E+09	3,455286E+09	3,455317E+09	3,164500E+09	6,910603E+09	1,007510E+10
-1160	1,582312E+09	1,582294E+09	3,455286E+09	3,455349E+09	3,164606E+09	6,910635E+09	1,007524E+10
-1159	1,582310E+09	1,582326E+09	3,455384E+09	3,455253E+09	3,164636E+09	6,910636E+09	1,007527E+10
-1158	1,582246E+09	1,582248E+09	3,455299E+09	3,455294E+09	3,164494E+09	6,910592E+09	1,007509E+10
-1157	1,582367E+09	1,582357E+09	3,455297E+09	3,455291E+09	3,164724E+09	6,910588E+09	1,007531E+10
-1156	1,582320E+09	1,582364E+09	3,455300E+09	3,455227E+09	3,164683E+09	6,910527E+09	1,007521E+10
-1155	1,582347E+09	1,582355E+09	3,455192E+09	3,455281E+09	3,164702E+09	6,910473E+09	1,007517E+10
-1154	1,582475E+09	1,582478E+09	3,455231E+09	3,455194E+09	3,164953E+09	6,910426E+09	1,007538E+10
-1153	1,582414E+09	1,582436E+09	3,455171E+09	3,455133E+09	3,164849E+09	6,910304E+09	1,007515E+10
-1152	1,582515E+09	1,582471E+09	3,455104E+09	3,455176E+09	3,164986E+09	6,910281E+09	1,007527E+10
-1151	1,582562E+09	1,582564E+09	3,455173E+09	3,455090E+09	3,165125E+09	6,910264E+09	1,007539E+10
-1150	1,582474E+09	1,582498E+09	3,455097E+09	3,455117E+09	3,164972E+09	6,910214E+09	1,007519E+10
-1149	1,582560E+09	1,582568E+09	3,455122E+09	3,455150E+09	3,165128E+09	6,910272E+09	1,007540E+10
-1148	1,582510E+09	1,582550E+09	3,455201E+09	3,455093E+09	3,165060E+09	6,910294E+09	1,007535E+10
-1147	1,582455E+09	1,582443E+09	3,455152E+09	3,455191E+09	3,164898E+09	6,910343E+09	1,007524E+10
-1146	1,582524E+09	1,582496E+09	3,455222E+09	3,455196E+09	3,165021E+09	6,910418E+09	1,007544E+10
-1145	1,582406E+09	1,582413E+09	3,455209E+09	3,455178E+09	3,164819E+09	6,910386E+09	1,007521E+10
-1144	1,582404E+09	1,582379E+09	3,455152E+09	3,455279E+09	3,164783E+09	6,910430E+09	1,007521E+10
-1143	1,582438E+09	1,582442E+09	3,455253E+09	3,455221E+09	3,164880E+09	6,910474E+09	1,007535E+10
-1142	1,582323E+09	1,582341E+09	3,455233E+09	3,455201E+09	3,164664E+09	6,910434E+09	1,007510E+10
-1141	1,582389E+09	1,582376E+09	3,455243E+09	3,455245E+09	3,164765E+09	6,910487E+09	1,007525E+10
-1140	1,582393E+09	1,582403E+09	3,455303E+09	3,455177E+09	3,164796E+09	6,910480E+09	1,007528E+10
-1139	1,582330E+09	1,582341E+09	3,455210E+09	3,455243E+09	3,164671E+09	6,910453E+09	1,007512E+10



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1138	1,582443E+09	1,582452E+09	3,455217E+09	3,455241E+09	3,164895E+09	6,910458E+09	1,007535E+10
-1137	1,582410E+09	1,582453E+09	3,455194E+09	3,455137E+09	3,164863E+09	6,910331E+09	1,007519E+10
-1136	1,582449E+09	1,582448E+09	3,455093E+09	3,455181E+09	3,164897E+09	6,910274E+09	1,007517E+10
-1135	1,582581E+09	1,582561E+09	3,455140E+09	3,455099E+09	3,165142E+09	6,910239E+09	1,007538E+10
-1134	1,582522E+09	1,582526E+09	3,455083E+09	3,455024E+09	3,165047E+09	6,910107E+09	1,007515E+10
-1133	1,582594E+09	1,582582E+09	3,455021E+09	3,455083E+09	3,165176E+09	6,910104E+09	1,007528E+10
-1132	1,582637E+09	1,582660E+09	3,455079E+09	3,455012E+09	3,165297E+09	6,910091E+09	1,007539E+10
-1131	1,582551E+09	1,582583E+09	3,455039E+09	3,455048E+09	3,165134E+09	6,910087E+09	1,007522E+10
-1130	1,582629E+09	1,582629E+09	3,455085E+09	3,455086E+09	3,165258E+09	6,910170E+09	1,007543E+10
-1129	1,582587E+09	1,582598E+09	3,455125E+09	3,455021E+09	3,165185E+09	6,910146E+09	1,007533E+10
-1128	1,582534E+09	1,582509E+09	3,455056E+09	3,455135E+09	3,165043E+09	6,910192E+09	1,007523E+10
-1127	1,582596E+09	1,582566E+09	3,455123E+09	3,455146E+09	3,165162E+09	6,910269E+09	1,007543E+10
-1126	1,582483E+09	1,582496E+09	3,455130E+09	3,455092E+09	3,164979E+09	6,910222E+09	1,007520E+10
-1125	1,582468E+09	1,582471E+09	3,455104E+09	3,455178E+09	3,164939E+09	6,910282E+09	1,007522E+10
-1124	1,582510E+09	1,582513E+09	3,455198E+09	3,455130E+09	3,165023E+09	6,910328E+09	1,007535E+10
-1123	1,582404E+09	1,582411E+09	3,455190E+09	3,455135E+09	3,164816E+09	6,910325E+09	1,007514E+10
-1122	1,582456E+09	1,582444E+09	3,455183E+09	3,455196E+09	3,164900E+09	6,910379E+09	1,007528E+10
-1121	1,582464E+09	1,582483E+09	3,455189E+09	3,455119E+09	3,164947E+09	6,910308E+09	1,007525E+10
-1120	1,582416E+09	1,582439E+09	3,455086E+09	3,455175E+09	3,164855E+09	6,910261E+09	1,007512E+10
-1119	1,582539E+09	1,582535E+09	3,455112E+09	3,455152E+09	3,165075E+09	6,910264E+09	1,007534E+10
-1118	1,582526E+09	1,582541E+09	3,455105E+09	3,455008E+09	3,165067E+09	6,910113E+09	1,007518E+10
-1117	1,582554E+09	1,582547E+09	3,455014E+09	3,455053E+09	3,165100E+09	6,910067E+09	1,007517E+10
-1116	1,582678E+09	1,582656E+09	3,455040E+09	3,455000E+09	3,165334E+09	6,910039E+09	1,007537E+10
-1115	1,582611E+09	1,582633E+09	3,455006E+09	3,454950E+09	3,165244E+09	6,909956E+09	1,007520E+10
-1114	1,582659E+09	1,582679E+09	3,454971E+09	3,455022E+09	3,165338E+09	6,909992E+09	1,007533E+10
-1113	1,582707E+09	1,582739E+09	3,455010E+09	3,454940E+09	3,165446E+09	6,909950E+09	1,007540E+10
-1112	1,582635E+09	1,582654E+09	3,454970E+09	3,454985E+09	3,165289E+09	6,909955E+09	1,007524E+10
-1111	1,582713E+09	1,582680E+09	3,455014E+09	3,455034E+09	3,165393E+09	6,910047E+09	1,007544E+10
-1110	1,582676E+09	1,582662E+09	3,455034E+09	3,454949E+09	3,165339E+09	6,909983E+09	1,007532E+10
-1109	1,582601E+09	1,582598E+09	3,454964E+09	3,455057E+09	3,165199E+09	6,910021E+09	1,007522E+10
-1108	1,582664E+09	1,582647E+09	3,455023E+09	3,455068E+09	3,165311E+09	6,910091E+09	1,007540E+10
-1107	1,582557E+09	1,582573E+09	3,455074E+09	3,455004E+09	3,165129E+09	6,910078E+09	1,007521E+10
-1106	1,582531E+09	1,582536E+09	3,455073E+09	3,455096E+09	3,165067E+09	6,910170E+09	1,007524E+10
-1105	1,582581E+09	1,582573E+09	3,455124E+09	3,455049E+09	3,165154E+09	6,910174E+09	1,007533E+10
-1104	1,582480E+09	1,582491E+09	3,455097E+09	3,455080E+09	3,164971E+09	6,910177E+09	1,007515E+10
-1103	1,582531E+09	1,582525E+09	3,455091E+09	3,455149E+09	3,165056E+09	6,910240E+09	1,007530E+10
-1102	1,582555E+09	1,582574E+09	3,455097E+09	3,455030E+09	3,165128E+09	6,910128E+09	1,007526E+10
-1101	1,582506E+09	1,582541E+09	3,455013E+09	3,455061E+09	3,165047E+09	6,910074E+09	1,007512E+10
-1100	1,582643E+09	1,582618E+09	3,455020E+09	3,455045E+09	3,165261E+09	6,910065E+09	1,007533E+10
-1099	1,582634E+09	1,582629E+09	3,455032E+09	3,454911E+09	3,165263E+09	6,909943E+09	1,007521E+10
-1098	1,582637E+09	1,582642E+09	3,454942E+09	3,454976E+09	3,165279E+09	6,909918E+09	1,007520E+10
-1097	1,582754E+09	1,582754E+09	3,454931E+09	3,454923E+09	3,165508E+09	6,909854E+09	1,007536E+10
-1096	1,582694E+09	1,582736E+09	3,454909E+09	3,454884E+09	3,165430E+09	6,909792E+09	1,007522E+10
-1095	1,582744E+09	1,582753E+09	3,454901E+09	3,454953E+09	3,165497E+09	6,909854E+09	1,007535E+10
-1094	1,582806E+09	1,582808E+09	3,454940E+09	3,454847E+09	3,165614E+09	6,909788E+09	1,007540E+10
-1093	1,582724E+09	1,582732E+09	3,454897E+09	3,454896E+09	3,165456E+09	6,909792E+09	1,007525E+10
-1092	1,582794E+09	1,582750E+09	3,454908E+09	3,454967E+09	3,165544E+09	6,909875E+09	1,007542E+10
-1091	1,582752E+09	1,582747E+09	3,454956E+09	3,454884E+09	3,165499E+09	6,909840E+09	1,007534E+10
-1090	1,582654E+09	1,582679E+09	3,454914E+09	3,454984E+09	3,165333E+09	6,909898E+09	1,007523E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1089	1,582719E+09	1,582714E+09	3,454962E+09	3,454980E+09	3,165433E+09	6,909942E+09	1,007538E+10
-1088	1,582628E+09	1,582641E+09	3,455018E+09	3,454933E+09	3,165269E+09	6,909952E+09	1,007522E+10
-1087	1,582601E+09	1,582588E+09	3,455018E+09	3,455044E+09	3,165189E+09	6,910062E+09	1,007525E+10
-1086	1,582659E+09	1,582644E+09	3,455038E+09	3,454984E+09	3,165303E+09	6,910022E+09	1,007532E+10
-1085	1,582554E+09	1,582585E+09	3,455002E+09	3,455002E+09	3,165139E+09	6,910004E+09	1,007514E+10
-1084	1,582616E+09	1,582607E+09	3,454980E+09	3,455067E+09	3,165223E+09	6,910046E+09	1,007527E+10
-1083	1,582657E+09	1,582657E+09	3,455022E+09	3,454927E+09	3,165314E+09	6,909950E+09	1,007526E+10
-1082	1,582599E+09	1,582625E+09	3,454951E+09	3,454956E+09	3,165224E+09	6,909907E+09	1,007513E+10
-1081	1,582737E+09	1,582704E+09	3,454918E+09	3,454943E+09	3,165441E+09	6,909861E+09	1,007530E+10
-1080	1,582729E+09	1,582739E+09	3,454923E+09	3,454835E+09	3,165468E+09	6,909758E+09	1,007523E+10
-1079	1,582721E+09	1,582744E+09	3,454858E+09	3,454915E+09	3,165465E+09	6,909772E+09	1,007524E+10
-1078	1,582843E+09	1,582857E+09	3,454854E+09	3,454834E+09	3,165700E+09	6,909688E+09	1,007539E+10
-1077	1,582780E+09	1,582834E+09	3,454856E+09	3,454788E+09	3,165615E+09	6,909644E+09	1,007526E+10
-1076	1,582839E+09	1,582821E+09	3,454827E+09	3,454878E+09	3,165660E+09	6,909705E+09	1,007536E+10
-1075	1,582901E+09	1,582873E+09	3,454871E+09	3,454778E+09	3,165774E+09	6,909649E+09	1,007542E+10
-1074	1,582792E+09	1,582808E+09	3,454818E+09	3,454836E+09	3,165600E+09	6,909654E+09	1,007525E+10
-1073	1,582856E+09	1,582827E+09	3,454791E+09	3,454894E+09	3,165683E+09	6,909685E+09	1,007537E+10
-1072	1,582820E+09	1,582830E+09	3,454862E+09	3,454809E+09	3,165650E+09	6,909671E+09	1,007532E+10
-1071	1,582723E+09	1,582739E+09	3,454867E+09	3,454906E+09	3,165462E+09	6,909773E+09	1,007523E+10
-1070	1,582796E+09	1,582774E+09	3,454909E+09	3,454883E+09	3,165571E+09	6,909793E+09	1,007536E+10
-1069	1,582701E+09	1,582716E+09	3,454965E+09	3,454851E+09	3,165417E+09	6,909816E+09	1,007523E+10
-1068	1,582673E+09	1,582658E+09	3,454926E+09	3,454992E+09	3,165331E+09	6,909918E+09	1,007525E+10
-1067	1,582734E+09	1,582726E+09	3,454966E+09	3,454925E+09	3,165461E+09	6,909890E+09	1,007535E+10
-1066	1,582622E+09	1,582673E+09	3,454941E+09	3,454929E+09	3,165295E+09	6,909870E+09	1,007517E+10
-1065	1,582698E+09	1,582684E+09	3,454888E+09	3,454971E+09	3,165382E+09	6,909859E+09	1,007524E+10
-1064	1,582757E+09	1,582745E+09	3,454931E+09	3,454840E+09	3,165502E+09	6,909771E+09	1,007527E+10
-1063	1,582696E+09	1,582706E+09	3,454870E+09	3,454878E+09	3,165402E+09	6,909748E+09	1,007515E+10
-1062	1,582829E+09	1,582809E+09	3,454814E+09	3,454849E+09	3,165638E+09	6,909663E+09	1,007530E+10
-1061	1,582816E+09	1,582861E+09	3,454832E+09	3,454740E+09	3,165677E+09	6,909573E+09	1,007525E+10
-1060	1,582811E+09	1,582836E+09	3,454763E+09	3,454830E+09	3,165647E+09	6,909594E+09	1,007524E+10
-1059	1,582943E+09	1,582938E+09	3,454799E+09	3,454742E+09	3,165881E+09	6,909541E+09	1,007542E+10
-1058	1,582870E+09	1,582907E+09	3,454798E+09	3,454704E+09	3,165777E+09	6,909502E+09	1,007528E+10
-1057	1,582922E+09	1,582888E+09	3,454718E+09	3,454800E+09	3,165810E+09	6,909519E+09	1,007533E+10
-1056	1,582984E+09	1,582962E+09	3,454756E+09	3,454719E+09	3,165945E+09	6,909476E+09	1,007542E+10
-1055	1,582862E+09	1,582886E+09	3,454738E+09	3,454773E+09	3,165749E+09	6,909510E+09	1,007526E+10
-1054	1,582926E+09	1,582911E+09	3,454722E+09	3,454797E+09	3,165836E+09	6,909519E+09	1,007536E+10
-1053	1,582891E+09	1,582913E+09	3,454823E+09	3,454708E+09	3,165804E+09	6,909532E+09	1,007534E+10
-1052	1,582798E+09	1,582793E+09	3,454814E+09	3,454838E+09	3,165591E+09	6,909652E+09	1,007524E+10
-1051	1,582870E+09	1,582833E+09	3,454863E+09	3,454827E+09	3,165703E+09	6,909690E+09	1,007539E+10
-1050	1,582757E+09	1,582791E+09	3,454899E+09	3,454807E+09	3,165548E+09	6,909706E+09	1,007525E+10
-1049	1,582734E+09	1,582733E+09	3,454813E+09	3,454932E+09	3,165466E+09	6,909745E+09	1,007521E+10
-1048	1,582816E+09	1,582810E+09	3,454860E+09	3,454852E+09	3,165626E+09	6,909712E+09	1,007534E+10
-1047	1,582714E+09	1,582744E+09	3,454868E+09	3,454838E+09	3,165458E+09	6,909706E+09	1,007516E+10
-1046	1,582801E+09	1,582770E+09	3,454797E+09	3,454852E+09	3,165571E+09	6,909649E+09	1,007522E+10
-1045	1,582855E+09	1,582852E+09	3,454846E+09	3,454730E+09	3,165707E+09	6,909576E+09	1,007528E+10
-1044	1,582788E+09	1,582809E+09	3,454772E+09	3,454800E+09	3,165597E+09	6,909571E+09	1,007517E+10
-1043	1,582916E+09	1,582912E+09	3,454749E+09	3,454763E+09	3,165828E+09	6,909513E+09	1,007534E+10
-1042	1,582891E+09	1,582959E+09	3,454786E+09	3,454661E+09	3,165850E+09	6,909446E+09	1,007530E+10
-1041	1,582897E+09	1,582912E+09	3,454681E+09	3,454747E+09	3,165809E+09	6,909427E+09	1,007524E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1040	1,583041E+09	1,583013E+09	3,454705E+09	3,454676E+09	3,166055E+09	6,909381E+09	1,007544E+10
-1039	1,582964E+09	1,582976E+09	3,454707E+09	3,454648E+09	3,165939E+09	6,909354E+09	1,007529E+10
-1038	1,583008E+09	1,582978E+09	3,454595E+09	3,454716E+09	3,165986E+09	6,909311E+09	1,007530E+10
-1037	1,583062E+09	1,583063E+09	3,454662E+09	3,454621E+09	3,166125E+09	6,909283E+09	1,007541E+10
-1036	1,582940E+09	1,582962E+09	3,454661E+09	3,454683E+09	3,165902E+09	6,909344E+09	1,007525E+10
-1035	1,583002E+09	1,582976E+09	3,454695E+09	3,454699E+09	3,165978E+09	6,909394E+09	1,007537E+10
-1034	1,582954E+09	1,582978E+09	3,454795E+09	3,454640E+09	3,165933E+09	6,909435E+09	1,007537E+10
-1033	1,582857E+09	1,582853E+09	3,454731E+09	3,454786E+09	3,165710E+09	6,909517E+09	1,007523E+10
-1032	1,582934E+09	1,582913E+09	3,454767E+09	3,454795E+09	3,165847E+09	6,909561E+09	1,007541E+10
-1031	1,582825E+09	1,582861E+09	3,454824E+09	3,454761E+09	3,165686E+09	6,909586E+09	1,007527E+10
-1030	1,582811E+09	1,582815E+09	3,454726E+09	3,454838E+09	3,165626E+09	6,909563E+09	1,007519E+10
-1029	1,582910E+09	1,582898E+09	3,454793E+09	3,454740E+09	3,165808E+09	6,909533E+09	1,007534E+10
-1028	1,582814E+09	1,582817E+09	3,454782E+09	3,454743E+09	3,165631E+09	6,909526E+09	1,007516E+10
-1027	1,582895E+09	1,582858E+09	3,454728E+09	3,454756E+09	3,165752E+09	6,909484E+09	1,007524E+10
-1026	1,582930E+09	1,582959E+09	3,454765E+09	3,454651E+09	3,165890E+09	6,909416E+09	1,007531E+10
-1025	1,582863E+09	1,582903E+09	3,454663E+09	3,454718E+09	3,165766E+09	6,909381E+09	1,007515E+10
-1024	1,583007E+09	1,583006E+09	3,454656E+09	3,454688E+09	3,166013E+09	6,909344E+09	1,007536E+10
-1023	1,582993E+09	1,583029E+09	3,454714E+09	3,454584E+09	3,166022E+09	6,909298E+09	1,007532E+10
-1022	1,583004E+09	1,582994E+09	3,454574E+09	3,454648E+09	3,165998E+09	6,909222E+09	1,007522E+10
-1021	1,583144E+09	1,583113E+09	3,454599E+09	3,454580E+09	3,166257E+09	6,909179E+09	1,007544E+10
-1020	1,583056E+09	1,583070E+09	3,454594E+09	3,454570E+09	3,166126E+09	6,909164E+09	1,007529E+10
-1019	1,583089E+09	1,583073E+09	3,454535E+09	3,454619E+09	3,166162E+09	6,909154E+09	1,007532E+10
-1018	1,583124E+09	1,583154E+09	3,454630E+09	3,454535E+09	3,166277E+09	6,909165E+09	1,007544E+10
-1017	1,583003E+09	1,583025E+09	3,454610E+09	3,454608E+09	3,166028E+09	6,909218E+09	1,007525E+10
-1016	1,583070E+09	1,583037E+09	3,454637E+09	3,454655E+09	3,166107E+09	6,909292E+09	1,007540E+10
-1015	1,583018E+09	1,583032E+09	3,454734E+09	3,454614E+09	3,166050E+09	6,909349E+09	1,007540E+10
-1014	1,582923E+09	1,582929E+09	3,454623E+09	3,454729E+09	3,165851E+09	6,909352E+09	1,007520E+10
-1013	1,583008E+09	1,582995E+09	3,454672E+09	3,454711E+09	3,166003E+09	6,909383E+09	1,007539E+10
-1012	1,582913E+09	1,582928E+09	3,454733E+09	3,454672E+09	3,165841E+09	6,909405E+09	1,007525E+10
-1011	1,582908E+09	1,582883E+09	3,454667E+09	3,454717E+09	3,165792E+09	6,909384E+09	1,007518E+10
-1010	1,582992E+09	1,582982E+09	3,454732E+09	3,454641E+09	3,165974E+09	6,909373E+09	1,007535E+10
-1009	1,582892E+09	1,582906E+09	3,454682E+09	3,454661E+09	3,165798E+09	6,909343E+09	1,007514E+10
-1008	1,582970E+09	1,582963E+09	3,454630E+09	3,454695E+09	3,165934E+09	6,909325E+09	1,007526E+10
-1007	1,583009E+09	1,583051E+09	3,454698E+09	3,454593E+09	3,166060E+09	6,909291E+09	1,007535E+10
-1006	1,582955E+09	1,582997E+09	3,454575E+09	3,454624E+09	3,165952E+09	6,909199E+09	1,007515E+10
-1005	1,583113E+09	1,583097E+09	3,454579E+09	3,454587E+09	3,166210E+09	6,909166E+09	1,007538E+10
-1004	1,583105E+09	1,583106E+09	3,454611E+09	3,454506E+09	3,166211E+09	6,909117E+09	1,007533E+10
-1003	1,583106E+09	1,583086E+09	3,454482E+09	3,454555E+09	3,166192E+09	6,909037E+09	1,007523E+10
-1002	1,583221E+09	1,583221E+09	3,454507E+09	3,454497E+09	3,166442E+09	6,909004E+09	1,007545E+10
-1001	1,583127E+09	1,583161E+09	3,454494E+09	3,454478E+09	3,166288E+09	6,908972E+09	1,007526E+10
-1000	1,583163E+09	1,583157E+09	3,454470E+09	3,454537E+09	3,166320E+09	6,909008E+09	1,007533E+10
-999	1,583200E+09	1,583210E+09	3,454595E+09	3,454471E+09	3,166410E+09	6,909066E+09	1,007548E+10
-998	1,583078E+09	1,583089E+09	3,454537E+09	3,454540E+09	3,166167E+09	6,909077E+09	1,007524E+10
-997	1,583144E+09	1,583113E+09	3,454560E+09	3,454596E+09	3,166257E+09	6,909156E+09	1,007541E+10
-996	1,583091E+09	1,583097E+09	3,454637E+09	3,454567E+09	3,166188E+09	6,909204E+09	1,007539E+10
-995	1,582996E+09	1,583002E+09	3,454559E+09	3,454642E+09	3,165998E+09	6,909201E+09	1,007520E+10
-994	1,583078E+09	1,583073E+09	3,454617E+09	3,454619E+09	3,166151E+09	6,909236E+09	1,007539E+10
-993	1,582991E+09	1,582993E+09	3,454651E+09	3,454577E+09	3,165984E+09	6,909229E+09	1,007521E+10
-992	1,582991E+09	1,582964E+09	3,454586E+09	3,454645E+09	3,165955E+09	6,909231E+09	1,007519E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-991	1,583069E+09	1,583064E+09	3,454654E+09	3,454586E+09	3,166132E+09	6,909240E+09	1,007537E+10
-990	1,582969E+09	1,583010E+09	3,454570E+09	3,454582E+09	3,165978E+09	6,909152E+09	1,007513E+10
-989	1,583058E+09	1,583067E+09	3,454541E+09	3,454600E+09	3,166125E+09	6,909141E+09	1,007527E+10
-988	1,583111E+09	1,583132E+09	3,454609E+09	3,454504E+09	3,166243E+09	6,909114E+09	1,007536E+10
-987	1,583068E+09	1,583080E+09	3,454506E+09	3,454512E+09	3,166148E+09	6,909017E+09	1,007517E+10
-986	1,583213E+09	1,583192E+09	3,454496E+09	3,454495E+09	3,166404E+09	6,908991E+09	1,007540E+10
-985	1,583196E+09	1,583203E+09	3,454491E+09	3,454422E+09	3,166399E+09	6,908914E+09	1,007531E+10
-984	1,583190E+09	1,583195E+09	3,454382E+09	3,454481E+09	3,166385E+09	6,908863E+09	1,007525E+10
-983	1,583295E+09	1,583308E+09	3,454453E+09	3,454428E+09	3,166603E+09	6,908881E+09	1,007548E+10
-982	1,583205E+09	1,583246E+09	3,454431E+09	3,454386E+09	3,166451E+09	6,908818E+09	1,007527E+10
-981	1,583245E+09	1,583227E+09	3,454423E+09	3,454453E+09	3,166473E+09	6,908877E+09	1,007535E+10
-980	1,583281E+09	1,583264E+09	3,454522E+09	3,454426E+09	3,166545E+09	6,908948E+09	1,007549E+10
-979	1,583154E+09	1,583155E+09	3,454461E+09	3,454476E+09	3,166310E+09	6,908937E+09	1,007525E+10
-978	1,583201E+09	1,583192E+09	3,454475E+09	3,454535E+09	3,166393E+09	6,909010E+09	1,007540E+10
-977	1,583156E+09	1,583164E+09	3,454535E+09	3,454487E+09	3,166319E+09	6,909022E+09	1,007534E+10
-976	1,583073E+09	1,583073E+09	3,454481E+09	3,454554E+09	3,166145E+09	6,909034E+09	1,007518E+10
-975	1,583158E+09	1,583134E+09	3,454561E+09	3,454542E+09	3,166291E+09	6,909102E+09	1,007539E+10
-974	1,583071E+09	1,583078E+09	3,454558E+09	3,454486E+09	3,166149E+09	6,909044E+09	1,007519E+10
-973	1,583070E+09	1,583064E+09	3,454504E+09	3,454560E+09	3,166134E+09	6,909065E+09	1,007520E+10
-972	1,583147E+09	1,583156E+09	3,454567E+09	3,454522E+09	3,166303E+09	6,909089E+09	1,007539E+10
-971	1,583056E+09	1,583103E+09	3,454516E+09	3,454485E+09	3,166158E+09	6,909001E+09	1,007516E+10
-970	1,583144E+09	1,583158E+09	3,454489E+09	3,454509E+09	3,166302E+09	6,908998E+09	1,007530E+10
-969	1,583209E+09	1,583206E+09	3,454515E+09	3,454417E+09	3,166415E+09	6,908933E+09	1,007535E+10
-968	1,583170E+09	1,583172E+09	3,454403E+09	3,454439E+09	3,166342E+09	6,908842E+09	1,007518E+10
-967	1,583306E+09	1,583284E+09	3,454393E+09	3,454433E+09	3,166589E+09	6,908826E+09	1,007542E+10
-966	1,583283E+09	1,583311E+09	3,454366E+09	3,454326E+09	3,166594E+09	6,908692E+09	1,007529E+10
-965	1,583283E+09	1,583295E+09	3,454302E+09	3,454372E+09	3,166578E+09	6,908674E+09	1,007525E+10
-964	1,583388E+09	1,583378E+09	3,454383E+09	3,454337E+09	3,166766E+09	6,908720E+09	1,007549E+10
-963	1,583298E+09	1,583315E+09	3,454386E+09	3,454289E+09	3,166613E+09	6,908675E+09	1,007529E+10
-962	1,583317E+09	1,583306E+09	3,454364E+09	3,454389E+09	3,166623E+09	6,908753E+09	1,007538E+10
-961	1,583344E+09	1,583336E+09	3,454419E+09	3,454376E+09	3,166680E+09	6,908795E+09	1,007547E+10
-960	1,583219E+09	1,583238E+09	3,454374E+09	3,454425E+09	3,166457E+09	6,908799E+09	1,007526E+10
-959	1,583265E+09	1,583255E+09	3,454415E+09	3,454477E+09	3,166520E+09	6,908892E+09	1,007541E+10
-958	1,583228E+09	1,583235E+09	3,454457E+09	3,454392E+09	3,166463E+09	6,908849E+09	1,007531E+10
-957	1,583157E+09	1,583145E+09	3,454422E+09	3,454457E+09	3,166302E+09	6,908879E+09	1,007518E+10
-956	1,583236E+09	1,583201E+09	3,454484E+09	3,454474E+09	3,166437E+09	6,908959E+09	1,007540E+10
-955	1,583149E+09	1,583168E+09	3,454488E+09	3,454402E+09	3,166318E+09	6,908890E+09	1,007521E+10
-954	1,583135E+09	1,583164E+09	3,454434E+09	3,454484E+09	3,166299E+09	6,908918E+09	1,007522E+10
-953	1,583223E+09	1,583236E+09	3,454476E+09	3,454439E+09	3,166459E+09	6,908916E+09	1,007537E+10
-952	1,583153E+09	1,583184E+09	3,454438E+09	3,454400E+09	3,166337E+09	6,908839E+09	1,007518E+10
-951	1,583245E+09	1,583229E+09	3,454412E+09	3,454440E+09	3,166474E+09	6,908852E+09	1,007533E+10
-950	1,583312E+09	1,583303E+09	3,454391E+09	3,454327E+09	3,166615E+09	6,908719E+09	1,007533E+10
-949	1,583273E+09	1,583283E+09	3,454291E+09	3,454340E+09	3,166556E+09	6,908630E+09	1,007519E+10
-948	1,583398E+09	1,583385E+09	3,454293E+09	3,454347E+09	3,166782E+09	6,908640E+09	1,007542E+10
-947	1,583378E+09	1,583412E+09	3,454308E+09	3,454208E+09	3,166790E+09	6,908516E+09	1,007531E+10
-946	1,583362E+09	1,583386E+09	3,454262E+09	3,454276E+09	3,166748E+09	6,908538E+09	1,007529E+10
-945	1,583465E+09	1,583445E+09	3,454312E+09	3,454268E+09	3,166910E+09	6,908580E+09	1,007549E+10
-944	1,583375E+09	1,583389E+09	3,454308E+09	3,454246E+09	3,166764E+09	6,908554E+09	1,007532E+10
-943	1,583381E+09	1,583374E+09	3,454280E+09	3,454360E+09	3,166755E+09	6,908640E+09	1,007539E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-942	1,583409E+09	1,583413E+09	3,454304E+09	3,454303E+09	3,166822E+09	6,908607E+09	1,007543E+10
-941	1,583298E+09	1,583311E+09	3,454295E+09	3,454324E+09	3,166609E+09	6,908619E+09	1,007523E+10
-940	1,583348E+09	1,583312E+09	3,454344E+09	3,454386E+09	3,166660E+09	6,908730E+09	1,007539E+10
-939	1,583316E+09	1,583304E+09	3,454405E+09	3,454283E+09	3,166620E+09	6,908688E+09	1,007531E+10
-938	1,583225E+09	1,583234E+09	3,454368E+09	3,454378E+09	3,166459E+09	6,908746E+09	1,007520E+10
-937	1,583297E+09	1,583285E+09	3,454397E+09	3,454411E+09	3,166582E+09	6,908809E+09	1,007539E+10
-936	1,583218E+09	1,583260E+09	3,454423E+09	3,454345E+09	3,166478E+09	6,908768E+09	1,007525E+10
-935	1,583210E+09	1,583238E+09	3,454381E+09	3,454430E+09	3,166447E+09	6,908811E+09	1,007526E+10
-934	1,583313E+09	1,583312E+09	3,454382E+09	3,454352E+09	3,166625E+09	6,908734E+09	1,007536E+10
-933	1,583264E+09	1,583268E+09	3,454344E+09	3,454307E+09	3,166532E+09	6,908652E+09	1,007518E+10
-932	1,583353E+09	1,583313E+09	3,454288E+09	3,454362E+09	3,166666E+09	6,908649E+09	1,007532E+10
-931	1,583414E+09	1,583415E+09	3,454278E+09	3,454216E+09	3,166829E+09	6,908494E+09	1,007532E+10
-930	1,583360E+09	1,583403E+09	3,454203E+09	3,454229E+09	3,166763E+09	6,908432E+09	1,007519E+10
-929	1,583481E+09	1,583476E+09	3,454208E+09	3,454236E+09	3,166957E+09	6,908444E+09	1,007540E+10
-928	1,583470E+09	1,583498E+09	3,454253E+09	3,454120E+09	3,166968E+09	6,908373E+09	1,007534E+10
-927	1,583445E+09	1,583454E+09	3,454209E+09	3,454224E+09	3,166899E+09	6,908432E+09	1,007533E+10
-926	1,583540E+09	1,583525E+09	3,454210E+09	3,454208E+09	3,167065E+09	6,908417E+09	1,007548E+10
-925	1,583457E+09	1,583474E+09	3,454215E+09	3,454183E+09	3,166931E+09	6,908398E+09	1,007533E+10
-924	1,583455E+09	1,583443E+09	3,454192E+09	3,454299E+09	3,166897E+09	6,908491E+09	1,007539E+10
-923	1,583490E+09	1,583487E+09	3,454247E+09	3,454198E+09	3,166976E+09	6,908446E+09	1,007542E+10
-922	1,583371E+09	1,583386E+09	3,454255E+09	3,454226E+09	3,166757E+09	6,908480E+09	1,007524E+10
-921	1,583416E+09	1,583373E+09	3,454276E+09	3,454308E+09	3,166789E+09	6,908583E+09	1,007537E+10
-920	1,583386E+09	1,583384E+09	3,454337E+09	3,454231E+09	3,166770E+09	6,908568E+09	1,007534E+10
-919	1,583282E+09	1,583310E+09	3,454299E+09	3,454346E+09	3,166593E+09	6,908645E+09	1,007524E+10
-918	1,583360E+09	1,583368E+09	3,454298E+09	3,454342E+09	3,166728E+09	6,908640E+09	1,007537E+10
-917	1,583309E+09	1,583336E+09	3,454340E+09	3,454253E+09	3,166645E+09	6,908593E+09	1,007524E+10
-916	1,583311E+09	1,583301E+09	3,454288E+09	3,454345E+09	3,166612E+09	6,908633E+09	1,007525E+10
-915	1,583426E+09	1,583398E+09	3,454286E+09	3,454237E+09	3,166824E+09	6,908523E+09	1,007535E+10
-914	1,583361E+09	1,583381E+09	3,454245E+09	3,454203E+09	3,166742E+09	6,908447E+09	1,007519E+10
-913	1,583439E+09	1,583424E+09	3,454173E+09	3,454264E+09	3,166863E+09	6,908436E+09	1,007530E+10
-912	1,583503E+09	1,583528E+09	3,454204E+09	3,454121E+09	3,167031E+09	6,908325E+09	1,007536E+10
-911	1,583441E+09	1,583492E+09	3,454160E+09	3,454153E+09	3,166934E+09	6,908313E+09	1,007525E+10
-910	1,583563E+09	1,583558E+09	3,454135E+09	3,454149E+09	3,167121E+09	6,908283E+09	1,007540E+10
-909	1,583567E+09	1,583575E+09	3,454180E+09	3,454052E+09	3,167142E+09	6,908231E+09	1,007537E+10
-908	1,583533E+09	1,583525E+09	3,454107E+09	3,454181E+09	3,167058E+09	6,908287E+09	1,007534E+10
-907	1,583626E+09	1,583612E+09	3,454108E+09	3,454125E+09	3,167238E+09	6,908233E+09	1,007547E+10
-906	1,583534E+09	1,583564E+09	3,454133E+09	3,454090E+09	3,167098E+09	6,908223E+09	1,007532E+10
-905	1,583531E+09	1,583509E+09	3,454106E+09	3,454198E+09	3,167040E+09	6,908304E+09	1,007534E+10
-904	1,583572E+09	1,583555E+09	3,454194E+09	3,454112E+09	3,167127E+09	6,908306E+09	1,007543E+10
-903	1,583440E+09	1,583452E+09	3,454208E+09	3,454173E+09	3,166892E+09	6,908382E+09	1,007527E+10
-902	1,583472E+09	1,583453E+09	3,454185E+09	3,454244E+09	3,166925E+09	6,908430E+09	1,007535E+10
-901	1,583455E+09	1,583472E+09	3,454261E+09	3,454173E+09	3,166926E+09	6,908434E+09	1,007536E+10
-900	1,583354E+09	1,583380E+09	3,454222E+09	3,454288E+09	3,166734E+09	6,908510E+09	1,007524E+10
-899	1,583446E+09	1,583443E+09	3,454232E+09	3,454240E+09	3,166889E+09	6,908471E+09	1,007536E+10
-898	1,583402E+09	1,583418E+09	3,454273E+09	3,454155E+09	3,166821E+09	6,908428E+09	1,007525E+10
-897	1,583404E+09	1,583379E+09	3,454179E+09	3,454255E+09	3,166783E+09	6,908434E+09	1,007522E+10
-896	1,583522E+09	1,583500E+09	3,454184E+09	3,454156E+09	3,167022E+09	6,908341E+09	1,007536E+10
-895	1,583444E+09	1,583486E+09	3,454152E+09	3,454129E+09	3,166930E+09	6,908281E+09	1,007521E+10
-894	1,583518E+09	1,583528E+09	3,454071E+09	3,454154E+09	3,167046E+09	6,908224E+09	1,007527E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-893	1,583605E+09	1,583620E+09	3,454132E+09	3,454017E+09	3,167225E+09	6,908149E+09	1,007537E+10
-892	1,583543E+09	1,583564E+09	3,454088E+09	3,454077E+09	3,167107E+09	6,908165E+09	1,007527E+10
-891	1,583665E+09	1,583643E+09	3,454054E+09	3,454060E+09	3,167309E+09	6,908114E+09	1,007542E+10
-890	1,583656E+09	1,583675E+09	3,454091E+09	3,453980E+09	3,167331E+09	6,908072E+09	1,007540E+10
-889	1,583610E+09	1,583613E+09	3,453999E+09	3,454111E+09	3,167223E+09	6,908109E+09	1,007533E+10
-888	1,583707E+09	1,583698E+09	3,454038E+09	3,454048E+09	3,167405E+09	6,908086E+09	1,007549E+10
-887	1,583604E+09	1,583633E+09	3,454087E+09	3,454020E+09	3,167237E+09	6,908107E+09	1,007534E+10
-886	1,583599E+09	1,583575E+09	3,454036E+09	3,454111E+09	3,167173E+09	6,908147E+09	1,007532E+10
-885	1,583650E+09	1,583622E+09	3,454122E+09	3,454046E+09	3,167273E+09	6,908168E+09	1,007544E+10
-884	1,583505E+09	1,583519E+09	3,454124E+09	3,454133E+09	3,167024E+09	6,908257E+09	1,007528E+10
-883	1,583539E+09	1,583537E+09	3,454102E+09	3,454165E+09	3,167076E+09	6,908267E+09	1,007534E+10
-882	1,583525E+09	1,583553E+09	3,454194E+09	3,454083E+09	3,167078E+09	6,908278E+09	1,007536E+10
-881	1,583435E+09	1,583444E+09	3,454137E+09	3,454193E+09	3,166879E+09	6,908331E+09	1,007521E+10
-880	1,583544E+09	1,583512E+09	3,454159E+09	3,454151E+09	3,167056E+09	6,908310E+09	1,007537E+10
-879	1,583492E+09	1,583500E+09	3,454191E+09	3,454088E+09	3,166992E+09	6,908279E+09	1,007527E+10
-878	1,583486E+09	1,583481E+09	3,454059E+09	3,454163E+09	3,166967E+09	6,908222E+09	1,007519E+10
-877	1,583615E+09	1,583610E+09	3,454087E+09	3,454067E+09	3,167225E+09	6,908153E+09	1,007538E+10
-876	1,583534E+09	1,583582E+09	3,454077E+09	3,454046E+09	3,167116E+09	6,908123E+09	1,007524E+10
-875	1,583617E+09	1,583624E+09	3,454009E+09	3,454039E+09	3,167241E+09	6,908048E+09	1,007529E+10
-874	1,583704E+09	1,583714E+09	3,454074E+09	3,453926E+09	3,167418E+09	6,908000E+09	1,007542E+10
-873	1,583638E+09	1,583646E+09	3,453986E+09	3,454010E+09	3,167284E+09	6,907996E+09	1,007528E+10
-872	1,583757E+09	1,583737E+09	3,453957E+09	3,454003E+09	3,167494E+09	6,907960E+09	1,007545E+10
-871	1,583735E+09	1,583767E+09	3,453998E+09	3,453927E+09	3,167502E+09	6,907925E+09	1,007543E+10
-870	1,583684E+09	1,583694E+09	3,453892E+09	3,454008E+09	3,167379E+09	6,907900E+09	1,007528E+10
-869	1,583797E+09	1,583769E+09	3,453962E+09	3,453949E+09	3,167566E+09	6,907911E+09	1,007548E+10
-868	1,583688E+09	1,583693E+09	3,454019E+09	3,453943E+09	3,167381E+09	6,907962E+09	1,007534E+10
-867	1,583673E+09	1,583652E+09	3,453968E+09	3,454019E+09	3,167325E+09	6,907987E+09	1,007531E+10
-866	1,583713E+09	1,583714E+09	3,454061E+09	3,453977E+09	3,167427E+09	6,908039E+09	1,007547E+10
-865	1,583564E+09	1,583593E+09	3,454047E+09	3,454072E+09	3,167157E+09	6,908119E+09	1,007528E+10
-864	1,583607E+09	1,583606E+09	3,454057E+09	3,454098E+09	3,167213E+09	6,908155E+09	1,007537E+10
-863	1,583596E+09	1,583613E+09	3,454146E+09	3,454025E+09	3,167209E+09	6,908172E+09	1,007538E+10
-862	1,583513E+09	1,583509E+09	3,454043E+09	3,454107E+09	3,167022E+09	6,908150E+09	1,007517E+10
-861	1,583641E+09	1,583593E+09	3,454052E+09	3,454079E+09	3,167233E+09	6,908131E+09	1,007536E+10
-860	1,583580E+09	1,583593E+09	3,454076E+09	3,454021E+09	3,167173E+09	6,908097E+09	1,007527E+10
-859	1,583576E+09	1,583593E+09	3,453959E+09	3,454047E+09	3,167170E+09	6,908007E+09	1,007518E+10
-858	1,583707E+09	1,583718E+09	3,454017E+09	3,453947E+09	3,167425E+09	6,907965E+09	1,007539E+10
-857	1,583631E+09	1,583668E+09	3,454000E+09	3,453943E+09	3,167299E+09	6,907943E+09	1,007524E+10
-856	1,583721E+09	1,583710E+09	3,453947E+09	3,453958E+09	3,167431E+09	6,907905E+09	1,007534E+10
-855	1,583793E+09	1,583804E+09	3,453992E+09	3,453877E+09	3,167597E+09	6,907869E+09	1,007547E+10
-854	1,583720E+09	1,583744E+09	3,453865E+09	3,453937E+09	3,167465E+09	6,907802E+09	1,007527E+10
-853	1,583851E+09	1,583829E+09	3,453849E+09	3,453926E+09	3,167680E+09	6,907776E+09	1,007546E+10
-852	1,583821E+09	1,583843E+09	3,453916E+09	3,453845E+09	3,167664E+09	6,907761E+09	1,007543E+10
-851	1,583774E+09	1,583774E+09	3,453828E+09	3,453889E+09	3,167548E+09	6,907717E+09	1,007526E+10
-850	1,583878E+09	1,583845E+09	3,453911E+09	3,453853E+09	3,167723E+09	6,907764E+09	1,007549E+10
-849	1,583758E+09	1,583763E+09	3,453941E+09	3,453880E+09	3,167520E+09	6,907821E+09	1,007534E+10
-848	1,583738E+09	1,583730E+09	3,453905E+09	3,453968E+09	3,167467E+09	6,907873E+09	1,007534E+10
-847	1,583765E+09	1,583787E+09	3,454000E+09	3,453936E+09	3,167552E+09	6,907936E+09	1,007549E+10
-846	1,583626E+09	1,583655E+09	3,453962E+09	3,453991E+09	3,167281E+09	6,907952E+09	1,007523E+10
-845	1,583697E+09	1,583662E+09	3,453974E+09	3,454022E+09	3,167359E+09	6,907996E+09	1,007535E+10



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-844	1,583688E+09	1,583674E+09	3,454057E+09	3,453959E+09	3,167362E+09	6,908015E+09	1,007538E+10
-843	1,583605E+09	1,583605E+09	3,453940E+09	3,454003E+09	3,167210E+09	6,907943E+09	1,007515E+10
-842	1,583726E+09	1,583707E+09	3,453965E+09	3,453980E+09	3,167433E+09	6,907945E+09	1,007538E+10
-841	1,583663E+09	1,583698E+09	3,453989E+09	3,453926E+09	3,167361E+09	6,907915E+09	1,007528E+10
-840	1,583664E+09	1,583689E+09	3,453917E+09	3,453951E+09	3,167354E+09	6,907868E+09	1,007522E+10
-839	1,583791E+09	1,583804E+09	3,453974E+09	3,453879E+09	3,167595E+09	6,907853E+09	1,007545E+10
-838	1,583720E+09	1,583745E+09	3,453907E+09	3,453862E+09	3,167466E+09	6,907769E+09	1,007523E+10
-837	1,583822E+09	1,583796E+09	3,453833E+09	3,453902E+09	3,167618E+09	6,907735E+09	1,007535E+10
-836	1,583887E+09	1,583895E+09	3,453869E+09	3,453820E+09	3,167782E+09	6,907688E+09	1,007547E+10
-835	1,583816E+09	1,583846E+09	3,453750E+09	3,453819E+09	3,167663E+09	6,907570E+09	1,007523E+10
-834	1,583946E+09	1,583923E+09	3,453772E+09	3,453801E+09	3,167869E+09	6,907574E+09	1,007544E+10
-833	1,583913E+09	1,583916E+09	3,453837E+09	3,453737E+09	3,167830E+09	6,907574E+09	1,007540E+10
-832	1,583860E+09	1,583848E+09	3,453783E+09	3,453804E+09	3,167708E+09	6,907587E+09	1,007530E+10
-831	1,583937E+09	1,583926E+09	3,453858E+09	3,453811E+09	3,167863E+09	6,907669E+09	1,007553E+10
-830	1,583809E+09	1,583842E+09	3,453860E+09	3,453825E+09	3,167651E+09	6,907685E+09	1,007534E+10
-829	1,583802E+09	1,583801E+09	3,453834E+09	3,453923E+09	3,167603E+09	6,907756E+09	1,007536E+10
-828	1,583834E+09	1,583842E+09	3,453937E+09	3,453885E+09	3,167676E+09	6,907822E+09	1,007550E+10
-827	1,583710E+09	1,583722E+09	3,453888E+09	3,453892E+09	3,167432E+09	6,907780E+09	1,007521E+10
-826	1,583786E+09	1,583737E+09	3,453897E+09	3,453931E+09	3,167522E+09	6,907827E+09	1,007535E+10
-825	1,583771E+09	1,583758E+09	3,453949E+09	3,453882E+09	3,167529E+09	6,907831E+09	1,007536E+10
-824	1,583689E+09	1,583705E+09	3,453863E+09	3,453917E+09	3,167394E+09	6,907781E+09	1,007517E+10
-823	1,583794E+09	1,583805E+09	3,453899E+09	3,453897E+09	3,167598E+09	6,907796E+09	1,007539E+10
-822	1,583742E+09	1,583782E+09	3,453911E+09	3,453818E+09	3,167524E+09	6,907729E+09	1,007525E+10
-821	1,583766E+09	1,583765E+09	3,453835E+09	3,453868E+09	3,167532E+09	6,907703E+09	1,007523E+10
-820	1,583888E+09	1,583880E+09	3,453880E+09	3,453818E+09	3,167768E+09	6,907698E+09	1,007547E+10
-819	1,583824E+09	1,583850E+09	3,453790E+09	3,453769E+09	3,167675E+09	6,907559E+09	1,007523E+10
-818	1,583923E+09	1,583906E+09	3,453726E+09	3,453807E+09	3,167829E+09	6,907534E+09	1,007536E+10
-817	1,583983E+09	1,583993E+09	3,453765E+09	3,453721E+09	3,167976E+09	6,907487E+09	1,007546E+10
-816	1,583915E+09	1,583937E+09	3,453697E+09	3,453708E+09	3,167852E+09	6,907405E+09	1,007526E+10
-815	1,584024E+09	1,584005E+09	3,453728E+09	3,453718E+09	3,168028E+09	6,907446E+09	1,007547E+10
-814	1,583985E+09	1,583991E+09	3,453760E+09	3,453660E+09	3,167976E+09	6,907420E+09	1,007540E+10
-813	1,583933E+09	1,583927E+09	3,453697E+09	3,453766E+09	3,167860E+09	6,907463E+09	1,007532E+10
-812	1,583997E+09	1,584001E+09	3,453774E+09	3,453780E+09	3,167998E+09	6,907554E+09	1,007555E+10
-811	1,583880E+09	1,583919E+09	3,453777E+09	3,453738E+09	3,167800E+09	6,907515E+09	1,007531E+10
-810	1,583883E+09	1,583867E+09	3,453771E+09	3,453827E+09	3,167750E+09	6,907598E+09	1,007535E+10
-809	1,583921E+09	1,583897E+09	3,453854E+09	3,453798E+09	3,167818E+09	6,907653E+09	1,007547E+10
-808	1,583799E+09	1,583792E+09	3,453825E+09	3,453804E+09	3,167591E+09	6,907629E+09	1,007522E+10
-807	1,583852E+09	1,583830E+09	3,453823E+09	3,453866E+09	3,167682E+09	6,907689E+09	1,007537E+10
-806	1,583836E+09	1,583851E+09	3,453853E+09	3,453794E+09	3,167687E+09	6,907647E+09	1,007533E+10
-805	1,583767E+09	1,583795E+09	3,453790E+09	3,453843E+09	3,167561E+09	6,907633E+09	1,007519E+10
-804	1,583873E+09	1,583881E+09	3,453840E+09	3,453826E+09	3,167754E+09	6,907666E+09	1,007542E+10
-803	1,583839E+09	1,583865E+09	3,453833E+09	3,453717E+09	3,167704E+09	6,907549E+09	1,007525E+10
-802	1,583870E+09	1,583854E+09	3,453747E+09	3,453783E+09	3,167724E+09	6,907530E+09	1,007525E+10
-801	1,583989E+09	1,583974E+09	3,453751E+09	3,453746E+09	3,167963E+09	6,907497E+09	1,007546E+10
-800	1,583928E+09	1,583957E+09	3,453689E+09	3,453675E+09	3,167885E+09	6,907364E+09	1,007525E+10
-799	1,584010E+09	1,584011E+09	3,453640E+09	3,453710E+09	3,168021E+09	6,907350E+09	1,007537E+10
-798	1,584071E+09	1,584079E+09	3,453675E+09	3,453601E+09	3,168150E+09	6,907275E+09	1,007543E+10
-797	1,584013E+09	1,584018E+09	3,453621E+09	3,453623E+09	3,168031E+09	6,907244E+09	1,007527E+10
-796	1,584102E+09	1,584082E+09	3,453657E+09	3,453662E+09	3,168184E+09	6,907319E+09	1,007550E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-795	1,584061E+09	1,584087E+09	3,453677E+09	3,453586E+09	3,168148E+09	6,907263E+09	1,007541E+10
-794	1,584005E+09	1,584015E+09	3,453631E+09	3,453699E+09	3,168021E+09	6,907330E+09	1,007535E+10
-793	1,584066E+09	1,584068E+09	3,453702E+09	3,453716E+09	3,168134E+09	6,907418E+09	1,007555E+10
-792	1,583964E+09	1,583979E+09	3,453738E+09	3,453656E+09	3,167943E+09	6,907395E+09	1,007534E+10
-791	1,583953E+09	1,583926E+09	3,453714E+09	3,453758E+09	3,167878E+09	6,907471E+09	1,007535E+10
-790	1,583990E+09	1,583960E+09	3,453757E+09	3,453721E+09	3,167950E+09	6,907477E+09	1,007543E+10
-789	1,583877E+09	1,583877E+09	3,453718E+09	3,453745E+09	3,167754E+09	6,907463E+09	1,007522E+10
-788	1,583917E+09	1,583916E+09	3,453733E+09	3,453800E+09	3,167833E+09	6,907534E+09	1,007537E+10
-787	1,583917E+09	1,583946E+09	3,453770E+09	3,453682E+09	3,167863E+09	6,907452E+09	1,007531E+10
-786	1,583861E+09	1,583877E+09	3,453727E+09	3,453735E+09	3,167738E+09	6,907462E+09	1,007520E+10
-785	1,583970E+09	1,583955E+09	3,453751E+09	3,453742E+09	3,167925E+09	6,907493E+09	1,007542E+10
-784	1,583945E+09	1,583956E+09	3,453753E+09	3,453632E+09	3,167901E+09	6,907385E+09	1,007529E+10
-783	1,583956E+09	1,583964E+09	3,453649E+09	3,453715E+09	3,167920E+09	6,907364E+09	1,007528E+10
-782	1,584076E+09	1,584079E+09	3,453637E+09	3,453650E+09	3,168155E+09	6,907287E+09	1,007544E+10
-781	1,584027E+09	1,584059E+09	3,453597E+09	3,453584E+09	3,168086E+09	6,907181E+09	1,007527E+10
-780	1,584100E+09	1,584098E+09	3,453573E+09	3,453622E+09	3,168198E+09	6,907195E+09	1,007539E+10
-779	1,584169E+09	1,584168E+09	3,453598E+09	3,453494E+09	3,168337E+09	6,907092E+09	1,007543E+10
-778	1,584103E+09	1,584106E+09	3,453552E+09	3,453547E+09	3,168209E+09	6,907099E+09	1,007531E+10
-777	1,584177E+09	1,584167E+09	3,453563E+09	3,453609E+09	3,168344E+09	6,907172E+09	1,007552E+10
-776	1,584140E+09	1,584166E+09	3,453613E+09	3,453517E+09	3,168307E+09	6,907129E+09	1,007544E+10
-775	1,584071E+09	1,584088E+09	3,453572E+09	3,453629E+09	3,168158E+09	6,907201E+09	1,007536E+10
-774	1,584140E+09	1,584117E+09	3,453617E+09	3,453622E+09	3,168257E+09	6,907239E+09	1,007550E+10
-773	1,584049E+09	1,584036E+09	3,453648E+09	3,453589E+09	3,168086E+09	6,907236E+09	1,007532E+10
-772	1,584024E+09	1,583997E+09	3,453626E+09	3,453701E+09	3,168020E+09	6,907327E+09	1,007535E+10
-771	1,584063E+09	1,584055E+09	3,453657E+09	3,453632E+09	3,168118E+09	6,907288E+09	1,007541E+10
-770	1,583952E+09	1,583974E+09	3,453653E+09	3,453656E+09	3,167925E+09	6,907308E+09	1,007523E+10
-769	1,583989E+09	1,583997E+09	3,453669E+09	3,453715E+09	3,167986E+09	6,907384E+09	1,007537E+10
-768	1,584007E+09	1,584022E+09	3,453734E+09	3,453589E+09	3,168029E+09	6,907323E+09	1,007535E+10
-767	1,583942E+09	1,583957E+09	3,453667E+09	3,453667E+09	3,167899E+09	6,907334E+09	1,007523E+10
-766	1,584055E+09	1,584034E+09	3,453639E+09	3,453668E+09	3,168089E+09	6,907308E+09	1,007540E+10
-765	1,584043E+09	1,584058E+09	3,453624E+09	3,453575E+09	3,168101E+09	6,907199E+09	1,007530E+10
-764	1,584047E+09	1,584066E+09	3,453538E+09	3,453635E+09	3,168113E+09	6,907173E+09	1,007529E+10
-763	1,584180E+09	1,584182E+09	3,453534E+09	3,453518E+09	3,168361E+09	6,907052E+09	1,007541E+10
-762	1,584139E+09	1,584153E+09	3,453525E+09	3,453457E+09	3,168293E+09	6,906982E+09	1,007527E+10
-761	1,584198E+09	1,584181E+09	3,453491E+09	3,453527E+09	3,168380E+09	6,907019E+09	1,007540E+10
-760	1,584266E+09	1,584261E+09	3,453537E+09	3,453415E+09	3,168527E+09	6,906953E+09	1,007548E+10
-759	1,584173E+09	1,584204E+09	3,453482E+09	3,453493E+09	3,168377E+09	6,906974E+09	1,007535E+10
-758	1,584241E+09	1,584243E+09	3,453477E+09	3,453541E+09	3,168484E+09	6,907018E+09	1,007550E+10
-757	1,584221E+09	1,584237E+09	3,453534E+09	3,453460E+09	3,168458E+09	6,906994E+09	1,007545E+10
-756	1,584144E+09	1,584144E+09	3,453504E+09	3,453566E+09	3,168288E+09	6,907070E+09	1,007536E+10
-755	1,584222E+09	1,584182E+09	3,453525E+09	3,453532E+09	3,168405E+09	6,907058E+09	1,007546E+10
-754	1,584131E+09	1,584116E+09	3,453559E+09	3,453508E+09	3,168247E+09	6,907067E+09	1,007531E+10
-753	1,584091E+09	1,584083E+09	3,453528E+09	3,453629E+09	3,168174E+09	6,907157E+09	1,007533E+10
-752	1,584138E+09	1,584143E+09	3,453601E+09	3,453537E+09	3,168282E+09	6,907138E+09	1,007542E+10
-751	1,584017E+09	1,584057E+09	3,453611E+09	3,453569E+09	3,168074E+09	6,907179E+09	1,007525E+10
-750	1,584063E+09	1,584059E+09	3,453600E+09	3,453624E+09	3,168122E+09	6,907224E+09	1,007535E+10
-749	1,584099E+09	1,584095E+09	3,453646E+09	3,453532E+09	3,168194E+09	6,907179E+09	1,007537E+10
-748	1,584027E+09	1,584044E+09	3,453568E+09	3,453615E+09	3,168071E+09	6,907183E+09	1,007525E+10
-747	1,584151E+09	1,584140E+09	3,453516E+09	3,453577E+09	3,168291E+09	6,907093E+09	1,007538E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-746	1,584147E+09	1,584167E+09	3,453530E+09	3,453470E+09	3,168314E+09	6,907000E+09	1,007531E+10
-745	1,584148E+09	1,584163E+09	3,453452E+09	3,453526E+09	3,168312E+09	6,906978E+09	1,007529E+10
-744	1,584289E+09	1,584271E+09	3,453480E+09	3,453400E+09	3,168560E+09	6,906880E+09	1,007544E+10
-743	1,584227E+09	1,584248E+09	3,453466E+09	3,453375E+09	3,168476E+09	6,906841E+09	1,007532E+10
-742	1,584276E+09	1,584267E+09	3,453391E+09	3,453455E+09	3,168543E+09	6,906846E+09	1,007539E+10
-741	1,584345E+09	1,584356E+09	3,453429E+09	3,453374E+09	3,168701E+09	6,906803E+09	1,007550E+10
-740	1,584246E+09	1,584286E+09	3,453395E+09	3,453439E+09	3,168532E+09	6,906834E+09	1,007537E+10
-739	1,584327E+09	1,584313E+09	3,453384E+09	3,453441E+09	3,168640E+09	6,906825E+09	1,007546E+10
-738	1,584316E+09	1,584303E+09	3,453457E+09	3,453362E+09	3,168618E+09	6,906819E+09	1,007544E+10
-737	1,584227E+09	1,584210E+09	3,453412E+09	3,453482E+09	3,168438E+09	6,906895E+09	1,007533E+10
-736	1,584302E+09	1,584265E+09	3,453459E+09	3,453445E+09	3,168567E+09	6,906904E+09	1,007547E+10
-735	1,584188E+09	1,584214E+09	3,453504E+09	3,453437E+09	3,168401E+09	6,906941E+09	1,007534E+10
-734	1,584143E+09	1,584160E+09	3,453468E+09	3,453547E+09	3,168303E+09	6,907015E+09	1,007532E+10
-733	1,584208E+09	1,584216E+09	3,453549E+09	3,453480E+09	3,168425E+09	6,907029E+09	1,007545E+10
-732	1,584090E+09	1,584117E+09	3,453559E+09	3,453516E+09	3,168207E+09	6,907076E+09	1,007528E+10
-731	1,584150E+09	1,584127E+09	3,453505E+09	3,453550E+09	3,168277E+09	6,907055E+09	1,007533E+10
-730	1,584198E+09	1,584184E+09	3,453536E+09	3,453461E+09	3,168382E+09	6,906997E+09	1,007538E+10
-729	1,584121E+09	1,584143E+09	3,453439E+09	3,453532E+09	3,168264E+09	6,906971E+09	1,007524E+10
-728	1,584260E+09	1,584243E+09	3,453427E+09	3,453457E+09	3,168502E+09	6,906883E+09	1,007539E+10
-727	1,584245E+09	1,584271E+09	3,453456E+09	3,453345E+09	3,168516E+09	6,906801E+09	1,007532E+10
-726	1,584243E+09	1,584248E+09	3,453365E+09	3,453406E+09	3,168490E+09	6,906772E+09	1,007526E+10
-725	1,584386E+09	1,584368E+09	3,453390E+09	3,453330E+09	3,168754E+09	6,906720E+09	1,007547E+10
-724	1,584308E+09	1,584346E+09	3,453382E+09	3,453325E+09	3,168654E+09	6,906707E+09	1,007536E+10
-723	1,584357E+09	1,584366E+09	3,453292E+09	3,453381E+09	3,168723E+09	6,906673E+09	1,007540E+10
-722	1,584435E+09	1,584446E+09	3,453352E+09	3,453294E+09	3,168881E+09	6,906646E+09	1,007553E+10
-721	1,584333E+09	1,584358E+09	3,453318E+09	3,453355E+09	3,168690E+09	6,906673E+09	1,007536E+10
-720	1,584423E+09	1,584376E+09	3,453327E+09	3,453342E+09	3,168800E+09	6,906668E+09	1,007547E+10
-719	1,584389E+09	1,584379E+09	3,453392E+09	3,453283E+09	3,168768E+09	6,906676E+09	1,007544E+10
-718	1,584288E+09	1,584286E+09	3,453321E+09	3,453407E+09	3,168574E+09	6,906728E+09	1,007530E+10
-717	1,584364E+09	1,584352E+09	3,453376E+09	3,453393E+09	3,168716E+09	6,906769E+09	1,007548E+10
-716	1,584245E+09	1,584288E+09	3,453454E+09	3,453378E+09	3,168533E+09	6,906831E+09	1,007536E+10
-715	1,584216E+09	1,584222E+09	3,453403E+09	3,453457E+09	3,168438E+09	6,906859E+09	1,007530E+10
-714	1,584296E+09	1,584278E+09	3,453482E+09	3,453403E+09	3,168575E+09	6,906885E+09	1,007546E+10
-713	1,584179E+09	1,584189E+09	3,453461E+09	3,453453E+09	3,168368E+09	6,906913E+09	1,007528E+10
-712	1,584249E+09	1,584215E+09	3,453407E+09	3,453464E+09	3,168464E+09	6,906871E+09	1,007534E+10
-711	1,584282E+09	1,584295E+09	3,453445E+09	3,453370E+09	3,168576E+09	6,906815E+09	1,007539E+10
-710	1,584207E+09	1,584241E+09	3,453345E+09	3,453415E+09	3,168448E+09	6,906760E+09	1,007521E+10
-709	1,584355E+09	1,584341E+09	3,453348E+09	3,453359E+09	3,168695E+09	6,906708E+09	1,007540E+10
-708	1,584335E+09	1,584360E+09	3,453394E+09	3,453264E+09	3,168695E+09	6,906658E+09	1,007535E+10
-707	1,584335E+09	1,584338E+09	3,453270E+09	3,453320E+09	3,168673E+09	6,906590E+09	1,007526E+10
-706	1,584479E+09	1,584470E+09	3,453289E+09	3,453262E+09	3,168949E+09	6,906551E+09	1,007550E+10
-705	1,584397E+09	1,584443E+09	3,453274E+09	3,453257E+09	3,168840E+09	6,906531E+09	1,007537E+10
-704	1,584458E+09	1,584450E+09	3,453217E+09	3,453278E+09	3,168907E+09	6,906495E+09	1,007540E+10
-703	1,584525E+09	1,584526E+09	3,453288E+09	3,453190E+09	3,169051E+09	6,906477E+09	1,007553E+10
-702	1,584419E+09	1,584421E+09	3,453232E+09	3,453251E+09	3,168840E+09	6,906483E+09	1,007532E+10
-701	1,584505E+09	1,584457E+09	3,453238E+09	3,453279E+09	3,168961E+09	6,906517E+09	1,007548E+10
-700	1,584452E+09	1,584465E+09	3,453321E+09	3,453234E+09	3,168917E+09	6,906554E+09	1,007547E+10
-699	1,584348E+09	1,584370E+09	3,453248E+09	3,453335E+09	3,168718E+09	6,906582E+09	1,007530E+10
-698	1,584433E+09	1,584430E+09	3,453326E+09	3,453321E+09	3,168863E+09	6,906647E+09	1,007551E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-697	1,584319E+09	1,584348E+09	3,453398E+09	3,453310E+09	3,168667E+09	6,906708E+09	1,007537E+10
-696	1,584306E+09	1,584280E+09	3,453349E+09	3,453376E+09	3,168586E+09	6,906725E+09	1,007531E+10
-695	1,584375E+09	1,584356E+09	3,453398E+09	3,453332E+09	3,168730E+09	6,906730E+09	1,007546E+10
-694	1,584256E+09	1,584274E+09	3,453337E+09	3,453370E+09	3,168530E+09	6,906707E+09	1,007524E+10
-693	1,584336E+09	1,584319E+09	3,453292E+09	3,453387E+09	3,168654E+09	6,906678E+09	1,007533E+10
-692	1,584367E+09	1,584389E+09	3,453365E+09	3,453273E+09	3,168756E+09	6,906638E+09	1,007539E+10
-691	1,584304E+09	1,584329E+09	3,453262E+09	3,453289E+09	3,168633E+09	6,906551E+09	1,007518E+10
-690	1,584458E+09	1,584432E+09	3,453270E+09	3,453255E+09	3,168889E+09	6,906525E+09	1,007541E+10
-689	1,584431E+09	1,584457E+09	3,453302E+09	3,453188E+09	3,168888E+09	6,906490E+09	1,007538E+10
-688	1,584435E+09	1,584441E+09	3,453187E+09	3,453238E+09	3,168876E+09	6,906425E+09	1,007530E+10
-687	1,584562E+09	1,584578E+09	3,453214E+09	3,453183E+09	3,169140E+09	6,906397E+09	1,007554E+10
-686	1,584484E+09	1,584528E+09	3,453188E+09	3,453164E+09	3,169012E+09	6,906353E+09	1,007536E+10
-685	1,584553E+09	1,584528E+09	3,453138E+09	3,453202E+09	3,169082E+09	6,906340E+09	1,007542E+10
-684	1,584608E+09	1,584596E+09	3,453220E+09	3,453124E+09	3,169204E+09	6,906344E+09	1,007555E+10
-683	1,584498E+09	1,584498E+09	3,453134E+09	3,453172E+09	3,168996E+09	6,906306E+09	1,007530E+10
-682	1,584576E+09	1,584546E+09	3,453145E+09	3,453212E+09	3,169123E+09	6,906357E+09	1,007548E+10
-681	1,584519E+09	1,584549E+09	3,453241E+09	3,453169E+09	3,169069E+09	6,906410E+09	1,007548E+10
-680	1,584429E+09	1,584437E+09	3,453197E+09	3,453238E+09	3,168866E+09	6,906436E+09	1,007530E+10
-679	1,584502E+09	1,584497E+09	3,453280E+09	3,453233E+09	3,168998E+09	6,906513E+09	1,007551E+10
-678	1,584395E+09	1,584405E+09	3,453315E+09	3,453230E+09	3,168800E+09	6,906544E+09	1,007534E+10
-677	1,584385E+09	1,584357E+09	3,453249E+09	3,453323E+09	3,168742E+09	6,906572E+09	1,007531E+10
-676	1,584446E+09	1,584444E+09	3,453309E+09	3,453276E+09	3,168890E+09	6,906585E+09	1,007548E+10
-675	1,584336E+09	1,584367E+09	3,453238E+09	3,453271E+09	3,168703E+09	6,906509E+09	1,007521E+10
-674	1,584427E+09	1,584415E+09	3,453215E+09	3,453280E+09	3,168842E+09	6,906495E+09	1,007534E+10
-673	1,584464E+09	1,584476E+09	3,453292E+09	3,453175E+09	3,168940E+09	6,906467E+09	1,007541E+10
-672	1,584411E+09	1,584413E+09	3,453198E+09	3,453186E+09	3,168825E+09	6,906384E+09	1,007521E+10
-671	1,584544E+09	1,584536E+09	3,453191E+09	3,453175E+09	3,169080E+09	6,906365E+09	1,007545E+10
-670	1,584518E+09	1,584557E+09	3,453188E+09	3,453113E+09	3,169075E+09	6,906301E+09	1,007538E+10
-669	1,584530E+09	1,584544E+09	3,453085E+09	3,453171E+09	3,169074E+09	6,906255E+09	1,007533E+10
-668	1,584655E+09	1,584663E+09	3,453136E+09	3,453101E+09	3,169318E+09	6,906238E+09	1,007556E+10
-667	1,584585E+09	1,584604E+09	3,453091E+09	3,453057E+09	3,169189E+09	6,906148E+09	1,007534E+10
-666	1,584655E+09	1,584613E+09	3,453041E+09	3,453112E+09	3,169268E+09	6,906153E+09	1,007542E+10
-665	1,584694E+09	1,584683E+09	3,453119E+09	3,453052E+09	3,169377E+09	6,906171E+09	1,007555E+10
-664	1,584580E+09	1,584591E+09	3,453064E+09	3,453085E+09	3,169171E+09	6,906149E+09	1,007532E+10
-663	1,584635E+09	1,584641E+09	3,453099E+09	3,453126E+09	3,169275E+09	6,906225E+09	1,007550E+10
-662	1,584582E+09	1,584615E+09	3,453187E+09	3,453087E+09	3,169196E+09	6,906275E+09	1,007547E+10
-661	1,584502E+09	1,584497E+09	3,453148E+09	3,453183E+09	3,168999E+09	6,906331E+09	1,007533E+10
-660	1,584569E+09	1,584548E+09	3,453220E+09	3,453189E+09	3,169117E+09	6,906409E+09	1,007553E+10
-659	1,584468E+09	1,584471E+09	3,453205E+09	3,453166E+09	3,168939E+09	6,906370E+09	1,007531E+10
-658	1,584466E+09	1,584447E+09	3,453130E+09	3,453251E+09	3,168913E+09	6,906381E+09	1,007529E+10
-657	1,584531E+09	1,584533E+09	3,453208E+09	3,453187E+09	3,169064E+09	6,906394E+09	1,007546E+10
-656	1,584439E+09	1,584455E+09	3,453170E+09	3,453142E+09	3,168893E+09	6,906312E+09	1,007521E+10
-655	1,584517E+09	1,584509E+09	3,453159E+09	3,453158E+09	3,169025E+09	6,906316E+09	1,007534E+10
-654	1,584557E+09	1,584564E+09	3,453204E+09	3,453081E+09	3,169121E+09	6,906285E+09	1,007541E+10
-653	1,584504E+09	1,584517E+09	3,453106E+09	3,453128E+09	3,169022E+09	6,906234E+09	1,007526E+10
-652	1,584623E+09	1,584640E+09	3,453109E+09	3,453124E+09	3,169263E+09	6,906233E+09	1,007550E+10
-651	1,584610E+09	1,584654E+09	3,453088E+09	3,453029E+09	3,169264E+09	6,906117E+09	1,007538E+10
-650	1,584633E+09	1,584637E+09	3,452991E+09	3,453080E+09	3,169270E+09	6,906070E+09	1,007534E+10
-649	1,584760E+09	1,584742E+09	3,453047E+09	3,453013E+09	3,169502E+09	6,906060E+09	1,007556E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-648	1,584694E+09	1,584684E+09	3,453003E+09	3,452949E+09	3,169379E+09	6,905952E+09	1,007533E+10
-647	1,584731E+09	1,584713E+09	3,452955E+09	3,453018E+09	3,169444E+09	6,905973E+09	1,007542E+10
-646	1,584764E+09	1,584776E+09	3,453022E+09	3,452971E+09	3,169540E+09	6,905993E+09	1,007553E+10
-645	1,584650E+09	1,584674E+09	3,453002E+09	3,453018E+09	3,169325E+09	6,906019E+09	1,007534E+10
-644	1,584696E+09	1,584702E+09	3,453064E+09	3,453062E+09	3,169397E+09	6,906126E+09	1,007552E+10
-643	1,584656E+09	1,584663E+09	3,453116E+09	3,453011E+09	3,169319E+09	6,906127E+09	1,007545E+10
-642	1,584583E+09	1,584560E+09	3,453054E+09	3,453124E+09	3,169143E+09	6,906178E+09	1,007532E+10
-641	1,584648E+09	1,584621E+09	3,453114E+09	3,453137E+09	3,169268E+09	6,906251E+09	1,007552E+10
-640	1,584556E+09	1,584561E+09	3,453113E+09	3,453074E+09	3,169117E+09	6,906186E+09	1,007530E+10
-639	1,584541E+09	1,584550E+09	3,453065E+09	3,453142E+09	3,169091E+09	6,906207E+09	1,007530E+10
-638	1,584615E+09	1,584618E+09	3,453136E+09	3,453079E+09	3,169233E+09	6,906215E+09	1,007545E+10
-637	1,584531E+09	1,584541E+09	3,453116E+09	3,453060E+09	3,169072E+09	6,906176E+09	1,007525E+10
-636	1,584595E+09	1,584593E+09	3,453099E+09	3,453098E+09	3,169187E+09	6,906197E+09	1,007538E+10
-635	1,584638E+09	1,584656E+09	3,453094E+09	3,453016E+09	3,169295E+09	6,906110E+09	1,007540E+10
-634	1,584599E+09	1,584625E+09	3,452985E+09	3,453064E+09	3,169224E+09	6,906049E+09	1,007527E+10
-633	1,584726E+09	1,584730E+09	3,452999E+09	3,453039E+09	3,169456E+09	6,906039E+09	1,007549E+10
-632	1,584730E+09	1,584742E+09	3,452996E+09	3,452902E+09	3,169471E+09	6,905898E+09	1,007537E+10
-631	1,584739E+09	1,584733E+09	3,452907E+09	3,452951E+09	3,169472E+09	6,905857E+09	1,007533E+10
-630	1,584856E+09	1,584830E+09	3,452941E+09	3,452910E+09	3,169686E+09	6,905851E+09	1,007554E+10
-629	1,584780E+09	1,584788E+09	3,452922E+09	3,452877E+09	3,169567E+09	6,905799E+09	1,007537E+10
-628	1,584791E+09	1,584806E+09	3,452903E+09	3,452958E+09	3,169597E+09	6,905861E+09	1,007546E+10
-627	1,584827E+09	1,584852E+09	3,452959E+09	3,452899E+09	3,169679E+09	6,905859E+09	1,007554E+10
-626	1,584726E+09	1,584742E+09	3,452941E+09	3,452958E+09	3,169469E+09	6,905899E+09	1,007537E+10
-625	1,584774E+09	1,584750E+09	3,452999E+09	3,453011E+09	3,169523E+09	6,906010E+09	1,007553E+10
-624	1,584744E+09	1,584723E+09	3,453032E+09	3,452939E+09	3,169466E+09	6,905971E+09	1,007544E+10
-623	1,584653E+09	1,584649E+09	3,452957E+09	3,453044E+09	3,169302E+09	6,906001E+09	1,007530E+10
-622	1,584721E+09	1,584707E+09	3,453001E+09	3,453053E+09	3,169428E+09	6,906055E+09	1,007548E+10
-621	1,584639E+09	1,584650E+09	3,453042E+09	3,452981E+09	3,169289E+09	6,906022E+09	1,007531E+10
-620	1,584613E+09	1,584629E+09	3,453024E+09	3,453049E+09	3,169242E+09	6,906073E+09	1,007532E+10
-619	1,584698E+09	1,584693E+09	3,453061E+09	3,452985E+09	3,169390E+09	6,906046E+09	1,007544E+10
-618	1,584621E+09	1,584631E+09	3,453020E+09	3,452994E+09	3,169252E+09	6,906014E+09	1,007527E+10
-617	1,584682E+09	1,584685E+09	3,452999E+09	3,453045E+09	3,169367E+09	6,906044E+09	1,007541E+10
-616	1,584740E+09	1,584757E+09	3,452994E+09	3,452922E+09	3,169497E+09	6,905916E+09	1,007541E+10
-615	1,584695E+09	1,584733E+09	3,452902E+09	3,452949E+09	3,169428E+09	6,905850E+09	1,007528E+10
-614	1,584834E+09	1,584817E+09	3,452901E+09	3,452930E+09	3,169651E+09	6,905831E+09	1,007548E+10
-613	1,584841E+09	1,584830E+09	3,452916E+09	3,452805E+09	3,169671E+09	6,905721E+09	1,007539E+10
-612	1,584824E+09	1,584824E+09	3,452832E+09	3,452873E+09	3,169648E+09	6,905705E+09	1,007535E+10
-611	1,584933E+09	1,584925E+09	3,452832E+09	3,452831E+09	3,169857E+09	6,905663E+09	1,007552E+10
-610	1,584858E+09	1,584888E+09	3,452826E+09	3,452811E+09	3,169747E+09	6,905637E+09	1,007538E+10
-609	1,584868E+09	1,584880E+09	3,452838E+09	3,452890E+09	3,169749E+09	6,905728E+09	1,007548E+10
-608	1,584918E+09	1,584916E+09	3,452897E+09	3,452805E+09	3,169834E+09	6,905702E+09	1,007554E+10
-607	1,584808E+09	1,584814E+09	3,452875E+09	3,452869E+09	3,169622E+09	6,905745E+09	1,007537E+10
-606	1,584853E+09	1,584815E+09	3,452895E+09	3,452945E+09	3,169668E+09	6,905840E+09	1,007551E+10
-605	1,584820E+09	1,584808E+09	3,452948E+09	3,452878E+09	3,169628E+09	6,905826E+09	1,007545E+10
-604	1,584712E+09	1,584737E+09	3,452902E+09	3,452973E+09	3,169448E+09	6,905874E+09	1,007532E+10
-603	1,584785E+09	1,584784E+09	3,452933E+09	3,452960E+09	3,169568E+09	6,905893E+09	1,007546E+10
-602	1,584721E+09	1,584731E+09	3,452980E+09	3,452902E+09	3,169452E+09	6,905881E+09	1,007533E+10
-601	1,584697E+09	1,584692E+09	3,452960E+09	3,452982E+09	3,169390E+09	6,905942E+09	1,007533E+10
-600	1,584788E+09	1,584773E+09	3,452970E+09	3,452905E+09	3,169561E+09	6,905875E+09	1,007544E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-599	1,584705E+09	1,584738E+09	3,452918E+09	3,452909E+09	3,169443E+09	6,905827E+09	1,007527E+10
-598	1,584775E+09	1,584778E+09	3,452878E+09	3,452958E+09	3,169552E+09	6,905836E+09	1,007539E+10
-597	1,584848E+09	1,584851E+09	3,452910E+09	3,452820E+09	3,169699E+09	6,905730E+09	1,007543E+10
-596	1,584794E+09	1,584821E+09	3,452832E+09	3,452841E+09	3,169616E+09	6,905673E+09	1,007529E+10
-595	1,584933E+09	1,584903E+09	3,452794E+09	3,452822E+09	3,169836E+09	6,905617E+09	1,007545E+10
-594	1,584940E+09	1,584938E+09	3,452802E+09	3,452727E+09	3,169877E+09	6,905529E+09	1,007541E+10
-593	1,584908E+09	1,584925E+09	3,452744E+09	3,452808E+09	3,169833E+09	6,905551E+09	1,007538E+10
-592	1,585017E+09	1,585025E+09	3,452759E+09	3,452741E+09	3,170042E+09	6,905500E+09	1,007554E+10
-591	1,584937E+09	1,584983E+09	3,452780E+09	3,452716E+09	3,169920E+09	6,905496E+09	1,007542E+10
-590	1,584951E+09	1,584943E+09	3,452772E+09	3,452817E+09	3,169895E+09	6,905590E+09	1,007548E+10
-589	1,585004E+09	1,584976E+09	3,452839E+09	3,452745E+09	3,169981E+09	6,905584E+09	1,007556E+10
-588	1,584872E+09	1,584883E+09	3,452805E+09	3,452818E+09	3,169755E+09	6,905623E+09	1,007538E+10
-587	1,584916E+09	1,584890E+09	3,452781E+09	3,452879E+09	3,169806E+09	6,905659E+09	1,007547E+10
-586	1,584893E+09	1,584893E+09	3,452844E+09	3,452804E+09	3,169786E+09	6,905648E+09	1,007543E+10
-585	1,584788E+09	1,584805E+09	3,452840E+09	3,452886E+09	3,169593E+09	6,905726E+09	1,007532E+10
-584	1,584874E+09	1,584853E+09	3,452869E+09	3,452845E+09	3,169727E+09	6,905714E+09	1,007544E+10
-583	1,584804E+09	1,584815E+09	3,452915E+09	3,452800E+09	3,169619E+09	6,905715E+09	1,007533E+10
-582	1,584780E+09	1,584775E+09	3,452860E+09	3,452915E+09	3,169555E+09	6,905775E+09	1,007533E+10
-581	1,584874E+09	1,584869E+09	3,452885E+09	3,452840E+09	3,169743E+09	6,905725E+09	1,007547E+10
-580	1,584783E+09	1,584838E+09	3,452848E+09	3,452834E+09	3,169621E+09	6,905682E+09	1,007530E+10
-579	1,584867E+09	1,584865E+09	3,452778E+09	3,452858E+09	3,169732E+09	6,905636E+09	1,007537E+10
-578	1,584957E+09	1,584946E+09	3,452810E+09	3,452728E+09	3,169903E+09	6,905537E+09	1,007544E+10
-577	1,584900E+09	1,584908E+09	3,452744E+09	3,452755E+09	3,169808E+09	6,905499E+09	1,007531E+10
-576	1,585033E+09	1,585007E+09	3,452687E+09	3,452719E+09	3,170040E+09	6,905407E+09	1,007545E+10
-575	1,585027E+09	1,585060E+09	3,452710E+09	3,452628E+09	3,170086E+09	6,905338E+09	1,007542E+10
-574	1,584994E+09	1,585020E+09	3,452653E+09	3,452724E+09	3,170014E+09	6,905377E+09	1,007539E+10
-573	1,585107E+09	1,585105E+09	3,452713E+09	3,452655E+09	3,170212E+09	6,905368E+09	1,007558E+10
-572	1,585017E+09	1,585051E+09	3,452738E+09	3,452643E+09	3,170068E+09	6,905381E+09	1,007545E+10
-571	1,585028E+09	1,585000E+09	3,452677E+09	3,452749E+09	3,170028E+09	6,905426E+09	1,007545E+10
-570	1,585083E+09	1,585056E+09	3,452728E+09	3,452697E+09	3,170139E+09	6,905425E+09	1,007556E+10
-569	1,584944E+09	1,584958E+09	3,452715E+09	3,452757E+09	3,169902E+09	6,905472E+09	1,007537E+10
-568	1,584989E+09	1,584973E+09	3,452701E+09	3,452777E+09	3,169962E+09	6,905478E+09	1,007544E+10
-567	1,584968E+09	1,584982E+09	3,452795E+09	3,452694E+09	3,169950E+09	6,905490E+09	1,007544E+10
-566	1,584868E+09	1,584868E+09	3,452779E+09	3,452803E+09	3,169736E+09	6,905582E+09	1,007532E+10
-565	1,584953E+09	1,584922E+09	3,452821E+09	3,452777E+09	3,169875E+09	6,905597E+09	1,007547E+10
-564	1,584869E+09	1,584900E+09	3,452846E+09	3,452748E+09	3,169769E+09	6,905594E+09	1,007536E+10
-563	1,584850E+09	1,584861E+09	3,452741E+09	3,452849E+09	3,169711E+09	6,905590E+09	1,007530E+10
-562	1,584966E+09	1,584965E+09	3,452770E+09	3,452765E+09	3,169931E+09	6,905535E+09	1,007547E+10
-561	1,584887E+09	1,584919E+09	3,452761E+09	3,452735E+09	3,169806E+09	6,905497E+09	1,007530E+10
-560	1,584982E+09	1,584957E+09	3,452677E+09	3,452730E+09	3,169939E+09	6,905407E+09	1,007535E+10
-559	1,585065E+09	1,585057E+09	3,452715E+09	3,452605E+09	3,170122E+09	6,905320E+09	1,007544E+10
-558	1,584999E+09	1,585014E+09	3,452639E+09	3,452666E+09	3,170013E+09	6,905305E+09	1,007532E+10
-557	1,585122E+09	1,585117E+09	3,452623E+09	3,452634E+09	3,170239E+09	6,905257E+09	1,007550E+10
-556	1,585100E+09	1,585161E+09	3,452670E+09	3,452553E+09	3,170260E+09	6,905223E+09	1,007548E+10
-555	1,585074E+09	1,585094E+09	3,452583E+09	3,452648E+09	3,170168E+09	6,905232E+09	1,007540E+10
-554	1,585199E+09	1,585174E+09	3,452626E+09	3,452598E+09	3,170373E+09	6,905224E+09	1,007560E+10
-553	1,585106E+09	1,585109E+09	3,452652E+09	3,452592E+09	3,170215E+09	6,905244E+09	1,007546E+10
-552	1,585113E+09	1,585080E+09	3,452555E+09	3,452668E+09	3,170192E+09	6,905222E+09	1,007541E+10
-551	1,585159E+09	1,585152E+09	3,452625E+09	3,452599E+09	3,170311E+09	6,905225E+09	1,007554E+10



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-550	1,585021E+09	1,585037E+09	3,452630E+09	3,452663E+09	3,170058E+09	6,905293E+09	1,007535E+10
-549	1,585067E+09	1,585044E+09	3,452664E+09	3,452672E+09	3,170111E+09	6,905336E+09	1,007545E+10
-548	1,585035E+09	1,585054E+09	3,452763E+09	3,452614E+09	3,170090E+09	6,905377E+09	1,007547E+10
-547	1,584935E+09	1,584935E+09	3,452694E+09	3,452739E+09	3,169870E+09	6,905433E+09	1,007530E+10
-546	1,585025E+09	1,585011E+09	3,452718E+09	3,452736E+09	3,170036E+09	6,905454E+09	1,007549E+10
-545	1,584947E+09	1,584983E+09	3,452763E+09	3,452695E+09	3,169930E+09	6,905459E+09	1,007539E+10
-544	1,584941E+09	1,584952E+09	3,452645E+09	3,452747E+09	3,169894E+09	6,905392E+09	1,007529E+10
-543	1,585069E+09	1,585064E+09	3,452693E+09	3,452645E+09	3,170133E+09	6,905338E+09	1,007547E+10
-542	1,584998E+09	1,585003E+09	3,452669E+09	3,452632E+09	3,170002E+09	6,905300E+09	1,007530E+10
-541	1,585086E+09	1,585052E+09	3,452603E+09	3,452629E+09	3,170138E+09	6,905232E+09	1,007537E+10
-540	1,585148E+09	1,585171E+09	3,452635E+09	3,452527E+09	3,170319E+09	6,905162E+09	1,007548E+10
-539	1,585078E+09	1,585114E+09	3,452530E+09	3,452585E+09	3,170192E+09	6,905115E+09	1,007531E+10
-538	1,585211E+09	1,585215E+09	3,452532E+09	3,452562E+09	3,170425E+09	6,905094E+09	1,007552E+10
-537	1,585198E+09	1,585230E+09	3,452602E+09	3,452477E+09	3,170428E+09	6,905078E+09	1,007551E+10
-536	1,585176E+09	1,585166E+09	3,452483E+09	3,452551E+09	3,170342E+09	6,905035E+09	1,007538E+10
-535	1,585295E+09	1,585263E+09	3,452525E+09	3,452507E+09	3,170557E+09	6,905032E+09	1,007559E+10
-534	1,585192E+09	1,585194E+09	3,452536E+09	3,452519E+09	3,170386E+09	6,905056E+09	1,007544E+10
-533	1,585189E+09	1,585170E+09	3,452489E+09	3,452577E+09	3,170359E+09	6,905066E+09	1,007542E+10
-532	1,585218E+09	1,585241E+09	3,452589E+09	3,452513E+09	3,170459E+09	6,905102E+09	1,007556E+10
-531	1,585083E+09	1,585102E+09	3,452576E+09	3,452580E+09	3,170185E+09	6,905156E+09	1,007534E+10
-530	1,585137E+09	1,585111E+09	3,452605E+09	3,452619E+09	3,170247E+09	6,905223E+09	1,007547E+10
-529	1,585105E+09	1,585112E+09	3,452701E+09	3,452575E+09	3,170217E+09	6,905276E+09	1,007549E+10
-528	1,585008E+09	1,585017E+09	3,452583E+09	3,452674E+09	3,170025E+09	6,905257E+09	1,007528E+10
-527	1,585108E+09	1,585104E+09	3,452616E+09	3,452647E+09	3,170213E+09	6,905263E+09	1,007548E+10
-526	1,585045E+09	1,585063E+09	3,452662E+09	3,452600E+09	3,170108E+09	6,905262E+09	1,007537E+10
-525	1,585050E+09	1,585036E+09	3,452578E+09	3,452624E+09	3,170086E+09	6,905203E+09	1,007529E+10
-524	1,585165E+09	1,585157E+09	3,452624E+09	3,452540E+09	3,170322E+09	6,905163E+09	1,007549E+10
-523	1,585090E+09	1,585101E+09	3,452560E+09	3,452540E+09	3,170191E+09	6,905099E+09	1,007529E+10
-522	1,585174E+09	1,585167E+09	3,452492E+09	3,452558E+09	3,170341E+09	6,905050E+09	1,007539E+10
-521	1,585234E+09	1,585271E+09	3,452558E+09	3,452460E+09	3,170505E+09	6,905018E+09	1,007552E+10
-520	1,585173E+09	1,585214E+09	3,452442E+09	3,452489E+09	3,170387E+09	6,904930E+09	1,007532E+10
-519	1,585313E+09	1,585306E+09	3,452458E+09	3,452461E+09	3,170618E+09	6,904919E+09	1,007554E+10
-518	1,585304E+09	1,585302E+09	3,452508E+09	3,452402E+09	3,170606E+09	6,904910E+09	1,007552E+10
-517	1,585273E+09	1,585248E+09	3,452397E+09	3,452467E+09	3,170521E+09	6,904864E+09	1,007538E+10
-516	1,585366E+09	1,585360E+09	3,452436E+09	3,452432E+09	3,170726E+09	6,904868E+09	1,007559E+10
-515	1,585259E+09	1,585279E+09	3,452433E+09	3,452432E+09	3,170538E+09	6,904866E+09	1,007540E+10
-514	1,585259E+09	1,585252E+09	3,452419E+09	3,452494E+09	3,170511E+09	6,904913E+09	1,007542E+10
-513	1,585293E+09	1,585298E+09	3,452552E+09	3,452441E+09	3,170591E+09	6,904993E+09	1,007558E+10
-512	1,585160E+09	1,585166E+09	3,452505E+09	3,452500E+09	3,170326E+09	6,905006E+09	1,007533E+10
-511	1,585210E+09	1,585190E+09	3,452529E+09	3,452551E+09	3,170400E+09	6,905080E+09	1,007548E+10
-510	1,585182E+09	1,585188E+09	3,452604E+09	3,452526E+09	3,170370E+09	6,905130E+09	1,007550E+10
-509	1,585089E+09	1,585101E+09	3,452516E+09	3,452591E+09	3,170189E+09	6,905107E+09	1,007530E+10
-508	1,585188E+09	1,585194E+09	3,452557E+09	3,452558E+09	3,170381E+09	6,905115E+09	1,007550E+10
-507	1,585135E+09	1,585138E+09	3,452568E+09	3,452500E+09	3,170274E+09	6,905068E+09	1,007534E+10
-506	1,585147E+09	1,585126E+09	3,452483E+09	3,452542E+09	3,170272E+09	6,905025E+09	1,007530E+10
-505	1,585257E+09	1,585247E+09	3,452532E+09	3,452468E+09	3,170505E+09	6,905000E+09	1,007550E+10
-504	1,585178E+09	1,585212E+09	3,452437E+09	3,452446E+09	3,170390E+09	6,904883E+09	1,007527E+10
-503	1,585266E+09	1,585282E+09	3,452398E+09	3,452455E+09	3,170548E+09	6,904853E+09	1,007540E+10
-502	1,585337E+09	1,585358E+09	3,452468E+09	3,452298E+09	3,170696E+09	6,904766E+09	1,007546E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-501	1,585284E+09	1,585297E+09	3,452378E+09	3,452379E+09	3,170581E+09	6,904757E+09	1,007534E+10
-500	1,585409E+09	1,585394E+09	3,452382E+09	3,452373E+09	3,170802E+09	6,904755E+09	1,007556E+10
-499	1,585391E+09	1,585389E+09	3,452389E+09	3,452324E+09	3,170780E+09	6,904712E+09	1,007549E+10
-498	1,585353E+09	1,585350E+09	3,452292E+09	3,452399E+09	3,170702E+09	6,904691E+09	1,007539E+10
-497	1,585437E+09	1,585442E+09	3,452374E+09	3,452363E+09	3,170879E+09	6,904737E+09	1,007562E+10
-496	1,585333E+09	1,585361E+09	3,452369E+09	3,452336E+09	3,170694E+09	6,904706E+09	1,007540E+10
-495	1,585337E+09	1,585325E+09	3,452376E+09	3,452404E+09	3,170662E+09	6,904780E+09	1,007544E+10
-494	1,585371E+09	1,585354E+09	3,452487E+09	3,452390E+09	3,170725E+09	6,904876E+09	1,007560E+10
-493	1,585238E+09	1,585236E+09	3,452439E+09	3,452440E+09	3,170474E+09	6,904879E+09	1,007535E+10
-492	1,585272E+09	1,585274E+09	3,452445E+09	3,452494E+09	3,170546E+09	6,904940E+09	1,007549E+10
-491	1,585253E+09	1,585263E+09	3,452495E+09	3,452448E+09	3,170516E+09	6,904943E+09	1,007546E+10
-490	1,585177E+09	1,585182E+09	3,452420E+09	3,452498E+09	3,170360E+09	6,904918E+09	1,007528E+10
-489	1,585282E+09	1,585263E+09	3,452482E+09	3,452467E+09	3,170544E+09	6,904949E+09	1,007549E+10
-488	1,585232E+09	1,585233E+09	3,452460E+09	3,452391E+09	3,170465E+09	6,904851E+09	1,007532E+10
-487	1,585240E+09	1,585237E+09	3,452387E+09	3,452439E+09	3,170476E+09	6,904826E+09	1,007530E+10
-486	1,585346E+09	1,585353E+09	3,452436E+09	3,452391E+09	3,170699E+09	6,904827E+09	1,007553E+10
-485	1,585273E+09	1,585317E+09	3,452379E+09	3,452345E+09	3,170590E+09	6,904724E+09	1,007531E+10
-484	1,585354E+09	1,585380E+09	3,452348E+09	3,452364E+09	3,170734E+09	6,904712E+09	1,007545E+10
-483	1,585434E+09	1,585436E+09	3,452378E+09	3,452283E+09	3,170870E+09	6,904661E+09	1,007553E+10
-482	1,585386E+09	1,585383E+09	3,452276E+09	3,452312E+09	3,170769E+09	6,904588E+09	1,007536E+10
-481	1,585500E+09	1,585477E+09	3,452280E+09	3,452316E+09	3,170977E+09	6,904596E+09	1,007557E+10
-480	1,585476E+09	1,585490E+09	3,452261E+09	3,452232E+09	3,170966E+09	6,904493E+09	1,007546E+10
-479	1,585437E+09	1,585448E+09	3,452211E+09	3,452291E+09	3,170885E+09	6,904502E+09	1,007539E+10
-478	1,585523E+09	1,585512E+09	3,452312E+09	3,452273E+09	3,171035E+09	6,904585E+09	1,007562E+10
-477	1,585419E+09	1,585427E+09	3,452335E+09	3,452241E+09	3,170846E+09	6,904576E+09	1,007542E+10
-476	1,585405E+09	1,585400E+09	3,452328E+09	3,452343E+09	3,170804E+09	6,904671E+09	1,007548E+10
-475	1,585433E+09	1,585423E+09	3,452385E+09	3,452340E+09	3,170856E+09	6,904724E+09	1,007558E+10
-474	1,585304E+09	1,585320E+09	3,452343E+09	3,452392E+09	3,170624E+09	6,904735E+09	1,007536E+10
-473	1,585343E+09	1,585342E+09	3,452375E+09	3,452433E+09	3,170685E+09	6,904808E+09	1,007549E+10
-472	1,585335E+09	1,585340E+09	3,452403E+09	3,452344E+09	3,170676E+09	6,904747E+09	1,007542E+10
-471	1,585272E+09	1,585266E+09	3,452349E+09	3,452387E+09	3,170538E+09	6,904736E+09	1,007527E+10
-470	1,585375E+09	1,585341E+09	3,452393E+09	3,452383E+09	3,170716E+09	6,904776E+09	1,007549E+10
-469	1,585324E+09	1,585334E+09	3,452380E+09	3,452295E+09	3,170658E+09	6,904674E+09	1,007533E+10
-468	1,585316E+09	1,585350E+09	3,452307E+09	3,452354E+09	3,170666E+09	6,904661E+09	1,007533E+10
-467	1,585429E+09	1,585446E+09	3,452338E+09	3,452300E+09	3,170875E+09	6,904637E+09	1,007551E+10
-466	1,585375E+09	1,585408E+09	3,452297E+09	3,452258E+09	3,170783E+09	6,904555E+09	1,007534E+10
-465	1,585460E+09	1,585452E+09	3,452270E+09	3,452290E+09	3,170913E+09	6,904560E+09	1,007547E+10
-464	1,585539E+09	1,585529E+09	3,452254E+09	3,452192E+09	3,171069E+09	6,904445E+09	1,007551E+10
-463	1,585489E+09	1,585494E+09	3,452162E+09	3,452216E+09	3,170982E+09	6,904378E+09	1,007536E+10
-462	1,585591E+09	1,585576E+09	3,452178E+09	3,452235E+09	3,171167E+09	6,904413E+09	1,007558E+10
-461	1,585567E+09	1,585589E+09	3,452207E+09	3,452123E+09	3,171156E+09	6,904330E+09	1,007549E+10
-460	1,585512E+09	1,585535E+09	3,452177E+09	3,452198E+09	3,171047E+09	6,904375E+09	1,007542E+10
-459	1,585593E+09	1,585575E+09	3,452248E+09	3,452203E+09	3,171169E+09	6,904451E+09	1,007562E+10
-458	1,585493E+09	1,585496E+09	3,452261E+09	3,452196E+09	3,170990E+09	6,904458E+09	1,007545E+10
-457	1,585466E+09	1,585462E+09	3,452246E+09	3,452312E+09	3,170928E+09	6,904558E+09	1,007549E+10
-456	1,585498E+09	1,585502E+09	3,452267E+09	3,452269E+09	3,171000E+09	6,904537E+09	1,007554E+10
-455	1,585385E+09	1,585399E+09	3,452256E+09	3,452289E+09	3,170785E+09	6,904544E+09	1,007533E+10
-454	1,585434E+09	1,585406E+09	3,452294E+09	3,452336E+09	3,170840E+09	6,904629E+09	1,007547E+10
-453	1,585435E+09	1,585417E+09	3,452341E+09	3,452225E+09	3,170852E+09	6,904566E+09	1,007542E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-452	1,585353E+09	1,585364E+09	3,452284E+09	3,452293E+09	3,170716E+09	6,904577E+09	1,007529E+10
-451	1,585447E+09	1,585438E+09	3,452294E+09	3,452305E+09	3,170884E+09	6,904599E+09	1,007548E+10
-450	1,585403E+09	1,585441E+09	3,452301E+09	3,452227E+09	3,170844E+09	6,904528E+09	1,007537E+10
-449	1,585398E+09	1,585436E+09	3,452249E+09	3,452291E+09	3,170834E+09	6,904541E+09	1,007537E+10
-448	1,585525E+09	1,585533E+09	3,452242E+09	3,452208E+09	3,171059E+09	6,904451E+09	1,007551E+10
-447	1,585489E+09	1,585499E+09	3,452206E+09	3,452163E+09	3,170988E+09	6,904369E+09	1,007536E+10
-446	1,585572E+09	1,585538E+09	3,452152E+09	3,452217E+09	3,171110E+09	6,904369E+09	1,007548E+10
-445	1,585644E+09	1,585636E+09	3,452144E+09	3,452088E+09	3,171281E+09	6,904232E+09	1,007551E+10
-444	1,585575E+09	1,585611E+09	3,452075E+09	3,452111E+09	3,171185E+09	6,904186E+09	1,007537E+10
-443	1,585671E+09	1,585664E+09	3,452088E+09	3,452125E+09	3,171335E+09	6,904213E+09	1,007555E+10
-442	1,585653E+09	1,585671E+09	3,452150E+09	3,452034E+09	3,171324E+09	6,904184E+09	1,007551E+10
-441	1,585589E+09	1,585597E+09	3,452129E+09	3,452143E+09	3,171186E+09	6,904272E+09	1,007546E+10
-440	1,585662E+09	1,585647E+09	3,452150E+09	3,452141E+09	3,171309E+09	6,904291E+09	1,007560E+10
-439	1,585568E+09	1,585579E+09	3,452172E+09	3,452135E+09	3,171147E+09	6,904307E+09	1,007545E+10
-438	1,585539E+09	1,585530E+09	3,452155E+09	3,452254E+09	3,171069E+09	6,904409E+09	1,007548E+10
-437	1,585581E+09	1,585576E+09	3,452207E+09	3,452165E+09	3,171157E+09	6,904372E+09	1,007553E+10
-436	1,585465E+09	1,585480E+09	3,452207E+09	3,452185E+09	3,170945E+09	6,904392E+09	1,007534E+10
-435	1,585512E+09	1,585475E+09	3,452212E+09	3,452244E+09	3,170987E+09	6,904456E+09	1,007544E+10
-434	1,585517E+09	1,585508E+09	3,452259E+09	3,452159E+09	3,171025E+09	6,904418E+09	1,007544E+10
-433	1,585424E+09	1,585453E+09	3,452204E+09	3,452244E+09	3,170877E+09	6,904448E+09	1,007532E+10
-432	1,585519E+09	1,585537E+09	3,452186E+09	3,452223E+09	3,171056E+09	6,904409E+09	1,007546E+10
-431	1,585502E+09	1,585535E+09	3,452218E+09	3,452128E+09	3,171038E+09	6,904346E+09	1,007538E+10
-430	1,585508E+09	1,585511E+09	3,452159E+09	3,452204E+09	3,171019E+09	6,904363E+09	1,007538E+10
-429	1,585646E+09	1,585624E+09	3,452152E+09	3,452096E+09	3,171271E+09	6,904248E+09	1,007552E+10
-428	1,585595E+09	1,585611E+09	3,452103E+09	3,452060E+09	3,171205E+09	6,904163E+09	1,007537E+10
-427	1,585663E+09	1,585648E+09	3,452027E+09	3,452120E+09	3,171311E+09	6,904147E+09	1,007546E+10
-426	1,585736E+09	1,585750E+09	3,452058E+09	3,451994E+09	3,171485E+09	6,904052E+09	1,007554E+10
-425	1,585654E+09	1,585697E+09	3,452028E+09	3,452032E+09	3,171351E+09	6,904061E+09	1,007541E+10
-424	1,585747E+09	1,585744E+09	3,452020E+09	3,452035E+09	3,171491E+09	6,904056E+09	1,007555E+10
-423	1,585742E+09	1,585743E+09	3,452087E+09	3,451964E+09	3,171485E+09	6,904051E+09	1,007554E+10
-422	1,585670E+09	1,585659E+09	3,452039E+09	3,452104E+09	3,171329E+09	6,904143E+09	1,007547E+10
-421	1,585742E+09	1,585727E+09	3,452055E+09	3,452068E+09	3,171469E+09	6,904123E+09	1,007559E+10
-420	1,585640E+09	1,585665E+09	3,452091E+09	3,452048E+09	3,171305E+09	6,904139E+09	1,007544E+10
-419	1,585614E+09	1,585597E+09	3,452063E+09	3,452154E+09	3,171211E+09	6,904218E+09	1,007543E+10
-418	1,585667E+09	1,585647E+09	3,452142E+09	3,452072E+09	3,171314E+09	6,904215E+09	1,007553E+10
-417	1,585542E+09	1,585550E+09	3,452151E+09	3,452118E+09	3,171091E+09	6,904269E+09	1,007536E+10
-416	1,585579E+09	1,585565E+09	3,452113E+09	3,452166E+09	3,171144E+09	6,904279E+09	1,007542E+10
-415	1,585595E+09	1,585610E+09	3,452175E+09	3,452088E+09	3,171205E+09	6,904263E+09	1,007547E+10
-414	1,585506E+09	1,585539E+09	3,452126E+09	3,452182E+09	3,171045E+09	6,904307E+09	1,007535E+10
-413	1,585616E+09	1,585624E+09	3,452120E+09	3,452119E+09	3,171240E+09	6,904238E+09	1,007548E+10
-412	1,585605E+09	1,585628E+09	3,452150E+09	3,452028E+09	3,171233E+09	6,904178E+09	1,007541E+10
-411	1,585612E+09	1,585593E+09	3,452042E+09	3,452109E+09	3,171206E+09	6,904151E+09	1,007536E+10
-410	1,585751E+09	1,585727E+09	3,452037E+09	3,452012E+09	3,171478E+09	6,904049E+09	1,007553E+10
-409	1,585685E+09	1,585718E+09	3,451998E+09	3,451983E+09	3,171403E+09	6,903982E+09	1,007538E+10
-408	1,585746E+09	1,585754E+09	3,451913E+09	3,452006E+09	3,171500E+09	6,903919E+09	1,007542E+10
-407	1,585835E+09	1,585845E+09	3,451985E+09	3,451884E+09	3,171680E+09	6,903870E+09	1,007555E+10
-406	1,585752E+09	1,585767E+09	3,451961E+09	3,451954E+09	3,171519E+09	6,903915E+09	1,007543E+10
-405	1,585842E+09	1,585822E+09	3,451951E+09	3,451947E+09	3,171664E+09	6,903898E+09	1,007556E+10
-404	1,585823E+09	1,585836E+09	3,452007E+09	3,451897E+09	3,171659E+09	6,903905E+09	1,007556E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-403	1,585740E+09	1,585740E+09	3,451932E+09	3,452039E+09	3,171480E+09	6,903971E+09	1,007545E+10
-402	1,585818E+09	1,585809E+09	3,451982E+09	3,451997E+09	3,171627E+09	6,903979E+09	1,007561E+10
-401	1,585711E+09	1,585734E+09	3,452039E+09	3,451978E+09	3,171444E+09	6,904018E+09	1,007546E+10
-400	1,585684E+09	1,585667E+09	3,451986E+09	3,452062E+09	3,171351E+09	6,904048E+09	1,007540E+10
-399	1,585752E+09	1,585723E+09	3,452071E+09	3,451997E+09	3,171475E+09	6,904068E+09	1,007554E+10
-398	1,585617E+09	1,585625E+09	3,452066E+09	3,452069E+09	3,171242E+09	6,904135E+09	1,007538E+10
-397	1,585656E+09	1,585660E+09	3,452029E+09	3,452081E+09	3,171316E+09	6,904110E+09	1,007543E+10
-396	1,585675E+09	1,585706E+09	3,452102E+09	3,451991E+09	3,171380E+09	6,904093E+09	1,007547E+10
-395	1,585596E+09	1,585614E+09	3,452032E+09	3,452080E+09	3,171210E+09	6,904112E+09	1,007532E+10
-394	1,585725E+09	1,585703E+09	3,452037E+09	3,452023E+09	3,171428E+09	6,904061E+09	1,007549E+10
-393	1,585705E+09	1,585713E+09	3,452057E+09	3,451953E+09	3,171418E+09	6,904010E+09	1,007543E+10
-392	1,585704E+09	1,585702E+09	3,451910E+09	3,452013E+09	3,171406E+09	6,903923E+09	1,007533E+10
-391	1,585851E+09	1,585843E+09	3,451928E+09	3,451916E+09	3,171694E+09	6,903844E+09	1,007554E+10
-390	1,585779E+09	1,585818E+09	3,451918E+09	3,451895E+09	3,171598E+09	6,903813E+09	1,007541E+10
-389	1,585844E+09	1,585852E+09	3,451854E+09	3,451889E+09	3,171697E+09	6,903743E+09	1,007544E+10
-388	1,585929E+09	1,585938E+09	3,451935E+09	3,451791E+09	3,171867E+09	6,903726E+09	1,007559E+10
-387	1,585840E+09	1,585842E+09	3,451870E+09	3,451889E+09	3,171682E+09	6,903759E+09	1,007544E+10
-386	1,585926E+09	1,585906E+09	3,451861E+09	3,451896E+09	3,171832E+09	6,903757E+09	1,007559E+10
-385	1,585892E+09	1,585918E+09	3,451919E+09	3,451852E+09	3,171810E+09	6,903771E+09	1,007558E+10
-384	1,585808E+09	1,585819E+09	3,451826E+09	3,451946E+09	3,171626E+09	6,903772E+09	1,007540E+10
-383	1,585904E+09	1,585879E+09	3,451906E+09	3,451902E+09	3,171783E+09	6,903808E+09	1,007559E+10
-382	1,585797E+09	1,585794E+09	3,451972E+09	3,451901E+09	3,171592E+09	6,903873E+09	1,007546E+10
-381	1,585766E+09	1,585745E+09	3,451915E+09	3,451962E+09	3,171511E+09	6,903878E+09	1,007539E+10
-380	1,585822E+09	1,585820E+09	3,452003E+09	3,451918E+09	3,171642E+09	6,903920E+09	1,007556E+10
-379	1,585685E+09	1,585710E+09	3,451976E+09	3,451997E+09	3,171395E+09	6,903973E+09	1,007537E+10
-378	1,585732E+09	1,585741E+09	3,451971E+09	3,452006E+09	3,171473E+09	6,903977E+09	1,007545E+10
-377	1,585755E+09	1,585779E+09	3,452046E+09	3,451926E+09	3,171534E+09	6,903973E+09	1,007551E+10
-376	1,585685E+09	1,585691E+09	3,451927E+09	3,451988E+09	3,171376E+09	6,903915E+09	1,007529E+10
-375	1,585834E+09	1,585793E+09	3,451923E+09	3,451943E+09	3,171626E+09	6,903866E+09	1,007549E+10
-374	1,585808E+09	1,585814E+09	3,451931E+09	3,451879E+09	3,171622E+09	6,903810E+09	1,007543E+10
-373	1,585805E+09	1,585821E+09	3,451798E+09	3,451890E+09	3,171626E+09	6,903688E+09	1,007531E+10
-372	1,585948E+09	1,585960E+09	3,451852E+09	3,451790E+09	3,171908E+09	6,903642E+09	1,007555E+10
-371	1,585878E+09	1,585908E+09	3,451838E+09	3,451784E+09	3,171786E+09	6,903623E+09	1,007541E+10
-370	1,585945E+09	1,585938E+09	3,451798E+09	3,451804E+09	3,171883E+09	6,903602E+09	1,007548E+10
-369	1,586013E+09	1,586023E+09	3,451862E+09	3,451744E+09	3,172036E+09	6,903607E+09	1,007564E+10
-368	1,585914E+09	1,585934E+09	3,451757E+09	3,451825E+09	3,171848E+09	6,903582E+09	1,007543E+10
-367	1,586011E+09	1,585994E+09	3,451764E+09	3,451832E+09	3,172005E+09	6,903597E+09	1,007560E+10
-366	1,585973E+09	1,585988E+09	3,451842E+09	3,451783E+09	3,171961E+09	6,903625E+09	1,007559E+10
-365	1,585894E+09	1,585894E+09	3,451765E+09	3,451834E+09	3,171789E+09	6,903599E+09	1,007539E+10
-364	1,585985E+09	1,585953E+09	3,451852E+09	3,451802E+09	3,171938E+09	6,903653E+09	1,007559E+10
-363	1,585869E+09	1,585863E+09	3,451888E+09	3,451828E+09	3,171732E+09	6,903717E+09	1,007545E+10
-362	1,585834E+09	1,585829E+09	3,451845E+09	3,451903E+09	3,171663E+09	6,903748E+09	1,007541E+10
-361	1,585878E+09	1,585901E+09	3,451933E+09	3,451869E+09	3,171779E+09	6,903802E+09	1,007558E+10
-360	1,585752E+09	1,585785E+09	3,451885E+09	3,451910E+09	3,171537E+09	6,903795E+09	1,007533E+10
-359	1,585828E+09	1,585809E+09	3,451885E+09	3,451922E+09	3,171637E+09	6,903807E+09	1,007544E+10
-358	1,585858E+09	1,585847E+09	3,451951E+09	3,451852E+09	3,171705E+09	6,903803E+09	1,007551E+10
-357	1,585792E+09	1,585793E+09	3,451815E+09	3,451876E+09	3,171585E+09	6,903690E+09	1,007528E+10
-356	1,585931E+09	1,585915E+09	3,451819E+09	3,451835E+09	3,171846E+09	6,903654E+09	1,007550E+10
-355	1,585900E+09	1,585928E+09	3,451828E+09	3,451774E+09	3,171828E+09	6,903602E+09	1,007543E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-354	1,585901E+09	1,585927E+09	3,451746E+09	3,451784E+09	3,171828E+09	6,903531E+09	1,007536E+10
-353	1,586033E+09	1,586052E+09	3,451809E+09	3,451714E+09	3,172085E+09	6,903523E+09	1,007561E+10
-352	1,585966E+09	1,585990E+09	3,451755E+09	3,451705E+09	3,171956E+09	6,903460E+09	1,007542E+10
-351	1,586042E+09	1,586021E+09	3,451699E+09	3,451754E+09	3,172062E+09	6,903453E+09	1,007552E+10
-350	1,586103E+09	1,586107E+09	3,451750E+09	3,451702E+09	3,172210E+09	6,903452E+09	1,007566E+10
-349	1,586006E+09	1,586027E+09	3,451644E+09	3,451719E+09	3,172034E+09	6,903363E+09	1,007540E+10
-348	1,586101E+09	1,586079E+09	3,451684E+09	3,451715E+09	3,172180E+09	6,903399E+09	1,007558E+10
-347	1,586063E+09	1,586055E+09	3,451757E+09	3,451673E+09	3,172118E+09	6,903430E+09	1,007555E+10
-346	1,585979E+09	1,585964E+09	3,451714E+09	3,451741E+09	3,171943E+09	6,903455E+09	1,007540E+10
-345	1,586044E+09	1,586033E+09	3,451795E+09	3,451751E+09	3,172078E+09	6,903546E+09	1,007562E+10
-344	1,585922E+09	1,585948E+09	3,451800E+09	3,451765E+09	3,171870E+09	6,903565E+09	1,007544E+10
-343	1,585902E+09	1,585909E+09	3,451771E+09	3,451851E+09	3,171811E+09	6,903621E+09	1,007543E+10
-342	1,585953E+09	1,585967E+09	3,451866E+09	3,451813E+09	3,171920E+09	6,903679E+09	1,007560E+10
-341	1,585845E+09	1,585862E+09	3,451807E+09	3,451805E+09	3,171707E+09	6,903613E+09	1,007532E+10
-340	1,585929E+09	1,585893E+09	3,451802E+09	3,451823E+09	3,171821E+09	6,903624E+09	1,007545E+10
-339	1,585955E+09	1,585938E+09	3,451831E+09	3,451764E+09	3,171893E+09	6,903595E+09	1,007549E+10
-338	1,585887E+09	1,585904E+09	3,451723E+09	3,451779E+09	3,171791E+09	6,903502E+09	1,007529E+10
-337	1,586010E+09	1,586026E+09	3,451742E+09	3,451744E+09	3,172036E+09	6,903486E+09	1,007552E+10
-336	1,585985E+09	1,586026E+09	3,451744E+09	3,451660E+09	3,172011E+09	6,903403E+09	1,007541E+10
-335	1,586006E+09	1,586013E+09	3,451672E+09	3,451699E+09	3,172020E+09	6,903371E+09	1,007539E+10
-334	1,586134E+09	1,586128E+09	3,451724E+09	3,451654E+09	3,172262E+09	6,903378E+09	1,007564E+10
-333	1,586070E+09	1,586091E+09	3,451646E+09	3,451619E+09	3,172161E+09	6,903265E+09	1,007543E+10
-332	1,586139E+09	1,586125E+09	3,451593E+09	3,451666E+09	3,172264E+09	6,903259E+09	1,007552E+10
-331	1,586191E+09	1,586195E+09	3,451643E+09	3,451610E+09	3,172387E+09	6,903253E+09	1,007564E+10
-330	1,586097E+09	1,586112E+09	3,451589E+09	3,451614E+09	3,172209E+09	6,903203E+09	1,007541E+10
-329	1,586173E+09	1,586154E+09	3,451637E+09	3,451633E+09	3,172327E+09	6,903270E+09	1,007560E+10
-328	1,586130E+09	1,586126E+09	3,451681E+09	3,451593E+09	3,172256E+09	6,903274E+09	1,007553E+10
-327	1,586050E+09	1,586040E+09	3,451631E+09	3,451697E+09	3,172090E+09	6,903329E+09	1,007542E+10
-326	1,586104E+09	1,586109E+09	3,451712E+09	3,451715E+09	3,172212E+09	6,903427E+09	1,007564E+10
-325	1,585995E+09	1,586031E+09	3,451716E+09	3,451676E+09	3,172026E+09	6,903392E+09	1,007542E+10
-324	1,585985E+09	1,585982E+09	3,451705E+09	3,451749E+09	3,171967E+09	6,903454E+09	1,007542E+10
-323	1,586046E+09	1,586029E+09	3,451778E+09	3,451719E+09	3,172075E+09	6,903497E+09	1,007557E+10
-322	1,585946E+09	1,585941E+09	3,451733E+09	3,451708E+09	3,171887E+09	6,903441E+09	1,007533E+10
-321	1,586008E+09	1,585994E+09	3,451714E+09	3,451750E+09	3,172002E+09	6,903463E+09	1,007547E+10
-320	1,586034E+09	1,586046E+09	3,451722E+09	3,451669E+09	3,172079E+09	6,903391E+09	1,007547E+10
-319	1,585978E+09	1,586007E+09	3,451641E+09	3,451696E+09	3,171985E+09	6,903337E+09	1,007532E+10
-318	1,586100E+09	1,586115E+09	3,451679E+09	3,451667E+09	3,172215E+09	6,903346E+09	1,007556E+10
-317	1,586092E+09	1,586118E+09	3,451664E+09	3,451551E+09	3,172210E+09	6,903214E+09	1,007542E+10
-316	1,586114E+09	1,586105E+09	3,451585E+09	3,451610E+09	3,172218E+09	6,903196E+09	1,007541E+10
-315	1,586236E+09	1,586222E+09	3,451595E+09	3,451583E+09	3,172458E+09	6,903178E+09	1,007564E+10
-314	1,586171E+09	1,586194E+09	3,451542E+09	3,451530E+09	3,172365E+09	6,903072E+09	1,007544E+10
-313	1,586220E+09	1,586225E+09	3,451505E+09	3,451578E+09	3,172445E+09	6,903083E+09	1,007553E+10
-312	1,586274E+09	1,586276E+09	3,451550E+09	3,451494E+09	3,172550E+09	6,903044E+09	1,007559E+10
-311	1,586190E+09	1,586187E+09	3,451516E+09	3,451527E+09	3,172376E+09	6,903043E+09	1,007542E+10
-310	1,586248E+09	1,586226E+09	3,451569E+09	3,451573E+09	3,172474E+09	6,903142E+09	1,007562E+10
-309	1,586204E+09	1,586217E+09	3,451599E+09	3,451514E+09	3,172421E+09	6,903113E+09	1,007553E+10
-308	1,586119E+09	1,586129E+09	3,451567E+09	3,451626E+09	3,172249E+09	6,903194E+09	1,007544E+10
-307	1,586172E+09	1,586178E+09	3,451639E+09	3,451648E+09	3,172350E+09	6,903287E+09	1,007564E+10
-306	1,586078E+09	1,586096E+09	3,451677E+09	3,451592E+09	3,172174E+09	6,903269E+09	1,007544E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-305	1,586060E+09	1,586048E+09	3,451648E+09	3,451681E+09	3,172109E+09	6,903328E+09	1,007544E+10
-304	1,586125E+09	1,586099E+09	3,451676E+09	3,451639E+09	3,172223E+09	6,903315E+09	1,007554E+10
-303	1,586037E+09	1,586035E+09	3,451621E+09	3,451646E+09	3,172072E+09	6,903267E+09	1,007534E+10
-302	1,586089E+09	1,586091E+09	3,451609E+09	3,451676E+09	3,172180E+09	6,903285E+09	1,007546E+10
-301	1,586128E+09	1,586153E+09	3,451625E+09	3,451546E+09	3,172282E+09	6,903171E+09	1,007545E+10
-300	1,586083E+09	1,586103E+09	3,451569E+09	3,451573E+09	3,172186E+09	6,903143E+09	1,007533E+10
-299	1,586203E+09	1,586196E+09	3,451586E+09	3,451570E+09	3,172399E+09	6,903156E+09	1,007556E+10
-298	1,586201E+09	1,586213E+09	3,451586E+09	3,451462E+09	3,172414E+09	6,903048E+09	1,007546E+10
-297	1,586202E+09	1,586214E+09	3,451486E+09	3,451545E+09	3,172415E+09	6,903031E+09	1,007545E+10
-296	1,586320E+09	1,586324E+09	3,451478E+09	3,451493E+09	3,172645E+09	6,902971E+09	1,007562E+10
-295	1,586268E+09	1,586292E+09	3,451448E+09	3,451445E+09	3,172560E+09	6,902893E+09	1,007545E+10
-294	1,586308E+09	1,586305E+09	3,451436E+09	3,451492E+09	3,172613E+09	6,902929E+09	1,007554E+10
-293	1,586368E+09	1,586360E+09	3,451476E+09	3,451386E+09	3,172728E+09	6,902862E+09	1,007559E+10
-292	1,586276E+09	1,586268E+09	3,451451E+09	3,451445E+09	3,172544E+09	6,902896E+09	1,007544E+10
-291	1,586317E+09	1,586305E+09	3,451478E+09	3,451517E+09	3,172622E+09	6,902995E+09	1,007562E+10
-290	1,586277E+09	1,586299E+09	3,451538E+09	3,451444E+09	3,172576E+09	6,902982E+09	1,007556E+10
-289	1,586180E+09	1,586204E+09	3,451511E+09	3,451561E+09	3,172384E+09	6,903072E+09	1,007546E+10
-288	1,586245E+09	1,586234E+09	3,451558E+09	3,451558E+09	3,172478E+09	6,903116E+09	1,007559E+10
-287	1,586171E+09	1,586158E+09	3,451586E+09	3,451524E+09	3,172328E+09	6,903111E+09	1,007544E+10
-286	1,586144E+09	1,586124E+09	3,451550E+09	3,451621E+09	3,172268E+09	6,903171E+09	1,007544E+10
-285	1,586214E+09	1,586202E+09	3,451558E+09	3,451538E+09	3,172416E+09	6,903096E+09	1,007551E+10
-284	1,586125E+09	1,586144E+09	3,451536E+09	3,451540E+09	3,172269E+09	6,903075E+09	1,007534E+10
-283	1,586174E+09	1,586188E+09	3,451529E+09	3,451575E+09	3,172362E+09	6,903104E+09	1,007547E+10
-282	1,586227E+09	1,586244E+09	3,451581E+09	3,451438E+09	3,172472E+09	6,903019E+09	1,007549E+10
-281	1,586172E+09	1,586193E+09	3,451510E+09	3,451498E+09	3,172365E+09	6,903008E+09	1,007537E+10
-280	1,586294E+09	1,586281E+09	3,451476E+09	3,451493E+09	3,172575E+09	6,902969E+09	1,007554E+10
-279	1,586303E+09	1,586316E+09	3,451459E+09	3,451407E+09	3,172620E+09	6,902865E+09	1,007549E+10
-278	1,586295E+09	1,586315E+09	3,451370E+09	3,451472E+09	3,172610E+09	6,902843E+09	1,007545E+10
-277	1,586424E+09	1,586425E+09	3,451371E+09	3,451364E+09	3,172849E+09	6,902735E+09	1,007558E+10
-276	1,586376E+09	1,586382E+09	3,451375E+09	3,451317E+09	3,172759E+09	6,902692E+09	1,007545E+10
-275	1,586403E+09	1,586383E+09	3,451355E+09	3,451394E+09	3,172786E+09	6,902749E+09	1,007553E+10
-274	1,586457E+09	1,586447E+09	3,451421E+09	3,451305E+09	3,172904E+09	6,902726E+09	1,007563E+10
-273	1,586337E+09	1,586363E+09	3,451391E+09	3,451397E+09	3,172700E+09	6,902788E+09	1,007549E+10
-272	1,586372E+09	1,586380E+09	3,451401E+09	3,451456E+09	3,172752E+09	6,902858E+09	1,007561E+10
-271	1,586352E+09	1,586368E+09	3,451470E+09	3,451398E+09	3,172720E+09	6,902868E+09	1,007559E+10
-270	1,586255E+09	1,586258E+09	3,451442E+09	3,451503E+09	3,172513E+09	6,902945E+09	1,007546E+10
-269	1,586333E+09	1,586299E+09	3,451462E+09	3,451466E+09	3,172632E+09	6,902928E+09	1,007556E+10
-268	1,586263E+09	1,586241E+09	3,451488E+09	3,451435E+09	3,172503E+09	6,902922E+09	1,007543E+10
-267	1,586223E+09	1,586217E+09	3,451434E+09	3,451536E+09	3,172439E+09	6,902970E+09	1,007541E+10
-266	1,586300E+09	1,586304E+09	3,451487E+09	3,451431E+09	3,172604E+09	6,902918E+09	1,007552E+10
-265	1,586201E+09	1,586242E+09	3,451481E+09	3,451440E+09	3,172442E+09	6,902921E+09	1,007536E+10
-264	1,586256E+09	1,586264E+09	3,451455E+09	3,451469E+09	3,172520E+09	6,902924E+09	1,007544E+10
-263	1,586329E+09	1,586329E+09	3,451491E+09	3,451372E+09	3,172658E+09	6,902863E+09	1,007552E+10
-262	1,586267E+09	1,586285E+09	3,451407E+09	3,451442E+09	3,172552E+09	6,902849E+09	1,007540E+10
-261	1,586397E+09	1,586391E+09	3,451348E+09	3,451400E+09	3,172789E+09	6,902747E+09	1,007554E+10
-260	1,586412E+09	1,586427E+09	3,451357E+09	3,451299E+09	3,172839E+09	6,902656E+09	1,007550E+10
-259	1,586397E+09	1,586413E+09	3,451277E+09	3,451363E+09	3,172810E+09	6,902640E+09	1,007545E+10
-258	1,586532E+09	1,586515E+09	3,451317E+09	3,451246E+09	3,173047E+09	6,902563E+09	1,007561E+10
-257	1,586460E+09	1,586474E+09	3,451322E+09	3,451237E+09	3,172934E+09	6,902559E+09	1,007549E+10



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-256	1,586474E+09	1,586465E+09	3,451268E+09	3,451326E+09	3,172939E+09	6,902593E+09	1,007553E+10
-255	1,586531E+09	1,586537E+09	3,451322E+09	3,451270E+09	3,173068E+09	6,902592E+09	1,007566E+10
-254	1,586405E+09	1,586440E+09	3,451310E+09	3,451352E+09	3,172844E+09	6,902662E+09	1,007551E+10
-253	1,586454E+09	1,586447E+09	3,451310E+09	3,451359E+09	3,172901E+09	6,902668E+09	1,007557E+10
-252	1,586444E+09	1,586429E+09	3,451393E+09	3,451296E+09	3,172874E+09	6,902689E+09	1,007556E+10
-251	1,586341E+09	1,586325E+09	3,451345E+09	3,451416E+09	3,172666E+09	6,902761E+09	1,007543E+10
-250	1,586420E+09	1,586384E+09	3,451383E+09	3,451372E+09	3,172804E+09	6,902755E+09	1,007556E+10
-249	1,586327E+09	1,586346E+09	3,451419E+09	3,451355E+09	3,172674E+09	6,902773E+09	1,007545E+10
-248	1,586285E+09	1,586306E+09	3,451362E+09	3,451441E+09	3,172591E+09	6,902802E+09	1,007539E+10
-247	1,586379E+09	1,586391E+09	3,451427E+09	3,451360E+09	3,172770E+09	6,902787E+09	1,007556E+10
-246	1,586284E+09	1,586316E+09	3,451425E+09	3,451378E+09	3,172600E+09	6,902803E+09	1,007540E+10
-245	1,586354E+09	1,586343E+09	3,451357E+09	3,451386E+09	3,172696E+09	6,902743E+09	1,007544E+10
-244	1,586435E+09	1,586425E+09	3,451379E+09	3,451295E+09	3,172860E+09	6,902674E+09	1,007553E+10
-243	1,586369E+09	1,586392E+09	3,451270E+09	3,451359E+09	3,172761E+09	6,902629E+09	1,007539E+10
-242	1,586509E+09	1,586499E+09	3,451252E+09	3,451281E+09	3,173008E+09	6,902533E+09	1,007554E+10
-241	1,586511E+09	1,586535E+09	3,451282E+09	3,451180E+09	3,173046E+09	6,902462E+09	1,007551E+10
-240	1,586491E+09	1,586497E+09	3,451193E+09	3,451243E+09	3,172988E+09	6,902436E+09	1,007542E+10
-239	1,586628E+09	1,586608E+09	3,451234E+09	3,451178E+09	3,173236E+09	6,902412E+09	1,007565E+10
-238	1,586538E+09	1,586565E+09	3,451240E+09	3,451188E+09	3,173104E+09	6,902428E+09	1,007553E+10
-237	1,586548E+09	1,586558E+09	3,451172E+09	3,451253E+09	3,173107E+09	6,902425E+09	1,007553E+10
-236	1,586612E+09	1,586621E+09	3,451249E+09	3,451192E+09	3,173234E+09	6,902442E+09	1,007568E+10
-235	1,586484E+09	1,586505E+09	3,451233E+09	3,451272E+09	3,172989E+09	6,902505E+09	1,007549E+10
-234	1,586545E+09	1,586506E+09	3,451255E+09	3,451264E+09	3,173051E+09	6,902519E+09	1,007557E+10
-233	1,586519E+09	1,586502E+09	3,451326E+09	3,451219E+09	3,173021E+09	6,902545E+09	1,007557E+10
-232	1,586406E+09	1,586401E+09	3,451246E+09	3,451335E+09	3,172807E+09	6,902581E+09	1,007539E+10
-231	1,586490E+09	1,586478E+09	3,451287E+09	3,451312E+09	3,172968E+09	6,902600E+09	1,007557E+10
-230	1,586395E+09	1,586432E+09	3,451352E+09	3,451284E+09	3,172827E+09	6,902636E+09	1,007546E+10
-229	1,586368E+09	1,586384E+09	3,451288E+09	3,451335E+09	3,172752E+09	6,902623E+09	1,007537E+10
-228	1,586477E+09	1,586467E+09	3,451354E+09	3,451266E+09	3,172944E+09	6,902621E+09	1,007556E+10
-227	1,586383E+09	1,586399E+09	3,451321E+09	3,451304E+09	3,172782E+09	6,902625E+09	1,007541E+10
-226	1,586462E+09	1,586442E+09	3,451257E+09	3,451298E+09	3,172905E+09	6,902555E+09	1,007546E+10
-225	1,586527E+09	1,586544E+09	3,451282E+09	3,451208E+09	3,173071E+09	6,902490E+09	1,007556E+10
-224	1,586462E+09	1,586498E+09	3,451171E+09	3,451245E+09	3,172960E+09	6,902416E+09	1,007538E+10
-223	1,586613E+09	1,586601E+09	3,451166E+09	3,451184E+09	3,173213E+09	6,902350E+09	1,007556E+10
-222	1,586606E+09	1,586625E+09	3,451216E+09	3,451096E+09	3,173232E+09	6,902312E+09	1,007554E+10
-221	1,586586E+09	1,586586E+09	3,451099E+09	3,451150E+09	3,173172E+09	6,902249E+09	1,007542E+10
-220	1,586716E+09	1,586704E+09	3,451138E+09	3,451106E+09	3,173419E+09	6,902244E+09	1,007566E+10
-219	1,586619E+09	1,586658E+09	3,451138E+09	3,451125E+09	3,173277E+09	6,902264E+09	1,007554E+10
-218	1,586639E+09	1,586636E+09	3,451104E+09	3,451157E+09	3,173274E+09	6,902261E+09	1,007554E+10
-217	1,586691E+09	1,586695E+09	3,451191E+09	3,451098E+09	3,173386E+09	6,902290E+09	1,007568E+10
-216	1,586564E+09	1,586563E+09	3,451149E+09	3,451173E+09	3,173127E+09	6,902322E+09	1,007545E+10
-215	1,586626E+09	1,586580E+09	3,451163E+09	3,451203E+09	3,173207E+09	6,902365E+09	1,007557E+10
-214	1,586585E+09	1,586587E+09	3,451245E+09	3,451167E+09	3,173172E+09	6,902411E+09	1,007558E+10
-213	1,586473E+09	1,586491E+09	3,451161E+09	3,451250E+09	3,172964E+09	6,902411E+09	1,007538E+10
-212	1,586564E+09	1,586565E+09	3,451231E+09	3,451225E+09	3,173129E+09	6,902456E+09	1,007559E+10
-211	1,586476E+09	1,586507E+09	3,451291E+09	3,451205E+09	3,172983E+09	6,902497E+09	1,007548E+10
-210	1,586464E+09	1,586454E+09	3,451235E+09	3,451247E+09	3,172918E+09	6,902482E+09	1,007540E+10
-209	1,586564E+09	1,586555E+09	3,451275E+09	3,451196E+09	3,173119E+09	6,902471E+09	1,007559E+10
-208	1,586471E+09	1,586492E+09	3,451194E+09	3,451222E+09	3,172962E+09	6,902416E+09	1,007538E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-207	1,586561E+09	1,586553E+09	3,451132E+09	3,451224E+09	3,173114E+09	6,902356E+09	1,007547E+10
-206	1,586625E+09	1,586645E+09	3,451186E+09	3,451107E+09	3,173269E+09	6,902293E+09	1,007556E+10
-205	1,586568E+09	1,586591E+09	3,451074E+09	3,451108E+09	3,173158E+09	6,902182E+09	1,007534E+10
-204	1,586721E+09	1,586696E+09	3,451083E+09	3,451068E+09	3,173417E+09	6,902150E+09	1,007557E+10
-203	1,586705E+09	1,586721E+09	3,451119E+09	3,451014E+09	3,173426E+09	6,902133E+09	1,007556E+10
-202	1,586683E+09	1,586687E+09	3,451022E+09	3,451067E+09	3,173370E+09	6,902089E+09	1,007546E+10
-201	1,586791E+09	1,586808E+09	3,451069E+09	3,451033E+09	3,173599E+09	6,902102E+09	1,007570E+10
-200	1,586697E+09	1,586736E+09	3,451060E+09	3,451040E+09	3,173433E+09	6,902100E+09	1,007553E+10
-199	1,586726E+09	1,586707E+09	3,451029E+09	3,451092E+09	3,173434E+09	6,902122E+09	1,007556E+10
-198	1,586771E+09	1,586756E+09	3,451123E+09	3,451038E+09	3,173526E+09	6,902161E+09	1,007569E+10
-197	1,586643E+09	1,586634E+09	3,451050E+09	3,451090E+09	3,173277E+09	6,902140E+09	1,007542E+10
-196	1,586701E+09	1,586670E+09	3,451064E+09	3,451127E+09	3,173371E+09	6,902191E+09	1,007556E+10
-195	1,586655E+09	1,586678E+09	3,451155E+09	3,451093E+09	3,173333E+09	6,902249E+09	1,007558E+10
-194	1,586557E+09	1,586571E+09	3,451112E+09	3,451147E+09	3,173128E+09	6,902259E+09	1,007539E+10
-193	1,586637E+09	1,586643E+09	3,451187E+09	3,451132E+09	3,173280E+09	6,902320E+09	1,007560E+10
-192	1,586560E+09	1,586574E+09	3,451212E+09	3,451120E+09	3,173134E+09	6,902332E+09	1,007547E+10
-191	1,586556E+09	1,586538E+09	3,451129E+09	3,451190E+09	3,173095E+09	6,902320E+09	1,007541E+10
-190	1,586648E+09	1,586651E+09	3,451173E+09	3,451136E+09	3,173299E+09	6,902309E+09	1,007561E+10
-189	1,586565E+09	1,586596E+09	3,451079E+09	3,451114E+09	3,173161E+09	6,902193E+09	1,007535E+10
-188	1,586663E+09	1,586657E+09	3,451040E+09	3,451107E+09	3,173320E+09	6,902146E+09	1,007547E+10
-187	1,586730E+09	1,586741E+09	3,451103E+09	3,451000E+09	3,173470E+09	6,902103E+09	1,007557E+10
-186	1,586681E+09	1,586681E+09	3,451009E+09	3,450996E+09	3,173361E+09	6,902005E+09	1,007537E+10
-185	1,586807E+09	1,586801E+09	3,451008E+09	3,450984E+09	3,173608E+09	6,901992E+09	1,007560E+10
-184	1,586788E+09	1,586821E+09	3,451012E+09	3,450940E+09	3,173609E+09	6,901951E+09	1,007556E+10
-183	1,586771E+09	1,586786E+09	3,450924E+09	3,451008E+09	3,173557E+09	6,901932E+09	1,007549E+10
-182	1,586875E+09	1,586886E+09	3,450996E+09	3,450961E+09	3,173762E+09	6,901957E+09	1,007572E+10
-181	1,586791E+09	1,586803E+09	3,450967E+09	3,450936E+09	3,173594E+09	6,901903E+09	1,007550E+10
-180	1,586821E+09	1,586781E+09	3,450935E+09	3,451004E+09	3,173601E+09	6,901939E+09	1,007554E+10
-179	1,586854E+09	1,586837E+09	3,451022E+09	3,450967E+09	3,173691E+09	6,901990E+09	1,007568E+10
-178	1,586723E+09	1,586727E+09	3,450980E+09	3,451003E+09	3,173450E+09	6,901982E+09	1,007543E+10
-177	1,586759E+09	1,586769E+09	3,451019E+09	3,451042E+09	3,173529E+09	6,902061E+09	1,007559E+10
-176	1,586721E+09	1,586750E+09	3,451101E+09	3,451006E+09	3,173471E+09	6,902107E+09	1,007558E+10
-175	1,586636E+09	1,586638E+09	3,451059E+09	3,451088E+09	3,173274E+09	6,902148E+09	1,007542E+10
-174	1,586713E+09	1,586702E+09	3,451122E+09	3,451081E+09	3,173415E+09	6,902203E+09	1,007562E+10
-173	1,586643E+09	1,586647E+09	3,451094E+09	3,451046E+09	3,173290E+09	6,902140E+09	1,007543E+10
-172	1,586649E+09	1,586638E+09	3,450999E+09	3,451112E+09	3,173287E+09	6,902111E+09	1,007540E+10
-171	1,586747E+09	1,586750E+09	3,451053E+09	3,451039E+09	3,173497E+09	6,902092E+09	1,007559E+10
-170	1,586679E+09	1,586695E+09	3,450999E+09	3,450974E+09	3,173374E+09	6,901973E+09	1,007535E+10
-169	1,586764E+09	1,586761E+09	3,450973E+09	3,450974E+09	3,173525E+09	6,901946E+09	1,007547E+10
-168	1,586830E+09	1,586835E+09	3,451010E+09	3,450893E+09	3,173665E+09	6,901902E+09	1,007557E+10
-167	1,586778E+09	1,586790E+09	3,450915E+09	3,450934E+09	3,173568E+09	6,901849E+09	1,007542E+10
-166	1,586887E+09	1,586906E+09	3,450926E+09	3,450933E+09	3,173793E+09	6,901859E+09	1,007565E+10
-165	1,586876E+09	1,586917E+09	3,450916E+09	3,450857E+09	3,173793E+09	6,901773E+09	1,007557E+10
-164	1,586869E+09	1,586875E+09	3,450837E+09	3,450923E+09	3,173743E+09	6,901760E+09	1,007550E+10
-163	1,586973E+09	1,586959E+09	3,450912E+09	3,450881E+09	3,173932E+09	6,901793E+09	1,007572E+10
-162	1,586894E+09	1,586877E+09	3,450891E+09	3,450837E+09	3,173771E+09	6,901728E+09	1,007550E+10
-161	1,586894E+09	1,586873E+09	3,450856E+09	3,450917E+09	3,173767E+09	6,901773E+09	1,007554E+10
-160	1,586921E+09	1,586926E+09	3,450926E+09	3,450890E+09	3,173848E+09	6,901816E+09	1,007566E+10
-159	1,586794E+09	1,586811E+09	3,450911E+09	3,450934E+09	3,173605E+09	6,901845E+09	1,007545E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-158	1,586820E+09	1,586833E+09	3,450978E+09	3,450971E+09	3,173653E+09	6,901950E+09	1,007560E+10
-157	1,586797E+09	1,586806E+09	3,451028E+09	3,450919E+09	3,173603E+09	6,901947E+09	1,007555E+10
-156	1,586722E+09	1,586706E+09	3,450963E+09	3,451020E+09	3,173428E+09	6,901983E+09	1,007541E+10
-155	1,586800E+09	1,586782E+09	3,451009E+09	3,451023E+09	3,173582E+09	6,902033E+09	1,007561E+10
-154	1,586743E+09	1,586745E+09	3,450992E+09	3,450949E+09	3,173488E+09	6,901940E+09	1,007543E+10
-153	1,586735E+09	1,586751E+09	3,450920E+09	3,450997E+09	3,173486E+09	6,901917E+09	1,007540E+10
-152	1,586842E+09	1,586847E+09	3,450967E+09	3,450922E+09	3,173689E+09	6,901889E+09	1,007558E+10
-151	1,586782E+09	1,586792E+09	3,450932E+09	3,450881E+09	3,173574E+09	6,901813E+09	1,007539E+10
-150	1,586850E+09	1,586853E+09	3,450908E+09	3,450903E+09	3,173703E+09	6,901811E+09	1,007551E+10
-149	1,586918E+09	1,586934E+09	3,450899E+09	3,450817E+09	3,173852E+09	6,901716E+09	1,007557E+10
-148	1,586873E+09	1,586900E+09	3,450798E+09	3,450868E+09	3,173773E+09	6,901667E+09	1,007544E+10
-147	1,586986E+09	1,586999E+09	3,450823E+09	3,450855E+09	3,173985E+09	6,901678E+09	1,007566E+10
-146	1,586990E+09	1,587001E+09	3,450835E+09	3,450741E+09	3,173991E+09	6,901576E+09	1,007557E+10
-145	1,586969E+09	1,586963E+09	3,450762E+09	3,450807E+09	3,173932E+09	6,901569E+09	1,007550E+10
-144	1,587066E+09	1,587036E+09	3,450807E+09	3,450783E+09	3,174101E+09	6,901590E+09	1,007569E+10
-143	1,586977E+09	1,586971E+09	3,450804E+09	3,450769E+09	3,173948E+09	6,901573E+09	1,007552E+10
-142	1,586952E+09	1,586963E+09	3,450796E+09	3,450854E+09	3,173915E+09	6,901650E+09	1,007557E+10
-141	1,586981E+09	1,587002E+09	3,450859E+09	3,450808E+09	3,173983E+09	6,901667E+09	1,007565E+10
-140	1,586868E+09	1,586882E+09	3,450853E+09	3,450868E+09	3,173750E+09	6,901721E+09	1,007547E+10
-139	1,586899E+09	1,586886E+09	3,450912E+09	3,450916E+09	3,173785E+09	6,901828E+09	1,007561E+10
-138	1,586889E+09	1,586869E+09	3,450946E+09	3,450843E+09	3,173759E+09	6,901789E+09	1,007555E+10
-137	1,586801E+09	1,586801E+09	3,450861E+09	3,450938E+09	3,173602E+09	6,901799E+09	1,007540E+10
-136	1,586884E+09	1,586877E+09	3,450884E+09	3,450934E+09	3,173761E+09	6,901817E+09	1,007558E+10
-135	1,586838E+09	1,586848E+09	3,450903E+09	3,450849E+09	3,173685E+09	6,901752E+09	1,007544E+10
-134	1,586822E+09	1,586842E+09	3,450862E+09	3,450889E+09	3,173663E+09	6,901752E+09	1,007542E+10
-133	1,586935E+09	1,586933E+09	3,450882E+09	3,450809E+09	3,173869E+09	6,901691E+09	1,007556E+10
-132	1,586882E+09	1,586893E+09	3,450834E+09	3,450802E+09	3,173775E+09	6,901636E+09	1,007541E+10
-131	1,586943E+09	1,586955E+09	3,450809E+09	3,450844E+09	3,173898E+09	6,901652E+09	1,007555E+10
-130	1,587023E+09	1,587041E+09	3,450808E+09	3,450729E+09	3,174064E+09	6,901536E+09	1,007560E+10
-129	1,586969E+09	1,587008E+09	3,450720E+09	3,450765E+09	3,173977E+09	6,901485E+09	1,007546E+10
-128	1,587091E+09	1,587082E+09	3,450730E+09	3,450755E+09	3,174172E+09	6,901485E+09	1,007566E+10
-127	1,587098E+09	1,587082E+09	3,450752E+09	3,450652E+09	3,174180E+09	6,901404E+09	1,007558E+10
-126	1,587049E+09	1,587043E+09	3,450684E+09	3,450733E+09	3,174092E+09	6,901417E+09	1,007551E+10
-125	1,587137E+09	1,587124E+09	3,450697E+09	3,450704E+09	3,174261E+09	6,901401E+09	1,007566E+10
-124	1,587050E+09	1,587067E+09	3,450707E+09	3,450701E+09	3,174117E+09	6,901408E+09	1,007552E+10
-123	1,587023E+09	1,587037E+09	3,450732E+09	3,450785E+09	3,174060E+09	6,901517E+09	1,007558E+10
-122	1,587068E+09	1,587066E+09	3,450804E+09	3,450711E+09	3,174134E+09	6,901515E+09	1,007565E+10
-121	1,586947E+09	1,586953E+09	3,450791E+09	3,450779E+09	3,173900E+09	6,901570E+09	1,007547E+10
-120	1,586980E+09	1,586953E+09	3,450808E+09	3,450848E+09	3,173932E+09	6,901656E+09	1,007559E+10
-119	1,586972E+09	1,586958E+09	3,450852E+09	3,450780E+09	3,173930E+09	6,901632E+09	1,007556E+10
-118	1,586869E+09	1,586897E+09	3,450789E+09	3,450861E+09	3,173766E+09	6,901650E+09	1,007542E+10
-117	1,586962E+09	1,586965E+09	3,450799E+09	3,450828E+09	3,173927E+09	6,901626E+09	1,007555E+10
-116	1,586931E+09	1,586942E+09	3,450828E+09	3,450755E+09	3,173873E+09	6,901583E+09	1,007546E+10
-115	1,586918E+09	1,586921E+09	3,450794E+09	3,450810E+09	3,173839E+09	6,901604E+09	1,007544E+10
-114	1,587037E+09	1,587024E+09	3,450795E+09	3,450720E+09	3,174061E+09	6,901515E+09	1,007558E+10
-113	1,586975E+09	1,587008E+09	3,450735E+09	3,450718E+09	3,173984E+09	6,901454E+09	1,007544E+10
-112	1,587042E+09	1,587054E+09	3,450684E+09	3,450758E+09	3,174096E+09	6,901442E+09	1,007554E+10
-111	1,587132E+09	1,587138E+09	3,450718E+09	3,450631E+09	3,174270E+09	6,901349E+09	1,007562E+10
-110	1,587070E+09	1,587096E+09	3,450644E+09	3,450660E+09	3,174165E+09	6,901304E+09	1,007547E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-109	1,587189E+09	1,587161E+09	3,450618E+09	3,450646E+09	3,174350E+09	6,901265E+09	1,007561E+10
-108	1,587194E+09	1,587182E+09	3,450638E+09	3,450574E+09	3,174377E+09	6,901211E+09	1,007559E+10
-107	1,587130E+09	1,587139E+09	3,450593E+09	3,450666E+09	3,174269E+09	6,901259E+09	1,007553E+10
-106	1,587217E+09	1,587220E+09	3,450629E+09	3,450612E+09	3,174436E+09	6,901241E+09	1,007568E+10
-105	1,587122E+09	1,587160E+09	3,450666E+09	3,450607E+09	3,174281E+09	6,901273E+09	1,007555E+10
-104	1,587099E+09	1,587098E+09	3,450673E+09	3,450710E+09	3,174197E+09	6,901383E+09	1,007558E+10
-103	1,587150E+09	1,587125E+09	3,450750E+09	3,450653E+09	3,174275E+09	6,901404E+09	1,007568E+10
-102	1,587012E+09	1,587020E+09	3,450720E+09	3,450728E+09	3,174033E+09	6,901447E+09	1,007548E+10
-101	1,587047E+09	1,587030E+09	3,450688E+09	3,450779E+09	3,174076E+09	6,901467E+09	1,007554E+10
-100	1,587053E+09	1,587053E+09	3,450740E+09	3,450704E+09	3,174106E+09	6,901444E+09	1,007555E+10
-99	1,586956E+09	1,586977E+09	3,450716E+09	3,450767E+09	3,173933E+09	6,901483E+09	1,007542E+10
-98	1,587063E+09	1,587048E+09	3,450732E+09	3,450703E+09	3,174111E+09	6,901435E+09	1,007555E+10
-97	1,587027E+09	1,587037E+09	3,450757E+09	3,450643E+09	3,174064E+09	6,901400E+09	1,007546E+10
-96	1,587012E+09	1,587014E+09	3,450689E+09	3,450733E+09	3,174026E+09	6,901422E+09	1,007545E+10
-95	1,587132E+09	1,587131E+09	3,450701E+09	3,450649E+09	3,174263E+09	6,901350E+09	1,007561E+10
-94	1,587059E+09	1,587114E+09	3,450657E+09	3,450641E+09	3,174172E+09	6,901298E+09	1,007547E+10
-93	1,587137E+09	1,587145E+09	3,450582E+09	3,450659E+09	3,174282E+09	6,901241E+09	1,007552E+10
-92	1,587241E+09	1,587232E+09	3,450614E+09	3,450541E+09	3,174473E+09	6,901155E+09	1,007563E+10
-91	1,587176E+09	1,587178E+09	3,450555E+09	3,450574E+09	3,174354E+09	6,901130E+09	1,007548E+10
-90	1,587290E+09	1,587258E+09	3,450513E+09	3,450544E+09	3,174547E+09	6,901057E+09	1,007560E+10
-89	1,587277E+09	1,587298E+09	3,450546E+09	3,450476E+09	3,174575E+09	6,901022E+09	1,007560E+10
-88	1,587209E+09	1,587230E+09	3,450506E+09	3,450582E+09	3,174440E+09	6,901088E+09	1,007553E+10
-87	1,587297E+09	1,587296E+09	3,450585E+09	3,450527E+09	3,174593E+09	6,901112E+09	1,007571E+10
-86	1,587193E+09	1,587223E+09	3,450631E+09	3,450535E+09	3,174415E+09	6,901165E+09	1,007558E+10
-85	1,587172E+09	1,587150E+09	3,450584E+09	3,450641E+09	3,174322E+09	6,901225E+09	1,007555E+10
-84	1,587227E+09	1,587202E+09	3,450641E+09	3,450607E+09	3,174429E+09	6,901248E+09	1,007568E+10
-83	1,587089E+09	1,587101E+09	3,450627E+09	3,450669E+09	3,174189E+09	6,901296E+09	1,007549E+10
-82	1,587130E+09	1,587118E+09	3,450601E+09	3,450676E+09	3,174248E+09	6,901277E+09	1,007553E+10
-81	1,587140E+09	1,587151E+09	3,450680E+09	3,450589E+09	3,174291E+09	6,901269E+09	1,007556E+10
-80	1,587049E+09	1,587053E+09	3,450641E+09	3,450669E+09	3,174102E+09	6,901309E+09	1,007541E+10
-79	1,587154E+09	1,587129E+09	3,450671E+09	3,450619E+09	3,174283E+09	6,901290E+09	1,007557E+10
-78	1,587104E+09	1,587134E+09	3,450681E+09	3,450578E+09	3,174238E+09	6,901259E+09	1,007550E+10
-77	1,587091E+09	1,587110E+09	3,450563E+09	3,450658E+09	3,174201E+09	6,901221E+09	1,007542E+10
-76	1,587230E+09	1,587238E+09	3,450581E+09	3,450573E+09	3,174468E+09	6,901154E+09	1,007562E+10
-75	1,587169E+09	1,587202E+09	3,450565E+09	3,450542E+09	3,174371E+09	6,901107E+09	1,007548E+10
-74	1,587258E+09	1,587236E+09	3,450480E+09	3,450529E+09	3,174494E+09	6,901009E+09	1,007550E+10
-73	1,587352E+09	1,587340E+09	3,450518E+09	3,450418E+09	3,174692E+09	6,900936E+09	1,007563E+10
-72	1,587274E+09	1,587281E+09	3,450447E+09	3,450482E+09	3,174555E+09	6,900928E+09	1,007548E+10
-71	1,587374E+09	1,587365E+09	3,450448E+09	3,450458E+09	3,174739E+09	6,900906E+09	1,007565E+10
-70	1,587344E+09	1,587395E+09	3,450508E+09	3,450402E+09	3,174740E+09	6,900910E+09	1,007565E+10
-69	1,587278E+09	1,587300E+09	3,450445E+09	3,450508E+09	3,174579E+09	6,900953E+09	1,007553E+10
-68	1,587379E+09	1,587362E+09	3,450512E+09	3,450479E+09	3,174740E+09	6,900991E+09	1,007573E+10
-67	1,587274E+09	1,587275E+09	3,450557E+09	3,450493E+09	3,174549E+09	6,901050E+09	1,007560E+10
-66	1,587255E+09	1,587224E+09	3,450472E+09	3,450570E+09	3,174480E+09	6,901042E+09	1,007552E+10
-65	1,587306E+09	1,587296E+09	3,450533E+09	3,450514E+09	3,174603E+09	6,901047E+09	1,007565E+10
-64	1,587172E+09	1,587183E+09	3,450529E+09	3,450570E+09	3,174356E+09	6,901099E+09	1,007545E+10
-63	1,587218E+09	1,587199E+09	3,450549E+09	3,450560E+09	3,174417E+09	6,901108E+09	1,007553E+10
-62	1,587216E+09	1,587232E+09	3,450634E+09	3,450492E+09	3,174448E+09	6,901125E+09	1,007557E+10
-61	1,587125E+09	1,587131E+09	3,450549E+09	3,450589E+09	3,174256E+09	6,901138E+09	1,007539E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-60	1,587235E+09	1,587228E+09	3,450561E+09	3,450568E+09	3,174463E+09	6,901128E+09	1,007559E+10
-59	1,587191E+09	1,587230E+09	3,450591E+09	3,450519E+09	3,174421E+09	6,901110E+09	1,007553E+10
-58	1,587193E+09	1,587211E+09	3,450462E+09	3,450553E+09	3,174404E+09	6,901015E+09	1,007542E+10
-57	1,587340E+09	1,587342E+09	3,450498E+09	3,450450E+09	3,174682E+09	6,900948E+09	1,007563E+10
-56	1,587287E+09	1,587291E+09	3,450466E+09	3,450434E+09	3,174578E+09	6,900900E+09	1,007548E+10
-55	1,587367E+09	1,587332E+09	3,450398E+09	3,450424E+09	3,174699E+09	6,900823E+09	1,007552E+10
-54	1,587436E+09	1,587451E+09	3,450434E+09	3,450336E+09	3,174887E+09	6,900770E+09	1,007566E+10
-53	1,587351E+09	1,587382E+09	3,450339E+09	3,450400E+09	3,174733E+09	6,900739E+09	1,007547E+10
-52	1,587455E+09	1,587462E+09	3,450363E+09	3,450390E+09	3,174917E+09	6,900752E+09	1,007567E+10
-51	1,587434E+09	1,587463E+09	3,450454E+09	3,450333E+09	3,174897E+09	6,900787E+09	1,007568E+10
-50	1,587374E+09	1,587364E+09	3,450359E+09	3,450419E+09	3,174738E+09	6,900779E+09	1,007552E+10
-49	1,587469E+09	1,587441E+09	3,450419E+09	3,450396E+09	3,174910E+09	6,900815E+09	1,007573E+10
-48	1,587361E+09	1,587354E+09	3,450438E+09	3,450422E+09	3,174714E+09	6,900860E+09	1,007557E+10
-47	1,587332E+09	1,587313E+09	3,450393E+09	3,450480E+09	3,174645E+09	6,900873E+09	1,007552E+10
-46	1,587370E+09	1,587389E+09	3,450485E+09	3,450422E+09	3,174759E+09	6,900907E+09	1,007567E+10
-45	1,587240E+09	1,587256E+09	3,450465E+09	3,450474E+09	3,174496E+09	6,900938E+09	1,007543E+10
-44	1,587294E+09	1,587276E+09	3,450483E+09	3,450493E+09	3,174570E+09	6,900976E+09	1,007555E+10
-43	1,587296E+09	1,587302E+09	3,450567E+09	3,450440E+09	3,174598E+09	6,901007E+09	1,007560E+10
-42	1,587210E+09	1,587222E+09	3,450438E+09	3,450515E+09	3,174432E+09	6,900952E+09	1,007538E+10
-41	1,587327E+09	1,587335E+09	3,450453E+09	3,450476E+09	3,174661E+09	6,900929E+09	1,007559E+10
-40	1,587298E+09	1,587320E+09	3,450481E+09	3,450419E+09	3,174619E+09	6,900900E+09	1,007552E+10
-39	1,587309E+09	1,587302E+09	3,450386E+09	3,450428E+09	3,174612E+09	6,900814E+09	1,007543E+10
-38	1,587445E+09	1,587440E+09	3,450420E+09	3,450339E+09	3,174884E+09	6,900760E+09	1,007564E+10
-37	1,587383E+09	1,587390E+09	3,450351E+09	3,450335E+09	3,174773E+09	6,900686E+09	1,007546E+10
-36	1,587458E+09	1,587450E+09	3,450287E+09	3,450354E+09	3,174908E+09	6,900641E+09	1,007555E+10
-35	1,587521E+09	1,587553E+09	3,450361E+09	3,450272E+09	3,175074E+09	6,900633E+09	1,007571E+10
-34	1,587443E+09	1,587478E+09	3,450263E+09	3,450310E+09	3,174921E+09	6,900574E+09	1,007550E+10
-33	1,587549E+09	1,587547E+09	3,450298E+09	3,450294E+09	3,175097E+09	6,900593E+09	1,007569E+10
-32	1,587531E+09	1,587526E+09	3,450367E+09	3,450264E+09	3,175058E+09	6,900631E+09	1,007569E+10
-31	1,587465E+09	1,587436E+09	3,450277E+09	3,450342E+09	3,174901E+09	6,900619E+09	1,007552E+10
-30	1,587535E+09	1,587528E+09	3,450327E+09	3,450326E+09	3,175064E+09	6,900653E+09	1,007572E+10
-29	1,587425E+09	1,587437E+09	3,450329E+09	3,450336E+09	3,174861E+09	6,900665E+09	1,007553E+10
-28	1,587404E+09	1,587398E+09	3,450312E+09	3,450394E+09	3,174802E+09	6,900706E+09	1,007551E+10
-27	1,587449E+09	1,587452E+09	3,450441E+09	3,450339E+09	3,174901E+09	6,900779E+09	1,007568E+10
-26	1,587326E+09	1,587328E+09	3,450390E+09	3,450380E+09	3,174654E+09	6,900770E+09	1,007542E+10
-25	1,587376E+09	1,587364E+09	3,450402E+09	3,450411E+09	3,174740E+09	6,900813E+09	1,007555E+10
-24	1,587382E+09	1,587390E+09	3,450463E+09	3,450379E+09	3,174771E+09	6,900842E+09	1,007561E+10
-23	1,587302E+09	1,587318E+09	3,450360E+09	3,450425E+09	3,174620E+09	6,900785E+09	1,007540E+10
-22	1,587416E+09	1,587434E+09	3,450385E+09	3,450382E+09	3,174849E+09	6,900767E+09	1,007562E+10
-21	1,587398E+09	1,587408E+09	3,450380E+09	3,450315E+09	3,174806E+09	6,900695E+09	1,007550E+10
-20	1,587415E+09	1,587401E+09	3,450283E+09	3,450343E+09	3,174816E+09	6,900627E+09	1,007544E+10
-19	1,587547E+09	1,587536E+09	3,450327E+09	3,450266E+09	3,175083E+09	6,900593E+09	1,007568E+10
-18	1,587480E+09	1,587504E+09	3,450227E+09	3,450238E+09	3,174985E+09	6,900465E+09	1,007545E+10
-17	1,587551E+09	1,587568E+09	3,450193E+09	3,450249E+09	3,175119E+09	6,900442E+09	1,007556E+10
-16	1,587623E+09	1,587642E+09	3,450273E+09	3,450178E+09	3,175264E+09	6,900451E+09	1,007571E+10
-15	1,587546E+09	1,587555E+09	3,450205E+09	3,450204E+09	3,175101E+09	6,900409E+09	1,007551E+10
-14	1,587636E+09	1,587626E+09	3,450231E+09	3,450214E+09	3,175262E+09	6,900445E+09	1,007571E+10
-13	1,587610E+09	1,587602E+09	3,450252E+09	3,450192E+09	3,175211E+09	6,900444E+09	1,007566E+10
-12	1,587538E+09	1,587530E+09	3,450169E+09	3,450282E+09	3,175069E+09	6,900452E+09	1,007552E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-11	1,587606E+09	1,587606E+09	3,450260E+09	3,450259E+09	3,175212E+09	6,900519E+09	1,007573E+10
-10	1,587500E+09	1,587518E+09	3,450260E+09	3,450236E+09	3,175017E+09	6,900497E+09	1,007551E+10
-9	1,587483E+09	1,587476E+09	3,450266E+09	3,450295E+09	3,174960E+09	6,900561E+09	1,007552E+10
-8	1,587531E+09	1,587514E+09	3,450372E+09	3,450274E+09	3,175045E+09	6,900647E+09	1,007569E+10
-7	1,587408E+09	1,587404E+09	3,450322E+09	3,450312E+09	3,174812E+09	6,900634E+09	1,007545E+10
-6	1,587444E+09	1,587458E+09	3,450316E+09	3,450350E+09	3,174902E+09	6,900666E+09	1,007557E+10
-5	1,587459E+09	1,587476E+09	3,450349E+09	3,450299E+09	3,174935E+09	6,900647E+09	1,007558E+10
-4	1,587399E+09	1,587413E+09	3,450259E+09	3,450335E+09	3,174812E+09	6,900593E+09	1,007541E+10
-3	1,587523E+09	1,587511E+09	3,450303E+09	3,450288E+09	3,175034E+09	6,900591E+09	1,007562E+10
-2	1,587510E+09	1,587508E+09	3,450265E+09	3,450201E+09	3,175017E+09	6,900465E+09	1,007548E+10
-1	1,587521E+09	1,587518E+09	3,450174E+09	3,450230E+09	3,175039E+09	6,900404E+09	1,007544E+10
1	1,587643E+09	1,587647E+09	3,450220E+09	3,450177E+09	3,175290E+09	6,900397E+09	1,007569E+10
2	1,587578E+09	1,587614E+09	3,450167E+09	3,450132E+09	3,175192E+09	6,900299E+09	1,007549E+10
3	1,587635E+09	1,587666E+09	3,450145E+09	3,450158E+09	3,175302E+09	6,900303E+09	1,007560E+10
4	1,587711E+09	1,587716E+09	3,450191E+09	3,450097E+09	3,175428E+09	6,900288E+09	1,007572E+10
5	1,587641E+09	1,587634E+09	3,450109E+09	3,450147E+09	3,175275E+09	6,900256E+09	1,007553E+10
6	1,587721E+09	1,587697E+09	3,450135E+09	3,450164E+09	3,175418E+09	6,900299E+09	1,007572E+10
7	1,587691E+09	1,587694E+09	3,450125E+09	3,450107E+09	3,175385E+09	6,900232E+09	1,007562E+10
8	1,587620E+09	1,587625E+09	3,450083E+09	3,450174E+09	3,175245E+09	6,900257E+09	1,007550E+10
9	1,587689E+09	1,587678E+09	3,450192E+09	3,450163E+09	3,175367E+09	6,900355E+09	1,007572E+10
10	1,587587E+09	1,587587E+09	3,450223E+09	3,450131E+09	3,175175E+09	6,900353E+09	1,007553E+10
11	1,587552E+09	1,587554E+09	3,450218E+09	3,450224E+09	3,175106E+09	6,900442E+09	1,007555E+10
12	1,587596E+09	1,587592E+09	3,450272E+09	3,450219E+09	3,175188E+09	6,900491E+09	1,007568E+10
13	1,587480E+09	1,587500E+09	3,450224E+09	3,450266E+09	3,174979E+09	6,900490E+09	1,007547E+10
14	1,587525E+09	1,587537E+09	3,450243E+09	3,450291E+09	3,175062E+09	6,900534E+09	1,007560E+10
15	1,587556E+09	1,587563E+09	3,450249E+09	3,450192E+09	3,175118E+09	6,900441E+09	1,007556E+10
16	1,587507E+09	1,587507E+09	3,450175E+09	3,450214E+09	3,175014E+09	6,900389E+09	1,007540E+10
17	1,587632E+09	1,587599E+09	3,450200E+09	3,450190E+09	3,175230E+09	6,900390E+09	1,007562E+10
18	1,587612E+09	1,587615E+09	3,450172E+09	3,450091E+09	3,175227E+09	6,900264E+09	1,007549E+10
19	1,587603E+09	1,587639E+09	3,450089E+09	3,450137E+09	3,175243E+09	6,900226E+09	1,007547E+10
20	1,587727E+09	1,587746E+09	3,450119E+09	3,450082E+09	3,175473E+09	6,900201E+09	1,007567E+10
21	1,587677E+09	1,587709E+09	3,450088E+09	3,450049E+09	3,175386E+09	6,900137E+09	1,007552E+10
22	1,587738E+09	1,587735E+09	3,450076E+09	3,450088E+09	3,175473E+09	6,900164E+09	1,007564E+10
23	1,587812E+09	1,587799E+09	3,450073E+09	3,450012E+09	3,175611E+09	6,900085E+09	1,007570E+10
24	1,587737E+09	1,587734E+09	3,449998E+09	3,450057E+09	3,175472E+09	6,900055E+09	1,007553E+10
25	1,587808E+09	1,587787E+09	3,450028E+09	3,450087E+09	3,175595E+09	6,900115E+09	1,007571E+10
26	1,587776E+09	1,587786E+09	3,450069E+09	3,450000E+09	3,175562E+09	6,900069E+09	1,007563E+10
27	1,587688E+09	1,587712E+09	3,450052E+09	3,450080E+09	3,175400E+09	6,900132E+09	1,007553E+10
28	1,587754E+09	1,587742E+09	3,450134E+09	3,450089E+09	3,175496E+09	6,900222E+09	1,007572E+10
29	1,587660E+09	1,587660E+09	3,450157E+09	3,450088E+09	3,175320E+09	6,900245E+09	1,007557E+10
30	1,587618E+09	1,587619E+09	3,450140E+09	3,450193E+09	3,175236E+09	6,900333E+09	1,007557E+10
31	1,587668E+09	1,587676E+09	3,450152E+09	3,450149E+09	3,175344E+09	6,900302E+09	1,007565E+10
32	1,587572E+09	1,587588E+09	3,450124E+09	3,450158E+09	3,175160E+09	6,900282E+09	1,007544E+10
33	1,587628E+09	1,587609E+09	3,450146E+09	3,450184E+09	3,175237E+09	6,900330E+09	1,007557E+10
34	1,587669E+09	1,587649E+09	3,450172E+09	3,450061E+09	3,175317E+09	6,900233E+09	1,007555E+10
35	1,587601E+09	1,587613E+09	3,450095E+09	3,450105E+09	3,175214E+09	6,900200E+09	1,007541E+10
36	1,587714E+09	1,587706E+09	3,450088E+09	3,450098E+09	3,175420E+09	6,900186E+09	1,007561E+10
37	1,587701E+09	1,587734E+09	3,450082E+09	3,450016E+09	3,175435E+09	6,900098E+09	1,007553E+10
38	1,587692E+09	1,587733E+09	3,450029E+09	3,450070E+09	3,175425E+09	6,900099E+09	1,007552E+10



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
39	1,587824E+09	1,587839E+09	3,450027E+09	3,449991E+09	3,175664E+09	6,900018E+09	1,007568E+10
40	1,587789E+09	1,587799E+09	3,450000E+09	3,449956E+09	3,175588E+09	6,899956E+09	1,007554E+10
41	1,587846E+09	1,587814E+09	3,449963E+09	3,450019E+09	3,175660E+09	6,899982E+09	1,007564E+10
42	1,587913E+09	1,587898E+09	3,449967E+09	3,449914E+09	3,175811E+09	6,899881E+09	1,007569E+10
43	1,587816E+09	1,587845E+09	3,449911E+09	3,449958E+09	3,175661E+09	6,899869E+09	1,007553E+10
44	1,587880E+09	1,587874E+09	3,449942E+09	3,449983E+09	3,175755E+09	6,899925E+09	1,007568E+10
45	1,587856E+09	1,587866E+09	3,450016E+09	3,449915E+09	3,175723E+09	6,899931E+09	1,007565E+10
46	1,587764E+09	1,587770E+09	3,450013E+09	3,450025E+09	3,175534E+09	6,900038E+09	1,007557E+10
47	1,587824E+09	1,587812E+09	3,450038E+09	3,450024E+09	3,175636E+09	6,900062E+09	1,007570E+10
48	1,587736E+09	1,587744E+09	3,450066E+09	3,450022E+09	3,175479E+09	6,900088E+09	1,007557E+10
49	1,587696E+09	1,587693E+09	3,450043E+09	3,450131E+09	3,175389E+09	6,900174E+09	1,007556E+10
50	1,587758E+09	1,587755E+09	3,450083E+09	3,450042E+09	3,175513E+09	6,900125E+09	1,007564E+10
51	1,587659E+09	1,587678E+09	3,450065E+09	3,450049E+09	3,175337E+09	6,900114E+09	1,007545E+10
52	1,587717E+09	1,587688E+09	3,450051E+09	3,450083E+09	3,175405E+09	6,900134E+09	1,007554E+10
53	1,587763E+09	1,587749E+09	3,450078E+09	3,449984E+09	3,175511E+09	6,900063E+09	1,007557E+10
54	1,587685E+09	1,587712E+09	3,450006E+09	3,450044E+09	3,175397E+09	6,900050E+09	1,007545E+10
55	1,587796E+09	1,587816E+09	3,449973E+09	3,450005E+09	3,175612E+09	6,899978E+09	1,007559E+10
56	1,587804E+09	1,587839E+09	3,449997E+09	3,449910E+09	3,175643E+09	6,899907E+09	1,007555E+10
57	1,587805E+09	1,587813E+09	3,449940E+09	3,449979E+09	3,175618E+09	6,899918E+09	1,007554E+10
58	1,587944E+09	1,587928E+09	3,449941E+09	3,449880E+09	3,175872E+09	6,899821E+09	1,007569E+10
59	1,587892E+09	1,587907E+09	3,449903E+09	3,449860E+09	3,175798E+09	6,899763E+09	1,007556E+10
60	1,587932E+09	1,587917E+09	3,449839E+09	3,449931E+09	3,175849E+09	6,899770E+09	1,007562E+10
61	1,588000E+09	1,588006E+09	3,449882E+09	3,449833E+09	3,176006E+09	6,899716E+09	1,007572E+10
62	1,587893E+09	1,587925E+09	3,449866E+09	3,449882E+09	3,175817E+09	6,899749E+09	1,007557E+10
63	1,587953E+09	1,587949E+09	3,449877E+09	3,449892E+09	3,175902E+09	6,899769E+09	1,007567E+10
64	1,587942E+09	1,587936E+09	3,449955E+09	3,449839E+09	3,175878E+09	6,899794E+09	1,007567E+10
65	1,587842E+09	1,587828E+09	3,449925E+09	3,449981E+09	3,175669E+09	6,899906E+09	1,007557E+10
66	1,587902E+09	1,587890E+09	3,449945E+09	3,449951E+09	3,175793E+09	6,899896E+09	1,007569E+10
67	1,587808E+09	1,587834E+09	3,449979E+09	3,449936E+09	3,175642E+09	6,899915E+09	1,007556E+10
68	1,587775E+09	1,587767E+09	3,449943E+09	3,450030E+09	3,175542E+09	6,899972E+09	1,007551E+10
69	1,587854E+09	1,587835E+09	3,450005E+09	3,449943E+09	3,175689E+09	6,899949E+09	1,007564E+10
70	1,587750E+09	1,587756E+09	3,449996E+09	3,449967E+09	3,175505E+09	6,899964E+09	1,007547E+10
71	1,587799E+09	1,587789E+09	3,449938E+09	3,449988E+09	3,175588E+09	6,899927E+09	1,007551E+10
72	1,587854E+09	1,587865E+09	3,449981E+09	3,449895E+09	3,175718E+09	6,899876E+09	1,007559E+10
73	1,587777E+09	1,587812E+09	3,449920E+09	3,449969E+09	3,175589E+09	6,899889E+09	1,007548E+10
74	1,587899E+09	1,587915E+09	3,449907E+09	3,449896E+09	3,175814E+09	6,899803E+09	1,007562E+10
75	1,587908E+09	1,587940E+09	3,449935E+09	3,449810E+09	3,175847E+09	6,899745E+09	1,007559E+10
76	1,587910E+09	1,587898E+09	3,449832E+09	3,449891E+09	3,175808E+09	6,899724E+09	1,007553E+10
77	1,588050E+09	1,588026E+09	3,449831E+09	3,449807E+09	3,176075E+09	6,899638E+09	1,007571E+10
78	1,587983E+09	1,588007E+09	3,449799E+09	3,449793E+09	3,175990E+09	6,899592E+09	1,007558E+10
79	1,588015E+09	1,588019E+09	3,449718E+09	3,449823E+09	3,176034E+09	6,899541E+09	1,007557E+10
80	1,588093E+09	1,588097E+09	3,449806E+09	3,449722E+09	3,176190E+09	6,899528E+09	1,007572E+10
81	1,587985E+09	1,587991E+09	3,449803E+09	3,449800E+09	3,175976E+09	6,899603E+09	1,007558E+10
82	1,588040E+09	1,588019E+09	3,449815E+09	3,449801E+09	3,176060E+09	6,899616E+09	1,007568E+10
83	1,588014E+09	1,588024E+09	3,449884E+09	3,449773E+09	3,176038E+09	6,899657E+09	1,007569E+10
84	1,587907E+09	1,587907E+09	3,449819E+09	3,449920E+09	3,175814E+09	6,899739E+09	1,007555E+10
85	1,587977E+09	1,587973E+09	3,449868E+09	3,449885E+09	3,175949E+09	6,899754E+09	1,007570E+10
86	1,587884E+09	1,587905E+09	3,449922E+09	3,449866E+09	3,175789E+09	6,899788E+09	1,007558E+10
87	1,587854E+09	1,587843E+09	3,449853E+09	3,449930E+09	3,175697E+09	6,899782E+09	1,007548E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
88	1,587949E+09	1,587920E+09	3,449923E+09	3,449853E+09	3,175869E+09	6,899776E+09	1,007564E+10
89	1,587839E+09	1,587842E+09	3,449900E+09	3,449900E+09	3,175681E+09	6,899800E+09	1,007548E+10
90	1,587886E+09	1,587896E+09	3,449847E+09	3,449889E+09	3,175782E+09	6,899736E+09	1,007552E+10
91	1,587941E+09	1,587977E+09	3,449904E+09	3,449793E+09	3,175918E+09	6,899698E+09	1,007562E+10
92	1,587873E+09	1,587899E+09	3,449827E+09	3,449868E+09	3,175773E+09	6,899694E+09	1,007547E+10
93	1,588013E+09	1,588003E+09	3,449828E+09	3,449805E+09	3,176016E+09	6,899633E+09	1,007565E+10
94	1,588016E+09	1,588025E+09	3,449841E+09	3,449736E+09	3,176041E+09	6,899577E+09	1,007562E+10
95	1,588007E+09	1,588004E+09	3,449691E+09	3,449797E+09	3,176011E+09	6,899488E+09	1,007550E+10
96	1,588153E+09	1,588141E+09	3,449712E+09	3,449709E+09	3,176293E+09	6,899421E+09	1,007571E+10
97	1,588077E+09	1,588103E+09	3,449710E+09	3,449702E+09	3,176181E+09	6,899412E+09	1,007559E+10
98	1,588109E+09	1,588114E+09	3,449662E+09	3,449703E+09	3,176222E+09	6,899365E+09	1,007559E+10
99	1,588179E+09	1,588186E+09	3,449761E+09	3,449628E+09	3,176366E+09	6,899388E+09	1,007575E+10
100	1,588064E+09	1,588060E+09	3,449723E+09	3,449737E+09	3,176124E+09	6,899459E+09	1,007558E+10
101	1,588116E+09	1,588098E+09	3,449733E+09	3,449756E+09	3,176214E+09	6,899489E+09	1,007570E+10
102	1,588079E+09	1,588100E+09	3,449800E+09	3,449732E+09	3,176179E+09	6,899532E+09	1,007571E+10
103	1,587974E+09	1,587985E+09	3,449709E+09	3,449831E+09	3,175959E+09	6,899540E+09	1,007550E+10
104	1,588066E+09	1,588045E+09	3,449785E+09	3,449785E+09	3,176112E+09	6,899570E+09	1,007568E+10
105	1,587978E+09	1,587970E+09	3,449845E+09	3,449778E+09	3,175947E+09	6,899624E+09	1,007557E+10
106	1,587947E+09	1,587929E+09	3,449775E+09	3,449819E+09	3,175877E+09	6,899594E+09	1,007547E+10
107	1,588028E+09	1,588029E+09	3,449848E+09	3,449762E+09	3,176057E+09	6,899610E+09	1,007567E+10
108	1,587917E+09	1,587942E+09	3,449807E+09	3,449822E+09	3,175859E+09	6,899629E+09	1,007549E+10
109	1,587973E+09	1,587991E+09	3,449784E+09	3,449811E+09	3,175963E+09	6,899595E+09	1,007556E+10
110	1,588030E+09	1,588061E+09	3,449847E+09	3,449726E+09	3,176091E+09	6,899573E+09	1,007566E+10
111	1,587973E+09	1,587984E+09	3,449716E+09	3,449772E+09	3,175957E+09	6,899487E+09	1,007544E+10
112	1,588128E+09	1,588093E+09	3,449708E+09	3,449720E+09	3,176222E+09	6,899428E+09	1,007565E+10
113	1,588125E+09	1,588125E+09	3,449709E+09	3,449661E+09	3,176250E+09	6,899370E+09	1,007562E+10
114	1,588112E+09	1,588121E+09	3,449572E+09	3,449674E+09	3,176233E+09	6,899246E+09	1,007548E+10
115	1,588247E+09	1,588257E+09	3,449633E+09	3,449583E+09	3,176504E+09	6,899216E+09	1,007572E+10
116	1,588171E+09	1,588191E+09	3,449633E+09	3,449590E+09	3,176362E+09	6,899222E+09	1,007558E+10
117	1,588201E+09	1,588194E+09	3,449612E+09	3,449618E+09	3,176396E+09	6,899231E+09	1,007563E+10
118	1,588255E+09	1,588262E+09	3,449699E+09	3,449582E+09	3,176517E+09	6,899281E+09	1,007580E+10
119	1,588130E+09	1,588144E+09	3,449612E+09	3,449677E+09	3,176274E+09	6,899289E+09	1,007556E+10
120	1,588194E+09	1,588180E+09	3,449638E+09	3,449696E+09	3,176374E+09	6,899334E+09	1,007571E+10
121	1,588158E+09	1,588167E+09	3,449722E+09	3,449666E+09	3,176326E+09	6,899388E+09	1,007571E+10
122	1,588060E+09	1,588061E+09	3,449645E+09	3,449718E+09	3,176122E+09	6,899363E+09	1,007548E+10
123	1,588152E+09	1,588126E+09	3,449729E+09	3,449683E+09	3,176278E+09	6,899412E+09	1,007569E+10
124	1,588059E+09	1,588045E+09	3,449756E+09	3,449700E+09	3,176104E+09	6,899456E+09	1,007556E+10
125	1,588026E+09	1,588023E+09	3,449698E+09	3,449752E+09	3,176050E+09	6,899451E+09	1,007550E+10
126	1,588097E+09	1,588122E+09	3,449767E+09	3,449703E+09	3,176219E+09	6,899469E+09	1,007569E+10
127	1,587994E+09	1,588031E+09	3,449703E+09	3,449726E+09	3,176025E+09	6,899429E+09	1,007545E+10
128	1,588079E+09	1,588073E+09	3,449691E+09	3,449717E+09	3,176152E+09	6,899408E+09	1,007556E+10
129	1,588143E+09	1,588137E+09	3,449744E+09	3,449643E+09	3,176280E+09	6,899388E+09	1,007567E+10
130	1,588089E+09	1,588091E+09	3,449597E+09	3,449656E+09	3,176179E+09	6,899253E+09	1,007543E+10
131	1,588234E+09	1,588219E+09	3,449594E+09	3,449610E+09	3,176453E+09	6,899204E+09	1,007566E+10
132	1,588222E+09	1,588241E+09	3,449597E+09	3,449554E+09	3,176463E+09	6,899151E+09	1,007561E+10
133	1,588208E+09	1,588230E+09	3,449516E+09	3,449567E+09	3,176439E+09	6,899083E+09	1,007552E+10
134	1,588329E+09	1,588347E+09	3,449594E+09	3,449503E+09	3,176677E+09	6,899098E+09	1,007577E+10
135	1,588252E+09	1,588271E+09	3,449557E+09	3,449511E+09	3,176523E+09	6,899068E+09	1,007559E+10
136	1,588290E+09	1,588269E+09	3,449525E+09	3,449569E+09	3,176559E+09	6,899095E+09	1,007565E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
137	1,588335E+09	1,588337E+09	3,449596E+09	3,449547E+09	3,176672E+09	6,899142E+09	1,007581E+10
138	1,588215E+09	1,588232E+09	3,449508E+09	3,449585E+09	3,176446E+09	6,899092E+09	1,007554E+10
139	1,588277E+09	1,588263E+09	3,449562E+09	3,449590E+09	3,176540E+09	6,899152E+09	1,007569E+10
140	1,588247E+09	1,588234E+09	3,449640E+09	3,449563E+09	3,176481E+09	6,899202E+09	1,007568E+10
141	1,588150E+09	1,588132E+09	3,449588E+09	3,449622E+09	3,176282E+09	6,899211E+09	1,007549E+10
142	1,588219E+09	1,588208E+09	3,449664E+09	3,449622E+09	3,176428E+09	6,899286E+09	1,007571E+10
143	1,588121E+09	1,588140E+09	3,449654E+09	3,449623E+09	3,176261E+09	6,899276E+09	1,007554E+10
144	1,588101E+09	1,588114E+09	3,449613E+09	3,449686E+09	3,176216E+09	6,899299E+09	1,007551E+10
145	1,588180E+09	1,588201E+09	3,449694E+09	3,449638E+09	3,176381E+09	6,899332E+09	1,007571E+10
146	1,588096E+09	1,588119E+09	3,449621E+09	3,449616E+09	3,176215E+09	6,899236E+09	1,007545E+10
147	1,588188E+09	1,588165E+09	3,449605E+09	3,449614E+09	3,176353E+09	6,899218E+09	1,007557E+10
148	1,588251E+09	1,588232E+09	3,449619E+09	3,449551E+09	3,176483E+09	6,899170E+09	1,007565E+10
149	1,588193E+09	1,588205E+09	3,449494E+09	3,449555E+09	3,176399E+09	6,899049E+09	1,007545E+10
150	1,588320E+09	1,588334E+09	3,449506E+09	3,449515E+09	3,176654E+09	6,899021E+09	1,007568E+10
151	1,588310E+09	1,588343E+09	3,449503E+09	3,449433E+09	3,176653E+09	6,898936E+09	1,007559E+10
152	1,588312E+09	1,588317E+09	3,449444E+09	3,449474E+09	3,176629E+09	6,898918E+09	1,007555E+10
153	1,588426E+09	1,588421E+09	3,449517E+09	3,449442E+09	3,176848E+09	6,898959E+09	1,007581E+10
154	1,588348E+09	1,588364E+09	3,449461E+09	3,449430E+09	3,176712E+09	6,898890E+09	1,007560E+10
155	1,588378E+09	1,588368E+09	3,449433E+09	3,449494E+09	3,176746E+09	6,898927E+09	1,007567E+10
156	1,588417E+09	1,588418E+09	3,449494E+09	3,449469E+09	3,176835E+09	6,898963E+09	1,007580E+10
157	1,588302E+09	1,588311E+09	3,449453E+09	3,449489E+09	3,176613E+09	6,898942E+09	1,007556E+10
158	1,588351E+09	1,588334E+09	3,449507E+09	3,449509E+09	3,176685E+09	6,899016E+09	1,007570E+10
159	1,588316E+09	1,588304E+09	3,449553E+09	3,449474E+09	3,176621E+09	6,899027E+09	1,007565E+10
160	1,588227E+09	1,588213E+09	3,449502E+09	3,449565E+09	3,176440E+09	6,899066E+09	1,007551E+10
161	1,588285E+09	1,588290E+09	3,449574E+09	3,449573E+09	3,176575E+09	6,899147E+09	1,007572E+10
162	1,588200E+09	1,588235E+09	3,449566E+09	3,449525E+09	3,176435E+09	6,899091E+09	1,007553E+10
163	1,588192E+09	1,588200E+09	3,449543E+09	3,449578E+09	3,176392E+09	6,899122E+09	1,007551E+10
164	1,588281E+09	1,588272E+09	3,449601E+09	3,449538E+09	3,176553E+09	6,899140E+09	1,007569E+10
165	1,588208E+09	1,588206E+09	3,449540E+09	3,449514E+09	3,176414E+09	6,899054E+09	1,007547E+10
166	1,588280E+09	1,588270E+09	3,449504E+09	3,449535E+09	3,176550E+09	6,899039E+09	1,007559E+10
167	1,588338E+09	1,588347E+09	3,449494E+09	3,449449E+09	3,176686E+09	6,898943E+09	1,007563E+10
168	1,588292E+09	1,588317E+09	3,449402E+09	3,449462E+09	3,176610E+09	6,898864E+09	1,007547E+10
169	1,588413E+09	1,588429E+09	3,449440E+09	3,449431E+09	3,176842E+09	6,898871E+09	1,007571E+10
170	1,588416E+09	1,588441E+09	3,449432E+09	3,449325E+09	3,176857E+09	6,898757E+09	1,007561E+10
171	1,588414E+09	1,588407E+09	3,449373E+09	3,449392E+09	3,176821E+09	6,898765E+09	1,007559E+10
172	1,588521E+09	1,588507E+09	3,449405E+09	3,449383E+09	3,177028E+09	6,898788E+09	1,007582E+10
173	1,588443E+09	1,588457E+09	3,449363E+09	3,449354E+09	3,176900E+09	6,898717E+09	1,007562E+10
174	1,588452E+09	1,588456E+09	3,449345E+09	3,449418E+09	3,176908E+09	6,898763E+09	1,007567E+10
175	1,588494E+09	1,588493E+09	3,449397E+09	3,449357E+09	3,176987E+09	6,898753E+09	1,007574E+10
176	1,588390E+09	1,588380E+09	3,449375E+09	3,449397E+09	3,176770E+09	6,898773E+09	1,007554E+10
177	1,588427E+09	1,588403E+09	3,449435E+09	3,449442E+09	3,176829E+09	6,898877E+09	1,007571E+10
178	1,588393E+09	1,588397E+09	3,449465E+09	3,449385E+09	3,176791E+09	6,898851E+09	1,007564E+10
179	1,588299E+09	1,588308E+09	3,449433E+09	3,449485E+09	3,176608E+09	6,898919E+09	1,007553E+10
180	1,588357E+09	1,588370E+09	3,449497E+09	3,449498E+09	3,176727E+09	6,898995E+09	1,007572E+10
181	1,588289E+09	1,588311E+09	3,449522E+09	3,449435E+09	3,176600E+09	6,898957E+09	1,007556E+10
182	1,588276E+09	1,588276E+09	3,449481E+09	3,449505E+09	3,176552E+09	6,898986E+09	1,007554E+10
183	1,588372E+09	1,588350E+09	3,449489E+09	3,449449E+09	3,176722E+09	6,898938E+09	1,007566E+10
184	1,588311E+09	1,588308E+09	3,449416E+09	3,449441E+09	3,176618E+09	6,898857E+09	1,007548E+10
185	1,588375E+09	1,588378E+09	3,449385E+09	3,449456E+09	3,176753E+09	6,898841E+09	1,007559E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
186	1,588442E+09	1,588467E+09	3,449389E+09	3,449320E+09	3,176909E+09	6,898709E+09	1,007562E+10
187	1,588403E+09	1,588424E+09	3,449333E+09	3,449336E+09	3,176827E+09	6,898670E+09	1,007550E+10
188	1,588519E+09	1,588514E+09	3,449353E+09	3,449330E+09	3,177033E+09	6,898684E+09	1,007572E+10
189	1,588525E+09	1,588534E+09	3,449362E+09	3,449238E+09	3,177060E+09	6,898600E+09	1,007566E+10
190	1,588500E+09	1,588510E+09	3,449277E+09	3,449331E+09	3,177009E+09	6,898608E+09	1,007562E+10
191	1,588598E+09	1,588602E+09	3,449286E+09	3,449299E+09	3,177200E+09	6,898585E+09	1,007578E+10
192	1,588533E+09	1,588548E+09	3,449270E+09	3,449276E+09	3,177081E+09	6,898547E+09	1,007563E+10
193	1,588534E+09	1,588529E+09	3,449274E+09	3,449337E+09	3,177063E+09	6,898611E+09	1,007567E+10
194	1,588583E+09	1,588571E+09	3,449324E+09	3,449249E+09	3,177154E+09	6,898573E+09	1,007573E+10
195	1,588475E+09	1,588458E+09	3,449314E+09	3,449310E+09	3,176933E+09	6,898624E+09	1,007556E+10
196	1,588495E+09	1,588481E+09	3,449346E+09	3,449379E+09	3,176976E+09	6,898725E+09	1,007570E+10
197	1,588467E+09	1,588484E+09	3,449402E+09	3,449312E+09	3,176951E+09	6,898715E+09	1,007567E+10
198	1,588362E+09	1,588389E+09	3,449372E+09	3,449417E+09	3,176752E+09	6,898789E+09	1,007554E+10
199	1,588433E+09	1,588434E+09	3,449411E+09	3,449404E+09	3,176867E+09	6,898815E+09	1,007568E+10
200	1,588390E+09	1,588382E+09	3,449428E+09	3,449360E+09	3,176772E+09	6,898788E+09	1,007556E+10
201	1,588371E+09	1,588358E+09	3,449375E+09	3,449439E+09	3,176729E+09	6,898814E+09	1,007554E+10
202	1,588474E+09	1,588464E+09	3,449364E+09	3,449345E+09	3,176938E+09	6,898708E+09	1,007565E+10
203	1,588411E+09	1,588428E+09	3,449321E+09	3,449329E+09	3,176840E+09	6,898650E+09	1,007549E+10
204	1,588471E+09	1,588486E+09	3,449298E+09	3,449348E+09	3,176957E+09	6,898646E+09	1,007560E+10
205	1,588550E+09	1,588567E+09	3,449337E+09	3,449204E+09	3,177117E+09	6,898542E+09	1,007566E+10
206	1,588495E+09	1,588518E+09	3,449273E+09	3,449256E+09	3,177013E+09	6,898530E+09	1,007554E+10
207	1,588608E+09	1,588600E+09	3,449247E+09	3,449252E+09	3,177209E+09	6,898499E+09	1,007571E+10
208	1,588623E+09	1,588632E+09	3,449239E+09	3,449185E+09	3,177255E+09	6,898425E+09	1,007568E+10
209	1,588588E+09	1,588604E+09	3,449163E+09	3,449268E+09	3,177192E+09	6,898431E+09	1,007562E+10
210	1,588696E+09	1,588695E+09	3,449177E+09	3,449179E+09	3,177392E+09	6,898357E+09	1,007575E+10
211	1,588634E+09	1,588631E+09	3,449199E+09	3,449151E+09	3,177265E+09	6,898350E+09	1,007562E+10
212	1,588625E+09	1,588600E+09	3,449193E+09	3,449237E+09	3,177226E+09	6,898430E+09	1,007566E+10
213	1,588670E+09	1,588652E+09	3,449268E+09	3,449163E+09	3,177323E+09	6,898430E+09	1,007575E+10
214	1,588534E+09	1,58852E+09	3,449252E+09	3,449258E+09	3,177086E+09	6,898510E+09	1,007560E+10
215	1,588548E+09	1,588561E+09	3,449264E+09	3,449312E+09	3,177109E+09	6,898576E+09	1,007569E+10
216	1,588541E+09	1,588560E+09	3,449334E+09	3,449260E+09	3,177101E+09	6,898594E+09	1,007569E+10
217	1,588442E+09	1,588454E+09	3,449303E+09	3,449359E+09	3,176895E+09	6,898663E+09	1,007556E+10
218	1,588530E+09	1,588508E+09	3,449315E+09	3,449311E+09	3,177038E+09	6,898625E+09	1,007566E+10
219	1,588495E+09	1,588473E+09	3,449329E+09	3,449268E+09	3,176967E+09	6,898597E+09	1,007556E+10
220	1,588466E+09	1,588459E+09	3,449247E+09	3,449348E+09	3,176925E+09	6,898594E+09	1,007552E+10
221	1,588574E+09	1,588577E+09	3,449276E+09	3,449229E+09	3,177151E+09	6,898505E+09	1,007566E+10
222	1,588499E+09	1,588539E+09	3,449251E+09	3,449217E+09	3,177038E+09	6,898468E+09	1,007551E+10
223	1,588559E+09	1,588573E+09	3,449215E+09	3,449228E+09	3,177132E+09	6,898443E+09	1,007557E+10
224	1,588656E+09	1,588658E+09	3,449249E+09	3,449131E+09	3,177314E+09	6,898380E+09	1,007569E+10
225	1,588593E+09	1,588610E+09	3,449171E+09	3,449201E+09	3,177203E+09	6,898373E+09	1,007558E+10
226	1,588711E+09	1,588708E+09	3,449122E+09	3,449164E+09	3,177418E+09	6,898286E+09	1,007570E+10
227	1,588728E+09	1,588739E+09	3,449140E+09	3,449086E+09	3,177467E+09	6,898226E+09	1,007569E+10
228	1,588685E+09	1,588694E+09	3,449069E+09	3,449166E+09	3,177379E+09	6,898235E+09	1,007561E+10
229	1,588798E+09	1,588779E+09	3,449125E+09	3,449066E+09	3,177577E+09	6,898191E+09	1,007577E+10
230	1,588712E+09	1,588715E+09	3,449146E+09	3,449071E+09	3,177427E+09	6,898217E+09	1,007564E+10
231	1,588689E+09	1,588676E+09	3,449109E+09	3,449165E+09	3,177365E+09	6,898274E+09	1,007564E+10
232	1,588739E+09	1,588740E+09	3,449176E+09	3,449125E+09	3,177480E+09	6,898301E+09	1,007578E+10
233	1,588597E+09	1,588629E+09	3,449175E+09	3,449216E+09	3,177226E+09	6,898391E+09	1,007562E+10
234	1,588628E+09	1,588633E+09	3,449180E+09	3,449220E+09	3,177261E+09	6,898400E+09	1,007566E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
235	1,588636E+09	1,588625E+09	3,449261E+09	3,449160E+09	3,177261E+09	6,898421E+09	1,007568E+10
236	1,588537E+09	1,588524E+09	3,449202E+09	3,449270E+09	3,177061E+09	6,898472E+09	1,007553E+10
237	1,588632E+09	1,588597E+09	3,449221E+09	3,449209E+09	3,177229E+09	6,898430E+09	1,007566E+10
238	1,588573E+09	1,588586E+09	3,449237E+09	3,449178E+09	3,177159E+09	6,898415E+09	1,007557E+10
239	1,588540E+09	1,588563E+09	3,449155E+09	3,449237E+09	3,177103E+09	6,898392E+09	1,007549E+10
240	1,588664E+09	1,588677E+09	3,449203E+09	3,449142E+09	3,177341E+09	6,898346E+09	1,007569E+10
241	1,588591E+09	1,588625E+09	3,449191E+09	3,449145E+09	3,177216E+09	6,898335E+09	1,007555E+10
242	1,588664E+09	1,588660E+09	3,449119E+09	3,449138E+09	3,177324E+09	6,898257E+09	1,007558E+10
243	1,588766E+09	1,588756E+09	3,449143E+09	3,449051E+09	3,177522E+09	6,898193E+09	1,007572E+10
244	1,588698E+09	1,588716E+09	3,449034E+09	3,449124E+09	3,177414E+09	6,898158E+09	1,007557E+10
245	1,588822E+09	1,588813E+09	3,449022E+09	3,449051E+09	3,177635E+09	6,898073E+09	1,007571E+10
246	1,588823E+09	1,588842E+09	3,449062E+09	3,448973E+09	3,177665E+09	6,898034E+09	1,007570E+10
247	1,588774E+09	1,588775E+09	3,448984E+09	3,449045E+09	3,177548E+09	6,898029E+09	1,007558E+10
248	1,588887E+09	1,588865E+09	3,449045E+09	3,448996E+09	3,177752E+09	6,898041E+09	1,007579E+10
249	1,588785E+09	1,588802E+09	3,449073E+09	3,449025E+09	3,177587E+09	6,898098E+09	1,007568E+10
250	1,588758E+09	1,588767E+09	3,449022E+09	3,449096E+09	3,177525E+09	6,898117E+09	1,007564E+10
251	1,588815E+09	1,588825E+09	3,449113E+09	3,449053E+09	3,177640E+09	6,898166E+09	1,007581E+10
252	1,588677E+09	1,588695E+09	3,449099E+09	3,449140E+09	3,177372E+09	6,898239E+09	1,007561E+10
253	1,588721E+09	1,588693E+09	3,449125E+09	3,449125E+09	3,177415E+09	6,898250E+09	1,007566E+10
254	1,588717E+09	1,588700E+09	3,449187E+09	3,449081E+09	3,177418E+09	6,898268E+09	1,007569E+10
255	1,588611E+09	1,588604E+09	3,449090E+09	3,449179E+09	3,177215E+09	6,898269E+09	1,007548E+10
256	1,588713E+09	1,588701E+09	3,449110E+09	3,449140E+09	3,177414E+09	6,898250E+09	1,007566E+10
257	1,588652E+09	1,588685E+09	3,449153E+09	3,449097E+09	3,177337E+09	6,898249E+09	1,007559E+10
258	1,588634E+09	1,588655E+09	3,449072E+09	3,449118E+09	3,177289E+09	6,898190E+09	1,007548E+10
259	1,588771E+09	1,588765E+09	3,449130E+09	3,449035E+09	3,177536E+09	6,898165E+09	1,007570E+10
260	1,588699E+09	1,588714E+09	3,449087E+09	3,449063E+09	3,177413E+09	6,898150E+09	1,007556E+10
261	1,588777E+09	1,588763E+09	3,449020E+09	3,449049E+09	3,177540E+09	6,898069E+09	1,007561E+10
262	1,588859E+09	1,588876E+09	3,449041E+09	3,448967E+09	3,177736E+09	6,898008E+09	1,007574E+10
263	1,588788E+09	1,588821E+09	3,448929E+09	3,449012E+09	3,177609E+09	6,897941E+09	1,007555E+10
264	1,588922E+09	1,588913E+09	3,448936E+09	3,448960E+09	3,177836E+09	6,897896E+09	1,007573E+10
265	1,588914E+09	1,588927E+09	3,448998E+09	3,448894E+09	3,177841E+09	6,897892E+09	1,007573E+10
266	1,588865E+09	1,588859E+09	3,448902E+09	3,448955E+09	3,177723E+09	6,897857E+09	1,007558E+10
267	1,588971E+09	1,588952E+09	3,448962E+09	3,448925E+09	3,177923E+09	6,897886E+09	1,007581E+10
268	1,588861E+09	1,588888E+09	3,448976E+09	3,448967E+09	3,177749E+09	6,897943E+09	1,007569E+10
269	1,588843E+09	1,588842E+09	3,448955E+09	3,449004E+09	3,177685E+09	6,897958E+09	1,007564E+10
270	1,588888E+09	1,588895E+09	3,449052E+09	3,448962E+09	3,177783E+09	6,898014E+09	1,007580E+10
271	1,588755E+09	1,588753E+09	3,449012E+09	3,449038E+09	3,177508E+09	6,898051E+09	1,007556E+10
272	1,588809E+09	1,588767E+09	3,449023E+09	3,449060E+09	3,177576E+09	6,898083E+09	1,007566E+10
273	1,588793E+09	1,588790E+09	3,449093E+09	3,449021E+09	3,177583E+09	6,898114E+09	1,007570E+10
274	1,588691E+09	1,588706E+09	3,448989E+09	3,449082E+09	3,177397E+09	6,898071E+09	1,007547E+10
275	1,588798E+09	1,588802E+09	3,449042E+09	3,449037E+09	3,177600E+09	6,898078E+09	1,007568E+10
276	1,588745E+09	1,588776E+09	3,449082E+09	3,449004E+09	3,177520E+09	6,898086E+09	1,007561E+10
277	1,588740E+09	1,588739E+09	3,449015E+09	3,449017E+09	3,177479E+09	6,898032E+09	1,007551E+10
278	1,588864E+09	1,588863E+09	3,449050E+09	3,448958E+09	3,177726E+09	6,898009E+09	1,007573E+10
279	1,588792E+09	1,588814E+09	3,448960E+09	3,448979E+09	3,177607E+09	6,897939E+09	1,007555E+10
280	1,588879E+09	1,588877E+09	3,448892E+09	3,448980E+09	3,177757E+09	6,897871E+09	1,007563E+10
281	1,588959E+09	1,588980E+09	3,448944E+09	3,448875E+09	3,177939E+09	6,897819E+09	1,007576E+10
282	1,588896E+09	1,588914E+09	3,448834E+09	3,448879E+09	3,177810E+09	6,897713E+09	1,007552E+10
283	1,589031E+09	1,589004E+09	3,448858E+09	3,448844E+09	3,178034E+09	6,897703E+09	1,007574E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
284	1,589012E+09	1,589016E+09	3,448902E+09	3,448810E+09	3,178029E+09	6,897712E+09	1,007574E+10
285	1,588955E+09	1,588952E+09	3,448828E+09	3,448872E+09	3,177907E+09	6,897700E+09	1,007561E+10
286	1,589036E+09	1,589052E+09	3,448896E+09	3,448856E+09	3,178089E+09	6,897752E+09	1,007584E+10
287	1,588928E+09	1,588961E+09	3,448902E+09	3,448885E+09	3,177889E+09	6,897786E+09	1,007567E+10
288	1,588923E+09	1,588909E+09	3,448886E+09	3,448945E+09	3,177832E+09	6,897831E+09	1,007566E+10
289	1,588966E+09	1,588952E+09	3,448984E+09	3,448905E+09	3,177918E+09	6,897890E+09	1,007581E+10
290	1,588837E+09	1,588823E+09	3,448911E+09	3,448953E+09	3,177661E+09	6,897864E+09	1,007552E+10
291	1,588891E+09	1,588860E+09	3,448918E+09	3,448978E+09	3,177751E+09	6,897895E+09	1,007565E+10
292	1,588874E+09	1,588888E+09	3,448988E+09	3,448938E+09	3,177762E+09	6,897926E+09	1,007569E+10
293	1,588783E+09	1,588798E+09	3,448929E+09	3,448966E+09	3,177582E+09	6,897895E+09	1,007548E+10
294	1,588879E+09	1,588893E+09	3,448991E+09	3,448929E+09	3,177772E+09	6,897920E+09	1,007569E+10
295	1,588834E+09	1,588854E+09	3,449000E+09	3,448905E+09	3,177689E+09	6,897905E+09	1,007559E+10
296	1,588841E+09	1,588833E+09	3,448911E+09	3,448958E+09	3,177674E+09	6,897869E+09	1,007554E+10
297	1,588956E+09	1,588965E+09	3,448945E+09	3,448902E+09	3,177922E+09	6,897847E+09	1,007577E+10
298	1,588895E+09	1,588925E+09	3,448841E+09	3,448876E+09	3,177821E+09	6,897717E+09	1,007554E+10
299	1,588990E+09	1,588983E+09	3,448793E+09	3,448863E+09	3,177973E+09	6,897656E+09	1,007563E+10
300	1,589069E+09	1,589076E+09	3,448853E+09	3,448767E+09	3,178145E+09	6,897620E+09	1,007576E+10
301	1,589011E+09	1,589004E+09	3,448766E+09	3,448761E+09	3,178014E+09	6,897527E+09	1,007554E+10
302	1,589114E+09	1,589103E+09	3,448785E+09	3,448757E+09	3,178216E+09	6,897542E+09	1,007576E+10
303	1,589088E+09	1,589111E+09	3,448800E+09	3,448736E+09	3,178200E+09	6,897536E+09	1,007574E+10
304	1,589035E+09	1,589046E+09	3,448733E+09	3,448821E+09	3,178081E+09	6,897554E+09	1,007563E+10
305	1,589110E+09	1,589126E+09	3,448828E+09	3,448793E+09	3,178236E+09	6,897621E+09	1,007586E+10
306	1,589015E+09	1,589024E+09	3,448815E+09	3,448785E+09	3,178039E+09	6,897600E+09	1,007564E+10
307	1,589015E+09	1,588977E+09	3,448795E+09	3,448855E+09	3,177992E+09	6,897651E+09	1,007564E+10
308	1,589052E+09	1,589031E+09	3,448879E+09	3,448832E+09	3,178083E+09	6,897711E+09	1,007579E+10
309	1,588924E+09	1,588918E+09	3,448830E+09	3,448856E+09	3,177843E+09	6,897686E+09	1,007553E+10
310	1,588955E+09	1,588967E+09	3,448860E+09	3,448882E+09	3,177922E+09	6,897741E+09	1,007566E+10
311	1,588946E+09	1,588975E+09	3,448926E+09	3,448838E+09	3,177921E+09	6,897763E+09	1,007568E+10
312	1,588869E+09	1,588880E+09	3,448874E+09	3,448900E+09	3,177749E+09	6,897774E+09	1,007552E+10
313	1,588963E+09	1,588966E+09	3,448930E+09	3,448876E+09	3,177928E+09	6,897806E+09	1,007573E+10
314	1,588929E+09	1,588936E+09	3,448886E+09	3,448829E+09	3,177866E+09	6,897715E+09	1,007558E+10
315	1,588945E+09	1,588939E+09	3,448779E+09	3,448880E+09	3,177883E+09	6,897659E+09	1,007554E+10
316	1,589066E+09	1,589071E+09	3,448810E+09	3,448805E+09	3,178137E+09	6,897615E+09	1,007575E+10
317	1,589017E+09	1,589028E+09	3,448748E+09	3,448731E+09	3,178045E+09	6,897479E+09	1,007552E+10
318	1,589094E+09	1,589091E+09	3,448718E+09	3,448726E+09	3,178185E+09	6,897444E+09	1,007563E+10
319	1,589169E+09	1,589169E+09	3,448757E+09	3,448652E+09	3,178338E+09	6,897409E+09	1,007575E+10
320	1,589105E+09	1,589108E+09	3,448676E+09	3,448699E+09	3,178214E+09	6,897375E+09	1,007559E+10
321	1,589187E+09	1,589203E+09	3,448708E+09	3,448709E+09	3,178389E+09	6,897417E+09	1,007581E+10
322	1,589166E+09	1,589202E+09	3,448713E+09	3,448659E+09	3,178368E+09	6,897371E+09	1,007574E+10
323	1,589122E+09	1,589127E+09	3,448657E+09	3,448742E+09	3,178250E+09	6,897399E+09	1,007565E+10
324	1,589201E+09	1,589190E+09	3,448747E+09	3,448719E+09	3,178391E+09	6,897466E+09	1,007586E+10
325	1,589114E+09	1,589090E+09	3,448743E+09	3,448688E+09	3,178204E+09	6,897430E+09	1,007563E+10
326	1,589088E+09	1,589065E+09	3,448713E+09	3,448769E+09	3,178153E+09	6,897482E+09	1,007563E+10
327	1,589120E+09	1,589121E+09	3,448776E+09	3,448749E+09	3,178241E+09	6,897525E+09	1,007577E+10
328	1,588999E+09	1,589013E+09	3,448755E+09	3,448785E+09	3,178012E+09	6,897540E+09	1,007555E+10
329	1,589022E+09	1,589043E+09	3,448814E+09	3,448806E+09	3,178065E+09	6,897620E+09	1,007568E+10
330	1,589031E+09	1,589044E+09	3,448853E+09	3,448742E+09	3,178075E+09	6,897595E+09	1,007567E+10
331	1,588968E+09	1,588957E+09	3,448775E+09	3,448821E+09	3,177924E+09	6,897596E+09	1,007552E+10
332	1,589063E+09	1,589053E+09	3,448808E+09	3,448811E+09	3,178116E+09	6,897619E+09	1,007573E+10



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
333	1,589041E+09	1,589045E+09	3,448771E+09	3,448725E+09	3,178086E+09	6,897497E+09	1,007558E+10
334	1,589041E+09	1,589060E+09	3,448682E+09	3,448761E+09	3,178100E+09	6,897443E+09	1,007554E+10
335	1,589168E+09	1,589176E+09	3,448714E+09	3,448680E+09	3,178344E+09	6,897393E+09	1,007574E+10
336	1,589126E+09	1,589132E+09	3,448672E+09	3,448632E+09	3,178258E+09	6,897304E+09	1,007556E+10
337	1,589184E+09	1,589185E+09	3,448653E+09	3,448648E+09	3,178369E+09	6,897301E+09	1,007567E+10
338	1,589258E+09	1,589267E+09	3,448654E+09	3,448572E+09	3,178526E+09	6,897225E+09	1,007575E+10
339	1,589196E+09	1,589214E+09	3,448568E+09	3,448635E+09	3,178410E+09	6,897203E+09	1,007561E+10
340	1,589277E+09	1,589292E+09	3,448611E+09	3,448639E+09	3,178569E+09	6,897250E+09	1,007582E+10
341	1,589271E+09	1,589278E+09	3,448639E+09	3,448548E+09	3,178549E+09	6,897188E+09	1,007574E+10
342	1,589212E+09	1,589206E+09	3,448587E+09	3,448634E+09	3,178418E+09	6,897221E+09	1,007564E+10
343	1,589288E+09	1,589259E+09	3,448647E+09	3,448627E+09	3,178547E+09	6,897274E+09	1,007582E+10
344	1,589195E+09	1,589180E+09	3,448654E+09	3,448625E+09	3,178375E+09	6,897280E+09	1,007565E+10
345	1,589148E+09	1,589157E+09	3,448650E+09	3,448710E+09	3,178305E+09	6,897360E+09	1,007566E+10
346	1,589185E+09	1,589202E+09	3,448704E+09	3,448661E+09	3,178388E+09	6,897365E+09	1,007575E+10
347	1,589078E+09	1,589092E+09	3,448695E+09	3,448710E+09	3,178170E+09	6,897405E+09	1,007557E+10
348	1,589108E+09	1,589106E+09	3,448742E+09	3,448739E+09	3,178214E+09	6,897482E+09	1,007570E+10
349	1,589131E+09	1,589114E+09	3,448769E+09	3,448655E+09	3,178245E+09	6,897424E+09	1,007567E+10
350	1,589055E+09	1,589059E+09	3,448669E+09	3,448735E+09	3,178114E+09	6,897404E+09	1,007552E+10
351	1,589157E+09	1,589155E+09	3,448670E+09	3,448717E+09	3,178312E+09	6,897387E+09	1,007570E+10
352	1,589146E+09	1,589157E+09	3,448668E+09	3,448624E+09	3,178303E+09	6,897292E+09	1,007559E+10
353	1,589137E+09	1,589159E+09	3,448611E+09	3,448647E+09	3,178296E+09	6,897258E+09	1,007555E+10
354	1,589270E+09	1,589268E+09	3,448622E+09	3,448555E+09	3,178538E+09	6,897177E+09	1,007571E+10
355	1,589231E+09	1,589236E+09	3,448574E+09	3,448542E+09	3,178467E+09	6,897117E+09	1,007558E+10
356	1,589279E+09	1,589288E+09	3,448552E+09	3,448583E+09	3,178567E+09	6,897135E+09	1,007570E+10
357	1,589359E+09	1,589374E+09	3,448566E+09	3,448483E+09	3,178732E+09	6,897049E+09	1,007578E+10
358	1,589285E+09	1,589319E+09	3,448496E+09	3,448540E+09	3,178604E+09	6,897036E+09	1,007564E+10
359	1,589370E+09	1,589368E+09	3,448527E+09	3,448548E+09	3,178738E+09	6,897075E+09	1,007581E+10
360	1,589370E+09	1,589353E+09	3,448567E+09	3,448475E+09	3,178724E+09	6,897042E+09	1,007577E+10
361	1,589288E+09	1,589277E+09	3,448515E+09	3,448570E+09	3,178565E+09	6,897084E+09	1,007565E+10
362	1,589360E+09	1,589341E+09	3,448538E+09	3,448551E+09	3,178700E+09	6,897089E+09	1,007579E+10
363	1,589270E+09	1,589275E+09	3,448549E+09	3,448553E+09	3,178545E+09	6,897103E+09	1,007565E+10
364	1,589221E+09	1,589235E+09	3,448575E+09	3,448631E+09	3,178456E+09	6,897206E+09	1,007566E+10
365	1,589274E+09	1,589275E+09	3,448647E+09	3,448552E+09	3,178549E+09	6,897199E+09	1,007575E+10
366	1,589161E+09	1,589170E+09	3,448631E+09	3,448611E+09	3,178330E+09	6,897242E+09	1,007557E+10
367	1,589194E+09	1,589179E+09	3,448638E+09	3,448663E+09	3,178374E+09	6,897302E+09	1,007568E+10
368	1,589223E+09	1,589211E+09	3,448666E+09	3,448591E+09	3,178434E+09	6,897256E+09	1,007569E+10
369	1,589135E+09	1,589164E+09	3,448582E+09	3,448656E+09	3,178299E+09	6,897238E+09	1,007554E+10
370	1,589248E+09	1,589254E+09	3,448571E+09	3,448604E+09	3,178502E+09	6,897175E+09	1,007568E+10
371	1,589251E+09	1,589260E+09	3,448581E+09	3,448518E+09	3,178511E+09	6,897099E+09	1,007561E+10
372	1,589242E+09	1,589249E+09	3,448535E+09	3,448556E+09	3,178491E+09	6,897090E+09	1,007558E+10
373	1,589379E+09	1,589364E+09	3,448536E+09	3,448454E+09	3,178743E+09	6,896990E+09	1,007573E+10
374	1,589324E+09	1,589353E+09	3,448480E+09	3,448457E+09	3,178677E+09	6,896937E+09	1,007561E+10
375	1,589373E+09	1,589390E+09	3,448437E+09	3,448505E+09	3,178763E+09	6,896942E+09	1,007570E+10
376	1,589460E+09	1,589470E+09	3,448483E+09	3,448402E+09	3,178929E+09	6,896885E+09	1,007581E+10
377	1,589377E+09	1,589401E+09	3,448431E+09	3,448451E+09	3,178778E+09	6,896882E+09	1,007566E+10
378	1,589464E+09	1,589435E+09	3,448421E+09	3,448446E+09	3,178899E+09	6,896868E+09	1,007577E+10
379	1,589462E+09	1,589440E+09	3,448454E+09	3,448400E+09	3,178903E+09	6,896854E+09	1,007576E+10
380	1,589368E+09	1,589367E+09	3,448417E+09	3,448501E+09	3,178734E+09	6,896917E+09	1,007565E+10
381	1,589436E+09	1,589433E+09	3,448464E+09	3,448453E+09	3,178869E+09	6,896916E+09	1,007578E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
382	1,589338E+09	1,589370E+09	3,448507E+09	3,448455E+09	3,178708E+09	6,896962E+09	1,007567E+10
383	1,589295E+09	1,589301E+09	3,448515E+09	3,448550E+09	3,178596E+09	6,897065E+09	1,007566E+10
384	1,589357E+09	1,589340E+09	3,448594E+09	3,448491E+09	3,178697E+09	6,897085E+09	1,007578E+10
385	1,589233E+09	1,589241E+09	3,448559E+09	3,448558E+09	3,178474E+09	6,897117E+09	1,007559E+10
386	1,589272E+09	1,589261E+09	3,448512E+09	3,448589E+09	3,178533E+09	6,897101E+09	1,007563E+10
387	1,589316E+09	1,589315E+09	3,448540E+09	3,448510E+09	3,178631E+09	6,897050E+09	1,007568E+10
388	1,589235E+09	1,589257E+09	3,448489E+09	3,448550E+09	3,178492E+09	6,897039E+09	1,007553E+10
389	1,589361E+09	1,589348E+09	3,448491E+09	3,448464E+09	3,178709E+09	6,896955E+09	1,007566E+10
390	1,589357E+09	1,589368E+09	3,448504E+09	3,448393E+09	3,178725E+09	6,896897E+09	1,007562E+10
391	1,589343E+09	1,589349E+09	3,448429E+09	3,448469E+09	3,178693E+09	6,896898E+09	1,007559E+10
392	1,589477E+09	1,589479E+09	3,448446E+09	3,448387E+09	3,178956E+09	6,896833E+09	1,007579E+10
393	1,589409E+09	1,589461E+09	3,448405E+09	3,448388E+09	3,178870E+09	6,896793E+09	1,007566E+10
394	1,589466E+09	1,589479E+09	3,448340E+09	3,448413E+09	3,178945E+09	6,896754E+09	1,007570E+10
395	1,589566E+09	1,589558E+09	3,448382E+09	3,448317E+09	3,179124E+09	6,896699E+09	1,007582E+10
396	1,589478E+09	1,589474E+09	3,448339E+09	3,448368E+09	3,178953E+09	6,896708E+09	1,007566E+10
397	1,589561E+09	1,589522E+09	3,448320E+09	3,448345E+09	3,179083E+09	6,896665E+09	1,007575E+10
398	1,589540E+09	1,589547E+09	3,448361E+09	3,448303E+09	3,179088E+09	6,896664E+09	1,007575E+10
399	1,589441E+09	1,589455E+09	3,448330E+09	3,448416E+09	3,178896E+09	6,896746E+09	1,007564E+10
400	1,589511E+09	1,589511E+09	3,448421E+09	3,448368E+09	3,179022E+09	6,896788E+09	1,007581E+10
401	1,589406E+09	1,589434E+09	3,448475E+09	3,448379E+09	3,178840E+09	6,896854E+09	1,007569E+10
402	1,589369E+09	1,589356E+09	3,448430E+09	3,448476E+09	3,178724E+09	6,896906E+09	1,007563E+10
403	1,589440E+09	1,589418E+09	3,448482E+09	3,448440E+09	3,178858E+09	6,896922E+09	1,007578E+10
404	1,589317E+09	1,589329E+09	3,448454E+09	3,448496E+09	3,178646E+09	6,896950E+09	1,007560E+10
405	1,589368E+09	1,589359E+09	3,448412E+09	3,448480E+09	3,178727E+09	6,896893E+09	1,007562E+10
406	1,589411E+09	1,589424E+09	3,448468E+09	3,448386E+09	3,178835E+09	6,896855E+09	1,007569E+10
407	1,589338E+09	1,589348E+09	3,448409E+09	3,448442E+09	3,178686E+09	6,896851E+09	1,007554E+10
408	1,589462E+09	1,589441E+09	3,448428E+09	3,448373E+09	3,178903E+09	6,896801E+09	1,007570E+10
409	1,589443E+09	1,589472E+09	3,448430E+09	3,448325E+09	3,178915E+09	6,896755E+09	1,007567E+10
410	1,589431E+09	1,589451E+09	3,448303E+09	3,448392E+09	3,178881E+09	6,896694E+09	1,007558E+10
411	1,589575E+09	1,589589E+09	3,448323E+09	3,448313E+09	3,179164E+09	6,896637E+09	1,007580E+10
412	1,589518E+09	1,589551E+09	3,448310E+09	3,448293E+09	3,179069E+09	6,896603E+09	1,007567E+10
413	1,589583E+09	1,589563E+09	3,448240E+09	3,448286E+09	3,179146E+09	6,896526E+09	1,007567E+10
414	1,589671E+09	1,589656E+09	3,448289E+09	3,448198E+09	3,179327E+09	6,896487E+09	1,007581E+10
415	1,589573E+09	1,589567E+09	3,448230E+09	3,448276E+09	3,179140E+09	6,896506E+09	1,007565E+10
416	1,589641E+09	1,589624E+09	3,448251E+09	3,448262E+09	3,179264E+09	6,896513E+09	1,007578E+10
417	1,589602E+09	1,589642E+09	3,448322E+09	3,448230E+09	3,179244E+09	6,896551E+09	1,007580E+10
418	1,589504E+09	1,589523E+09	3,448273E+09	3,448338E+09	3,179028E+09	6,896611E+09	1,007564E+10
419	1,589587E+09	1,589577E+09	3,448353E+09	3,448316E+09	3,179164E+09	6,896669E+09	1,007583E+10
420	1,589488E+09	1,589488E+09	3,448403E+09	3,448333E+09	3,178975E+09	6,896736E+09	1,007571E+10
421	1,589456E+09	1,589429E+09	3,448320E+09	3,448402E+09	3,178885E+09	6,896722E+09	1,007561E+10
422	1,589525E+09	1,589520E+09	3,448369E+09	3,448348E+09	3,179045E+09	6,896718E+09	1,007576E+10
423	1,589410E+09	1,589423E+09	3,448345E+09	3,448393E+09	3,178833E+09	6,896738E+09	1,007557E+10
424	1,589467E+09	1,589454E+09	3,448349E+09	3,448361E+09	3,178922E+09	6,896710E+09	1,007563E+10
425	1,589501E+09	1,589517E+09	3,448412E+09	3,448277E+09	3,179018E+09	6,896689E+09	1,007571E+10
426	1,589427E+09	1,589436E+09	3,448312E+09	3,448346E+09	3,178863E+09	6,896658E+09	1,007552E+10
427	1,589553E+09	1,589550E+09	3,448311E+09	3,448309E+09	3,179104E+09	6,896620E+09	1,007572E+10
428	1,589537E+09	1,589575E+09	3,448331E+09	3,448259E+09	3,179112E+09	6,896590E+09	1,007570E+10
429	1,589536E+09	1,589557E+09	3,448202E+09	3,448287E+09	3,179093E+09	6,896489E+09	1,007558E+10
430	1,589685E+09	1,589693E+09	3,448240E+09	3,448194E+09	3,179379E+09	6,896434E+09	1,007581E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
431	1,589633E+09	1,589637E+09	3,448214E+09	3,448188E+09	3,179270E+09	6,896402E+09	1,007567E+10
432	1,589690E+09	1,589652E+09	3,448159E+09	3,448188E+09	3,179342E+09	6,896347E+09	1,007569E+10
433	1,589751E+09	1,589756E+09	3,448207E+09	3,448120E+09	3,179507E+09	6,896327E+09	1,007583E+10
434	1,589643E+09	1,589662E+09	3,448124E+09	3,448196E+09	3,179306E+09	6,896320E+09	1,007563E+10
435	1,589713E+09	1,589717E+09	3,448166E+09	3,448194E+09	3,179430E+09	6,896360E+09	1,007579E+10
436	1,589682E+09	1,589708E+09	3,448272E+09	3,448159E+09	3,179390E+09	6,896431E+09	1,007582E+10
437	1,589594E+09	1,589585E+09	3,448198E+09	3,448248E+09	3,179179E+09	6,896446E+09	1,007563E+10
438	1,589672E+09	1,589653E+09	3,448269E+09	3,448236E+09	3,179325E+09	6,896504E+09	1,007583E+10
439	1,589574E+09	1,589567E+09	3,448289E+09	3,448268E+09	3,179142E+09	6,896557E+09	1,007570E+10
440	1,589539E+09	1,589522E+09	3,448234E+09	3,448318E+09	3,179061E+09	6,896552E+09	1,007561E+10
441	1,589599E+09	1,589618E+09	3,448310E+09	3,448256E+09	3,179217E+09	6,896566E+09	1,007578E+10
442	1,589491E+09	1,589507E+09	3,448265E+09	3,448283E+09	3,178998E+09	6,896548E+09	1,007555E+10
443	1,589555E+09	1,589543E+09	3,448269E+09	3,448276E+09	3,179098E+09	6,896545E+09	1,007564E+10
444	1,589594E+09	1,589599E+09	3,448336E+09	3,448208E+09	3,179193E+09	6,896545E+09	1,007574E+10
445	1,589524E+09	1,589534E+09	3,448197E+09	3,448260E+09	3,179058E+09	6,896457E+09	1,007552E+10
446	1,589650E+09	1,589666E+09	3,448201E+09	3,448214E+09	3,179316E+09	6,896415E+09	1,007573E+10
447	1,589648E+09	1,589674E+09	3,448218E+09	3,448159E+09	3,179322E+09	6,896377E+09	1,007570E+10
448	1,589655E+09	1,589651E+09	3,448123E+09	3,448165E+09	3,179306E+09	6,896288E+09	1,007559E+10
449	1,589791E+09	1,589789E+09	3,448161E+09	3,448084E+09	3,179580E+09	6,896246E+09	1,007583E+10
450	1,589731E+09	1,589730E+09	3,448096E+09	3,448086E+09	3,179461E+09	6,896182E+09	1,007564E+10
451	1,589779E+09	1,589765E+09	3,448044E+09	3,448117E+09	3,179543E+09	6,896161E+09	1,007570E+10
452	1,589833E+09	1,589855E+09	3,448130E+09	3,448054E+09	3,179688E+09	6,896184E+09	1,007587E+10
453	1,589727E+09	1,589755E+09	3,448056E+09	3,448105E+09	3,179482E+09	6,896161E+09	1,007564E+10
454	1,589796E+09	1,589802E+09	3,448116E+09	3,448104E+09	3,179598E+09	6,896220E+09	1,007582E+10
455	1,589771E+09	1,589769E+09	3,448200E+09	3,448095E+09	3,179539E+09	6,896296E+09	1,007584E+10
456	1,589682E+09	1,589652E+09	3,448129E+09	3,448181E+09	3,179334E+09	6,896309E+09	1,007564E+10
457	1,589741E+09	1,589735E+09	3,448177E+09	3,448171E+09	3,179476E+09	6,896348E+09	1,007582E+10
458	1,589644E+09	1,589652E+09	3,448170E+09	3,448182E+09	3,179295E+09	6,896352E+09	1,007565E+10
459	1,589619E+09	1,589616E+09	3,448135E+09	3,448226E+09	3,179235E+09	6,896361E+09	1,007560E+10
460	1,589687E+09	1,589691E+09	3,448248E+09	3,448157E+09	3,179378E+09	6,896406E+09	1,007578E+10
461	1,589587E+09	1,589589E+09	3,448183E+09	3,448172E+09	3,179177E+09	6,896356E+09	1,007553E+10
462	1,589647E+09	1,589642E+09	3,448182E+09	3,448179E+09	3,179288E+09	6,896361E+09	1,007565E+10
463	1,589689E+09	1,589699E+09	3,448227E+09	3,448137E+09	3,179388E+09	6,896365E+09	1,007575E+10
464	1,589623E+09	1,589642E+09	3,448114E+09	3,448170E+09	3,179265E+09	6,896284E+09	1,007555E+10
465	1,589744E+09	1,589771E+09	3,448129E+09	3,448121E+09	3,179515E+09	6,896250E+09	1,007577E+10
466	1,589751E+09	1,589766E+09	3,448115E+09	3,448055E+09	3,179517E+09	6,896170E+09	1,007569E+10
467	1,589764E+09	1,589750E+09	3,448014E+09	3,448081E+09	3,179514E+09	6,896095E+09	1,007561E+10
468	1,589893E+09	1,589880E+09	3,448066E+09	3,448008E+09	3,179774E+09	6,896074E+09	1,007585E+10
469	1,589828E+09	1,589841E+09	3,447976E+09	3,447990E+09	3,179668E+09	6,895966E+09	1,007563E+10
470	1,589865E+09	1,589880E+09	3,447956E+09	3,448015E+09	3,179745E+09	6,895971E+09	1,007572E+10
471	1,589925E+09	1,589943E+09	3,448055E+09	3,447967E+09	3,179868E+09	6,896022E+09	1,007589E+10
472	1,589822E+09	1,589825E+09	3,448010E+09	3,448008E+09	3,179648E+09	6,896018E+09	1,007567E+10
473	1,589874E+09	1,589870E+09	3,448060E+09	3,448030E+09	3,179745E+09	6,896090E+09	1,007584E+10
474	1,589846E+09	1,589835E+09	3,448087E+09	3,448025E+09	3,179681E+09	6,896113E+09	1,007579E+10
475	1,589754E+09	1,589742E+09	3,448010E+09	3,448124E+09	3,179495E+09	6,896134E+09	1,007563E+10
476	1,589815E+09	1,589816E+09	3,448097E+09	3,448103E+09	3,179631E+09	6,896200E+09	1,007583E+10
477	1,589726E+09	1,589738E+09	3,448088E+09	3,448073E+09	3,179464E+09	6,896161E+09	1,007563E+10
478	1,589706E+09	1,589704E+09	3,448080E+09	3,448114E+09	3,179410E+09	6,896194E+09	1,007560E+10
479	1,589780E+09	1,589766E+09	3,448173E+09	3,448077E+09	3,179545E+09	6,896250E+09	1,007580E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
480	1,589680E+09	1,589676E+09	3,448112E+09	3,448092E+09	3,179356E+09	6,896204E+09	1,007556E+10
481	1,589724E+09	1,589746E+09	3,448092E+09	3,448112E+09	3,179470E+09	6,896204E+09	1,007567E+10
482	1,589774E+09	1,589798E+09	3,448104E+09	3,448052E+09	3,179572E+09	6,896156E+09	1,007573E+10
483	1,589727E+09	1,589748E+09	3,448003E+09	3,448079E+09	3,179474E+09	6,896082E+09	1,007556E+10
484	1,589860E+09	1,589856E+09	3,448042E+09	3,448022E+09	3,179715E+09	6,896064E+09	1,007578E+10
485	1,589869E+09	1,589866E+09	3,447998E+09	3,447935E+09	3,179735E+09	6,895933E+09	1,007567E+10
486	1,589872E+09	1,589868E+09	3,447908E+09	3,447967E+09	3,179740E+09	6,895875E+09	1,007561E+10
487	1,589991E+09	1,589991E+09	3,447960E+09	3,447922E+09	3,179982E+09	6,895882E+09	1,007586E+10
488	1,589922E+09	1,589949E+09	3,447921E+09	3,447891E+09	3,179871E+09	6,895812E+09	1,007568E+10
489	1,589943E+09	1,589974E+09	3,447915E+09	3,447928E+09	3,179917E+09	6,895842E+09	1,007576E+10
490	1,590003E+09	1,590011E+09	3,447980E+09	3,447890E+09	3,180014E+09	6,895870E+09	1,007588E+10
491	1,589907E+09	1,589897E+09	3,447921E+09	3,447958E+09	3,179804E+09	6,895879E+09	1,007568E+10
492	1,589954E+09	1,589930E+09	3,447968E+09	3,447987E+09	3,179883E+09	6,895954E+09	1,007584E+10
493	1,589924E+09	1,589920E+09	3,447961E+09	3,447947E+09	3,179844E+09	6,895908E+09	1,007575E+10
494	1,589834E+09	1,589837E+09	3,447915E+09	3,448017E+09	3,179671E+09	6,895932E+09	1,007560E+10
495	1,589902E+09	1,589892E+09	3,448020E+09	3,448000E+09	3,179794E+09	6,896020E+09	1,007581E+10
496	1,589820E+09	1,589815E+09	3,448045E+09	3,447956E+09	3,179635E+09	6,896001E+09	1,007564E+10
497	1,589782E+09	1,589789E+09	3,448027E+09	3,448028E+09	3,179571E+09	6,896055E+09	1,007563E+10
498	1,589851E+09	1,589852E+09	3,448069E+09	3,448008E+09	3,179704E+09	6,896077E+09	1,007578E+10
499	1,589761E+09	1,589783E+09	3,448004E+09	3,448040E+09	3,179543E+09	6,896043E+09	1,007559E+10
500	1,589813E+09	1,589836E+09	3,448011E+09	3,448048E+09	3,179649E+09	6,896059E+09	1,007571E+10
501	1,589879E+09	1,589895E+09	3,448002E+09	3,447944E+09	3,179774E+09	6,895946E+09	1,007572E+10
502	1,589842E+09	1,589849E+09	3,447916E+09	3,447957E+09	3,179692E+09	6,895873E+09	1,007557E+10
503	1,589978E+09	1,589948E+09	3,447937E+09	3,447925E+09	3,179925E+09	6,895862E+09	1,007579E+10
504	1,589980E+09	1,589972E+09	3,447902E+09	3,447825E+09	3,179953E+09	6,895727E+09	1,007568E+10
505	1,589958E+09	1,589988E+09	3,447819E+09	3,447873E+09	3,179946E+09	6,895692E+09	1,007564E+10
506	1,590073E+09	1,590091E+09	3,447856E+09	3,447824E+09	3,180164E+09	6,895681E+09	1,007584E+10
507	1,590013E+09	1,590041E+09	3,447841E+09	3,447810E+09	3,180055E+09	6,895651E+09	1,007571E+10
508	1,590036E+09	1,590037E+09	3,447854E+09	3,447860E+09	3,180073E+09	6,895715E+09	1,007579E+10
509	1,590096E+09	1,590083E+09	3,447871E+09	3,447809E+09	3,180179E+09	6,895680E+09	1,007586E+10
510	1,589996E+09	1,589988E+09	3,447814E+09	3,447874E+09	3,179985E+09	6,895688E+09	1,007567E+10
511	1,590038E+09	1,590016E+09	3,447857E+09	3,447914E+09	3,180053E+09	6,895771E+09	1,007582E+10
512	1,590008E+09	1,590010E+09	3,447900E+09	3,447840E+09	3,180018E+09	6,895740E+09	1,007576E+10
513	1,589905E+09	1,589927E+09	3,447879E+09	3,447917E+09	3,179832E+09	6,895796E+09	1,007563E+10
514	1,589971E+09	1,589963E+09	3,447955E+09	3,447911E+09	3,179934E+09	6,895866E+09	1,007580E+10
515	1,589897E+09	1,589896E+09	3,447974E+09	3,447902E+09	3,179794E+09	6,895876E+09	1,007567E+10
516	1,589856E+09	1,589863E+09	3,447950E+09	3,447987E+09	3,179719E+09	6,895937E+09	1,007566E+10
517	1,589931E+09	1,589947E+09	3,447948E+09	3,447935E+09	3,179878E+09	6,895883E+09	1,007576E+10
518	1,589860E+09	1,589885E+09	3,447903E+09	3,447935E+09	3,179745E+09	6,895838E+09	1,007558E+10
519	1,589927E+09	1,589918E+09	3,447909E+09	3,447942E+09	3,179845E+09	6,895852E+09	1,007570E+10
520	1,590003E+09	1,589986E+09	3,447921E+09	3,447812E+09	3,179990E+09	6,895733E+09	1,007572E+10
521	1,589948E+09	1,589958E+09	3,447825E+09	3,447840E+09	3,179907E+09	6,895665E+09	1,007557E+10
522	1,590067E+09	1,590057E+09	3,447813E+09	3,447823E+09	3,180124E+09	6,895636E+09	1,007576E+10
523	1,590071E+09	1,590097E+09	3,447802E+09	3,447747E+09	3,180169E+09	6,895549E+09	1,007572E+10
524	1,590045E+09	1,590082E+09	3,447758E+09	3,447803E+09	3,180127E+09	6,895562E+09	1,007569E+10
525	1,590163E+09	1,590182E+09	3,447775E+09	3,447735E+09	3,180345E+09	6,895510E+09	1,007585E+10
526	1,590116E+09	1,590125E+09	3,447766E+09	3,447722E+09	3,180242E+09	6,895488E+09	1,007573E+10
527	1,590136E+09	1,590104E+09	3,447754E+09	3,447799E+09	3,180240E+09	6,895553E+09	1,007579E+10
528	1,590190E+09	1,590169E+09	3,447773E+09	3,447722E+09	3,180359E+09	6,895495E+09	1,007585E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
529	1,590070E+09	1,590090E+09	3,447725E+09	3,447782E+09	3,180159E+09	6,895506E+09	1,007567E+10
530	1,590106E+09	1,590100E+09	3,447764E+09	3,447811E+09	3,180206E+09	6,895574E+09	1,007578E+10
531	1,590088E+09	1,590093E+09	3,447838E+09	3,447750E+09	3,180181E+09	6,895588E+09	1,007577E+10
532	1,589982E+09	1,589988E+09	3,447839E+09	3,447849E+09	3,179969E+09	6,895688E+09	1,007566E+10
533	1,590044E+09	1,590039E+09	3,447864E+09	3,447838E+09	3,180083E+09	6,895703E+09	1,007579E+10
534	1,589978E+09	1,589989E+09	3,447884E+09	3,447832E+09	3,179967E+09	6,895715E+09	1,007568E+10
535	1,589944E+09	1,589948E+09	3,447850E+09	3,447926E+09	3,179892E+09	6,895776E+09	1,007567E+10
536	1,590033E+09	1,590035E+09	3,447870E+09	3,447826E+09	3,180069E+09	6,895696E+09	1,007577E+10
537	1,589959E+09	1,589984E+09	3,447832E+09	3,447821E+09	3,179943E+09	6,895653E+09	1,007560E+10
538	1,590029E+09	1,590007E+09	3,447799E+09	3,447832E+09	3,180035E+09	6,895631E+09	1,007567E+10
539	1,590108E+09	1,590092E+09	3,447811E+09	3,447725E+09	3,180200E+09	6,895537E+09	1,007574E+10
540	1,590042E+09	1,590063E+09	3,447729E+09	3,447769E+09	3,180105E+09	6,895497E+09	1,007560E+10
541	1,590155E+09	1,590174E+09	3,447691E+09	3,447724E+09	3,180329E+09	6,895415E+09	1,007574E+10
542	1,590173E+09	1,590209E+09	3,447719E+09	3,447637E+09	3,180382E+09	6,895356E+09	1,007574E+10
543	1,590155E+09	1,590164E+09	3,447677E+09	3,447713E+09	3,180319E+09	6,895390E+09	1,007571E+10
544	1,590276E+09	1,590262E+09	3,447700E+09	3,447629E+09	3,180539E+09	6,895329E+09	1,007587E+10
545	1,590211E+09	1,590222E+09	3,447677E+09	3,447635E+09	3,180432E+09	6,895313E+09	1,007574E+10
546	1,590215E+09	1,590196E+09	3,447629E+09	3,447718E+09	3,180411E+09	6,895348E+09	1,007576E+10
547	1,590269E+09	1,590270E+09	3,447682E+09	3,447648E+09	3,180538E+09	6,895331E+09	1,007587E+10
548	1,590142E+09	1,590167E+09	3,447680E+09	3,447707E+09	3,180310E+09	6,895387E+09	1,007570E+10
549	1,590176E+09	1,590175E+09	3,447701E+09	3,447718E+09	3,180351E+09	6,895419E+09	1,007577E+10
550	1,590172E+09	1,590167E+09	3,447785E+09	3,447671E+09	3,180340E+09	6,895457E+09	1,007580E+10
551	1,590064E+09	1,590048E+09	3,447756E+09	3,447802E+09	3,180112E+09	6,895559E+09	1,007567E+10
552	1,590128E+09	1,590121E+09	3,447774E+09	3,447765E+09	3,180248E+09	6,895539E+09	1,007579E+10
553	1,590058E+09	1,590088E+09	3,447789E+09	3,447744E+09	3,180145E+09	6,895533E+09	1,007568E+10
554	1,590029E+09	1,590031E+09	3,447737E+09	3,447819E+09	3,180060E+09	6,895556E+09	1,007562E+10
555	1,590139E+09	1,590126E+09	3,447780E+09	3,447722E+09	3,180265E+09	6,895502E+09	1,007577E+10
556	1,590062E+09	1,590068E+09	3,447751E+09	3,447727E+09	3,180131E+09	6,895478E+09	1,007561E+10
557	1,590123E+09	1,590114E+09	3,447676E+09	3,447726E+09	3,180237E+09	6,895401E+09	1,007564E+10
558	1,590209E+09	1,590217E+09	3,447703E+09	3,447625E+09	3,180425E+09	6,895329E+09	1,007575E+10
559	1,590140E+09	1,590171E+09	3,447638E+09	3,447687E+09	3,180311E+09	6,895324E+09	1,007564E+10
560	1,590258E+09	1,590278E+09	3,447630E+09	3,447612E+09	3,180536E+09	6,895242E+09	1,007578E+10
561	1,590274E+09	1,590309E+09	3,447663E+09	3,447538E+09	3,180583E+09	6,895201E+09	1,007578E+10
562	1,590253E+09	1,590243E+09	3,447577E+09	3,447630E+09	3,180496E+09	6,895208E+09	1,007570E+10
563	1,590376E+09	1,590352E+09	3,447595E+09	3,447565E+09	3,180727E+09	6,895160E+09	1,007589E+10
564	1,590295E+09	1,590310E+09	3,447578E+09	3,447576E+09	3,180605E+09	6,895155E+09	1,007576E+10
565	1,590292E+09	1,590292E+09	3,447511E+09	3,447621E+09	3,180584E+09	6,895132E+09	1,007572E+10
566	1,590357E+09	1,590357E+09	3,447608E+09	3,447542E+09	3,180715E+09	6,895149E+09	1,007586E+10
567	1,590233E+09	1,590232E+09	3,447621E+09	3,447624E+09	3,180466E+09	6,895244E+09	1,007571E+10
568	1,590265E+09	1,590244E+09	3,447641E+09	3,447619E+09	3,180509E+09	6,895260E+09	1,007577E+10
569	1,590245E+09	1,590255E+09	3,447713E+09	3,447597E+09	3,180500E+09	6,895310E+09	1,007581E+10
570	1,590132E+09	1,590134E+09	3,447644E+09	3,447737E+09	3,180266E+09	6,895381E+09	1,007565E+10
571	1,590206E+09	1,590210E+09	3,447685E+09	3,447697E+09	3,180417E+09	6,895382E+09	1,007580E+10
572	1,590141E+09	1,590167E+09	3,447725E+09	3,447670E+09	3,180308E+09	6,895395E+09	1,007570E+10
573	1,590120E+09	1,590117E+09	3,447635E+09	3,447712E+09	3,180238E+09	6,895347E+09	1,007558E+10
574	1,590245E+09	1,590220E+09	3,447688E+09	3,447619E+09	3,180466E+09	6,895307E+09	1,007577E+10
575	1,590166E+09	1,590164E+09	3,447647E+09	3,447646E+09	3,180330E+09	6,895292E+09	1,007562E+10
576	1,590222E+09	1,590229E+09	3,447577E+09	3,447615E+09	3,180451E+09	6,895191E+09	1,007564E+10
577	1,590301E+09	1,590340E+09	3,447623E+09	3,447517E+09	3,180641E+09	6,895139E+09	1,007578E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
578	1,590238E+09	1,590266E+09	3,447544E+09	3,447581E+09	3,180504E+09	6,895125E+09	1,007563E+10
579	1,590368E+09	1,590367E+09	3,447554E+09	3,447524E+09	3,180736E+09	6,895078E+09	1,007581E+10
580	1,590378E+09	1,590390E+09	3,447580E+09	3,447471E+09	3,180769E+09	6,895051E+09	1,007582E+10
581	1,590346E+09	1,590341E+09	3,447443E+09	3,447548E+09	3,180686E+09	6,894991E+09	1,007568E+10
582	1,590473E+09	1,590459E+09	3,447482E+09	3,447480E+09	3,180932E+09	6,894962E+09	1,007589E+10
583	1,590387E+09	1,590399E+09	3,447488E+09	3,447493E+09	3,180786E+09	6,894980E+09	1,007577E+10
584	1,590381E+09	1,590380E+09	3,447456E+09	3,447504E+09	3,180761E+09	6,894960E+09	1,007572E+10
585	1,590438E+09	1,590444E+09	3,447564E+09	3,447443E+09	3,180882E+09	6,895007E+09	1,007589E+10
586	1,590306E+09	1,590297E+09	3,447542E+09	3,447554E+09	3,180603E+09	6,895096E+09	1,007570E+10
587	1,590336E+09	1,590322E+09	3,447562E+09	3,447574E+09	3,180658E+09	6,895136E+09	1,007579E+10
588	1,590309E+09	1,590332E+09	3,447628E+09	3,447556E+09	3,180641E+09	6,895185E+09	1,007583E+10
589	1,590201E+09	1,590218E+09	3,447530E+09	3,447648E+09	3,180419E+09	6,895178E+09	1,007560E+10
590	1,590303E+09	1,590291E+09	3,447595E+09	3,447592E+09	3,180594E+09	6,895188E+09	1,007578E+10
591	1,590247E+09	1,590239E+09	3,447637E+09	3,447572E+09	3,180486E+09	6,895209E+09	1,007570E+10
592	1,590227E+09	1,590211E+09	3,447546E+09	3,447588E+09	3,180438E+09	6,895135E+09	1,007557E+10
593	1,590338E+09	1,590338E+09	3,447597E+09	3,447513E+09	3,180676E+09	6,895111E+09	1,007579E+10
594	1,590252E+09	1,590276E+09	3,447540E+09	3,447553E+09	3,180528E+09	6,895094E+09	1,007562E+10
595	1,590315E+09	1,590339E+09	3,447507E+09	3,447530E+09	3,180654E+09	6,895037E+09	1,007569E+10
596	1,590393E+09	1,590433E+09	3,447568E+09	3,447446E+09	3,180826E+09	6,895015E+09	1,007584E+10
597	1,590339E+09	1,590357E+09	3,447442E+09	3,447493E+09	3,180696E+09	6,894935E+09	1,007563E+10
598	1,590484E+09	1,590455E+09	3,447444E+09	3,447446E+09	3,180940E+09	6,894890E+09	1,007583E+10
599	1,590488E+09	1,590483E+09	3,447453E+09	3,447406E+09	3,180971E+09	6,894859E+09	1,007583E+10
600	1,590450E+09	1,590451E+09	3,447320E+09	3,447431E+09	3,180901E+09	6,894751E+09	1,007565E+10
601	1,590562E+09	1,590570E+09	3,447396E+09	3,447357E+09	3,181132E+09	6,894752E+09	1,007588E+10
602	1,590473E+09	1,590485E+09	3,447410E+09	3,447379E+09	3,180957E+09	6,894788E+09	1,007575E+10
603	1,590466E+09	1,590456E+09	3,447409E+09	3,447416E+09	3,180922E+09	6,894824E+09	1,007575E+10
604	1,590507E+09	1,590514E+09	3,447511E+09	3,447395E+09	3,181021E+09	6,894906E+09	1,007593E+10
605	1,590369E+09	1,590378E+09	3,447436E+09	3,447496E+09	3,180747E+09	6,894932E+09	1,007568E+10
606	1,590411E+09	1,590404E+09	3,447469E+09	3,447515E+09	3,180815E+09	6,894984E+09	1,007580E+10
607	1,590392E+09	1,590402E+09	3,447547E+09	3,447491E+09	3,180795E+09	6,895039E+09	1,007583E+10
608	1,590296E+09	1,590298E+09	3,447458E+09	3,447532E+09	3,180594E+09	6,894989E+09	1,007558E+10
609	1,590398E+09	1,590380E+09	3,447528E+09	3,447483E+09	3,180777E+09	6,895011E+09	1,007579E+10
610	1,590340E+09	1,590324E+09	3,447537E+09	3,447480E+09	3,180663E+09	6,895017E+09	1,007568E+10
611	1,590316E+09	1,590315E+09	3,447459E+09	3,447510E+09	3,180631E+09	6,894969E+09	1,007560E+10
612	1,590416E+09	1,590445E+09	3,447513E+09	3,447447E+09	3,180861E+09	6,894961E+09	1,007582E+10
613	1,590337E+09	1,590379E+09	3,447435E+09	3,447456E+09	3,180716E+09	6,894891E+09	1,007561E+10
614	1,590426E+09	1,590431E+09	3,447420E+09	3,447436E+09	3,180857E+09	6,894856E+09	1,007571E+10
615	1,590512E+09	1,590512E+09	3,447467E+09	3,447363E+09	3,181024E+09	6,894831E+09	1,007585E+10
616	1,590459E+09	1,590458E+09	3,447323E+09	3,447379E+09	3,180917E+09	6,894703E+09	1,007562E+10
617	1,590590E+09	1,590576E+09	3,447326E+09	3,447339E+09	3,181166E+09	6,894664E+09	1,007583E+10
618	1,590581E+09	1,590592E+09	3,447332E+09	3,447301E+09	3,181174E+09	6,894633E+09	1,007581E+10
619	1,590540E+09	1,590555E+09	3,447261E+09	3,447327E+09	3,181095E+09	6,894587E+09	1,007568E+10
620	1,590638E+09	1,590653E+09	3,447359E+09	3,447277E+09	3,181291E+09	6,894636E+09	1,007593E+10
621	1,590546E+09	1,590559E+09	3,447342E+09	3,447299E+09	3,181105E+09	6,894640E+09	1,007574E+10
622	1,590547E+09	1,590526E+09	3,447333E+09	3,447365E+09	3,181073E+09	6,894699E+09	1,007577E+10
623	1,590582E+09	1,590582E+09	3,447414E+09	3,447361E+09	3,181164E+09	6,894775E+09	1,007594E+10
624	1,590450E+09	1,590464E+09	3,447333E+09	3,447408E+09	3,180914E+09	6,894741E+09	1,007565E+10
625	1,590495E+09	1,590489E+09	3,447386E+09	3,447410E+09	3,180984E+09	6,894796E+09	1,007578E+10
626	1,590483E+09	1,590473E+09	3,447456E+09	3,447383E+09	3,180956E+09	6,894839E+09	1,007580E+10



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
627	1,590393E+09	1,590379E+09	3,447392E+09	3,447429E+09	3,180772E+09	6,894820E+09	1,007559E+10
628	1,590476E+09	1,590470E+09	3,447455E+09	3,447411E+09	3,180946E+09	6,894866E+09	1,007581E+10
629	1,590414E+09	1,590432E+09	3,447426E+09	3,447396E+09	3,180846E+09	6,894821E+09	1,007567E+10
630	1,590404E+09	1,590421E+09	3,447366E+09	3,447434E+09	3,180824E+09	6,894800E+09	1,007562E+10
631	1,590509E+09	1,590536E+09	3,447436E+09	3,447375E+09	3,181046E+09	6,894811E+09	1,007586E+10
632	1,590449E+09	1,590477E+09	3,447349E+09	3,447340E+09	3,180925E+09	6,894690E+09	1,007561E+10
633	1,590539E+09	1,590527E+09	3,447331E+09	3,447329E+09	3,181067E+09	6,894661E+09	1,007573E+10
634	1,590623E+09	1,590607E+09	3,447342E+09	3,447272E+09	3,181229E+09	6,894613E+09	1,007584E+10
635	1,590565E+09	1,590570E+09	3,447214E+09	3,447282E+09	3,181136E+09	6,894496E+09	1,007563E+10
636	1,590675E+09	1,590687E+09	3,447233E+09	3,447249E+09	3,181362E+09	6,894482E+09	1,007584E+10
637	1,590666E+09	1,590693E+09	3,447235E+09	3,447183E+09	3,181359E+09	6,894418E+09	1,007578E+10
638	1,590637E+09	1,590638E+09	3,447195E+09	3,447233E+09	3,181275E+09	6,894427E+09	1,007570E+10
639	1,590727E+09	1,590721E+09	3,447292E+09	3,447215E+09	3,181448E+09	6,894507E+09	1,007596E+10
640	1,590635E+09	1,590642E+09	3,447254E+09	3,447219E+09	3,181277E+09	6,894473E+09	1,007575E+10
641	1,590625E+09	1,590618E+09	3,447247E+09	3,447295E+09	3,181242E+09	6,894542E+09	1,007578E+10
642	1,590658E+09	1,590660E+09	3,447315E+09	3,447289E+09	3,181318E+09	6,894604E+09	1,007592E+10
643	1,590533E+09	1,590543E+09	3,447277E+09	3,447319E+09	3,181076E+09	6,894596E+09	1,007567E+10
644	1,590571E+09	1,590563E+09	3,447332E+09	3,447334E+09	3,181133E+09	6,894666E+09	1,007580E+10
645	1,590561E+09	1,590548E+09	3,447365E+09	3,447293E+09	3,181109E+09	6,894658E+09	1,007577E+10
646	1,590481E+09	1,590466E+09	3,447301E+09	3,447362E+09	3,180947E+09	6,894663E+09	1,007561E+10
647	1,590556E+09	1,590561E+09	3,447353E+09	3,447348E+09	3,181117E+09	6,894702E+09	1,007582E+10
648	1,590504E+09	1,590539E+09	3,447326E+09	3,447286E+09	3,181043E+09	6,894612E+09	1,007565E+10
649	1,590502E+09	1,590521E+09	3,447290E+09	3,447317E+09	3,181023E+09	6,894607E+09	1,007563E+10
650	1,590616E+09	1,590617E+09	3,447338E+09	3,447268E+09	3,181234E+09	6,894605E+09	1,007584E+10
651	1,590566E+09	1,590570E+09	3,447266E+09	3,447237E+09	3,181136E+09	6,894502E+09	1,007564E+10
652	1,590639E+09	1,590632E+09	3,447226E+09	3,447251E+09	3,181271E+09	6,894477E+09	1,007575E+10
653	1,590715E+09	1,590722E+09	3,447208E+09	3,447170E+09	3,181437E+09	6,894378E+09	1,007581E+10
654	1,590666E+09	1,590684E+09	3,447116E+09	3,447187E+09	3,181350E+09	6,894302E+09	1,007565E+10
655	1,590769E+09	1,590780E+09	3,447164E+09	3,447160E+09	3,181549E+09	6,894324E+09	1,007587E+10
656	1,590767E+09	1,590787E+09	3,447169E+09	3,447073E+09	3,181555E+09	6,894242E+09	1,007580E+10
657	1,590732E+09	1,590723E+09	3,447133E+09	3,447149E+09	3,181455E+09	6,894282E+09	1,007574E+10
658	1,590810E+09	1,590798E+09	3,447192E+09	3,447159E+09	3,181609E+09	6,894351E+09	1,007596E+10
659	1,590719E+09	1,590731E+09	3,447168E+09	3,447155E+09	3,181450E+09	6,894323E+09	1,007577E+10
660	1,590692E+09	1,590701E+09	3,447165E+09	3,447231E+09	3,181393E+09	6,894397E+09	1,007579E+10
661	1,590732E+09	1,590734E+09	3,447221E+09	3,447187E+09	3,181466E+09	6,894408E+09	1,007587E+10
662	1,590627E+09	1,590612E+09	3,447196E+09	3,447224E+09	3,181239E+09	6,894420E+09	1,007566E+10
663	1,590656E+09	1,590633E+09	3,447251E+09	3,447257E+09	3,181289E+09	6,894508E+09	1,007580E+10
664	1,590649E+09	1,590648E+09	3,447265E+09	3,447190E+09	3,181297E+09	6,894455E+09	1,007575E+10
665	1,590561E+09	1,590572E+09	3,447219E+09	3,447268E+09	3,181133E+09	6,894487E+09	1,007562E+10
666	1,590635E+09	1,590654E+09	3,447269E+09	3,447263E+09	3,181289E+09	6,894532E+09	1,007582E+10
667	1,590600E+09	1,590628E+09	3,447277E+09	3,447189E+09	3,181229E+09	6,894465E+09	1,007569E+10
668	1,590593E+09	1,590606E+09	3,447226E+09	3,447241E+09	3,181199E+09	6,894467E+09	1,007567E+10
669	1,590715E+09	1,590702E+09	3,447223E+09	3,447177E+09	3,181418E+09	6,894400E+09	1,007582E+10
670	1,590677E+09	1,590672E+09	3,447138E+09	3,447161E+09	3,181350E+09	6,894299E+09	1,007565E+10
671	1,590741E+09	1,590742E+09	3,447098E+09	3,447172E+09	3,181482E+09	6,894270E+09	1,007575E+10
672	1,590822E+09	1,590842E+09	3,447094E+09	3,447038E+09	3,181665E+09	6,894132E+09	1,007580E+10
673	1,590773E+09	1,590791E+09	3,447046E+09	3,447056E+09	3,181565E+09	6,894103E+09	1,007567E+10
674	1,590869E+09	1,590865E+09	3,447086E+09	3,447057E+09	3,181733E+09	6,894143E+09	1,007588E+10
675	1,590867E+09	1,590875E+09	3,447111E+09	3,446990E+09	3,181742E+09	6,894101E+09	1,007584E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
676	1,590807E+09	1,590816E+09	3,447054E+09	3,447101E+09	3,181624E+09	6,894155E+09	1,007578E+10
677	1,590879E+09	1,590884E+09	3,447080E+09	3,447090E+09	3,181763E+09	6,894169E+09	1,007593E+10
678	1,590803E+09	1,590814E+09	3,447080E+09	3,447088E+09	3,181617E+09	6,894168E+09	1,007578E+10
679	1,590774E+09	1,590768E+09	3,447089E+09	3,447155E+09	3,181542E+09	6,894244E+09	1,007579E+10
680	1,590823E+09	1,590809E+09	3,447140E+09	3,447075E+09	3,181631E+09	6,894215E+09	1,007585E+10
681	1,590715E+09	1,590694E+09	3,447129E+09	3,447126E+09	3,181408E+09	6,894255E+09	1,007566E+10
682	1,590731E+09	1,590715E+09	3,447153E+09	3,447181E+09	3,181446E+09	6,894334E+09	1,007578E+10
683	1,590729E+09	1,590745E+09	3,447194E+09	3,447107E+09	3,181474E+09	6,894300E+09	1,007577E+10
684	1,590632E+09	1,590665E+09	3,447150E+09	3,447193E+09	3,181297E+09	6,894343E+09	1,007564E+10
685	1,590717E+09	1,590731E+09	3,447178E+09	3,447161E+09	3,181448E+09	6,894339E+09	1,007579E+10
686	1,590710E+09	1,590710E+09	3,447180E+09	3,447106E+09	3,181420E+09	6,894287E+09	1,007571E+10
687	1,590701E+09	1,590694E+09	3,447112E+09	3,447168E+09	3,181395E+09	6,894280E+09	1,007568E+10
688	1,590828E+09	1,590820E+09	3,447087E+09	3,447066E+09	3,181648E+09	6,894153E+09	1,007580E+10
689	1,590786E+09	1,590801E+09	3,447031E+09	3,447041E+09	3,181587E+09	6,894073E+09	1,007566E+10
690	1,590840E+09	1,590855E+09	3,447003E+09	3,447058E+09	3,181695E+09	6,894061E+09	1,007576E+10
691	1,590930E+09	1,590948E+09	3,447047E+09	3,446923E+09	3,181878E+09	6,893970E+09	1,007585E+10
692	1,590862E+09	1,590885E+09	3,446998E+09	3,446982E+09	3,181747E+09	6,893980E+09	1,007573E+10
693	1,590951E+09	1,590946E+09	3,446996E+09	3,446987E+09	3,181898E+09	6,893982E+09	1,007588E+10
694	1,590959E+09	1,590963E+09	3,447001E+09	3,446945E+09	3,181922E+09	6,893945E+09	1,007587E+10
695	1,590888E+09	1,590900E+09	3,446943E+09	3,447049E+09	3,181788E+09	6,893992E+09	1,007578E+10
696	1,590970E+09	1,590971E+09	3,446971E+09	3,446978E+09	3,181941E+09	6,893949E+09	1,007589E+10
697	1,590898E+09	1,590891E+09	3,447005E+09	3,446965E+09	3,181789E+09	6,893970E+09	1,007576E+10
698	1,590863E+09	1,590836E+09	3,447005E+09	3,447053E+09	3,181699E+09	6,894058E+09	1,007576E+10
699	1,590911E+09	1,590890E+09	3,447078E+09	3,446981E+09	3,181801E+09	6,894060E+09	1,007586E+10
700	1,590777E+09	1,590790E+09	3,447062E+09	3,447066E+09	3,181567E+09	6,894128E+09	1,007569E+10
701	1,590788E+09	1,590805E+09	3,447065E+09	3,447105E+09	3,181592E+09	6,894170E+09	1,007576E+10
702	1,590808E+09	1,590831E+09	3,447122E+09	3,447045E+09	3,181638E+09	6,894167E+09	1,007581E+10
703	1,590719E+09	1,590739E+09	3,447079E+09	3,447130E+09	3,181458E+09	6,894209E+09	1,007567E+10
704	1,590824E+09	1,590813E+09	3,447076E+09	3,447061E+09	3,181638E+09	6,894138E+09	1,007578E+10
705	1,590823E+09	1,590807E+09	3,447076E+09	3,447008E+09	3,181630E+09	6,894083E+09	1,007571E+10
706	1,590807E+09	1,590802E+09	3,446976E+09	3,447074E+09	3,181609E+09	6,894050E+09	1,007566E+10
707	1,590936E+09	1,590941E+09	3,446991E+09	3,446949E+09	3,181877E+09	6,893940E+09	1,007582E+10
708	1,590880E+09	1,590919E+09	3,446960E+09	3,446930E+09	3,181798E+09	6,893890E+09	1,007569E+10
709	1,590932E+09	1,590946E+09	3,446919E+09	3,446935E+09	3,181879E+09	6,893854E+09	1,007573E+10
710	1,591036E+09	1,591038E+09	3,446964E+09	3,446847E+09	3,182074E+09	6,893811E+09	1,007588E+10
711	1,590959E+09	1,590971E+09	3,446900E+09	3,446927E+09	3,181930E+09	6,893827E+09	1,007576E+10
712	1,591046E+09	1,591044E+09	3,446873E+09	3,446903E+09	3,182091E+09	6,893775E+09	1,007587E+10
713	1,591054E+09	1,591062E+09	3,446905E+09	3,446853E+09	3,182116E+09	6,893759E+09	1,007588E+10
714	1,590977E+09	1,590982E+09	3,446848E+09	3,446954E+09	3,181959E+09	6,893803E+09	1,007576E+10
715	1,591065E+09	1,591048E+09	3,446918E+09	3,446870E+09	3,182113E+09	6,893789E+09	1,007590E+10
716	1,590974E+09	1,590971E+09	3,446951E+09	3,446885E+09	3,181944E+09	6,893836E+09	1,007578E+10
717	1,590927E+09	1,590911E+09	3,446919E+09	3,446973E+09	3,181837E+09	6,893893E+09	1,007573E+10
718	1,590982E+09	1,590981E+09	3,446984E+09	3,446935E+09	3,181963E+09	6,893920E+09	1,007588E+10
719	1,590845E+09	1,590875E+09	3,446978E+09	3,447016E+09	3,181720E+09	6,893994E+09	1,007571E+10
720	1,590871E+09	1,590887E+09	3,446978E+09	3,447005E+09	3,181758E+09	6,893983E+09	1,007574E+10
721	1,590909E+09	1,590908E+09	3,447049E+09	3,446938E+09	3,181816E+09	6,893987E+09	1,007580E+10
722	1,590823E+09	1,590818E+09	3,446974E+09	3,447036E+09	3,181641E+09	6,894010E+09	1,007565E+10
723	1,590937E+09	1,590911E+09	3,446980E+09	3,446960E+09	3,181848E+09	6,893940E+09	1,007579E+10
724	1,590914E+09	1,590928E+09	3,446974E+09	3,446918E+09	3,181842E+09	6,893892E+09	1,007573E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
725	1,590893E+09	1,590915E+09	3,446872E+09	3,446960E+09	3,181808E+09	6,893832E+09	1,007564E+10
726	1,591036E+09	1,591049E+09	3,446907E+09	3,446854E+09	3,182085E+09	6,893761E+09	1,007585E+10
727	1,590977E+09	1,591010E+09	3,446893E+09	3,446850E+09	3,181987E+09	6,893743E+09	1,007573E+10
728	1,591038E+09	1,591038E+09	3,446828E+09	3,446840E+09	3,182075E+09	6,893668E+09	1,007574E+10
729	1,591141E+09	1,591133E+09	3,446866E+09	3,446767E+09	3,182273E+09	6,893633E+09	1,007591E+10
730	1,591057E+09	1,591069E+09	3,446771E+09	3,446860E+09	3,182126E+09	6,893630E+09	1,007576E+10
731	1,591149E+09	1,591141E+09	3,446777E+09	3,446803E+09	3,182289E+09	6,893580E+09	1,007587E+10
732	1,591140E+09	1,591155E+09	3,446830E+09	3,446751E+09	3,182295E+09	6,893581E+09	1,007588E+10
733	1,591059E+09	1,591055E+09	3,446764E+09	3,446837E+09	3,182114E+09	6,893601E+09	1,007571E+10
734	1,591151E+09	1,591125E+09	3,446838E+09	3,446797E+09	3,182277E+09	6,893635E+09	1,007591E+10
735	1,591045E+09	1,591053E+09	3,446876E+09	3,446834E+09	3,182097E+09	6,893709E+09	1,007581E+10
736	1,590996E+09	1,591003E+09	3,446828E+09	3,446896E+09	3,182000E+09	6,893724E+09	1,007572E+10
737	1,591056E+09	1,591070E+09	3,446921E+09	3,446856E+09	3,182126E+09	6,893777E+09	1,007590E+10
738	1,590926E+09	1,590950E+09	3,446905E+09	3,446939E+09	3,181876E+09	6,893845E+09	1,007572E+10
739	1,590969E+09	1,590955E+09	3,446924E+09	3,446912E+09	3,181925E+09	6,893836E+09	1,007576E+10
740	1,590999E+09	1,590990E+09	3,446976E+09	3,446862E+09	3,181989E+09	6,893838E+09	1,007583E+10
741	1,590911E+09	1,590904E+09	3,446851E+09	3,446941E+09	3,181815E+09	6,893792E+09	1,007561E+10
742	1,591033E+09	1,591022E+09	3,446852E+09	3,446884E+09	3,182055E+09	6,893736E+09	1,007579E+10
743	1,591008E+09	1,591038E+09	3,446869E+09	3,446826E+09	3,182046E+09	6,893695E+09	1,007574E+10
744	1,590996E+09	1,591018E+09	3,446775E+09	3,446826E+09	3,182014E+09	6,893601E+09	1,007561E+10
745	1,591147E+09	1,591147E+09	3,446834E+09	3,446734E+09	3,182294E+09	6,893567E+09	1,007586E+10
746	1,591088E+09	1,591103E+09	3,446791E+09	3,446763E+09	3,182190E+09	6,893555E+09	1,007575E+10
747	1,591149E+09	1,591139E+09	3,446736E+09	3,446753E+09	3,182288E+09	6,893489E+09	1,007578E+10
748	1,591230E+09	1,591249E+09	3,446768E+09	3,446692E+09	3,182478E+09	6,893460E+09	1,007594E+10
749	1,591141E+09	1,591167E+09	3,446666E+09	3,446757E+09	3,182308E+09	6,893423E+09	1,007573E+10
750	1,591243E+09	1,591233E+09	3,446693E+09	3,446720E+09	3,182475E+09	6,893413E+09	1,007589E+10
751	1,591226E+09	1,591232E+09	3,446765E+09	3,446675E+09	3,182458E+09	6,893440E+09	1,007590E+10
752	1,591144E+09	1,591132E+09	3,446685E+09	3,446743E+09	3,182276E+09	6,893429E+09	1,007571E+10
753	1,591230E+09	1,591210E+09	3,446763E+09	3,446721E+09	3,182440E+09	6,893484E+09	1,007592E+10
754	1,591117E+09	1,591139E+09	3,446784E+09	3,446775E+09	3,182256E+09	6,893559E+09	1,007581E+10
755	1,591078E+09	1,591083E+09	3,446769E+09	3,446810E+09	3,182161E+09	6,893579E+09	1,007574E+10
756	1,591130E+09	1,591145E+09	3,446864E+09	3,446770E+09	3,182275E+09	6,893634E+09	1,007591E+10
757	1,591009E+09	1,591012E+09	3,446816E+09	3,446840E+09	3,182022E+09	6,893656E+09	1,007568E+10
758	1,591068E+09	1,591034E+09	3,446813E+09	3,446842E+09	3,182101E+09	6,893655E+09	1,007576E+10
759	1,591087E+09	1,591083E+09	3,446863E+09	3,446794E+09	3,182171E+09	6,893657E+09	1,007583E+10
760	1,591003E+09	1,591018E+09	3,446734E+09	3,446830E+09	3,182021E+09	6,893564E+09	1,007558E+10
761	1,591129E+09	1,591134E+09	3,446769E+09	3,446766E+09	3,182263E+09	6,893535E+09	1,007580E+10
762	1,591109E+09	1,591140E+09	3,446791E+09	3,446722E+09	3,182249E+09	6,893513E+09	1,007576E+10
763	1,591108E+09	1,591111E+09	3,446718E+09	3,446718E+09	3,182220E+09	6,893436E+09	1,007566E+10
764	1,591242E+09	1,591247E+09	3,446759E+09	3,446656E+09	3,182489E+09	6,893415E+09	1,007590E+10
765	1,591181E+09	1,591202E+09	3,446670E+09	3,446683E+09	3,182382E+09	6,893353E+09	1,007574E+10
766	1,591249E+09	1,591248E+09	3,446609E+09	3,446691E+09	3,182497E+09	6,893300E+09	1,007580E+10
767	1,591324E+09	1,591345E+09	3,446669E+09	3,446610E+09	3,182669E+09	6,893279E+09	1,007595E+10
768	1,591243E+09	1,591255E+09	3,446571E+09	3,446627E+09	3,182498E+09	6,893198E+09	1,007570E+10
769	1,591344E+09	1,591315E+09	3,446619E+09	3,446604E+09	3,182659E+09	6,893223E+09	1,007588E+10
770	1,591319E+09	1,591315E+09	3,446676E+09	3,446594E+09	3,182634E+09	6,893270E+09	1,007590E+10
771	1,591231E+09	1,591220E+09	3,446619E+09	3,446664E+09	3,182451E+09	6,893282E+09	1,007573E+10
772	1,591291E+09	1,591308E+09	3,446703E+09	3,446658E+09	3,182599E+09	6,893361E+09	1,007596E+10
773	1,591182E+09	1,591213E+09	3,446709E+09	3,446693E+09	3,182394E+09	6,893402E+09	1,007580E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
774	1,591158E+09	1,591152E+09	3,446697E+09	3,446751E+09	3,182310E+09	6,893448E+09	1,007576E+10
775	1,591212E+09	1,591207E+09	3,446790E+09	3,446711E+09	3,182419E+09	6,893501E+09	1,007592E+10
776	1,591100E+09	1,591088E+09	3,446705E+09	3,446746E+09	3,182188E+09	6,893451E+09	1,007564E+10
777	1,591161E+09	1,591133E+09	3,446698E+09	3,446751E+09	3,182294E+09	6,893449E+09	1,007574E+10
778	1,591182E+09	1,591193E+09	3,446742E+09	3,446700E+09	3,182375E+09	6,893442E+09	1,007582E+10
779	1,591107E+09	1,591123E+09	3,446662E+09	3,446701E+09	3,182231E+09	6,893364E+09	1,007559E+10
780	1,591219E+09	1,591239E+09	3,446713E+09	3,446646E+09	3,182458E+09	6,893359E+09	1,007582E+10
781	1,591205E+09	1,591228E+09	3,446707E+09	3,446611E+09	3,182433E+09	6,893318E+09	1,007575E+10
782	1,591213E+09	1,591211E+09	3,446616E+09	3,446656E+09	3,182424E+09	6,893272E+09	1,007570E+10
783	1,591337E+09	1,591351E+09	3,446651E+09	3,446601E+09	3,182688E+09	6,893252E+09	1,007594E+10
784	1,591282E+09	1,591312E+09	3,446550E+09	3,446584E+09	3,182594E+09	6,893134E+09	1,007573E+10
785	1,591356E+09	1,591351E+09	3,446515E+09	3,446583E+09	3,182707E+09	6,893097E+09	1,007580E+10
786	1,591429E+09	1,591435E+09	3,446583E+09	3,446510E+09	3,182865E+09	6,893093E+09	1,007596E+10
787	1,591352E+09	1,591338E+09	3,446513E+09	3,446517E+09	3,182691E+09	6,893031E+09	1,007572E+10
788	1,591422E+09	1,591405E+09	3,446553E+09	3,446521E+09	3,182827E+09	6,893074E+09	1,007590E+10
789	1,591388E+09	1,591403E+09	3,446579E+09	3,446522E+09	3,182791E+09	6,893101E+09	1,007589E+10
790	1,591304E+09	1,591311E+09	3,446524E+09	3,446615E+09	3,182615E+09	6,893139E+09	1,007575E+10
791	1,591358E+09	1,591378E+09	3,446633E+09	3,446597E+09	3,182736E+09	6,893230E+09	1,007597E+10
792	1,591265E+09	1,591276E+09	3,446626E+09	3,446592E+09	3,182541E+09	6,893218E+09	1,007576E+10
793	1,591252E+09	1,591219E+09	3,446607E+09	3,446658E+09	3,182471E+09	6,893264E+09	1,007574E+10
794	1,591306E+09	1,591286E+09	3,446679E+09	3,446634E+09	3,182592E+09	6,893312E+09	1,007590E+10
795	1,591198E+09	1,591189E+09	3,446613E+09	3,446641E+09	3,182387E+09	6,893253E+09	1,007564E+10
796	1,591237E+09	1,591250E+09	3,446623E+09	3,446645E+09	3,182486E+09	6,893269E+09	1,007576E+10
797	1,591263E+09	1,591293E+09	3,446666E+09	3,446586E+09	3,182556E+09	6,893252E+09	1,007581E+10
798	1,591203E+09	1,591218E+09	3,446598E+09	3,446622E+09	3,182421E+09	6,893220E+09	1,007564E+10
799	1,591310E+09	1,591321E+09	3,446649E+09	3,446584E+09	3,182631E+09	6,893232E+09	1,007586E+10
800	1,591307E+09	1,591319E+09	3,446596E+09	3,446529E+09	3,182626E+09	6,893125E+09	1,007575E+10
801	1,591321E+09	1,591319E+09	3,446489E+09	3,446579E+09	3,182640E+09	6,893068E+09	1,007571E+10
802	1,591449E+09	1,591460E+09	3,446519E+09	3,446514E+09	3,182908E+09	6,893033E+09	1,007594E+10
803	1,591405E+09	1,591413E+09	3,446457E+09	3,446449E+09	3,182818E+09	6,892906E+09	1,007572E+10
804	1,591460E+09	1,591455E+09	3,446439E+09	3,446453E+09	3,182914E+09	6,892892E+09	1,007581E+10
805	1,591528E+09	1,591523E+09	3,446485E+09	3,446394E+09	3,183050E+09	6,892878E+09	1,007593E+10
806	1,591442E+09	1,591436E+09	3,446422E+09	3,446453E+09	3,182877E+09	6,892875E+09	1,007575E+10
807	1,591488E+09	1,591501E+09	3,446477E+09	3,446473E+09	3,182988E+09	6,892950E+09	1,007594E+10
808	1,591458E+09	1,591490E+09	3,446494E+09	3,446444E+09	3,182947E+09	6,892938E+09	1,007589E+10
809	1,591384E+09	1,591388E+09	3,446458E+09	3,446538E+09	3,182772E+09	6,892995E+09	1,007577E+10
810	1,591445E+09	1,591441E+09	3,446556E+09	3,446526E+09	3,182886E+09	6,893082E+09	1,007597E+10
811	1,591365E+09	1,591341E+09	3,446556E+09	3,446496E+09	3,182706E+09	6,893052E+09	1,007576E+10
812	1,591331E+09	1,591308E+09	3,446520E+09	3,446571E+09	3,182639E+09	6,893091E+09	1,007573E+10
813	1,591382E+09	1,591380E+09	3,446563E+09	3,446542E+09	3,182763E+09	6,893106E+09	1,007587E+10
814	1,591282E+09	1,591294E+09	3,446522E+09	3,446560E+09	3,182576E+09	6,893083E+09	1,007566E+10
815	1,591314E+09	1,591339E+09	3,446565E+09	3,446555E+09	3,182653E+09	6,893120E+09	1,007577E+10
816	1,591356E+09	1,591375E+09	3,446588E+09	3,446476E+09	3,182732E+09	6,893064E+09	1,007580E+10
817	1,591309E+09	1,591306E+09	3,446505E+09	3,446537E+09	3,182615E+09	6,893042E+09	1,007566E+10
818	1,591417E+09	1,591416E+09	3,446529E+09	3,446520E+09	3,182833E+09	6,893049E+09	1,007588E+10
819	1,591425E+09	1,591432E+09	3,446486E+09	3,446432E+09	3,182856E+09	6,892918E+09	1,007577E+10
820	1,591423E+09	1,591441E+09	3,446386E+09	3,446467E+09	3,182863E+09	6,892853E+09	1,007572E+10
821	1,591552E+09	1,591562E+09	3,446416E+09	3,446391E+09	3,183114E+09	6,892807E+09	1,007592E+10
822	1,591514E+09	1,591516E+09	3,446374E+09	3,446350E+09	3,183029E+09	6,892724E+09	1,007575E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
823	1,591546E+09	1,591542E+09	3,446371E+09	3,446373E+09	3,183088E+09	6,892744E+09	1,007583E+10
824	1,591611E+09	1,591614E+09	3,446387E+09	3,446311E+09	3,183225E+09	6,892699E+09	1,007592E+10
825	1,591525E+09	1,591534E+09	3,446323E+09	3,446390E+09	3,183058E+09	6,892713E+09	1,007577E+10
826	1,591568E+09	1,591584E+09	3,446387E+09	3,446409E+09	3,183151E+09	6,892797E+09	1,007595E+10
827	1,591553E+09	1,591560E+09	3,446431E+09	3,446339E+09	3,183114E+09	6,892770E+09	1,007588E+10
828	1,591467E+09	1,591461E+09	3,446392E+09	3,446435E+09	3,182928E+09	6,892827E+09	1,007575E+10
829	1,591531E+09	1,591505E+09	3,446454E+09	3,446435E+09	3,183036E+09	6,892889E+09	1,007593E+10
830	1,591451E+09	1,591430E+09	3,446456E+09	3,446431E+09	3,182881E+09	6,892887E+09	1,007577E+10
831	1,591397E+09	1,591405E+09	3,446441E+09	3,446503E+09	3,182802E+09	6,892944E+09	1,007575E+10
832	1,591457E+09	1,591475E+09	3,446480E+09	3,446442E+09	3,182931E+09	6,892923E+09	1,007585E+10
833	1,591369E+09	1,591386E+09	3,446458E+09	3,446473E+09	3,182756E+09	6,892931E+09	1,007569E+10
834	1,591409E+09	1,591418E+09	3,446494E+09	3,446483E+09	3,182827E+09	6,892977E+09	1,007580E+10
835	1,591467E+09	1,591457E+09	3,446507E+09	3,446384E+09	3,182924E+09	6,892891E+09	1,007581E+10
836	1,591407E+09	1,591415E+09	3,446398E+09	3,446452E+09	3,182822E+09	6,892850E+09	1,007567E+10
837	1,591520E+09	1,591524E+09	3,446384E+09	3,446423E+09	3,183045E+09	6,892807E+09	1,007585E+10
838	1,591535E+09	1,591548E+09	3,446368E+09	3,446331E+09	3,183083E+09	6,892699E+09	1,007578E+10
839	1,591523E+09	1,591544E+09	3,446306E+09	3,446352E+09	3,183067E+09	6,892658E+09	1,007572E+10
840	1,591656E+09	1,591653E+09	3,446320E+09	3,446260E+09	3,183309E+09	6,892580E+09	1,007589E+10
841	1,591617E+09	1,591615E+09	3,446282E+09	3,446256E+09	3,183233E+09	6,892537E+09	1,007577E+10
842	1,591637E+09	1,591640E+09	3,446274E+09	3,446307E+09	3,183277E+09	6,892582E+09	1,007586E+10
843	1,591703E+09	1,591714E+09	3,446309E+09	3,446226E+09	3,183417E+09	6,892535E+09	1,007595E+10
844	1,591603E+09	1,591632E+09	3,446261E+09	3,446304E+09	3,183235E+09	6,892565E+09	1,007580E+10
845	1,591650E+09	1,591652E+09	3,446311E+09	3,446325E+09	3,183302E+09	6,892635E+09	1,007594E+10
846	1,591644E+09	1,591628E+09	3,446363E+09	3,446274E+09	3,183272E+09	6,892637E+09	1,007591E+10
847	1,591541E+09	1,591527E+09	3,446319E+09	3,446375E+09	3,183068E+09	6,892694E+09	1,007576E+10
848	1,591603E+09	1,591584E+09	3,446343E+09	3,446357E+09	3,183187E+09	6,892700E+09	1,007589E+10
849	1,591530E+09	1,591530E+09	3,446349E+09	3,446357E+09	3,183060E+09	6,892706E+09	1,007577E+10
850	1,591477E+09	1,591493E+09	3,446359E+09	3,446420E+09	3,182970E+09	6,892779E+09	1,007575E+10
851	1,591554E+09	1,591558E+09	3,446423E+09	3,446325E+09	3,183112E+09	6,892748E+09	1,007586E+10
852	1,591462E+09	1,591475E+09	3,446390E+09	3,446364E+09	3,182937E+09	6,892755E+09	1,007569E+10
853	1,591503E+09	1,591499E+09	3,446385E+09	3,446397E+09	3,183002E+09	6,892782E+09	1,007578E+10
854	1,591568E+09	1,591564E+09	3,446394E+09	3,446316E+09	3,183131E+09	6,892710E+09	1,007584E+10
855	1,591495E+09	1,591526E+09	3,446296E+09	3,446371E+09	3,183021E+09	6,892667E+09	1,007569E+10
856	1,591619E+09	1,591629E+09	3,446275E+09	3,446307E+09	3,183248E+09	6,892581E+09	1,007583E+10
857	1,591647E+09	1,591655E+09	3,446274E+09	3,446220E+09	3,183301E+09	6,892494E+09	1,007580E+10
858	1,591632E+09	1,591635E+09	3,446224E+09	3,446255E+09	3,183268E+09	6,892480E+09	1,007575E+10
859	1,591767E+09	1,591748E+09	3,446239E+09	3,446154E+09	3,183514E+09	6,892394E+09	1,007591E+10
860	1,591707E+09	1,591728E+09	3,446194E+09	3,446170E+09	3,183435E+09	6,892363E+09	1,007580E+10
861	1,591722E+09	1,591738E+09	3,446166E+09	3,446232E+09	3,183460E+09	6,892398E+09	1,007586E+10
862	1,591794E+09	1,591806E+09	3,446230E+09	3,446153E+09	3,183599E+09	6,892382E+09	1,007598E+10
863	1,591683E+09	1,591706E+09	3,446200E+09	3,446224E+09	3,183389E+09	6,892424E+09	1,007581E+10
864	1,591737E+09	1,591713E+09	3,446214E+09	3,446230E+09	3,183450E+09	6,892444E+09	1,007589E+10
865	1,591733E+09	1,591708E+09	3,446256E+09	3,446205E+09	3,183441E+09	6,892461E+09	1,007590E+10
866	1,591622E+09	1,591616E+09	3,446220E+09	3,446310E+09	3,183238E+09	6,892530E+09	1,007577E+10
867	1,591687E+09	1,591679E+09	3,446262E+09	3,446254E+09	3,183366E+09	6,892516E+09	1,007588E+10
868	1,591604E+09	1,591632E+09	3,446298E+09	3,446251E+09	3,183237E+09	6,892548E+09	1,007578E+10
869	1,591558E+09	1,591570E+09	3,446292E+09	3,446325E+09	3,183128E+09	6,892617E+09	1,007575E+10
870	1,591642E+09	1,591634E+09	3,446362E+09	3,446253E+09	3,183276E+09	6,892615E+09	1,007589E+10
871	1,591542E+09	1,591556E+09	3,446316E+09	3,446306E+09	3,183097E+09	6,892621E+09	1,007572E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
872	1,591591E+09	1,591587E+09	3,446254E+09	3,446318E+09	3,183178E+09	6,892572E+09	1,007575E+10
873	1,591670E+09	1,591674E+09	3,446262E+09	3,446233E+09	3,183343E+09	6,892496E+09	1,007584E+10
874	1,591605E+09	1,591628E+09	3,446191E+09	3,446262E+09	3,183234E+09	6,892453E+09	1,007569E+10
875	1,591741E+09	1,591727E+09	3,446187E+09	3,446161E+09	3,183468E+09	6,892348E+09	1,007582E+10
876	1,591758E+09	1,591765E+09	3,446193E+09	3,446089E+09	3,183523E+09	6,892282E+09	1,007581E+10
877	1,591735E+09	1,591736E+09	3,446118E+09	3,446161E+09	3,183471E+09	6,892279E+09	1,007575E+10
878	1,591860E+09	1,591861E+09	3,446151E+09	3,446087E+09	3,183721E+09	6,892239E+09	1,007596E+10
879	1,591784E+09	1,591833E+09	3,446125E+09	3,446107E+09	3,183617E+09	6,892233E+09	1,007585E+10
880	1,591803E+09	1,591820E+09	3,446082E+09	3,446149E+09	3,183623E+09	6,892232E+09	1,007585E+10
881	1,591888E+09	1,591885E+09	3,446144E+09	3,446083E+09	3,183774E+09	6,892228E+09	1,007600E+10
882	1,591778E+09	1,591770E+09	3,446116E+09	3,446154E+09	3,183548E+09	6,892271E+09	1,007582E+10
883	1,591832E+09	1,591789E+09	3,446118E+09	3,446137E+09	3,183622E+09	6,892255E+09	1,007588E+10
884	1,591812E+09	1,591809E+09	3,446157E+09	3,446108E+09	3,183621E+09	6,892265E+09	1,007589E+10
885	1,591696E+09	1,591705E+09	3,446123E+09	3,446217E+09	3,183401E+09	6,892339E+09	1,007574E+10
886	1,591763E+09	1,591765E+09	3,446210E+09	3,446160E+09	3,183528E+09	6,892371E+09	1,007590E+10
887	1,591675E+09	1,591704E+09	3,446259E+09	3,446165E+09	3,183379E+09	6,892423E+09	1,007580E+10
888	1,591637E+09	1,591632E+09	3,446206E+09	3,446242E+09	3,183270E+09	6,892448E+09	1,007572E+10
889	1,591733E+09	1,591720E+09	3,446246E+09	3,446197E+09	3,183453E+09	6,892443E+09	1,007590E+10
890	1,591637E+09	1,591652E+09	3,446200E+09	3,446240E+09	3,183289E+09	6,892440E+09	1,007573E+10
891	1,591700E+09	1,591694E+09	3,446144E+09	3,446205E+09	3,183394E+09	6,892349E+09	1,007574E+10
892	1,591776E+09	1,591791E+09	3,446177E+09	3,446103E+09	3,183567E+09	6,892280E+09	1,007585E+10
893	1,591716E+09	1,591728E+09	3,446101E+09	3,446142E+09	3,183444E+09	6,892243E+09	1,007569E+10
894	1,591848E+09	1,591829E+09	3,446116E+09	3,446061E+09	3,183677E+09	6,892177E+09	1,007585E+10
895	1,591845E+09	1,591872E+09	3,446119E+09	3,446016E+09	3,183717E+09	6,892135E+09	1,007585E+10
896	1,591820E+09	1,591840E+09	3,446002E+09	3,446086E+09	3,183660E+09	6,892088E+09	1,007575E+10
897	1,591952E+09	1,591969E+09	3,446039E+09	3,446024E+09	3,183921E+09	6,892063E+09	1,007598E+10
898	1,591887E+09	1,591918E+09	3,446043E+09	3,446027E+09	3,183805E+09	6,892069E+09	1,007587E+10
899	1,591915E+09	1,591893E+09	3,445992E+09	3,446031E+09	3,183808E+09	6,892023E+09	1,007583E+10
900	1,591987E+09	1,591970E+09	3,446055E+09	3,445972E+09	3,183957E+09	6,892027E+09	1,007598E+10
901	1,591868E+09	1,591854E+09	3,446005E+09	3,446062E+09	3,183723E+09	6,892067E+09	1,007579E+10
902	1,591908E+09	1,591886E+09	3,446038E+09	3,446053E+09	3,183794E+09	6,892091E+09	1,007589E+10
903	1,591871E+09	1,591904E+09	3,446112E+09	3,446031E+09	3,183775E+09	6,892142E+09	1,007592E+10
904	1,591760E+09	1,591777E+09	3,446063E+09	3,446131E+09	3,183537E+09	6,892194E+09	1,007573E+10
905	1,591839E+09	1,591837E+09	3,446145E+09	3,446102E+09	3,183676E+09	6,892248E+09	1,007592E+10
906	1,591761E+09	1,591765E+09	3,446188E+09	3,446113E+09	3,183526E+09	6,892301E+09	1,007583E+10
907	1,591733E+09	1,591710E+09	3,446097E+09	3,446163E+09	3,183443E+09	6,892260E+09	1,007570E+10
908	1,591827E+09	1,591827E+09	3,446128E+09	3,446103E+09	3,183655E+09	6,892231E+09	1,007589E+10
909	1,591740E+09	1,591756E+09	3,446076E+09	3,446131E+09	3,183496E+09	6,892207E+09	1,007570E+10
910	1,591808E+09	1,591799E+09	3,446065E+09	3,446079E+09	3,183608E+09	6,892143E+09	1,007575E+10
911	1,591875E+09	1,591893E+09	3,446113E+09	3,445985E+09	3,183768E+09	6,892098E+09	1,007587E+10
912	1,591813E+09	1,591822E+09	3,446003E+09	3,446037E+09	3,183635E+09	6,892040E+09	1,007568E+10
913	1,591944E+09	1,591943E+09	3,446005E+09	3,445996E+09	3,183887E+09	6,892001E+09	1,007589E+10
914	1,591942E+09	1,591978E+09	3,446023E+09	3,445952E+09	3,183920E+09	6,891975E+09	1,007589E+10
915	1,591926E+09	1,591943E+09	3,445908E+09	3,445988E+09	3,183868E+09	6,891896E+09	1,007576E+10
916	1,592057E+09	1,592069E+09	3,445959E+09	3,445911E+09	3,184125E+09	6,891871E+09	1,007600E+10
917	1,591994E+09	1,591995E+09	3,445947E+09	3,445928E+09	3,183988E+09	6,891875E+09	1,007586E+10
918	1,592015E+09	1,591973E+09	3,445913E+09	3,445941E+09	3,183988E+09	6,891854E+09	1,007584E+10
919	1,592061E+09	1,592059E+09	3,445972E+09	3,445898E+09	3,184120E+09	6,891869E+09	1,007599E+10
920	1,591935E+09	1,591943E+09	3,445898E+09	3,445981E+09	3,183878E+09	6,891879E+09	1,007576E+10



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
921	1,591978E+09	1,591979E+09	3,445950E+09	3,445983E+09	3,183957E+09	6,891933E+09	1,007589E+10
922	1,591950E+09	1,591974E+09	3,446059E+09	3,445954E+09	3,183924E+09	6,892013E+09	1,007594E+10
923	1,591851E+09	1,591843E+09	3,445993E+09	3,446034E+09	3,183694E+09	6,892027E+09	1,007572E+10
924	1,591927E+09	1,591916E+09	3,446061E+09	3,446015E+09	3,183843E+09	6,892077E+09	1,007592E+10
925	1,591852E+09	1,591851E+09	3,446071E+09	3,446042E+09	3,183703E+09	6,892113E+09	1,007582E+10
926	1,591825E+09	1,591814E+09	3,446000E+09	3,446076E+09	3,183638E+09	6,892076E+09	1,007571E+10
927	1,591910E+09	1,591935E+09	3,446057E+09	3,446006E+09	3,183845E+09	6,892063E+09	1,007591E+10
928	1,591832E+09	1,591852E+09	3,445990E+09	3,446014E+09	3,183683E+09	6,892004E+09	1,007569E+10
929	1,591908E+09	1,591899E+09	3,445978E+09	3,445988E+09	3,183807E+09	6,891966E+09	1,007577E+10
930	1,591979E+09	1,591985E+09	3,446034E+09	3,445910E+09	3,183964E+09	6,891944E+09	1,007591E+10
931	1,591920E+09	1,591926E+09	3,445889E+09	3,445944E+09	3,183845E+09	6,891833E+09	1,007568E+10
932	1,592042E+09	1,592061E+09	3,445895E+09	3,445900E+09	3,184103E+09	6,891795E+09	1,007590E+10
933	1,592050E+09	1,592080E+09	3,445911E+09	3,445855E+09	3,184130E+09	6,891767E+09	1,007590E+10
934	1,592038E+09	1,592033E+09	3,445830E+09	3,445874E+09	3,184070E+09	6,891704E+09	1,007577E+10
935	1,592155E+09	1,592154E+09	3,445886E+09	3,445810E+09	3,184308E+09	6,891697E+09	1,007601E+10
936	1,592085E+09	1,592076E+09	3,445832E+09	3,445831E+09	3,184161E+09	6,891663E+09	1,007582E+10
937	1,592098E+09	1,592075E+09	3,445797E+09	3,445875E+09	3,184173E+09	6,891672E+09	1,007585E+10
938	1,592138E+09	1,592153E+09	3,445893E+09	3,445833E+09	3,184291E+09	6,891726E+09	1,007602E+10
939	1,592014E+09	1,592031E+09	3,445832E+09	3,445887E+09	3,184046E+09	6,891719E+09	1,007576E+10
940	1,592054E+09	1,592063E+09	3,445905E+09	3,445889E+09	3,184117E+09	6,891794E+09	1,007591E+10
941	1,592035E+09	1,592036E+09	3,445991E+09	3,445885E+09	3,184071E+09	6,891876E+09	1,007595E+10
942	1,591937E+09	1,591911E+09	3,445926E+09	3,445966E+09	3,183848E+09	6,891892E+09	1,007574E+10
943	1,592000E+09	1,592002E+09	3,445972E+09	3,445954E+09	3,184001E+09	6,891926E+09	1,007593E+10
944	1,591930E+09	1,591941E+09	3,445946E+09	3,445957E+09	3,183871E+09	6,891903E+09	1,007577E+10
945	1,591916E+09	1,591917E+09	3,445892E+09	3,445985E+09	3,183834E+09	6,891877E+09	1,007571E+10
946	1,592013E+09	1,592018E+09	3,445981E+09	3,445899E+09	3,184031E+09	6,891879E+09	1,007591E+10
947	1,591943E+09	1,591943E+09	3,445898E+09	3,445888E+09	3,183886E+09	6,891786E+09	1,007567E+10
948	1,592012E+09	1,592008E+09	3,445881E+09	3,445875E+09	3,184020E+09	6,891756E+09	1,007578E+10
949	1,592081E+09	1,592093E+09	3,445916E+09	3,445826E+09	3,184173E+09	6,891743E+09	1,007592E+10
950	1,592022E+09	1,592040E+09	3,445803E+09	3,445853E+09	3,184063E+09	6,891657E+09	1,007572E+10
951	1,592135E+09	1,592167E+09	3,445824E+09	3,445809E+09	3,184303E+09	6,891633E+09	1,007594E+10
952	1,592150E+09	1,592169E+09	3,445813E+09	3,445756E+09	3,184318E+09	6,891569E+09	1,007589E+10
953	1,592143E+09	1,592127E+09	3,445723E+09	3,445797E+09	3,184270E+09	6,891520E+09	1,007579E+10
954	1,592254E+09	1,592236E+09	3,445792E+09	3,445739E+09	3,184490E+09	6,891531E+09	1,007602E+10
955	1,592178E+09	1,592178E+09	3,445716E+09	3,445736E+09	3,184356E+09	6,891452E+09	1,007581E+10
956	1,592178E+09	1,592185E+09	3,445708E+09	3,445773E+09	3,184363E+09	6,891481E+09	1,007584E+10
957	1,592222E+09	1,592238E+09	3,445820E+09	3,445742E+09	3,184460E+09	6,891562E+09	1,007602E+10
958	1,592102E+09	1,592103E+09	3,445795E+09	3,445790E+09	3,184204E+09	6,891585E+09	1,007579E+10
959	1,592126E+09	1,592130E+09	3,445859E+09	3,445818E+09	3,184255E+09	6,891677E+09	1,007593E+10
960	1,592108E+09	1,592103E+09	3,445889E+09	3,445820E+09	3,184210E+09	6,891709E+09	1,007592E+10
961	1,592014E+09	1,592003E+09	3,445804E+09	3,445916E+09	3,184017E+09	6,891720E+09	1,007574E+10
962	1,592084E+09	1,592087E+09	3,445881E+09	3,445886E+09	3,184171E+09	6,891768E+09	1,007594E+10
963	1,592027E+09	1,592035E+09	3,445850E+09	3,445839E+09	3,184062E+09	6,891689E+09	1,007575E+10
964	1,592014E+09	1,592015E+09	3,445820E+09	3,445859E+09	3,184029E+09	6,891679E+09	1,007571E+10
965	1,592117E+09	1,592106E+09	3,445895E+09	3,445802E+09	3,184223E+09	6,891697E+09	1,007592E+10
966	1,592045E+09	1,592039E+09	3,445821E+09	3,445796E+09	3,184084E+09	6,891617E+09	1,007570E+10
967	1,592094E+09	1,592120E+09	3,445791E+09	3,445802E+09	3,184214E+09	6,891593E+09	1,007581E+10
968	1,592169E+09	1,592199E+09	3,445792E+09	3,445740E+09	3,184368E+09	6,891532E+09	1,007590E+10
969	1,592127E+09	1,592149E+09	3,445691E+09	3,445767E+09	3,184277E+09	6,891459E+09	1,007574E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
970	1,592251E+09	1,592251E+09	3,445738E+09	3,445714E+09	3,184501E+09	6,891452E+09	1,007595E+10
971	1,592267E+09	1,592261E+09	3,445697E+09	3,445638E+09	3,184528E+09	6,891336E+09	1,007586E+10
972	1,592247E+09	1,592236E+09	3,445616E+09	3,445685E+09	3,184483E+09	6,891301E+09	1,007578E+10
973	1,592347E+09	1,592340E+09	3,445683E+09	3,445652E+09	3,184687E+09	6,891335E+09	1,007602E+10
974	1,592264E+09	1,592281E+09	3,445661E+09	3,445639E+09	3,184545E+09	6,891300E+09	1,007584E+10
975	1,592246E+09	1,592276E+09	3,445678E+09	3,445690E+09	3,184522E+09	6,891368E+09	1,007589E+10
976	1,592291E+09	1,592303E+09	3,445758E+09	3,445669E+09	3,184594E+09	6,891428E+09	1,007602E+10
977	1,592182E+09	1,592171E+09	3,445717E+09	3,445750E+09	3,184353E+09	6,891466E+09	1,007582E+10
978	1,592207E+09	1,592185E+09	3,445769E+09	3,445778E+09	3,184391E+09	6,891547E+09	1,007594E+10
979	1,592191E+09	1,592185E+09	3,445759E+09	3,445742E+09	3,184376E+09	6,891501E+09	1,007588E+10
980	1,592102E+09	1,592105E+09	3,445695E+09	3,445805E+09	3,184207E+09	6,891499E+09	1,007571E+10
981	1,592181E+09	1,592173E+09	3,445784E+09	3,445773E+09	3,184354E+09	6,891557E+09	1,007591E+10
982	1,592131E+09	1,592124E+09	3,445793E+09	3,445710E+09	3,184255E+09	6,891503E+09	1,007576E+10
983	1,592101E+09	1,592111E+09	3,445758E+09	3,445757E+09	3,184212E+09	6,891515E+09	1,007573E+10
984	1,592198E+09	1,592203E+09	3,445787E+09	3,445718E+09	3,184401E+09	6,891505E+09	1,007591E+10
985	1,592134E+09	1,592158E+09	3,445707E+09	3,445738E+09	3,184292E+09	6,891445E+09	1,007574E+10
986	1,592190E+09	1,592218E+09	3,445707E+09	3,445735E+09	3,184408E+09	6,891442E+09	1,007585E+10
987	1,592279E+09	1,592300E+09	3,445691E+09	3,445632E+09	3,184579E+09	6,891323E+09	1,007590E+10
988	1,592245E+09	1,592253E+09	3,445601E+09	3,445647E+09	3,184497E+09	6,891248E+09	1,007575E+10
989	1,592369E+09	1,592339E+09	3,445632E+09	3,445618E+09	3,184708E+09	6,891250E+09	1,007596E+10
990	1,592377E+09	1,592362E+09	3,445606E+09	3,445533E+09	3,184739E+09	6,891140E+09	1,007588E+10
991	1,592328E+09	1,592349E+09	3,445533E+09	3,445598E+09	3,184677E+09	6,891130E+09	1,007581E+10
992	1,592420E+09	1,592437E+09	3,445590E+09	3,445563E+09	3,184857E+09	6,891152E+09	1,007601E+10
993	1,592347E+09	1,592368E+09	3,445589E+09	3,445566E+09	3,184716E+09	6,891155E+09	1,007587E+10
994	1,592332E+09	1,592332E+09	3,445627E+09	3,445627E+09	3,184664E+09	6,891254E+09	1,007592E+10
995	1,592379E+09	1,592368E+09	3,445655E+09	3,445590E+09	3,184747E+09	6,891246E+09	1,007599E+10
996	1,592266E+09	1,592255E+09	3,445608E+09	3,445667E+09	3,184521E+09	6,891275E+09	1,007580E+10
997	1,592291E+09	1,592270E+09	3,445653E+09	3,445706E+09	3,184561E+09	6,891360E+09	1,007592E+10
998	1,592280E+09	1,592276E+09	3,445686E+09	3,445634E+09	3,184556E+09	6,891320E+09	1,007588E+10
999	1,592178E+09	1,592200E+09	3,445649E+09	3,445697E+09	3,184379E+09	6,891346E+09	1,007572E+10
1000	1,592258E+09	1,592254E+09	3,445710E+09	3,445671E+09	3,184511E+09	6,891381E+09	1,007589E+10
1001	1,592218E+09	1,592216E+09	3,445713E+09	3,445643E+09	3,184434E+09	6,891356E+09	1,007579E+10
1002	1,592186E+09	1,592195E+09	3,445677E+09	3,445705E+09	3,184381E+09	6,891382E+09	1,007576E+10
1003	1,592287E+09	1,592307E+09	3,445661E+09	3,445637E+09	3,184594E+09	6,891298E+09	1,007589E+10
1004	1,592238E+09	1,592270E+09	3,445602E+09	3,445630E+09	3,184509E+09	6,891232E+09	1,007574E+10
1005	1,592310E+09	1,592308E+09	3,445602E+09	3,445628E+09	3,184618E+09	6,891230E+09	1,007585E+10
1006	1,592405E+09	1,592393E+09	3,445609E+09	3,445502E+09	3,184799E+09	6,891111E+09	1,007591E+10
1007	1,592353E+09	1,592361E+09	3,445513E+09	3,445534E+09	3,184713E+09	6,891047E+09	1,007576E+10
1008	1,592460E+09	1,592445E+09	3,445506E+09	3,445520E+09	3,184905E+09	6,891026E+09	1,007593E+10
1009	1,592467E+09	1,592485E+09	3,445503E+09	3,445461E+09	3,184952E+09	6,890965E+09	1,007592E+10
1010	1,592412E+09	1,592440E+09	3,445472E+09	3,445527E+09	3,184853E+09	6,890999E+09	1,007585E+10
1011	1,592504E+09	1,592521E+09	3,445513E+09	3,445473E+09	3,185025E+09	6,890986E+09	1,007601E+10
1012	1,592440E+09	1,592448E+09	3,445523E+09	3,445481E+09	3,184888E+09	6,891003E+09	1,007589E+10
1013	1,592423E+09	1,592392E+09	3,445533E+09	3,445569E+09	3,184815E+09	6,891102E+09	1,007592E+10
1014	1,592468E+09	1,592445E+09	3,445564E+09	3,445510E+09	3,184912E+09	6,891075E+09	1,007599E+10
1015	1,592338E+09	1,592353E+09	3,445516E+09	3,445579E+09	3,184692E+09	6,891095E+09	1,007579E+10
1016	1,592362E+09	1,592356E+09	3,445551E+09	3,445602E+09	3,184717E+09	6,891153E+09	1,007587E+10
1017	1,592365E+09	1,592367E+09	3,445614E+09	3,445538E+09	3,184732E+09	6,891152E+09	1,007588E+10
1018	1,592264E+09	1,592269E+09	3,445601E+09	3,445615E+09	3,184533E+09	6,891215E+09	1,007575E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1019	1,592341E+09	1,592338E+09	3,445615E+09	3,445582E+09	3,184679E+09	6,891198E+09	1,007588E+10
1020	1,592307E+09	1,592321E+09	3,445616E+09	3,445560E+09	3,184628E+09	6,891176E+09	1,007580E+10
1021	1,592281E+09	1,592292E+09	3,445571E+09	3,445636E+09	3,184573E+09	6,891208E+09	1,007578E+10
1022	1,592396E+09	1,592407E+09	3,445583E+09	3,445530E+09	3,184803E+09	6,891113E+09	1,007592E+10
1023	1,592343E+09	1,592376E+09	3,445532E+09	3,445521E+09	3,184719E+09	6,891052E+09	1,007577E+10
1024	1,592418E+09	1,592400E+09	3,445493E+09	3,445524E+09	3,184818E+09	6,891016E+09	1,007583E+10
1025	1,592517E+09	1,592498E+09	3,445495E+09	3,445418E+09	3,185015E+09	6,890913E+09	1,007593E+10
1026	1,592450E+09	1,592462E+09	3,445413E+09	3,445461E+09	3,184912E+09	6,890874E+09	1,007579E+10
1027	1,592548E+09	1,592560E+09	3,445382E+09	3,445418E+09	3,185108E+09	6,890799E+09	1,007591E+10
1028	1,592562E+09	1,592593E+09	3,445419E+09	3,445350E+09	3,185156E+09	6,890769E+09	1,007592E+10
1029	1,592513E+09	1,592518E+09	3,445400E+09	3,445439E+09	3,185030E+09	6,890839E+09	1,007587E+10
1030	1,592605E+09	1,592592E+09	3,445450E+09	3,445372E+09	3,185198E+09	6,890822E+09	1,007602E+10
1031	1,592524E+09	1,592533E+09	3,445446E+09	3,445401E+09	3,185056E+09	6,890847E+09	1,007590E+10
1032	1,592495E+09	1,592474E+09	3,445412E+09	3,445496E+09	3,184969E+09	6,890908E+09	1,007588E+10
1033	1,592544E+09	1,592540E+09	3,445467E+09	3,445443E+09	3,185084E+09	6,890909E+09	1,007599E+10
1034	1,592413E+09	1,592431E+09	3,445464E+09	3,445501E+09	3,184844E+09	6,890965E+09	1,007581E+10
1035	1,592438E+09	1,592435E+09	3,445478E+09	3,445498E+09	3,184873E+09	6,890976E+09	1,007585E+10
1036	1,592454E+09	1,592450E+09	3,445553E+09	3,445444E+09	3,184904E+09	6,890998E+09	1,007590E+10
1037	1,592355E+09	1,592341E+09	3,445517E+09	3,445555E+09	3,184696E+09	6,891072E+09	1,007577E+10
1038	1,592430E+09	1,592429E+09	3,445526E+09	3,445502E+09	3,184859E+09	6,891029E+09	1,007589E+10
1039	1,592393E+09	1,592432E+09	3,445523E+09	3,445475E+09	3,184826E+09	6,890998E+09	1,007582E+10
1040	1,592376E+09	1,592386E+09	3,445453E+09	3,445532E+09	3,184761E+09	6,890985E+09	1,007575E+10
1041	1,592511E+09	1,592506E+09	3,445485E+09	3,445428E+09	3,185018E+09	6,890913E+09	1,007593E+10
1042	1,592459E+09	1,592465E+09	3,445440E+09	3,445419E+09	3,184924E+09	6,890859E+09	1,007578E+10
1043	1,592522E+09	1,592509E+09	3,445357E+09	3,445409E+09	3,185030E+09	6,890766E+09	1,007580E+10
1044	1,592621E+09	1,592626E+09	3,445380E+09	3,445310E+09	3,185247E+09	6,890690E+09	1,007594E+10
1045	1,592550E+09	1,592571E+09	3,445317E+09	3,445374E+09	3,185121E+09	6,890691E+09	1,007581E+10
1046	1,592646E+09	1,592662E+09	3,445328E+09	3,445306E+09	3,185308E+09	6,890634E+09	1,007594E+10
1047	1,592654E+09	1,592690E+09	3,445374E+09	3,445255E+09	3,185343E+09	6,890630E+09	1,007597E+10
1048	1,592600E+09	1,592588E+09	3,445313E+09	3,445364E+09	3,185188E+09	6,890677E+09	1,007586E+10
1049	1,592695E+09	1,592671E+09	3,445355E+09	3,445321E+09	3,185366E+09	6,890676E+09	1,007604E+10
1050	1,592602E+09	1,592609E+09	3,445350E+09	3,445351E+09	3,185211E+09	6,890701E+09	1,007591E+10
1051	1,592568E+09	1,592564E+09	3,445290E+09	3,445405E+09	3,185132E+09	6,890694E+09	1,007583E+10
1052	1,592630E+09	1,592629E+09	3,445386E+09	3,445334E+09	3,185259E+09	6,890720E+09	1,007598E+10
1053	1,592504E+09	1,592500E+09	3,445400E+09	3,445409E+09	3,185004E+09	6,890809E+09	1,007581E+10
1054	1,592529E+09	1,592511E+09	3,445422E+09	3,445392E+09	3,185040E+09	6,890814E+09	1,007585E+10
1055	1,592532E+09	1,592544E+09	3,445483E+09	3,445365E+09	3,185076E+09	6,890849E+09	1,007592E+10
1056	1,592430E+09	1,592435E+09	3,445405E+09	3,445488E+09	3,184864E+09	6,890893E+09	1,007576E+10
1057	1,592518E+09	1,592529E+09	3,445428E+09	3,445434E+09	3,185048E+09	6,890863E+09	1,007591E+10
1058	1,592487E+09	1,592519E+09	3,445451E+09	3,445396E+09	3,185006E+09	6,890847E+09	1,007585E+10
1059	1,592478E+09	1,592481E+09	3,445341E+09	3,445419E+09	3,184959E+09	6,890760E+09	1,007572E+10
1060	1,592627E+09	1,592606E+09	3,445381E+09	3,445316E+09	3,185232E+09	6,890697E+09	1,007593E+10
1061	1,592571E+09	1,592565E+09	3,445328E+09	3,445329E+09	3,185136E+09	6,890657E+09	1,007579E+10
1062	1,592627E+09	1,592626E+09	3,445253E+09	3,445292E+09	3,185253E+09	6,890544E+09	1,007580E+10
1063	1,592714E+09	1,592752E+09	3,445297E+09	3,445200E+09	3,185466E+09	6,890497E+09	1,007596E+10
1064	1,592643E+09	1,592668E+09	3,445228E+09	3,445269E+09	3,185311E+09	6,890498E+09	1,007581E+10
1065	1,592748E+09	1,592748E+09	3,445259E+09	3,445223E+09	3,185496E+09	6,890482E+09	1,007598E+10
1066	1,592749E+09	1,592761E+09	3,445302E+09	3,445195E+09	3,185510E+09	6,890497E+09	1,007601E+10
1067	1,592686E+09	1,592674E+09	3,445183E+09	3,445287E+09	3,185360E+09	6,890470E+09	1,007583E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1068	1,592784E+09	1,592769E+09	3,445241E+09	3,445241E+09	3,185553E+09	6,890482E+09	1,007604E+10
1069	1,592690E+09	1,592695E+09	3,445259E+09	3,445272E+09	3,185385E+09	6,890530E+09	1,007592E+10
1070	1,592655E+09	1,592650E+09	3,445235E+09	3,445290E+09	3,185305E+09	6,890525E+09	1,007583E+10
1071	1,592710E+09	1,592719E+09	3,445346E+09	3,445235E+09	3,185429E+09	6,890581E+09	1,007601E+10
1072	1,592581E+09	1,592569E+09	3,445323E+09	3,445334E+09	3,185150E+09	6,890657E+09	1,007581E+10
1073	1,592605E+09	1,592594E+09	3,445342E+09	3,445342E+09	3,185199E+09	6,890684E+09	1,007588E+10
1074	1,592604E+09	1,592629E+09	3,445394E+09	3,445316E+09	3,185233E+09	6,890710E+09	1,007594E+10
1075	1,592507E+09	1,592528E+09	3,445279E+09	3,445395E+09	3,185035E+09	6,890674E+09	1,007571E+10
1076	1,592623E+09	1,592621E+09	3,445332E+09	3,445323E+09	3,185244E+09	6,890655E+09	1,007590E+10
1077	1,592604E+09	1,592599E+09	3,445353E+09	3,445290E+09	3,185203E+09	6,890643E+09	1,007585E+10
1078	1,592596E+09	1,592580E+09	3,445244E+09	3,445288E+09	3,185176E+09	6,890533E+09	1,007571E+10
1079	1,592729E+09	1,592729E+09	3,445281E+09	3,445202E+09	3,185458E+09	6,890483E+09	1,007594E+10
1080	1,592664E+09	1,592683E+09	3,445213E+09	3,445229E+09	3,185347E+09	6,890442E+09	1,007579E+10
1081	1,592722E+09	1,592743E+09	3,445179E+09	3,445205E+09	3,185464E+09	6,890384E+09	1,007585E+10
1082	1,592805E+09	1,592845E+09	3,445247E+09	3,445127E+09	3,185650E+09	6,890374E+09	1,007602E+10
1083	1,592738E+09	1,592755E+09	3,445135E+09	3,445185E+09	3,185492E+09	6,890320E+09	1,007581E+10
1084	1,592854E+09	1,592830E+09	3,445162E+09	3,445152E+09	3,185684E+09	6,890314E+09	1,007600E+10
1085	1,592850E+09	1,592841E+09	3,445187E+09	3,445140E+09	3,185690E+09	6,890327E+09	1,007602E+10
1086	1,592781E+09	1,592774E+09	3,445070E+09	3,445187E+09	3,185555E+09	6,890257E+09	1,007581E+10
1087	1,592867E+09	1,592872E+09	3,445156E+09	3,445131E+09	3,185739E+09	6,890287E+09	1,007603E+10
1088	1,592772E+09	1,592776E+09	3,445181E+09	3,445162E+09	3,185548E+09	6,890343E+09	1,007589E+10
1089	1,592740E+09	1,592725E+09	3,445183E+09	3,445196E+09	3,185465E+09	6,890380E+09	1,007585E+10
1090	1,592780E+09	1,592786E+09	3,445291E+09	3,445176E+09	3,185566E+09	6,890467E+09	1,007603E+10
1091	1,592646E+09	1,592654E+09	3,445214E+09	3,445268E+09	3,185300E+09	6,890482E+09	1,007578E+10
1092	1,592683E+09	1,592682E+09	3,445242E+09	3,445277E+09	3,185365E+09	6,890519E+09	1,007588E+10
1093	1,592693E+09	1,592708E+09	3,445307E+09	3,445247E+09	3,185401E+09	6,890554E+09	1,007596E+10
1094	1,592611E+09	1,592617E+09	3,445199E+09	3,445274E+09	3,185228E+09	6,890473E+09	1,007570E+10
1095	1,592729E+09	1,592718E+09	3,445254E+09	3,445208E+09	3,185447E+09	6,890463E+09	1,007591E+10
1096	1,592709E+09	1,592693E+09	3,445242E+09	3,445189E+09	3,185401E+09	6,890431E+09	1,007583E+10
1097	1,592697E+09	1,592691E+09	3,445144E+09	3,445200E+09	3,185388E+09	6,890344E+09	1,007573E+10
1098	1,592815E+09	1,592843E+09	3,445189E+09	3,445126E+09	3,185658E+09	6,890315E+09	1,007597E+10
1099	1,592753E+09	1,592796E+09	3,445102E+09	3,445125E+09	3,185549E+09	6,890227E+09	1,007578E+10
1100	1,592830E+09	1,592841E+09	3,445097E+09	3,445106E+09	3,185670E+09	6,890203E+09	1,007587E+10
1101	1,592920E+09	1,592926E+09	3,445159E+09	3,445048E+09	3,185845E+09	6,890207E+09	1,007605E+10
1102	1,592853E+09	1,592848E+09	3,445030E+09	3,445083E+09	3,185701E+09	6,890114E+09	1,007581E+10
1103	1,592954E+09	1,592940E+09	3,445055E+09	3,445060E+09	3,185893E+09	6,890115E+09	1,007601E+10
1104	1,592939E+09	1,592940E+09	3,445065E+09	3,445046E+09	3,185879E+09	6,890111E+09	1,007599E+10
1105	1,592866E+09	1,592871E+09	3,445005E+09	3,445089E+09	3,185737E+09	6,890094E+09	1,007583E+10
1106	1,592939E+09	1,592951E+09	3,445117E+09	3,445048E+09	3,185890E+09	6,890165E+09	1,007606E+10
1107	1,592841E+09	1,592848E+09	3,445110E+09	3,445075E+09	3,185689E+09	6,890185E+09	1,007587E+10
1108	1,592817E+09	1,592795E+09	3,445115E+09	3,445139E+09	3,185612E+09	6,890254E+09	1,007587E+10
1109	1,592855E+09	1,592855E+09	3,445198E+09	3,445138E+09	3,185710E+09	6,890336E+09	1,007605E+10
1110	1,592729E+09	1,592742E+09	3,445111E+09	3,445182E+09	3,185471E+09	6,890294E+09	1,007576E+10
1111	1,592771E+09	1,592774E+09	3,445155E+09	3,445173E+09	3,185545E+09	6,890329E+09	1,007587E+10
1112	1,592791E+09	1,592785E+09	3,445208E+09	3,445136E+09	3,185577E+09	6,890344E+09	1,007592E+10
1113	1,592719E+09	1,592706E+09	3,445121E+09	3,445164E+09	3,185425E+09	6,890285E+09	1,007571E+10
1114	1,592821E+09	1,592814E+09	3,445168E+09	3,445123E+09	3,185635E+09	6,890290E+09	1,007593E+10
1115	1,592793E+09	1,592810E+09	3,445117E+09	3,445091E+09	3,185603E+09	6,890208E+09	1,007581E+10
1116	1,592792E+09	1,592809E+09	3,445046E+09	3,445113E+09	3,185602E+09	6,890159E+09	1,007576E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1117	1,592913E+09	1,592943E+09	3,445113E+09	3,445049E+09	3,185856E+09	6,890162E+09	1,007602E+10
1118	1,592866E+09	1,592898E+09	3,445029E+09	3,445015E+09	3,185764E+09	6,890044E+09	1,007581E+10
1119	1,592942E+09	1,592936E+09	3,445018E+09	3,445009E+09	3,185878E+09	6,890027E+09	1,007590E+10
1120	1,593028E+09	1,593013E+09	3,445041E+09	3,444967E+09	3,186040E+09	6,890008E+09	1,007605E+10
1121	1,592956E+09	1,592951E+09	3,444919E+09	3,444995E+09	3,185908E+09	6,889914E+09	1,007582E+10
1122	1,593034E+09	1,593039E+09	3,444956E+09	3,444976E+09	3,186073E+09	6,889932E+09	1,007600E+10
1123	1,593016E+09	1,593035E+09	3,444964E+09	3,444931E+09	3,186051E+09	6,889895E+09	1,007595E+10
1124	1,592956E+09	1,592949E+09	3,444940E+09	3,444990E+09	3,185904E+09	6,889930E+09	1,007583E+10
1125	1,593023E+09	1,593014E+09	3,445056E+09	3,444980E+09	3,186037E+09	6,890036E+09	1,007607E+10
1126	1,592927E+09	1,592928E+09	3,445029E+09	3,444991E+09	3,185855E+09	6,890020E+09	1,007587E+10
1127	1,592892E+09	1,592887E+09	3,445030E+09	3,445068E+09	3,185779E+09	6,890098E+09	1,007588E+10
1128	1,592931E+09	1,592938E+09	3,445096E+09	3,445066E+09	3,185868E+09	6,890163E+09	1,007603E+10
1129	1,592817E+09	1,592828E+09	3,445046E+09	3,445092E+09	3,185645E+09	6,890138E+09	1,007578E+10
1130	1,592854E+09	1,592854E+09	3,445092E+09	3,445092E+09	3,185709E+09	6,890185E+09	1,007589E+10
1131	1,592880E+09	1,592871E+09	3,445105E+09	3,445036E+09	3,185750E+09	6,890141E+09	1,007589E+10
1132	1,592817E+09	1,592803E+09	3,445023E+09	3,445083E+09	3,185620E+09	6,890105E+09	1,007573E+10
1133	1,592913E+09	1,592916E+09	3,445062E+09	3,445051E+09	3,185830E+09	6,890113E+09	1,007594E+10
1134	1,592894E+09	1,592928E+09	3,445013E+09	3,444977E+09	3,185822E+09	6,889991E+09	1,007581E+10
1135	1,592897E+09	1,592921E+09	3,444972E+09	3,444996E+09	3,185818E+09	6,889968E+09	1,007579E+10
1136	1,593024E+09	1,593031E+09	3,445016E+09	3,444941E+09	3,186055E+09	6,889957E+09	1,007601E+10
1137	1,592984E+09	1,592990E+09	3,444945E+09	3,444915E+09	3,185974E+09	6,889860E+09	1,007583E+10
1138	1,593041E+09	1,593034E+09	3,444913E+09	3,444935E+09	3,186075E+09	6,889848E+09	1,007592E+10
1139	1,593115E+09	1,593120E+09	3,444901E+09	3,444871E+09	3,186235E+09	6,889772E+09	1,007601E+10
1140	1,593051E+09	1,593058E+09	3,444819E+09	3,444903E+09	3,186110E+09	6,889722E+09	1,007583E+10
1141	1,593123E+09	1,593125E+09	3,444886E+09	3,444889E+09	3,186248E+09	6,889775E+09	1,007602E+10
1142	1,593111E+09	1,593123E+09	3,444904E+09	3,444821E+09	3,186234E+09	6,889725E+09	1,007596E+10
1143	1,593042E+09	1,593030E+09	3,444888E+09	3,444906E+09	3,186072E+09	6,889795E+09	1,007587E+10
1144	1,593098E+09	1,593085E+09	3,444965E+09	3,444924E+09	3,186183E+09	6,889889E+09	1,007607E+10
1145	1,593004E+09	1,593013E+09	3,444948E+09	3,444932E+09	3,186017E+09	6,889880E+09	1,007590E+10
1146	1,592958E+09	1,592969E+09	3,444946E+09	3,445008E+09	3,185927E+09	6,889954E+09	1,007588E+10
1147	1,593005E+09	1,593014E+09	3,444996E+09	3,444964E+09	3,186019E+09	6,889960E+09	1,007598E+10
1148	1,592915E+09	1,592905E+09	3,444963E+09	3,444993E+09	3,185820E+09	6,889955E+09	1,007578E+10
1149	1,592951E+09	1,592930E+09	3,445004E+09	3,445009E+09	3,185881E+09	6,890014E+09	1,007589E+10
1150	1,592981E+09	1,592977E+09	3,445000E+09	3,444927E+09	3,185958E+09	6,889927E+09	1,007589E+10
1151	1,592911E+09	1,592919E+09	3,444930E+09	3,444979E+09	3,185830E+09	6,889909E+09	1,007574E+10
1152	1,593002E+09	1,593022E+09	3,444967E+09	3,444956E+09	3,186024E+09	6,889923E+09	1,007595E+10
1153	1,592998E+09	1,593031E+09	3,444956E+09	3,444872E+09	3,186029E+09	6,889828E+09	1,007586E+10
1154	1,592993E+09	1,593012E+09	3,444904E+09	3,444915E+09	3,186005E+09	6,889819E+09	1,007582E+10
1155	1,593124E+09	1,593119E+09	3,444902E+09	3,444850E+09	3,186244E+09	6,889752E+09	1,007600E+10
1156	1,593097E+09	1,593090E+09	3,444819E+09	3,444841E+09	3,186187E+09	6,889660E+09	1,007585E+10
1157	1,593143E+09	1,593137E+09	3,444784E+09	3,444862E+09	3,186281E+09	6,889646E+09	1,007593E+10
1158	1,593221E+09	1,593235E+09	3,444784E+09	3,444745E+09	3,186456E+09	6,889529E+09	1,007598E+10
1159	1,593152E+09	1,593163E+09	3,444750E+09	3,444773E+09	3,186315E+09	6,889523E+09	1,007584E+10
1160	1,593215E+09	1,593206E+09	3,444814E+09	3,444784E+09	3,186421E+09	6,889598E+09	1,007602E+10
1161	1,593203E+09	1,593205E+09	3,444852E+09	3,444736E+09	3,186408E+09	6,889588E+09	1,007600E+10
1162	1,593109E+09	1,593114E+09	3,444818E+09	3,444859E+09	3,186224E+09	6,889678E+09	1,007590E+10
1163	1,593159E+09	1,593169E+09	3,444857E+09	3,444860E+09	3,186327E+09	6,889717E+09	1,007604E+10
1164	1,593082E+09	1,593095E+09	3,444864E+09	3,444870E+09	3,186177E+09	6,889734E+09	1,007591E+10
1165	1,593041E+09	1,593039E+09	3,444873E+09	3,444938E+09	3,186080E+09	6,889811E+09	1,007589E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1166	1,593104E+09	1,593092E+09	3,444913E+09	3,444854E+09	3,186195E+09	6,889767E+09	1,007596E+10
1167	1,593014E+09	1,592993E+09	3,444890E+09	3,444889E+09	3,186007E+09	6,889779E+09	1,007579E+10
1168	1,593040E+09	1,593021E+09	3,444895E+09	3,444920E+09	3,186060E+09	6,889814E+09	1,007587E+10
1169	1,593072E+09	1,593085E+09	3,444913E+09	3,444832E+09	3,186157E+09	6,889745E+09	1,007590E+10
1170	1,592990E+09	1,593026E+09	3,444852E+09	3,444895E+09	3,186017E+09	6,889748E+09	1,007576E+10
1171	1,593089E+09	1,593111E+09	3,444870E+09	3,444847E+09	3,186200E+09	6,889717E+09	1,007592E+10
1172	1,593111E+09	1,593120E+09	3,444863E+09	3,444784E+09	3,186231E+09	6,889648E+09	1,007588E+10
1173	1,593107E+09	1,593100E+09	3,444791E+09	3,444842E+09	3,186207E+09	6,889633E+09	1,007584E+10
1174	1,593241E+09	1,593233E+09	3,444765E+09	3,444742E+09	3,186474E+09	6,889507E+09	1,007598E+10
1175	1,593207E+09	1,593216E+09	3,444708E+09	3,444724E+09	3,186422E+09	6,889432E+09	1,007585E+10
1176	1,593242E+09	1,593247E+09	3,444683E+09	3,444749E+09	3,186488E+09	6,889432E+09	1,007592E+10
1177	1,593322E+09	1,593337E+09	3,444737E+09	3,444631E+09	3,186659E+09	6,889368E+09	1,007603E+10
1178	1,593234E+09	1,593250E+09	3,444708E+09	3,444698E+09	3,186484E+09	6,889406E+09	1,007589E+10
1179	1,593285E+09	1,593280E+09	3,444734E+09	3,444714E+09	3,186566E+09	6,889448E+09	1,007601E+10
1180	1,593284E+09	1,593286E+09	3,444760E+09	3,444697E+09	3,186570E+09	6,889457E+09	1,007603E+10
1181	1,593184E+09	1,593190E+09	3,444717E+09	3,444820E+09	3,186374E+09	6,889536E+09	1,007591E+10
1182	1,593248E+09	1,593251E+09	3,444754E+09	3,444761E+09	3,186499E+09	6,889516E+09	1,007601E+10
1183	1,593180E+09	1,593172E+09	3,444786E+09	3,444750E+09	3,186352E+09	6,889536E+09	1,007589E+10
1184	1,593136E+09	1,593109E+09	3,444779E+09	3,444831E+09	3,186244E+09	6,889610E+09	1,007585E+10
1185	1,593201E+09	1,593179E+09	3,444838E+09	3,444749E+09	3,186380E+09	6,889587E+09	1,007597E+10
1186	1,593086E+09	1,593096E+09	3,444807E+09	3,444813E+09	3,186183E+09	6,889619E+09	1,007580E+10
1187	1,593105E+09	1,593124E+09	3,444794E+09	3,444829E+09	3,186229E+09	6,889623E+09	1,007585E+10
1188	1,593159E+09	1,593186E+09	3,444833E+09	3,444757E+09	3,186345E+09	6,889590E+09	1,007594E+10
1189	1,593086E+09	1,593112E+09	3,444779E+09	3,444825E+09	3,186198E+09	6,889604E+09	1,007580E+10
1190	1,593204E+09	1,593203E+09	3,444769E+09	3,444744E+09	3,186406E+09	6,889513E+09	1,007592E+10
1191	1,593231E+09	1,593221E+09	3,444760E+09	3,444684E+09	3,186452E+09	6,889443E+09	1,007590E+10
1192	1,593218E+09	1,593209E+09	3,444652E+09	3,444749E+09	3,186427E+09	6,889401E+09	1,007583E+10
1193	1,593352E+09	1,593354E+09	3,444660E+09	3,444625E+09	3,186706E+09	6,889285E+09	1,007599E+10
1194	1,593298E+09	1,593333E+09	3,444630E+09	3,444614E+09	3,186631E+09	6,889244E+09	1,007587E+10
1195	1,593328E+09	1,593339E+09	3,444603E+09	3,444626E+09	3,186667E+09	6,889229E+09	1,007590E+10
1196	1,593420E+09	1,593422E+09	3,444667E+09	3,444555E+09	3,186842E+09	6,889222E+09	1,007606E+10
1197	1,593322E+09	1,593328E+09	3,444628E+09	3,444654E+09	3,186650E+09	6,889281E+09	1,007593E+10
1198	1,593373E+09	1,593369E+09	3,444623E+09	3,444642E+09	3,186741E+09	6,889265E+09	1,007601E+10
1199	1,593371E+09	1,593378E+09	3,444671E+09	3,444617E+09	3,186748E+09	6,889288E+09	1,007604E+10
1200	1,593269E+09	1,593268E+09	3,444620E+09	3,444730E+09	3,186537E+09	6,889350E+09	1,007589E+10
1201	1,593340E+09	1,593324E+09	3,444696E+09	3,444655E+09	3,186664E+09	6,889350E+09	1,007601E+10
1202	1,593257E+09	1,593252E+09	3,444727E+09	3,444667E+09	3,186509E+09	6,889394E+09	1,007590E+10
1203	1,593204E+09	1,593186E+09	3,444685E+09	3,444742E+09	3,186390E+09	6,889426E+09	1,007582E+10
1204	1,593279E+09	1,593275E+09	3,444739E+09	3,444691E+09	3,186554E+09	6,889431E+09	1,007598E+10
1205	1,593163E+09	1,593191E+09	3,444714E+09	3,444754E+09	3,186354E+09	6,889468E+09	1,007582E+10
1206	1,593196E+09	1,593219E+09	3,444701E+09	3,444721E+09	3,186414E+09	6,889422E+09	1,007584E+10
1207	1,593266E+09	1,593276E+09	3,444760E+09	3,444642E+09	3,186542E+09	6,889402E+09	1,007594E+10
1208	1,593199E+09	1,593197E+09	3,444671E+09	3,444725E+09	3,186396E+09	6,889396E+09	1,007579E+10
1209	1,593324E+09	1,593303E+09	3,444669E+09	3,444639E+09	3,186627E+09	6,889308E+09	1,007593E+10
1210	1,593329E+09	1,593344E+09	3,444649E+09	3,444593E+09	3,186673E+09	6,889242E+09	1,007591E+10
1211	1,593307E+09	1,593326E+09	3,444536E+09	3,444634E+09	3,186632E+09	6,889169E+09	1,007580E+10
1212	1,593453E+09	1,593465E+09	3,444577E+09	3,444531E+09	3,186919E+09	6,889108E+09	1,007603E+10
1213	1,593396E+09	1,593424E+09	3,444568E+09	3,444536E+09	3,186819E+09	6,889104E+09	1,007592E+10
1214	1,593430E+09	1,593427E+09	3,444524E+09	3,444534E+09	3,186858E+09	6,889057E+09	1,007592E+10



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1215	1,593520E+09	1,593510E+09	3,444581E+09	3,444478E+09	3,187030E+09	6,889059E+09	1,007609E+10
1216	1,593411E+09	1,593416E+09	3,444506E+09	3,444593E+09	3,186827E+09	6,889098E+09	1,007593E+10
1217	1,593466E+09	1,593458E+09	3,444530E+09	3,444552E+09	3,186924E+09	6,889082E+09	1,007601E+10
1218	1,593447E+09	1,593464E+09	3,444593E+09	3,444523E+09	3,186911E+09	6,889116E+09	1,007603E+10
1219	1,593345E+09	1,593338E+09	3,444534E+09	3,444614E+09	3,186683E+09	6,889148E+09	1,007583E+10
1220	1,593428E+09	1,593401E+09	3,444612E+09	3,444575E+09	3,186829E+09	6,889187E+09	1,007602E+10
1221	1,593334E+09	1,593335E+09	3,444645E+09	3,444607E+09	3,186668E+09	6,889251E+09	1,007592E+10
1222	1,593281E+09	1,593285E+09	3,444587E+09	3,444653E+09	3,186567E+09	6,889240E+09	1,007581E+10
1223	1,593359E+09	1,593375E+09	3,444669E+09	3,444600E+09	3,186734E+09	6,889269E+09	1,007600E+10
1224	1,593251E+09	1,593278E+09	3,444638E+09	3,444670E+09	3,186529E+09	6,889307E+09	1,007584E+10
1225	1,593301E+09	1,593299E+09	3,444644E+09	3,444622E+09	3,186600E+09	6,889266E+09	1,007587E+10
1226	1,593362E+09	1,593366E+09	3,444684E+09	3,444563E+09	3,186728E+09	6,889247E+09	1,007598E+10
1227	1,593294E+09	1,593292E+09	3,444546E+09	3,444630E+09	3,186586E+09	6,889176E+09	1,007576E+10
1228	1,593429E+09	1,593418E+09	3,444536E+09	3,444566E+09	3,186847E+09	6,889102E+09	1,007595E+10
1229	1,593430E+09	1,593459E+09	3,444538E+09	3,444506E+09	3,186889E+09	6,889044E+09	1,007593E+10
1230	1,593416E+09	1,593433E+09	3,444434E+09	3,444498E+09	3,186849E+09	6,888933E+09	1,007578E+10
1231	1,593564E+09	1,593564E+09	3,444507E+09	3,444406E+09	3,187128E+09	6,888913E+09	1,007604E+10
1232	1,593504E+09	1,593514E+09	3,444472E+09	3,444445E+09	3,187018E+09	6,888917E+09	1,007593E+10
1233	1,593533E+09	1,593520E+09	3,444439E+09	3,444449E+09	3,187053E+09	6,888887E+09	1,007594E+10
1234	1,593597E+09	1,593616E+09	3,444490E+09	3,444413E+09	3,187213E+09	6,888903E+09	1,007612E+10
1235	1,593484E+09	1,593504E+09	3,444402E+09	3,444501E+09	3,186988E+09	6,888903E+09	1,007589E+10
1236	1,593551E+09	1,593540E+09	3,444449E+09	3,444478E+09	3,187091E+09	6,888928E+09	1,007602E+10
1237	1,593530E+09	1,593533E+09	3,444527E+09	3,444451E+09	3,187063E+09	6,888979E+09	1,007604E+10
1238	1,593430E+09	1,593412E+09	3,444453E+09	3,444517E+09	3,186842E+09	6,888969E+09	1,007581E+10
1239	1,593509E+09	1,593485E+09	3,444536E+09	3,444490E+09	3,186994E+09	6,889026E+09	1,007602E+10
1240	1,593411E+09	1,593425E+09	3,444546E+09	3,444538E+09	3,186836E+09	6,889083E+09	1,007592E+10
1241	1,593366E+09	1,593374E+09	3,444521E+09	3,444560E+09	3,186740E+09	6,889081E+09	1,007582E+10
1242	1,593436E+09	1,593463E+09	3,444609E+09	3,444509E+09	3,186898E+09	6,889118E+09	1,007602E+10
1243	1,593338E+09	1,593352E+09	3,444547E+09	3,444566E+09	3,186690E+09	6,889113E+09	1,007580E+10
1244	1,593409E+09	1,593385E+09	3,444535E+09	3,444553E+09	3,186794E+09	6,889088E+09	1,007588E+10
1245	1,593465E+09	1,593464E+09	3,444564E+09	3,444496E+09	3,186928E+09	6,889060E+09	1,007599E+10
1246	1,593400E+09	1,593413E+09	3,444415E+09	3,444516E+09	3,186813E+09	6,888931E+09	1,007574E+10
1247	1,593537E+09	1,593539E+09	3,444438E+09	3,444438E+09	3,187076E+09	6,888876E+09	1,007595E+10
1248	1,593537E+09	1,593567E+09	3,444449E+09	3,444392E+09	3,187104E+09	6,888841E+09	1,007595E+10
1249	1,593530E+09	1,593532E+09	3,444379E+09	3,444384E+09	3,187061E+09	6,888763E+09	1,007582E+10
1250	1,593655E+09	1,593663E+09	3,444438E+09	3,444328E+09	3,187317E+09	6,888766E+09	1,007608E+10
1251	1,593588E+09	1,593606E+09	3,444364E+09	3,444370E+09	3,187194E+09	6,888734E+09	1,007593E+10
1252	1,593624E+09	1,593619E+09	3,444321E+09	3,444398E+09	3,187244E+09	6,888719E+09	1,007596E+10
1253	1,593682E+09	1,593703E+09	3,444395E+09	3,444345E+09	3,187384E+09	6,888740E+09	1,007612E+10
1254	1,593578E+09	1,593585E+09	3,444310E+09	3,444379E+09	3,187164E+09	6,888689E+09	1,007585E+10
1255	1,593647E+09	1,593615E+09	3,444377E+09	3,444363E+09	3,187262E+09	6,888740E+09	1,007600E+10
1256	1,593620E+09	1,593610E+09	3,444438E+09	3,444367E+09	3,187231E+09	6,888805E+09	1,007604E+10
1257	1,593517E+09	1,593499E+09	3,444384E+09	3,444430E+09	3,187016E+09	6,888814E+09	1,007583E+10
1258	1,593567E+09	1,593586E+09	3,444472E+09	3,444422E+09	3,187154E+09	6,888894E+09	1,007605E+10
1259	1,593475E+09	1,593509E+09	3,444472E+09	3,444453E+09	3,186984E+09	6,888926E+09	1,007591E+10
1260	1,593449E+09	1,593452E+09	3,444453E+09	3,444502E+09	3,186901E+09	6,888955E+09	1,007586E+10
1261	1,593526E+09	1,593532E+09	3,444538E+09	3,444453E+09	3,187058E+09	6,888991E+09	1,007605E+10
1262	1,593442E+09	1,593433E+09	3,444431E+09	3,444470E+09	3,186876E+09	6,888901E+09	1,007578E+10
1263	1,593516E+09	1,593488E+09	3,444411E+09	3,444456E+09	3,187003E+09	6,888867E+09	1,007587E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1264	1,593571E+09	1,593581E+09	3,444426E+09	3,444395E+09	3,187152E+09	6,888821E+09	1,007597E+10
1265	1,593513E+09	1,593527E+09	3,444328E+09	3,444377E+09	3,187039E+09	6,888704E+09	1,007574E+10
1266	1,593631E+09	1,593651E+09	3,444376E+09	3,444310E+09	3,187282E+09	6,888686E+09	1,007597E+10
1267	1,593635E+09	1,593660E+09	3,444365E+09	3,444273E+09	3,187295E+09	6,888639E+09	1,007593E+10
1268	1,593633E+09	1,593629E+09	3,444285E+09	3,444321E+09	3,187262E+09	6,888606E+09	1,007587E+10
1269	1,593746E+09	1,593760E+09	3,444337E+09	3,444279E+09	3,187506E+09	6,888616E+09	1,007612E+10
1270	1,593683E+09	1,593709E+09	3,444246E+09	3,444280E+09	3,187392E+09	6,888526E+09	1,007592E+10
1271	1,593723E+09	1,593714E+09	3,444231E+09	3,444298E+09	3,187437E+09	6,888528E+09	1,007597E+10
1272	1,593781E+09	1,593784E+09	3,444308E+09	3,444250E+09	3,187565E+09	6,888557E+09	1,007612E+10
1273	1,593681E+09	1,593662E+09	3,444254E+09	3,444270E+09	3,187342E+09	6,888524E+09	1,007587E+10
1274	1,593721E+09	1,593701E+09	3,444315E+09	3,444281E+09	3,187422E+09	6,888596E+09	1,007602E+10
1275	1,593686E+09	1,593695E+09	3,444344E+09	3,444293E+09	3,187381E+09	6,888637E+09	1,007602E+10
1276	1,593589E+09	1,593593E+09	3,444294E+09	3,444385E+09	3,187182E+09	6,888680E+09	1,007586E+10
1277	1,593636E+09	1,593663E+09	3,444401E+09	3,444363E+09	3,187298E+09	6,888764E+09	1,007606E+10
1278	1,593563E+09	1,593581E+09	3,444389E+09	3,444349E+09	3,187144E+09	6,888738E+09	1,007588E+10
1279	1,593552E+09	1,593526E+09	3,444360E+09	3,444399E+09	3,187078E+09	6,888759E+09	1,007584E+10
1280	1,593631E+09	1,593616E+09	3,444416E+09	3,444367E+09	3,187247E+09	6,888782E+09	1,007603E+10
1281	1,593552E+09	1,593542E+09	3,444327E+09	3,444355E+09	3,187094E+09	6,888682E+09	1,007578E+10
1282	1,593602E+09	1,593613E+09	3,444318E+09	3,444342E+09	3,187216E+09	6,888660E+09	1,007588E+10
1283	1,593661E+09	1,593691E+09	3,444339E+09	3,444270E+09	3,187352E+09	6,888609E+09	1,007596E+10
1284	1,593615E+09	1,593631E+09	3,444259E+09	3,444289E+09	3,187246E+09	6,888548E+09	1,007579E+10
1285	1,593725E+09	1,593740E+09	3,444313E+09	3,444242E+09	3,187465E+09	6,888555E+09	1,007602E+10
1286	1,593738E+09	1,593752E+09	3,444264E+09	3,444189E+09	3,187490E+09	6,888453E+09	1,007594E+10
1287	1,593739E+09	1,593732E+09	3,444166E+09	3,444248E+09	3,187470E+09	6,888414E+09	1,007588E+10
1288	1,593850E+09	1,593862E+09	3,444207E+09	3,444203E+09	3,187713E+09	6,888410E+09	1,007612E+10
1289	1,593797E+09	1,593804E+09	3,444157E+09	3,444156E+09	3,187602E+09	6,888313E+09	1,007591E+10
1290	1,593815E+09	1,593808E+09	3,444159E+09	3,444178E+09	3,187624E+09	6,888337E+09	1,007596E+10
1291	1,593870E+09	1,593863E+09	3,444219E+09	3,444140E+09	3,187732E+09	6,888359E+09	1,007609E+10
1292	1,593766E+09	1,593750E+09	3,444170E+09	3,444209E+09	3,187516E+09	6,888380E+09	1,007590E+10
1293	1,593784E+09	1,593791E+09	3,444242E+09	3,444235E+09	3,187575E+09	6,888477E+09	1,007605E+10
1294	1,593755E+09	1,593783E+09	3,444258E+09	3,444211E+09	3,187538E+09	6,888468E+09	1,007601E+10
1295	1,593667E+09	1,593672E+09	3,444227E+09	3,444304E+09	3,187339E+09	6,888531E+09	1,007587E+10
1296	1,593725E+09	1,593730E+09	3,444322E+09	3,444289E+09	3,187454E+09	6,888611E+09	1,007607E+10
1297	1,593667E+09	1,593649E+09	3,444316E+09	3,444250E+09	3,187316E+09	6,888565E+09	1,007588E+10
1298	1,593639E+09	1,593619E+09	3,444268E+09	3,444309E+09	3,187258E+09	6,888577E+09	1,007584E+10
1299	1,593719E+09	1,593715E+09	3,444288E+09	3,444268E+09	3,187434E+09	6,888556E+09	1,007599E+10
1300	1,593647E+09	1,593658E+09	3,444220E+09	3,444268E+09	3,187305E+09	6,888487E+09	1,007579E+10
1301	1,593691E+09	1,593716E+09	3,444245E+09	3,444242E+09	3,187406E+09	6,888487E+09	1,007589E+10
1302	1,593763E+09	1,593785E+09	3,444254E+09	3,444146E+09	3,187548E+09	6,888399E+09	1,007595E+10
1303	1,593727E+09	1,593726E+09	3,444169E+09	3,444193E+09	3,187454E+09	6,888363E+09	1,007582E+10
1304	1,593835E+09	1,593838E+09	3,444195E+09	3,444174E+09	3,187673E+09	6,888368E+09	1,007604E+10
1305	1,593853E+09	1,593864E+09	3,444156E+09	3,444095E+09	3,187717E+09	6,888251E+09	1,007597E+10
1306	1,593835E+09	1,593853E+09	3,444068E+09	3,444148E+09	3,187688E+09	6,888216E+09	1,007590E+10
1307	1,593947E+09	1,593959E+09	3,444110E+09	3,444091E+09	3,187906E+09	6,888200E+09	1,007611E+10
1308	1,593901E+09	1,593900E+09	3,444081E+09	3,444070E+09	3,187801E+09	6,888151E+09	1,007595E+10
1309	1,593899E+09	1,593887E+09	3,444093E+09	3,444104E+09	3,187787E+09	6,888197E+09	1,007598E+10
1310	1,593949E+09	1,593946E+09	3,444126E+09	3,444056E+09	3,187895E+09	6,888183E+09	1,007608E+10
1311	1,593844E+09	1,593843E+09	3,444076E+09	3,444142E+09	3,187687E+09	6,888217E+09	1,007590E+10
1312	1,593857E+09	1,593873E+09	3,444150E+09	3,444170E+09	3,187730E+09	6,888320E+09	1,007605E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1313	1,593845E+09	1,593856E+09	3,444200E+09	3,444106E+09	3,187701E+09	6,888306E+09	1,007601E+10
1314	1,593749E+09	1,593746E+09	3,444163E+09	3,444202E+09	3,187495E+09	6,888365E+09	1,007586E+10
1315	1,593813E+09	1,593795E+09	3,444221E+09	3,444195E+09	3,187608E+09	6,888417E+09	1,007602E+10
1316	1,593762E+09	1,593742E+09	3,444207E+09	3,444182E+09	3,187504E+09	6,888389E+09	1,007589E+10
1317	1,593716E+09	1,593723E+09	3,444171E+09	3,444237E+09	3,187439E+09	6,888407E+09	1,007585E+10
1318	1,593804E+09	1,593822E+09	3,444189E+09	3,444157E+09	3,187626E+09	6,888346E+09	1,007597E+10
1319	1,593745E+09	1,593762E+09	3,444146E+09	3,444162E+09	3,187507E+09	6,888308E+09	1,007582E+10
1320	1,593792E+09	1,593807E+09	3,444169E+09	3,444156E+09	3,187599E+09	6,888325E+09	1,007592E+10
1321	1,593879E+09	1,593877E+09	3,444178E+09	3,444047E+09	3,187756E+09	6,888225E+09	1,007598E+10
1322	1,593827E+09	1,593837E+09	3,444071E+09	3,444112E+09	3,187664E+09	6,888183E+09	1,007585E+10
1323	1,593937E+09	1,593945E+09	3,444059E+09	3,444089E+09	3,187882E+09	6,888148E+09	1,007603E+10
1324	1,593963E+09	1,593977E+09	3,444039E+09	3,444010E+09	3,187940E+09	6,888049E+09	1,007599E+10
1325	1,593933E+09	1,593950E+09	3,443985E+09	3,444045E+09	3,187883E+09	6,888031E+09	1,007591E+10
1326	1,594049E+09	1,594043E+09	3,444012E+09	3,443960E+09	3,188092E+09	6,887972E+09	1,007606E+10
1327	1,594000E+09	1,593989E+09	3,443989E+09	3,443971E+09	3,187988E+09	6,887960E+09	1,007595E+10
1328	1,593985E+09	1,593978E+09	3,443999E+09	3,444035E+09	3,187962E+09	6,888034E+09	1,007600E+10
1329	1,594034E+09	1,594039E+09	3,444050E+09	3,443969E+09	3,188073E+09	6,888019E+09	1,007609E+10
1330	1,593913E+09	1,593938E+09	3,444019E+09	3,444060E+09	3,187851E+09	6,888078E+09	1,007593E+10
1331	1,593932E+09	1,593939E+09	3,444078E+09	3,444087E+09	3,187872E+09	6,888165E+09	1,007604E+10
1332	1,593932E+09	1,593924E+09	3,444133E+09	3,444045E+09	3,187856E+09	6,888178E+09	1,007603E+10
1333	1,593826E+09	1,593814E+09	3,444087E+09	3,444142E+09	3,187640E+09	6,888230E+09	1,007587E+10
1334	1,593895E+09	1,593876E+09	3,444101E+09	3,444111E+09	3,187771E+09	6,888212E+09	1,007598E+10
1335	1,593851E+09	1,593849E+09	3,444088E+09	3,444099E+09	3,187700E+09	6,888186E+09	1,007589E+10
1336	1,593808E+09	1,593825E+09	3,444071E+09	3,444141E+09	3,187633E+09	6,888212E+09	1,007585E+10
1337	1,593910E+09	1,593919E+09	3,444124E+09	3,444024E+09	3,187829E+09	6,888148E+09	1,007598E+10
1338	1,593845E+09	1,593865E+09	3,444082E+09	3,444046E+09	3,187710E+09	6,888128E+09	1,007584E+10
1339	1,593894E+09	1,593896E+09	3,444067E+09	3,444065E+09	3,187790E+09	6,888132E+09	1,007592E+10
1340	1,593986E+09	1,593989E+09	3,444070E+09	3,443984E+09	3,187974E+09	6,888054E+09	1,007603E+10
1341	1,593921E+09	1,593951E+09	3,443963E+09	3,444038E+09	3,187872E+09	6,888001E+09	1,007587E+10
1342	1,594038E+09	1,594049E+09	3,443944E+09	3,443976E+09	3,188086E+09	6,887920E+09	1,007601E+10
1343	1,594074E+09	1,594081E+09	3,443943E+09	3,443900E+09	3,188155E+09	6,887843E+09	1,007600E+10
1344	1,594040E+09	1,594036E+09	3,443899E+09	3,443947E+09	3,188076E+09	6,887847E+09	1,007592E+10
1345	1,594154E+09	1,594130E+09	3,443938E+09	3,443854E+09	3,188284E+09	6,887792E+09	1,007608E+10
1346	1,594082E+09	1,594092E+09	3,443909E+09	3,443887E+09	3,188174E+09	6,887796E+09	1,007597E+10
1347	1,594059E+09	1,594068E+09	3,443899E+09	3,443964E+09	3,188127E+09	6,887863E+09	1,007599E+10
1348	1,594114E+09	1,594128E+09	3,443976E+09	3,443905E+09	3,188241E+09	6,887881E+09	1,007612E+10
1349	1,593986E+09	1,594007E+09	3,443962E+09	3,443987E+09	3,187992E+09	6,887949E+09	1,007594E+10
1350	1,594015E+09	1,593997E+09	3,443987E+09	3,443995E+09	3,188012E+09	6,887982E+09	1,007599E+10
1351	1,594023E+09	1,593999E+09	3,444026E+09	3,443971E+09	3,188023E+09	6,887998E+09	1,007602E+10
1352	1,593912E+09	1,593904E+09	3,443977E+09	3,444072E+09	3,187816E+09	6,888049E+09	1,007586E+10
1353	1,593987E+09	1,593979E+09	3,444010E+09	3,444002E+09	3,187966E+09	6,888012E+09	1,007598E+10
1354	1,593933E+09	1,593962E+09	3,444027E+09	3,443985E+09	3,187895E+09	6,888012E+09	1,007591E+10
1355	1,593897E+09	1,593914E+09	3,444004E+09	3,444038E+09	3,187812E+09	6,888042E+09	1,007585E+10
1356	1,594008E+09	1,594007E+09	3,444060E+09	3,443947E+09	3,188015E+09	6,888007E+09	1,007602E+10
1357	1,593934E+09	1,593953E+09	3,444005E+09	3,443984E+09	3,187887E+09	6,887990E+09	1,007588E+10
1358	1,593991E+09	1,593990E+09	3,443933E+09	3,443983E+09	3,187981E+09	6,887916E+09	1,007590E+10
1359	1,594092E+09	1,594101E+09	3,443930E+09	3,443900E+09	3,188193E+09	6,887830E+09	1,007602E+10
1360	1,594034E+09	1,594056E+09	3,443848E+09	3,443931E+09	3,188090E+09	6,887779E+09	1,007587E+10
1361	1,594161E+09	1,594146E+09	3,443851E+09	3,443829E+09	3,188307E+09	6,887681E+09	1,007599E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude <sup>⊙</sup>	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1362	1,594182E+09	1,594188E+09	3,443862E+09	3,443769E+09	3,188370E+09	6,887631E+09	1,007600E+10
1363	1,594138E+09	1,594131E+09	3,443797E+09	3,443850E+09	3,188270E+09	6,887647E+09	1,007592E+10
1364	1,594241E+09	1,594237E+09	3,443854E+09	3,443788E+09	3,188478E+09	6,887642E+09	1,007612E+10
1365	1,594150E+09	1,594193E+09	3,443846E+09	3,443829E+09	3,188342E+09	6,887675E+09	1,007602E+10
1366	1,594130E+09	1,594145E+09	3,443822E+09	3,443883E+09	3,188275E+09	6,887705E+09	1,007598E+10
1367	1,594198E+09	1,594201E+09	3,443900E+09	3,443839E+09	3,188399E+09	6,887739E+09	1,007614E+10
1368	1,594075E+09	1,594069E+09	3,443882E+09	3,443922E+09	3,188144E+09	6,887803E+09	1,007595E+10
1369	1,594110E+09	1,594068E+09	3,443895E+09	3,443904E+09	3,188178E+09	6,887799E+09	1,007598E+10
1370	1,594105E+09	1,594101E+09	3,443930E+09	3,443879E+09	3,188206E+09	6,887808E+09	1,007601E+10
1371	1,593993E+09	1,593999E+09	3,443873E+09	3,443976E+09	3,187992E+09	6,887849E+09	1,007584E+10
1372	1,594072E+09	1,594077E+09	3,443949E+09	3,443904E+09	3,188149E+09	6,887853E+09	1,007600E+10
1373	1,594014E+09	1,594046E+09	3,443978E+09	3,443888E+09	3,188060E+09	6,887865E+09	1,007593E+10
1374	1,593985E+09	1,593987E+09	3,443913E+09	3,443940E+09	3,187972E+09	6,887854E+09	1,007583E+10
1375	1,594107E+09	1,594102E+09	3,443943E+09	3,443882E+09	3,188208E+09	6,887825E+09	1,007603E+10
1376	1,594037E+09	1,594056E+09	3,443880E+09	3,443916E+09	3,188092E+09	6,887796E+09	1,007589E+10
1377	1,594105E+09	1,594101E+09	3,443818E+09	3,443871E+09	3,188207E+09	6,887688E+09	1,007590E+10
1378	1,594203E+09	1,594220E+09	3,443840E+09	3,443771E+09	3,188423E+09	6,887610E+09	1,007603E+10
1379	1,594147E+09	1,594156E+09	3,443755E+09	3,443809E+09	3,188303E+09	6,887564E+09	1,007587E+10
1380	1,594270E+09	1,594247E+09	3,443779E+09	3,443730E+09	3,188516E+09	6,887509E+09	1,007603E+10
1381	1,594268E+09	1,594288E+09	3,443791E+09	3,443695E+09	3,188556E+09	6,887486E+09	1,007604E+10
1382	1,594217E+09	1,594228E+09	3,443690E+09	3,443776E+09	3,188445E+09	6,887466E+09	1,007591E+10
1383	1,594322E+09	1,594338E+09	3,443749E+09	3,443730E+09	3,188661E+09	6,887479E+09	1,007614E+10
1384	1,594238E+09	1,594271E+09	3,443770E+09	3,443756E+09	3,188509E+09	6,887526E+09	1,007604E+10
1385	1,594232E+09	1,594211E+09	3,443747E+09	3,443775E+09	3,188443E+09	6,887522E+09	1,007596E+10
1386	1,594290E+09	1,594277E+09	3,443822E+09	3,443738E+09	3,188566E+09	6,887560E+09	1,007613E+10
1387	1,594165E+09	1,594147E+09	3,443775E+09	3,443836E+09	3,188311E+09	6,887611E+09	1,007592E+10
1388	1,594192E+09	1,594164E+09	3,443803E+09	3,443822E+09	3,188356E+09	6,887626E+09	1,007598E+10
1389	1,594171E+09	1,594200E+09	3,443867E+09	3,443796E+09	3,188371E+09	6,887663E+09	1,007603E+10
1390	1,594065E+09	1,594082E+09	3,443801E+09	3,443875E+09	3,188147E+09	6,887676E+09	1,007582E+10
1391	1,594154E+09	1,594159E+09	3,443876E+09	3,443829E+09	3,188313E+09	6,887705E+09	1,007602E+10
1392	1,594107E+09	1,594120E+09	3,443904E+09	3,443825E+09	3,188228E+09	6,887728E+09	1,007596E+10
1393	1,594091E+09	1,594073E+09	3,443805E+09	3,443854E+09	3,188163E+09	6,887659E+09	1,007582E+10
1394	1,594208E+09	1,594216E+09	3,443823E+09	3,443787E+09	3,188424E+09	6,887610E+09	1,007603E+10
1395	1,594147E+09	1,594168E+09	3,443748E+09	3,443807E+09	3,188316E+09	6,887554E+09	1,007587E+10
1396	1,594221E+09	1,594214E+09	3,443726E+09	3,443745E+09	3,188435E+09	6,887471E+09	1,007591E+10
1397	1,594306E+09	1,594326E+09	3,443769E+09	3,443649E+09	3,188632E+09	6,887418E+09	1,007605E+10
1398	1,594247E+09	1,594251E+09	3,443655E+09	3,443694E+09	3,188498E+09	6,887349E+09	1,007585E+10
1399	1,594363E+09	1,594357E+09	3,443673E+09	3,443658E+09	3,188720E+09	6,887331E+09	1,007605E+10
1400	1,594359E+09	1,594393E+09	3,443700E+09	3,443634E+09	3,188752E+09	6,887333E+09	1,007609E+10
1401	1,594312E+09	1,594325E+09	3,443609E+09	3,443686E+09	3,188637E+09	6,887295E+09	1,007593E+10
1402	1,594414E+09	1,594431E+09	3,443686E+09	3,443634E+09	3,188845E+09	6,887320E+09	1,007617E+10
1403	1,594336E+09	1,594338E+09	3,443686E+09	3,443671E+09	3,188675E+09	6,887358E+09	1,007603E+10
1404	1,594326E+09	1,594282E+09	3,443673E+09	3,443698E+09	3,188608E+09	6,887371E+09	1,007598E+10
1405	1,594364E+09	1,594357E+09	3,443736E+09	3,443668E+09	3,188721E+09	6,887404E+09	1,007612E+10
1406	1,594232E+09	1,594232E+09	3,443660E+09	3,443750E+09	3,188463E+09	6,887409E+09	1,007587E+10
1407	1,594263E+09	1,594263E+09	3,443706E+09	3,443745E+09	3,188526E+09	6,887451E+09	1,007598E+10
1408	1,594253E+09	1,594279E+09	3,443804E+09	3,443709E+09	3,188532E+09	6,887513E+09	1,007604E+10
1409	1,594162E+09	1,594156E+09	3,443733E+09	3,443767E+09	3,188317E+09	6,887500E+09	1,007582E+10
1410	1,594247E+09	1,594246E+09	3,443794E+09	3,443733E+09	3,188493E+09	6,887527E+09	1,007602E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1411	1,594206E+09	1,594212E+09	3,443785E+09	3,443747E+09	3,188418E+09	6,887532E+09	1,007595E+10
1412	1,594191E+09	1,594184E+09	3,443699E+09	3,443767E+09	3,188376E+09	6,887466E+09	1,007584E+10
1413	1,594301E+09	1,594329E+09	3,443738E+09	3,443688E+09	3,188629E+09	6,887426E+09	1,007606E+10
1414	1,594247E+09	1,594270E+09	3,443652E+09	3,443683E+09	3,188517E+09	6,887334E+09	1,007585E+10
1415	1,594328E+09	1,594319E+09	3,443631E+09	3,443647E+09	3,188647E+09	6,887278E+09	1,007592E+10
1416	1,594413E+09	1,594420E+09	3,443687E+09	3,443568E+09	3,188833E+09	6,887255E+09	1,007609E+10
1417	1,594354E+09	1,594354E+09	3,443554E+09	3,443601E+09	3,188708E+09	6,887155E+09	1,007586E+10
1418	1,594456E+09	1,594472E+09	3,443574E+09	3,443570E+09	3,188928E+09	6,887144E+09	1,007607E+10
1419	1,594459E+09	1,594491E+09	3,443599E+09	3,443549E+09	3,188950E+09	6,887148E+09	1,007610E+10
1420	1,594417E+09	1,594409E+09	3,443536E+09	3,443584E+09	3,188826E+09	6,887120E+09	1,007595E+10
1421	1,594503E+09	1,594505E+09	3,443617E+09	3,443541E+09	3,189008E+09	6,887158E+09	1,007617E+10
1422	1,594422E+09	1,594411E+09	3,443574E+09	3,443577E+09	3,188832E+09	6,887150E+09	1,007598E+10
1423	1,594405E+09	1,594376E+09	3,443551E+09	3,443632E+09	3,188780E+09	6,887183E+09	1,007596E+10
1424	1,594439E+09	1,594449E+09	3,443649E+09	3,443600E+09	3,188888E+09	6,887249E+09	1,007614E+10
1425	1,594313E+09	1,594323E+09	3,443589E+09	3,443647E+09	3,188637E+09	6,887236E+09	1,007587E+10
1426	1,594340E+09	1,594353E+09	3,443660E+09	3,443641E+09	3,188693E+09	6,887301E+09	1,007599E+10
1427	1,594342E+09	1,594351E+09	3,443737E+09	3,443629E+09	3,188693E+09	6,887366E+09	1,007606E+10
1428	1,594254E+09	1,594232E+09	3,443665E+09	3,443694E+09	3,188486E+09	6,887359E+09	1,007585E+10
1429	1,594327E+09	1,594337E+09	3,443704E+09	3,443669E+09	3,188664E+09	6,887374E+09	1,007604E+10
1430	1,594293E+09	1,594310E+09	3,443652E+09	3,443658E+09	3,188603E+09	6,887310E+09	1,007591E+10
1431	1,594291E+09	1,594297E+09	3,443577E+09	3,443674E+09	3,188588E+09	6,887252E+09	1,007584E+10
1432	1,594413E+09	1,594423E+09	3,443652E+09	3,443577E+09	3,188836E+09	6,887229E+09	1,007607E+10
1433	1,594366E+09	1,594368E+09	3,443559E+09	3,443550E+09	3,188734E+09	6,887109E+09	1,007584E+10
1434	1,594437E+09	1,594432E+09	3,443540E+09	3,443532E+09	3,188868E+09	6,887071E+09	1,007594E+10
1435	1,594518E+09	1,594529E+09	3,443572E+09	3,443483E+09	3,189047E+09	6,887055E+09	1,007610E+10
1436	1,594455E+09	1,594468E+09	3,443470E+09	3,443517E+09	3,188923E+09	6,886987E+09	1,007591E+10
1437	1,594542E+09	1,594575E+09	3,443507E+09	3,443485E+09	3,189117E+09	6,886992E+09	1,007611E+10
1438	1,594548E+09	1,594571E+09	3,443507E+09	3,443454E+09	3,189119E+09	6,886961E+09	1,007608E+10
1439	1,594511E+09	1,594492E+09	3,443436E+09	3,443516E+09	3,189003E+09	6,886953E+09	1,007596E+10
1440	1,594595E+09	1,594574E+09	3,443525E+09	3,443477E+09	3,189169E+09	6,887002E+09	1,007617E+10
1441	1,594510E+09	1,594499E+09	3,443462E+09	3,443486E+09	3,189010E+09	6,886948E+09	1,007596E+10
1442	1,594482E+09	1,594481E+09	3,443459E+09	3,443531E+09	3,188963E+09	6,886990E+09	1,007595E+10
1443	1,594520E+09	1,594536E+09	3,443572E+09	3,443504E+09	3,189056E+09	6,887076E+09	1,007613E+10
1444	1,594400E+09	1,594400E+09	3,443551E+09	3,443545E+09	3,188800E+09	6,887096E+09	1,007590E+10
1445	1,594413E+09	1,594423E+09	3,443615E+09	3,443561E+09	3,188836E+09	6,887176E+09	1,007601E+10
1446	1,594417E+09	1,594421E+09	3,443636E+09	3,443556E+09	3,188838E+09	6,887192E+09	1,007603E+10
1447	1,594338E+09	1,594331E+09	3,443538E+09	3,443642E+09	3,188669E+09	6,887180E+09	1,007585E+10
1448	1,594421E+09	1,594431E+09	3,443601E+09	3,443601E+09	3,188851E+09	6,887202E+09	1,007605E+10
1449	1,594401E+09	1,594414E+09	3,443550E+09	3,443540E+09	3,188816E+09	6,887090E+09	1,007591E+10
1450	1,594401E+09	1,594405E+09	3,443497E+09	3,443544E+09	3,188806E+09	6,887040E+09	1,007585E+10
1451	1,594528E+09	1,594520E+09	3,443560E+09	3,443472E+09	3,189048E+09	6,887032E+09	1,007608E+10
1452	1,594479E+09	1,594471E+09	3,443476E+09	3,443448E+09	3,188950E+09	6,886924E+09	1,007587E+10
1453	1,594523E+09	1,594546E+09	3,443448E+09	3,443453E+09	3,189068E+09	6,886901E+09	1,007597E+10
1454	1,594604E+09	1,594639E+09	3,443449E+09	3,443396E+09	3,189243E+09	6,886845E+09	1,007609E+10
1455	1,594553E+09	1,594575E+09	3,443359E+09	3,443438E+09	3,189129E+09	6,886797E+09	1,007593E+10
1456	1,594649E+09	1,594652E+09	3,443429E+09	3,443398E+09	3,189301E+09	6,886826E+09	1,007613E+10
1457	1,594659E+09	1,594651E+09	3,443402E+09	3,443343E+09	3,189310E+09	6,886745E+09	1,007606E+10
1458	1,594608E+09	1,594589E+09	3,443334E+09	3,443410E+09	3,189197E+09	6,886745E+09	1,007594E+10
1459	1,594683E+09	1,594670E+09	3,443416E+09	3,443394E+09	3,189353E+09	6,886809E+09	1,007616E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude <sup>⊙</sup>	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1460	1,594592E+09	1,594598E+09	3,443402E+09	3,443389E+09	3,189190E+09	6,886792E+09	1,007598E+10
1461	1,594544E+09	1,594570E+09	3,443429E+09	3,443445E+09	3,189114E+09	6,886874E+09	1,007599E+10
1462	1,594586E+09	1,594603E+09	3,443512E+09	3,443424E+09	3,189188E+09	6,886936E+09	1,007612E+10
1463	1,594477E+09	1,594471E+09	3,443476E+09	3,443502E+09	3,188948E+09	6,886978E+09	1,007593E+10
1464	1,594496E+09	1,594483E+09	3,443533E+09	3,443523E+09	3,188979E+09	6,887056E+09	1,007603E+10
1465	1,594508E+09	1,594506E+09	3,443510E+09	3,443482E+09	3,189014E+09	6,886992E+09	1,007601E+10
1466	1,594434E+09	1,594441E+09	3,443423E+09	3,443536E+09	3,188875E+09	6,886959E+09	1,007583E+10
1467	1,594531E+09	1,594526E+09	3,443490E+09	3,443484E+09	3,189057E+09	6,886974E+09	1,007603E+10
1468	1,594517E+09	1,594513E+09	3,443479E+09	3,443401E+09	3,189030E+09	6,886880E+09	1,007591E+10
1469	1,594499E+09	1,594509E+09	3,443425E+09	3,443427E+09	3,189008E+09	6,886852E+09	1,007586E+10
1470	1,594615E+09	1,594622E+09	3,443445E+09	3,443373E+09	3,189237E+09	6,886818E+09	1,007606E+10
1471	1,594570E+09	1,594595E+09	3,443360E+09	3,443386E+09	3,189165E+09	6,886746E+09	1,007591E+10
1472	1,594618E+09	1,594647E+09	3,443362E+09	3,443387E+09	3,189265E+09	6,886749E+09	1,007601E+10
1473	1,594710E+09	1,594737E+09	3,443355E+09	3,443294E+09	3,189448E+09	6,886649E+09	1,007610E+10
1474	1,594665E+09	1,594673E+09	3,443275E+09	3,443326E+09	3,189338E+09	6,886601E+09	1,007594E+10
1475	1,594761E+09	1,594730E+09	3,443327E+09	3,443309E+09	3,189492E+09	6,886636E+09	1,007613E+10
1476	1,594763E+09	1,594741E+09	3,443315E+09	3,443246E+09	3,189503E+09	6,886561E+09	1,007606E+10
1477	1,594683E+09	1,594692E+09	3,443250E+09	3,443325E+09	3,189375E+09	6,886576E+09	1,007595E+10
1478	1,594748E+09	1,594762E+09	3,443321E+09	3,443303E+09	3,189510E+09	6,886624E+09	1,007613E+10
1479	1,594667E+09	1,594688E+09	3,443332E+09	3,443317E+09	3,189355E+09	6,886649E+09	1,007600E+10
1480	1,594624E+09	1,594627E+09	3,443385E+09	3,443381E+09	3,189251E+09	6,886766E+09	1,007602E+10
1481	1,594672E+09	1,594669E+09	3,443423E+09	3,443347E+09	3,189341E+09	6,886770E+09	1,007611E+10
1482	1,594565E+09	1,594557E+09	3,443371E+09	3,443422E+09	3,189122E+09	6,886793E+09	1,007591E+10
1483	1,594589E+09	1,594572E+09	3,443410E+09	3,443453E+09	3,189161E+09	6,886863E+09	1,007602E+10
1484	1,594607E+09	1,594607E+09	3,443422E+09	3,443370E+09	3,189214E+09	6,886792E+09	1,007601E+10
1485	1,594521E+09	1,594545E+09	3,443360E+09	3,443417E+09	3,189066E+09	6,886777E+09	1,007584E+10
1486	1,594619E+09	1,594618E+09	3,443403E+09	3,443368E+09	3,189237E+09	6,886771E+09	1,007601E+10
1487	1,594614E+09	1,594615E+09	3,443387E+09	3,443322E+09	3,189230E+09	6,886709E+09	1,007594E+10
1488	1,594592E+09	1,594601E+09	3,443343E+09	3,443364E+09	3,189193E+09	6,886707E+09	1,007590E+10
1489	1,594711E+09	1,594733E+09	3,443321E+09	3,443287E+09	3,189444E+09	6,886609E+09	1,007605E+10
1490	1,594676E+09	1,594712E+09	3,443256E+09	3,443281E+09	3,189388E+09	6,886538E+09	1,007593E+10
1491	1,594737E+09	1,594739E+09	3,443261E+09	3,443285E+09	3,189475E+09	6,886547E+09	1,007602E+10
1492	1,594834E+09	1,594825E+09	3,443277E+09	3,443170E+09	3,189659E+09	6,886447E+09	1,007611E+10
1493	1,594766E+09	1,594771E+09	3,443190E+09	3,443220E+09	3,189537E+09	6,886410E+09	1,007595E+10
1494	1,594847E+09	1,594827E+09	3,443202E+09	3,443215E+09	3,189673E+09	6,886417E+09	1,007609E+10
1495	1,594844E+09	1,594855E+09	3,443210E+09	3,443180E+09	3,189699E+09	6,886389E+09	1,007609E+10
1496	1,594759E+09	1,594779E+09	3,443197E+09	3,443260E+09	3,189538E+09	6,886457E+09	1,007600E+10
1497	1,594825E+09	1,594841E+09	3,443257E+09	3,443216E+09	3,189666E+09	6,886473E+09	1,007614E+10
1498	1,594754E+09	1,594764E+09	3,443279E+09	3,443236E+09	3,189518E+09	6,886515E+09	1,007603E+10
1499	1,594714E+09	1,594685E+09	3,443297E+09	3,443324E+09	3,189399E+09	6,886621E+09	1,007602E+10
1500	1,594761E+09	1,594742E+09	3,443333E+09	3,443270E+09	3,189503E+09	6,886602E+09	1,007611E+10
1501	1,594640E+09	1,594657E+09	3,443271E+09	3,443336E+09	3,189297E+09	6,886607E+09	1,007590E+10
1502	1,594665E+09	1,594663E+09	3,443291E+09	3,443345E+09	3,189328E+09	6,886636E+09	1,007596E+10
1503	1,594701E+09	1,594705E+09	3,443335E+09	3,443267E+09	3,189406E+09	6,886603E+09	1,007601E+10
1504	1,594618E+09	1,594624E+09	3,443300E+09	3,443319E+09	3,189242E+09	6,886619E+09	1,007586E+10
1505	1,594714E+09	1,594711E+09	3,443303E+09	3,443262E+09	3,189424E+09	6,886565E+09	1,007599E+10
1506	1,594713E+09	1,594730E+09	3,443285E+09	3,443227E+09	3,189443E+09	6,886512E+09	1,007596E+10
1507	1,594695E+09	1,594707E+09	3,443231E+09	3,443290E+09	3,189402E+09	6,886521E+09	1,007592E+10
1508	1,594822E+09	1,594840E+09	3,443242E+09	3,443181E+09	3,189662E+09	6,886423E+09	1,007608E+10



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1509	1,594781E+09	1,594820E+09	3,443185E+09	3,443174E+09	3,189601E+09	6,886360E+09	1,007596E+10
1510	1,594841E+09	1,594828E+09	3,443154E+09	3,443184E+09	3,189669E+09	6,886337E+09	1,007601E+10
1511	1,594941E+09	1,594925E+09	3,443167E+09	3,443095E+09	3,189867E+09	6,886262E+09	1,007613E+10
1512	1,594861E+09	1,594864E+09	3,443096E+09	3,443152E+09	3,189724E+09	6,886248E+09	1,007597E+10
1513	1,594931E+09	1,594935E+09	3,443084E+09	3,443121E+09	3,189866E+09	6,886205E+09	1,007607E+10
1514	1,594934E+09	1,594960E+09	3,443128E+09	3,443073E+09	3,189894E+09	6,886201E+09	1,007609E+10
1515	1,594853E+09	1,594853E+09	3,443131E+09	3,443173E+09	3,189706E+09	6,886304E+09	1,007601E+10
1516	1,594919E+09	1,594908E+09	3,443202E+09	3,443115E+09	3,189828E+09	6,886317E+09	1,007614E+10
1517	1,594830E+09	1,594842E+09	3,443208E+09	3,443156E+09	3,189672E+09	6,886364E+09	1,007604E+10
1518	1,594783E+09	1,594763E+09	3,443178E+09	3,443253E+09	3,189546E+09	6,886430E+09	1,007598E+10
1519	1,594839E+09	1,594838E+09	3,443225E+09	3,443205E+09	3,189676E+09	6,886431E+09	1,007611E+10
1520	1,594721E+09	1,594739E+09	3,443208E+09	3,443254E+09	3,189460E+09	6,886463E+09	1,007592E+10
1521	1,594752E+09	1,594751E+09	3,443207E+09	3,443232E+09	3,189503E+09	6,886439E+09	1,007594E+10
1522	1,594800E+09	1,594799E+09	3,443264E+09	3,443160E+09	3,189599E+09	6,886425E+09	1,007602E+10
1523	1,594720E+09	1,594707E+09	3,443212E+09	3,443245E+09	3,189427E+09	6,886458E+09	1,007588E+10
1524	1,594812E+09	1,594810E+09	3,443212E+09	3,443172E+09	3,189622E+09	6,886384E+09	1,007601E+10
1525	1,594803E+09	1,594850E+09	3,443191E+09	3,443138E+09	3,189652E+09	6,886329E+09	1,007598E+10
1526	1,594792E+09	1,594810E+09	3,443112E+09	3,443187E+09	3,189602E+09	6,886299E+09	1,007590E+10
1527	1,594936E+09	1,594942E+09	3,443144E+09	3,443085E+09	3,189878E+09	6,886229E+09	1,007611E+10
1528	1,594897E+09	1,594908E+09	3,443101E+09	3,443080E+09	3,189805E+09	6,886181E+09	1,007599E+10
1529	1,594948E+09	1,594929E+09	3,443021E+09	3,443076E+09	3,189877E+09	6,886097E+09	1,007597E+10
1530	1,595045E+09	1,595045E+09	3,443052E+09	3,442992E+09	3,190090E+09	6,886045E+09	1,007613E+10
1531	1,594958E+09	1,594969E+09	3,442996E+09	3,443065E+09	3,189927E+09	6,886061E+09	1,007599E+10
1532	1,595021E+09	1,595030E+09	3,443032E+09	3,443009E+09	3,190050E+09	6,886041E+09	1,007609E+10
1533	1,595014E+09	1,595051E+09	3,443091E+09	3,442980E+09	3,190065E+09	6,886071E+09	1,007614E+10
1534	1,594929E+09	1,594916E+09	3,443052E+09	3,443100E+09	3,189845E+09	6,886152E+09	1,007600E+10
1535	1,595000E+09	1,594979E+09	3,443115E+09	3,443071E+09	3,189979E+09	6,886186E+09	1,007616E+10
1536	1,594906E+09	1,594911E+09	3,443116E+09	3,443111E+09	3,189817E+09	6,886226E+09	1,007604E+10
1537	1,594858E+09	1,594852E+09	3,443050E+09	3,443165E+09	3,189710E+09	6,886215E+09	1,007592E+10
1538	1,594930E+09	1,594932E+09	3,443135E+09	3,443092E+09	3,189862E+09	6,886227E+09	1,007609E+10
1539	1,594822E+09	1,594816E+09	3,443133E+09	3,443149E+09	3,189638E+09	6,886281E+09	1,007592E+10
1540	1,594853E+09	1,594836E+09	3,443144E+09	3,443110E+09	3,189688E+09	6,886254E+09	1,007594E+10
1541	1,594887E+09	1,594905E+09	3,443187E+09	3,443066E+09	3,189792E+09	6,886253E+09	1,007604E+10
1542	1,594801E+09	1,594811E+09	3,443095E+09	3,443168E+09	3,189612E+09	6,886263E+09	1,007588E+10
1543	1,594905E+09	1,594925E+09	3,443112E+09	3,443105E+09	3,189829E+09	6,886218E+09	1,007605E+10
1544	1,594902E+09	1,594945E+09	3,443120E+09	3,443062E+09	3,189847E+09	6,886182E+09	1,007603E+10
1545	1,594901E+09	1,594909E+09	3,443004E+09	3,443080E+09	3,189810E+09	6,886084E+09	1,007589E+10
1546	1,595059E+09	1,595042E+09	3,443038E+09	3,442975E+09	3,190101E+09	6,886013E+09	1,007611E+10
1547	1,595015E+09	1,595004E+09	3,442985E+09	3,442990E+09	3,190018E+09	6,885975E+09	1,007599E+10
1548	1,595055E+09	1,595042E+09	3,442914E+09	3,442959E+09	3,190097E+09	6,885873E+09	1,007597E+10
1549	1,595131E+09	1,595166E+09	3,442967E+09	3,442882E+09	3,190298E+09	6,885849E+09	1,007615E+10
1550	1,595041E+09	1,595061E+09	3,442914E+09	3,442963E+09	3,190102E+09	6,885877E+09	1,007598E+10
1551	1,595110E+09	1,595110E+09	3,442972E+09	3,442931E+09	3,190220E+09	6,885903E+09	1,007612E+10
1552	1,595098E+09	1,595112E+09	3,443034E+09	3,442924E+09	3,190210E+09	6,885958E+09	1,007617E+10
1553	1,595007E+09	1,594992E+09	3,442932E+09	3,443031E+09	3,189999E+09	6,885963E+09	1,007596E+10
1554	1,595084E+09	1,595069E+09	3,443001E+09	3,442998E+09	3,190153E+09	6,885999E+09	1,007615E+10
1555	1,594994E+09	1,594996E+09	3,443018E+09	3,443034E+09	3,189989E+09	6,886053E+09	1,007604E+10
1556	1,594948E+09	1,594939E+09	3,442986E+09	3,443046E+09	3,189888E+09	6,886032E+09	1,007592E+10
1557	1,595013E+09	1,595026E+09	3,443087E+09	3,442985E+09	3,190039E+09	6,886071E+09	1,007611E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude <sup>⊙</sup>	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1558	1,594904E+09	1,594896E+09	3,443052E+09	3,443062E+09	3,189799E+09	6,886115E+09	1,007591E+10
1559	1,594935E+09	1,594927E+09	3,443063E+09	3,443053E+09	3,189862E+09	6,886115E+09	1,007598E+10
1560	1,594967E+09	1,594998E+09	3,443101E+09	3,443015E+09	3,189965E+09	6,886116E+09	1,007608E+10
1561	1,594889E+09	1,594914E+09	3,442966E+09	3,443077E+09	3,189803E+09	6,886043E+09	1,007585E+10
1562	1,595018E+09	1,595025E+09	3,443011E+09	3,442995E+09	3,190042E+09	6,886006E+09	1,007605E+10
1563	1,595029E+09	1,595031E+09	3,443016E+09	3,442952E+09	3,190061E+09	6,885967E+09	1,007603E+10
1564	1,595026E+09	1,595007E+09	3,442899E+09	3,442944E+09	3,190033E+09	6,885843E+09	1,007588E+10
1565	1,595164E+09	1,595164E+09	3,442933E+09	3,442858E+09	3,190328E+09	6,885791E+09	1,007612E+10
1566	1,595107E+09	1,595121E+09	3,442862E+09	3,442886E+09	3,190228E+09	6,885748E+09	1,007598E+10
1567	1,595144E+09	1,595158E+09	3,442838E+09	3,442872E+09	3,190303E+09	6,885710E+09	1,007601E+10
1568	1,595216E+09	1,595256E+09	3,442923E+09	3,442810E+09	3,190472E+09	6,885732E+09	1,007620E+10
1569	1,595127E+09	1,595142E+09	3,442832E+09	3,442883E+09	3,190269E+09	6,885715E+09	1,007598E+10
1570	1,595205E+09	1,595184E+09	3,442889E+09	3,442866E+09	3,190389E+09	6,885755E+09	1,007614E+10
1571	1,595191E+09	1,595180E+09	3,442928E+09	3,442875E+09	3,190372E+09	6,885803E+09	1,007617E+10
1572	1,595096E+09	1,595082E+09	3,442821E+09	3,442939E+09	3,190178E+09	6,885760E+09	1,007594E+10
1573	1,595164E+09	1,595171E+09	3,442911E+09	3,442892E+09	3,190334E+09	6,885803E+09	1,007614E+10
1574	1,595074E+09	1,595079E+09	3,442934E+09	3,442921E+09	3,190153E+09	6,885856E+09	1,007601E+10
1575	1,595036E+09	1,595022E+09	3,442933E+09	3,442949E+09	3,190058E+09	6,885882E+09	1,007594E+10
1576	1,595090E+09	1,595099E+09	3,443034E+09	3,442916E+09	3,190190E+09	6,885950E+09	1,007614E+10
1577	1,594979E+09	1,594988E+09	3,442944E+09	3,442990E+09	3,189967E+09	6,885934E+09	1,007590E+10
1578	1,595022E+09	1,595027E+09	3,442956E+09	3,442980E+09	3,190049E+09	6,885936E+09	1,007599E+10
1579	1,595064E+09	1,595088E+09	3,443006E+09	3,442940E+09	3,190152E+09	6,885946E+09	1,007610E+10
1580	1,595001E+09	1,595013E+09	3,442880E+09	3,442953E+09	3,190014E+09	6,885833E+09	1,007585E+10
1581	1,595130E+09	1,595127E+09	3,442925E+09	3,442876E+09	3,190257E+09	6,885802E+09	1,007606E+10
1582	1,595139E+09	1,595128E+09	3,442900E+09	3,442847E+09	3,190267E+09	6,885746E+09	1,007601E+10
1583	1,595132E+09	1,595120E+09	3,442792E+09	3,442855E+09	3,190252E+09	6,885646E+09	1,007590E+10
1584	1,595253E+09	1,595276E+09	3,442838E+09	3,442780E+09	3,190529E+09	6,885618E+09	1,007615E+10
1585	1,595194E+09	1,595234E+09	3,442752E+09	3,442783E+09	3,190428E+09	6,885535E+09	1,007596E+10
1586	1,595245E+09	1,595254E+09	3,442763E+09	3,442774E+09	3,190499E+09	6,885537E+09	1,007604E+10
1587	1,595321E+09	1,595330E+09	3,442847E+09	3,442735E+09	3,190651E+09	6,885582E+09	1,007623E+10
1588	1,595232E+09	1,595223E+09	3,442739E+09	3,442788E+09	3,190455E+09	6,885527E+09	1,007598E+10
1589	1,595293E+09	1,595280E+09	3,442789E+09	3,442784E+09	3,190573E+09	6,885573E+09	1,007615E+10
1590	1,595270E+09	1,595272E+09	3,442810E+09	3,442793E+09	3,190542E+09	6,885603E+09	1,007615E+10
1591	1,595175E+09	1,595175E+09	3,442754E+09	3,442851E+09	3,190350E+09	6,885604E+09	1,007595E+10
1592	1,595236E+09	1,595248E+09	3,442873E+09	3,442813E+09	3,190484E+09	6,885686E+09	1,007617E+10
1593	1,595148E+09	1,595154E+09	3,442858E+09	3,442830E+09	3,190302E+09	6,885688E+09	1,007599E+10
1594	1,595119E+09	1,595097E+09	3,442861E+09	3,442881E+09	3,190216E+09	6,885742E+09	1,007596E+10
1595	1,595174E+09	1,595175E+09	3,442936E+09	3,442866E+09	3,190349E+09	6,885802E+09	1,007615E+10
1596	1,595068E+09	1,595084E+09	3,442834E+09	3,442898E+09	3,190152E+09	6,885731E+09	1,007588E+10
1597	1,595116E+09	1,595130E+09	3,442864E+09	3,442874E+09	3,190245E+09	6,885738E+09	1,007598E+10
1598	1,595170E+09	1,595175E+09	3,442898E+09	3,442825E+09	3,190345E+09	6,885723E+09	1,007607E+10
1599	1,595117E+09	1,595110E+09	3,442792E+09	3,442840E+09	3,190227E+09	6,885632E+09	1,007586E+10
1600	1,595234E+09	1,595227E+09	3,442829E+09	3,442785E+09	3,190461E+09	6,885614E+09	1,007607E+10
1601	1,595233E+09	1,595248E+09	3,442763E+09	3,442742E+09	3,190482E+09	6,885505E+09	1,007599E+10
1602	1,595232E+09	1,595244E+09	3,442688E+09	3,442760E+09	3,190476E+09	6,885448E+09	1,007592E+10
1603	1,595351E+09	1,595379E+09	3,442761E+09	3,442696E+09	3,190731E+09	6,885458E+09	1,007619E+10
1604	1,595302E+09	1,595333E+09	3,442688E+09	3,442673E+09	3,190635E+09	6,885361E+09	1,007600E+10
1605	1,595347E+09	1,595345E+09	3,442699E+09	3,442683E+09	3,190693E+09	6,885382E+09	1,007607E+10
1606	1,595416E+09	1,595407E+09	3,442744E+09	3,442665E+09	3,190823E+09	6,885409E+09	1,007623E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude <sup>⊙</sup>	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1607	1,595325E+09	1,595315E+09	3,442641E+09	3,442720E+09	3,190640E+09	6,885361E+09	1,007600E+10
1608	1,595368E+09	1,595367E+09	3,442694E+09	3,442717E+09	3,190735E+09	6,885411E+09	1,007615E+10
1609	1,595345E+09	1,595361E+09	3,442707E+09	3,442688E+09	3,190705E+09	6,885395E+09	1,007610E+10
1610	1,595265E+09	1,595252E+09	3,442685E+09	3,442746E+09	3,190517E+09	6,885431E+09	1,007595E+10
1611	1,595321E+09	1,595310E+09	3,442808E+09	3,442734E+09	3,190631E+09	6,885541E+09	1,007617E+10
1612	1,595236E+09	1,595236E+09	3,442777E+09	3,442736E+09	3,190472E+09	6,885514E+09	1,007599E+10
1613	1,595196E+09	1,595193E+09	3,442773E+09	3,442803E+09	3,190389E+09	6,885575E+09	1,007596E+10
1614	1,595251E+09	1,595266E+09	3,442831E+09	3,442791E+09	3,190517E+09	6,885622E+09	1,007614E+10
1615	1,595162E+09	1,595179E+09	3,442762E+09	3,442807E+09	3,190341E+09	6,885569E+09	1,007591E+10
1616	1,595208E+09	1,595215E+09	3,442795E+09	3,442791E+09	3,190423E+09	6,885586E+09	1,007601E+10
1617	1,595269E+09	1,595267E+09	3,442787E+09	3,442721E+09	3,190536E+09	6,885508E+09	1,007604E+10
1618	1,595227E+09	1,595211E+09	3,442685E+09	3,442748E+09	3,190438E+09	6,885432E+09	1,007587E+10
1619	1,595336E+09	1,595334E+09	3,442715E+09	3,442704E+09	3,190669E+09	6,885419E+09	1,007609E+10
1620	1,595340E+09	1,595372E+09	3,442654E+09	3,442622E+09	3,190712E+09	6,885275E+09	1,007599E+10
1621	1,595335E+09	1,595360E+09	3,442614E+09	3,442641E+09	3,190695E+09	6,885255E+09	1,007595E+10
1622	1,595456E+09	1,595469E+09	3,442677E+09	3,442592E+09	3,190925E+09	6,885270E+09	1,007619E+10
1623	1,595413E+09	1,595421E+09	3,442618E+09	3,442585E+09	3,190833E+09	6,885203E+09	1,007604E+10
1624	1,595440E+09	1,595431E+09	3,442609E+09	3,442624E+09	3,190871E+09	6,885233E+09	1,007610E+10
1625	1,595499E+09	1,595502E+09	3,442606E+09	3,442581E+09	3,191001E+09	6,885187E+09	1,007619E+10
1626	1,595414E+09	1,595413E+09	3,442536E+09	3,442634E+09	3,190827E+09	6,885170E+09	1,007600E+10
1627	1,595454E+09	1,595449E+09	3,442618E+09	3,442630E+09	3,190903E+09	6,885248E+09	1,007615E+10
1628	1,595436E+09	1,595444E+09	3,442642E+09	3,442573E+09	3,190880E+09	6,885215E+09	1,007609E+10
1629	1,595348E+09	1,595334E+09	3,442636E+09	3,442656E+09	3,190681E+09	6,885291E+09	1,007597E+10
1630	1,595395E+09	1,595382E+09	3,442720E+09	3,442670E+09	3,190777E+09	6,885390E+09	1,007617E+10
1631	1,595314E+09	1,595325E+09	3,442698E+09	3,442675E+09	3,190639E+09	6,885372E+09	1,007601E+10
1632	1,595265E+09	1,595282E+09	3,442687E+09	3,442742E+09	3,190548E+09	6,885429E+09	1,007598E+10
1633	1,595332E+09	1,595351E+09	3,442724E+09	3,442688E+09	3,190683E+09	6,885411E+09	1,007609E+10
1634	1,595269E+09	1,595266E+09	3,442672E+09	3,442701E+09	3,190534E+09	6,885373E+09	1,007591E+10
1635	1,595318E+09	1,595298E+09	3,442696E+09	3,442698E+09	3,190616E+09	6,885394E+09	1,007601E+10
1636	1,595381E+09	1,595378E+09	3,442672E+09	3,442601E+09	3,190759E+09	6,885273E+09	1,007603E+10
1637	1,595329E+09	1,595339E+09	3,442585E+09	3,442635E+09	3,190667E+09	6,885221E+09	1,007589E+10
1638	1,595428E+09	1,595448E+09	3,442617E+09	3,442604E+09	3,190876E+09	6,885221E+09	1,007610E+10
1639	1,595445E+09	1,595483E+09	3,442602E+09	3,442521E+09	3,190927E+09	6,885123E+09	1,007605E+10
1640	1,595431E+09	1,595451E+09	3,442556E+09	3,442567E+09	3,190882E+09	6,885122E+09	1,007600E+10
1641	1,595552E+09	1,595553E+09	3,442571E+09	3,442511E+09	3,191106E+09	6,885082E+09	1,007619E+10
1642	1,595520E+09	1,595511E+09	3,442499E+09	3,442518E+09	3,191032E+09	6,885017E+09	1,007605E+10
1643	1,595535E+09	1,595521E+09	3,442480E+09	3,442559E+09	3,191056E+09	6,885039E+09	1,007609E+10
1644	1,595597E+09	1,595606E+09	3,442489E+09	3,442464E+09	3,191203E+09	6,884953E+09	1,007616E+10
1645	1,595506E+09	1,595510E+09	3,442466E+09	3,442506E+09	3,191016E+09	6,884972E+09	1,007599E+10
1646	1,595539E+09	1,595524E+09	3,442549E+09	3,442522E+09	3,191063E+09	6,885071E+09	1,007613E+10
1647	1,595523E+09	1,595523E+09	3,442594E+09	3,442484E+09	3,191046E+09	6,885078E+09	1,007612E+10
1648	1,595413E+09	1,595414E+09	3,442569E+09	3,442606E+09	3,190827E+09	6,885176E+09	1,007600E+10
1649	1,595453E+09	1,595468E+09	3,442612E+09	3,442605E+09	3,190921E+09	6,885217E+09	1,007614E+10
1650	1,595394E+09	1,595412E+09	3,442610E+09	3,442609E+09	3,190806E+09	6,885219E+09	1,007602E+10
1651	1,595354E+09	1,595357E+09	3,442609E+09	3,442669E+09	3,190711E+09	6,885277E+09	1,007599E+10
1652	1,595440E+09	1,595436E+09	3,442634E+09	3,442572E+09	3,190876E+09	6,885206E+09	1,007608E+10
1653	1,595377E+09	1,595362E+09	3,442591E+09	3,442589E+09	3,190738E+09	6,885180E+09	1,007592E+10
1654	1,595418E+09	1,595398E+09	3,442581E+09	3,442602E+09	3,190816E+09	6,885183E+09	1,007600E+10
1655	1,595483E+09	1,595496E+09	3,442577E+09	3,442502E+09	3,190978E+09	6,885079E+09	1,007606E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1656	1,595417E+09	1,595454E+09	3,442504E+09	3,442549E+09	3,190872E+09	6,885053E+09	1,007592E+10
1657	1,595520E+09	1,595547E+09	3,442516E+09	3,442490E+09	3,191067E+09	6,885006E+09	1,007607E+10
1658	1,595558E+09	1,595575E+09	3,442512E+09	3,442429E+09	3,191133E+09	6,884941E+09	1,007607E+10
1659	1,595544E+09	1,595537E+09	3,442448E+09	3,442494E+09	3,191082E+09	6,884942E+09	1,007602E+10
1660	1,595665E+09	1,595658E+09	3,442437E+09	3,442407E+09	3,191323E+09	6,884844E+09	1,007617E+10
1661	1,595623E+09	1,595629E+09	3,442389E+09	3,442409E+09	3,191252E+09	6,884798E+09	1,007605E+10
1662	1,595627E+09	1,595623E+09	3,442377E+09	3,442452E+09	3,191250E+09	6,884829E+09	1,007608E+10
1663	1,595691E+09	1,595701E+09	3,442443E+09	3,442354E+09	3,191392E+09	6,884797E+09	1,007619E+10
1664	1,595581E+09	1,595592E+09	3,442430E+09	3,442430E+09	3,191173E+09	6,884861E+09	1,007603E+10
1665	1,595602E+09	1,595594E+09	3,442475E+09	3,442449E+09	3,191197E+09	6,884924E+09	1,007612E+10
1666	1,595598E+09	1,595601E+09	3,442510E+09	3,442443E+09	3,191199E+09	6,884953E+09	1,007615E+10
1667	1,595486E+09	1,595490E+09	3,442470E+09	3,442567E+09	3,190975E+09	6,885037E+09	1,007601E+10
1668	1,595541E+09	1,595552E+09	3,442509E+09	3,442508E+09	3,191093E+09	6,885017E+09	1,007611E+10
1669	1,595493E+09	1,595496E+09	3,442534E+09	3,442492E+09	3,190989E+09	6,885026E+09	1,007602E+10
1670	1,595456E+09	1,595433E+09	3,442511E+09	3,442562E+09	3,190888E+09	6,885073E+09	1,007596E+10
1671	1,595549E+09	1,595529E+09	3,442553E+09	3,442466E+09	3,191078E+09	6,885019E+09	1,007610E+10
1672	1,595463E+09	1,595472E+09	3,442495E+09	3,442505E+09	3,190935E+09	6,885001E+09	1,007594E+10
1673	1,595494E+09	1,595512E+09	3,442466E+09	3,442501E+09	3,191006E+09	6,884966E+09	1,007597E+10
1674	1,595579E+09	1,595609E+09	3,442488E+09	3,442414E+09	3,191188E+09	6,884902E+09	1,007609E+10
1675	1,595518E+09	1,595546E+09	3,442427E+09	3,442471E+09	3,191064E+09	6,884898E+09	1,007596E+10
1676	1,595636E+09	1,595641E+09	3,442421E+09	3,442386E+09	3,191277E+09	6,884808E+09	1,007608E+10
1677	1,595676E+09	1,595674E+09	3,442414E+09	3,442332E+09	3,191349E+09	6,884746E+09	1,007610E+10
1678	1,595652E+09	1,595638E+09	3,442313E+09	3,442410E+09	3,191290E+09	6,884722E+09	1,007601E+10
1679	1,595772E+09	1,595770E+09	3,442331E+09	3,442302E+09	3,191542E+09	6,884632E+09	1,007617E+10
1680	1,595709E+09	1,595738E+09	3,442309E+09	3,442305E+09	3,191447E+09	6,884614E+09	1,007606E+10
1681	1,595706E+09	1,595709E+09	3,442298E+09	3,442330E+09	3,191415E+09	6,884628E+09	1,007604E+10
1682	1,595781E+09	1,595780E+09	3,442378E+09	3,442274E+09	3,191560E+09	6,884652E+09	1,007621E+10
1683	1,595662E+09	1,595662E+09	3,442358E+09	3,442383E+09	3,191324E+09	6,884741E+09	1,007606E+10
1684	1,595682E+09	1,595679E+09	3,442372E+09	3,442379E+09	3,191361E+09	6,884751E+09	1,007611E+10
1685	1,595677E+09	1,595691E+09	3,442427E+09	3,442366E+09	3,191369E+09	6,884793E+09	1,007616E+10
1686	1,595569E+09	1,595570E+09	3,442378E+09	3,442486E+09	3,191138E+09	6,884864E+09	1,007600E+10
1687	1,595639E+09	1,595628E+09	3,442447E+09	3,442407E+09	3,191267E+09	6,884854E+09	1,007612E+10
1688	1,595581E+09	1,595581E+09	3,442467E+09	3,442409E+09	3,191161E+09	6,884876E+09	1,007604E+10
1689	1,595537E+09	1,595519E+09	3,442401E+09	3,442462E+09	3,191056E+09	6,884863E+09	1,007592E+10
1690	1,595638E+09	1,595633E+09	3,442440E+09	3,442393E+09	3,191271E+09	6,884833E+09	1,007610E+10
1691	1,595550E+09	1,595579E+09	3,442391E+09	3,442433E+09	3,191130E+09	6,884824E+09	1,007595E+10
1692	1,595593E+09	1,595619E+09	3,442365E+09	3,442381E+09	3,191212E+09	6,884746E+09	1,007596E+10
1693	1,595689E+09	1,595710E+09	3,442418E+09	3,442292E+09	3,191399E+09	6,884709E+09	1,007611E+10
1694	1,595635E+09	1,595637E+09	3,442323E+09	3,442370E+09	3,191272E+09	6,884693E+09	1,007596E+10
1695	1,595757E+09	1,595740E+09	3,442324E+09	3,442286E+09	3,191498E+09	6,884610E+09	1,007611E+10
1696	1,595774E+09	1,595791E+09	3,442303E+09	3,442249E+09	3,191565E+09	6,884552E+09	1,007612E+10
1697	1,595738E+09	1,595750E+09	3,442189E+09	3,442300E+09	3,191488E+09	6,884490E+09	1,007598E+10
1698	1,595868E+09	1,595876E+09	3,442246E+09	3,442210E+09	3,191744E+09	6,884456E+09	1,007620E+10
1699	1,595800E+09	1,595823E+09	3,442249E+09	3,442227E+09	3,191624E+09	6,884476E+09	1,007610E+10
1700	1,595798E+09	1,595791E+09	3,442228E+09	3,442238E+09	3,191589E+09	6,884466E+09	1,007605E+10
1701	1,595869E+09	1,595861E+09	3,442311E+09	3,442202E+09	3,191730E+09	6,884512E+09	1,007624E+10
1702	1,595742E+09	1,595741E+09	3,442251E+09	3,442333E+09	3,191483E+09	6,884584E+09	1,007607E+10
1703	1,595769E+09	1,595763E+09	3,442289E+09	3,442304E+09	3,191532E+09	6,884593E+09	1,007612E+10
1704	1,595753E+09	1,595774E+09	3,442349E+09	3,442281E+09	3,191527E+09	6,884630E+09	1,007616E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1705	1,595646E+09	1,595641E+09	3,442283E+09	3,442370E+09	3,191287E+09	6,884653E+09	1,007594E+10
1706	1,595734E+09	1,595708E+09	3,442354E+09	3,442320E+09	3,191442E+09	6,884673E+09	1,007612E+10
1707	1,595667E+09	1,595666E+09	3,442370E+09	3,442335E+09	3,191334E+09	6,884705E+09	1,007604E+10
1708	1,595624E+09	1,595626E+09	3,442292E+09	3,442359E+09	3,191251E+09	6,884652E+09	1,007590E+10
1709	1,595727E+09	1,595745E+09	3,442360E+09	3,442287E+09	3,191472E+09	6,884647E+09	1,007612E+10
1710	1,595646E+09	1,595677E+09	3,442311E+09	3,442339E+09	3,191323E+09	6,884649E+09	1,007597E+10
1711	1,595705E+09	1,595709E+09	3,442308E+09	3,442278E+09	3,191414E+09	6,884586E+09	1,007600E+10
1712	1,595790E+09	1,595805E+09	3,442341E+09	3,442213E+09	3,191595E+09	6,884554E+09	1,007615E+10
1713	1,595733E+09	1,595733E+09	3,442197E+09	3,442277E+09	3,191466E+09	6,884474E+09	1,007594E+10
1714	1,595866E+09	1,595851E+09	3,442188E+09	3,442214E+09	3,191717E+09	6,884402E+09	1,007612E+10
1715	1,595875E+09	1,595902E+09	3,442186E+09	3,442165E+09	3,191776E+09	6,884351E+09	1,007613E+10
1716	1,595844E+09	1,595857E+09	3,442088E+09	3,442168E+09	3,191701E+09	6,884256E+09	1,007596E+10
1717	1,595972E+09	1,595970E+09	3,442184E+09	3,442087E+09	3,191942E+09	6,884270E+09	1,007621E+10
1718	1,595901E+09	1,595908E+09	3,442168E+09	3,442143E+09	3,191809E+09	6,884310E+09	1,007612E+10
1719	1,595894E+09	1,595875E+09	3,442155E+09	3,442160E+09	3,191769E+09	6,884314E+09	1,007608E+10
1720	1,595938E+09	1,595959E+09	3,442227E+09	3,442146E+09	3,191897E+09	6,884373E+09	1,007627E+10
1721	1,595808E+09	1,595826E+09	3,442147E+09	3,442247E+09	3,191634E+09	6,884394E+09	1,007603E+10
1722	1,595850E+09	1,595839E+09	3,442205E+09	3,442232E+09	3,191689E+09	6,884437E+09	1,007613E+10
1723	1,595837E+09	1,595842E+09	3,442280E+09	3,442210E+09	3,191678E+09	6,884490E+09	1,007617E+10
1724	1,595737E+09	1,595717E+09	3,442194E+09	3,442266E+09	3,191454E+09	6,884460E+09	1,007591E+10
1725	1,595822E+09	1,595797E+09	3,442272E+09	3,442225E+09	3,191619E+09	6,884497E+09	1,007612E+10
1726	1,595754E+09	1,595766E+09	3,442261E+09	3,442256E+09	3,191520E+09	6,884517E+09	1,007604E+10
1727	1,595717E+09	1,595727E+09	3,442219E+09	3,442257E+09	3,191445E+09	6,884476E+09	1,007592E+10
1728	1,595810E+09	1,595845E+09	3,442297E+09	3,442190E+09	3,191655E+09	6,884487E+09	1,007614E+10
1729	1,595739E+09	1,595761E+09	3,442217E+09	3,442230E+09	3,191500E+09	6,884447E+09	1,007595E+10
1730	1,595817E+09	1,595800E+09	3,442199E+09	3,442207E+09	3,191617E+09	6,884406E+09	1,007602E+10
1731	1,595898E+09	1,595904E+09	3,442219E+09	3,442147E+09	3,191802E+09	6,884365E+09	1,007617E+10
1732	1,595842E+09	1,595853E+09	3,442060E+09	3,442166E+09	3,191696E+09	6,884226E+09	1,007592E+10
1733	1,595975E+09	1,595973E+09	3,442090E+09	3,442091E+09	3,191948E+09	6,884181E+09	1,007613E+10
1734	1,595982E+09	1,596007E+09	3,442099E+09	3,442055E+09	3,191990E+09	6,884154E+09	1,007614E+10
1735	1,595955E+09	1,595951E+09	3,442041E+09	3,442058E+09	3,191906E+09	6,884099E+09	1,007600E+10
1736	1,596056E+09	1,596062E+09	3,442124E+09	3,442011E+09	3,192119E+09	6,884134E+09	1,007625E+10
1737	1,595975E+09	1,595989E+09	3,442067E+09	3,442071E+09	3,191964E+09	6,884139E+09	1,007610E+10
1738	1,595974E+09	1,595965E+09	3,442045E+09	3,442116E+09	3,191939E+09	6,884162E+09	1,007610E+10
1739	1,596014E+09	1,596036E+09	3,442132E+09	3,442086E+09	3,192050E+09	6,884218E+09	1,007627E+10
1740	1,595896E+09	1,595901E+09	3,442056E+09	3,442131E+09	3,191797E+09	6,884187E+09	1,007598E+10
1741	1,595945E+09	1,595911E+09	3,442131E+09	3,442116E+09	3,191856E+09	6,884248E+09	1,007610E+10
1742	1,595931E+09	1,595918E+09	3,442185E+09	3,442120E+09	3,191848E+09	6,884305E+09	1,007615E+10
1743	1,595830E+09	1,595808E+09	3,442118E+09	3,442170E+09	3,191638E+09	6,884288E+09	1,007593E+10
1744	1,595888E+09	1,595906E+09	3,442197E+09	3,442145E+09	3,191794E+09	6,884342E+09	1,007614E+10
1745	1,595824E+09	1,595863E+09	3,442179E+09	3,442160E+09	3,191686E+09	6,884338E+09	1,007602E+10
1746	1,595808E+09	1,595818E+09	3,442145E+09	3,442189E+09	3,191626E+09	6,884334E+09	1,007596E+10
1747	1,595906E+09	1,595925E+09	3,442222E+09	3,442129E+09	3,191831E+09	6,884352E+09	1,007618E+10
1748	1,595850E+09	1,595853E+09	3,442104E+09	3,442134E+09	3,191703E+09	6,884237E+09	1,007594E+10
1749	1,595932E+09	1,595906E+09	3,442077E+09	3,442112E+09	3,191838E+09	6,884190E+09	1,007603E+10
1750	1,596013E+09	1,596023E+09	3,442079E+09	3,442052E+09	3,192036E+09	6,884130E+09	1,007617E+10
1751	1,595962E+09	1,595971E+09	3,441965E+09	3,442028E+09	3,191932E+09	6,883993E+09	1,007592E+10
1752	1,596071E+09	1,596087E+09	3,442024E+09	3,441962E+09	3,192157E+09	6,883985E+09	1,007614E+10
1753	1,596077E+09	1,596101E+09	3,442016E+09	3,441932E+09	3,192178E+09	6,883948E+09	1,007613E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1754	1,596051E+09	1,596041E+09	3,441953E+09	3,441994E+09	3,192092E+09	6,883947E+09	1,007604E+10
1755	1,596136E+09	1,596150E+09	3,442032E+09	3,441969E+09	3,192287E+09	6,884001E+09	1,007629E+10
1756	1,596059E+09	1,596083E+09	3,441957E+09	3,441990E+09	3,192142E+09	6,883947E+09	1,007609E+10
1757	1,596062E+09	1,596050E+09	3,441963E+09	3,442026E+09	3,192112E+09	6,883989E+09	1,007610E+10
1758	1,596107E+09	1,596109E+09	3,442048E+09	3,441999E+09	3,192216E+09	6,884047E+09	1,007626E+10
1759	1,595996E+09	1,595973E+09	3,442000E+09	3,442023E+09	3,191969E+09	6,884023E+09	1,007599E+10
1760	1,596020E+09	1,595996E+09	3,442066E+09	3,442033E+09	3,192016E+09	6,884099E+09	1,007611E+10
1761	1,595999E+09	1,596004E+09	3,442085E+09	3,442037E+09	3,192004E+09	6,884122E+09	1,007613E+10
1762	1,595905E+09	1,595908E+09	3,442022E+09	3,442117E+09	3,191813E+09	6,884139E+09	1,007595E+10
1763	1,595960E+09	1,595993E+09	3,442122E+09	3,442080E+09	3,191953E+09	6,884202E+09	1,007616E+10
1764	1,595916E+09	1,595945E+09	3,442096E+09	3,442051E+09	3,191861E+09	6,884147E+09	1,007601E+10
1765	1,595918E+09	1,595901E+09	3,442060E+09	3,442086E+09	3,191818E+09	6,884146E+09	1,007596E+10
1766	1,596022E+09	1,596013E+09	3,442099E+09	3,442044E+09	3,192035E+09	6,884143E+09	1,007618E+10
1767	1,595971E+09	1,595965E+09	3,441992E+09	3,442020E+09	3,191936E+09	6,884012E+09	1,007595E+10
1768	1,596029E+09	1,596037E+09	3,441968E+09	3,441997E+09	3,192066E+09	6,883965E+09	1,007603E+10
1769	1,596107E+09	1,596136E+09	3,441976E+09	3,441920E+09	3,192243E+09	6,883897E+09	1,007614E+10
1770	1,596066E+09	1,596078E+09	3,441892E+09	3,441934E+09	3,192144E+09	6,883826E+09	1,007597E+10
1771	1,596163E+09	1,596174E+09	3,441961E+09	3,441890E+09	3,192336E+09	6,883851E+09	1,007619E+10
1772	1,596174E+09	1,596189E+09	3,441924E+09	3,441849E+09	3,192363E+09	6,883773E+09	1,007614E+10
1773	1,596149E+09	1,596135E+09	3,441849E+09	3,441925E+09	3,192284E+09	6,883774E+09	1,007606E+10
1774	1,596231E+09	1,596242E+09	3,441910E+09	3,441904E+09	3,192473E+09	6,883814E+09	1,007629E+10
1775	1,596163E+09	1,596170E+09	3,441873E+09	3,441878E+09	3,192333E+09	6,883752E+09	1,007608E+10
1776	1,596147E+09	1,596136E+09	3,441892E+09	3,441914E+09	3,192284E+09	6,883806E+09	1,007609E+10
1777	1,596190E+09	1,596182E+09	3,441959E+09	3,441889E+09	3,192372E+09	6,883848E+09	1,007622E+10
1778	1,596081E+09	1,596060E+09	3,441912E+09	3,441957E+09	3,192141E+09	6,883869E+09	1,007601E+10
1779	1,596083E+09	1,596088E+09	3,441988E+09	3,441979E+09	3,192171E+09	6,883967E+09	1,007614E+10
1780	1,596071E+09	1,596101E+09	3,441998E+09	3,441949E+09	3,192172E+09	6,883947E+09	1,007612E+10
1781	1,595988E+09	1,595995E+09	3,441959E+09	3,442031E+09	3,191983E+09	6,883990E+09	1,007597E+10
1782	1,596056E+09	1,596069E+09	3,442047E+09	3,442005E+09	3,192125E+09	6,884053E+09	1,007618E+10
1783	1,596030E+09	1,596023E+09	3,442021E+09	3,441949E+09	3,192053E+09	6,883970E+09	1,007602E+10
1784	1,596014E+09	1,595999E+09	3,441961E+09	3,441994E+09	3,192014E+09	6,883955E+09	1,007597E+10
1785	1,596120E+09	1,596119E+09	3,441961E+09	3,441940E+09	3,192238E+09	6,883901E+09	1,007614E+10
1786	1,596076E+09	1,596086E+09	3,441869E+09	3,441926E+09	3,192162E+09	6,883795E+09	1,007596E+10
1787	1,596124E+09	1,596145E+09	3,441884E+09	3,441892E+09	3,192269E+09	6,883776E+09	1,007604E+10
1788	1,596213E+09	1,596236E+09	3,441888E+09	3,441788E+09	3,192448E+09	6,883676E+09	1,007612E+10
1789	1,596177E+09	1,596174E+09	3,441812E+09	3,441833E+09	3,192351E+09	6,883645E+09	1,007600E+10
1790	1,596268E+09	1,596268E+09	3,441853E+09	3,441823E+09	3,192536E+09	6,883676E+09	1,007621E+10
1791	1,596281E+09	1,596292E+09	3,441827E+09	3,441762E+09	3,192574E+09	6,883588E+09	1,007616E+10
1792	1,596234E+09	1,596246E+09	3,441758E+09	3,441838E+09	3,192480E+09	6,883596E+09	1,007608E+10
1793	1,596317E+09	1,596327E+09	3,441816E+09	3,441800E+09	3,192645E+09	6,883616E+09	1,007626E+10
1794	1,596257E+09	1,596254E+09	3,441800E+09	3,441800E+09	3,192511E+09	6,883599E+09	1,007611E+10
1795	1,596225E+09	1,596209E+09	3,441828E+09	3,441846E+09	3,192433E+09	6,883675E+09	1,007611E+10
1796	1,596266E+09	1,596260E+09	3,441869E+09	3,441807E+09	3,192526E+09	6,883676E+09	1,007620E+10
1797	1,596159E+09	1,596152E+09	3,441825E+09	3,441889E+09	3,192311E+09	6,883714E+09	1,007602E+10
1798	1,596160E+09	1,596173E+09	3,441893E+09	3,441911E+09	3,192333E+09	6,883805E+09	1,007614E+10
1799	1,596164E+09	1,596181E+09	3,441939E+09	3,441840E+09	3,192345E+09	6,883779E+09	1,007612E+10
1800	1,596076E+09	1,596079E+09	3,441891E+09	3,441923E+09	3,192154E+09	6,883815E+09	1,007597E+10
1801	1,596150E+09	1,596140E+09	3,441939E+09	3,441904E+09	3,192290E+09	6,883843E+09	1,007613E+10
1802	1,596134E+09	1,596122E+09	3,441904E+09	3,441877E+09	3,192255E+09	6,883781E+09	1,007604E+10



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1803	1,596103E+09	1,596109E+09	3,441845E+09	3,441917E+09	3,192212E+09	6,883762E+09	1,007597E+10
1804	1,596216E+09	1,596234E+09	3,441847E+09	3,441820E+09	3,192450E+09	6,883667E+09	1,007612E+10
1805	1,596183E+09	1,596200E+09	3,441787E+09	3,441809E+09	3,192383E+09	6,883596E+09	1,007598E+10
1806	1,596232E+09	1,596244E+09	3,441805E+09	3,441796E+09	3,192476E+09	6,883600E+09	1,007608E+10
1807	1,596330E+09	1,596332E+09	3,441819E+09	3,441684E+09	3,192662E+09	6,883503E+09	1,007616E+10
1808	1,596274E+09	1,596282E+09	3,441722E+09	3,441754E+09	3,192556E+09	6,883476E+09	1,007603E+10
1809	1,596361E+09	1,596369E+09	3,441727E+09	3,441745E+09	3,192730E+09	6,883472E+09	1,007620E+10
1810	1,596381E+09	1,596400E+09	3,441716E+09	3,441690E+09	3,192781E+09	6,883405E+09	1,007619E+10
1811	1,596321E+09	1,596334E+09	3,441679E+09	3,441749E+09	3,192655E+09	6,883427E+09	1,007608E+10
1812	1,596411E+09	1,596404E+09	3,441728E+09	3,441681E+09	3,192815E+09	6,883409E+09	1,007622E+10
1813	1,596352E+09	1,596334E+09	3,441717E+09	3,441705E+09	3,192685E+09	6,883422E+09	1,007611E+10
1814	1,596309E+09	1,596293E+09	3,441736E+09	3,441779E+09	3,192602E+09	6,883516E+09	1,007612E+10
1815	1,596351E+09	1,596352E+09	3,441791E+09	3,441715E+09	3,192703E+09	6,883506E+09	1,007621E+10
1816	1,596225E+09	1,596249E+09	3,441764E+09	3,441803E+09	3,192474E+09	6,883567E+09	1,007604E+10
1817	1,596233E+09	1,596245E+09	3,441822E+09	3,441824E+09	3,192478E+09	6,883645E+09	1,007612E+10
1818	1,596253E+09	1,596254E+09	3,441869E+09	3,441776E+09	3,192507E+09	6,883645E+09	1,007615E+10
1819	1,596158E+09	1,596152E+09	3,441812E+09	3,441864E+09	3,192310E+09	6,883676E+09	1,007599E+10
1820	1,596243E+09	1,596225E+09	3,441814E+09	3,441816E+09	3,192468E+09	6,883629E+09	1,007610E+10
1821	1,596235E+09	1,596233E+09	3,441775E+09	3,441788E+09	3,192468E+09	6,883563E+09	1,007603E+10
1822	1,596207E+09	1,596221E+09	3,441731E+09	3,441814E+09	3,192428E+09	6,883545E+09	1,007597E+10
1823	1,596331E+09	1,596340E+09	3,441772E+09	3,441677E+09	3,192671E+09	6,883449E+09	1,007612E+10
1824	1,596286E+09	1,596310E+09	3,441722E+09	3,441684E+09	3,192596E+09	6,883406E+09	1,007600E+10
1825	1,596335E+09	1,596337E+09	3,441705E+09	3,441697E+09	3,192672E+09	6,883402E+09	1,007607E+10
1826	1,596433E+09	1,596442E+09	3,441715E+09	3,441623E+09	3,192875E+09	6,883339E+09	1,007621E+10
1827	1,596362E+09	1,596392E+09	3,441621E+09	3,441693E+09	3,192755E+09	6,883313E+09	1,007607E+10
1828	1,596455E+09	1,596465E+09	3,441619E+09	3,441646E+09	3,192920E+09	6,883265E+09	1,007619E+10
1829	1,596486E+09	1,596493E+09	3,441630E+09	3,441593E+09	3,192979E+09	6,883223E+09	1,007620E+10
1830	1,596424E+09	1,596412E+09	3,441592E+09	3,441659E+09	3,192836E+09	6,883251E+09	1,007609E+10
1831	1,596513E+09	1,596481E+09	3,441655E+09	3,441577E+09	3,192994E+09	6,883232E+09	1,007623E+10
1832	1,596429E+09	1,596431E+09	3,441638E+09	3,441619E+09	3,192861E+09	6,883257E+09	1,007612E+10
1833	1,596377E+09	1,596379E+09	3,441635E+09	3,441702E+09	3,192755E+09	6,883337E+09	1,007609E+10
1834	1,596424E+09	1,596442E+09	3,441718E+09	3,441650E+09	3,192867E+09	6,883367E+09	1,007623E+10
1835	1,596296E+09	1,596320E+09	3,441707E+09	3,441731E+09	3,192616E+09	6,883437E+09	1,007605E+10
1836	1,596317E+09	1,596306E+09	3,441733E+09	3,441729E+09	3,192623E+09	6,883462E+09	1,007608E+10
1837	1,596351E+09	1,596333E+09	3,441762E+09	3,441699E+09	3,192684E+09	6,883461E+09	1,007614E+10
1838	1,596255E+09	1,596247E+09	3,441690E+09	3,441787E+09	3,192502E+09	6,883477E+09	1,007598E+10
1839	1,596347E+09	1,596337E+09	3,441709E+09	3,441698E+09	3,192684E+09	6,883407E+09	1,007609E+10
1840	1,596328E+09	1,596357E+09	3,441699E+09	3,441662E+09	3,192684E+09	6,883361E+09	1,007605E+10
1841	1,596303E+09	1,596321E+09	3,441656E+09	3,441696E+09	3,192624E+09	6,883352E+09	1,007598E+10
1842	1,596434E+09	1,596440E+09	3,441708E+09	3,441593E+09	3,192874E+09	6,883300E+09	1,007617E+10
1843	1,596378E+09	1,596404E+09	3,441651E+09	3,441623E+09	3,192782E+09	6,883274E+09	1,007606E+10
1844	1,596432E+09	1,596433E+09	3,441585E+09	3,441623E+09	3,192864E+09	6,883208E+09	1,007607E+10
1845	1,596539E+09	1,596551E+09	3,441584E+09	3,441551E+09	3,193090E+09	6,883135E+09	1,007622E+10
1846	1,596473E+09	1,596493E+09	3,441505E+09	3,441600E+09	3,192966E+09	6,883106E+09	1,007607E+10
1847	1,596576E+09	1,596554E+09	3,441527E+09	3,441506E+09	3,193130E+09	6,883033E+09	1,007616E+10
1848	1,596587E+09	1,596588E+09	3,441549E+09	3,441466E+09	3,193175E+09	6,883015E+09	1,007619E+10
1849	1,596514E+09	1,596497E+09	3,441494E+09	3,441560E+09	3,193011E+09	6,883055E+09	1,007607E+10
1850	1,596591E+09	1,596580E+09	3,441571E+09	3,441511E+09	3,193171E+09	6,883082E+09	1,007625E+10
1851	1,596488E+09	1,596527E+09	3,441576E+09	3,441563E+09	3,193015E+09	6,883139E+09	1,007615E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1852	1,596442E+09	1,596454E+09	3,441563E+09	3,441622E+09	3,192896E+09	6,883185E+09	1,007608E+10
1853	1,596504E+09	1,596514E+09	3,441649E+09	3,441584E+09	3,193018E+09	6,883233E+09	1,007625E+10
1854	1,596386E+09	1,596384E+09	3,441627E+09	3,441668E+09	3,192769E+09	6,883295E+09	1,007606E+10
1855	1,596419E+09	1,596377E+09	3,441639E+09	3,441637E+09	3,192796E+09	6,883275E+09	1,007607E+10
1856	1,596440E+09	1,596437E+09	3,441658E+09	3,441604E+09	3,192876E+09	6,883261E+09	1,007614E+10
1857	1,596345E+09	1,596351E+09	3,441571E+09	3,441682E+09	3,192696E+09	6,883253E+09	1,007595E+10
1858	1,596441E+09	1,596447E+09	3,441632E+09	3,441591E+09	3,192888E+09	6,883223E+09	1,007611E+10
1859	1,596417E+09	1,596454E+09	3,441645E+09	3,441557E+09	3,192871E+09	6,883203E+09	1,007607E+10
1860	1,596400E+09	1,596404E+09	3,441568E+09	3,441592E+09	3,192804E+09	6,883160E+09	1,007596E+10
1861	1,596540E+09	1,596540E+09	3,441598E+09	3,441526E+09	3,193079E+09	6,883123E+09	1,007620E+10
1862	1,596487E+09	1,596510E+09	3,441523E+09	3,441556E+09	3,192997E+09	6,883079E+09	1,007608E+10
1863	1,596548E+09	1,596543E+09	3,441467E+09	3,441514E+09	3,193091E+09	6,882981E+09	1,007607E+10
1864	1,596647E+09	1,596668E+09	3,441491E+09	3,441427E+09	3,193316E+09	6,882918E+09	1,007623E+10
1865	1,596581E+09	1,596587E+09	3,441409E+09	3,441479E+09	3,193168E+09	6,882888E+09	1,007606E+10
1866	1,596678E+09	1,596649E+09	3,441455E+09	3,441411E+09	3,193326E+09	6,882865E+09	1,007619E+10
1867	1,596666E+09	1,596680E+09	3,441480E+09	3,441394E+09	3,193346E+09	6,882874E+09	1,007622E+10
1868	1,596586E+09	1,596585E+09	3,441396E+09	3,441486E+09	3,193171E+09	6,882882E+09	1,007605E+10
1869	1,596664E+09	1,596676E+09	3,441475E+09	3,441454E+09	3,193340E+09	6,882929E+09	1,007627E+10
1870	1,596569E+09	1,596602E+09	3,441504E+09	3,441493E+09	3,193172E+09	6,882997E+09	1,007617E+10
1871	1,596538E+09	1,596518E+09	3,441497E+09	3,441515E+09	3,193056E+09	6,883012E+09	1,007607E+10
1872	1,596595E+09	1,596587E+09	3,441573E+09	3,441484E+09	3,193182E+09	6,883058E+09	1,007624E+10
1873	1,596476E+09	1,596461E+09	3,441517E+09	3,441580E+09	3,192937E+09	6,883097E+09	1,007603E+10
1874	1,596506E+09	1,596479E+09	3,441538E+09	3,441557E+09	3,192986E+09	6,883094E+09	1,007608E+10
1875	1,596514E+09	1,596544E+09	3,441583E+09	3,441519E+09	3,193057E+09	6,883102E+09	1,007616E+10
1876	1,596428E+09	1,596445E+09	3,441494E+09	3,441574E+09	3,192873E+09	6,883068E+09	1,007594E+10
1877	1,596535E+09	1,596540E+09	3,441555E+09	3,441505E+09	3,193074E+09	6,883060E+09	1,007613E+10
1878	1,596520E+09	1,596540E+09	3,441566E+09	3,441486E+09	3,193060E+09	6,883053E+09	1,007611E+10
1879	1,596514E+09	1,596497E+09	3,441461E+09	3,441499E+09	3,193010E+09	6,882960E+09	1,007597E+10
1880	1,596644E+09	1,596655E+09	3,441476E+09	3,441431E+09	3,193299E+09	6,882907E+09	1,007621E+10
1881	1,596597E+09	1,596623E+09	3,441389E+09	3,441452E+09	3,193220E+09	6,882841E+09	1,007606E+10
1882	1,596663E+09	1,596653E+09	3,441369E+09	3,441397E+09	3,193316E+09	6,882766E+09	1,007608E+10
1883	1,596747E+09	1,596767E+09	3,441420E+09	3,441311E+09	3,193514E+09	6,882730E+09	1,007624E+10
1884	1,596678E+09	1,596674E+09	3,441313E+09	3,441362E+09	3,193352E+09	6,882675E+09	1,007603E+10
1885	1,596766E+09	1,596749E+09	3,441353E+09	3,441338E+09	3,193515E+09	6,882691E+09	1,007621E+10
1886	1,596750E+09	1,596778E+09	3,441392E+09	3,441334E+09	3,193528E+09	6,882726E+09	1,007625E+10
1887	1,596672E+09	1,596676E+09	3,441321E+09	3,441398E+09	3,193348E+09	6,882718E+09	1,007607E+10
1888	1,596743E+09	1,596762E+09	3,441421E+09	3,441363E+09	3,193505E+09	6,882783E+09	1,007629E+10
1889	1,596658E+09	1,596666E+09	3,441430E+09	3,441412E+09	3,193324E+09	6,882842E+09	1,007617E+10
1890	1,596628E+09	1,596586E+09	3,441426E+09	3,441446E+09	3,193213E+09	6,882872E+09	1,007609E+10
1891	1,596670E+09	1,596665E+09	3,441492E+09	3,441421E+09	3,193335E+09	6,882913E+09	1,007625E+10
1892	1,596552E+09	1,596549E+09	3,441397E+09	3,441492E+09	3,193100E+09	6,882889E+09	1,007599E+10
1893	1,596589E+09	1,596586E+09	3,441428E+09	3,441474E+09	3,193175E+09	6,882903E+09	1,007608E+10
1894	1,596609E+09	1,596636E+09	3,441502E+09	3,441418E+09	3,193245E+09	6,882921E+09	1,007617E+10
1895	1,596535E+09	1,596531E+09	3,441418E+09	3,441449E+09	3,193065E+09	6,882867E+09	1,007593E+10
1896	1,596634E+09	1,596639E+09	3,441471E+09	3,441398E+09	3,193273E+09	6,882869E+09	1,007614E+10
1897	1,596624E+09	1,596639E+09	3,441445E+09	3,441400E+09	3,193263E+09	6,882845E+09	1,007611E+10
1898	1,596619E+09	1,596614E+09	3,441353E+09	3,441413E+09	3,193233E+09	6,882766E+09	1,007600E+10
1899	1,596740E+09	1,596771E+09	3,441386E+09	3,441335E+09	3,193511E+09	6,882721E+09	1,007623E+10
1900	1,596699E+09	1,596724E+09	3,441290E+09	3,441329E+09	3,193424E+09	6,882620E+09	1,007604E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1901	1,596770E+09	1,596756E+09	3,441273E+09	3,441301E+09	3,193527E+09	6,882574E+09	1,007610E+10
1902	1,596853E+09	1,596856E+09	3,441337E+09	3,441229E+09	3,193709E+09	6,882566E+09	1,007627E+10
1903	1,596780E+09	1,596769E+09	3,441220E+09	3,441269E+09	3,193549E+09	6,882489E+09	1,007604E+10
1904	1,596849E+09	1,596858E+09	3,441263E+09	3,441252E+09	3,193707E+09	6,882514E+09	1,007622E+10
1905	1,596836E+09	1,596869E+09	3,441300E+09	3,441255E+09	3,193705E+09	6,882555E+09	1,007626E+10
1906	1,596763E+09	1,596755E+09	3,441262E+09	3,441309E+09	3,193518E+09	6,882571E+09	1,007609E+10
1907	1,596822E+09	1,596828E+09	3,441364E+09	3,441284E+09	3,193650E+09	6,882648E+09	1,007630E+10
1908	1,596740E+09	1,596731E+09	3,441328E+09	3,441328E+09	3,193471E+09	6,882655E+09	1,007613E+10
1909	1,596710E+09	1,596675E+09	3,441299E+09	3,441384E+09	3,193385E+09	6,882683E+09	1,007607E+10
1910	1,596752E+09	1,596759E+09	3,441389E+09	3,441350E+09	3,193510E+09	6,882739E+09	1,007625E+10
1911	1,596642E+09	1,596648E+09	3,441313E+09	3,441377E+09	3,193290E+09	6,882690E+09	1,007598E+10
1912	1,596672E+09	1,596684E+09	3,441372E+09	3,441354E+09	3,193357E+09	6,882726E+09	1,007608E+10
1913	1,596703E+09	1,596719E+09	3,441432E+09	3,441325E+09	3,193422E+09	6,882757E+09	1,007618E+10
1914	1,596634E+09	1,596617E+09	3,441348E+09	3,441370E+09	3,193251E+09	6,882718E+09	1,007597E+10
1915	1,596720E+09	1,596734E+09	3,441382E+09	3,441332E+09	3,193455E+09	6,882715E+09	1,007617E+10
1916	1,596718E+09	1,596743E+09	3,441311E+09	3,441311E+09	3,193461E+09	6,882621E+09	1,007608E+10
1917	1,596725E+09	1,596731E+09	3,441222E+09	3,441323E+09	3,193456E+09	6,882545E+09	1,007600E+10
1918	1,596856E+09	1,596868E+09	3,441293E+09	3,441224E+09	3,193724E+09	6,882516E+09	1,007624E+10
1919	1,596823E+09	1,596821E+09	3,441194E+09	3,441190E+09	3,193644E+09	6,882384E+09	1,007603E+10
1920	1,596877E+09	1,596865E+09	3,441182E+09	3,441181E+09	3,193742E+09	6,882363E+09	1,007610E+10
1921	1,596953E+09	1,596962E+09	3,441226E+09	3,441144E+09	3,193915E+09	6,882370E+09	1,007629E+10
1922	1,596871E+09	1,596879E+09	3,441143E+09	3,441193E+09	3,193751E+09	6,882336E+09	1,007609E+10
1923	1,596923E+09	1,596955E+09	3,441210E+09	3,441181E+09	3,193878E+09	6,882390E+09	1,007627E+10
1924	1,596915E+09	1,596941E+09	3,441222E+09	3,441170E+09	3,193857E+09	6,882392E+09	1,007625E+10
1925	1,596851E+09	1,596830E+09	3,441170E+09	3,441252E+09	3,193681E+09	6,882423E+09	1,007610E+10
1926	1,596912E+09	1,596891E+09	3,441271E+09	3,441224E+09	3,193803E+09	6,882495E+09	1,007630E+10
1927	1,596830E+09	1,596812E+09	3,441213E+09	3,441235E+09	3,193642E+09	6,882447E+09	1,007609E+10
1928	1,596789E+09	1,596781E+09	3,441200E+09	3,441279E+09	3,193570E+09	6,882479E+09	1,007605E+10
1929	1,596837E+09	1,596851E+09	3,441300E+09	3,441245E+09	3,193688E+09	6,882544E+09	1,007623E+10
1930	1,596733E+09	1,596734E+09	3,441270E+09	3,441264E+09	3,193468E+09	6,882534E+09	1,007600E+10
1931	1,596751E+09	1,596765E+09	3,441325E+09	3,441264E+09	3,193515E+09	6,882589E+09	1,007610E+10
1932	1,596785E+09	1,596798E+09	3,441331E+09	3,441242E+09	3,193583E+09	6,882574E+09	1,007616E+10
1933	1,596725E+09	1,596724E+09	3,441219E+09	3,441315E+09	3,193449E+09	6,882534E+09	1,007598E+10
1934	1,596822E+09	1,596835E+09	3,441269E+09	3,441263E+09	3,193658E+09	6,882532E+09	1,007619E+10
1935	1,596834E+09	1,596851E+09	3,441202E+09	3,441190E+09	3,193685E+09	6,882392E+09	1,007608E+10
1936	1,596840E+09	1,596844E+09	3,441134E+09	3,441190E+09	3,193684E+09	6,882324E+09	1,007601E+10
1937	1,596973E+09	1,596967E+09	3,441197E+09	3,441115E+09	3,193940E+09	6,882312E+09	1,007625E+10
1938	1,596935E+09	1,596925E+09	3,441119E+09	3,441091E+09	3,193860E+09	6,882210E+09	1,007607E+10
1939	1,596960E+09	1,596973E+09	3,441101E+09	3,441108E+09	3,193934E+09	6,882209E+09	1,007614E+10
1940	1,597033E+09	1,597066E+09	3,441116E+09	3,441066E+09	3,194099E+09	6,882182E+09	1,007628E+10
1941	1,596962E+09	1,596980E+09	3,441039E+09	3,441125E+09	3,193942E+09	6,882163E+09	1,007611E+10
1942	1,597019E+09	1,597021E+09	3,441137E+09	3,441102E+09	3,194040E+09	6,882239E+09	1,007628E+10
1943	1,597018E+09	1,597011E+09	3,441126E+09	3,441065E+09	3,194029E+09	6,882191E+09	1,007622E+10
1944	1,596941E+09	1,596915E+09	3,441069E+09	3,441150E+09	3,193856E+09	6,882219E+09	1,007607E+10
1945	1,596997E+09	1,596979E+09	3,441158E+09	3,441142E+09	3,193977E+09	6,882300E+09	1,007628E+10
1946	1,596911E+09	1,596912E+09	3,441143E+09	3,441137E+09	3,193823E+09	6,882279E+09	1,007610E+10
1947	1,596853E+09	1,596874E+09	3,441163E+09	3,441186E+09	3,193727E+09	6,882349E+09	1,007608E+10
1948	1,596906E+09	1,596927E+09	3,441238E+09	3,441152E+09	3,193832E+09	6,882391E+09	1,007622E+10
1949	1,596816E+09	1,596815E+09	3,441191E+09	3,441213E+09	3,193631E+09	6,882404E+09	1,007603E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1950	1,596840E+09	1,596833E+09	3,441242E+09	3,441218E+09	3,193673E+09	6,882460E+09	1,007613E+10
1951	1,596885E+09	1,596890E+09	3,441203E+09	3,441162E+09	3,193775E+09	6,882365E+09	1,007614E+10
1952	1,596828E+09	1,596842E+09	3,441095E+09	3,441208E+09	3,193670E+09	6,882303E+09	1,007597E+10
1953	1,596941E+09	1,596941E+09	3,441150E+09	3,441146E+09	3,193881E+09	6,882296E+09	1,007618E+10
1954	1,596956E+09	1,596957E+09	3,441125E+09	3,441052E+09	3,193913E+09	6,882177E+09	1,007609E+10
1955	1,596944E+09	1,596952E+09	3,441063E+09	3,441072E+09	3,193896E+09	6,882135E+09	1,007603E+10
1956	1,597067E+09	1,597070E+09	3,441083E+09	3,441011E+09	3,194136E+09	6,882094E+09	1,007623E+10
1957	1,597027E+09	1,597048E+09	3,441003E+09	3,441029E+09	3,194075E+09	6,882032E+09	1,007611E+10
1958	1,597052E+09	1,597074E+09	3,441017E+09	3,441041E+09	3,194126E+09	6,882059E+09	1,007618E+10
1959	1,597129E+09	1,597157E+09	3,441029E+09	3,440967E+09	3,194287E+09	6,881996E+09	1,007628E+10
1960	1,597061E+09	1,597069E+09	3,440966E+09	3,441023E+09	3,194129E+09	6,881989E+09	1,007612E+10
1961	1,597122E+09	1,597089E+09	3,441042E+09	3,441023E+09	3,194210E+09	6,882064E+09	1,007627E+10
1962	1,597114E+09	1,597088E+09	3,441045E+09	3,440978E+09	3,194202E+09	6,882023E+09	1,007622E+10
1963	1,597011E+09	1,597010E+09	3,440985E+09	3,441070E+09	3,194021E+09	6,882055E+09	1,007608E+10
1964	1,597061E+09	1,597069E+09	3,441057E+09	3,441050E+09	3,194129E+09	6,882107E+09	1,007624E+10
1965	1,596987E+09	1,597005E+09	3,441067E+09	3,441060E+09	3,193991E+09	6,882127E+09	1,007612E+10
1966	1,596934E+09	1,596937E+09	3,441115E+09	3,441112E+09	3,193871E+09	6,882227E+09	1,007610E+10
1967	1,596994E+09	1,596997E+09	3,441152E+09	3,441065E+09	3,193991E+09	6,882217E+09	1,007621E+10
1968	1,596908E+09	1,596908E+09	3,441088E+09	3,441130E+09	3,193815E+09	6,882218E+09	1,007603E+10
1969	1,596939E+09	1,596928E+09	3,441116E+09	3,441148E+09	3,193867E+09	6,882264E+09	1,007613E+10
1970	1,596993E+09	1,596998E+09	3,441112E+09	3,441055E+09	3,193991E+09	6,882168E+09	1,007616E+10
1971	1,596926E+09	1,596952E+09	3,441023E+09	3,441090E+09	3,193878E+09	6,882114E+09	1,007599E+10
1972	1,597040E+09	1,597039E+09	3,441055E+09	3,441025E+09	3,194079E+09	6,882080E+09	1,007616E+10
1973	1,597064E+09	1,597066E+09	3,441022E+09	3,440965E+09	3,194129E+09	6,881987E+09	1,007612E+10
1974	1,597043E+09	1,597045E+09	3,440975E+09	3,441000E+09	3,194088E+09	6,881975E+09	1,007606E+10
1975	1,597163E+09	1,597180E+09	3,440963E+09	3,440920E+09	3,194343E+09	6,881884E+09	1,007623E+10
1976	1,597127E+09	1,597164E+09	3,440902E+09	3,440927E+09	3,194290E+09	6,881828E+09	1,007612E+10
1977	1,597161E+09	1,597161E+09	3,440925E+09	3,440946E+09	3,194322E+09	6,881871E+09	1,007619E+10
1978	1,597243E+09	1,597236E+09	3,440960E+09	3,440853E+09	3,194479E+09	6,881813E+09	1,007629E+10
1979	1,597153E+09	1,597153E+09	3,440888E+09	3,440926E+09	3,194306E+09	6,881814E+09	1,007612E+10
1980	1,597200E+09	1,597173E+09	3,440919E+09	3,440935E+09	3,194374E+09	6,881855E+09	1,007623E+10
1981	1,597191E+09	1,597194E+09	3,440933E+09	3,440915E+09	3,194385E+09	6,881848E+09	1,007623E+10
1982	1,597084E+09	1,597095E+09	3,440925E+09	3,441001E+09	3,194179E+09	6,881926E+09	1,007611E+10
1983	1,597136E+09	1,597150E+09	3,440993E+09	3,440953E+09	3,194286E+09	6,881946E+09	1,007623E+10
1984	1,597070E+09	1,597087E+09	3,441016E+09	3,440971E+09	3,194156E+09	6,881987E+09	1,007614E+10
1985	1,597026E+09	1,597002E+09	3,441036E+09	3,441052E+09	3,194028E+09	6,882088E+09	1,007612E+10
1986	1,597088E+09	1,597075E+09	3,441069E+09	3,440991E+09	3,194163E+09	6,882060E+09	1,007622E+10
1987	1,596991E+09	1,597013E+09	3,440989E+09	3,441050E+09	3,194004E+09	6,882039E+09	1,007604E+10
1988	1,597028E+09	1,597027E+09	3,440985E+09	3,441040E+09	3,194055E+09	6,882026E+09	1,007608E+10
1989	1,597097E+09	1,597106E+09	3,441009E+09	3,440949E+09	3,194203E+09	6,881958E+09	1,007616E+10
1990	1,597035E+09	1,597041E+09	3,440951E+09	3,440978E+09	3,194076E+09	6,881929E+09	1,007600E+10
1991	1,597144E+09	1,597137E+09	3,440947E+09	3,440905E+09	3,194281E+09	6,881852E+09	1,007613E+10
1992	1,597166E+09	1,597185E+09	3,440919E+09	3,440861E+09	3,194351E+09	6,881780E+09	1,007613E+10
1993	1,597148E+09	1,597155E+09	3,440863E+09	3,440924E+09	3,194303E+09	6,881787E+09	1,007609E+10
1994	1,597269E+09	1,597287E+09	3,440890E+09	3,440820E+09	3,194556E+09	6,881710E+09	1,007627E+10
1995	1,597224E+09	1,597267E+09	3,440840E+09	3,440829E+09	3,194491E+09	6,881670E+09	1,007616E+10
1996	1,597256E+09	1,597241E+09	3,440825E+09	3,440855E+09	3,194497E+09	6,881681E+09	1,007618E+10
1997	1,597341E+09	1,597325E+09	3,440856E+09	3,440790E+09	3,194666E+09	6,881646E+09	1,007631E+10
1998	1,597241E+09	1,597233E+09	3,440797E+09	3,440862E+09	3,194474E+09	6,881659E+09	1,007613E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1999	1,597279E+09	1,597270E+09	3,440802E+09	3,440844E+09	3,194549E+09	6,881646E+09	1,007620E+10
2000	1,597273E+09	1,597297E+09	3,440852E+09	3,440811E+09	3,194570E+09	6,881663E+09	1,007623E+10
2001	1,597172E+09	1,597169E+09	3,440865E+09	3,440913E+09	3,194341E+09	6,881778E+09	1,007612E+10
2002	1,597227E+09	1,597218E+09	3,440951E+09	3,440854E+09	3,194445E+09	6,881805E+09	1,007625E+10
2003	1,597147E+09	1,597164E+09	3,440952E+09	3,440892E+09	3,194311E+09	6,881844E+09	1,007616E+10
2004	1,597099E+09	1,597082E+09	3,440916E+09	3,440982E+09	3,194182E+09	6,881897E+09	1,007608E+10
2005	1,597174E+09	1,597177E+09	3,440948E+09	3,440925E+09	3,194352E+09	6,881874E+09	1,007623E+10
2006	1,597081E+09	1,597102E+09	3,440908E+09	3,440961E+09	3,194183E+09	6,881869E+09	1,007605E+10
2007	1,597126E+09	1,597124E+09	3,440888E+09	3,440918E+09	3,194250E+09	6,881806E+09	1,007606E+10
2008	1,597206E+09	1,597209E+09	3,440925E+09	3,440829E+09	3,194415E+09	6,881753E+09	1,007617E+10
2009	1,597146E+09	1,597133E+09	3,440857E+09	3,440892E+09	3,194279E+09	6,881749E+09	1,007603E+10
2010	1,597250E+09	1,597243E+09	3,440856E+09	3,440807E+09	3,194493E+09	6,881663E+09	1,007616E+10
2011	1,597258E+09	1,597309E+09	3,440825E+09	3,440772E+09	3,194567E+09	6,881597E+09	1,007616E+10
2012	1,597242E+09	1,597261E+09	3,440748E+09	3,440825E+09	3,194503E+09	6,881573E+09	1,007608E+10
2013	1,597378E+09	1,597388E+09	3,440793E+09	3,440732E+09	3,194766E+09	6,881525E+09	1,007629E+10
2014	1,597333E+09	1,597346E+09	3,440761E+09	3,440742E+09	3,194680E+09	6,881503E+09	1,007618E+10
2015	1,597358E+09	1,597332E+09	3,440699E+09	3,440753E+09	3,194689E+09	6,881453E+09	1,007614E+10
2016	1,597436E+09	1,597433E+09	3,440745E+09	3,440693E+09	3,194869E+09	6,881438E+09	1,007631E+10
2017	1,597331E+09	1,597332E+09	3,440703E+09	3,440781E+09	3,194663E+09	6,881484E+09	1,007615E+10
2018	1,597362E+09	1,597361E+09	3,440757E+09	3,440736E+09	3,194723E+09	6,881493E+09	1,007622E+10
2019	1,597347E+09	1,597386E+09	3,440824E+09	3,440721E+09	3,194733E+09	6,881545E+09	1,007628E+10
2020	1,597245E+09	1,597232E+09	3,440790E+09	3,440839E+09	3,194477E+09	6,881629E+09	1,007611E+10
2021	1,597305E+09	1,597289E+09	3,440864E+09	3,440812E+09	3,194593E+09	6,881676E+09	1,007627E+10
2022	1,597226E+09	1,597235E+09	3,440860E+09	3,440846E+09	3,194460E+09	6,881706E+09	1,007617E+10
2023	1,597180E+09	1,597173E+09	3,440779E+09	3,440893E+09	3,194354E+09	6,881671E+09	1,007603E+10
2024	1,597272E+09	1,597278E+09	3,440847E+09	3,440810E+09	3,194550E+09	6,881657E+09	1,007621E+10
2025	1,597193E+09	1,597189E+09	3,440820E+09	3,440845E+09	3,194382E+09	6,881665E+09	1,007605E+10
2026	1,597238E+09	1,597217E+09	3,440817E+09	3,440784E+09	3,194455E+09	6,881601E+09	1,007606E+10
2027	1,597303E+09	1,597323E+09	3,440842E+09	3,440724E+09	3,194625E+09	6,881566E+09	1,007619E+10
2028	1,597234E+09	1,597244E+09	3,440736E+09	3,440806E+09	3,194479E+09	6,881541E+09	1,007602E+10
2029	1,597343E+09	1,597365E+09	3,440753E+09	3,440739E+09	3,194708E+09	6,881492E+09	1,007620E+10
2030	1,597357E+09	1,597407E+09	3,440756E+09	3,440695E+09	3,194765E+09	6,881451E+09	1,007622E+10
2031	1,597348E+09	1,597357E+09	3,440645E+09	3,440723E+09	3,194705E+09	6,881368E+09	1,007607E+10
2032	1,597494E+09	1,597483E+09	3,440697E+09	3,440631E+09	3,194977E+09	6,881328E+09	1,007631E+10
2033	1,597447E+09	1,597432E+09	3,440654E+09	3,440662E+09	3,194879E+09	6,881316E+09	1,007619E+10
2034	1,597460E+09	1,597433E+09	3,440601E+09	3,440649E+09	3,194893E+09	6,881250E+09	1,007614E+10
2035	1,597518E+09	1,597546E+09	3,440659E+09	3,440591E+09	3,195064E+09	6,881250E+09	1,007631E+10
2036	1,597407E+09	1,597420E+09	3,440621E+09	3,440681E+09	3,194827E+09	6,881302E+09	1,007613E+10
2037	1,597444E+09	1,597440E+09	3,440698E+09	3,440657E+09	3,194884E+09	6,881355E+09	1,007624E+10
2038	1,597424E+09	1,597442E+09	3,440771E+09	3,440659E+09	3,194866E+09	6,881431E+09	1,007630E+10
2039	1,597320E+09	1,597304E+09	3,440677E+09	3,440770E+09	3,194624E+09	6,881446E+09	1,007607E+10
2040	1,597389E+09	1,597378E+09	3,440748E+09	3,440739E+09	3,194766E+09	6,881487E+09	1,007625E+10
2041	1,597318E+09	1,597323E+09	3,440754E+09	3,440769E+09	3,194641E+09	6,881523E+09	1,007616E+10
2042	1,597279E+09	1,597269E+09	3,440705E+09	3,440769E+09	3,194548E+09	6,881473E+09	1,007602E+10
2043	1,597365E+09	1,597381E+09	3,440788E+09	3,440692E+09	3,194746E+09	6,881480E+09	1,007623E+10
2044	1,597284E+09	1,597280E+09	3,440732E+09	3,440744E+09	3,194565E+09	6,881475E+09	1,007604E+10
2045	1,597330E+09	1,597319E+09	3,440728E+09	3,440713E+09	3,194649E+09	6,881441E+09	1,007609E+10
2046	1,597389E+09	1,597424E+09	3,440755E+09	3,440662E+09	3,194813E+09	6,881417E+09	1,007623E+10
2047	1,597327E+09	1,597356E+09	3,440609E+09	3,440714E+09	3,194683E+09	6,881322E+09	1,007601E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude <sup>⊙</sup>	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2048	1,597456E+09	1,597470E+09	3,440656E+09	3,440632E+09	3,194925E+09	6,881288E+09	1,007621E+10
2049	1,597484E+09	1,597495E+09	3,440662E+09	3,440594E+09	3,194979E+09	6,881256E+09	1,007624E+10
2050	1,597474E+09	1,597449E+09	3,440547E+09	3,440598E+09	3,194922E+09	6,881144E+09	1,007607E+10
2051	1,597598E+09	1,597595E+09	3,440594E+09	3,440524E+09	3,195193E+09	6,881119E+09	1,007631E+10
2052	1,597536E+09	1,597542E+09	3,440526E+09	3,440562E+09	3,195078E+09	6,881088E+09	1,007617E+10
2053	1,597542E+09	1,597543E+09	3,440517E+09	3,440565E+09	3,195084E+09	6,881082E+09	1,007617E+10
2054	1,597593E+09	1,597630E+09	3,440620E+09	3,440518E+09	3,195223E+09	6,881138E+09	1,007636E+10
2055	1,597483E+09	1,597494E+09	3,440547E+09	3,440601E+09	3,194977E+09	6,881148E+09	1,007612E+10
2056	1,597528E+09	1,597508E+09	3,440628E+09	3,440594E+09	3,195035E+09	6,881222E+09	1,007626E+10
2057	1,597513E+09	1,597504E+09	3,440676E+09	3,440615E+09	3,195016E+09	6,881290E+09	1,007631E+10
2058	1,597408E+09	1,597388E+09	3,440569E+09	3,440684E+09	3,194796E+09	6,881253E+09	1,007605E+10
2059	1,597471E+09	1,597480E+09	3,440652E+09	3,440638E+09	3,194950E+09	6,881290E+09	1,007624E+10
2060	1,597405E+09	1,597411E+09	3,440657E+09	3,440652E+09	3,194816E+09	6,881309E+09	1,007612E+10
2061	1,597373E+09	1,597360E+09	3,440638E+09	3,440662E+09	3,194734E+09	6,881301E+09	1,007603E+10
2062	1,597453E+09	1,597463E+09	3,440726E+09	3,440607E+09	3,194915E+09	6,881334E+09	1,007625E+10
2063	1,597367E+09	1,597381E+09	3,440618E+09	3,440658E+09	3,194748E+09	6,881276E+09	1,007602E+10
2064	1,597422E+09	1,597431E+09	3,440622E+09	3,440635E+09	3,194853E+09	6,881258E+09	1,007611E+10
2065	1,597493E+09	1,597524E+09	3,440659E+09	3,440589E+09	3,195017E+09	6,881248E+09	1,007626E+10
2066	1,597445E+09	1,597460E+09	3,440527E+09	3,440597E+09	3,194905E+09	6,881124E+09	1,007603E+10
2067	1,597573E+09	1,597573E+09	3,440569E+09	3,440519E+09	3,195146E+09	6,881088E+09	1,007623E+10
2068	1,597596E+09	1,597588E+09	3,440542E+09	3,440492E+09	3,195184E+09	6,881034E+09	1,007622E+10
2069	1,597580E+09	1,597558E+09	3,440435E+09	3,440510E+09	3,195138E+09	6,880945E+09	1,007608E+10
2070	1,597684E+09	1,597699E+09	3,440496E+09	3,440446E+09	3,195382E+09	6,880941E+09	1,007632E+10
2071	1,597616E+09	1,597650E+09	3,440417E+09	3,440460E+09	3,195266E+09	6,880877E+09	1,007614E+10
2072	1,597632E+09	1,597634E+09	3,440450E+09	3,440466E+09	3,195267E+09	6,880915E+09	1,007618E+10
2073	1,597688E+09	1,597697E+09	3,440557E+09	3,440443E+09	3,195385E+09	6,881000E+09	1,007639E+10
2074	1,597579E+09	1,597567E+09	3,440469E+09	3,440511E+09	3,195146E+09	6,880980E+09	1,007613E+10
2075	1,597608E+09	1,597595E+09	3,440536E+09	3,440519E+09	3,195203E+09	6,881055E+09	1,007626E+10
2076	1,597587E+09	1,597591E+09	3,440558E+09	3,440538E+09	3,195178E+09	6,881096E+09	1,007627E+10
2077	1,597488E+09	1,597484E+09	3,440490E+09	3,440597E+09	3,194972E+09	6,881087E+09	1,007606E+10
2078	1,597547E+09	1,597559E+09	3,440604E+09	3,440552E+09	3,195107E+09	6,881156E+09	1,007626E+10
2079	1,597486E+09	1,597495E+09	3,440575E+09	3,440552E+09	3,194981E+09	6,881127E+09	1,007611E+10
2080	1,597464E+09	1,597444E+09	3,440564E+09	3,440584E+09	3,194908E+09	6,881148E+09	1,007606E+10
2081	1,597546E+09	1,597548E+09	3,440633E+09	3,440551E+09	3,195094E+09	6,881184E+09	1,007628E+10
2082	1,597468E+09	1,597485E+09	3,440509E+09	3,440564E+09	3,194953E+09	6,881073E+09	1,007603E+10
2083	1,597523E+09	1,597543E+09	3,440526E+09	3,440532E+09	3,195066E+09	6,881059E+09	1,007612E+10
2084	1,597603E+09	1,597619E+09	3,440547E+09	3,440472E+09	3,195223E+09	6,881019E+09	1,007624E+10
2085	1,597564E+09	1,597559E+09	3,440431E+09	3,440484E+09	3,195123E+09	6,880915E+09	1,007604E+10
2086	1,597679E+09	1,597670E+09	3,440472E+09	3,440427E+09	3,195349E+09	6,880899E+09	1,007625E+10
2087	1,597691E+09	1,597703E+09	3,440401E+09	3,440387E+09	3,195394E+09	6,880788E+09	1,007618E+10
2088	1,597676E+09	1,597678E+09	3,440329E+09	3,440414E+09	3,195354E+09	6,880744E+09	1,007610E+10
2089	1,597778E+09	1,597798E+09	3,440422E+09	3,440361E+09	3,195575E+09	6,880783E+09	1,007636E+10
2090	1,597715E+09	1,597742E+09	3,440364E+09	3,440352E+09	3,195457E+09	6,880716E+09	1,007617E+10
2091	1,597722E+09	1,597719E+09	3,440399E+09	3,440381E+09	3,195440E+09	6,880780E+09	1,007622E+10
2092	1,597771E+09	1,597764E+09	3,440464E+09	3,440380E+09	3,195535E+09	6,880845E+09	1,007638E+10
2093	1,597661E+09	1,597648E+09	3,440376E+09	3,440453E+09	3,195310E+09	6,880830E+09	1,007614E+10
2094	1,597679E+09	1,597675E+09	3,440441E+09	3,440460E+09	3,195354E+09	6,880901E+09	1,007626E+10
2095	1,597660E+09	1,597677E+09	3,440449E+09	3,440437E+09	3,195337E+09	6,880886E+09	1,007622E+10
2096	1,597579E+09	1,597566E+09	3,440419E+09	3,440491E+09	3,195145E+09	6,880910E+09	1,007605E+10



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2097	1,597641E+09	1,597628E+09	3,440536E+09	3,440465E+09	3,195269E+09	6,881000E+09	1,007627E+10
2098	1,597584E+09	1,597585E+09	3,440492E+09	3,440449E+09	3,195169E+09	6,880942E+09	1,007611E+10
2099	1,597551E+09	1,597551E+09	3,440468E+09	3,440495E+09	3,195102E+09	6,880964E+09	1,007607E+10
2100	1,597630E+09	1,597650E+09	3,440516E+09	3,440468E+09	3,195280E+09	6,880984E+09	1,007626E+10
2101	1,597567E+09	1,597594E+09	3,440428E+09	3,440471E+09	3,195161E+09	6,880899E+09	1,007606E+10
2102	1,597622E+09	1,597634E+09	3,440453E+09	3,440444E+09	3,195256E+09	6,880897E+09	1,007615E+10
2103	1,597708E+09	1,597715E+09	3,440433E+09	3,440366E+09	3,195422E+09	6,880800E+09	1,007622E+10
2104	1,597679E+09	1,597662E+09	3,440321E+09	3,440388E+09	3,195341E+09	6,880709E+09	1,007605E+10
2105	1,597786E+09	1,597774E+09	3,440355E+09	3,440344E+09	3,195560E+09	6,880700E+09	1,007626E+10
2106	1,597798E+09	1,597825E+09	3,440291E+09	3,440268E+09	3,195623E+09	6,880559E+09	1,007618E+10
2107	1,597773E+09	1,597792E+09	3,440257E+09	3,440298E+09	3,195566E+09	6,880555E+09	1,007612E+10
2108	1,597871E+09	1,597884E+09	3,440348E+09	3,440260E+09	3,195754E+09	6,880607E+09	1,007636E+10
2109	1,597813E+09	1,597823E+09	3,440305E+09	3,440270E+09	3,195636E+09	6,880575E+09	1,007621E+10
2110	1,597801E+09	1,597790E+09	3,440323E+09	3,440330E+09	3,195592E+09	6,880653E+09	1,007624E+10
2111	1,597844E+09	1,597848E+09	3,440337E+09	3,440311E+09	3,195692E+09	6,880648E+09	1,007634E+10
2112	1,597743E+09	1,597740E+09	3,440274E+09	3,440379E+09	3,195483E+09	6,880654E+09	1,007614E+10
2113	1,597765E+09	1,597754E+09	3,440364E+09	3,440382E+09	3,195519E+09	6,880746E+09	1,007626E+10
2114	1,597756E+09	1,597760E+09	3,440380E+09	3,440320E+09	3,195516E+09	6,880700E+09	1,007622E+10
2115	1,597667E+09	1,597652E+09	3,440365E+09	3,440392E+09	3,195319E+09	6,880756E+09	1,007608E+10
2116	1,597720E+09	1,597707E+09	3,440444E+09	3,440387E+09	3,195428E+09	6,880831E+09	1,007626E+10
2117	1,597667E+09	1,597680E+09	3,440406E+09	3,440378E+09	3,195347E+09	6,880784E+09	1,007613E+10
2118	1,597626E+09	1,597647E+09	3,440380E+09	3,440431E+09	3,195274E+09	6,880811E+09	1,007608E+10
2119	1,597716E+09	1,597745E+09	3,440402E+09	3,440363E+09	3,195461E+09	6,880765E+09	1,007623E+10
2120	1,597680E+09	1,597687E+09	3,440335E+09	3,440362E+09	3,195367E+09	6,880697E+09	1,007606E+10
2121	1,597742E+09	1,597721E+09	3,440349E+09	3,440347E+09	3,195463E+09	6,880696E+09	1,007616E+10
2122	1,597829E+09	1,597824E+09	3,440313E+09	3,440242E+09	3,195653E+09	6,880555E+09	1,007621E+10
2123	1,597785E+09	1,597791E+09	3,440215E+09	3,440272E+09	3,195575E+09	6,880487E+09	1,007606E+10
2124	1,597880E+09	1,597890E+09	3,440250E+09	3,440239E+09	3,195770E+09	6,880488E+09	1,007626E+10
2125	1,597897E+09	1,597935E+09	3,440238E+09	3,440166E+09	3,195833E+09	6,880405E+09	1,007624E+10
2126	1,597861E+09	1,597880E+09	3,440211E+09	3,440227E+09	3,195741E+09	6,880438E+09	1,007618E+10
2127	1,597955E+09	1,597960E+09	3,440256E+09	3,440188E+09	3,195915E+09	6,880444E+09	1,007636E+10
2128	1,597910E+09	1,597903E+09	3,440206E+09	3,440218E+09	3,195812E+09	6,880424E+09	1,007624E+10
2129	1,597891E+09	1,597867E+09	3,440204E+09	3,440280E+09	3,195759E+09	6,880484E+09	1,007624E+10
2130	1,597938E+09	1,597943E+09	3,440221E+09	3,440207E+09	3,195881E+09	6,880428E+09	1,007631E+10
2131	1,597834E+09	1,597835E+09	3,440198E+09	3,440252E+09	3,195670E+09	6,880449E+09	1,007612E+10
2132	1,597849E+09	1,597830E+09	3,440287E+09	3,440266E+09	3,195679E+09	6,880552E+09	1,007623E+10
2133	1,597844E+09	1,597844E+09	3,440327E+09	3,440221E+09	3,195689E+09	6,880549E+09	1,007624E+10
2134	1,597735E+09	1,597736E+09	3,440296E+09	3,440330E+09	3,195471E+09	6,880627E+09	1,007610E+10
2135	1,597782E+09	1,597800E+09	3,440334E+09	3,440315E+09	3,195582E+09	6,880649E+09	1,007623E+10
2136	1,597751E+09	1,597778E+09	3,440315E+09	3,440308E+09	3,195529E+09	6,880622E+09	1,007615E+10
2137	1,597723E+09	1,597730E+09	3,440297E+09	3,440355E+09	3,195454E+09	6,880652E+09	1,007611E+10
2138	1,597833E+09	1,597836E+09	3,440309E+09	3,440246E+09	3,195670E+09	6,880555E+09	1,007622E+10
2139	1,597797E+09	1,597790E+09	3,440245E+09	3,440246E+09	3,195587E+09	6,880491E+09	1,007608E+10
2140	1,597849E+09	1,597824E+09	3,440226E+09	3,440247E+09	3,195673E+09	6,880473E+09	1,007615E+10
2141	1,597936E+09	1,597946E+09	3,440210E+09	3,440140E+09	3,195882E+09	6,880350E+09	1,007623E+10
2142	1,597873E+09	1,597908E+09	3,440131E+09	3,440184E+09	3,195781E+09	6,880315E+09	1,007610E+10
2143	1,597966E+09	1,597992E+09	3,440157E+09	3,440129E+09	3,195958E+09	6,880286E+09	1,007624E+10
2144	1,598003E+09	1,598025E+09	3,440164E+09	3,440082E+09	3,196028E+09	6,880246E+09	1,007627E+10
2145	1,597967E+09	1,597956E+09	3,440121E+09	3,440167E+09	3,195924E+09	6,880288E+09	1,007621E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2146	1,598061E+09	1,598051E+09	3,440131E+09	3,440097E+09	3,196112E+09	6,880228E+09	1,007634E+10
2147	1,598003E+09	1,598008E+09	3,440097E+09	3,440120E+09	3,196011E+09	6,880217E+09	1,007623E+10
2148	1,597976E+09	1,597962E+09	3,440097E+09	3,440180E+09	3,195937E+09	6,880276E+09	1,007621E+10
2149	1,598025E+09	1,598031E+09	3,440169E+09	3,440097E+09	3,196056E+09	6,880266E+09	1,007632E+10
2150	1,597905E+09	1,597914E+09	3,440162E+09	3,440172E+09	3,195819E+09	6,880333E+09	1,007615E+10
2151	1,597912E+09	1,597901E+09	3,440211E+09	3,440185E+09	3,195813E+09	6,880396E+09	1,007621E+10
2152	1,597920E+09	1,597924E+09	3,440247E+09	3,440172E+09	3,195844E+09	6,880418E+09	1,007626E+10
2153	1,597813E+09	1,597816E+09	3,440197E+09	3,440287E+09	3,195629E+09	6,880484E+09	1,007611E+10
2154	1,597875E+09	1,597891E+09	3,440226E+09	3,440218E+09	3,195766E+09	6,880443E+09	1,007621E+10
2155	1,597856E+09	1,597871E+09	3,440234E+09	3,440188E+09	3,195727E+09	6,880422E+09	1,007615E+10
2156	1,597834E+09	1,597815E+09	3,440191E+09	3,440240E+09	3,195649E+09	6,880431E+09	1,007608E+10
2157	1,597951E+09	1,597935E+09	3,440218E+09	3,440132E+09	3,195886E+09	6,880350E+09	1,007624E+10
2158	1,597893E+09	1,597906E+09	3,440144E+09	3,440155E+09	3,195799E+09	6,880298E+09	1,007610E+10
2159	1,597933E+09	1,597945E+09	3,440101E+09	3,440142E+09	3,195878E+09	6,880243E+09	1,007612E+10
2160	1,598035E+09	1,598067E+09	3,440122E+09	3,440051E+09	3,196103E+09	6,880173E+09	1,007628E+10
2161	1,597977E+09	1,598004E+09	3,440059E+09	3,440106E+09	3,195981E+09	6,880165E+09	1,007615E+10
2162	1,598079E+09	1,598085E+09	3,440073E+09	3,440029E+09	3,196164E+09	6,880102E+09	1,007627E+10
2163	1,598114E+09	1,598119E+09	3,440077E+09	3,439989E+09	3,196233E+09	6,880066E+09	1,007630E+10
2164	1,598066E+09	1,598044E+09	3,439993E+09	3,440089E+09	3,196110E+09	6,880082E+09	1,007619E+10
2165	1,598158E+09	1,598151E+09	3,440029E+09	3,440003E+09	3,196309E+09	6,880033E+09	1,007634E+10
2166	1,598081E+09	1,598106E+09	3,440015E+09	3,440026E+09	3,196186E+09	6,880041E+09	1,007623E+10
2167	1,598047E+09	1,598043E+09	3,440016E+09	3,440061E+09	3,196090E+09	6,880077E+09	1,007617E+10
2168	1,598110E+09	1,598107E+09	3,440107E+09	3,440012E+09	3,196217E+09	6,880119E+09	1,007634E+10
2169	1,597985E+09	1,597981E+09	3,440093E+09	3,440118E+09	3,195965E+09	6,880211E+09	1,007618E+10
2170	1,597991E+09	1,597985E+09	3,440113E+09	3,440110E+09	3,195976E+09	6,880223E+09	1,007620E+10
2171	1,598000E+09	1,598019E+09	3,440161E+09	3,440091E+09	3,196019E+09	6,880253E+09	1,007627E+10
2172	1,597898E+09	1,597903E+09	3,440100E+09	3,440205E+09	3,195800E+09	6,880305E+09	1,007611E+10
2173	1,597978E+09	1,597975E+09	3,440161E+09	3,440115E+09	3,195954E+09	6,880276E+09	1,007623E+10
2174	1,597950E+09	1,597961E+09	3,440162E+09	3,440103E+09	3,195912E+09	6,880265E+09	1,007618E+10
2175	1,597925E+09	1,597909E+09	3,440078E+09	3,440140E+09	3,195833E+09	6,880218E+09	1,007605E+10
2176	1,598052E+09	1,598044E+09	3,440101E+09	3,440055E+09	3,196096E+09	6,880156E+09	1,007625E+10
2177	1,597992E+09	1,598019E+09	3,440033E+09	3,440079E+09	3,196011E+09	6,880112E+09	1,007612E+10
2178	1,598039E+09	1,598060E+09	3,439994E+09	3,440016E+09	3,196100E+09	6,880010E+09	1,007611E+10
2179	1,598146E+09	1,598173E+09	3,440051E+09	3,439923E+09	3,196318E+09	6,879974E+09	1,007629E+10
2180	1,598090E+09	1,598094E+09	3,439963E+09	3,440005E+09	3,196185E+09	6,879968E+09	1,007615E+10
2181	1,598193E+09	1,598175E+09	3,439983E+09	3,439934E+09	3,196368E+09	6,879917E+09	1,007629E+10
2182	1,598204E+09	1,598223E+09	3,439974E+09	3,439917E+09	3,196427E+09	6,879891E+09	1,007632E+10
2183	1,598143E+09	1,598146E+09	3,439868E+09	3,439991E+09	3,196290E+09	6,879859E+09	1,007615E+10
2184	1,598246E+09	1,598247E+09	3,439943E+09	3,439919E+09	3,196493E+09	6,879862E+09	1,007635E+10
2185	1,598167E+09	1,598184E+09	3,439956E+09	3,439949E+09	3,196351E+09	6,879905E+09	1,007626E+10
2186	1,598135E+09	1,598119E+09	3,439948E+09	3,439965E+09	3,196254E+09	6,879913E+09	1,007617E+10
2187	1,598193E+09	1,598186E+09	3,440047E+09	3,439934E+09	3,196379E+09	6,879981E+09	1,007636E+10
2188	1,598063E+09	1,598059E+09	3,439991E+09	3,440063E+09	3,196122E+09	6,880055E+09	1,007618E+10
2189	1,598073E+09	1,598072E+09	3,440030E+09	3,440036E+09	3,196145E+09	6,880066E+09	1,007621E+10
2190	1,598075E+09	1,598108E+09	3,440085E+09	3,440012E+09	3,196183E+09	6,880097E+09	1,007628E+10
2191	1,597980E+09	1,597982E+09	3,440003E+09	3,440092E+09	3,195961E+09	6,880095E+09	1,007606E+10
2192	1,598084E+09	1,598061E+09	3,440066E+09	3,440027E+09	3,196145E+09	6,880093E+09	1,007624E+10
2193	1,598053E+09	1,598053E+09	3,440055E+09	3,440022E+09	3,196106E+09	6,880076E+09	1,007618E+10
2194	1,598026E+09	1,598024E+09	3,439955E+09	3,440026E+09	3,196049E+09	6,879981E+09	1,007603E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2195	1,598151E+09	1,598168E+09	3,440009E+09	3,439936E+09	3,196319E+09	6,879944E+09	1,007626E+10
2196	1,598092E+09	1,598126E+09	3,439945E+09	3,439973E+09	3,196218E+09	6,879918E+09	1,007614E+10
2197	1,598150E+09	1,598157E+09	3,439941E+09	3,439910E+09	3,196308E+09	6,879851E+09	1,007616E+10
2198	1,598244E+09	1,598268E+09	3,439981E+09	3,439847E+09	3,196512E+09	6,879828E+09	1,007634E+10
2199	1,598184E+09	1,598184E+09	3,439845E+09	3,439922E+09	3,196369E+09	6,879766E+09	1,007613E+10
2200	1,598297E+09	1,598276E+09	3,439854E+09	3,439873E+09	3,196573E+09	6,879727E+09	1,007630E+10
2201	1,598299E+09	1,598322E+09	3,439856E+09	3,439845E+09	3,196621E+09	6,879701E+09	1,007632E+10
2202	1,598242E+09	1,598245E+09	3,439766E+09	3,439866E+09	3,196487E+09	6,879632E+09	1,007612E+10
2203	1,598342E+09	1,598335E+09	3,439883E+09	3,439794E+09	3,196677E+09	6,879678E+09	1,007635E+10
2204	1,598258E+09	1,598261E+09	3,439882E+09	3,439860E+09	3,196519E+09	6,879742E+09	1,007626E+10
2205	1,598222E+09	1,598199E+09	3,439886E+09	3,439887E+09	3,196420E+09	6,879772E+09	1,007619E+10
2206	1,598254E+09	1,598279E+09	3,439971E+09	3,439883E+09	3,196533E+09	6,879854E+09	1,007639E+10
2207	1,598124E+09	1,598145E+09	3,439893E+09	3,439988E+09	3,196269E+09	6,879881E+09	1,007615E+10
2208	1,598157E+09	1,598149E+09	3,439948E+09	3,439971E+09	3,196306E+09	6,879919E+09	1,007622E+10
2209	1,598166E+09	1,598178E+09	3,440013E+09	3,439942E+09	3,196345E+09	6,879955E+09	1,007630E+10
2210	1,598082E+09	1,598064E+09	3,439902E+09	3,439980E+09	3,196147E+09	6,879882E+09	1,007603E+10
2211	1,598183E+09	1,598156E+09	3,439970E+09	3,439919E+09	3,196339E+09	6,879890E+09	1,007623E+10
2212	1,598151E+09	1,598161E+09	3,439935E+09	3,439929E+09	3,196312E+09	6,879864E+09	1,007618E+10
2213	1,598127E+09	1,598135E+09	3,439869E+09	3,439913E+09	3,196262E+09	6,879782E+09	1,007604E+10
2214	1,598238E+09	1,598278E+09	3,439942E+09	3,439832E+09	3,196516E+09	6,879775E+09	1,007629E+10
2215	1,598187E+09	1,598219E+09	3,439853E+09	3,439860E+09	3,196406E+09	6,879714E+09	1,007612E+10
2216	1,598263E+09	1,598249E+09	3,439839E+09	3,439839E+09	3,196513E+09	6,879678E+09	1,007619E+10
2217	1,598351E+09	1,598363E+09	3,439863E+09	3,439787E+09	3,196715E+09	6,879650E+09	1,007636E+10
2218	1,598292E+09	1,598299E+09	3,439705E+09	3,439817E+09	3,196590E+09	6,879521E+09	1,007611E+10
2219	1,598400E+09	1,598392E+09	3,439753E+09	3,439756E+09	3,196791E+09	6,879509E+09	1,007630E+10
2220	1,598400E+09	1,598422E+09	3,439769E+09	3,439737E+09	3,196823E+09	6,879506E+09	1,007633E+10
2221	1,598343E+09	1,598333E+09	3,439726E+09	3,439756E+09	3,196675E+09	6,879481E+09	1,007616E+10
2222	1,598416E+09	1,598421E+09	3,439839E+09	3,439723E+09	3,196837E+09	6,879562E+09	1,007640E+10
2223	1,598323E+09	1,598336E+09	3,439796E+09	3,439795E+09	3,196659E+09	6,879591E+09	1,007625E+10
2224	1,598296E+09	1,598282E+09	3,439789E+09	3,439853E+09	3,196579E+09	6,879642E+09	1,007622E+10
2225	1,598328E+09	1,598354E+09	3,439875E+09	3,439832E+09	3,196682E+09	6,879707E+09	1,007639E+10
2226	1,598212E+09	1,598222E+09	3,439796E+09	3,439875E+09	3,196434E+09	6,879671E+09	1,007611E+10
2227	1,598256E+09	1,598226E+09	3,439869E+09	3,439851E+09	3,196482E+09	6,879720E+09	1,007620E+10
2228	1,598268E+09	1,598256E+09	3,439908E+09	3,439843E+09	3,196524E+09	6,879751E+09	1,007628E+10
2229	1,598184E+09	1,598161E+09	3,439817E+09	3,439873E+09	3,196345E+09	6,879690E+09	1,007603E+10
2230	1,598259E+09	1,598274E+09	3,439882E+09	3,439829E+09	3,196533E+09	6,879711E+09	1,007624E+10
2231	1,598227E+09	1,598270E+09	3,439841E+09	3,439824E+09	3,196498E+09	6,879664E+09	1,007616E+10
2232	1,598224E+09	1,598237E+09	3,439794E+09	3,439837E+09	3,196461E+09	6,879631E+09	1,007609E+10
2233	1,598338E+09	1,598364E+09	3,439868E+09	3,439768E+09	3,196703E+09	6,879636E+09	1,007634E+10
2234	1,598301E+09	1,598313E+09	3,439745E+09	3,439766E+09	3,196614E+09	6,879510E+09	1,007612E+10
2235	1,598379E+09	1,598351E+09	3,439722E+09	3,439747E+09	3,196730E+09	6,879469E+09	1,007620E+10
2236	1,598463E+09	1,598474E+09	3,439724E+09	3,439698E+09	3,196937E+09	6,879422E+09	1,007636E+10
2237	1,598406E+09	1,598412E+09	3,439610E+09	3,439688E+09	3,196817E+09	6,879299E+09	1,007612E+10
2238	1,598489E+09	1,598498E+09	3,439689E+09	3,439636E+09	3,196987E+09	6,879325E+09	1,007631E+10
2239	1,598487E+09	1,598509E+09	3,439696E+09	3,439621E+09	3,196996E+09	6,879317E+09	1,007631E+10
2240	1,598433E+09	1,598414E+09	3,439649E+09	3,439695E+09	3,196847E+09	6,879344E+09	1,007619E+10
2241	1,598488E+09	1,598498E+09	3,439756E+09	3,439685E+09	3,196987E+09	6,879441E+09	1,007643E+10
2242	1,598400E+09	1,598424E+09	3,439688E+09	3,439717E+09	3,196824E+09	6,879405E+09	1,007623E+10
2243	1,598377E+09	1,598363E+09	3,439706E+09	3,439764E+09	3,196740E+09	6,879470E+09	1,007621E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2244	1,598418E+09	1,598425E+09	3,439792E+09	3,439746E+09	3,196844E+09	6,879538E+09	1,007638E+10
2245	1,598314E+09	1,598295E+09	3,439735E+09	3,439765E+09	3,196609E+09	6,879499E+09	1,007611E+10
2246	1,598337E+09	1,598314E+09	3,439797E+09	3,439763E+09	3,196651E+09	6,879560E+09	1,007621E+10
2247	1,598345E+09	1,598350E+09	3,439799E+09	3,439751E+09	3,196695E+09	6,879549E+09	1,007624E+10
2248	1,598269E+09	1,598270E+09	3,439712E+09	3,439809E+09	3,196539E+09	6,879520E+09	1,007606E+10
2249	1,598339E+09	1,598374E+09	3,439799E+09	3,439755E+09	3,196713E+09	6,879553E+09	1,007627E+10
2250	1,598326E+09	1,598367E+09	3,439753E+09	3,439705E+09	3,196693E+09	6,879457E+09	1,007615E+10
2251	1,598338E+09	1,598329E+09	3,439712E+09	3,439727E+09	3,196666E+09	6,879439E+09	1,007611E+10
2252	1,598458E+09	1,598458E+09	3,439749E+09	3,439681E+09	3,196916E+09	6,879430E+09	1,007635E+10
2253	1,598423E+09	1,598424E+09	3,439635E+09	3,439657E+09	3,196847E+09	6,879292E+09	1,007614E+10
2254	1,598477E+09	1,598480E+09	3,439613E+09	3,439644E+09	3,196957E+09	6,879258E+09	1,007621E+10
2255	1,598556E+09	1,598584E+09	3,439619E+09	3,439576E+09	3,197140E+09	6,879195E+09	1,007634E+10
2256	1,598508E+09	1,598515E+09	3,439541E+09	3,439599E+09	3,197023E+09	6,879140E+09	1,007616E+10
2257	1,598577E+09	1,598581E+09	3,439629E+09	3,439564E+09	3,197158E+09	6,879192E+09	1,007635E+10
2258	1,598575E+09	1,598589E+09	3,439611E+09	3,439537E+09	3,197165E+09	6,879148E+09	1,007631E+10
2259	1,598519E+09	1,598498E+09	3,439560E+09	3,439629E+09	3,197018E+09	6,879189E+09	1,007621E+10
2260	1,598572E+09	1,598580E+09	3,439640E+09	3,439628E+09	3,197153E+09	6,879268E+09	1,007642E+10
2261	1,598494E+09	1,598505E+09	3,439611E+09	3,439616E+09	3,196999E+09	6,879226E+09	1,007623E+10
2262	1,598457E+09	1,598445E+09	3,439636E+09	3,439660E+09	3,196903E+09	6,879296E+09	1,007620E+10
2263	1,598501E+09	1,598495E+09	3,439701E+09	3,439636E+09	3,196996E+09	6,879337E+09	1,007633E+10
2264	1,598404E+09	1,598382E+09	3,439643E+09	3,439692E+09	3,196786E+09	6,879335E+09	1,007612E+10
2265	1,598410E+09	1,598408E+09	3,439706E+09	3,439699E+09	3,196818E+09	6,879405E+09	1,007622E+10
2266	1,598424E+09	1,598456E+09	3,439699E+09	3,439651E+09	3,196881E+09	6,879350E+09	1,007623E+10
2267	1,598359E+09	1,598370E+09	3,439642E+09	3,439710E+09	3,196729E+09	6,879352E+09	1,007608E+10
2268	1,598439E+09	1,598460E+09	3,439722E+09	3,439671E+09	3,196899E+09	6,879394E+09	1,007629E+10
2269	1,598445E+09	1,598453E+09	3,439685E+09	3,439602E+09	3,196898E+09	6,879287E+09	1,007619E+10
2270	1,598440E+09	1,598430E+09	3,439618E+09	3,439642E+09	3,196870E+09	6,879260E+09	1,007613E+10
2271	1,598562E+09	1,598562E+09	3,439614E+09	3,439586E+09	3,197124E+09	6,879199E+09	1,007632E+10
2272	1,598535E+09	1,598545E+09	3,439503E+09	3,439569E+09	3,197079E+09	6,879072E+09	1,007615E+10
2273	1,598574E+09	1,598588E+09	3,439517E+09	3,439542E+09	3,197162E+09	6,879059E+09	1,007622E+10
2274	1,598661E+09	1,598684E+09	3,439528E+09	3,439439E+09	3,197345E+09	6,878967E+09	1,007631E+10
2275	1,598612E+09	1,598605E+09	3,439465E+09	3,439492E+09	3,197217E+09	6,878957E+09	1,007617E+10
2276	1,598673E+09	1,598667E+09	3,439533E+09	3,439496E+09	3,197339E+09	6,879029E+09	1,007637E+10
2277	1,598671E+09	1,598684E+09	3,439523E+09	3,439455E+09	3,197355E+09	6,878978E+09	1,007633E+10
2278	1,598593E+09	1,598601E+09	3,439476E+09	3,439553E+09	3,197194E+09	6,879029E+09	1,007622E+10
2279	1,598648E+09	1,598659E+09	3,439551E+09	3,439534E+09	3,197307E+09	6,879084E+09	1,007639E+10
2280	1,598583E+09	1,598583E+09	3,439539E+09	3,439542E+09	3,197166E+09	6,879081E+09	1,007625E+10
2281	1,598534E+09	1,598516E+09	3,439569E+09	3,439593E+09	3,197050E+09	6,879163E+09	1,007621E+10
2282	1,598582E+09	1,598573E+09	3,439606E+09	3,439545E+09	3,197155E+09	6,879151E+09	1,007631E+10
2283	1,598486E+09	1,598477E+09	3,439552E+09	3,439612E+09	3,196964E+09	6,879164E+09	1,007613E+10
2284	1,598492E+09	1,598504E+09	3,439606E+09	3,439624E+09	3,196996E+09	6,879230E+09	1,007623E+10
2285	1,598522E+09	1,598548E+09	3,439637E+09	3,439537E+09	3,197071E+09	6,879174E+09	1,007624E+10
2286	1,598452E+09	1,598465E+09	3,439581E+09	3,439605E+09	3,196916E+09	6,879185E+09	1,007610E+10
2287	1,598540E+09	1,598538E+09	3,439618E+09	3,439570E+09	3,197078E+09	6,879188E+09	1,007627E+10
2288	1,598557E+09	1,598555E+09	3,439566E+09	3,439533E+09	3,197113E+09	6,879099E+09	1,007621E+10
2289	1,598539E+09	1,598543E+09	3,439490E+09	3,439565E+09	3,197082E+09	6,879055E+09	1,007614E+10
2290	1,598663E+09	1,598679E+09	3,439484E+09	3,439463E+09	3,197342E+09	6,878947E+09	1,007629E+10
2291	1,598643E+09	1,598660E+09	3,439417E+09	3,439445E+09	3,197303E+09	6,878862E+09	1,007617E+10
2292	1,598682E+09	1,598685E+09	3,439436E+09	3,439440E+09	3,197367E+09	6,878876E+09	1,007624E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2293	1,598773E+09	1,598775E+09	3,439468E+09	3,439334E+09	3,197548E+09	6,878803E+09	1,007635E+10
2294	1,598700E+09	1,598705E+09	3,439390E+09	3,439419E+09	3,197405E+09	6,878809E+09	1,007621E+10
2295	1,598753E+09	1,598755E+09	3,439421E+09	3,439428E+09	3,197508E+09	6,878848E+09	1,007636E+10
2296	1,598759E+09	1,598780E+09	3,439421E+09	3,439398E+09	3,197539E+09	6,878819E+09	1,007636E+10
2297	1,598670E+09	1,598679E+09	3,439397E+09	3,439476E+09	3,197349E+09	6,878873E+09	1,007622E+10
2298	1,598735E+09	1,598727E+09	3,439464E+09	3,439419E+09	3,197463E+09	6,878883E+09	1,007635E+10
2299	1,598676E+09	1,598658E+09	3,439458E+09	3,439444E+09	3,197333E+09	6,878902E+09	1,007624E+10
2300	1,598619E+09	1,598597E+09	3,439473E+09	3,439521E+09	3,197216E+09	6,878994E+09	1,007621E+10
2301	1,598669E+09	1,598670E+09	3,439527E+09	3,439450E+09	3,197339E+09	6,878977E+09	1,007632E+10
2302	1,598558E+09	1,598583E+09	3,439486E+09	3,439525E+09	3,197140E+09	6,879011E+09	1,007615E+10
2303	1,598570E+09	1,598587E+09	3,439533E+09	3,439532E+09	3,197157E+09	6,879065E+09	1,007622E+10
2304	1,598620E+09	1,598633E+09	3,439563E+09	3,439468E+09	3,197253E+09	6,879031E+09	1,007628E+10
2305	1,598543E+09	1,598546E+09	3,439494E+09	3,439541E+09	3,197089E+09	6,879035E+09	1,007612E+10
2306	1,598644E+09	1,598630E+09	3,439487E+09	3,439477E+09	3,197273E+09	6,878964E+09	1,007624E+10
2307	1,598667E+09	1,598669E+09	3,439430E+09	3,439437E+09	3,197336E+09	6,878867E+09	1,007620E+10
2308	1,598649E+09	1,598660E+09	3,439363E+09	3,439460E+09	3,197309E+09	6,878823E+09	1,007613E+10
2309	1,598783E+09	1,598790E+09	3,439402E+09	3,439315E+09	3,197573E+09	6,878717E+09	1,007629E+10
2310	1,598747E+09	1,598772E+09	3,439354E+09	3,439316E+09	3,197519E+09	6,878670E+09	1,007619E+10
2311	1,598780E+09	1,598777E+09	3,439347E+09	3,439338E+09	3,197557E+09	6,878685E+09	1,007624E+10
2312	1,598869E+09	1,598879E+09	3,439374E+09	3,439278E+09	3,197748E+09	6,878652E+09	1,007640E+10
2313	1,598778E+09	1,598805E+09	3,439298E+09	3,439368E+09	3,197583E+09	6,878666E+09	1,007625E+10
2314	1,598836E+09	1,598842E+09	3,439318E+09	3,439339E+09	3,197678E+09	6,878657E+09	1,007633E+10
2315	1,598851E+09	1,598862E+09	3,439343E+09	3,439310E+09	3,197713E+09	6,878653E+09	1,007637E+10
2316	1,598764E+09	1,598750E+09	3,439316E+09	3,439396E+09	3,197514E+09	6,878712E+09	1,007623E+10
2317	1,598833E+09	1,598798E+09	3,439395E+09	3,439321E+09	3,197631E+09	6,878716E+09	1,007635E+10
2318	1,598753E+09	1,598752E+09	3,439384E+09	3,439363E+09	3,197504E+09	6,878748E+09	1,007625E+10
2319	1,598690E+09	1,598684E+09	3,439370E+09	3,439441E+09	3,197374E+09	6,878811E+09	1,007618E+10
2320	1,598746E+09	1,598766E+09	3,439447E+09	3,439382E+09	3,197511E+09	6,878829E+09	1,007634E+10
2321	1,598632E+09	1,598664E+09	3,439423E+09	3,439446E+09	3,197296E+09	6,878869E+09	1,007617E+10
2322	1,598659E+09	1,598655E+09	3,439441E+09	3,439428E+09	3,197313E+09	6,878870E+09	1,007618E+10
2323	1,598723E+09	1,598717E+09	3,439459E+09	3,439384E+09	3,197440E+09	6,878842E+09	1,007628E+10
2324	1,598650E+09	1,598645E+09	3,439362E+09	3,439461E+09	3,197294E+09	6,878823E+09	1,007612E+10
2325	1,598758E+09	1,598745E+09	3,439371E+09	3,439357E+09	3,197503E+09	6,878728E+09	1,007623E+10
2326	1,598768E+09	1,598799E+09	3,439341E+09	3,439309E+09	3,197567E+09	6,878650E+09	1,007622E+10
2327	1,598750E+09	1,598765E+09	3,439281E+09	3,439334E+09	3,197515E+09	6,878615E+09	1,007613E+10
2328	1,598888E+09	1,598893E+09	3,439338E+09	3,439226E+09	3,197781E+09	6,878564E+09	1,007634E+10
2329	1,598837E+09	1,598865E+09	3,439287E+09	3,439253E+09	3,197702E+09	6,878540E+09	1,007624E+10
2330	1,598870E+09	1,598866E+09	3,439238E+09	3,439266E+09	3,197736E+09	6,878504E+09	1,007624E+10
2331	1,598965E+09	1,598980E+09	3,439256E+09	3,439215E+09	3,197944E+09	6,878470E+09	1,007641E+10
2332	1,598877E+09	1,598897E+09	3,439187E+09	3,439292E+09	3,197774E+09	6,878479E+09	1,007625E+10
2333	1,598946E+09	1,598922E+09	3,439238E+09	3,439216E+09	3,197868E+09	6,878453E+09	1,007632E+10
2334	1,598946E+09	1,598946E+09	3,439270E+09	3,439194E+09	3,197892E+09	6,878464E+09	1,007636E+10
2335	1,598851E+09	1,598827E+09	3,439222E+09	3,439299E+09	3,197679E+09	6,878521E+09	1,007620E+10
2336	1,598912E+09	1,598895E+09	3,439305E+09	3,439252E+09	3,197806E+09	6,878557E+09	1,007636E+10
2337	1,598811E+09	1,598848E+09	3,439312E+09	3,439300E+09	3,197659E+09	6,878612E+09	1,007627E+10
2338	1,598755E+09	1,598767E+09	3,439295E+09	3,439351E+09	3,197522E+09	6,878646E+09	1,007617E+10
2339	1,598826E+09	1,598843E+09	3,439379E+09	3,439306E+09	3,197670E+09	6,878686E+09	1,007636E+10
2340	1,598726E+09	1,598734E+09	3,439344E+09	3,439379E+09	3,197461E+09	6,878724E+09	1,007618E+10
2341	1,598768E+09	1,598731E+09	3,439348E+09	3,439334E+09	3,197499E+09	6,878682E+09	1,007618E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2342	1,598822E+09	1,598823E+09	3,439351E+09	3,439288E+09	3,197645E+09	6,878639E+09	1,007628E+10
2343	1,598749E+09	1,598756E+09	3,439232E+09	3,439352E+09	3,197505E+09	6,878584E+09	1,007609E+10
2344	1,598862E+09	1,598863E+09	3,439276E+09	3,439246E+09	3,197725E+09	6,878522E+09	1,007625E+10
2345	1,598862E+09	1,598905E+09	3,439278E+09	3,439196E+09	3,197768E+09	6,878475E+09	1,007624E+10
2346	1,598850E+09	1,598854E+09	3,439195E+09	3,439219E+09	3,197705E+09	6,878414E+09	1,007612E+10
2347	1,598990E+09	1,598992E+09	3,439239E+09	3,439154E+09	3,197982E+09	6,878393E+09	1,007637E+10
2348	1,598941E+09	1,598968E+09	3,439172E+09	3,439196E+09	3,197908E+09	6,878368E+09	1,007628E+10
2349	1,598979E+09	1,598969E+09	3,439131E+09	3,439173E+09	3,197948E+09	6,878304E+09	1,007625E+10
2350	1,599063E+09	1,599087E+09	3,439173E+09	3,439110E+09	3,198151E+09	6,878283E+09	1,007643E+10
2351	1,598978E+09	1,598980E+09	3,439095E+09	3,439181E+09	3,197958E+09	6,878276E+09	1,007623E+10
2352	1,599042E+09	1,599006E+09	3,439164E+09	3,439128E+09	3,198048E+09	6,878293E+09	1,007634E+10
2353	1,599020E+09	1,599029E+09	3,439201E+09	3,439123E+09	3,198049E+09	6,878325E+09	1,007637E+10
2354	1,598918E+09	1,598907E+09	3,439123E+09	3,439220E+09	3,197825E+09	6,878343E+09	1,007617E+10
2355	1,598979E+09	1,598987E+09	3,439213E+09	3,439191E+09	3,197966E+09	6,878404E+09	1,007637E+10
2356	1,598890E+09	1,598927E+09	3,439237E+09	3,439228E+09	3,197816E+09	6,878466E+09	1,007628E+10
2357	1,598851E+09	1,598834E+09	3,439232E+09	3,439243E+09	3,197685E+09	6,878475E+09	1,007616E+10
2358	1,598919E+09	1,598921E+09	3,439307E+09	3,439205E+09	3,197840E+09	6,878512E+09	1,007635E+10
2359	1,598823E+09	1,598815E+09	3,439230E+09	3,439288E+09	3,197638E+09	6,878518E+09	1,007616E+10
2360	1,598866E+09	1,598839E+09	3,439235E+09	3,439252E+09	3,197704E+09	6,878487E+09	1,007619E+10
2361	1,598906E+09	1,598938E+09	3,439256E+09	3,439197E+09	3,197844E+09	6,878453E+09	1,007630E+10
2362	1,598840E+09	1,598860E+09	3,439142E+09	3,439230E+09	3,197700E+09	6,878372E+09	1,007607E+10
2363	1,598962E+09	1,598968E+09	3,439197E+09	3,439148E+09	3,197930E+09	6,878345E+09	1,007628E+10
2364	1,598970E+09	1,598999E+09	3,439200E+09	3,439120E+09	3,197969E+09	6,878320E+09	1,007629E+10
2365	1,598967E+09	1,598949E+09	3,439103E+09	3,439130E+09	3,197916E+09	6,878232E+09	1,007615E+10
2366	1,599093E+09	1,599105E+09	3,439128E+09	3,439069E+09	3,198198E+09	6,878197E+09	1,007639E+10
2367	1,599046E+09	1,599076E+09	3,439042E+09	3,439105E+09	3,198122E+09	6,878147E+09	1,007627E+10
2368	1,599088E+09	1,599074E+09	3,439032E+09	3,439067E+09	3,198162E+09	6,878099E+09	1,007626E+10
2369	1,599155E+09	1,599175E+09	3,439101E+09	3,439000E+09	3,198329E+09	6,878101E+09	1,007643E+10
2370	1,599066E+09	1,599058E+09	3,439005E+09	3,439064E+09	3,198124E+09	6,878069E+09	1,007619E+10
2371	1,599124E+09	1,599096E+09	3,439066E+09	3,439053E+09	3,198219E+09	6,878119E+09	1,007634E+10
2372	1,599097E+09	1,599121E+09	3,439113E+09	3,439063E+09	3,198218E+09	6,878177E+09	1,007639E+10
2373	1,598999E+09	1,598995E+09	3,439052E+09	3,439131E+09	3,197995E+09	6,878183E+09	1,007618E+10
2374	1,599052E+09	1,599073E+09	3,439163E+09	3,439100E+09	3,198125E+09	6,878264E+09	1,007639E+10
2375	1,598974E+09	1,598993E+09	3,439169E+09	3,439147E+09	3,197968E+09	6,878316E+09	1,007628E+10
2376	1,598942E+09	1,598905E+09	3,439160E+09	3,439174E+09	3,197848E+09	6,878334E+09	1,007618E+10
2377	1,598999E+09	1,599000E+09	3,439222E+09	3,439142E+09	3,197999E+09	6,878364E+09	1,007636E+10
2378	1,598908E+09	1,598908E+09	3,439103E+09	3,439195E+09	3,197816E+09	6,878298E+09	1,007611E+10
2379	1,598957E+09	1,598952E+09	3,439113E+09	3,439164E+09	3,197909E+09	6,878277E+09	1,007619E+10
2380	1,599010E+09	1,599041E+09	3,439167E+09	3,439092E+09	3,198051E+09	6,878260E+09	1,007631E+10
2381	1,598956E+09	1,598954E+09	3,439067E+09	3,439098E+09	3,197911E+09	6,878165E+09	1,007608E+10
2382	1,599068E+09	1,599073E+09	3,439120E+09	3,439037E+09	3,198141E+09	6,878157E+09	1,007630E+10
2383	1,599079E+09	1,599102E+09	3,439081E+09	3,439030E+09	3,198181E+09	6,878111E+09	1,007629E+10
2384	1,599072E+09	1,599066E+09	3,438991E+09	3,439050E+09	3,198138E+09	6,878041E+09	1,007618E+10
2385	1,599184E+09	1,599218E+09	3,439037E+09	3,438981E+09	3,198402E+09	6,878018E+09	1,007642E+10
2386	1,599142E+09	1,599169E+09	3,438943E+09	3,438987E+09	3,198311E+09	6,877930E+09	1,007624E+10
2387	1,599187E+09	1,599167E+09	3,438940E+09	3,438977E+09	3,198354E+09	6,877918E+09	1,007627E+10
2388	1,599254E+09	1,599254E+09	3,439018E+09	3,438924E+09	3,198508E+09	6,877942E+09	1,007645E+10
2389	1,599163E+09	1,599142E+09	3,438920E+09	3,438972E+09	3,198304E+09	6,877892E+09	1,007620E+10
2390	1,599199E+09	1,599197E+09	3,438983E+09	3,438968E+09	3,198396E+09	6,877952E+09	1,007635E+10



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2391	1,599175E+09	1,599209E+09	3,439023E+09	3,438984E+09	3,198384E+09	6,878007E+09	1,007639E+10
2392	1,599083E+09	1,599075E+09	3,438996E+09	3,439046E+09	3,198158E+09	6,878042E+09	1,007620E+10
2393	1,599126E+09	1,599139E+09	3,439110E+09	3,439022E+09	3,198265E+09	6,878132E+09	1,007640E+10
2394	1,599055E+09	1,599057E+09	3,439070E+09	3,439060E+09	3,198112E+09	6,878130E+09	1,007624E+10
2395	1,599029E+09	1,598997E+09	3,439034E+09	3,439113E+09	3,198026E+09	6,878147E+09	1,007617E+10
2396	1,599090E+09	1,599099E+09	3,439108E+09	3,439070E+09	3,198189E+09	6,878178E+09	1,007637E+10
2397	1,599010E+09	1,599017E+09	3,439011E+09	3,439075E+09	3,198027E+09	6,878086E+09	1,007611E+10
2398	1,599053E+09	1,599063E+09	3,439047E+09	3,439034E+09	3,198116E+09	6,878080E+09	1,007620E+10
2399	1,599114E+09	1,599137E+09	3,439090E+09	3,438985E+09	3,198251E+09	6,878076E+09	1,007633E+10
2400	1,599063E+09	1,599053E+09	3,438994E+09	3,439010E+09	3,198116E+09	6,878004E+09	1,007612E+10
2401	1,599156E+09	1,599171E+09	3,439031E+09	3,438968E+09	3,198327E+09	6,877999E+09	1,007633E+10
2402	1,599172E+09	1,599206E+09	3,438952E+09	3,438943E+09	3,198377E+09	6,877896E+09	1,007627E+10
2403	1,599176E+09	1,599181E+09	3,438860E+09	3,438967E+09	3,198357E+09	6,877827E+09	1,007618E+10
2404	1,599297E+09	1,599310E+09	3,438942E+09	3,438878E+09	3,198607E+09	6,877820E+09	1,007643E+10
2405	1,599262E+09	1,599258E+09	3,438852E+09	3,438852E+09	3,198521E+09	6,877705E+09	1,007623E+10
2406	1,599288E+09	1,599265E+09	3,438854E+09	3,438861E+09	3,198553E+09	6,877715E+09	1,007627E+10
2407	1,599346E+09	1,599350E+09	3,438913E+09	3,438840E+09	3,198696E+09	6,877754E+09	1,007645E+10
2408	1,599244E+09	1,599245E+09	3,438844E+09	3,438899E+09	3,198490E+09	6,877743E+09	1,007623E+10
2409	1,599260E+09	1,599288E+09	3,438935E+09	3,438901E+09	3,198547E+09	6,877836E+09	1,007638E+10
2410	1,599244E+09	1,599278E+09	3,438957E+09	3,438901E+09	3,198522E+09	6,877859E+09	1,007638E+10
2411	1,599163E+09	1,599146E+09	3,438915E+09	3,438994E+09	3,198309E+09	6,877909E+09	1,007622E+10
2412	1,599216E+09	1,599199E+09	3,439025E+09	3,438971E+09	3,198415E+09	6,877996E+09	1,007641E+10
2413	1,599152E+09	1,599135E+09	3,438957E+09	3,438972E+09	3,198288E+09	6,877929E+09	1,007622E+10
2414	1,599117E+09	1,599106E+09	3,438925E+09	3,439010E+09	3,198223E+09	6,877935E+09	1,007616E+10
2415	1,599187E+09	1,599201E+09	3,439000E+09	3,438956E+09	3,198388E+09	6,877957E+09	1,007634E+10
2416	1,599110E+09	1,599116E+09	3,438951E+09	3,438949E+09	3,198225E+09	6,877900E+09	1,007613E+10
2417	1,599139E+09	1,599154E+09	3,438996E+09	3,438929E+09	3,198293E+09	6,877924E+09	1,007622E+10
2418	1,599202E+09	1,599223E+09	3,438989E+09	3,438890E+09	3,198425E+09	6,877879E+09	1,007630E+10
2419	1,599159E+09	1,599163E+09	3,438867E+09	3,438954E+09	3,198322E+09	6,877821E+09	1,007614E+10
2420	1,599261E+09	1,599275E+09	3,438914E+09	3,438901E+09	3,198537E+09	6,877816E+09	1,007635E+10
2421	1,599290E+09	1,599313E+09	3,438842E+09	3,438828E+09	3,198603E+09	6,877670E+09	1,007627E+10
2422	1,599290E+09	1,599292E+09	3,438771E+09	3,438839E+09	3,198582E+09	6,877611E+09	1,007619E+10
2423	1,599412E+09	1,599404E+09	3,438844E+09	3,438771E+09	3,198816E+09	6,877615E+09	1,007643E+10
2424	1,599368E+09	1,599357E+09	3,438779E+09	3,438755E+09	3,198725E+09	6,877534E+09	1,007626E+10
2425	1,599364E+09	1,599366E+09	3,438780E+09	3,438788E+09	3,198729E+09	6,877568E+09	1,007630E+10
2426	1,599414E+09	1,599446E+09	3,438812E+09	3,438764E+09	3,198860E+09	6,877576E+09	1,007644E+10
2427	1,599322E+09	1,599341E+09	3,438754E+09	3,438841E+09	3,198663E+09	6,877595E+09	1,007626E+10
2428	1,599346E+09	1,599349E+09	3,438874E+09	3,438833E+09	3,198694E+09	6,877707E+09	1,007640E+10
2429	1,599342E+09	1,599340E+09	3,438877E+09	3,438806E+09	3,198682E+09	6,877683E+09	1,007636E+10
2430	1,599254E+09	1,599227E+09	3,438815E+09	3,438897E+09	3,198480E+09	6,877712E+09	1,007619E+10
2431	1,599306E+09	1,599285E+09	3,438903E+09	3,438889E+09	3,198591E+09	6,877792E+09	1,007638E+10
2432	1,599241E+09	1,599241E+09	3,438872E+09	3,438869E+09	3,198482E+09	6,877741E+09	1,007622E+10
2433	1,599187E+09	1,599206E+09	3,438871E+09	3,438906E+09	3,198393E+09	6,877776E+09	1,007617E+10
2434	1,599262E+09	1,599286E+09	3,438933E+09	3,438849E+09	3,198548E+09	6,877782E+09	1,007633E+10
2435	1,599200E+09	1,599207E+09	3,438869E+09	3,438886E+09	3,198407E+09	6,877755E+09	1,007616E+10
2436	1,599235E+09	1,599231E+09	3,438912E+09	3,438877E+09	3,198466E+09	6,877789E+09	1,007625E+10
2437	1,599309E+09	1,599321E+09	3,438866E+09	3,438808E+09	3,198630E+09	6,877674E+09	1,007630E+10
2438	1,599267E+09	1,599284E+09	3,438740E+09	3,438851E+09	3,198551E+09	6,877591E+09	1,007614E+10
2439	1,599381E+09	1,599383E+09	3,438791E+09	3,438789E+09	3,198764E+09	6,877581E+09	1,007634E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2440	1,599413E+09	1,599418E+09	3,438761E+09	3,438692E+09	3,198831E+09	6,877453E+09	1,007628E+10
2441	1,599390E+09	1,599394E+09	3,438700E+09	3,438722E+09	3,198784E+09	6,877422E+09	1,007621E+10
2442	1,599501E+09	1,599500E+09	3,438737E+09	3,438668E+09	3,199001E+09	6,877405E+09	1,007641E+10
2443	1,599453E+09	1,599471E+09	3,438671E+09	3,438698E+09	3,198924E+09	6,877369E+09	1,007629E+10
2444	1,599445E+09	1,599460E+09	3,438707E+09	3,438732E+09	3,198905E+09	6,877439E+09	1,007634E+10
2445	1,599502E+09	1,599529E+09	3,438738E+09	3,438673E+09	3,199031E+09	6,877411E+09	1,007644E+10
2446	1,599411E+09	1,599421E+09	3,438692E+09	3,438749E+09	3,198832E+09	6,877441E+09	1,007627E+10
2447	1,599442E+09	1,599410E+09	3,438783E+09	3,438760E+09	3,198851E+09	6,877543E+09	1,007639E+10
2448	1,599434E+09	1,599410E+09	3,438794E+09	3,438723E+09	3,198843E+09	6,877517E+09	1,007636E+10
2449	1,599323E+09	1,599317E+09	3,438728E+09	3,438817E+09	3,198641E+09	6,877545E+09	1,007619E+10
2450	1,599373E+09	1,599377E+09	3,438789E+09	3,438791E+09	3,198750E+09	6,877580E+09	1,007633E+10
2451	1,599321E+09	1,599342E+09	3,438784E+09	3,438784E+09	3,198664E+09	6,877569E+09	1,007623E+10
2452	1,599276E+09	1,599281E+09	3,438816E+09	3,438818E+09	3,198557E+09	6,877634E+09	1,007619E+10
2453	1,599359E+09	1,599366E+09	3,438848E+09	3,438748E+09	3,198725E+09	6,877596E+09	1,007632E+10
2454	1,599298E+09	1,599309E+09	3,438767E+09	3,438796E+09	3,198607E+09	6,877563E+09	1,007617E+10
2455	1,599341E+09	1,599334E+09	3,438781E+09	3,438803E+09	3,198675E+09	6,877584E+09	1,007626E+10
2456	1,599420E+09	1,599436E+09	3,438768E+09	3,438702E+09	3,198856E+09	6,877470E+09	1,007633E+10
2457	1,599367E+09	1,599400E+09	3,438664E+09	3,438734E+09	3,198767E+09	6,877398E+09	1,007616E+10
2458	1,599482E+09	1,599481E+09	3,438694E+09	3,438669E+09	3,198964E+09	6,877363E+09	1,007633E+10
2459	1,599520E+09	1,599526E+09	3,438663E+09	3,438610E+09	3,199046E+09	6,877273E+09	1,007632E+10
2460	1,599490E+09	1,599482E+09	3,438618E+09	3,438654E+09	3,198972E+09	6,877272E+09	1,007624E+10
2461	1,599595E+09	1,599603E+09	3,438630E+09	3,438583E+09	3,199197E+09	6,877213E+09	1,007641E+10
2462	1,599545E+09	1,599581E+09	3,438575E+09	3,438604E+09	3,199126E+09	6,877179E+09	1,007630E+10
2463	1,599543E+09	1,599540E+09	3,438620E+09	3,438644E+09	3,199082E+09	6,877264E+09	1,007635E+10
2464	1,599603E+09	1,599601E+09	3,438680E+09	3,438569E+09	3,199203E+09	6,877248E+09	1,007645E+10
2465	1,599492E+09	1,599494E+09	3,438620E+09	3,438660E+09	3,198986E+09	6,877280E+09	1,007627E+10
2466	1,599514E+09	1,599483E+09	3,438665E+09	3,438678E+09	3,198997E+09	6,877343E+09	1,007634E+10
2467	1,599509E+09	1,599510E+09	3,438676E+09	3,438664E+09	3,199020E+09	6,877340E+09	1,007636E+10
2468	1,599399E+09	1,599404E+09	3,438657E+09	3,438744E+09	3,198803E+09	6,877401E+09	1,007620E+10
2469	1,599454E+09	1,599464E+09	3,438721E+09	3,438683E+09	3,198918E+09	6,877404E+09	1,007632E+10
2470	1,599410E+09	1,599432E+09	3,438729E+09	3,438683E+09	3,198842E+09	6,877411E+09	1,007625E+10
2471	1,599373E+09	1,599355E+09	3,438737E+09	3,438748E+09	3,198728E+09	6,877485E+09	1,007621E+10
2472	1,599458E+09	1,599452E+09	3,438765E+09	3,438669E+09	3,198910E+09	6,877434E+09	1,007634E+10
2473	1,599385E+09	1,599418E+09	3,438666E+09	3,438717E+09	3,198803E+09	6,877384E+09	1,007619E+10
2474	1,599435E+09	1,599439E+09	3,438648E+09	3,438700E+09	3,198874E+09	6,877349E+09	1,007622E+10
2475	1,599531E+09	1,599547E+09	3,438658E+09	3,438603E+09	3,199078E+09	6,877261E+09	1,007634E+10
2476	1,599484E+09	1,599491E+09	3,438589E+09	3,438624E+09	3,198974E+09	6,877213E+09	1,007619E+10
2477	1,599596E+09	1,599579E+09	3,438584E+09	3,438544E+09	3,199174E+09	6,877128E+09	1,007630E+10
2478	1,599625E+09	1,599643E+09	3,438557E+09	3,438504E+09	3,199267E+09	6,877061E+09	1,007633E+10
2479	1,599591E+09	1,599591E+09	3,438506E+09	3,438575E+09	3,199182E+09	6,877081E+09	1,007626E+10
2480	1,599689E+09	1,599705E+09	3,438559E+09	3,438485E+09	3,199394E+09	6,877044E+09	1,007644E+10
2481	1,599628E+09	1,599676E+09	3,438525E+09	3,438514E+09	3,199304E+09	6,877039E+09	1,007634E+10
2482	1,599625E+09	1,599610E+09	3,438531E+09	3,438560E+09	3,199235E+09	6,877091E+09	1,007633E+10
2483	1,599691E+09	1,599678E+09	3,438583E+09	3,438516E+09	3,199369E+09	6,877099E+09	1,007647E+10
2484	1,599576E+09	1,599564E+09	3,438533E+09	3,438602E+09	3,199139E+09	6,877135E+09	1,007627E+10
2485	1,599593E+09	1,599574E+09	3,438545E+09	3,438589E+09	3,199166E+09	6,877134E+09	1,007630E+10
2486	1,599591E+09	1,599615E+09	3,438589E+09	3,438557E+09	3,199205E+09	6,877146E+09	1,007635E+10
2487	1,599489E+09	1,599485E+09	3,438589E+09	3,438646E+09	3,198974E+09	6,877235E+09	1,007621E+10
2488	1,599545E+09	1,599540E+09	3,438679E+09	3,438573E+09	3,199085E+09	6,877252E+09	1,007634E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2489	1,599490E+09	1,599519E+09	3,438669E+09	3,438597E+09	3,199008E+09	6,877266E+09	1,007627E+10
2490	1,599451E+09	1,599441E+09	3,438619E+09	3,438675E+09	3,198892E+09	6,877294E+09	1,007619E+10
2491	1,599550E+09	1,599562E+09	3,438643E+09	3,438612E+09	3,199112E+09	6,877255E+09	1,007637E+10
2492	1,599486E+09	1,599514E+09	3,438577E+09	3,438632E+09	3,199000E+09	6,877210E+09	1,007621E+10
2493	1,599545E+09	1,599541E+09	3,438544E+09	3,438578E+09	3,199086E+09	6,877122E+09	1,007621E+10
2494	1,599649E+09	1,599656E+09	3,438564E+09	3,438476E+09	3,199304E+09	6,877041E+09	1,007635E+10
2495	1,599601E+09	1,599586E+09	3,438487E+09	3,438528E+09	3,199186E+09	6,877015E+09	1,007620E+10
2496	1,599701E+09	1,599685E+09	3,438497E+09	3,438441E+09	3,199386E+09	6,876938E+09	1,007632E+10
2497	1,599711E+09	1,599763E+09	3,438467E+09	3,438415E+09	3,199475E+09	6,876883E+09	1,007636E+10
2498	1,599676E+09	1,599692E+09	3,438400E+09	3,438484E+09	3,199367E+09	6,876885E+09	1,007625E+10
2499	1,599786E+09	1,599798E+09	3,438472E+09	3,438409E+09	3,199584E+09	6,876882E+09	1,007647E+10
2500	1,599726E+09	1,599742E+09	3,438458E+09	3,438438E+09	3,199468E+09	6,876896E+09	1,007636E+10
2501	1,599719E+09	1,599685E+09	3,438415E+09	3,438468E+09	3,199404E+09	6,876883E+09	1,007629E+10
2502	1,599779E+09	1,599773E+09	3,438472E+09	3,438426E+09	3,199552E+09	6,876897E+09	1,007645E+10
2503	1,599662E+09	1,599657E+09	3,438434E+09	3,438520E+09	3,199319E+09	6,876954E+09	1,007627E+10
2504	1,599674E+09	1,599665E+09	3,438494E+09	3,438477E+09	3,199339E+09	6,876971E+09	1,007631E+10
2505	1,599662E+09	1,599704E+09	3,438559E+09	3,438460E+09	3,199366E+09	6,877020E+09	1,007639E+10
2506	1,599562E+09	1,599554E+09	3,438522E+09	3,438569E+09	3,199115E+09	6,877091E+09	1,007621E+10
2507	1,599626E+09	1,599615E+09	3,438596E+09	3,438533E+09	3,199241E+09	6,877129E+09	1,007637E+10
2508	1,599575E+09	1,599594E+09	3,438581E+09	3,438553E+09	3,199169E+09	6,877135E+09	1,007630E+10
2509	1,599544E+09	1,599539E+09	3,438475E+09	3,438586E+09	3,199083E+09	6,877061E+09	1,007614E+10
2510	1,599658E+09	1,599670E+09	3,438528E+09	3,438493E+09	3,199328E+09	6,877020E+09	1,007635E+10
2511	1,599608E+09	1,599612E+09	3,438477E+09	3,438507E+09	3,199220E+09	6,876983E+09	1,007620E+10
2512	1,599665E+09	1,599640E+09	3,438461E+09	3,438434E+09	3,199305E+09	6,876895E+09	1,007620E+10
2513	1,599749E+09	1,599772E+09	3,438479E+09	3,438362E+09	3,199522E+09	6,876841E+09	1,007636E+10
2514	1,599690E+09	1,599700E+09	3,438365E+09	3,438435E+09	3,199390E+09	6,876801E+09	1,007619E+10
2515	1,599791E+09	1,599808E+09	3,438395E+09	3,438375E+09	3,199599E+09	6,876770E+09	1,007637E+10
2516	1,599804E+09	1,599859E+09	3,438407E+09	3,438342E+09	3,199664E+09	6,876749E+09	1,007641E+10
2517	1,599774E+09	1,599779E+09	3,438310E+09	3,438388E+09	3,199553E+09	6,876698E+09	1,007625E+10
2518	1,599891E+09	1,599882E+09	3,438388E+09	3,438318E+09	3,199773E+09	6,876706E+09	1,007648E+10
2519	1,599831E+09	1,599816E+09	3,438357E+09	3,438366E+09	3,199648E+09	6,876722E+09	1,007637E+10
2520	1,599812E+09	1,599774E+09	3,438320E+09	3,438372E+09	3,199585E+09	6,876693E+09	1,007628E+10
2521	1,599853E+09	1,599878E+09	3,438388E+09	3,438333E+09	3,199732E+09	6,876721E+09	1,007645E+10
2522	1,599731E+09	1,599743E+09	3,438352E+09	3,438423E+09	3,199474E+09	6,876775E+09	1,007625E+10
2523	1,599752E+09	1,599746E+09	3,438441E+09	3,438400E+09	3,199498E+09	6,876841E+09	1,007634E+10
2524	1,599741E+09	1,599763E+09	3,438512E+09	3,438395E+09	3,199504E+09	6,876907E+09	1,007641E+10
2525	1,599641E+09	1,599628E+09	3,438412E+09	3,438497E+09	3,199269E+09	6,876909E+09	1,007618E+10
2526	1,599715E+09	1,599709E+09	3,438476E+09	3,438456E+09	3,199424E+09	6,876932E+09	1,007636E+10
2527	1,599675E+09	1,599687E+09	3,438463E+09	3,438472E+09	3,199362E+09	6,876935E+09	1,007630E+10
2528	1,599651E+09	1,599641E+09	3,438391E+09	3,438458E+09	3,199292E+09	6,876850E+09	1,007614E+10
2529	1,599760E+09	1,599778E+09	3,438457E+09	3,438368E+09	3,199539E+09	6,876825E+09	1,007636E+10
2530	1,599707E+09	1,599709E+09	3,438380E+09	3,438396E+09	3,199417E+09	6,876776E+09	1,007619E+10
2531	1,599764E+09	1,599748E+09	3,438367E+09	3,438356E+09	3,199512E+09	6,876723E+09	1,007624E+10
2532	1,599841E+09	1,599875E+09	3,438392E+09	3,438296E+09	3,199716E+09	6,876688E+09	1,007640E+10
2533	1,599783E+09	1,599813E+09	3,438242E+09	3,438346E+09	3,199596E+09	6,876588E+09	1,007618E+10
2534	1,599897E+09	1,599912E+09	3,438302E+09	3,438273E+09	3,199809E+09	6,876575E+09	1,007638E+10
2535	1,599922E+09	1,599941E+09	3,438321E+09	3,438248E+09	3,199863E+09	6,876569E+09	1,007643E+10
2536	1,599890E+09	1,599862E+09	3,438222E+09	3,438273E+09	3,199752E+09	6,876495E+09	1,007625E+10
2537	1,599985E+09	1,599979E+09	3,438292E+09	3,438223E+09	3,199964E+09	6,876515E+09	1,007648E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2538	1,599912E+09	1,599914E+09	3,438235E+09	3,438278E+09	3,199826E+09	6,876513E+09	1,007634E+10
2539	1,599888E+09	1,599877E+09	3,438234E+09	3,438298E+09	3,199765E+09	6,876533E+09	1,007630E+10
2540	1,599925E+09	1,599959E+09	3,438351E+09	3,438260E+09	3,199884E+09	6,876611E+09	1,007649E+10
2541	1,599807E+09	1,599818E+09	3,438280E+09	3,438337E+09	3,199624E+09	6,876617E+09	1,007624E+10
2542	1,599833E+09	1,599815E+09	3,438372E+09	3,438330E+09	3,199649E+09	6,876702E+09	1,007635E+10
2543	1,599830E+09	1,599829E+09	3,438421E+09	3,438344E+09	3,199659E+09	6,876765E+09	1,007642E+10
2544	1,599732E+09	1,599714E+09	3,438303E+09	3,438410E+09	3,199446E+09	6,876713E+09	1,007616E+10
2545	1,599802E+09	1,599815E+09	3,438374E+09	3,438357E+09	3,199617E+09	6,876731E+09	1,007635E+10
2546	1,599769E+09	1,599784E+09	3,438355E+09	3,438352E+09	3,199553E+09	6,876707E+09	1,007626E+10
2547	1,599755E+09	1,599742E+09	3,438312E+09	3,438346E+09	3,199496E+09	6,876658E+09	1,007615E+10
2548	1,599859E+09	1,599868E+09	3,438389E+09	3,438271E+09	3,199727E+09	6,876660E+09	1,007639E+10
2549	1,599801E+09	1,599816E+09	3,438262E+09	3,438297E+09	3,199617E+09	6,876559E+09	1,007618E+10
2550	1,599860E+09	1,599866E+09	3,438260E+09	3,438270E+09	3,199726E+09	6,876530E+09	1,007626E+10
2551	1,599945E+09	1,599981E+09	3,438296E+09	3,438219E+09	3,199926E+09	6,876515E+09	1,007644E+10
2552	1,599897E+09	1,599914E+09	3,438168E+09	3,438235E+09	3,199811E+09	6,876403E+09	1,007621E+10
2553	1,600006E+09	1,600010E+09	3,438229E+09	3,438173E+09	3,200016E+09	6,876402E+09	1,007642E+10
2554	1,600026E+09	1,600024E+09	3,438212E+09	3,438162E+09	3,200050E+09	6,876373E+09	1,007642E+10
2555	1,599989E+09	1,599959E+09	3,438118E+09	3,438204E+09	3,199948E+09	6,876321E+09	1,007627E+10
2556	1,600067E+09	1,600070E+09	3,438195E+09	3,438154E+09	3,200137E+09	6,876349E+09	1,007649E+10
2557	1,599987E+09	1,600014E+09	3,438124E+09	3,438180E+09	3,200001E+09	6,876304E+09	1,007630E+10
2558	1,599971E+09	1,599966E+09	3,438168E+09	3,438195E+09	3,199937E+09	6,876363E+09	1,007630E+10
2559	1,600013E+09	1,600021E+09	3,438291E+09	3,438179E+09	3,200034E+09	6,876470E+09	1,007650E+10
2560	1,599896E+09	1,599886E+09	3,438213E+09	3,438246E+09	3,199782E+09	6,876459E+09	1,007624E+10
2561	1,599910E+09	1,599899E+09	3,438284E+09	3,438257E+09	3,199809E+09	6,876541E+09	1,007635E+10
2562	1,599905E+09	1,599916E+09	3,438301E+09	3,438270E+09	3,199820E+09	6,876571E+09	1,007639E+10
2563	1,599817E+09	1,599815E+09	3,438212E+09	3,438325E+09	3,199633E+09	6,876537E+09	1,007617E+10
2564	1,599889E+09	1,599900E+09	3,438314E+09	3,438266E+09	3,199789E+09	6,876580E+09	1,007637E+10
2565	1,599861E+09	1,599876E+09	3,438262E+09	3,438242E+09	3,199737E+09	6,876504E+09	1,007624E+10
2566	1,599856E+09	1,599836E+09	3,438228E+09	3,438252E+09	3,199691E+09	6,876480E+09	1,007617E+10
2567	1,599960E+09	1,599961E+09	3,438291E+09	3,438201E+09	3,199921E+09	6,876492E+09	1,007641E+10
2568	1,599906E+09	1,599929E+09	3,438155E+09	3,438199E+09	3,199835E+09	6,876354E+09	1,007619E+10
2569	1,599961E+09	1,599984E+09	3,438167E+09	3,438171E+09	3,199945E+09	6,876338E+09	1,007628E+10
2570	1,600053E+09	1,600080E+09	3,438193E+09	3,438113E+09	3,200132E+09	6,876306E+09	1,007644E+10
2571	1,600014E+09	1,600012E+09	3,438076E+09	3,438135E+09	3,200025E+09	6,876211E+09	1,007624E+10
2572	1,600111E+09	1,600097E+09	3,438137E+09	3,438090E+09	3,200208E+09	6,876227E+09	1,007643E+10
2573	1,600119E+09	1,600129E+09	3,438070E+09	3,438061E+09	3,200248E+09	6,876131E+09	1,007638E+10
2574	1,600078E+09	1,600070E+09	3,438007E+09	3,438108E+09	3,200148E+09	6,876115E+09	1,007626E+10
2575	1,600153E+09	1,600164E+09	3,438122E+09	3,438067E+09	3,200317E+09	6,876189E+09	1,007651E+10
2576	1,600076E+09	1,600100E+09	3,438077E+09	3,438069E+09	3,200177E+09	6,876146E+09	1,007632E+10
2577	1,600050E+09	1,600045E+09	3,438130E+09	3,438111E+09	3,200095E+09	6,876241E+09	1,007634E+10
2578	1,600088E+09	1,600085E+09	3,438209E+09	3,438119E+09	3,200172E+09	6,876328E+09	1,007650E+10
2579	1,599975E+09	1,599964E+09	3,438125E+09	3,438197E+09	3,199938E+09	6,876322E+09	1,007626E+10
2580	1,599982E+09	1,599977E+09	3,438190E+09	3,438204E+09	3,199959E+09	6,876394E+09	1,007635E+10
2581	1,599983E+09	1,600005E+09	3,438181E+09	3,438172E+09	3,199988E+09	6,876353E+09	1,007634E+10
2582	1,599914E+09	1,599905E+09	3,438131E+09	3,438211E+09	3,199819E+09	6,876342E+09	1,007616E+10
2583	1,599993E+09	1,599978E+09	3,438236E+09	3,438165E+09	3,199971E+09	6,876401E+09	1,007637E+10
2584	1,599968E+09	1,599972E+09	3,438174E+09	3,438127E+09	3,199940E+09	6,876301E+09	1,007624E+10
2585	1,599949E+09	1,599951E+09	3,438134E+09	3,438159E+09	3,199900E+09	6,876293E+09	1,007619E+10
2586	1,600048E+09	1,600072E+09	3,438174E+09	3,438118E+09	3,200120E+09	6,876292E+09	1,007641E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2587	1,600009E+09	1,600045E+09	3,438075E+09	3,438113E+09	3,200054E+09	6,876188E+09	1,007624E+10
2588	1,600064E+09	1,600077E+09	3,438095E+09	3,438086E+09	3,200141E+09	6,876181E+09	1,007632E+10
2589	1,600157E+09	1,600172E+09	3,438079E+09	3,438012E+09	3,200329E+09	6,876091E+09	1,007642E+10
2590	1,600126E+09	1,600109E+09	3,437968E+09	3,438042E+09	3,200236E+09	6,876009E+09	1,007624E+10
2591	1,600215E+09	1,600190E+09	3,438018E+09	3,438010E+09	3,200405E+09	6,876029E+09	1,007643E+10
2592	1,600219E+09	1,600240E+09	3,437962E+09	3,437948E+09	3,200459E+09	6,875910E+09	1,007637E+10
2593	1,600167E+09	1,600177E+09	3,437938E+09	3,437995E+09	3,200344E+09	6,875932E+09	1,007628E+10
2594	1,600235E+09	1,600243E+09	3,438056E+09	3,437967E+09	3,200478E+09	6,876023E+09	1,007650E+10
2595	1,600164E+09	1,600175E+09	3,438029E+09	3,437991E+09	3,200339E+09	6,876019E+09	1,007636E+10
2596	1,600122E+09	1,600108E+09	3,438063E+09	3,438063E+09	3,200230E+09	6,876126E+09	1,007636E+10
2597	1,600154E+09	1,600163E+09	3,438086E+09	3,438055E+09	3,200317E+09	6,876141E+09	1,007646E+10
2598	1,600055E+09	1,600054E+09	3,438018E+09	3,438123E+09	3,200109E+09	6,876141E+09	1,007625E+10
2599	1,600070E+09	1,600058E+09	3,438103E+09	3,438124E+09	3,200128E+09	6,876227E+09	1,007636E+10
2600	1,600085E+09	1,600093E+09	3,438108E+09	3,438050E+09	3,200178E+09	6,876159E+09	1,007634E+10
2601	1,600010E+09	1,599999E+09	3,438071E+09	3,438104E+09	3,200010E+09	6,876175E+09	1,007618E+10
2602	1,600082E+09	1,600068E+09	3,438144E+09	3,438080E+09	3,200149E+09	6,876223E+09	1,007637E+10
2603	1,600061E+09	1,600079E+09	3,438082E+09	3,438050E+09	3,200140E+09	6,876132E+09	1,007627E+10
2604	1,600033E+09	1,600056E+09	3,438042E+09	3,438091E+09	3,200089E+09	6,876133E+09	1,007622E+10
2605	1,600141E+09	1,600176E+09	3,438054E+09	3,438011E+09	3,200317E+09	6,876066E+09	1,007638E+10
2606	1,600123E+09	1,600142E+09	3,437979E+09	3,438002E+09	3,200265E+09	6,875981E+09	1,007625E+10
2607	1,600185E+09	1,600162E+09	3,437993E+09	3,437991E+09	3,200348E+09	6,875984E+09	1,007633E+10
2608	1,600279E+09	1,600274E+09	3,437960E+09	3,437890E+09	3,200553E+09	6,875850E+09	1,007640E+10
2609	1,600229E+09	1,600231E+09	3,437862E+09	3,437929E+09	3,200460E+09	6,875791E+09	1,007625E+10
2610	1,600303E+09	1,600301E+09	3,437912E+09	3,437908E+09	3,200604E+09	6,875819E+09	1,007642E+10
2611	1,600310E+09	1,600345E+09	3,437910E+09	3,437851E+09	3,200655E+09	6,875761E+09	1,007642E+10
2612	1,600244E+09	1,600257E+09	3,437903E+09	3,437927E+09	3,200501E+09	6,875830E+09	1,007633E+10
2613	1,600307E+09	1,600312E+09	3,437974E+09	3,437900E+09	3,200619E+09	6,875874E+09	1,007649E+10
2614	1,600247E+09	1,600246E+09	3,437943E+09	3,437944E+09	3,200493E+09	6,875886E+09	1,007638E+10
2615	1,600205E+09	1,600177E+09	3,437953E+09	3,438021E+09	3,200382E+09	6,875974E+09	1,007636E+10
2616	1,600245E+09	1,600251E+09	3,437973E+09	3,437960E+09	3,200495E+09	6,875933E+09	1,007643E+10
2617	1,600145E+09	1,600151E+09	3,437941E+09	3,438004E+09	3,200296E+09	6,875945E+09	1,007624E+10
2618	1,600161E+09	1,600138E+09	3,438019E+09	3,438007E+09	3,200298E+09	6,876027E+09	1,007632E+10
2619	1,600182E+09	1,600184E+09	3,438047E+09	3,437947E+09	3,200366E+09	6,875994E+09	1,007636E+10
2620	1,600090E+09	1,600091E+09	3,437994E+09	3,438030E+09	3,200181E+09	6,876024E+09	1,007620E+10
2621	1,600151E+09	1,600169E+09	3,438023E+09	3,437995E+09	3,200320E+09	6,876019E+09	1,007634E+10
2622	1,600151E+09	1,600188E+09	3,437986E+09	3,437970E+09	3,200339E+09	6,875956E+09	1,007630E+10
2623	1,600136E+09	1,600146E+09	3,437955E+09	3,438009E+09	3,200282E+09	6,875964E+09	1,007625E+10
2624	1,600262E+09	1,600270E+09	3,437963E+09	3,437894E+09	3,200532E+09	6,875857E+09	1,007639E+10
2625	1,600244E+09	1,600245E+09	3,437888E+09	3,437888E+09	3,200489E+09	6,875776E+09	1,007627E+10
2626	1,600295E+09	1,600262E+09	3,437867E+09	3,437894E+09	3,200557E+09	6,875761E+09	1,007632E+10
2627	1,600385E+09	1,600392E+09	3,437854E+09	3,437792E+09	3,200778E+09	6,875646E+09	1,007642E+10
2628	1,600315E+09	1,600344E+09	3,437775E+09	3,437842E+09	3,200659E+09	6,875617E+09	1,007628E+10
2629	1,600381E+09	1,600400E+09	3,437822E+09	3,437798E+09	3,200781E+09	6,875621E+09	1,007640E+10
2630	1,600405E+09	1,600430E+09	3,437847E+09	3,437765E+09	3,200835E+09	6,875612E+09	1,007645E+10
2631	1,600337E+09	1,600323E+09	3,437827E+09	3,437871E+09	3,200661E+09	6,875698E+09	1,007636E+10
2632	1,600401E+09	1,600391E+09	3,437868E+09	3,437821E+09	3,200793E+09	6,875689E+09	1,007648E+10
2633	1,600332E+09	1,600341E+09	3,437843E+09	3,437860E+09	3,200674E+09	6,875704E+09	1,007638E+10
2634	1,600286E+09	1,600267E+09	3,437847E+09	3,437933E+09	3,200553E+09	6,875780E+09	1,007633E+10
2635	1,600335E+09	1,600339E+09	3,437914E+09	3,437852E+09	3,200674E+09	6,875766E+09	1,007644E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2636	1,600222E+09	1,600231E+09	3,437897E+09	3,437916E+09	3,200453E+09	6,875813E+09	1,007627E+10
2637	1,600231E+09	1,600217E+09	3,437935E+09	3,437913E+09	3,200448E+09	6,875849E+09	1,007630E+10
2638	1,600264E+09	1,600270E+09	3,437960E+09	3,437882E+09	3,200534E+09	6,875842E+09	1,007638E+10
2639	1,600174E+09	1,600179E+09	3,437894E+09	3,437979E+09	3,200353E+09	6,875872E+09	1,007622E+10
2640	1,600250E+09	1,600268E+09	3,437912E+09	3,437895E+09	3,200518E+09	6,875807E+09	1,007633E+10
2641	1,600260E+09	1,600291E+09	3,437904E+09	3,437851E+09	3,200550E+09	6,875755E+09	1,007631E+10
2642	1,600252E+09	1,600237E+09	3,437848E+09	3,437895E+09	3,200490E+09	6,875743E+09	1,007623E+10
2643	1,600385E+09	1,600370E+09	3,437868E+09	3,437782E+09	3,200755E+09	6,875650E+09	1,007640E+10
2644	1,600344E+09	1,600359E+09	3,437783E+09	3,437797E+09	3,200703E+09	6,875580E+09	1,007628E+10
2645	1,600380E+09	1,600382E+09	3,437734E+09	3,437787E+09	3,200763E+09	6,875521E+09	1,007628E+10
2646	1,600480E+09	1,600511E+09	3,437764E+09	3,437701E+09	3,200991E+09	6,875465E+09	1,007646E+10
2647	1,600412E+09	1,600436E+09	3,437713E+09	3,437765E+09	3,200848E+09	6,875479E+09	1,007633E+10
2648	1,600482E+09	1,600484E+09	3,437755E+09	3,437705E+09	3,200966E+09	6,875460E+09	1,007643E+10
2649	1,600503E+09	1,600514E+09	3,437782E+09	3,437687E+09	3,201017E+09	6,875468E+09	1,007649E+10
2650	1,600427E+09	1,600398E+09	3,437714E+09	3,437809E+09	3,200825E+09	6,875523E+09	1,007635E+10
2651	1,600491E+09	1,600479E+09	3,437770E+09	3,437745E+09	3,200970E+09	6,875514E+09	1,007648E+10
2652	1,600407E+09	1,600432E+09	3,437756E+09	3,437774E+09	3,200839E+09	6,875530E+09	1,007637E+10
2653	1,600355E+09	1,600345E+09	3,437755E+09	3,437814E+09	3,200701E+09	6,875568E+09	1,007627E+10
2654	1,600421E+09	1,600416E+09	3,437848E+09	3,437758E+09	3,200837E+09	6,875606E+09	1,007644E+10
2655	1,600307E+09	1,600302E+09	3,437823E+09	3,437848E+09	3,200608E+09	6,875671E+09	1,007628E+10
2656	1,600315E+09	1,600306E+09	3,437836E+09	3,437827E+09	3,200621E+09	6,875663E+09	1,007628E+10
2657	1,600348E+09	1,600376E+09	3,437871E+09	3,437793E+09	3,200724E+09	6,875664E+09	1,007639E+10
2658	1,600265E+09	1,600276E+09	3,437792E+09	3,437892E+09	3,200540E+09	6,875684E+09	1,007622E+10
2659	1,600359E+09	1,600363E+09	3,437844E+09	3,437792E+09	3,200721E+09	6,875635E+09	1,007636E+10
2660	1,600362E+09	1,600386E+09	3,437828E+09	3,437762E+09	3,200748E+09	6,875590E+09	1,007634E+10
2661	1,600350E+09	1,600336E+09	3,437726E+09	3,437792E+09	3,200685E+09	6,875518E+09	1,007620E+10
2662	1,600492E+09	1,600482E+09	3,437748E+09	3,437699E+09	3,200973E+09	6,875447E+09	1,007642E+10
2663	1,600445E+09	1,600472E+09	3,437669E+09	3,437718E+09	3,200917E+09	6,875387E+09	1,007630E+10
2664	1,600485E+09	1,600499E+09	3,437633E+09	3,437664E+09	3,200984E+09	6,875297E+09	1,007628E+10
2665	1,600586E+09	1,600615E+09	3,437704E+09	3,437579E+09	3,201200E+09	6,875283E+09	1,007648E+10
2666	1,600518E+09	1,600521E+09	3,437633E+09	3,437674E+09	3,201039E+09	6,875307E+09	1,007635E+10
2667	1,600588E+09	1,600565E+09	3,437677E+09	3,437620E+09	3,201153E+09	6,875296E+09	1,007645E+10
2668	1,600582E+09	1,600604E+09	3,437686E+09	3,437626E+09	3,201185E+09	6,875312E+09	1,007650E+10
2669	1,600494E+09	1,600491E+09	3,437589E+09	3,437720E+09	3,200985E+09	6,875309E+09	1,007629E+10
2670	1,600572E+09	1,600566E+09	3,437679E+09	3,437664E+09	3,201138E+09	6,875343E+09	1,007648E+10
2671	1,600489E+09	1,600504E+09	3,437696E+09	3,437697E+09	3,200994E+09	6,875392E+09	1,007639E+10
2672	1,600444E+09	1,600421E+09	3,437685E+09	3,437713E+09	3,200864E+09	6,875397E+09	1,007626E+10
2673	1,600504E+09	1,600497E+09	3,437787E+09	3,437673E+09	3,201002E+09	6,875460E+09	1,007646E+10
2674	1,600388E+09	1,600385E+09	3,437724E+09	3,437787E+09	3,200773E+09	6,875511E+09	1,007628E+10
2675	1,600401E+09	1,600399E+09	3,437750E+09	3,437750E+09	3,200800E+09	6,875500E+09	1,007630E+10
2676	1,600427E+09	1,600472E+09	3,437793E+09	3,437713E+09	3,200899E+09	6,875506E+09	1,007641E+10
2677	1,600352E+09	1,600363E+09	3,437688E+09	3,437777E+09	3,200716E+09	6,875465E+09	1,007618E+10
2678	1,600471E+09	1,600452E+09	3,437744E+09	3,437700E+09	3,200923E+09	6,875444E+09	1,007637E+10
2679	1,600474E+09	1,600481E+09	3,437716E+09	3,437680E+09	3,200954E+09	6,875397E+09	1,007635E+10
2680	1,600459E+09	1,600452E+09	3,437597E+09	3,437677E+09	3,200911E+09	6,875274E+09	1,007619E+10
2681	1,600596E+09	1,600609E+09	3,437653E+09	3,437580E+09	3,201205E+09	6,875233E+09	1,007644E+10
2682	1,600549E+09	1,600583E+09	3,437579E+09	3,437611E+09	3,201132E+09	6,875190E+09	1,007632E+10
2683	1,600594E+09	1,600596E+09	3,437584E+09	3,437559E+09	3,201190E+09	6,875143E+09	1,007633E+10
2684	1,600677E+09	1,600706E+09	3,437642E+09	3,437506E+09	3,201383E+09	6,875148E+09	1,007653E+10



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2685	1,600600E+09	1,600601E+09	3,437522E+09	3,437598E+09	3,201201E+09	6,875120E+09	1,007632E+10
2686	1,600679E+09	1,600652E+09	3,437559E+09	3,437570E+09	3,201331E+09	6,875129E+09	1,007646E+10
2687	1,600669E+09	1,600689E+09	3,437570E+09	3,437565E+09	3,201358E+09	6,875135E+09	1,007649E+10
2688	1,600585E+09	1,600581E+09	3,437487E+09	3,437603E+09	3,201166E+09	6,875089E+09	1,007626E+10
2689	1,600663E+09	1,600651E+09	3,437620E+09	3,437539E+09	3,201314E+09	6,875159E+09	1,007647E+10
2690	1,600579E+09	1,600580E+09	3,437621E+09	3,437602E+09	3,201158E+09	6,875223E+09	1,007638E+10
2691	1,600529E+09	1,600502E+09	3,437624E+09	3,437627E+09	3,201031E+09	6,875251E+09	1,007628E+10
2692	1,600566E+09	1,600593E+09	3,437711E+09	3,437614E+09	3,201159E+09	6,875324E+09	1,007648E+10
2693	1,600449E+09	1,600478E+09	3,437621E+09	3,437707E+09	3,200927E+09	6,875328E+09	1,007626E+10
2694	1,600487E+09	1,600486E+09	3,437668E+09	3,437682E+09	3,200973E+09	6,875350E+09	1,007632E+10
2695	1,600525E+09	1,600548E+09	3,437719E+09	3,437643E+09	3,201073E+09	6,875362E+09	1,007643E+10
2696	1,600464E+09	1,600453E+09	3,437587E+09	3,437668E+09	3,200917E+09	6,875255E+09	1,007617E+10
2697	1,600583E+09	1,600552E+09	3,437643E+09	3,437592E+09	3,201135E+09	6,875236E+09	1,007637E+10
2698	1,600583E+09	1,600593E+09	3,437589E+09	3,437586E+09	3,201176E+09	6,875175E+09	1,007635E+10
2699	1,600569E+09	1,600571E+09	3,437501E+09	3,437558E+09	3,201141E+09	6,875059E+09	1,007620E+10
2700	1,600685E+09	1,600723E+09	3,437580E+09	3,437472E+09	3,201408E+09	6,875053E+09	1,007646E+10
2701	1,600641E+09	1,600678E+09	3,437494E+09	3,437496E+09	3,201319E+09	6,874989E+09	1,007631E+10
2702	1,600700E+09	1,600682E+09	3,437493E+09	3,437490E+09	3,201382E+09	6,874982E+09	1,007636E+10
2703	1,600775E+09	1,600789E+09	3,437537E+09	3,437455E+09	3,201565E+09	6,874992E+09	1,007656E+10
2704	1,600699E+09	1,600702E+09	3,437388E+09	3,437506E+09	3,201400E+09	6,874895E+09	1,007630E+10
2705	1,600773E+09	1,600755E+09	3,437460E+09	3,437465E+09	3,201528E+09	6,874925E+09	1,007645E+10
2706	1,600762E+09	1,600780E+09	3,437484E+09	3,437464E+09	3,201542E+09	6,874949E+09	1,007649E+10
2707	1,600680E+09	1,600661E+09	3,437446E+09	3,437493E+09	3,201342E+09	6,874939E+09	1,007628E+10
2708	1,600731E+09	1,600731E+09	3,437578E+09	3,437465E+09	3,201463E+09	6,875043E+09	1,007651E+10
2709	1,600640E+09	1,600654E+09	3,437538E+09	3,437531E+09	3,201294E+09	6,875070E+09	1,007636E+10
2710	1,600600E+09	1,600585E+09	3,437532E+09	3,437591E+09	3,201185E+09	6,875123E+09	1,007631E+10
2711	1,600639E+09	1,600672E+09	3,437619E+09	3,437567E+09	3,201311E+09	6,875186E+09	1,007650E+10
2712	1,600541E+09	1,600560E+09	3,437524E+09	3,437601E+09	3,201101E+09	6,875125E+09	1,007623E+10
2713	1,600595E+09	1,600568E+09	3,437590E+09	3,437565E+09	3,201163E+09	6,875155E+09	1,007632E+10
2714	1,600640E+09	1,600632E+09	3,437605E+09	3,437540E+09	3,201272E+09	6,875145E+09	1,007642E+10
2715	1,600577E+09	1,600556E+09	3,437488E+09	3,437552E+09	3,201133E+09	6,875039E+09	1,007617E+10
2716	1,600669E+09	1,600678E+09	3,437540E+09	3,437491E+09	3,201348E+09	6,875031E+09	1,007638E+10
2717	1,600665E+09	1,600711E+09	3,437480E+09	3,437468E+09	3,201376E+09	6,874948E+09	1,007632E+10
2718	1,600668E+09	1,600679E+09	3,437426E+09	3,437475E+09	3,201348E+09	6,874901E+09	1,007625E+10
2719	1,600784E+09	1,600812E+09	3,437510E+09	3,437405E+09	3,201597E+09	6,874916E+09	1,007651E+10
2720	1,600751E+09	1,600769E+09	3,437394E+09	3,437406E+09	3,201520E+09	6,874801E+09	1,007632E+10
2721	1,600809E+09	1,600777E+09	3,437389E+09	3,437406E+09	3,201586E+09	6,874795E+09	1,007638E+10
2722	1,600881E+09	1,600888E+09	3,437404E+09	3,437378E+09	3,201768E+09	6,874782E+09	1,007655E+10
2723	1,600803E+09	1,600805E+09	3,437296E+09	3,437389E+09	3,201608E+09	6,874686E+09	1,007629E+10
2724	1,600854E+09	1,600853E+09	3,437395E+09	3,437351E+09	3,201708E+09	6,874746E+09	1,007645E+10
2725	1,600838E+09	1,600859E+09	3,437413E+09	3,437348E+09	3,201697E+09	6,874762E+09	1,007646E+10
2726	1,600763E+09	1,600738E+09	3,437380E+09	3,437431E+09	3,201501E+09	6,874810E+09	1,007631E+10
2727	1,600798E+09	1,600804E+09	3,437503E+09	3,437428E+09	3,201602E+09	6,874931E+09	1,007653E+10
2728	1,600713E+09	1,600742E+09	3,437439E+09	3,437460E+09	3,201455E+09	6,874899E+09	1,007635E+10
2729	1,600682E+09	1,600669E+09	3,437451E+09	3,437506E+09	3,201351E+09	6,874957E+09	1,007631E+10
2730	1,600734E+09	1,600747E+09	3,437533E+09	3,437485E+09	3,201481E+09	6,875018E+09	1,007650E+10
2731	1,600651E+09	1,600640E+09	3,437455E+09	3,437488E+09	3,201291E+09	6,874942E+09	1,007623E+10
2732	1,600685E+09	1,600661E+09	3,437504E+09	3,437472E+09	3,201346E+09	6,874976E+09	1,007632E+10
2733	1,600726E+09	1,600731E+09	3,437487E+09	3,437438E+09	3,201457E+09	6,874925E+09	1,007638E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2734	1,600672E+09	1,600671E+09	3,437372E+09	3,437476E+09	3,201343E+09	6,874848E+09	1,007619E+10
2735	1,600757E+09	1,600785E+09	3,437449E+09	3,437409E+09	3,201542E+09	6,874858E+09	1,007640E+10
2736	1,600768E+09	1,600816E+09	3,437391E+09	3,437344E+09	3,201584E+09	6,874735E+09	1,007632E+10
2737	1,600782E+09	1,600774E+09	3,437351E+09	3,437363E+09	3,201556E+09	6,874715E+09	1,007627E+10
2738	1,600901E+09	1,600903E+09	3,437401E+09	3,437323E+09	3,201804E+09	6,874724E+09	1,007653E+10
2739	1,600868E+09	1,600873E+09	3,437289E+09	3,437306E+09	3,201741E+09	6,874596E+09	1,007634E+10
2740	1,600899E+09	1,600895E+09	3,437281E+09	3,437315E+09	3,201793E+09	6,874596E+09	1,007639E+10
2741	1,600964E+09	1,600989E+09	3,437299E+09	3,437264E+09	3,201953E+09	6,874563E+09	1,007652E+10
2742	1,600895E+09	1,600898E+09	3,437230E+09	3,437304E+09	3,201794E+09	6,874534E+09	1,007633E+10
2743	1,600934E+09	1,600928E+09	3,437343E+09	3,437285E+09	3,201862E+09	6,874628E+09	1,007649E+10
2744	1,600921E+09	1,600933E+09	3,437337E+09	3,437269E+09	3,201854E+09	6,874606E+09	1,007646E+10
2745	1,600844E+09	1,600817E+09	3,437303E+09	3,437369E+09	3,201662E+09	6,874672E+09	1,007633E+10
2746	1,600879E+09	1,600884E+09	3,437390E+09	3,437374E+09	3,201763E+09	6,874764E+09	1,007653E+10
2747	1,600805E+09	1,600823E+09	3,437360E+09	3,437360E+09	3,201628E+09	6,874720E+09	1,007635E+10
2748	1,600763E+09	1,600755E+09	3,437380E+09	3,437402E+09	3,201518E+09	6,874781E+09	1,007630E+10
2749	1,600821E+09	1,600819E+09	3,437435E+09	3,437369E+09	3,201640E+09	6,874804E+09	1,007644E+10
2750	1,600749E+09	1,600732E+09	3,437356E+09	3,437407E+09	3,201481E+09	6,874763E+09	1,007624E+10
2751	1,600769E+09	1,600762E+09	3,437399E+09	3,437398E+09	3,201531E+09	6,874798E+09	1,007633E+10
2752	1,600815E+09	1,600847E+09	3,437374E+09	3,437328E+09	3,201663E+09	6,874701E+09	1,007636E+10
2753	1,600770E+09	1,600784E+09	3,437299E+09	3,437365E+09	3,201554E+09	6,874664E+09	1,007622E+10
2754	1,600862E+09	1,600881E+09	3,437372E+09	3,437317E+09	3,201743E+09	6,874689E+09	1,007643E+10
2755	1,600887E+09	1,600908E+09	3,437330E+09	3,437239E+09	3,201796E+09	6,874569E+09	1,007636E+10
2756	1,600884E+09	1,600876E+09	3,437263E+09	3,437284E+09	3,201759E+09	6,874546E+09	1,007631E+10
2757	1,600999E+09	1,601000E+09	3,437271E+09	3,437236E+09	3,201999E+09	6,874507E+09	1,007651E+10
2758	1,600974E+09	1,600986E+09	3,437163E+09	3,437233E+09	3,201960E+09	6,874396E+09	1,007636E+10
2759	1,600991E+09	1,600993E+09	3,437185E+09	3,437228E+09	3,201984E+09	6,874412E+09	1,007640E+10
2760	1,601063E+09	1,601081E+09	3,437214E+09	3,437138E+09	3,202144E+09	6,874352E+09	1,007650E+10
2761	1,600994E+09	1,600981E+09	3,437164E+09	3,437198E+09	3,201975E+09	6,874362E+09	1,007634E+10
2762	1,601022E+09	1,601005E+09	3,437255E+09	3,437218E+09	3,202028E+09	6,874473E+09	1,007650E+10
2763	1,601009E+09	1,601021E+09	3,437257E+09	3,437186E+09	3,202030E+09	6,874443E+09	1,007647E+10
2764	1,600908E+09	1,600914E+09	3,437220E+09	3,437297E+09	3,201822E+09	6,874517E+09	1,007634E+10
2765	1,600947E+09	1,600960E+09	3,437304E+09	3,437283E+09	3,201907E+09	6,874587E+09	1,007649E+10
2766	1,600893E+09	1,600900E+09	3,437287E+09	3,437288E+09	3,201793E+09	6,874576E+09	1,007637E+10
2767	1,600845E+09	1,600825E+09	3,437306E+09	3,437336E+09	3,201670E+09	6,874642E+09	1,007631E+10
2768	1,600911E+09	1,600901E+09	3,437332E+09	3,437273E+09	3,201812E+09	6,874605E+09	1,007642E+10
2769	1,600842E+09	1,600832E+09	3,437257E+09	3,437316E+09	3,201674E+09	6,874572E+09	1,007625E+10
2770	1,600861E+09	1,600867E+09	3,437289E+09	3,437312E+09	3,201729E+09	6,874601E+09	1,007633E+10
2771	1,600921E+09	1,600951E+09	3,437302E+09	3,437203E+09	3,201872E+09	6,874505E+09	1,007638E+10
2772	1,600866E+09	1,600887E+09	3,437236E+09	3,437254E+09	3,201753E+09	6,874490E+09	1,007624E+10
2773	1,600964E+09	1,600966E+09	3,437273E+09	3,437214E+09	3,201930E+09	6,874487E+09	1,007642E+10
2774	1,601000E+09	1,601010E+09	3,437217E+09	3,437175E+09	3,202010E+09	6,874392E+09	1,007640E+10
2775	1,600982E+09	1,600985E+09	3,437139E+09	3,437219E+09	3,201967E+09	6,874358E+09	1,007633E+10
2776	1,601102E+09	1,601112E+09	3,437138E+09	3,437124E+09	3,202214E+09	6,874263E+09	1,007648E+10
2777	1,601081E+09	1,601097E+09	3,437077E+09	3,437114E+09	3,202178E+09	6,874191E+09	1,007637E+10
2778	1,601096E+09	1,601087E+09	3,437102E+09	3,437125E+09	3,202183E+09	6,874227E+09	1,007641E+10
2779	1,601167E+09	1,601165E+09	3,437157E+09	3,437031E+09	3,202332E+09	6,874189E+09	1,007652E+10
2780	1,601072E+09	1,601073E+09	3,437101E+09	3,437126E+09	3,202145E+09	6,874227E+09	1,007637E+10
2781	1,601090E+09	1,601084E+09	3,437153E+09	3,437152E+09	3,202174E+09	6,874305E+09	1,007648E+10
2782	1,601085E+09	1,601110E+09	3,437164E+09	3,437138E+09	3,202195E+09	6,874301E+09	1,007650E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2783	1,600979E+09	1,600988E+09	3,437143E+09	3,437228E+09	3,201968E+09	6,874371E+09	1,007634E+10
2784	1,601033E+09	1,601025E+09	3,437217E+09	3,437173E+09	3,202059E+09	6,874390E+09	1,007645E+10
2785	1,600989E+09	1,600975E+09	3,437206E+09	3,437188E+09	3,201964E+09	6,874394E+09	1,007636E+10
2786	1,600938E+09	1,600910E+09	3,437199E+09	3,437256E+09	3,201848E+09	6,874455E+09	1,007630E+10
2787	1,601006E+09	1,601004E+09	3,437242E+09	3,437167E+09	3,202010E+09	6,874410E+09	1,007642E+10
2788	1,600920E+09	1,600950E+09	3,437181E+09	3,437217E+09	3,201870E+09	6,874398E+09	1,007627E+10
2789	1,600943E+09	1,600961E+09	3,437212E+09	3,437209E+09	3,201904E+09	6,874422E+09	1,007633E+10
2790	1,601022E+09	1,601047E+09	3,437234E+09	3,437132E+09	3,202068E+09	6,874366E+09	1,007643E+10
2791	1,600963E+09	1,600973E+09	3,437154E+09	3,437196E+09	3,201936E+09	6,874350E+09	1,007629E+10
2792	1,601073E+09	1,601058E+09	3,437150E+09	3,437129E+09	3,202131E+09	6,874278E+09	1,007641E+10
2793	1,601115E+09	1,601121E+09	3,437082E+09	3,437084E+09	3,202236E+09	6,874166E+09	1,007640E+10
2794	1,601095E+09	1,601098E+09	3,437004E+09	3,437120E+09	3,202193E+09	6,874123E+09	1,007632E+10
2795	1,601219E+09	1,601220E+09	3,437053E+09	3,436977E+09	3,202440E+09	6,874030E+09	1,007647E+10
2796	1,601178E+09	1,601202E+09	3,437014E+09	3,436984E+09	3,202379E+09	6,873998E+09	1,007638E+10
2797	1,601183E+09	1,601170E+09	3,437023E+09	3,437022E+09	3,202353E+09	6,874045E+09	1,007640E+10
2798	1,601252E+09	1,601258E+09	3,437073E+09	3,436977E+09	3,202510E+09	6,874051E+09	1,007656E+10
2799	1,601138E+09	1,601162E+09	3,437016E+09	3,437085E+09	3,202300E+09	6,874101E+09	1,007640E+10
2800	1,601162E+09	1,601164E+09	3,437058E+09	3,437072E+09	3,202326E+09	6,874130E+09	1,007646E+10
2801	1,601170E+09	1,601184E+09	3,437092E+09	3,437055E+09	3,202354E+09	6,874147E+09	1,007650E+10
2802	1,601071E+09	1,601055E+09	3,437062E+09	3,437151E+09	3,202126E+09	6,874213E+09	1,007634E+10
2803	1,601134E+09	1,601096E+09	3,437143E+09	3,437072E+09	3,202229E+09	6,874215E+09	1,007644E+10
2804	1,601069E+09	1,601070E+09	3,437125E+09	3,437101E+09	3,202139E+09	6,874226E+09	1,007637E+10
2805	1,601013E+09	1,601004E+09	3,437091E+09	3,437168E+09	3,202018E+09	6,874259E+09	1,007628E+10
2806	1,601089E+09	1,601110E+09	3,437156E+09	3,437094E+09	3,202199E+09	6,874249E+09	1,007645E+10
2807	1,601001E+09	1,601043E+09	3,437117E+09	3,437136E+09	3,202044E+09	6,874253E+09	1,007630E+10
2808	1,601040E+09	1,601040E+09	3,437122E+09	3,437102E+09	3,202080E+09	6,874223E+09	1,007630E+10
2809	1,601133E+09	1,601137E+09	3,437133E+09	3,437045E+09	3,202270E+09	6,874177E+09	1,007645E+10
2810	1,601078E+09	1,601078E+09	3,437016E+09	3,437114E+09	3,202155E+09	6,874130E+09	1,007629E+10
2811	1,601191E+09	1,601174E+09	3,437024E+09	3,437008E+09	3,202365E+09	6,874032E+09	1,007640E+10
2812	1,601217E+09	1,601251E+09	3,436987E+09	3,436957E+09	3,202468E+09	6,873944E+09	1,007641E+10
2813	1,601194E+09	1,601201E+09	3,436917E+09	3,436990E+09	3,202396E+09	6,873908E+09	1,007630E+10
2814	1,601320E+09	1,601320E+09	3,436993E+09	3,436888E+09	3,202639E+09	6,873881E+09	1,007652E+10
2815	1,601261E+09	1,601288E+09	3,436955E+09	3,436924E+09	3,202549E+09	6,873879E+09	1,007643E+10
2816	1,601263E+09	1,601250E+09	3,436928E+09	3,436954E+09	3,202513E+09	6,873882E+09	1,007639E+10
2817	1,601335E+09	1,601349E+09	3,436971E+09	3,436923E+09	3,202684E+09	6,873894E+09	1,007658E+10
2818	1,601227E+09	1,601244E+09	3,436911E+09	3,437020E+09	3,202471E+09	6,873931E+09	1,007640E+10
2819	1,601262E+09	1,601235E+09	3,436983E+09	3,436959E+09	3,202497E+09	6,873942E+09	1,007644E+10
2820	1,601258E+09	1,601263E+09	3,437024E+09	3,436945E+09	3,202521E+09	6,873969E+09	1,007649E+10
2821	1,601154E+09	1,601128E+09	3,436967E+09	3,437054E+09	3,202282E+09	6,874021E+09	1,007630E+10
2822	1,601215E+09	1,601192E+09	3,437051E+09	3,437005E+09	3,202407E+09	6,874056E+09	1,007646E+10
2823	1,601134E+09	1,601170E+09	3,437045E+09	3,437037E+09	3,202304E+09	6,874081E+09	1,007639E+10
2824	1,601087E+09	1,601096E+09	3,437011E+09	3,437072E+09	3,202183E+09	6,874083E+09	1,007627E+10
2825	1,601178E+09	1,601198E+09	3,437086E+09	3,437006E+09	3,202376E+09	6,874092E+09	1,007647E+10
2826	1,601103E+09	1,601122E+09	3,437033E+09	3,437063E+09	3,202225E+09	6,874096E+09	1,007632E+10
2827	1,601156E+09	1,601123E+09	3,437029E+09	3,437003E+09	3,202279E+09	6,874033E+09	1,007631E+10
2828	1,601237E+09	1,601244E+09	3,437021E+09	3,436949E+09	3,202481E+09	6,873970E+09	1,007645E+10
2829	1,601181E+09	1,601189E+09	3,436880E+09	3,437006E+09	3,202370E+09	6,873886E+09	1,007626E+10
2830	1,601300E+09	1,601294E+09	3,436918E+09	3,436900E+09	3,202594E+09	6,873817E+09	1,007641E+10
2831	1,601313E+09	1,601357E+09	3,436917E+09	3,436845E+09	3,202670E+09	6,873762E+09	1,007643E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2832	1,601293E+09	1,601290E+09	3,436835E+09	3,436871E+09	3,202583E+09	6,873707E+09	1,007629E+10
2833	1,601416E+09	1,601413E+09	3,436904E+09	3,436813E+09	3,202829E+09	6,873716E+09	1,007655E+10
2834	1,601355E+09	1,601383E+09	3,436849E+09	3,436871E+09	3,202738E+09	6,873721E+09	1,007646E+10
2835	1,601360E+09	1,601344E+09	3,436831E+09	3,436869E+09	3,202704E+09	6,873699E+09	1,007640E+10
2836	1,601419E+09	1,601446E+09	3,436895E+09	3,436831E+09	3,202865E+09	6,873726E+09	1,007659E+10
2837	1,601314E+09	1,601320E+09	3,436829E+09	3,436921E+09	3,202634E+09	6,873750E+09	1,007638E+10
2838	1,601353E+09	1,601312E+09	3,436913E+09	3,436883E+09	3,202664E+09	6,873796E+09	1,007646E+10
2839	1,601332E+09	1,601340E+09	3,436958E+09	3,436882E+09	3,202672E+09	6,873840E+09	1,007651E+10
2840	1,601226E+09	1,601208E+09	3,436867E+09	3,436970E+09	3,202434E+09	6,873837E+09	1,007627E+10
2841	1,601287E+09	1,601289E+09	3,436955E+09	3,436934E+09	3,202576E+09	6,873889E+09	1,007646E+10
2842	1,601218E+09	1,601261E+09	3,436961E+09	3,436954E+09	3,202479E+09	6,873915E+09	1,007639E+10
2843	1,601186E+09	1,601172E+09	3,436945E+09	3,436953E+09	3,202358E+09	6,873898E+09	1,007626E+10
2844	1,601273E+09	1,601284E+09	3,437017E+09	3,436901E+09	3,202557E+09	6,873917E+09	1,007647E+10
2845	1,601205E+09	1,601208E+09	3,436917E+09	3,436969E+09	3,202413E+09	6,873885E+09	1,007630E+10
2846	1,601262E+09	1,601234E+09	3,436908E+09	3,436925E+09	3,202495E+09	6,873833E+09	1,007633E+10
2847	1,601328E+09	1,601363E+09	3,436915E+09	3,436859E+09	3,202691E+09	6,873774E+09	1,007647E+10
2848	1,601279E+09	1,601298E+09	3,436780E+09	3,436880E+09	3,202576E+09	6,873659E+09	1,007624E+10
2849	1,601403E+09	1,601401E+09	3,436838E+09	3,436795E+09	3,202805E+09	6,873632E+09	1,007644E+10
2850	1,601421E+09	1,601451E+09	3,436838E+09	3,436764E+09	3,202872E+09	6,873602E+09	1,007647E+10
2851	1,601403E+09	1,601381E+09	3,436754E+09	3,436782E+09	3,202784E+09	6,873536E+09	1,007632E+10
2852	1,601508E+09	1,601518E+09	3,436810E+09	3,436737E+09	3,203025E+09	6,873547E+09	1,007657E+10
2853	1,601446E+09	1,601479E+09	3,436733E+09	3,436795E+09	3,202925E+09	6,873528E+09	1,007645E+10
2854	1,601456E+09	1,601438E+09	3,436744E+09	3,436785E+09	3,202894E+09	6,873529E+09	1,007642E+10
2855	1,601502E+09	1,601521E+09	3,436829E+09	3,436738E+09	3,203022E+09	6,873568E+09	1,007659E+10
2856	1,601399E+09	1,601388E+09	3,436743E+09	3,436811E+09	3,202787E+09	6,873554E+09	1,007634E+10
2857	1,601434E+09	1,601396E+09	3,436812E+09	3,436805E+09	3,202830E+09	6,873617E+09	1,007645E+10
2858	1,601409E+09	1,601429E+09	3,436859E+09	3,436815E+09	3,202838E+09	6,873674E+09	1,007651E+10
2859	1,601309E+09	1,601300E+09	3,436792E+09	3,436872E+09	3,202608E+09	6,873664E+09	1,007627E+10
2860	1,601359E+09	1,601381E+09	3,436902E+09	3,436834E+09	3,202740E+09	6,873736E+09	1,007648E+10
2861	1,601304E+09	1,601334E+09	3,436894E+09	3,436866E+09	3,202638E+09	6,873760E+09	1,007640E+10
2862	1,601282E+09	1,601252E+09	3,436871E+09	3,436884E+09	3,202535E+09	6,873754E+09	1,007629E+10
2863	1,601361E+09	1,601367E+09	3,436927E+09	3,436838E+09	3,202728E+09	6,873765E+09	1,007649E+10
2864	1,601299E+09	1,601307E+09	3,436784E+09	3,436873E+09	3,202605E+09	6,873658E+09	1,007626E+10
2865	1,601364E+09	1,601353E+09	3,436774E+09	3,436833E+09	3,202717E+09	6,873607E+09	1,007632E+10
2866	1,601439E+09	1,601473E+09	3,436813E+09	3,436748E+09	3,202912E+09	6,873562E+09	1,007647E+10
2867	1,601400E+09	1,601399E+09	3,436703E+09	3,436737E+09	3,202799E+09	6,873440E+09	1,007624E+10
2868	1,601507E+09	1,601508E+09	3,436766E+09	3,436678E+09	3,203015E+09	6,873443E+09	1,007646E+10
2869	1,601524E+09	1,601553E+09	3,436734E+09	3,436677E+09	3,203076E+09	6,873411E+09	1,007649E+10
2870	1,601502E+09	1,601492E+09	3,436655E+09	3,436716E+09	3,202993E+09	6,873370E+09	1,007636E+10
2871	1,601590E+09	1,601621E+09	3,436728E+09	3,436668E+09	3,203211E+09	6,873396E+09	1,007661E+10
2872	1,601534E+09	1,601564E+09	3,436641E+09	3,436689E+09	3,203098E+09	6,873330E+09	1,007643E+10
2873	1,601547E+09	1,601519E+09	3,436656E+09	3,436703E+09	3,203066E+09	6,873359E+09	1,007643E+10
2874	1,601595E+09	1,601592E+09	3,436747E+09	3,436665E+09	3,203186E+09	6,873413E+09	1,007660E+10
2875	1,601490E+09	1,601462E+09	3,436658E+09	3,436716E+09	3,202953E+09	6,873375E+09	1,007633E+10
2876	1,601505E+09	1,601491E+09	3,436732E+09	3,436719E+09	3,202996E+09	6,873450E+09	1,007645E+10
2877	1,601485E+09	1,601518E+09	3,436766E+09	3,436732E+09	3,203003E+09	6,873498E+09	1,007650E+10
2878	1,601391E+09	1,601385E+09	3,436734E+09	3,436787E+09	3,202775E+09	6,873521E+09	1,007630E+10
2879	1,601434E+09	1,601451E+09	3,436852E+09	3,436755E+09	3,202885E+09	6,873606E+09	1,007649E+10
2880	1,601389E+09	1,601402E+09	3,436797E+09	3,436775E+09	3,202791E+09	6,873572E+09	1,007636E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2881	1,601376E+09	1,601347E+09	3,436743E+09	3,436820E+09	3,202723E+09	6,873563E+09	1,007629E+10
2882	1,601462E+09	1,601471E+09	3,436800E+09	3,436763E+09	3,202933E+09	6,873563E+09	1,007650E+10
2883	1,601410E+09	1,601421E+09	3,436680E+09	3,436746E+09	3,202831E+09	6,873426E+09	1,007626E+10
2884	1,601466E+09	1,601472E+09	3,436701E+09	3,436697E+09	3,202938E+09	6,873398E+09	1,007634E+10
2885	1,601548E+09	1,601574E+09	3,436735E+09	3,436636E+09	3,203122E+09	6,873371E+09	1,007649E+10
2886	1,601509E+09	1,601501E+09	3,436637E+09	3,436653E+09	3,203010E+09	6,873290E+09	1,007630E+10
2887	1,601595E+09	1,601604E+09	3,436686E+09	3,436614E+09	3,203199E+09	6,873300E+09	1,007650E+10
2888	1,601613E+09	1,601651E+09	3,436615E+09	3,436598E+09	3,203264E+09	6,873213E+09	1,007648E+10
2889	1,601599E+09	1,601599E+09	3,436528E+09	3,436643E+09	3,203198E+09	6,873171E+09	1,007637E+10
2890	1,601693E+09	1,601703E+09	3,436632E+09	3,436574E+09	3,203396E+09	6,873206E+09	1,007660E+10
2891	1,601645E+09	1,601641E+09	3,436558E+09	3,436560E+09	3,203286E+09	6,873118E+09	1,007640E+10
2892	1,601640E+09	1,601606E+09	3,436572E+09	3,436590E+09	3,203246E+09	6,873162E+09	1,007641E+10
2893	1,601680E+09	1,601678E+09	3,436644E+09	3,436582E+09	3,203358E+09	6,873227E+09	1,007658E+10
2894	1,601567E+09	1,601564E+09	3,436582E+09	3,436642E+09	3,203131E+09	6,873224E+09	1,007635E+10
2895	1,601561E+09	1,601582E+09	3,436681E+09	3,436649E+09	3,203143E+09	6,873330E+09	1,007647E+10
2896	1,601550E+09	1,601591E+09	3,436705E+09	3,436644E+09	3,203141E+09	6,873348E+09	1,007649E+10
2897	1,601472E+09	1,601460E+09	3,436656E+09	3,436731E+09	3,202931E+09	6,873387E+09	1,007632E+10
2898	1,601527E+09	1,601515E+09	3,436766E+09	3,436701E+09	3,203042E+09	6,873468E+09	1,007651E+10
2899	1,601493E+09	1,601485E+09	3,436686E+09	3,436684E+09	3,202978E+09	6,873370E+09	1,007635E+10
2900	1,601471E+09	1,601460E+09	3,436627E+09	3,436716E+09	3,202932E+09	6,873343E+09	1,007627E+10
2901	1,601567E+09	1,601582E+09	3,436685E+09	3,436649E+09	3,203149E+09	6,873333E+09	1,007648E+10
2902	1,601519E+09	1,601530E+09	3,436611E+09	3,436617E+09	3,203049E+09	6,873228E+09	1,007628E+10
2903	1,601560E+09	1,601571E+09	3,436648E+09	3,436586E+09	3,203131E+09	6,873234E+09	1,007636E+10
2904	1,601643E+09	1,601667E+09	3,436635E+09	3,436532E+09	3,203309E+09	6,873167E+09	1,007648E+10
2905	1,601606E+09	1,601611E+09	3,436513E+09	3,436595E+09	3,203216E+09	6,873109E+09	1,007633E+10
2906	1,601695E+09	1,601707E+09	3,436572E+09	3,436553E+09	3,203402E+09	6,873125E+09	1,007653E+10
2907	1,601723E+09	1,601751E+09	3,436509E+09	3,436490E+09	3,203474E+09	6,872999E+09	1,007647E+10
2908	1,601702E+09	1,601700E+09	3,436446E+09	3,436526E+09	3,203402E+09	6,872972E+09	1,007637E+10
2909	1,601799E+09	1,601785E+09	3,436539E+09	3,436475E+09	3,203584E+09	6,873014E+09	1,007660E+10
2910	1,601743E+09	1,601728E+09	3,436487E+09	3,436471E+09	3,203471E+09	6,872959E+09	1,007643E+10
2911	1,601708E+09	1,601696E+09	3,436504E+09	3,436521E+09	3,203403E+09	6,873025E+09	1,007643E+10
2912	1,601741E+09	1,601766E+09	3,436548E+09	3,436505E+09	3,203507E+09	6,873053E+09	1,007656E+10
2913	1,601637E+09	1,601656E+09	3,436495E+09	3,436586E+09	3,203293E+09	6,873081E+09	1,007637E+10
2914	1,601641E+09	1,601645E+09	3,436623E+09	3,436580E+09	3,203286E+09	6,873203E+09	1,007649E+10
2915	1,601644E+09	1,601652E+09	3,436632E+09	3,436546E+09	3,203296E+09	6,873178E+09	1,007647E+10
2916	1,601562E+09	1,601542E+09	3,436563E+09	3,436637E+09	3,203104E+09	6,873200E+09	1,007630E+10
2917	1,601624E+09	1,601603E+09	3,436641E+09	3,436622E+09	3,203226E+09	6,873263E+09	1,007649E+10
2918	1,601592E+09	1,601596E+09	3,436590E+09	3,436585E+09	3,203189E+09	6,873175E+09	1,007636E+10
2919	1,601554E+09	1,601570E+09	3,436556E+09	3,436605E+09	3,203124E+09	6,873162E+09	1,007629E+10
2920	1,601653E+09	1,601677E+09	3,436605E+09	3,436528E+09	3,203330E+09	6,873133E+09	1,007646E+10
2921	1,601618E+09	1,601633E+09	3,436523E+09	3,436540E+09	3,203251E+09	6,873063E+09	1,007631E+10
2922	1,601660E+09	1,601655E+09	3,436560E+09	3,436524E+09	3,203315E+09	6,873085E+09	1,007640E+10
2923	1,601750E+09	1,601765E+09	3,436521E+09	3,436447E+09	3,203515E+09	6,872968E+09	1,007648E+10
2924	1,601711E+09	1,601730E+09	3,436391E+09	3,436499E+09	3,203441E+09	6,872890E+09	1,007633E+10
2925	1,601810E+09	1,601809E+09	3,436452E+09	3,436451E+09	3,203619E+09	6,872903E+09	1,007652E+10
2926	1,601840E+09	1,601849E+09	3,436431E+09	3,436365E+09	3,203690E+09	6,872796E+09	1,007649E+10
2927	1,601795E+09	1,601792E+09	3,436378E+09	3,436415E+09	3,203587E+09	6,872793E+09	1,007638E+10
2928	1,601880E+09	1,601871E+09	3,436438E+09	3,436374E+09	3,203751E+09	6,872812E+09	1,007656E+10
2929	1,601820E+09	1,601833E+09	3,436382E+09	3,436414E+09	3,203653E+09	6,872796E+09	1,007645E+10

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2930	1,601779E+09	1,601783E+09	3,436433E+09	3,436464E+09	3,203563E+09	6,872897E+09	1,007646E+10
2931	1,601820E+09	1,601846E+09	3,436484E+09	3,436415E+09	3,203666E+09	6,872899E+09	1,007657E+10
2932	1,601717E+09	1,601733E+09	3,436445E+09	3,436499E+09	3,203450E+09	6,872943E+09	1,007639E+10
2933	1,601733E+09	1,601704E+09	3,436544E+09	3,436516E+09	3,203437E+09	6,873060E+09	1,007650E+10
2934	1,601739E+09	1,601721E+09	3,436553E+09	3,436473E+09	3,203460E+09	6,873025E+09	1,007649E+10
2935	1,601639E+09	1,601633E+09	3,436469E+09	3,436563E+09	3,203272E+09	6,873032E+09	1,007630E+10
2936	1,601702E+09	1,601701E+09	3,436512E+09	3,436520E+09	3,203403E+09	6,873032E+09	1,007644E+10
2937	1,601682E+09	1,601706E+09	3,436483E+09	3,436491E+09	3,203388E+09	6,872974E+09	1,007636E+10
2938	1,601652E+09	1,601656E+09	3,436493E+09	3,436503E+09	3,203308E+09	6,872996E+09	1,007630E+10
2939	1,601758E+09	1,601764E+09	3,436519E+09	3,436412E+09	3,203522E+09	6,872931E+09	1,007645E+10
2940	1,601720E+09	1,601740E+09	3,436426E+09	3,436444E+09	3,203460E+09	6,872870E+09	1,007633E+10
2941	1,601768E+09	1,601761E+09	3,436432E+09	3,436451E+09	3,203529E+09	6,872883E+09	1,007641E+10
2942	1,601860E+09	1,601881E+09	3,436422E+09	3,436350E+09	3,203741E+09	6,872772E+09	1,007651E+10
2943	1,601808E+09	1,601843E+09	3,436315E+09	3,436392E+09	3,203650E+09	6,872707E+09	1,007636E+10
2944	1,601908E+09	1,601900E+09	3,436356E+09	3,436335E+09	3,203808E+09	6,872691E+09	1,007650E+10
2945	1,601941E+09	1,601947E+09	3,436335E+09	3,436289E+09	3,203888E+09	6,872624E+09	1,007651E+10
2946	1,601888E+09	1,601871E+09	3,436300E+09	3,436349E+09	3,203759E+09	6,872649E+09	1,007641E+10
2947	1,601965E+09	1,601961E+09	3,436340E+09	3,436291E+09	3,203926E+09	6,872631E+09	1,007656E+10
2948	1,601900E+09	1,601936E+09	3,436299E+09	3,436328E+09	3,203836E+09	6,872627E+09	1,007646E+10
2949	1,601867E+09	1,601859E+09	3,436355E+09	3,436386E+09	3,203725E+09	6,872741E+09	1,007647E+10
2950	1,601913E+09	1,601915E+09	3,436437E+09	3,436321E+09	3,203827E+09	6,872757E+09	1,007658E+10
2951	1,601796E+09	1,601802E+09	3,436378E+09	3,436415E+09	3,203598E+09	6,872792E+09	1,007639E+10
2952	1,601807E+09	1,601774E+09	3,436424E+09	3,436435E+09	3,203581E+09	6,872858E+09	1,007644E+10
2953	1,601820E+09	1,601824E+09	3,436425E+09	3,436412E+09	3,203643E+09	6,872836E+09	1,007648E+10
2954	1,601721E+09	1,601726E+09	3,436380E+09	3,436480E+09	3,203448E+09	6,872859E+09	1,007631E+10
2955	1,601792E+09	1,601797E+09	3,436433E+09	3,436398E+09	3,203589E+09	6,872832E+09	1,007642E+10
2956	1,601779E+09	1,601808E+09	3,436420E+09	3,436374E+09	3,203587E+09	6,872794E+09	1,007638E+10
2957	1,601757E+09	1,601741E+09	3,436411E+09	3,436422E+09	3,203498E+09	6,872833E+09	1,007633E+10
2958	1,601862E+09	1,601859E+09	3,436440E+09	3,436328E+09	3,203721E+09	6,872769E+09	1,007649E+10
2959	1,601810E+09	1,601851E+09	3,436328E+09	3,436367E+09	3,203662E+09	6,872695E+09	1,007636E+10
2960	1,601863E+09	1,601868E+09	3,436301E+09	3,436354E+09	3,203730E+09	6,872655E+09	1,007638E+10
2961	1,601969E+09	1,601992E+09	3,436309E+09	3,436257E+09	3,203961E+09	6,872566E+09	1,007653E+10
2962	1,601920E+09	1,601929E+09	3,436238E+09	3,436285E+09	3,203849E+09	6,872523E+09	1,007637E+10
2963	1,602018E+09	1,601991E+09	3,436254E+09	3,436215E+09	3,204008E+09	6,872468E+09	1,007648E+10
2964	1,602039E+09	1,602054E+09	3,436237E+09	3,436189E+09	3,204093E+09	6,872426E+09	1,007652E+10
2965	1,601982E+09	1,601972E+09	3,436198E+09	3,436279E+09	3,203954E+09	6,872477E+09	1,007643E+10
2966	1,602051E+09	1,602057E+09	3,436276E+09	3,436202E+09	3,204108E+09	6,872478E+09	1,007659E+10
2967	1,601972E+09	1,602023E+09	3,436258E+09	3,436247E+09	3,203995E+09	6,872505E+09	1,007650E+10
2968	1,601940E+09	1,601923E+09	3,436275E+09	3,436305E+09	3,203863E+09	6,872581E+09	1,007644E+10
2969	1,601993E+09	1,601984E+09	3,436342E+09	3,436274E+09	3,203977E+09	6,872616E+09	1,007659E+10
2970	1,601876E+09	1,601867E+09	3,436292E+09	3,436360E+09	3,203743E+09	6,872652E+09	1,007639E+10
2971	1,601890E+09	1,601861E+09	3,436299E+09	3,436345E+09	3,203751E+09	6,872644E+09	1,007639E+10
2972	1,601906E+09	1,601930E+09	3,436327E+09	3,436302E+09	3,203836E+09	6,872629E+09	1,007647E+10
2973	1,601819E+09	1,601816E+09	3,436302E+09	3,436371E+09	3,203636E+09	6,872673E+09	1,007631E+10
2974	1,601890E+09	1,601882E+09	3,436386E+09	3,436276E+09	3,203773E+09	6,872662E+09	1,007643E+10
2975	1,601864E+09	1,601903E+09	3,436360E+09	3,436279E+09	3,203768E+09	6,872639E+09	1,007641E+10
2976	1,601841E+09	1,601834E+09	3,436293E+09	3,436342E+09	3,203675E+09	6,872634E+09	1,007631E+10
2977	1,601957E+09	1,601974E+09	3,436314E+09	3,436272E+09	3,203930E+09	6,872586E+09	1,007652E+10
2978	1,601914E+09	1,601953E+09	3,436235E+09	3,436285E+09	3,203866E+09	6,872520E+09	1,007639E+10



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude ☉	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2979	1,601975E+09	1,601968E+09	3,436196E+09	3,436235E+09	3,203943E+09	6,872431E+09	1,007637E+10
2980	1,602087E+09	1,602098E+09	3,436220E+09	3,436138E+09	3,204184E+09	6,872358E+09	1,007654E+10
2981	1,602038E+09	1,602021E+09	3,436139E+09	3,436193E+09	3,204058E+09	6,872332E+09	1,007639E+10
2982	1,602121E+09	1,602091E+09	3,436172E+09	3,436117E+09	3,204212E+09	6,872288E+09	1,007650E+10
2983	1,602120E+09	1,602169E+09	3,436151E+09	3,436103E+09	3,204289E+09	6,872255E+09	1,007654E+10
2984	1,602055E+09	1,602066E+09	3,436097E+09	3,436191E+09	3,204121E+09	6,872288E+09	1,007641E+10
2985	1,602133E+09	1,602145E+09	3,436199E+09	3,436133E+09	3,204278E+09	6,872332E+09	1,007661E+10
2986	1,602058E+09	1,602081E+09	3,436200E+09	3,436174E+09	3,204138E+09	6,872374E+09	1,007651E+10
2987	1,602026E+09	1,601988E+09	3,436171E+09	3,436219E+09	3,204014E+09	6,872390E+09	1,007640E+10
2988	1,602079E+09	1,602071E+09	3,436233E+09	3,436187E+09	3,204150E+09	6,872421E+09	1,007657E+10
2989	1,601965E+09	1,601959E+09	3,436185E+09	3,436278E+09	3,203923E+09	6,872463E+09	1,007639E+10
2990	1,601975E+09	1,601958E+09	3,436237E+09	3,436228E+09	3,203934E+09	6,872466E+09	1,007640E+10
2991	1,601983E+09	1,602027E+09	3,436289E+09	3,436195E+09	3,204010E+09	6,872484E+09	1,007649E+10
2992	1,601897E+09	1,601895E+09	3,436232E+09	3,436282E+09	3,203791E+09	6,872514E+09	1,007631E+10
2993	1,601975E+09	1,601969E+09	3,436301E+09	3,436228E+09	3,203944E+09	6,872529E+09	1,007647E+10
2994	1,601953E+09	1,601984E+09	3,436274E+09	3,436231E+09	3,203938E+09	6,872505E+09	1,007644E+10
2995	1,601939E+09	1,601937E+09	3,436155E+09	3,436257E+09	3,203876E+09	6,872412E+09	1,007629E+10
2996	1,602070E+09	1,602086E+09	3,436197E+09	3,436161E+09	3,204155E+09	6,872359E+09	1,007651E+10
2997	1,602042E+09	1,602054E+09	3,436133E+09	3,436167E+09	3,204096E+09	6,872299E+09	1,007639E+10
2998	1,602101E+09	1,602067E+09	3,436110E+09	3,436094E+09	3,204168E+09	6,872203E+09	1,007637E+10
2999	1,602188E+09	1,602209E+09	3,436133E+09	3,436024E+09	3,204397E+09	6,872157E+09	1,007655E+10