



# Astrodienst Ephemeris Tables for the year 2231

tropical geocentric zodiac

contains Sun, Moon, Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto, True Node, Moon's Node, Lilith, Chiron

Programming  
Dieter Koch and Alois Treindl  
based on Swiss Ephemeris  
Code D5EPX

ASTRODIENST EPHEMERIS for the year 2231  
geocentric

JANUARY 2231

00:00 UT

| Day  | Sid.t   | ☉        | ☽      | ♀     | ♂      | ♂     | ♂     | ♂      | ♂      | ♂     | ♂     | ♂     | ♂     | ♂    | ♂      | Day  |
|------|---------|----------|--------|-------|--------|-------|-------|--------|--------|-------|-------|-------|-------|------|--------|------|
| S 1  | 6 40 6  | 9°34'32  | 2°53   | 9°37  | 11°37  | 11°37 | 6°10  | 15°35  | 23°17  | 3°14  | 2°43  | 6°R 3 | 7°19  | 2°35 | 20°R27 | S 1  |
| S 2  | 6 44 3  | 10°48'42 | 15°10  | 11°13 | 12°51  | 12°22 | 6°19  | 15°39  | 23° 9  | 3°12  | 2°44  | 5°H3  | 7°16  | 2°41 | 20°R26 | S 2  |
| M 3  | 6 47 59 | 11°49'51 | 27°19  | 12°49 | 14° 5  | 13° 8 | 6°27  | 15°44  | 23°12  | 3°10  | 2°45  | 5°41  | 7°13  | 2°48 | 20°24  | M 3  |
| T 4  | 6 51 56 | 12°51'01 | 9°30   | 14°25 | 15°19  | 13°54 | 6°36  | 15°48  | 23°15  | 3° 9  | 2°46  | 5°31  | 7°10  | 2°55 | 20°22  | T 4  |
| W 5  | 6 55 52 | 13°52'11 | 21°14  | 16° 2 | 16°33  | 14°40 | 6°44  | 15°53  | 23°18  | 3° 7  | 2°48  | 5°21  | 7° 7  | 3° 1 | 20°21  | W 5  |
| T 6  | 6 59 49 | 14°53'21 | 3° 5   | 17°39 | 17°47  | 15°25 | 6°53  | 15°58  | 23°20  | 3° 5  | 2°49  | 5°14  | 7° 3  | 3° 8 | 20°19  | T 6  |
| F 7  | 7 3 45  | 15°54'31 | 14°52  | 19°17 | 19° 0  | 16°11 | 7° 1  | 16° 2  | 23°23  | 3° 4  | 2°50  | 5° 9  | 7° 0  | 3°15 | 20°18  | F 7  |
| S 8  | 7 7 42  | 16°55'40 | 26°39  | 20°54 | 20°14  | 16°57 | 7° 9  | 16° 7  | 23°26  | 3° 2  | 2°51  | 5° 7  | 6°57  | 3°21 | 20°17  | S 8  |
| S 9  | 7 11 39 | 17°56'50 | 8°30   | 22°33 | 21°28  | 17°43 | 7°16  | 16°12  | 23°28  | 3° 0  | 2°52  | 5°D 6 | 6°54  | 3°28 | 20°15  | S 9  |
| M10  | 7 15 35 | 18°57'59 | 20°27  | 24°11 | 22°42  | 18°29 | 7°24  | 16°17  | 23°31  | 2°59  | 2°53  | 5° 7  | 6°51  | 3°35 | 20°14  | M10  |
| T 11 | 7 19 32 | 19°59'08 | 2°Y35  | 25°50 | 23°55  | 19°15 | 7°32  | 16°22  | 23°33  | 2°57  | 2°54  | 5° 9  | 6°48  | 3°41 | 20°13  | T 11 |
| W12  | 7 23 28 | 21° 0'17 | 15° 0  | 27°29 | 25° 9  | 20° 2 | 7°39  | 16°27  | 23°36  | 2°55  | 2°54  | 5°R10 | 6°44  | 3°48 | 20°12  | W12  |
| T 13 | 7 27 25 | 22° 1'25 | 27°45  | 29° 8 | 26°22  | 20°48 | 7°47  | 16°33  | 23°38  | 2°54  | 2°55  | 5°10  | 6°41  | 3°55 | 20°11  | T 13 |
| F 14 | 7 31 21 | 23° 2'33 | 10°B56 | 0°48  | 27°36  | 21°34 | 7°54  | 16°38  | 23°40  | 2°52  | 2°56  | 5° 8  | 6°38  | 4° 1 | 20°10  | F 14 |
| S 15 | 7 35 18 | 24° 3'40 | 24°36  | 2°28  | 28°49  | 22°20 | 8° 1  | 16°43  | 23°43  | 2°51  | 2°57  | 5° 5  | 6°35  | 4° 8 | 20° 9  | S 15 |
| S 16 | 7 39 14 | 25° 4'47 | 8°H46  | 4° 8  | 0°H 2  | 23° 6 | 8° 8  | 16°49  | 23°45  | 2°49  | 2°58  | 5° 0  | 6°32  | 4°15 | 20° 8  | S 16 |
| M17  | 7 43 11 | 26° 5'53 | 23°23  | 5°48  | 1°16   | 23°53 | 8°14  | 16°54  | 23°47  | 2°48  | 2°58  | 4°54  | 6°28  | 4°21 | 20° 7  | M17  |
| T 18 | 7 47 8  | 27° 6'59 | 8°B23  | 7°28  | 2°29   | 24°39 | 8°21  | 17° 0  | 23°49  | 2°46  | 2°59  | 4°48  | 6°25  | 4°28 | 20° 6  | T 18 |
| W19  | 7 51 4  | 28° 8'05 | 23°57  | 9° 9  | 3°42   | 25°25 | 8°28  | 17° 6  | 23°52  | 2°45  | 3° 0  | 4°42  | 6°22  | 4°35 | 20° 5  | W19  |
| T 20 | 7 55 1  | 29° 9'09 | 8°D34  | 10°49 | 4°55   | 26°12 | 8°34  | 17°11  | 23°54  | 2°43  | 3° 0  | 4°39  | 6°19  | 4°41 | 20° 5  | T 20 |
| F 21 | 7 58 57 | 0°10'14  | 24° 5  | 12°29 | 6° 8   | 26°58 | 8°40  | 17°17  | 23°56  | 2°42  | 3° 1  | 4°37  | 6°16  | 4°48 | 20° 4  | F 21 |
| S 22 | 8 2 54  | 1°11'18  | 8°H59  | 14° 9 | 7°21   | 27°45 | 8°46  | 17°23  | 23°58  | 2°40  | 3° 1  | 4°D36 | 6°13  | 4°55 | 20° 4  | S 22 |
| S 23 | 8 6 50  | 2°12'21  | 23°31  | 15°48 | 8°34   | 28°31 | 8°52  | 17°29  | 24° 0  | 2°39  | 3° 2  | 4°37  | 6° 9  | 5° 1 | 20° 3  | S 23 |
| M24  | 8 10 47 | 3°13'24  | 7°B37  | 17°26 | 9°47   | 29°18 | 8°58  | 17°35  | 24° 2  | 2°37  | 3° 2  | 4°39  | 6° 6  | 5° 8 | 20° 3  | M24  |
| T 25 | 8 14 43 | 4°14'27  | 21°17  | 19° 3 | 11° 0  | 0°4 4 | 9° 3  | 17°41  | 24° 3  | 2°36  | 3° 3  | 4°40  | 6° 3  | 5°15 | 20° 2  | T 25 |
| W26  | 8 18 40 | 5°15'30  | 4°H31  | 20°39 | 12°13  | 0°51  | 9° 9  | 17°47  | 24° 5  | 2°34  | 3° 3  | 4°R41 | 6° 0  | 5°21 | 20° 2  | W26  |
| T 27 | 8 22 37 | 6°16'32  | 17°23  | 22°13 | 13°26  | 1°37  | 9°14  | 17°53  | 24° 7  | 2°33  | 3° 3  | 4°40  | 5°57  | 5°28 | 20° 2  | T 27 |
| F 28 | 8 26 33 | 7°17'34  | 29°56  | 23°45 | 14°38  | 2°24  | 9°19  | 17°59  | 24° 9  | 2°32  | 3° 4  | 4°38  | 5°54  | 5°35 | 20° 2  | F 28 |
| S 29 | 8 30 30 | 8°18'36  | 12°A15 | 25°15 | 15°51  | 3°11  | 9°24  | 18° 5  | 24°10  | 2°30  | 3° 4  | 4°35  | 5°50  | 5°41 | 20° 2  | S 29 |
| S 30 | 8 34 26 | 9°19'37  | 24°22  | 26°41 | 17° 3  | 3°57  | 9°28  | 18°12  | 24°12  | 2°29  | 3° 4  | 4°31  | 5°47  | 5°48 | 20°D 2 | S 30 |
| M31  | 8 38 23 | 10°20'37 | 6°B20  | 28° 5 | 18°H16 | 4°44  | 9°M33 | 18°H18 | 24°M13 | 2°B28 | 3°M 4 | 4°H27 | 5°H44 | 5°55 | 20°B 2 | M31  |

| Day  | ☉     | ☽     | ♀    | ♂     | ♂    | ♂     | ♂    | ♂     | ♂    | ♂     | ♂    | ♂    | ♂    | ♂     | ♂    | ♂     |
|------|-------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|-------|------|-------|
|      | decl  | decl  | lat  | decl  | lat  | decl  | lat  | decl  | lat  | decl  | lat  | decl | lat  | decl  | lat  | lat   |
| S 1  | 23s 3 | 25s41 | 5s 4 | 24s44 | 1s40 | 19s 2 | 1s49 | 23s46 | 0s52 | 12s27 | 1n10 | 7s29 | 1s58 | 18s14 | 0n18 | 22n11 |
| S 2  | 22 58 | 27 34 | 5 1  | 24 40 | 1 44 | 18 41 | 1 49 | 23 42 | 0 52 | 12 30 | 1 11 | 7 28 | 1 58 | 18 15 | 0 18 | 22 11 |
| M 3  | 22 53 | 28 7  | 4 44 | 24 35 | 1 48 | 18 19 | 1 49 | 23 38 | 0 52 | 12 33 | 1 11 | 7 26 | 1 58 | 18 15 | 0 18 | 22 11 |
| T 4  | 22 47 | 27 18 | 4 14 | 24 29 | 1 51 | 17 57 | 1 49 | 23 34 | 0 53 | 12 35 | 1 11 | 7 24 | 1 58 | 18 16 | 0 18 | 22 11 |
| W 5  | 22 41 | 25 15 | 3 33 | 24 21 | 1 54 | 17 35 | 1 48 | 23 29 | 0 53 | 12 38 | 1 11 | 7 22 | 1 57 | 18 17 | 0 18 | 22 12 |
| T 6  | 22 35 | 22 6  | 2 44 | 24 11 | 1 57 | 17 12 | 1 48 | 23 24 | 0 54 | 12 40 | 1 11 | 7 20 | 1 57 | 18 17 | 0 18 | 22 12 |
| F 7  | 22 28 | 18 4  | 1 47 | 24 0  | 2 0  | 16 48 | 1 47 | 23 19 | 0 54 | 12 43 | 1 11 | 7 18 | 1 57 | 18 18 | 0 18 | 22 12 |
| S 8  | 22 20 | 13 20 | 0 46 | 23 48 | 2 2  | 16 25 | 1 47 | 23 14 | 0 54 | 12 45 | 1 12 | 7 16 | 1 57 | 18 19 | 0 18 | 22 12 |
| S 9  | 22 13 | 8 6   | 0n18 | 23 34 | 2 4  | 16 0  | 1 46 | 23 9  | 0 55 | 12 48 | 1 12 | 7 14 | 1 57 | 18 19 | 0 18 | 22 12 |
| M10  | 22 4  | 2 31  | 1 22 | 23 19 | 2 5  | 15 36 | 1 45 | 23 3  | 0 55 | 12 50 | 1 12 | 7 12 | 1 57 | 18 20 | 0 18 | 22 12 |
| T 11 | 21 56 | 3n13  | 2 23 | 23 2  | 2 7  | 15 11 | 1 44 | 22 57 | 0 55 | 12 52 | 1 12 | 7 10 | 1 57 | 18 21 | 0 18 | 22 12 |
| W12  | 21 46 | 8 58  | 3 19 | 22 43 | 2 7  | 14 45 | 1 44 | 22 50 | 0 56 | 12 55 | 1 12 | 7 8  | 1 57 | 18 21 | 0 18 | 22 12 |
| T 13 | 21 37 | 14 30 | 4 7  | 22 23 | 2 8  | 14 19 | 1 43 | 22 44 | 0 56 | 12 57 | 1 12 | 7 6  | 1 56 | 18 22 | 0 18 | 22 12 |
| F 14 | 21 27 | 19 34 | 4 7  | 22 2  | 2 8  | 13 53 | 1 41 | 22 37 | 0 56 | 12 59 | 1 13 | 7 3  | 1 56 | 18 22 | 0 18 | 22 12 |
| S 15 | 21 16 | 23 50 | 5 5  | 21 39 | 2 7  | 13 26 | 1 40 | 22 30 | 0 57 | 13 1  | 1 13 | 7 1  | 1 56 | 18 23 | 0 18 | 22 12 |
| S 16 | 21 6  | 26 50 | 5 10 | 21 14 | 2 6  | 12 59 | 1 39 | 22 22 | 0 57 | 13 3  | 1 13 | 6 59 | 1 56 | 18 23 | 0 18 | 22 12 |
| M17  | 20 54 | 28 9  | 4 55 | 20 48 | 2 4  | 12 32 | 1 38 | 22 15 | 0 57 | 13 5  | 1 13 | 6 57 | 1 56 | 18 24 | 0 18 | 22 12 |
| T 18 | 20 43 | 27 27 | 4 19 | 20 21 | 2 2  | 12 4  | 1 36 | 22 7  | 0 58 | 13 7  | 1 13 | 6 55 | 1 56 | 18 24 | 0 19 | 22 12 |
| W19  | 20 31 | 24 43 | 3 25 | 19 52 | 2 0  | 11 36 | 1 35 | 21 59 | 0 58 | 13 9  | 1 13 | 6 52 | 1 56 | 18 25 | 0 19 | 22 12 |
| T 20 | 20 18 | 20 12 | 2 16 | 19 22 | 1 56 | 11 8  | 1 33 | 21 50 | 0 58 | 13 11 | 1 14 | 6 50 | 1 56 | 18 26 | 0 19 | 22 12 |
| F 21 | 20 5  | 14 23 | 0 57 | 18 50 | 1 52 | 10 40 | 1 31 | 21 42 | 0 59 | 13 12 | 1 14 | 6 48 | 1 56 | 18 26 | 0 19 | 22 12 |
| S 22 | 19 52 | 7 49  | 0s24 | 18 17 | 1 48 | 10 11 | 1 30 | 21 33 | 0 59 | 13 14 | 1 14 | 6 45 | 1 56 | 18 27 | 0 19 | 22 12 |
| S 23 | 19 39 | 1 1   | 1 42 | 17 43 | 1 43 | 9 42  | 1 28 | 21 24 | 0 59 | 13 16 | 1 14 | 6 43 | 1 55 | 18 27 | 0 19 | 22 13 |
| M24  | 19 25 | 5s38  | 2 51 | 17 8  | 1 37 | 9 13  | 1 26 | 21 15 | 0 59 | 13 18 | 1 14 | 6 40 | 1 55 | 18 27 | 0 19 | 22 13 |
| T 25 | 19 11 | 11 49 | 3 48 | 16 31 | 1 30 | 8 43  | 1 24 | 21 5  | 1 0  | 13 19 | 1 15 | 6 38 | 1 55 | 18 28 | 0 19 | 22 13 |
| W26  | 18 56 | 17 16 | 4 31 | 15 54 | 1 23 | 8 14  | 1 22 | 20 55 | 1 0  | 13 21 | 1 15 | 6 36 | 1 55 | 18 28 | 0 19 | 22 13 |
| T 27 | 18 41 | 21 47 | 5 0  | 15 16 | 1 15 | 7 44  | 1 19 | 20 45 | 1 0  | 13 22 | 1 15 | 6 33 | 1 55 | 18 29 | 0 19 | 22 13 |
| F 28 | 18 26 | 25 12 | 5 13 | 14 37 | 1 6  | 7 14  | 1 17 | 20 35 | 1 1  | 13 24 | 1 15 | 6 31 | 1 55 | 18 29 | 0 19 | 22 13 |
| S 29 | 18 10 | 27 22 | 5 11 | 13 58 | 0 56 | 6 43  | 1 15 | 20 25 | 1 1  | 13 25 | 1 15 | 6 28 | 1 55 | 18 30 | 0 19 | 22 13 |
| S 30 | 17 54 | 28 12 | 4 55 | 13 19 | 0 45 | 6 13  | 1 12 | 20 14 | 1 1  | 13 26 | 1 16 | 6 26 | 1 55 | 18 30 | 0 19 | 22 13 |
| M31  | 17s38 | 27s42 | 4s27 | 12s39 | 0s34 | 5s42  | 1s10 | 20s 3 | 1s 1 | 13s27 | 1n16 | 6s23 | 1s55 | 18s30 | 0n19 | 22n13 |

Julian Day Number = 2535915.5, Delta T = 196.52 sec  
Ecliptic obliquity = 23°24'41, Nutation = 0°00'07, out-of-bounds declination in red  
Ayanamsha: Fagan/Bradley = 27°58'07, Lahiri = 27°05'08

ASTRODIENST EPHEMERIS for the year 2231  
geocentric

FEBRUARY 2231

00:00 UT

| Day  | Sid.t    | ☉                   | ☽                   | ♀                   | ♂                   | ♂                   | ♂                   | ♂                   | ♂                   | ♂                  | ♂                  | ♂                  | ♂                  | ♂                  | ♂                   | Day  |
|------|----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|------|
| T 1  | 8 42 19  | 11 <sup>22</sup> 37 | 18 <sup>3</sup> 13  | 29 <sup>23</sup> 23 | 19 <sup>28</sup> 28 | 5 <sup>31</sup> 31  | 9 <sup>37</sup> 37  | 18 <sup>24</sup> 24 | 24 <sup>15</sup> 15 | 2 <sup>27</sup> 27 | 3 <sup>5</sup> 5   | 4 <sup>22</sup> 22 | 5 <sup>41</sup> 41 | 6 <sup>1</sup> 1   | 20 <sup>8</sup> 2   | T 1  |
| W 2  | 8 46 16  | 12 <sup>22</sup> 35 | 0 <sup>3</sup> 3    | 0 <sup>37</sup> 37  | 20 <sup>40</sup> 40 | 6 <sup>18</sup> 18  | 9 <sup>42</sup> 42  | 18 <sup>31</sup> 31 | 24 <sup>16</sup> 16 | 2 <sup>25</sup> 25 | 3 <sup>5</sup> 5   | 4 <sup>19</sup> 19 | 5 <sup>38</sup> 38 | 6 <sup>8</sup> 8   | 20 <sup>2</sup> 2   | W 2  |
| T 3  | 8 50 13  | 13 <sup>23</sup> 33 | 11 <sup>51</sup> 51 | 1 <sup>45</sup> 45  | 21 <sup>52</sup> 52 | 7 <sup>4</sup> 4    | 9 <sup>46</sup> 46  | 18 <sup>37</sup> 37 | 24 <sup>18</sup> 18 | 2 <sup>24</sup> 24 | 3 <sup>5</sup> 5   | 4 <sup>16</sup> 16 | 5 <sup>34</sup> 34 | 6 <sup>15</sup> 15 | 20 <sup>2</sup> 2   | T 3  |
| F 4  | 8 54 9   | 14 <sup>24</sup> 30 | 23 <sup>40</sup> 40 | 2 <sup>47</sup> 47  | 23 <sup>5</sup> 5   | 7 <sup>51</sup> 51  | 9 <sup>50</sup> 50  | 18 <sup>44</sup> 44 | 24 <sup>19</sup> 19 | 2 <sup>23</sup> 23 | 3 <sup>5</sup> 5   | 4 <sup>15</sup> 15 | 5 <sup>31</sup> 31 | 6 <sup>21</sup> 21 | 20 <sup>3</sup> 3   | F 4  |
| S 5  | 8 58 6   | 15 <sup>25</sup> 26 | 5 <sup>32</sup> 32  | 3 <sup>41</sup> 41  | 24 <sup>17</sup> 17 | 8 <sup>38</sup> 38  | 9 <sup>53</sup> 53  | 18 <sup>50</sup> 50 | 24 <sup>20</sup> 20 | 2 <sup>22</sup> 22 | 3 <sup>5</sup> 5   | 4 <sup>14</sup> 14 | 5 <sup>28</sup> 28 | 6 <sup>28</sup> 28 | 20 <sup>3</sup> 3   | S 5  |
| S 6  | 9 2 2    | 16 <sup>26</sup> 21 | 17 <sup>28</sup> 28 | 4 <sup>28</sup> 28  | 25 <sup>28</sup> 28 | 9 <sup>25</sup> 25  | 9 <sup>57</sup> 57  | 18 <sup>57</sup> 57 | 24 <sup>22</sup> 22 | 2 <sup>21</sup> 21 | 3 <sup>5</sup> 5   | 4 <sup>15</sup> 15 | 5 <sup>25</sup> 25 | 6 <sup>35</sup> 35 | 20 <sup>4</sup> 4   | S 6  |
| M 7  | 9 5 59   | 17 <sup>27</sup> 14 | 29 <sup>32</sup> 32 | 5 <sup>5</sup> 5    | 26 <sup>40</sup> 40 | 10 <sup>12</sup> 12 | 10 <sup>0</sup> 0   | 19 <sup>3</sup> 3   | 24 <sup>23</sup> 23 | 2 <sup>20</sup> 20 | 3 <sup>5</sup> 5   | 4 <sup>16</sup> 16 | 5 <sup>22</sup> 22 | 6 <sup>41</sup> 41 | 20 <sup>4</sup> 4   | M 7  |
| T 8  | 9 9 55   | 18 <sup>28</sup> 07 | 11 <sup>47</sup> 47 | 5 <sup>33</sup> 33  | 27 <sup>52</sup> 52 | 10 <sup>59</sup> 59 | 10 <sup>3</sup> 3   | 19 <sup>10</sup> 10 | 24 <sup>24</sup> 24 | 2 <sup>19</sup> 19 | 3 <sup>5</sup> 5   | 4 <sup>17</sup> 17 | 5 <sup>19</sup> 19 | 6 <sup>48</sup> 48 | 20 <sup>5</sup> 5   | T 8  |
| W 9  | 9 13 52  | 19 <sup>28</sup> 58 | 24 <sup>15</sup> 15 | 5 <sup>51</sup> 51  | 29 <sup>4</sup> 4   | 11 <sup>46</sup> 46 | 10 <sup>6</sup> 6   | 19 <sup>17</sup> 17 | 24 <sup>25</sup> 25 | 2 <sup>17</sup> 17 | 3 <sup>5</sup> 5   | 4 <sup>19</sup> 19 | 5 <sup>15</sup> 15 | 6 <sup>55</sup> 55 | 20 <sup>5</sup> 5   | W 9  |
| T 10 | 9 17 48  | 20 <sup>29</sup> 47 | 7 <sup>1</sup> 1    | 5 <sup>58</sup> 58  | 0 <sup>15</sup> 15  | 12 <sup>33</sup> 33 | 10 <sup>9</sup> 9   | 19 <sup>24</sup> 24 | 24 <sup>26</sup> 26 | 2 <sup>16</sup> 16 | 3 <sup>4</sup> 4   | 4 <sup>20</sup> 20 | 5 <sup>12</sup> 12 | 7 <sup>1</sup> 1   | 20 <sup>6</sup> 6   | T 10 |
| F 11 | 9 21 45  | 21 <sup>30</sup> 35 | 20 <sup>7</sup> 7   | 5 <sup>54</sup> 54  | 1 <sup>27</sup> 27  | 13 <sup>20</sup> 20 | 10 <sup>12</sup> 12 | 19 <sup>30</sup> 30 | 24 <sup>27</sup> 27 | 2 <sup>15</sup> 15 | 3 <sup>4</sup> 4   | 4 <sup>20</sup> 20 | 5 <sup>9</sup> 9   | 7 <sup>8</sup> 8   | 20 <sup>7</sup> 7   | F 11 |
| S 12 | 9 25 41  | 22 <sup>31</sup> 22 | 3 <sup>38</sup> 38  | 5 <sup>39</sup> 39  | 2 <sup>38</sup> 38  | 14 <sup>7</sup> 7   | 10 <sup>14</sup> 14 | 19 <sup>37</sup> 37 | 24 <sup>28</sup> 28 | 2 <sup>14</sup> 14 | 3 <sup>4</sup> 4   | 4 <sup>20</sup> 20 | 5 <sup>6</sup> 6   | 7 <sup>15</sup> 15 | 20 <sup>8</sup> 8   | S 12 |
| S 13 | 9 29 38  | 23 <sup>32</sup> 07 | 17 <sup>33</sup> 33 | 5 <sup>13</sup> 13  | 3 <sup>49</sup> 49  | 14 <sup>54</sup> 54 | 10 <sup>17</sup> 17 | 19 <sup>44</sup> 44 | 24 <sup>29</sup> 29 | 2 <sup>14</sup> 14 | 3 <sup>4</sup> 4   | 4 <sup>19</sup> 19 | 5 <sup>3</sup> 3   | 7 <sup>21</sup> 21 | 20 <sup>9</sup> 9   | S 13 |
| M14  | 9 33 35  | 24 <sup>32</sup> 51 | 1 <sup>54</sup> 54  | 4 <sup>37</sup> 37  | 5 <sup>0</sup> 0    | 15 <sup>41</sup> 41 | 10 <sup>19</sup> 19 | 19 <sup>51</sup> 51 | 24 <sup>30</sup> 30 | 2 <sup>13</sup> 13 | 3 <sup>3</sup> 3   | 4 <sup>18</sup> 18 | 5 <sup>0</sup> 0   | 7 <sup>28</sup> 28 | 20 <sup>10</sup> 10 | M14  |
| T 15 | 9 37 31  | 25 <sup>33</sup> 33 | 16 <sup>37</sup> 37 | 3 <sup>52</sup> 52  | 6 <sup>11</sup> 11  | 16 <sup>28</sup> 28 | 10 <sup>21</sup> 21 | 19 <sup>58</sup> 58 | 24 <sup>30</sup> 30 | 2 <sup>12</sup> 12 | 3 <sup>3</sup> 3   | 4 <sup>17</sup> 17 | 4 <sup>56</sup> 56 | 7 <sup>35</sup> 35 | 20 <sup>11</sup> 11 | T 15 |
| W16  | 9 41 28  | 26 <sup>34</sup> 14 | 1 <sup>54</sup> 54  | 2 <sup>59</sup> 59  | 7 <sup>22</sup> 22  | 17 <sup>15</sup> 15 | 10 <sup>22</sup> 22 | 20 <sup>5</sup> 5   | 24 <sup>31</sup> 31 | 2 <sup>11</sup> 11 | 3 <sup>3</sup> 3   | 4 <sup>16</sup> 16 | 4 <sup>53</sup> 53 | 7 <sup>41</sup> 41 | 20 <sup>12</sup> 12 | W16  |
| T 17 | 9 45 24  | 27 <sup>34</sup> 53 | 16 <sup>46</sup> 46 | 1 <sup>59</sup> 59  | 8 <sup>33</sup> 33  | 18 <sup>2</sup> 2   | 10 <sup>24</sup> 24 | 20 <sup>12</sup> 12 | 24 <sup>32</sup> 32 | 2 <sup>10</sup> 10 | 3 <sup>2</sup> 2   | 4 <sup>15</sup> 15 | 4 <sup>50</sup> 50 | 7 <sup>48</sup> 48 | 20 <sup>13</sup> 13 | T 17 |
| F 18 | 9 49 21  | 28 <sup>35</sup> 31 | 1 <sup>56</sup> 56  | 0 <sup>54</sup> 54  | 9 <sup>43</sup> 43  | 18 <sup>49</sup> 49 | 10 <sup>25</sup> 25 | 20 <sup>19</sup> 19 | 24 <sup>32</sup> 32 | 2 <sup>9</sup> 9   | 3 <sup>2</sup> 2   | 4 <sup>15</sup> 15 | 4 <sup>47</sup> 47 | 7 <sup>55</sup> 55 | 20 <sup>14</sup> 14 | F 18 |
| S 19 | 9 53 17  | 29 <sup>36</sup> 07 | 16 <sup>56</sup> 56 | 2 <sup>56</sup> 56  | 10 <sup>54</sup> 54 | 19 <sup>36</sup> 36 | 10 <sup>27</sup> 27 | 20 <sup>26</sup> 26 | 24 <sup>33</sup> 33 | 2 <sup>9</sup> 9   | 3 <sup>1</sup> 1   | 4 <sup>15</sup> 15 | 4 <sup>44</sup> 44 | 8 <sup>1</sup> 1   | 20 <sup>15</sup> 15 | S 19 |
| S 20 | 9 57 14  | 0 <sup>36</sup> 42  | 1 <sup>59</sup> 59  | 2 <sup>57</sup> 57  | 12 <sup>4</sup> 4   | 20 <sup>23</sup> 23 | 10 <sup>28</sup> 28 | 20 <sup>33</sup> 33 | 24 <sup>33</sup> 33 | 2 <sup>8</sup> 8   | 3 <sup>1</sup> 1   | 4 <sup>16</sup> 16 | 4 <sup>40</sup> 40 | 8 <sup>8</sup> 8   | 20 <sup>17</sup> 17 | S 20 |
| M21  | 10 1 11  | 1 <sup>37</sup> 15  | 15 <sup>58</sup> 58 | 2 <sup>58</sup> 58  | 13 <sup>14</sup> 14 | 21 <sup>10</sup> 10 | 10 <sup>28</sup> 28 | 20 <sup>40</sup> 40 | 24 <sup>34</sup> 34 | 2 <sup>7</sup> 7   | 3 <sup>0</sup> 0   | 4 <sup>16</sup> 16 | 4 <sup>37</sup> 37 | 8 <sup>15</sup> 15 | 20 <sup>18</sup> 18 | M21  |
| T 22 | 10 5 7   | 2 <sup>37</sup> 47  | 29 <sup>50</sup> 50 | 2 <sup>6</sup> 6    | 14 <sup>24</sup> 24 | 21 <sup>58</sup> 58 | 10 <sup>29</sup> 29 | 20 <sup>47</sup> 47 | 24 <sup>34</sup> 34 | 2 <sup>6</sup> 6   | 3 <sup>0</sup> 0   | 4 <sup>16</sup> 16 | 4 <sup>34</sup> 34 | 8 <sup>21</sup> 21 | 20 <sup>19</sup> 19 | T 22 |
| W23  | 10 9 4   | 3 <sup>38</sup> 18  | 13 <sup>15</sup> 15 | 2 <sup>5</sup> 5    | 15 <sup>34</sup> 34 | 22 <sup>45</sup> 45 | 10 <sup>29</sup> 29 | 20 <sup>55</sup> 55 | 24 <sup>34</sup> 34 | 2 <sup>6</sup> 6   | 2 <sup>59</sup> 59 | 4 <sup>16</sup> 16 | 4 <sup>31</sup> 31 | 8 <sup>28</sup> 28 | 20 <sup>21</sup> 21 | W23  |
| T 24 | 10 13 0  | 4 <sup>38</sup> 48  | 26 <sup>14</sup> 14 | 2 <sup>4</sup> 4    | 16 <sup>44</sup> 44 | 23 <sup>32</sup> 32 | 10 <sup>30</sup> 30 | 21 <sup>2</sup> 2   | 24 <sup>35</sup> 35 | 2 <sup>5</sup> 5   | 2 <sup>58</sup> 58 | 4 <sup>16</sup> 16 | 4 <sup>28</sup> 28 | 8 <sup>35</sup> 35 | 20 <sup>22</sup> 22 | T 24 |
| F 25 | 10 16 57 | 5 <sup>39</sup> 17  | 8 <sup>21</sup> 21  | 2 <sup>3</sup> 3    | 17 <sup>54</sup> 54 | 24 <sup>19</sup> 19 | 10 <sup>30</sup> 30 | 21 <sup>9</sup> 9   | 24 <sup>35</sup> 35 | 2 <sup>5</sup> 5   | 2 <sup>58</sup> 58 | 4 <sup>16</sup> 16 | 4 <sup>25</sup> 25 | 8 <sup>41</sup> 41 | 20 <sup>24</sup> 24 | F 25 |
| S 26 | 10 20 53 | 6 <sup>39</sup> 44  | 21 <sup>9</sup> 9   | 2 <sup>4</sup> 4    | 19 <sup>3</sup> 3   | 25 <sup>6</sup> 6   | 10 <sup>30</sup> 30 | 21 <sup>16</sup> 16 | 24 <sup>35</sup> 35 | 2 <sup>4</sup> 4   | 2 <sup>57</sup> 57 | 4 <sup>16</sup> 16 | 4 <sup>21</sup> 21 | 8 <sup>48</sup> 48 | 20 <sup>26</sup> 26 | S 26 |
| S 27 | 10 24 50 | 7 <sup>40</sup> 10  | 3 <sup>13</sup> 13  | 2 <sup>6</sup> 6    | 20 <sup>13</sup> 13 | 25 <sup>54</sup> 54 | 10 <sup>29</sup> 29 | 21 <sup>24</sup> 24 | 24 <sup>35</sup> 35 | 2 <sup>4</sup> 4   | 2 <sup>56</sup> 56 | 4 <sup>16</sup> 16 | 4 <sup>18</sup> 18 | 8 <sup>55</sup> 55 | 20 <sup>28</sup> 28 | S 27 |
| M28  | 10 28 46 | 8 <sup>40</sup> 35  | 15 <sup>3</sup> 3   | 2 <sup>13</sup> 13  | 21 <sup>35</sup> 35 | 21 <sup>22</sup> 22 | 26 <sup>41</sup> 41 | 10 <sup>29</sup> 29 | 21 <sup>31</sup> 31 | 2 <sup>3</sup> 3   | 2 <sup>56</sup> 56 | 4 <sup>17</sup> 17 | 4 <sup>15</sup> 15 | 9 <sup>1</sup> 1   | 20 <sup>29</sup> 29 | M28  |

| Day  | ☉        | ☽       | ♀      | ♂       | ♂        | ♂                 | ♂          | ♂       | ♂       | ♂       | ♂       | ♂      | ♂       | ♂       | ♂        | ♂        |
|------|----------|---------|--------|---------|----------|-------------------|------------|---------|---------|---------|---------|--------|---------|---------|----------|----------|
|      | decl     | decl    | lat    | decl    | lat      | decl              | lat        | decl    | lat     | decl    | lat     | decl   | lat     | decl    | lat      | lat      |
| T 1  | 17s21    | 25s55   | 3s47   | 12s 0   | 0s21     | 5s12              | 1s 7       | 19s52   | 1s 2    | 13s29   | 1n16    | 6s20   | 1s55    | 18s31   | 0n19     | 22n13    |
| W 2  | 17 4 23  | 0 2 58  | 11 22  | 0 8 4   | 4 41     | 1 4 19            | 41 1 2     | 13 30   | 1 16 6  | 18 1 55 | 18 31   | 0 19   | 22 13   | 1 10 3  | 34 17    | 5 9 55   |
| T 3  | 16 47 19 | 2 0 10  | 45 0n  | 6 4 10  | 1 2 19   | 29 17             | 1 2 13     | 32 1 16 | 6 15    | 1 55 18 | 31 0 19 | 22 13  | 1 10 3  | 34 17   | 5 9 56   | 9 27 21  |
| F 4  | 16 29 14 | 32 0 58 | 10 9 0 | 21 3 39 | 0 59 19  | 17 1 2            | 13 32 1 17 | 6 13    | 1 55 18 | 32 0 19 | 22 13   | 1 10 3 | 35 17   | 6 9 57  | 9 29 21  | 6 15 13  |
| S 5  | 16 12 9  | 22 0n 7 | 9 35 0 | 36 3 8  | 0 56 19  | 5 1 2             | 13 33 1 17 | 6 10    | 1 54 18 | 32 0 19 | 22 13   | 1 10 3 | 35 17   | 6 9 57  | 9 30 21  | 3 15 13  |
| S 6  | 15 53 3  | 50 1 13 | 9 3 0  | 53 2 36 | 0 53 18  | 53 1 3            | 13 34 1 17 | 6 7     | 1 54 18 | 32 0 19 | 22 13   | 1 10 3 | 36 17   | 7 9 57  | 9 31 21  | 1 15 13  |
| M 7  | 15 35 1n | 53 2 16 | 8 34 1 | 9 2 5   | 0 50 18  | 41 1 3            | 13 35 1 17 | 6 5     | 1 54 18 | 33 0 19 | 22 13   | 1 10 3 | 37 17   | 7 9 56  | 9 32 20  | 58 15 13 |
| T 8  | 15 16 7  | 37 3 13 | 8 8 1  | 26 1 34 | 0 47 18  | 28 1 3            | 13 35 1 17 | 6 2     | 1 54 18 | 33 0 19 | 22 13   | 1 10 3 | 37 17   | 8 9 56  | 9 33 20  | 56 15 14 |
| W 9  | 14 58 13 | 9 4 3   | 7 46 1 | 43 1 2  | 0 43 18  | 15 1 3            | 13 36 1 18 | 5 59    | 1 54 18 | 33 0 19 | 22 14   | 1 10 3 | 38 17   | 9 9 55  | 9 34 20  | 53 15 14 |
| T 10 | 14 38 18 | 16 4 42 | 7 28 2 | 0 31 0  | 40 18 2  | 1 3 13            | 37 1 18    | 5 57    | 1 54 18 | 33 0 19 | 22 14   | 1 10 3 | 38 17   | 9 9 55  | 9 36 20  | 51 15 14 |
| F 11 | 14 19 22 | 41 5 8  | 7 14 2 | 16 0n 1 | 0 37 17  | 49 1 4            | 13 38 1 18 | 5 54    | 1 54 18 | 34 0 19 | 22 14   | 1 10 3 | 39 17   | 10 9 55 | 9 37 20  | 49 15 14 |
| S 12 | 13 59 26 | 2 5 17  | 7 4 2  | 32 0 33 | 17 36 1  | 4 13 38 1 18      | 5 51       | 1 54 18 | 34 0 19 | 22 14   | 1 10 3  | 39 17  | 10 9 55 | 9 38 20 | 46 15 15 | 2 36     |
| S 13 | 13 40 27 | 5 9 7   | 0 2 47 | 1 4 0   | 30 17 22 | 1 4 13 39 1 18    | 5 49       | 1 54 18 | 34 0 19 | 22 14   | 1 10 3  | 40 17  | 11 9 55 | 9 39 20 | 44 15 15 | 2 36     |
| M14  | 13 19 28 | 5 4 41  | 7 0 3  | 1 35 0  | 26 17 8  | 1 4 13 39 1 19    | 5 46       | 1 54 18 | 34 0 19 | 22 14   | 1 10 3  | 41 17  | 11 9 55 | 9 40 20 | 41 15 15 | 2 36     |
| T 15 | 12 59 26 | 16 3 55 | 7 5 3  | 13 2 6  | 0 23 16  | 54 1 4 13 39 1 19 | 5 43       | 1 54 18 | 34 0 19 | 22 14   | 1 10 3  | 41 17  | 12 9 56 | 9 41 20 | 39 15 16 | 2 36     |
| W16  | 12 39 22 | 34 2 52 | 7 14 3 | 23 2 38 | 0 19 16  | 40 1 4 13 40 1 19 | 5 40       | 1 54 18 | 35 0 19 | 22 14   | 1 10 3  | 42 17  | 12 9 56 | 9 43 20 | 36 15 16 | 2 36     |
| T 17 | 12 18 17 | 19 1 36 | 7 28 3 | 31 3 9  | 0 15 16  | 26 1 5 13 40 1 19 | 5 37       | 1 54 18 | 35 0 19 | 22 14   | 1 10 3  | 42 17  | 13 9 56 | 9 44 20 | 34 15 16 | 2 36     |
| F 18 | 11 57 10 | 59 0 13 | 7 45 3 | 37 3 40 | 0 12 16  | 12 1 5 13 40 1 19 | 5 35       | 1 54 18 | 35 0 19 | 22 14   | 1 10 3  | 43 17  | 13 9 56 | 9 45 20 | 31 15 17 | 2 36     |
| S 19 | 11 36 4  | 5 1s10  | 8 5 3  | 41 4 11 | 0 8 15   | 57 1 5 13 40 1 20 | 5 32       | 1 54 18 | 35 0 19 | 22 14   | 1 10 3  | 44 17  | 14 9 56 | 9 46 20 | 29 15 17 | 2 36     |
| S 20 | 11 15 2s | 54 2 27 | 8 28 3 | 42 4 4  | 0 4 15   | 42 1 5 13 41 1 20 | 5 29       | 1 54 18 | 35 0 19 | 22 14   | 1 10 3  | 44 17  | 14 9 56 | 9 47 20 | 26 15 18 | 2 36     |
| M21  | 10 53 9  | 32 3 32 | 8 52 3 | 41 5 13 | 0n 0 15  | 27 1 5 13 41 1 20 | 5 26       | 1 54 18 | 35 0 19 | 22 14   | 1 9 3   | 45 17  | 15 9 56 | 9 48 20 | 24 15 18 | 2 36     |
| T 22 | 10 32 15 | 29 4 22 | 9 18 3 | 38 5 44 | 0 4 15   | 12 1 5 13 41 1 20 | 5 23       | 1 54 18 | 35 0 19 | 22 14   | 1 9 3   | 46 17  | 15 9 56 | 9 49 20 | 21 15 18 | 2 36     |
| W23  | 10 10 20 | 30 4 57 | 9 43 3 | 33 6 15 | 0 8 14   | 57 1 5 13 41 1 21 | 5 21       | 1 54 18 | 35 0 19 | 22 14   | 1 9 3   | 46 17  | 16 9 56 | 9 51 20 | 19 15 19 | 2 35     |
| T 24 | 9 48 24  | 23 5 15 | 10 9 3 | 26 6 46 | 0 12 14  | 41 1 5 13 40 1 21 | 5 18       | 1 54 18 | 35 0 19 | 22 14   | 1 9 3   | 47 17  | 16 9 56 | 9 52 20 | 16 15 19 | 2 35     |

# ASTRODIENST EPHEMERIS for the year 2231

## geocentric

MARCH 2231

00:00 UT

| Day  | Sid.t    | ☉        | ☽       | ♀      | ♂      | ♂     | ♂      | ♂      | ♂      | ♂     | ♂     | ♂     | ♂     | ♂     | ♂      | Day  |
|------|----------|----------|---------|--------|--------|-------|--------|--------|--------|-------|-------|-------|-------|-------|--------|------|
| T 1  | 10 32 43 | 9°40'58  | 26°35'6 | 21°R12 | 22°Y31 | 27°28 | 10°R28 | 21°X38 | 24°R35 | 2°R 3 | 2°R55 | 4°X17 | 4°X12 | 9°8   | 20°R31 | T 1  |
| W 2  | 10 36 40 | 10°41'20 | 8°43    | 20°56  | 23°40  | 28°15 | 10°M27 | 21°45  | 24°M35 | 2°2   | 2°M54 | 4°18  | 4°9   | 9°15  | 20°33  | W 2  |
| T 3  | 10 40 36 | 11°41'40 | 20°32   | 20°47  | 24°49  | 29°3  | 10°26  | 21°53  | 24°35  | 2°2   | 2°53  | 4°19  | 4°6   | 9°21  | 20°35  | T 3  |
| F 4  | 10 44 33 | 12°41'58 | 2°32    | 20°D45 | 25°57  | 29°50 | 10°25  | 22°0   | 24°35  | 2°1   | 2°52  | 4°R19 | 4°2   | 9°28  | 20°37  | F 4  |
| S 5  | 10 48 29 | 13°42'15 | 14°25   | 20°50  | 27°6   | 0°X37 | 10°23  | 22°7   | 24°35  | 2°1   | 2°51  | 4°19  | 3°59  | 9°35  | 20°39  | S 5  |
| S 6  | 10 52 26 | 14°42'30 | 26°32   | 21°1   | 28°14  | 1°24  | 10°22  | 22°15  | 24°34  | 2°1   | 2°50  | 4°18  | 3°56  | 9°41  | 20°41  | S 6  |
| M 7  | 10 56 22 | 15°42'43 | 8°Y50   | 21°18  | 29°22  | 2°12  | 10°20  | 22°22  | 24°34  | 2°1   | 2°49  | 4°17  | 3°53  | 9°48  | 20°43  | M 7  |
| T 8  | 11 0 19  | 16°42'54 | 21°19   | 21°40  | 0°B30  | 2°59  | 10°18  | 22°29  | 24°34  | 2°0   | 2°48  | 4°15  | 3°50  | 9°55  | 20°46  | T 8  |
| W 9  | 11 4 15  | 17°43'04 | 4°B1    | 22°7   | 1°37   | 3°46  | 10°15  | 22°37  | 24°33  | 2°0   | 2°47  | 4°13  | 3°46  | 10°1  | 20°48  | W 9  |
| T 10 | 11 8 12  | 18°43'11 | 16°58   | 22°39  | 2°45   | 4°33  | 10°13  | 22°44  | 24°33  | 2°0   | 2°46  | 4°11  | 3°43  | 10°8  | 20°50  | T 10 |
| F 11 | 11 12 8  | 19°43'17 | 0°II10  | 23°16  | 3°52   | 5°21  | 10°10  | 22°52  | 24°32  | 2°0   | 2°45  | 4°10  | 3°40  | 10°15 | 20°53  | F 11 |
| S 12 | 11 16 5  | 20°43'20 | 13°39   | 23°56  | 4°59   | 6°8   | 10°8   | 22°59  | 24°31  | 2°0   | 2°44  | 4°9   | 3°37  | 10°21 | 20°55  | S 12 |
| S 13 | 11 20 2  | 21°43'21 | 27°26   | 24°41  | 6°6    | 6°55  | 10°5   | 23°6   | 24°31  | 2°0   | 2°43  | 4°D9  | 3°34  | 10°28 | 20°58  | S 13 |
| M14  | 11 23 58 | 22°43'20 | 11°31   | 25°29  | 7°13   | 7°42  | 10°2   | 23°14  | 24°30  | 2°D0  | 2°42  | 4°10  | 3°31  | 10°35 | 21°0   | M14  |
| T 15 | 11 27 55 | 23°43'17 | 25°53   | 26°20  | 8°19   | 8°30  | 9°58   | 23°21  | 24°29  | 2°0   | 2°40  | 4°11  | 3°27  | 10°41 | 21°3   | T 15 |
| W16  | 11 31 51 | 24°43'11 | 10°Q30  | 27°15  | 9°25   | 9°17  | 9°55   | 23°29  | 24°28  | 2°0   | 2°39  | 4°12  | 3°24  | 10°48 | 21°5   | W16  |
| T 17 | 11 35 48 | 25°43'03 | 25°17   | 28°12  | 10°31  | 10°4  | 9°51   | 23°36  | 24°28  | 2°0   | 2°38  | 4°13  | 3°21  | 10°54 | 21°8   | T 17 |
| F 18 | 11 39 44 | 26°42'54 | 10°P7   | 29°12  | 11°37  | 10°51 | 9°47   | 23°43  | 24°27  | 2°0   | 2°37  | 4°R13 | 3°18  | 11°1  | 21°11  | F 18 |
| S 19 | 11 43 41 | 27°42'42 | 24°54   | 0°X15  | 12°42  | 11°38 | 9°43   | 23°51  | 24°26  | 2°0   | 2°35  | 4°12  | 3°15  | 11°8  | 21°14  | S 19 |
| S 20 | 11 47 37 | 28°42'28 | 9°Q30   | 1°20   | 13°47  | 12°26 | 9°39   | 23°58  | 24°25  | 2°0   | 2°34  | 4°10  | 3°11  | 11°14 | 21°16  | S 20 |
| M21  | 11 51 34 | 29°42'12 | 23°49   | 2°28   | 14°52  | 13°13 | 9°35   | 24°6   | 24°24  | 2°1   | 2°33  | 4°7   | 3°8   | 11°21 | 21°19  | M21  |
| T 22 | 11 55 31 | 0°Y41'54 | 7°M46   | 3°38   | 15°57  | 14°0  | 9°31   | 24°13  | 24°23  | 2°1   | 2°31  | 4°3   | 3°5   | 11°28 | 21°22  | T 22 |
| W23  | 11 59 27 | 1°41'35  | 21°17   | 4°50   | 17°1   | 14°47 | 9°26   | 24°20  | 24°21  | 2°1   | 2°30  | 3°58  | 3°2   | 11°34 | 21°25  | W23  |
| T 24 | 12 3 24  | 2°41'14  | 4°X23   | 6°3    | 18°5   | 15°34 | 9°21   | 24°28  | 24°20  | 2°2   | 2°29  | 3°55  | 2°59  | 11°41 | 21°28  | T 24 |
| F 25 | 12 7 20  | 3°40'51  | 17°5    | 7°19   | 19°9   | 16°21 | 9°16   | 24°35  | 24°19  | 2°2   | 2°27  | 3°52  | 2°56  | 11°48 | 21°31  | F 25 |
| S 26 | 12 11 17 | 4°40'27  | 29°27   | 8°37   | 20°12  | 17°9  | 9°11   | 24°42  | 24°18  | 2°2   | 2°26  | 3°D51 | 2°52  | 11°54 | 21°34  | S 26 |
| S 27 | 12 15 13 | 5°40'01  | 11°B32  | 9°56   | 21°15  | 17°56 | 9°6    | 24°50  | 24°16  | 2°3   | 2°24  | 3°51  | 2°49  | 12°1  | 21°37  | S 27 |
| M28  | 12 19 10 | 6°39'33  | 23°27   | 11°17  | 22°18  | 18°43 | 9°1    | 24°57  | 24°15  | 2°3   | 2°23  | 3°52  | 2°46  | 12°8  | 21°41  | M28  |
| T 29 | 12 23 6  | 7°39'03  | 5°M16   | 12°40  | 23°20  | 19°30 | 8°55   | 25°4   | 24°14  | 2°4   | 2°21  | 3°54  | 2°43  | 12°14 | 21°44  | T 29 |
| W30  | 12 27 3  | 8°38'32  | 17°3    | 14°4   | 24°22  | 20°17 | 8°49   | 25°12  | 24°12  | 2°4   | 2°20  | 3°56  | 2°40  | 12°21 | 21°47  | W30  |
| T 31 | 12 31 0  | 9°Y37'58 | 28°54   | 15°X30 | 25°B24 | 21°X4 | 8°M44  | 25°X19 | 24°M11 | 2°5   | 2°M18 | 3°R57 | 2°X37 | 12°28 | 21°B50 | T 31 |

| Day  | ☉    | ☾     |      | ♀     |      | ♀     |      | ♂     |      | ♂     |      | ♂    |      | ♂     |      | ♂     |      | ♂    |       | ♂     |       | ♂     |       | ♂    |     | ♂    |     | ♂    |     |
|------|------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|-------|------|-------|------|------|-------|-------|-------|-------|-------|------|-----|------|-----|------|-----|
|      | decl | decl  | lat  | decl  | lat  | decl  | lat  | decl  | lat  | decl  | lat  | decl | lat  | decl  | lat  | decl  | lat  | decl | lat   | decl  | lat   | decl  | lat   | decl | lat | decl | lat | decl | lat |
| T 1  | 7s56 | 23s54 | 3s13 | 12s 2 | 2n31 | 9n16  | 0n34 | 13s22 | 1s 6 | 13s39 | 1n22 | 5s 3 | 1s54 | 18s35 | 0n19 | 22n15 | 1s 9 | 3n51 | 17n19 | 9s56  | 9s58  | 20s 3 | 15n22 | 2s35 |     |      |     |      |     |
| W 2  | 7 33 | 20 16 | 2 17 | 12 19 | 2 18 | 9 46  | 0 38 | 13 6  | 1 6  | 13 38 | 1 22 | 5 1  | 1 54 | 18 35 | 0 19 | 22 15 | 1 9  | 3 51 | 17 19 | 9 55  | 9 59  | 20 1  | 15 23 | 2 35 |     |      |     |      |     |
| T 3  | 7 10 | 15 50 | 1 16 | 12 35 | 2 5  | 10 15 | 0 42 | 12 49 | 1 6  | 13 38 | 1 22 | 4 58 | 1 54 | 18 35 | 0 19 | 22 15 | 1 9  | 3 52 | 17 20 | 9 55  | 10 0  | 19 58 | 15 23 | 2 35 |     |      |     |      |     |
| F 4  | 6 47 | 10 46 | 0 11 | 12 48 | 1 51 | 10 44 | 0 47 | 12 33 | 1 6  | 13 37 | 1 22 | 4 55 | 1 54 | 18 35 | 0 19 | 22 15 | 1 9  | 3 53 | 17 20 | 9 55  | 10 1  | 19 56 | 15 24 | 2 35 |     |      |     |      |     |
| S 5  | 6 24 | 5 16  | 0n56 | 12 59 | 1 38 | 11 13 | 0 51 | 12 16 | 1 6  | 13 37 | 1 23 | 4 52 | 1 54 | 18 35 | 0 19 | 22 15 | 1 9  | 3 53 | 17 21 | 9 55  | 10 2  | 19 53 | 15 24 | 2 35 |     |      |     |      |     |
| S 6  | 6 1  | 0n28  | 2 0  | 13 9  | 1 24 | 11 42 | 0 56 | 11 59 | 1 6  | 13 36 | 1 23 | 4 49 | 1 54 | 18 35 | 0 19 | 22 15 | 1 9  | 3 54 | 17 21 | 9 55  | 10 3  | 19 51 | 15 25 | 2 35 |     |      |     |      |     |
| M 7  | 5 38 | 6 15  | 3 0  | 13 16 | 1 11 | 12 11 | 1 0  | 11 43 | 1 6  | 13 35 | 1 23 | 4 46 | 1 54 | 18 35 | 0 19 | 22 15 | 1 9  | 3 55 | 17 22 | 9 56  | 10 4  | 19 48 | 15 26 | 2 35 |     |      |     |      |     |
| T 8  | 5 14 | 11 53 | 3 52 | 13 22 | 0 58 | 12 39 | 1 5  | 11 26 | 1 6  | 13 34 | 1 23 | 4 43 | 1 54 | 18 35 | 0 19 | 22 15 | 1 9  | 3 56 | 17 22 | 9 56  | 10 6  | 19 46 | 15 26 | 2 35 |     |      |     |      |     |
| W 9  | 4 51 | 17 8  | 4 34 | 13 25 | 0 45 | 13 7  | 1 9  | 11 8  | 1 6  | 13 34 | 1 23 | 4 40 | 1 54 | 18 35 | 0 19 | 22 15 | 1 9  | 3 56 | 17 22 | 9 57  | 10 7  | 19 43 | 15 27 | 2 34 |     |      |     |      |     |
| T 10 | 4 27 | 21 42 | 5 2  | 13 26 | 0 32 | 13 34 | 1 14 | 10 51 | 1 6  | 13 33 | 1 23 | 4 37 | 1 54 | 18 35 | 0 19 | 22 15 | 1 9  | 3 57 | 17 23 | 9 58  | 10 8  | 19 40 | 15 28 | 2 34 |     |      |     |      |     |
| F 11 | 4 4  | 25 18 | 5 16 | 13 26 | 0 20 | 14 2  | 1 19 | 10 34 | 1 6  | 13 32 | 1 24 | 4 34 | 1 54 | 18 35 | 0 19 | 22 15 | 1 9  | 3 58 | 17 23 | 9 58  | 10 9  | 19 38 | 15 28 | 2 34 |     |      |     |      |     |
| S 12 | 3 40 | 27 34 | 5 12 | 13 24 | 0 8  | 14 29 | 1 23 | 10 16 | 1 6  | 13 31 | 1 24 | 4 32 | 1 54 | 18 34 | 0 19 | 22 15 | 1 9  | 3 58 | 17 24 | 9 59  | 10 10 | 19 35 | 15 29 | 2 34 |     |      |     |      |     |
| S 13 | 3 17 | 28 14 | 4 51 | 13 20 | 0s 3 | 14 55 | 1 28 | 9 59  | 1 6  | 13 30 | 1 24 | 4 29 | 1 54 | 18 34 | 0 19 | 22 15 | 1 9  | 3 59 | 17 24 | 9 59  | 10 11 | 19 33 | 15 30 | 2 34 |     |      |     |      |     |
| M14  | 2 53 | 27 5  | 4 12 | 13 14 | 0 14 | 15 22 | 1 32 | 9 41  | 1 6  | 13 28 | 1 24 | 4 26 | 1 54 | 18 34 | 0 19 | 22 15 | 1 9  | 4 0  | 17 24 | 9 58  | 10 13 | 19 30 | 15 30 | 2 34 |     |      |     |      |     |
| T 15 | 2 29 | 24 9  | 3 16 | 13 7  | 0 25 | 15 48 | 1 37 | 9 24  | 1 6  | 13 27 | 1 24 | 4 23 | 1 54 | 18 34 | 0 19 | 22 15 | 1 8  | 4 1  | 17 25 | 9 58  | 10 14 | 19 27 | 15 31 | 2 34 |     |      |     |      |     |
| W16  | 2 6  | 19 38 | 2 7  | 12 58 | 0 35 | 16 13 | 1 42 | 9 6   | 1 6  | 13 26 | 1 25 | 4 20 | 1 54 | 18 34 | 0 19 | 22 15 | 1 8  | 4 1  | 17 25 | 9 57  | 10 15 | 19 25 | 15 32 | 2 34 |     |      |     |      |     |
| T 17 | 1 42 | 13 51 | 0 49 | 12 47 | 0 45 | 16 39 | 1 46 | 8 48  | 1 6  | 13 25 | 1 25 | 4 17 | 1 54 | 18 33 | 0 19 | 22 15 | 1 8  | 4 2  | 17 26 | 9 57  | 10 16 | 19 22 | 15 33 | 2 34 |     |      |     |      |     |
| F 18 | 1 18 | 7 16  | 0s32 | 12 35 | 0 54 | 17 3  | 1 51 | 8 30  | 1 6  | 13 23 | 1 25 | 4 14 | 1 54 | 18 33 | 0 19 | 22 15 | 1 8  | 4 3  | 17 26 | 9 57  | 10 17 | 19 19 | 15 33 | 2 34 |     |      |     |      |     |
| S 19 | 0 55 | 0 19  | 1 52 | 12 21 | 1 3  | 17 28 | 1 56 | 8 12  | 1 6  | 13 22 | 1 25 | 4 11 | 1 54 | 18 33 | 0 19 | 22 16 | 1 8  | 4 4  | 17 26 | 9 57  | 10 18 | 19 17 | 15 34 | 2 34 |     |      |     |      |     |
| S 20 | 0 31 | 6s33  | 3 2  | 12 6  | 1 11 | 17 52 | 2 0  | 7 54  | 1 6  | 13 20 | 1 25 | 4 8  | 1 54 | 18 33 | 0 19 | 22 16 | 1 8  | 4 4  | 17 27 | 9 58  | 10 19 | 19 14 | 15 35 | 2 34 |     |      |     |      |     |
| M21  | 0 7  | 12 57 | 4 0  | 11 49 | 1 19 | 18 16 | 2 5  | 7 36  | 1 5  | 13 19 | 1 25 | 4 6  | 1 54 | 18 32 | 0 19 | 22 16 | 1 8  | 4 5  | 17 27 | 9 59  | 10 21 | 19 12 | 15 36 | 2 34 |     |      |     |      |     |
| T 22 | 0n17 | 18 31 | 4 42 | 11 31 | 1 27 | 18 39 | 2 9  | 7 18  | 1 5  | 13 17 | 1 25 | 4 3  | 1 54 | 18 32 | 0 19 | 22 16 | 1 8  | 4 6  | 17 27 | 10 1  | 10 22 | 19 9  | 15 36 | 2 34 |     |      |     |      |     |
| W23  | 0 40 | 22 59 | 5 6  | 11 11 | 1 34 | 19 2  | 2 14 | 6 59  | 1 5  | 13 16 | 1 26 | 4 0  | 1 54 | 18 32 | 0 19 | 22 16 | 1 8  | 4 7  | 17 28 | 10 2  | 10 23 | 19 6  | 15 37 | 2 34 |     |      |     |      |     |
| T 24 | 1 4  | 26 8  | 5 14 | 10 50 | 1 41 | 19 25 | 2 19 | 6 41  | 1 5  | 13 14 | 1 26 | 3 57 | 1 55 | 18 32 | 0 19 | 22 16 | 1 8  | 4 7  | 17 28 | 10 4  | 10 24 | 19 4  | 15 38 | 2 34 |     |      |     |      |     |
| F 25 | 1 28 | 27 51 | 5 5  | 10 28 | 1 47 | 19 47 | 2 23 | 6 23  | 1 5  | 13 13 | 1 26 | 3 54 | 1 55 | 18 31 | 0 19 | 22 16 | 1 8  | 4 8  | 17 28 | 10 5  | 10 25 | 19 1  | 15 39 | 2 34 |     |      |     |      |     |
| S 26 | 1 51 | 28 8  | 4 43 | 10 4  | 1 53 | 20 9  | 2 28 | 6 4   | 1 5  | 13 11 | 1 26 | 3 51 | 1 55 | 18 31 | 0 19 | 22 16 | 1 8  | 4 9  | 17 28 | 10 5  | 10 26 | 18 58 | 15 40 | 2 34 |     |      |     |      |     |
| S 27 | 2 15 | 27 2  | 4 9  | 9 39  | 1 58 | 20 30 | 2 32 | 5 46  | 1 5  | 13 9  | 1 26 | 3 48 | 1 55 | 18 31 | 0 19 | 22 16 | 1 8  | 4 9  | 17 29 | 10 5  | 10 27 | 18 56 | 15 40 | 2 34 |     |      |     |      |     |
| M28  | 2 38 | 24 43 | 3 24 | 9 13  | 2 3  | 20 51 | 2 37 | 5 27  | 1 5  | 13 7  | 1 26 | 3 46 | 1 55 | 18 30 | 0 19 | 22 16 | 1 8  | 4 10 | 17 29 | 10 5  | 10 29 | 18 53 | 15 41 | 2 34 |     |      |     |      |     |
| T 29 | 3 2  | 21 22 | 2 31 | 8 45  | 2 7  | 21 11 | 2 41 | 5 8   | 1 4  | 13 5  | 1 26 | 3 43 | 1 55 | 18 30 | 0 19 | 22 16 | 1 8  | 4 11 | 17 29 | 10 4  | 10 30 | 18 50 | 15 42 | 2 34 |     |      |     |      |     |
| W30  | 3 25 | 17 9  | 1 31 | 8 17  | 2 11 | 21 31 | 2 45 | 4 50  | 1 4  | 13 3  | 1 27 | 3 40 | 1 55 | 18 30 | 0 19 | 22 16 | 1 8  | 4 12 | 17 29 | 10 4  | 10 31 | 18 48 | 15 43 | 2 34 |     |      |     |      |     |
| T 31 | 3n49 | 12s16 | 0s28 | 7s47  | 2s15 | 21n50 | 2n50 | 4s31  | 1s 4 | 13s 1 | 1n27 | 3s37 | 1s55 | 18s29 | 0n19 | 22n16 | 1s 8 | 4n12 | 17n30 | 10s 3 | 10s32 | 18s45 | 15n44 | 2s34 |     |      |     |      |     |

Julian Day Number = 2535974.5, Delta T = 196.71 sec  
 Ecliptic obliquity = 23°24'42", Nutation = 0°00'09", out-of-bounds declination in red  
 Ayanamsha: Fagan/Bradley = 27°58'15", Lahiri = 27°05'16"

# ASTRODIENST EPHEMERIS for the year 2231

## geocentric

APRIL 2231

00:00 UT

| Day  | Sid.t    | ☉         | ☽      | ♀      | ♂      | ♂      | ♂     | ♂      | ♂      | ♂     | ♂     | ♂     | ♂     | ♂      | ♂      | Day  |
|------|----------|-----------|--------|--------|--------|--------|-------|--------|--------|-------|-------|-------|-------|--------|--------|------|
| F 1  | 12 34 56 | 10°37'23" | 10°52' | 16°57' | 26°25' | 21°51' | 8°R38 | 25°26' | 24°R 9 | 2°5 5 | 2°R17 | 3°R57 | 2°33' | 12°34' | 21°54' | F 1  |
| S 2  | 12 38 53 | 11°36'46" | 23° 1' | 18°26' | 27°26' | 22°38' | 8°M32 | 25°33' | 24°M 7 | 2° 6  | 2°M15 | 3°M55 | 2°30' | 12°41' | 21°57' | S 2  |
| S 3  | 12 42 49 | 12°36'06" | 5°22'  | 19°57' | 28°27' | 23°25' | 8°25' | 25°41' | 24° 6  | 2° 7  | 2°14  | 3°51  | 2°27' | 12°48' | 22° 0' | S 3  |
| M 4  | 12 46 46 | 13°35'25" | 17°57' | 21°28' | 29°27' | 24°12' | 8°19' | 25°48' | 24° 4  | 2° 7  | 2°12  | 3°46  | 2°24' | 12°54' | 22° 4' | M 4  |
| T 5  | 12 50 42 | 14°34'42" | 0°34'  | 23° 2' | 0°11'  | 24°59' | 8°13' | 25°55' | 24° 2  | 2° 8  | 2°11  | 3°39  | 2°21' | 13° 1' | 22° 7' | T 5  |
| W 6  | 12 54 39 | 15°33'57" | 13°49' | 24°36' | 1°27'  | 25°46' | 8° 6  | 26° 2  | 24° 1  | 2° 9  | 2° 9  | 3°32  | 2°17' | 13° 8' | 22°11' | W 6  |
| T 7  | 12 58 35 | 16°33'09" | 27° 6' | 26°13' | 2°26'  | 26°33' | 8° 0  | 26° 9  | 23°59' | 2°10  | 2° 7  | 3°24  | 2°14' | 13°14' | 22°14' | T 7  |
| F 8  | 13 2 32  | 17°32'20" | 10°11' | 27°50' | 3°24'  | 27°20' | 7°53' | 26°16' | 23°57' | 2°11  | 2° 6  | 3°18  | 2°11' | 13°21' | 22°18' | F 8  |
| S 9  | 13 6 29  | 18°31'28" | 24°15' | 29°29' | 4°22'  | 28° 7' | 7°46' | 26°23' | 23°55' | 2°11  | 2° 4  | 3°14  | 2° 8  | 13°28' | 22°21' | S 9  |
| S 10 | 13 10 25 | 19°30'34" | 8° 6'  | 1°10'  | 5°20'  | 28°54' | 7°39' | 26°30' | 23°53' | 2°12  | 2° 3  | 3°11  | 2° 5  | 13°34' | 22°25' | S 10 |
| M 11 | 13 14 22 | 20°29'38" | 22° 6' | 2°52'  | 6°17'  | 29°41' | 7°32' | 26°37' | 23°51' | 2°13  | 2° 1  | 3°D11 | 2° 2  | 13°41' | 22°29' | M 11 |
| T 12 | 13 18 18 | 21°28'39" | 6°15'  | 4°35'  | 7°13'  | 0°12'  | 7°25' | 26°44' | 23°49' | 2°14  | 1°59  | 3°11  | 1°58' | 13°47' | 22°32' | T 12 |
| W 13 | 13 22 15 | 22°27'38" | 20°31' | 6°20'  | 8° 9'  | 1°14'  | 7°18' | 26°51' | 23°47' | 2°15  | 1°58  | 3°13  | 1°55' | 13°54' | 22°36' | W 13 |
| T 14 | 13 26 11 | 23°26'34" | 4°11'  | 8° 7'  | 9° 5'  | 2° 1'  | 7°11' | 26°58' | 23°45' | 2°16  | 1°56  | 3°R13 | 1°52' | 14° 1' | 22°40' | T 14 |
| F 15 | 13 30 8  | 24°25'28" | 19°17' | 9°55'  | 10° 0' | 2°48'  | 7° 4' | 27° 5' | 23°43' | 2°17  | 1°54  | 3°12  | 1°49' | 14° 7' | 22°43' | F 15 |
| S 16 | 13 34 4  | 25°24'20" | 3°39'  | 11°44' | 10°54' | 3°35'  | 6°56' | 27°12' | 23°41' | 2°18  | 1°53  | 3° 9  | 1°46' | 14°14' | 22°47' | S 16 |
| S 17 | 13 38 1  | 26°23'10" | 17°54' | 13°35' | 11°48' | 4°21'  | 6°49' | 27°19' | 23°39' | 2°19  | 1°51  | 3° 3  | 1°43' | 14°21' | 22°51' | S 17 |
| M 18 | 13 41 58 | 27°21'58" | 1°58'  | 15°27' | 12°41' | 5° 8'  | 6°41' | 27°25' | 23°37' | 2°21  | 1°49  | 2°55  | 1°39' | 14°27' | 22°55' | M 18 |
| T 19 | 13 45 54 | 28°20'44" | 15°44' | 17°21' | 13°33' | 5°55'  | 6°34' | 27°32' | 23°35' | 2°22  | 1°48  | 2°46  | 1°36' | 14°34' | 22°59' | T 19 |
| W 20 | 13 49 51 | 29°19'28" | 29°11' | 19°17' | 14°25' | 6°41'  | 6°26' | 27°39' | 23°32' | 2°23  | 1°46  | 2°36  | 1°33' | 14°41' | 23° 3' | W 20 |
| T 21 | 13 53 47 | 0°18'11"  | 12°15' | 21°14' | 15°16' | 7°28'  | 6°19' | 27°46' | 23°30' | 2°24  | 1°44  | 2°28  | 1°30' | 14°47' | 23° 6' | T 21 |
| F 22 | 13 57 44 | 1°16'51"  | 24°58' | 23°12' | 16° 6' | 8°14'  | 6°11' | 27°52' | 23°28' | 2°25  | 1°42  | 2°20  | 1°27' | 14°54' | 23°10' | F 22 |
| S 23 | 14 1 40  | 2°15'30"  | 7°32'  | 25°12' | 16°55' | 9° 1'  | 6° 4' | 27°59' | 23°26' | 2°27  | 1°41  | 2°15  | 1°23' | 15° 1' | 23°14' | S 23 |
| S 24 | 14 5 37  | 3°14'08"  | 19°29' | 27°13' | 17°44' | 9°47'  | 5°56' | 28° 5' | 23°23' | 2°28  | 1°39  | 2°12  | 1°20' | 15° 7' | 23°18' | S 24 |
| M 25 | 14 9 33  | 4°12'43"  | 1°24'  | 29°16' | 18°32' | 10°34' | 5°48' | 28°12' | 23°21' | 2°29  | 1°37  | 2°D11 | 1°17' | 15°14' | 23°22' | M 25 |
| T 26 | 14 13 30 | 5°11'17"  | 13°14' | 1°20'  | 19°19' | 11°20' | 5°41' | 28°18' | 23°19' | 2°31  | 1°36  | 2°11  | 1°14' | 15°21' | 23°26' | T 26 |
| W 27 | 14 17 27 | 6° 9'49"  | 25° 2' | 3°25'  | 20° 5' | 12° 7' | 5°33' | 28°25' | 23°16' | 2°32  | 1°34  | 2°11  | 1°11' | 15°27' | 23°30' | W 27 |
| T 28 | 14 21 23 | 7° 8'20"  | 6°55'  | 5°32'  | 20°50' | 12°53' | 5°25' | 28°31' | 23°14' | 2°33  | 1°32  | 2°R11 | 1° 8' | 15°34' | 23°34' | T 28 |
| F 29 | 14 25 20 | 8° 6'48"  | 18°58' | 7°39'  | 21°35' | 13°39' | 5°18' | 28°37' | 23°11' | 2°35  | 1°31  | 2°10  | 1° 4' | 15°41' | 23°38' | F 29 |
| S 30 | 14 29 16 | 9° 5'16"  | 1°13'  | 9°47'  | 22°18' | 14°26' | 5°10' | 28°44' | 23°M 9 | 2°36  | 1°M29 | 2°3 6 | 1°3 1 | 15°47' | 23°42' | S 30 |

| Day  | ☉     | ☾     |      | ♀     |      | ♀     |      | ♂    |      | ♂     |      | ♂    |      | ♂     |      | ♂     |      | ♂    |       | ♂     |       | ♂     |       | ♂    |     | ♂    |     |
|------|-------|-------|------|-------|------|-------|------|------|------|-------|------|------|------|-------|------|-------|------|------|-------|-------|-------|-------|-------|------|-----|------|-----|
|      | decl  | decl  | lat  | decl  | lat  | decl  | lat  | decl | lat  | decl  | lat  | decl | lat  | decl  | lat  | decl  | lat  | decl | lat   | decl  | lat   | decl  | lat   | decl | lat | decl | lat |
| F 1  | 4n12  | 6s54  | 0n38 | 7s15  | 2s18 | 22n 9 | 2n54 | 4s12 | 1s 4 | 13s 0 | 1n27 | 3s34 | 1s55 | 18s29 | 0n19 | 22n16 | 1s 8 | 4n13 | 17n30 | 10s 3 | 10s33 | 18s42 | 15n45 | 2s34 |     |      |     |
| S 2  | 4 35  | 1 13  | 1 42 | 6 43  | 2 20 | 22 27 | 2 58 | 3 54 | 1 4  | 12 57 | 1 27 | 3 32 | 1 55 | 18 28 | 0 19 | 22 16 | 1 8  | 4 14 | 17 30 | 10 4  | 10 34 | 18 40 | 15 46 | 2 34 |     |      |     |
| S 3  | 4 58  | 4n37  | 2 43 | 6 9   | 2 22 | 22 45 | 3 2  | 3 35 | 1 4  | 12 55 | 1 27 | 3 29 | 1 55 | 18 28 | 0 19 | 22 16 | 1 8  | 4 14 | 17 30 | 10 5  | 10 35 | 18 37 | 15 46 | 2 34 |     |      |     |
| M 4  | 5 21  | 10 22 | 3 36 | 5 35  | 2 24 | 23 3  | 3 7  | 3 16 | 1 3  | 12 53 | 1 27 | 3 26 | 1 55 | 18 28 | 0 19 | 22 16 | 1 8  | 4 15 | 17 31 | 10 7  | 10 37 | 18 34 | 15 47 | 2 33 |     |      |     |
| T 5  | 5 44  | 15 47 | 4 20 | 4 59  | 2 25 | 23 20 | 3 11 | 2 57 | 1 3  | 12 51 | 1 27 | 3 23 | 1 55 | 18 27 | 0 19 | 22 16 | 1 7  | 4 16 | 17 31 | 10 9  | 10 38 | 18 32 | 15 48 | 2 33 |     |      |     |
| W 6  | 6 7   | 20 36 | 4 51 | 4 22  | 2 26 | 23 36 | 3 15 | 2 39 | 1 3  | 12 49 | 1 27 | 3 21 | 1 56 | 18 27 | 0 19 | 22 16 | 1 7  | 4 16 | 17 31 | 10 12 | 10 39 | 18 29 | 15 49 | 2 33 |     |      |     |
| T 7  | 6 30  | 24 28 | 5 7  | 3 44  | 2 26 | 23 52 | 3 19 | 2 20 | 1 3  | 12 47 | 1 27 | 3 18 | 1 56 | 18 26 | 0 19 | 22 16 | 1 7  | 4 17 | 17 31 | 10 15 | 10 40 | 18 26 | 15 50 | 2 33 |     |      |     |
| F 8  | 6 53  | 27 4  | 5 6  | 3 5   | 2 25 | 24 7  | 3 22 | 2 1  | 1 3  | 12 45 | 1 27 | 3 15 | 1 56 | 18 26 | 0 19 | 22 16 | 1 7  | 4 18 | 17 31 | 10 17 | 10 41 | 18 23 | 15 51 | 2 33 |     |      |     |
| S 9  | 7 15  | 28 5  | 4 49 | 2 25  | 2 25 | 24 22 | 3 26 | 1 42 | 1 2  | 12 42 | 1 27 | 3 12 | 1 56 | 18 25 | 0 19 | 22 16 | 1 7  | 4 18 | 17 31 | 10 19 | 10 42 | 18 21 | 15 52 | 2 33 |     |      |     |
| S 10 | 7 38  | 27 23 | 4 14 | 1 44  | 2 23 | 24 37 | 3 30 | 1 23 | 1 2  | 12 40 | 1 27 | 3 10 | 1 56 | 18 25 | 0 19 | 22 16 | 1 7  | 4 19 | 17 31 | 10 19 | 10 43 | 18 18 | 15 53 | 2 33 |     |      |     |
| M 11 | 8 0   | 24 57 | 3 23 | 1 2   | 2 21 | 24 50 | 3 34 | 1 4  | 1 2  | 12 38 | 1 28 | 3 7  | 1 56 | 18 24 | 0 19 | 22 16 | 1 7  | 4 20 | 17 32 | 10 20 | 10 44 | 18 15 | 15 54 | 2 33 |     |      |     |
| T 12 | 8 22  | 20 57 | 2 20 | 0 19  | 2 19 | 25 4  | 3 37 | 0 46 | 1 2  | 12 35 | 1 28 | 3 4  | 1 56 | 18 24 | 0 19 | 22 16 | 1 7  | 4 20 | 17 32 | 10 19 | 10 46 | 18 13 | 15 55 | 2 33 |     |      |     |
| W 13 | 8 44  | 15 43 | 1 8  | 0n26  | 2 16 | 25 16 | 3 41 | 0 27 | 1 1  | 12 33 | 1 28 | 3 2  | 1 56 | 18 23 | 0 19 | 22 16 | 1 7  | 4 21 | 17 32 | 10 19 | 10 47 | 18 10 | 15 56 | 2 33 |     |      |     |
| T 14 | 9 6   | 9 34  | 0s 9 | 1 10  | 2 13 | 25 29 | 3 44 | 0 8  | 1 1  | 12 31 | 1 28 | 2 59 | 1 56 | 18 23 | 0 19 | 22 16 | 1 7  | 4 22 | 17 32 | 10 19 | 10 48 | 18 7  | 15 56 | 2 33 |     |      |     |
| F 15 | 9 27  | 2 56  | 1 25 | 1 56  | 2 9  | 25 40 | 3 47 | 0n11 | 1 1  | 12 28 | 1 28 | 2 56 | 1 57 | 18 22 | 0 19 | 22 16 | 1 7  | 4 22 | 17 32 | 10 19 | 10 49 | 18 4  | 15 57 | 2 33 |     |      |     |
| S 16 | 9 49  | 3s50  | 2 36 | 2 43  | 2 5  | 25 51 | 3 51 | 0 30 | 1 1  | 12 26 | 1 28 | 2 54 | 1 57 | 18 22 | 0 19 | 22 17 | 1 7  | 4 23 | 17 32 | 10 20 | 10 50 | 18 2  | 15 58 | 2 33 |     |      |     |
| S 17 | 10 10 | 10 21 | 3 36 | 3 30  | 2 0  | 26 2  | 3 54 | 0 48 | 1 0  | 12 24 | 1 28 | 2 51 | 1 57 | 18 21 | 0 19 | 22 17 | 1 7  | 4 23 | 17 32 | 10 22 | 10 51 | 17 59 | 15 59 | 2 33 |     |      |     |
| M 18 | 10 31 | 16 14 | 4 22 | 4 18  | 1 55 | 26 12 | 3 57 | 1 7  | 1 0  | 12 21 | 1 28 | 2 49 | 1 57 | 18 21 | 0 19 | 22 17 | 1 7  | 4 24 | 17 32 | 10 25 | 10 52 | 17 56 | 16 0  | 2 33 |     |      |     |
| T 19 | 10 52 | 21 11 | 4 52 | 5 7   | 1 49 | 26 22 | 3 59 | 1 26 | 1 0  | 12 19 | 1 28 | 2 46 | 1 57 | 18 20 | 0 19 | 22 17 | 1 7  | 4 25 | 17 32 | 10 29 | 10 54 | 17 53 | 16 1  | 2 33 |     |      |     |
| W 20 | 11 13 | 24 54 | 5 5  | 5 57  | 1 43 | 26 31 | 4 2  | 1 45 | 0 59 | 12 16 | 1 28 | 2 44 | 1 57 | 18 20 | 0 19 | 22 17 | 1 7  | 4 25 | 17 32 | 10 32 | 10 55 | 17 51 | 16 2  | 2 33 |     |      |     |
| T 21 | 11 34 | 27 12 | 5 1  | 6 47  | 1 36 | 26 39 | 4 5  | 2 3  | 0 59 | 12 14 | 1 28 | 2 41 | 1 57 | 18 19 | 0 19 | 22 17 | 1 7  | 4 26 | 17 32 | 10 35 | 10 56 | 17 48 | 16 3  | 2 34 |     |      |     |
| F 22 | 11 54 | 28 1  | 4 42 | 7 38  | 1 29 | 26 47 | 4 7  | 2 22 | 0 59 | 12 11 | 1 28 | 2 39 | 1 57 | 18 19 | 0 19 | 22 17 | 1 7  | 4 26 | 17 32 | 10 38 | 10 57 | 17 45 | 16 4  | 2 34 |     |      |     |
| S 23 | 12 15 | 27 22 | 4 10 | 8 29  | 1 21 | 26 54 | 4 10 | 2 40 | 0 58 | 12 9  | 1 28 | 2 36 | 1 58 | 18 18 | 0 19 | 22 17 | 1 7  | 4 27 | 17 32 | 10 40 | 10 58 | 17 42 | 16 5  | 2 34 |     |      |     |
| S 24 | 12 35 | 25 26 | 3 28 | 9 20  | 1 13 | 27 1  | 4 12 | 2 59 | 0 58 | 12 6  | 1 28 | 2 34 | 1 58 | 18 18 | 0 19 | 22 17 | 1 7  | 4 27 | 17 32 | 10 41 | 10 59 | 17 39 | 16 6  | 2 34 |     |      |     |
| M 25 | 12 55 | 22 22 | 2 37 | 10 12 | 1 4  | 27 8  | 4 14 | 3 17 | 0 58 | 12 4  | 1 28 | 2 31 | 1 58 | 18 17 | 0 19 | 22 17 | 1 7  | 4 28 | 17 32 | 10 41 | 11 0  | 17 37 | 16 7  | 2 34 |     |      |     |
| T 26 | 13 14 | 18 25 | 1 40 | 11 3  | 0 55 | 27 14 | 4 16 | 3 36 | 0 57 | 12 1  | 1 28 | 2 29 | 1 58 | 18 16 | 0 19 | 22 17 | 1 7  | 4 28 | 17 32 | 10 41 | 11 1  | 17 34 | 16 8  | 2 34 |     |      |     |
| W 27 | 13 34 | 13 46 | 0 38 | 11 55 | 0 46 | 27 19 | 4 17 | 3 54 | 0 57 | 11 59 | 1 28 | 2 26 | 1 58 | 18 16 | 0 19 | 22 17 | 1 7  | 4 29 | 17 32 | 10 41 | 11 3  | 17 31 | 16 9  | 2 34 |     |      |     |
| T 28 | 13 53 | 8 34  | 0n25 | 12 47 | 0 36 | 27 24 | 4 19 | 4 13 | 0 57 | 11 56 | 1 28 | 2 24 | 1 58 | 18 15 | 0 19 | 22 17 | 1 7  | 4 29 | 17 32 | 10 41 | 11 4  | 17 28 | 16 10 | 2 34 |     |      |     |
| F 29 | 14 12 | 3 1   | 1 28 | 13 38 | 0 26 | 27 28 | 4 20 | 4 31 | 0 56 | 11 54 | 1 27 | 2 22 | 1 59 | 18 15 | 0 19 | 22 17 | 1 6  | 4 30 | 17 32 | 10 41 | 11 5  | 17 26 | 16 11 | 2 34 |     |      |     |
| S 30 | 14n31 | 2n45  | 2n28 | 14n28 | 0s16 | 27n32 | 4n21 | 4n49 | 0s56 | 11s51 | 1n27 | 2s19 | 1s59 | 18s14 | 0n19 | 22n17 | 1s 6 | 4n30 | 17n32 | 10s43 | 11s 6 | 17s23 | 16n12 | 2s34 |     |      |     |

# ASTRODIENST EPHEMERIS for the year 2231

## geocentric

MAY 2231

00:00 UT

| Day  | Sid.t    | ☉              | ☽          | ♀          | ♂          | ♂       | ♂         | ♂       | ♂       | ♂      | ♂      | ♂       | ♂       | ♂       | ♂       | Day  |
|------|----------|----------------|------------|------------|------------|---------|-----------|---------|---------|--------|--------|---------|---------|---------|---------|------|
| S 1  | 14 33 13 | 10° 3' 41"     | 13° 46'    | 11° 55'    | 23° 11' 0" | 15° 12' | 5° 12' 2" | 28° 50' | 23° 7'  | 2° 38' | 1° 27' | 2° 0'   | 0° 58'  | 15° 54' | 23° 46' | S 1  |
| M 2  | 14 37 9  | 11° 2' 05"     | 26° 36'    | 14° 4'     | 23° 41'    | 15° 58' | 4° 55'    | 28° 56' | 23° 4'  | 2° 39' | 1° 26' | 1° 51'  | 0° 55'  | 16° 0'  | 23° 50' | M 2  |
| T 3  | 14 41 6  | 12° 0' 27"     | 9° 46'     | 16° 13'    | 24° 22'    | 16° 44' | 4° 47'    | 29° 2'  | 23° 2'  | 2° 41' | 1° 24' | 1° 41'  | 0° 52'  | 16° 7'  | 23° 55' | T 3  |
| W 4  | 14 45 2  | 12° 58' 47"    | 23° 13'    | 18° 22'    | 25° 1'     | 17° 30' | 4° 39'    | 29° 8'  | 22° 59' | 2° 42' | 1° 22' | 1° 29'  | 0° 49'  | 16° 14' | 23° 59' | W 4  |
| T 5  | 14 48 59 | 13° 57' 06"    | 6° 11' 55" | 20° 30'    | 25° 39'    | 18° 17' | 4° 32'    | 29° 14' | 22° 57' | 2° 44' | 1° 21' | 1° 18'  | 0° 45'  | 16° 20' | 24° 3'  | T 5  |
| F 6  | 14 52 56 | 14° 55' 23"    | 20° 49'    | 22° 38'    | 26° 15'    | 19° 3'  | 4° 25'    | 29° 20' | 22° 54' | 2° 46' | 1° 19' | 1° 8'   | 0° 42'  | 16° 27' | 24° 7'  | F 6  |
| S 7  | 14 56 52 | 15° 53' 38"    | 4° 51'     | 24° 44'    | 26° 51'    | 19° 49' | 4° 17'    | 29° 26' | 22° 52' | 2° 47' | 1° 17' | 1° 0'   | 0° 39'  | 16° 34' | 24° 11' | S 7  |
| S 8  | 15 0 49  | 16° 51' 51"    | 18° 57'    | 26° 49'    | 27° 25'    | 20° 35' | 4° 10'    | 29° 32' | 22° 49' | 2° 49' | 1° 16' | 0° 55'  | 0° 36'  | 16° 40' | 24° 15' | S 8  |
| M 9  | 15 4 45  | 17° 50' 01"    | 3° 42'     | 28° 53'    | 27° 57'    | 21° 21' | 4° 2'     | 29° 37' | 22° 47' | 2° 51' | 1° 14' | 0° 53'  | 0° 33'  | 16° 47' | 24° 19' | M 9  |
| T 10 | 15 8 42  | 18° 48' 10"    | 17° 12'    | 0° 11' 55" | 28° 28'    | 22° 6'  | 3° 55'    | 29° 43' | 22° 44' | 2° 52' | 1° 13' | 0° 52'  | 0° 29'  | 16° 54' | 24° 23' | T 10 |
| W 11 | 15 12 38 | 19° 46' 17"    | 1° 18'     | 2° 54'     | 28° 58'    | 22° 52' | 3° 48'    | 29° 49' | 22° 42' | 2° 54' | 1° 11' | 0° 52'  | 0° 26'  | 17° 0'  | 24° 28' | W 11 |
| T 12 | 15 16 35 | 20° 44' 22"    | 15° 23'    | 4° 51'     | 29° 26'    | 23° 38' | 3° 41'    | 29° 54' | 22° 39' | 2° 56' | 1° 9'  | 0° 52'  | 0° 23'  | 17° 7'  | 24° 32' | T 12 |
| F 13 | 15 20 31 | 21° 42' 24"    | 29° 24'    | 6° 45'     | 29° 53'    | 24° 24' | 3° 34'    | 29° 59' | 22° 37' | 2° 58' | 1° 8'  | 0° 49'  | 0° 20'  | 17° 14' | 24° 36' | F 13 |
| S 14 | 15 24 28 | 22° 40' 25"    | 13° 21'    | 8° 37'     | 0° 18'     | 25° 9'  | 3° 27'    | 0° 5'   | 22° 34' | 2° 59' | 1° 6'  | 0° 44'  | 0° 17'  | 17° 20' | 24° 40' | S 14 |
| S 15 | 15 28 25 | 23° 38' 24"    | 27° 10'    | 10° 25'    | 0° 41'     | 25° 55' | 3° 20'    | 0° 11'  | 22° 32' | 3° 1'  | 1° 5'  | 0° 37'  | 0° 14'  | 17° 27' | 24° 44' | S 15 |
| M 16 | 15 32 21 | 24° 36' 22"    | 10° 49'    | 12° 10'    | 1° 2'      | 26° 41' | 3° 13'    | 0° 16'  | 22° 29' | 3° 3'  | 1° 3'  | 0° 26'  | 0° 10'  | 17° 34' | 24° 48' | M 16 |
| T 17 | 15 36 18 | 25° 34' 18"    | 24° 16'    | 13° 52'    | 1° 22'     | 27° 26' | 3° 7'     | 0° 21'  | 22° 27' | 3° 5'  | 1° 2'  | 0° 14'  | 0° 7'   | 17° 40' | 24° 53' | T 17 |
| W 18 | 15 40 14 | 26° 32' 12"    | 7° 27'     | 15° 31'    | 1° 39'     | 28° 12' | 3° 0'     | 0° 27'  | 22° 24' | 3° 7'  | 1° 0'  | 0° 2'   | 0° 4'   | 17° 47' | 24° 57' | W 18 |
| T 19 | 15 44 11 | 27° 30' 05"    | 20° 20'    | 17° 6'     | 1° 55'     | 28° 57' | 2° 54'    | 0° 32'  | 22° 22' | 3° 9'  | 0° 59' | 29° 49' | 0° 1'   | 17° 54' | 25° 1'  | T 19 |
| F 20 | 15 48 7  | 28° 27' 57"    | 2° 56'     | 18° 38'    | 2° 9'      | 29° 43' | 2° 47'    | 0° 37'  | 22° 19' | 3° 10' | 0° 57' | 29° 39' | 29° 58' | 18° 0'  | 25° 5'  | F 20 |
| S 21 | 15 52 4  | 29° 25' 47"    | 15° 16'    | 20° 7'     | 2° 20'     | 0° 28'  | 2° 41'    | 0° 42'  | 22° 17' | 3° 12' | 0° 56' | 29° 31' | 29° 55' | 18° 7'  | 25° 9'  | S 21 |
| S 22 | 15 56 0  | 0° 11' 23' 36" | 27° 21'    | 21° 31'    | 2° 29'     | 1° 13'  | 2° 35'    | 0° 47'  | 22° 14' | 3° 14' | 0° 54' | 29° 26' | 29° 51' | 18° 13' | 25° 13' | S 22 |
| M 23 | 15 59 57 | 1° 21' 23"     | 9° 21'     | 22° 52'    | 2° 37'     | 1° 59'  | 2° 29'    | 0° 52'  | 22° 12' | 3° 16' | 0° 53' | 29° 23' | 29° 48' | 18° 20' | 25° 18' | M 23 |
| T 24 | 16 3 54  | 2° 19' 10"     | 21° 6'     | 24° 10'    | 2° 42'     | 2° 44'  | 2° 23'    | 0° 56'  | 22° 9'  | 3° 18' | 0° 52' | 29° 22' | 29° 45' | 18° 27' | 25° 22' | T 24 |
| W 25 | 16 7 50  | 3° 16' 55"     | 2° 55'     | 25° 23'    | 2° 44'     | 3° 29'  | 2° 17'    | 1° 1'   | 22° 7'  | 3° 20' | 0° 50' | 29° 22' | 29° 42' | 18° 33' | 25° 26' | W 25 |
| T 26 | 16 11 47 | 4° 14' 40"     | 14° 48'    | 26° 33'    | 2° 45'     | 4° 14'  | 2° 12'    | 1° 6'   | 22° 4'  | 3° 22' | 0° 49' | 29° 21' | 29° 39' | 18° 40' | 25° 30' | T 26 |
| F 27 | 16 15 43 | 5° 12' 23"     | 26° 52'    | 27° 39'    | 2° 43'     | 4° 59'  | 2° 6'     | 1° 10'  | 22° 2'  | 3° 24' | 0° 48' | 29° 20' | 29° 35' | 18° 47' | 25° 34' | F 27 |
| S 28 | 16 19 40 | 6° 10' 05"     | 9° 11'     | 28° 41'    | 2° 38'     | 5° 45'  | 2° 1'     | 1° 15'  | 21° 59' | 3° 26' | 0° 46' | 29° 16' | 29° 32' | 18° 53' | 25° 38' | S 28 |
| S 29 | 16 23 36 | 7° 7' 46"      | 21° 50'    | 29° 39'    | 2° 32'     | 6° 30'  | 1° 56'    | 1° 19'  | 21° 57' | 3° 28' | 0° 45' | 29° 10' | 29° 29' | 19° 0'  | 25° 42' | S 29 |
| M 30 | 16 27 33 | 8° 5' 26"      | 4° 51'     | 0° 33'     | 2° 22'     | 7° 14'  | 1° 51'    | 1° 24'  | 21° 54' | 3° 30' | 0° 44' | 29° 2'  | 29° 26' | 19° 7'  | 25° 46' | M 30 |
| T 31 | 16 31 29 | 9° 11' 30"     | 18° 15'    | 1° 23'     | 2° 11'     | 7° 59'  | 1° 46'    | 1° 28'  | 21° 52' | 3° 32' | 0° 42' | 28° 55' | 29° 23' | 19° 13' | 25° 51' | T 31 |

| Day  | ☉     | ☽     | ♀    | ♂     | ♂    | ♂     | ♂    | ♂     | ♂    | ♂     | ♂    | ♂    | ♂    | ♂     | ♂    | ♂     |
|------|-------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|-------|------|-------|
|      | decl  | decl  | lat  | decl  | lat  | decl  | lat  | decl  | lat  | decl  | lat  | decl | lat  | decl  | lat  | lat   |
| S 1  | 14n49 | 8n32  | 3n22 | 15n18 | 0s 6 | 27n36 | 4n22 | 5n 7  | 0s56 | 11s49 | 1n27 | 2s17 | 1s59 | 18s13 | 0n19 | 22n17 |
| M 2  | 15 7  | 14 5  | 4 7  | 16 7  | 0n 5 | 27 39 | 4 23 | 5 26  | 0 55 | 11 46 | 1 27 | 2 15 | 1 59 | 18 13 | 0 19 | 22 17 |
| T 3  | 15 25 | 19 9  | 4 40 | 16 55 | 0 16 | 27 41 | 4 24 | 5 44  | 0 55 | 11 44 | 1 27 | 2 12 | 1 59 | 18 12 | 0 19 | 22 17 |
| W 4  | 15 43 | 23 22 | 4 59 | 17 42 | 0 26 | 27 43 | 4 24 | 6 2   | 0 54 | 11 41 | 1 27 | 2 10 | 1 59 | 18 12 | 0 19 | 22 17 |
| T 5  | 16 0  | 26 22 | 5 0  | 18 27 | 0 37 | 27 44 | 4 24 | 6 19  | 0 54 | 11 39 | 1 27 | 2 8  | 2 0  | 18 11 | 0 19 | 22 17 |
| F 6  | 16 18 | 27 49 | 4 44 | 19 10 | 0 47 | 27 46 | 4 24 | 6 37  | 0 54 | 11 37 | 1 27 | 2 6  | 2 0  | 18 10 | 0 19 | 22 17 |
| S 7  | 16 35 | 27 30 | 4 11 | 19 52 | 0 58 | 27 46 | 4 24 | 6 55  | 0 53 | 11 34 | 1 27 | 2 4  | 2 0  | 18 10 | 0 19 | 22 17 |
| S 8  | 16 51 | 25 25 | 3 23 | 20 31 | 1 7  | 27 46 | 4 23 | 7 13  | 0 53 | 11 32 | 1 27 | 2 1  | 2 0  | 18 9  | 0 19 | 22 17 |
| M 9  | 17 8  | 21 45 | 2 22 | 21 8  | 1 17 | 27 46 | 4 22 | 7 30  | 0 52 | 11 30 | 1 27 | 1 59 | 2 0  | 18 8  | 0 19 | 22 17 |
| T 10 | 17 24 | 16 48 | 1 12 | 21 43 | 1 26 | 27 45 | 4 21 | 7 48  | 0 52 | 11 27 | 1 26 | 1 57 | 2 0  | 18 8  | 0 19 | 22 17 |
| W 11 | 17 40 | 10 58 | 0s 2 | 22 16 | 1 35 | 27 44 | 4 20 | 8 5   | 0 51 | 11 25 | 1 26 | 1 55 | 2 1  | 18 7  | 0 19 | 22 17 |
| T 12 | 17 55 | 4 35  | 1 16 | 22 46 | 1 43 | 27 43 | 4 18 | 8 22  | 0 51 | 11 23 | 1 26 | 1 53 | 2 1  | 18 7  | 0 19 | 22 17 |
| F 13 | 18 10 | 1s59  | 2 25 | 23 13 | 1 50 | 27 41 | 4 16 | 8 40  | 0 51 | 11 20 | 1 26 | 1 51 | 2 1  | 18 6  | 0 19 | 22 17 |
| S 14 | 18 25 | 8 24  | 3 24 | 23 38 | 1 57 | 27 38 | 4 14 | 8 57  | 0 50 | 11 18 | 1 26 | 1 49 | 2 1  | 18 5  | 0 19 | 22 17 |
| S 15 | 18 40 | 14 21 | 4 11 | 24 1  | 2 3  | 27 36 | 4 11 | 9 14  | 0 50 | 11 16 | 1 26 | 1 47 | 2 1  | 18 5  | 0 19 | 22 17 |
| M 16 | 18 54 | 19 32 | 4 43 | 24 20 | 2 8  | 27 33 | 4 8  | 9 31  | 0 49 | 11 14 | 1 26 | 1 45 | 2 2  | 18 4  | 0 19 | 22 17 |
| T 17 | 19 8  | 23 38 | 4 59 | 24 38 | 2 12 | 27 29 | 4 5  | 9 48  | 0 49 | 11 12 | 1 25 | 1 43 | 2 2  | 18 3  | 0 19 | 22 17 |
| W 18 | 19 21 | 26 25 | 4 58 | 24 53 | 2 16 | 27 25 | 4 1  | 10 4  | 0 48 | 11 10 | 1 25 | 1 41 | 2 2  | 18 3  | 0 19 | 22 17 |
| T 19 | 19 35 | 27 44 | 4 42 | 25 6  | 2 19 | 27 21 | 3 57 | 10 21 | 0 48 | 11 8  | 1 25 | 1 39 | 2 2  | 18 2  | 0 19 | 22 17 |
| F 20 | 19 48 | 27 35 | 4 12 | 25 16 | 2 21 | 27 16 | 3 53 | 10 37 | 0 47 | 11 6  | 1 25 | 1 38 | 2 2  | 18 1  | 0 19 | 22 17 |
| S 21 | 20 0  | 26 2  | 3 31 | 25 24 | 2 22 | 27 11 | 3 48 | 10 54 | 0 47 | 11 4  | 1 25 | 1 36 | 2 3  | 18 1  | 0 19 | 22 17 |
| S 22 | 20 13 | 23 17 | 2 41 | 25 30 | 2 22 | 27 6  | 3 42 | 11 10 | 0 46 | 11 2  | 1 25 | 1 34 | 2 3  | 18 0  | 0 19 | 22 17 |
| M 23 | 20 24 | 19 35 | 1 44 | 25 34 | 2 21 | 27 0  | 3 37 | 11 26 | 0 46 | 11 0  | 1 24 | 1 32 | 2 3  | 18 0  | 0 19 | 22 17 |
| T 24 | 20 36 | 15 8  | 0 44 | 25 37 | 2 20 | 26 53 | 3 30 | 11 42 | 0 45 | 10 58 | 1 24 | 1 31 | 2 3  | 17 59 | 0 19 | 22 17 |
| W 25 | 20 47 | 10 8  | 0n19 | 25 37 | 2 17 | 26 47 | 3 24 | 11 58 | 0 45 | 10 56 | 1 24 | 1 29 | 2 3  | 17 58 | 0 19 | 22 17 |
| T 26 | 20 58 | 4 44  | 1 21 | 25 36 | 2 14 | 26 40 | 3 17 | 12 14 | 0 44 | 10 55 | 1 24 | 1 27 | 2 4  | 17 58 | 0 19 | 22 17 |
| F 27 | 21 9  | 0n54  | 2 20 | 25 33 | 2 10 | 26 32 | 3 9  | 12 29 | 0 44 | 10 53 | 1 24 | 1 26 | 2 4  | 17 57 | 0 19 | 22 17 |
| S 28 | 21 19 | 6 37  | 3 14 | 25 29 | 2 5  | 26 24 | 3 1  | 12 45 | 0 43 | 10 51 | 1 23 | 1 24 | 2 4  | 17 57 | 0 19 | 22 16 |
| S 29 | 21 28 | 12 12 | 4 0  | 25 23 | 1 59 | 26 16 | 2 53 | 13 0  | 0 42 | 10 50 | 1 23 | 1 23 | 2 4  | 17 56 | 0 19 | 22 16 |
| M 30 | 21 38 | 17 26 | 4 35 | 25 16 | 1 52 | 26 7  | 2 44 | 13 15 | 0 42 | 10 48 | 1 23 | 1 21 | 2 5  | 17 55 | 0 19 | 22 16 |
| T 31 | 21n47 | 21n59 | 4n56 | 25n 8 | 1n44 | 25n58 | 2n34 | 13n30 | 0s41 | 10s47 | 1n23 | 1s20 | 2s 5 | 17s55 | 0n19 | 22n16 |

Julian Day Number = 2536035.5, Delta T = 196.91 sec  
 Ecliptic obliquity = 23°24'41", Nutation = 0°00'07", out-of-bounds declination in red  
 Ayanamsha: Fagan/Bradley = 27°58'24", Lahiri = 27°05'24"



# ASTRODIENST EPHEMERIS for the year 2231

## geocentric

JUNE 2231

00:00 UT

| Day  | Sid.t    | ☉                     | ☽                   | ♀                   | ♂                   | ♂                  | ♂                 | ♂     | ♂                  | ♂                 | ♂                 | ♂                   | ♂                   | ♂                   | ♂                  | Day  |
|------|----------|-----------------------|---------------------|---------------------|---------------------|--------------------|-------------------|-------|--------------------|-------------------|-------------------|---------------------|---------------------|---------------------|--------------------|------|
| W 1  | 16 35 26 | 10 <sup>II</sup> 0'43 | 2 <sup>II</sup> 1   | 25 <sup>8</sup> 8   | 1°R57               | 8 <sup>8</sup> 44  | 1°R41             | 1°Y32 | 21°R50             | 3 <sup>3</sup> 34 | 0°R41             | 28°R40              | 29 <sup>20</sup> 20 | 19 <sup>20</sup> 20 | 25 <sup>8</sup> 55 | W 1  |
| T 2  | 16 39 23 | 10°58'20              | 16° 7               | 2°50                | 1 <sup>8</sup> 41   | 9°29               | 1 <sup>1</sup> 36 | 1°36  | 21 <sup>1</sup> 47 | 3°37              | 0 <sup>1</sup> 40 | 28 <sup>28</sup> 28 | 29°16               | 19°27               | 25°59              | T 2  |
| F 3  | 16 43 19 | 11°55'56              | 0 <sup>2</sup> 26   | 3°27                | 1°22                | 10°14              | 1°32              | 1°40  | 21°45              | 3°39              | 0°39              | 28°18               | 29°13               | 19°33               | 26° 3              | F 3  |
| S 4  | 16 47 16 | 12°53'30              | 14°53               | 3°59                | 1° 1                | 10°58              | 1°28              | 1°44  | 21°43              | 3°41              | 0°38              | 28°10               | 29°10               | 19°40               | 26° 7              | S 4  |
| S 5  | 16 51 12 | 13°51'04              | 29°22               | 4°27                | 0°38                | 11°43              | 1°24              | 1°48  | 21°40              | 3°43              | 0°37              | 28° 5               | 29° 7               | 19°47               | 26°11              | S 5  |
| M 6  | 16 55 9  | 14°48'36              | 13 <sup>2</sup> 47  | 4°51                | 0°12                | 12°28              | 1°20              | 1°52  | 21°38              | 3°45              | 0°36              | 28° 3               | 29° 4               | 19°53               | 26°15              | M 6  |
| T 7  | 16 59 5  | 15°46'06              | 28° 5               | 5°10                | 29 <sup>II</sup> 45 | 13°12              | 1°16              | 1°55  | 21°36              | 3°47              | 0°34              | 28°D 2              | 29° 1               | 20° 0               | 26°19              | T 7  |
| W 8  | 17 3 2   | 16°43'35              | 12 <sup>II</sup> 15 | 5°24                | 29°16               | 13°57              | 1°12              | 1°59  | 21°34              | 3°49              | 0°33              | 28°R 2              | 28°57               | 20° 6               | 26°23              | W 8  |
| T 9  | 17 6 58  | 17°41'03              | 26°14               | 5°34                | 28°45               | 14°41              | 1° 9              | 2° 3  | 21°32              | 3°51              | 0°32              | 28° 2               | 28°54               | 20°13               | 26°27              | T 9  |
| F 10 | 17 10 55 | 18°38'30              | 10 <sup>2</sup> 2   | 5°39                | 28°12               | 15°25              | 1° 5              | 2° 6  | 21°29              | 3°54              | 0°31              | 28° 0               | 28°51               | 20°20               | 26°31              | F 10 |
| S 11 | 17 14 52 | 19°35'55              | 23°40               | 5°R39               | 27°38               | 16°10              | 1° 2              | 2° 9  | 21°27              | 3°56              | 0°30              | 27°56               | 28°48               | 20°26               | 26°35              | S 11 |
| S 12 | 17 18 48 | 20°33'20              | 7 <sup>II</sup> 7   | 5°35                | 27° 3               | 16°54              | 0°59              | 2°13  | 21°25              | 3°58              | 0°29              | 27°50               | 28°45               | 20°33               | 26°39              | S 12 |
| M13  | 17 22 45 | 21°30'43              | 20°23               | 5°27                | 26°27               | 17°38              | 0°56              | 2°16  | 21°23              | 4° 0              | 0°29              | 27°41               | 28°41               | 20°40               | 26°43              | M13  |
| T 14 | 17 26 41 | 22°28'05              | 3 <sup>2</sup> 26   | 5°15                | 25°50               | 18°22              | 0°54              | 2°19  | 21°21              | 4° 2              | 0°28              | 27°30               | 28°38               | 20°46               | 26°46              | T 14 |
| W15  | 17 30 38 | 23°25'27              | 16°17               | 4°58                | 25°13               | 19° 6              | 0°51              | 2°22  | 21°19              | 4° 5              | 0°27              | 27°19               | 28°35               | 20°53               | 26°50              | W15  |
| T 16 | 17 34 34 | 24°22'48              | 28°54               | 4°38                | 24°35               | 19°50              | 0°49              | 2°25  | 21°17              | 4° 7              | 0°26              | 27° 9               | 28°32               | 21° 0               | 26°54              | T 16 |
| F 17 | 17 38 31 | 25°20'08              | 11 <sup>2</sup> 17  | 4°14                | 23°57               | 20°34              | 0°47              | 2°28  | 21°15              | 4° 9              | 0°25              | 27° 0               | 28°29               | 21° 6               | 26°58              | F 17 |
| S 18 | 17 42 28 | 26°17'27              | 23°28               | 3°48                | 23°20               | 21°18              | 0°45              | 2°30  | 21°13              | 4°11              | 0°24              | 26°52               | 28°26               | 21°13               | 27° 2              | S 18 |
| S 19 | 17 46 24 | 27°14'46              | 5 <sup>2</sup> 29   | 3°18                | 22°43               | 22° 2              | 0°43              | 2°33  | 21°11              | 4°13              | 0°24              | 26°48               | 28°22               | 21°20               | 27° 5              | S 19 |
| M20  | 17 50 21 | 28°12'04              | 17°21               | 2°47                | 22° 7               | 22°46              | 0°42              | 2°35  | 21° 9              | 4°16              | 0°23              | 26°45               | 28°19               | 21°26               | 27° 9              | M20  |
| T 21 | 17 54 17 | 29° 9'22              | 29° 9               | 2°14                | 21°31               | 23°29              | 0°40              | 2°38  | 21° 8              | 4°18              | 0°22              | 26°D45              | 28°16               | 21°33               | 27°13              | T 21 |
| W22  | 17 58 14 | 0 <sup>2</sup> 6'39   | 10 <sup>2</sup> 57  | 1°41                | 20°57               | 24°13              | 0°39              | 2°40  | 21° 6              | 4°20              | 0°22              | 26°46               | 28°13               | 21°40               | 27°17              | W22  |
| T 23 | 18 2 10  | 1° 3'56               | 22°50               | 1° 6                | 20°24               | 24°57              | 0°38              | 2°42  | 21° 4              | 4°22              | 0°21              | 26°47               | 28°10               | 21°46               | 27°20              | T 23 |
| F 24 | 18 6 7   | 2° 1'13               | 4 <sup>Y</sup> 54   | 0°32                | 19°53               | 25°40              | 0°37              | 2°45  | 21° 2              | 4°25              | 0°21              | 26°R47              | 28° 6               | 21°53               | 27°24              | F 24 |
| S 25 | 18 10 3  | 2°58'29               | 17°13               | 29 <sup>II</sup> 59 | 19°23               | 26°24              | 0°37              | 2°47  | 21° 1              | 4°27              | 0°20              | 26°46               | 28° 3               | 21°59               | 27°28              | S 25 |
| S 26 | 18 14 0  | 3°55'46               | 29°52               | 29°27               | 18°55               | 27° 7              | 0°36              | 2°49  | 20°59              | 4°29              | 0°19              | 26°43               | 28° 0               | 22° 6               | 27°31              | S 26 |
| M27  | 18 17 57 | 4°53'02               | 12 <sup>2</sup> 56  | 28°57               | 18°29               | 27°50              | 0°36              | 2°50  | 20°58              | 4°31              | 0°19              | 26°38               | 27°57               | 22°13               | 27°35              | M27  |
| T 28 | 18 21 53 | 5°50'18               | 26°25               | 28°29               | 18° 6               | 28°34              | 0°D36             | 2°52  | 20°56              | 4°33              | 0°19              | 26°31               | 27°54               | 22°19               | 27°38              | T 28 |
| W29  | 18 25 50 | 6°47'34               | 10 <sup>II</sup> 21 | 28° 4               | 17°44               | 29°17              | 0°36              | 2°54  | 20°54              | 4°36              | 0°18              | 26°23               | 27°51               | 22°26               | 27°42              | W29  |
| T 30 | 18 29 46 | 7 <sup>2</sup> 44'50  | 24 <sup>II</sup> 40 | 27 <sup>II</sup> 42 | 17 <sup>II</sup> 25 | 29 <sup>2</sup> 59 | 0 <sup>1</sup> 36 | 2°Y55 | 20 <sup>1</sup> 53 | 4 <sup>2</sup> 38 | 0 <sup>1</sup> 18 | 26 <sup>2</sup> 16  | 27 <sup>2</sup> 47  | 22 <sup>2</sup> 33  | 27 <sup>2</sup> 45 | T 30 |

| Day  | ☉     | ☾     |      | ♀     |      | ♂     |      | ♂     |      | ♂     |      | ♂    |      | ♂     |      | ♂     |      | ♂    |       | ♂     |       | ♂     |       | ♂    |     |
|------|-------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|-------|------|-------|------|------|-------|-------|-------|-------|-------|------|-----|
|      | decl  | decl  | lat  | decl  | lat  | decl  | lat  | decl  | lat  | decl  | lat  | decl | lat  | decl  | lat  | decl  | lat  | decl | lat   | decl  | lat   | decl  | lat   | decl | lat |
| W 1  | 21n56 | 25n27 | 5n 1 | 24n59 | 1n35 | 25n48 | 2n24 | 13n45 | 0s41 | 10s45 | 1n23 | 1s18 | 2s 5 | 17s54 | 0n19 | 22n16 | 1s 5 | 4n39 | 17n24 | 11s56 | 11s42 | 15s51 | 16n41 | 2s36 |     |
| T 2  | 22 4  | 27 27 | 4 47 | 24 48 | 1 25 | 25 38 | 2 14 | 14 0  | 0 40 | 10 44 | 1 22 | 1 17 | 2 5  | 17 54 | 0 19 | 22 16 | 1 5  | 4 39 | 17 24 | 11 59 | 11 43 | 15 48 | 16 42 | 2 36 |     |
| F 3  | 22 12 | 27 40 | 4 16 | 24 37 | 1 15 | 25 27 | 2 3  | 14 14 | 0 40 | 10 43 | 1 22 | 1 15 | 2 5  | 17 53 | 0 19 | 22 16 | 1 5  | 4 39 | 17 23 | 12 3  | 11 44 | 15 46 | 16 42 | 2 37 |     |
| S 4  | 22 19 | 26 1  | 3 28 | 24 24 | 1 3  | 25 16 | 1 51 | 14 29 | 0 39 | 10 41 | 1 22 | 1 14 | 2 6  | 17 52 | 0 19 | 22 16 | 1 5  | 4 39 | 17 23 | 12 6  | 11 45 | 15 43 | 16 43 | 2 37 |     |
| S 5  | 22 26 | 22 38 | 2 26 | 24 11 | 0 51 | 25 4  | 1 40 | 14 43 | 0 38 | 10 40 | 1 22 | 1 13 | 2 6  | 17 52 | 0 19 | 22 16 | 1 5  | 4 39 | 17 22 | 12 7  | 11 46 | 15 40 | 16 44 | 2 37 |     |
| M 6  | 22 33 | 17 52 | 1 15 | 23 58 | 0 38 | 24 52 | 1 27 | 14 57 | 0 38 | 10 39 | 1 21 | 1 11 | 2 6  | 17 51 | 0 19 | 22 16 | 1 5  | 4 38 | 17 22 | 12 8  | 11 47 | 15 37 | 16 45 | 2 37 |     |
| T 7  | 22 39 | 12 7  | 0s 0 | 23 43 | 0 25 | 24 39 | 1 15 | 15 11 | 0 37 | 10 38 | 1 21 | 1 10 | 2 6  | 17 51 | 0 19 | 22 16 | 1 5  | 4 38 | 17 22 | 12 9  | 11 48 | 15 34 | 16 46 | 2 37 |     |
| W 8  | 22 45 | 5 48  | 1 15 | 23 28 | 0 10 | 24 26 | 1 2  | 15 25 | 0 37 | 10 37 | 1 21 | 1 9  | 2 7  | 17 50 | 0 19 | 22 16 | 1 5  | 4 38 | 17 21 | 12 9  | 11 49 | 15 31 | 16 46 | 2 37 |     |
| T 9  | 22 50 | 0s42  | 2 24 | 23 13 | 0s 5 | 24 13 | 0 49 | 15 39 | 0 36 | 10 36 | 1 21 | 1 8  | 2 7  | 17 50 | 0 19 | 22 16 | 1 5  | 4 38 | 17 21 | 12 9  | 11 51 | 15 28 | 16 47 | 2 37 |     |
| F 10 | 22 56 | 7 5   | 3 24 | 22 57 | 0 21 | 23 59 | 0 35 | 15 52 | 0 35 | 10 35 | 1 20 | 1 7  | 2 7  | 17 49 | 0 18 | 22 16 | 1 5  | 4 38 | 17 20 | 12 9  | 11 52 | 15 25 | 16 48 | 2 37 |     |
| S 11 | 23 0  | 13 4  | 4 11 | 22 41 | 0 37 | 23 45 | 0 21 | 16 6  | 0 35 | 10 34 | 1 20 | 1 6  | 2 7  | 17 48 | 0 18 | 22 16 | 1 5  | 4 38 | 17 20 | 12 11 | 11 53 | 15 22 | 16 49 | 2 38 |     |
| S 12 | 23 5  | 18 20 | 4 44 | 22 24 | 0 53 | 23 30 | 0 7  | 16 19 | 0 34 | 10 33 | 1 20 | 1 5  | 2 8  | 17 48 | 0 18 | 22 16 | 1 5  | 4 38 | 17 19 | 12 13 | 11 54 | 15 19 | 16 49 | 2 38 |     |
| M13  | 23 8  | 22 39 | 5 1  | 22 8  | 1 10 | 23 15 | 0s 7 | 16 32 | 0 34 | 10 33 | 1 20 | 1 4  | 2 8  | 17 47 | 0 18 | 22 16 | 1 5  | 4 38 | 17 19 | 12 16 | 11 55 | 15 16 | 16 50 | 2 38 |     |
| T 14 | 23 12 | 25 45 | 5 1  | 21 51 | 1 27 | 23 0  | 0 21 | 16 45 | 0 33 | 10 32 | 1 19 | 1 3  | 2 8  | 17 47 | 0 18 | 22 16 | 1 5  | 4 38 | 17 18 | 12 19 | 11 56 | 15 13 | 16 51 | 2 38 |     |
| W15  | 23 15 | 27 28 | 4 47 | 21 35 | 1 44 | 22 44 | 0 35 | 16 58 | 0 32 | 10 31 | 1 19 | 1 2  | 2 8  | 17 46 | 0 18 | 22 16 | 1 5  | 4 37 | 17 18 | 12 23 | 11 57 | 15 10 | 16 52 | 2 38 |     |
| T 16 | 23 18 | 27 43 | 4 18 | 21 18 | 2 1  | 22 29 | 0 50 | 17 10 | 0 32 | 10 31 | 1 19 | 1 1  | 2 9  | 17 46 | 0 18 | 22 16 | 1 5  | 4 37 | 17 17 | 12 27 | 11 58 | 15 7  | 16 52 | 2 38 |     |
| F 17 | 23 20 | 26 33 | 3 38 | 21 2  | 2 18 | 22 13 | 1 4  | 17 22 | 0 31 | 10 30 | 1 19 | 1 0  | 2 9  | 17 45 | 0 18 | 22 16 | 1 5  | 4 37 | 17 17 | 12 30 | 11 59 | 15 4  | 16 53 | 2 38 |     |
| S 18 | 23 22 | 24 8  | 2 48 | 20 47 | 2 35 | 21 57 | 1 18 | 17 34 | 0 30 | 10 30 | 1 18 | 0 59 | 2 9  | 17 45 | 0 18 | 22 16 | 1 5  | 4 37 | 17 16 | 12 32 | 12 0  | 15 1  | 16 54 | 2 39 |     |
| S 19 | 23 23 | 20 41 | 1 51 | 20 31 | 2 51 | 21 42 | 1 31 | 17 46 | 0 30 | 10 29 | 1 18 | 0 58 | 2 9  | 17 44 | 0 18 | 22 16 | 1 5  | 4 37 | 17 16 | 12 34 | 12 2  | 14 59 | 16 55 | 2 39 |     |
| M20  | 23 24 | 16 25 | 0 50 | 20 17 | 3 6  | 21 26 | 1 45 | 17 58 | 0 29 | 10 29 | 1 18 | 0 57 | 2 10 | 17 44 | 0 18 | 22 15 | 1 5  | 4 36 | 17 15 | 12 35 | 12 3  | 14 56 | 16 55 | 2 39 |     |
| T 21 | 23 25 | 11 33 | 0n13 | 20 3  | 3 21 | 21 11 | 1 58 | 18 10 | 0 28 | 10 29 | 1 18 | 0 57 | 2 10 | 17 44 | 0 18 | 22 15 | 1 5  | 4 36 | 17 15 | 12 35 | 12 4  | 14 53 | 16 56 | 2 39 |     |
| W22  | 23 25 | 6 17  | 1 16 | 19 49 | 3 35 | 20 56 | 2 11 | 18 21 | 0 28 | 10 29 | 1 17 | 0 56 | 2 10 | 17 43 | 0 18 | 22 15 | 1 5  | 4 36 | 17 14 | 12 35 | 12 5  | 14 50 | 16 57 | 2 39 |     |
| T 23 | 23 24 | 0 46  | 2 16 | 19 37 | 3 47 | 20 41 | 2 23 | 18 32 | 0 27 | 10 29 | 1 17 | 0 55 | 2 11 | 17 43 | 0 18 | 22 15 | 1 5  | 4 36 | 17 14 | 12 34 | 12 6  | 14 47 | 16 57 | 2 39 |     |
| F 24 | 23 24 | 4n51  | 3 10 | 19 26 | 3 59 | 20 27 | 2 35 | 18 44 | 0 26 | 10 29 | 1 17 | 0 55 | 2 11 | 17 42 | 0 18 | 22 15 | 1 5  | 4 35 | 17 13 | 12 34 | 12 7  | 14 44 | 16 58 | 2 40 |     |
| S 25 | 23 23 | 10 25 | 3 58 | 19 16 | 4 9  | 20 13 | 2 47 | 18 54 | 0 26 | 10 29 | 1 17 | 0 54 | 2 11 | 17 42 | 0 18 | 22 15 | 1 5  | 4 35 | 17 13 | 12 35 | 12 8  | 14 41 | 16 58 | 2 40 |     |
| S 26 | 23 21 | 15 42 | 4 35 | 19 7  | 4 17 | 20 0  | 2 58 | 19 5  | 0 25 | 10 29 | 1 16 | 0 54 | 2 11 | 17 41 | 0 18 | 22 15 | 1 5  | 4 35 | 17 12 | 12 36 | 12 9  | 14 38 | 16 59 | 2 40 |     |
| M27  | 23 19 | 20 26 | 4 59 | 19 0  | 4 25 | 19 47 | 3 8  | 19 16 | 0 24 | 10 29 | 1 16 | 0 53 | 2 12 | 17 41 | 0 18 | 22 15 | 1 5  | 4 34 | 17 12 | 12 37 | 12 10 | 14 35 | 17 0  | 2 40 |     |
| T 28 | 23 17 | 24 18 | 5 7  | 18 54 | 4 31 | 19 35 | 3 19 | 19 26 | 0 24 | 10 29 | 1 16 | 0 53 | 2 12 | 17 41 | 0 18 | 22 15 | 1 5  | 4 34 | 17 11 | 12 40 | 12 11 | 14 32 | 17 0  | 2 40 |     |
| W29  | 23 14 | 26 54 | 4 58 | 18 49 | 4 35 | 19 24 | 3 28 | 19 36 | 0 23 | 10 29 | 1 15 | 0 52 | 2 12 | 17 40 | 0 18 | 22 15 | 1 5  | 4 34 | 17 11 | 12 42 | 12 13 | 14 29 | 17 1  | 2 41 |     |
| T 30 | 23n11 | 27n49 | 4n31 | 18n46 | 4s38 | 19n13 | 3s37 | 19n46 | 0s22 | 10s30 | 1n15 | 0s52 | 2s12 | 17s40 | 0n18 | 22n15 | 1s 5 | 4n33 | 17n10 | 12s45 | 12s14 | 14s26 | 17n 1 | 2s41 |     |

ASTRODIENST EPHEMERIS for the year 2231  
geocentric

JULY 2231

00:00 UT

| Day  | Sid.t    | ☉        | ☽     | ♂      | ♀      | ♂     | ♂    | ♂     | ♂      | ♂    | ♂     | ♂      | ♂     | ♂     | ♂     | Day  |
|------|----------|----------|-------|--------|--------|-------|------|-------|--------|------|-------|--------|-------|-------|-------|------|
| F 1  | 18 33 43 | 8♌42'06  | 9♌18  | 27°R24 | 17°R 8 | 0♏43  | 0♏36 | 2°V57 | 20°R52 | 4♌40 | 0°R17 | 26°R 9 | 27♌44 | 22♌39 | 27♌48 | F 1  |
| S 2  | 18 37 39 | 9°39'21  | 24° 7 | 27♏10  | 16♏53  | 1°26  | 0°37 | 2°58  | 20♏50  | 4°42 | 0♏17  | 26♌ 4  | 27°41 | 22°46 | 27°52 | S 2  |
| S 3  | 18 41 36 | 10°36'36 | 8♏59  | 27° 0  | 16°41  | 2° 9  | 0°38 | 3° 0  | 20°49  | 4°45 | 0°17  | 26° 1  | 27°38 | 22°53 | 27°55 | S 3  |
| M 4  | 18 45 32 | 11°33'50 | 23°46 | 26°55  | 16°31  | 2°52  | 0°39 | 3° 1  | 20°48  | 4°47 | 0°17  | 26°D 0 | 27°35 | 22°59 | 27°59 | M 4  |
| T 5  | 18 49 29 | 12°31'04 | 8♏23  | 26°D55 | 16°23  | 3°35  | 0°40 | 3° 2  | 20°46  | 4°49 | 0°16  | 26° 0  | 27°32 | 23° 6 | 28° 2 | T 5  |
| W 6  | 18 53 26 | 13°28'18 | 22°45 | 26°59  | 16°18  | 4°17  | 0°41 | 3° 3  | 20°45  | 4°51 | 0°16  | 26° 1  | 27°28 | 23°13 | 28° 5 | W 6  |
| T 7  | 18 57 22 | 14°25'31 | 6♏49  | 27° 8  | 16°15  | 5° 0  | 0°43 | 3° 4  | 20°44  | 4°54 | 0°16  | 26° 2  | 27°25 | 23°19 | 28° 8 | T 7  |
| F 8  | 19 1 19  | 15°22'44 | 20°36 | 27°22  | 16°D15 | 5°43  | 0°44 | 3° 4  | 20°43  | 4°56 | 0°16  | 26°R 2 | 27°22 | 23°26 | 28°11 | F 8  |
| S 9  | 19 5 15  | 16°19'56 | 4♏ 6  | 27°41  | 16°16  | 6°25  | 0°46 | 3° 5  | 20°42  | 4°58 | 0°16  | 26° 1  | 27°19 | 23°33 | 28°15 | S 9  |
| S 10 | 19 9 12  | 17°17'09 | 17°19 | 28° 5  | 16°20  | 7° 8  | 0°48 | 3° 6  | 20°41  | 5° 0 | 0°16  | 25°58  | 27°16 | 23°39 | 28°18 | S 10 |
| M 11 | 19 13 8  | 18°14'21 | 0♏17  | 28°34  | 16°27  | 7°50  | 0°50 | 3° 6  | 20°40  | 5° 2 | 0°D16 | 25°53  | 27°13 | 23°46 | 28°21 | M 11 |
| T 12 | 19 17 5  | 19°11'33 | 13° 1 | 29° 8  | 16°35  | 8°33  | 0°53 | 3° 7  | 20°39  | 5° 5 | 0°16  | 25°47  | 27° 9 | 23°52 | 28°24 | T 12 |
| W 13 | 19 21 1  | 20° 8'45 | 25°33 | 29°46  | 16°46  | 9°15  | 0°55 | 3° 7  | 20°38  | 5° 7 | 0°16  | 25°41  | 27° 6 | 23°59 | 28°27 | W 13 |
| T 14 | 19 24 58 | 21° 5'56 | 7♌53  | 0♏30   | 16°58  | 9°57  | 0°58 | 3° 7  | 20°37  | 5° 9 | 0°16  | 25°35  | 27° 3 | 24° 6 | 28°30 | T 14 |
| F 15 | 19 28 55 | 22° 3'08 | 20° 3 | 1°19   | 17°13  | 10°39 | 1° 1 | 3°R 7 | 20°36  | 5°11 | 0°16  | 25°30  | 27° 0 | 24°12 | 28°32 | F 15 |
| S 16 | 19 32 51 | 23° 0'20 | 2♌ 3  | 2°12   | 17°29  | 11°21 | 1° 4 | 3° 7  | 20°36  | 5°13 | 0°16  | 25°27  | 26°57 | 24°19 | 28°35 | S 16 |
| S 17 | 19 36 48 | 23°57'33 | 13°57 | 3°11   | 17°48  | 12° 3 | 1° 7 | 3° 7  | 20°35  | 5°15 | 0°16  | 25°25  | 26°53 | 24°26 | 28°38 | S 17 |
| M 18 | 19 40 44 | 24°54'45 | 25°46 | 4°13   | 18° 8  | 12°45 | 1°10 | 3° 7  | 20°34  | 5°17 | 0°16  | 25°D24 | 26°50 | 24°32 | 28°41 | M 18 |
| T 19 | 19 44 41 | 25°51'58 | 7♌33  | 5°21   | 18°30  | 13°27 | 1°14 | 3° 6  | 20°34  | 5°20 | 0°17  | 25°25  | 26°47 | 24°39 | 28°44 | T 19 |
| W 20 | 19 48 37 | 26°49'12 | 19°22 | 6°33   | 18°54  | 14° 9 | 1°18 | 3° 6  | 20°33  | 5°22 | 0°17  | 25°26  | 26°44 | 24°46 | 28°46 | W 20 |
| T 21 | 19 52 34 | 27°46'25 | 1°V16 | 7°50   | 19°19  | 14°51 | 1°22 | 3° 5  | 20°33  | 5°24 | 0°17  | 25°28  | 26°41 | 24°52 | 28°49 | T 21 |
| F 22 | 19 56 30 | 28°43'40 | 13°19 | 9°11   | 19°46  | 15°33 | 1°26 | 3° 5  | 20°32  | 5°26 | 0°18  | 25°29  | 26°38 | 24°59 | 28°51 | F 22 |
| S 23 | 20 0 27  | 29°40'55 | 25°38 | 10°36  | 20°15  | 16°14 | 1°30 | 3° 4  | 20°32  | 5°28 | 0°18  | 25°R30 | 26°34 | 25° 6 | 28°54 | S 23 |
| S 24 | 20 4 24  | 0♏38'11  | 8♌15  | 12° 5  | 20°45  | 16°56 | 1°34 | 3° 3  | 20°31  | 5°30 | 0°18  | 25°30  | 26°31 | 25°12 | 28°56 | S 24 |
| M 25 | 20 8 20  | 1°35'28  | 21°15 | 13°39  | 21°16  | 17°37 | 1°39 | 3° 2  | 20°31  | 5°32 | 0°19  | 25°29  | 26°28 | 25°19 | 28°59 | M 25 |
| T 26 | 20 12 17 | 2°32'45  | 4♏42  | 15°16  | 21°49  | 18°19 | 1°43 | 3° 1  | 20°31  | 5°34 | 0°19  | 25°27  | 26°25 | 25°25 | 29° 1 | T 26 |
| W 27 | 20 16 13 | 3°30'04  | 18°36 | 16°58  | 22°23  | 19° 0 | 1°48 | 3° 0  | 20°31  | 5°36 | 0°20  | 25°24  | 26°22 | 25°32 | 29° 4 | W 27 |
| T 28 | 20 20 10 | 4°27'23  | 2♌57  | 18°43  | 22°59  | 19°41 | 1°53 | 2°59  | 20°31  | 5°38 | 0°20  | 25°21  | 26°19 | 25°39 | 29° 6 | T 28 |
| F 29 | 20 24 6  | 5°24'43  | 17°40 | 20°31  | 23°35  | 20°22 | 1°58 | 2°57  | 20°31  | 5°40 | 0°21  | 25°18  | 26°15 | 25°45 | 29° 8 | F 29 |
| S 30 | 20 28 3  | 6°22'04  | 2♏39  | 22°22  | 24°13  | 21° 3 | 2° 4 | 2°56  | 20°D30 | 5°42 | 0°22  | 25°17  | 26°12 | 25°52 | 29°10 | S 30 |
| S 31 | 20 32 0  | 7♏19'25  | 17♏46 | 24♌16  | 24♏52  | 21♏45 | 2♏ 9 | 2°V54 | 20♏31  | 5♌44 | 0♏22  | 25♌16  | 26♌ 9 | 25♌59 | 29♌12 | S 31 |

| Day  | ☉     | ☽     | ♂    | ♀     | ♂    | ♂     | ♂    | ♂     | ♂    | ♂     | ♂    | ♂    | ♂    | ♂     | ♂    | ♂     |
|------|-------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|-------|------|-------|
|      | decl  | decl  | lat  | decl  | lat  | decl  | lat  | decl  | lat  | decl  | lat  | decl | lat  | decl  | lat  | decl  |
| F 1  | 23n 8 | 26n50 | 3n45 | 18n44 | 4s39 | 19n 3 | 3s46 | 19n55 | 0s22 | 10s30 | 1n15 | 0s52 | 2s13 | 17s39 | 0n18 | 22n15 |
| S 2  | 23 4  | 23 57 | 2 44 | 18 44 | 4 39 | 18 53 | 3 54 | 20 5  | 0 21 | 10 30 | 1 15 | 0 51 | 2 13 | 17 39 | 0 18 | 22 15 |
| S 3  | 22 59 | 19 27 | 1 31 | 18 45 | 4 38 | 18 45 | 4 1  | 20 14 | 0 20 | 10 31 | 1 14 | 0 51 | 2 13 | 17 39 | 0 18 | 22 15 |
| M 4  | 22 55 | 13 46 | 0 12 | 18 47 | 4 35 | 18 37 | 4 8  | 20 23 | 0 20 | 10 32 | 1 14 | 0 51 | 2 13 | 17 38 | 0 18 | 22 15 |
| T 5  | 22 49 | 7 23  | 1s 7 | 18 51 | 4 31 | 18 30 | 4 14 | 20 32 | 0 19 | 10 32 | 1 14 | 0 51 | 2 14 | 17 38 | 0 18 | 22 14 |
| W 6  | 22 44 | 0 44  | 2 20 | 18 56 | 4 26 | 18 24 | 4 20 | 20 41 | 0 18 | 10 33 | 1 14 | 0 50 | 2 14 | 17 38 | 0 18 | 22 14 |
| T 7  | 22 38 | 5s49  | 3 23 | 19 3  | 4 20 | 18 18 | 4 25 | 20 49 | 0 17 | 10 34 | 1 13 | 0 50 | 2 14 | 17 38 | 0 18 | 22 14 |
| F 8  | 22 32 | 11 57 | 4 13 | 19 10 | 4 13 | 18 13 | 4 30 | 20 58 | 0 17 | 10 35 | 1 13 | 0 50 | 2 15 | 17 37 | 0 18 | 22 14 |
| S 9  | 22 25 | 17 23 | 4 48 | 19 19 | 4 5  | 18 9  | 4 35 | 21 6  | 0 16 | 10 35 | 1 13 | 0 50 | 2 15 | 17 37 | 0 18 | 22 14 |
| S 10 | 22 18 | 21 53 | 5 7  | 19 28 | 3 56 | 18 5  | 4 39 | 21 14 | 0 15 | 10 36 | 1 12 | 0 50 | 2 15 | 17 37 | 0 18 | 22 14 |
| M 11 | 22 10 | 25 14 | 5 10 | 19 38 | 3 46 | 18 3  | 4 42 | 21 21 | 0 14 | 10 37 | 1 12 | 0 50 | 2 15 | 17 37 | 0 18 | 22 14 |
| T 12 | 22 2  | 27 14 | 4 57 | 19 49 | 3 35 | 18 0  | 4 45 | 21 29 | 0 14 | 10 38 | 1 12 | 0 50 | 2 16 | 17 36 | 0 18 | 22 14 |
| W 13 | 21 54 | 27 50 | 4 30 | 20 1  | 3 24 | 17 59 | 4 48 | 21 36 | 0 13 | 10 40 | 1 12 | 0 51 | 2 16 | 17 36 | 0 18 | 22 14 |
| T 14 | 21 45 | 27 1  | 3 51 | 20 12 | 3 12 | 17 58 | 4 50 | 21 43 | 0 12 | 10 41 | 1 11 | 0 51 | 2 16 | 17 36 | 0 18 | 22 14 |
| F 15 | 21 36 | 24 54 | 3 1  | 20 24 | 3 0  | 17 57 | 4 52 | 21 50 | 0 11 | 10 42 | 1 11 | 0 51 | 2 16 | 17 36 | 0 18 | 22 14 |
| S 16 | 21 27 | 21 42 | 2 4  | 20 36 | 2 47 | 17 57 | 4 54 | 21 56 | 0 11 | 10 43 | 1 11 | 0 51 | 2 17 | 17 36 | 0 18 | 22 14 |
| S 17 | 21 17 | 17 37 | 1 2  | 20 48 | 2 34 | 17 57 | 4 55 | 22 3  | 0 10 | 10 45 | 1 11 | 0 52 | 2 17 | 17 35 | 0 18 | 22 13 |
| M 18 | 21 7  | 12 53 | 0n 2 | 21 0  | 2 21 | 17 58 | 4 56 | 22 9  | 0 9  | 10 46 | 1 10 | 0 52 | 2 17 | 17 35 | 0 18 | 22 13 |
| T 19 | 20 57 | 7 42  | 1 6  | 21 11 | 2 8  | 18 0  | 4 56 | 22 15 | 0 8  | 10 48 | 1 10 | 0 52 | 2 18 | 17 35 | 0 18 | 22 13 |
| W 20 | 20 46 | 2 15  | 2 8  | 21 21 | 1 54 | 18 1  | 4 56 | 22 21 | 0 8  | 10 49 | 1 10 | 0 53 | 2 18 | 17 35 | 0 18 | 22 13 |
| T 21 | 20 35 | 3n19  | 3 4  | 21 31 | 1 40 | 18 3  | 4 56 | 22 26 | 0 7  | 10 51 | 1 10 | 0 53 | 2 18 | 17 35 | 0 18 | 22 13 |
| F 22 | 20 23 | 8 50  | 3 54 | 21 40 | 1 26 | 18 6  | 4 56 | 22 32 | 0 6  | 10 52 | 1 9  | 0 54 | 2 18 | 17 35 | 0 18 | 22 13 |
| S 23 | 20 12 | 14 8  | 4 33 | 21 47 | 1 12 | 18 8  | 4 56 | 22 37 | 0 5  | 10 54 | 1 9  | 0 54 | 2 19 | 17 35 | 0 18 | 22 13 |
| S 24 | 19 59 | 18 59 | 5 1  | 21 53 | 0 59 | 18 11 | 4 55 | 22 42 | 0 4  | 10 56 | 1 9  | 0 55 | 2 19 | 17 35 | 0 18 | 22 13 |
| M 25 | 19 47 | 23 6  | 5 14 | 21 58 | 0 45 | 18 14 | 4 54 | 22 46 | 0 4  | 10 58 | 1 9  | 0 55 | 2 19 | 17 35 | 0 18 | 22 13 |
| T 26 | 19 34 | 26 9  | 5 11 | 22 1  | 0 32 | 18 18 | 4 53 | 22 51 | 0 3  | 10 59 | 1 8  | 0 56 | 2 19 | 17 35 | 0 17 | 22 13 |
| W 27 | 19 21 | 27 44 | 4 50 | 22 1  | 0 19 | 18 21 | 4 51 | 22 55 | 0 2  | 11 1  | 1 8  | 0 57 | 2 20 | 17 35 | 0 17 | 22 13 |
| T 28 | 19 7  | 27 33 | 4 10 | 22 0  | 0 6  | 18 25 | 4 49 | 22 59 | 0 1  | 11 3  | 1 8  | 0 57 | 2 20 | 17 35 | 0 17 | 22 12 |
| F 29 | 18 54 | 25 26 | 3 13 | 21 57 | 0n 6 | 18 28 | 4 47 | 23 3  | 0 1  | 11 5  | 1 8  | 0 58 | 2 20 | 17 35 | 0 17 | 22 12 |
| S 30 | 18 40 | 21 31 | 2 2  | 21 51 | 0 18 | 18 32 | 4 45 | 23 7  | 0n 0 | 11 7  | 1 7  | 0 59 | 2 20 | 17 35 | 0 17 | 22 12 |
| S 31 | 18n25 | 16n 9 | 0n41 | 21n42 | 0n29 | 18n36 | 4s43 | 23n10 | 0n 1 | 11s 9 | 1n 7 | 1s 0 | 2s21 | 17s35 | 0n17 | 22n12 |

Julian Day Number = 2536096.5, Delta T = 197.11 sec  
Ecliptic obliquity = 23°24'40, Nutation = 0°00'09, out-of-bounds declination in red  
Ayanamsha: Fagan/Bradley = 27°58'32, Lahiri = 27°05'33



# ASTRODIENST EPHEMERIS for the year 2231

## geocentric

AUGUST 2231

00:00 UT

| Day  | Sid.t    | ☉        | ☽     | ♂     | ♀     | ♂     | ♂    | ♂     | ♂     | ♂    | ♂    | ♂      | ♂     | ♂     | ♂     | Day  |
|------|----------|----------|-------|-------|-------|-------|------|-------|-------|------|------|--------|-------|-------|-------|------|
| M 1  | 20 35 56 | 8♌1647   | 2♍51  | 26♊13 | 25♊32 | 22♊25 | 2♌15 | 2°R53 | 20♌31 | 5♌46 | 0♌23 | 25°D16 | 26♌6  | 26♌5  | 29♌15 | M 1  |
| T 2  | 20 39 53 | 9°14'09  | 17°47 | 28°12 | 26°13 | 23°6  | 2°20 | 2°Y51 | 20°31 | 5°48 | 0°24 | 25°16  | 26°3  | 26°12 | 29°17 | T 2  |
| W 3  | 20 43 49 | 10°11'32 | 2♌25  | 0♌13  | 26°55 | 23°47 | 2°26 | 2°49  | 20°31 | 5°50 | 0°25 | 25°17  | 25°59 | 26°19 | 29°19 | W 3  |
| T 4  | 20 47 46 | 11°8'55  | 16°43 | 2°16  | 27°38 | 24°28 | 2°32 | 2°47  | 20°31 | 5°52 | 0°25 | 25°19  | 25°56 | 26°25 | 29°20 | T 4  |
| F 5  | 20 51 42 | 12°6'19  | 0♌37  | 4°19  | 28°22 | 25°9  | 2°38 | 2°45  | 20°31 | 5°54 | 0°26 | 25°19  | 25°53 | 26°32 | 29°22 | F 5  |
| S 6  | 20 55 39 | 13°3'43  | 14°7  | 6°24  | 29°6  | 25°49 | 2°45 | 2°43  | 20°32 | 5°56 | 0°27 | 25°R19 | 25°50 | 26°39 | 29°24 | S 6  |
| S 7  | 20 59 35 | 14°1'08  | 27°16 | 8°29  | 29°52 | 26°30 | 2°51 | 2°41  | 20°32 | 5°58 | 0°28 | 25°19  | 25°47 | 26°45 | 29°26 | S 7  |
| M 8  | 21 3 32  | 14°58'34 | 10♌5  | 10°34 | 0♊39  | 27°10 | 2°58 | 2°39  | 20°33 | 5°59 | 0°29 | 25°18  | 25°44 | 26°52 | 29°28 | M 8  |
| T 9  | 21 7 29  | 15°56'01 | 22°37 | 12°39 | 1°26  | 27°50 | 3°4  | 2°37  | 20°33 | 6°1  | 0°30 | 25°17  | 25°40 | 26°59 | 29°29 | T 9  |
| W10  | 21 11 25 | 16°53'28 | 4♌55  | 14°44 | 2°14  | 28°31 | 3°11 | 2°34  | 20°34 | 6°3  | 0°31 | 25°16  | 25°37 | 27°5  | 29°31 | W10  |
| T 11 | 21 15 22 | 17°50'56 | 17°2  | 16°49 | 3°3   | 29°11 | 3°18 | 2°32  | 20°34 | 6°5  | 0°32 | 25°15  | 25°34 | 27°12 | 29°32 | T 11 |
| F 12 | 21 19 18 | 18°48'24 | 29°1  | 18°53 | 3°52  | 29°51 | 3°25 | 2°29  | 20°35 | 6°7  | 0°33 | 25°14  | 25°31 | 27°18 | 29°34 | F 12 |
| S 13 | 21 23 15 | 19°45'54 | 10♌53 | 20°56 | 4°43  | 0♊31  | 3°33 | 2°26  | 20°36 | 6°8  | 0°34 | 25°14  | 25°28 | 27°25 | 29°35 | S 13 |
| S 14 | 21 27 11 | 20°43'25 | 22°42 | 22°58 | 5°34  | 1°11  | 3°40 | 2°23  | 20°36 | 6°10 | 0°35 | 25°D14 | 25°24 | 27°32 | 29°37 | S 14 |
| M15  | 21 31 8  | 21°40'56 | 4♌30  | 24°58 | 6°25  | 1°51  | 3°48 | 2°21  | 20°37 | 6°12 | 0°36 | 25°14  | 25°21 | 27°38 | 29°38 | M15  |
| T 16 | 21 35 4  | 22°38'29 | 16°18 | 26°58 | 7°17  | 2°31  | 3°55 | 2°18  | 20°38 | 6°13 | 0°37 | 25°14  | 25°18 | 27°45 | 29°39 | T 16 |
| W17  | 21 39 1  | 23°36'03 | 28°10 | 28°56 | 8°10  | 3°10  | 4°3  | 2°15  | 20°39 | 6°15 | 0°39 | 25°14  | 25°15 | 27°52 | 29°40 | W17  |
| T 18 | 21 42 58 | 24°33'39 | 10♌9  | 0♍53  | 9°4   | 3°50  | 4°11 | 2°12  | 20°40 | 6°17 | 0°40 | 25°14  | 25°12 | 27°58 | 29°41 | T 18 |
| F 19 | 21 46 54 | 25°31'15 | 22°16 | 2°49  | 9°58  | 4°30  | 4°19 | 2°8   | 20°41 | 6°18 | 0°41 | 25°R14 | 25°9  | 28°5  | 29°43 | F 19 |
| S 20 | 21 50 51 | 26°28'54 | 4♌37  | 4°43  | 10°52 | 5°9   | 4°27 | 2°5   | 20°42 | 6°20 | 0°42 | 25°14  | 25°5  | 28°12 | 29°44 | S 20 |
| S 21 | 21 54 47 | 27°26'34 | 17°14 | 6°36  | 11°47 | 5°49  | 4°35 | 2°2   | 20°43 | 6°21 | 0°44 | 25°14  | 25°2  | 28°18 | 29°44 | S 21 |
| M22  | 21 58 44 | 28°24'15 | 0♊11  | 8°27  | 12°43 | 6°28  | 4°44 | 1°58  | 20°44 | 6°23 | 0°45 | 25°D14 | 24°59 | 28°25 | 29°45 | M22  |
| T 23 | 22 2 40  | 29°21'58 | 13°31 | 10°17 | 13°39 | 7°7   | 4°52 | 1°55  | 20°45 | 6°24 | 0°46 | 25°14  | 24°56 | 28°32 | 29°46 | T 23 |
| W24  | 22 6 37  | 0♍19'43  | 27°16 | 12°5  | 14°36 | 7°46  | 5°1  | 1°51  | 20°47 | 6°26 | 0°48 | 25°14  | 24°53 | 28°38 | 29°47 | W24  |
| T 25 | 22 10 33 | 1°17'29  | 11♌27 | 13°52 | 15°33 | 8°25  | 5°9  | 1°48  | 20°48 | 6°27 | 0°49 | 25°15  | 24°50 | 28°45 | 29°48 | T 25 |
| F 26 | 22 14 30 | 2°15'17  | 26°2  | 15°38 | 16°30 | 9°4   | 5°18 | 1°44  | 20°49 | 6°29 | 0°51 | 25°15  | 24°46 | 28°51 | 29°48 | F 26 |
| S 27 | 22 18 27 | 3°13'06  | 10♌57 | 17°22 | 17°28 | 9°43  | 5°27 | 1°40  | 20°51 | 6°30 | 0°52 | 25°16  | 24°43 | 28°58 | 29°49 | S 27 |
| S 28 | 22 22 23 | 4°10'57  | 26°4  | 19°5  | 18°27 | 10°22 | 5°36 | 1°37  | 20°52 | 6°32 | 0°54 | 25°R16 | 24°40 | 29°5  | 29°49 | S 28 |
| M29  | 22 26 20 | 5°8'50   | 11♌16 | 20°47 | 19°26 | 11°1  | 5°45 | 1°33  | 20°54 | 6°33 | 0°55 | 25°16  | 24°37 | 29°11 | 29°50 | M29  |
| T 30 | 22 30 16 | 6°6'44   | 26°22 | 22°27 | 20°25 | 11°40 | 5°55 | 1°29  | 20°55 | 6°34 | 0°57 | 25°15  | 24°34 | 29°18 | 29°50 | T 30 |
| W31  | 22 34 13 | 7♍4'39   | 11♌13 | 24♍6  | 21♌24 | 12♌18 | 6♌4  | 1°Y25 | 20♌57 | 6♌36 | 0♌58 | 25°14  | 24°30 | 29°25 | 29°51 | W31  |

| Day  | ☉     | ☽     | ♂    | ♀     | ♂    | ♂     | ♂    | ♂     | ♂    | ♂     | ♂   | ♂    | ♂    | ♂     | ♂    | ♂     |
|------|-------|-------|------|-------|------|-------|------|-------|------|-------|-----|------|------|-------|------|-------|
|      | decl  | decl  | lat  | decl  | lat  | decl  | lat  | decl  | lat  | decl  | lat | decl | lat  | decl  | lat  | lat   |
| M 1  | 18n10 | 9n48  | 0s42 | 21n32 | 0n39 | 18n40 | 4s41 | 23n14 | 0n2  | 11s12 | 1n7 | 1s1  | 2s21 | 17s35 | 0n17 | 22n12 |
| T 2  | 17 55 | 2 58  | 2 1  | 21 18 | 0 49 | 18 43 | 4 38 | 23 17 | 0 3  | 11 14 | 1 7 | 1 2  | 2 21 | 17 35 | 0 17 | 22 12 |
| W 3  | 17 40 | 3s54  | 3 12 | 21 2  | 0 58 | 18 47 | 4 35 | 23 19 | 0 4  | 11 16 | 1 6 | 1 3  | 2 21 | 17 35 | 0 17 | 22 12 |
| T 4  | 17 25 | 10 23 | 4 8  | 20 43 | 1 7  | 18 51 | 4 33 | 23 22 | 0 4  | 11 18 | 1 6 | 1 4  | 2 22 | 17 35 | 0 17 | 22 12 |
| F 5  | 17 9  | 16 10 | 4 48 | 20 21 | 1 14 | 18 55 | 4 30 | 23 24 | 0 5  | 11 21 | 1 6 | 1 5  | 2 22 | 17 35 | 0 17 | 22 12 |
| S 6  | 16 53 | 21 0  | 5 11 | 19 57 | 1 21 | 18 58 | 4 26 | 23 27 | 0 6  | 11 23 | 1 6 | 1 6  | 2 22 | 17 35 | 0 17 | 22 12 |
| S 7  | 16 36 | 24 40 | 5 17 | 19 31 | 1 27 | 19 2  | 4 23 | 23 29 | 0 7  | 11 25 | 1 5 | 1 7  | 2 22 | 17 35 | 0 17 | 22 12 |
| M 8  | 16 19 | 26 59 | 5 7  | 19 2  | 1 32 | 19 5  | 4 20 | 23 31 | 0 8  | 11 28 | 1 5 | 1 8  | 2 23 | 17 35 | 0 17 | 22 11 |
| T 9  | 16 2  | 27 54 | 4 42 | 18 32 | 1 36 | 19 8  | 4 16 | 23 32 | 0 8  | 11 30 | 1 5 | 1 9  | 2 23 | 17 36 | 0 17 | 22 11 |
| W10  | 15 45 | 27 23 | 4 4  | 17 59 | 1 40 | 19 11 | 4 13 | 23 33 | 0 9  | 11 33 | 1 5 | 1 10 | 2 23 | 17 36 | 0 17 | 22 11 |
| T 11 | 15 28 | 25 35 | 3 17 | 17 24 | 1 42 | 19 14 | 4 9  | 23 35 | 0 10 | 11 35 | 1 5 | 1 11 | 2 23 | 17 36 | 0 17 | 22 11 |
| F 12 | 15 10 | 22 37 | 2 21 | 16 48 | 1 44 | 19 16 | 4 5  | 23 36 | 0 11 | 11 38 | 1 4 | 1 13 | 2 24 | 17 36 | 0 17 | 22 11 |
| S 13 | 14 52 | 18 45 | 1 19 | 16 10 | 1 45 | 19 19 | 4 1  | 23 36 | 0 12 | 11 41 | 1 4 | 1 14 | 2 24 | 17 36 | 0 17 | 22 11 |
| S 14 | 14 34 | 14 9  | 0 14 | 15 31 | 1 46 | 19 21 | 3 57 | 23 37 | 0 13 | 11 43 | 1 4 | 1 15 | 2 24 | 17 36 | 0 17 | 22 11 |
| M15  | 14 16 | 9 3   | 0n51 | 14 50 | 1 45 | 19 23 | 3 53 | 23 37 | 0 14 | 11 46 | 1 4 | 1 17 | 2 24 | 17 37 | 0 17 | 22 11 |
| T 16 | 13 57 | 3 38  | 1 53 | 14 9  | 1 45 | 19 24 | 3 49 | 23 38 | 0 14 | 11 49 | 1 3 | 1 18 | 2 24 | 17 37 | 0 17 | 22 11 |
| W17  | 13 38 | 1n55  | 2 55 | 13 26 | 1 43 | 19 25 | 3 45 | 23 38 | 0 15 | 11 52 | 1 3 | 1 19 | 2 25 | 17 37 | 0 17 | 22 11 |
| T 18 | 13 19 | 7 27  | 3 45 | 12 43 | 1 41 | 19 26 | 3 40 | 23 37 | 0 16 | 11 55 | 1 3 | 1 21 | 2 25 | 17 38 | 0 17 | 22 11 |
| F 19 | 13 0  | 12 47 | 4 27 | 11 59 | 1 38 | 19 27 | 3 36 | 23 37 | 0 17 | 11 57 | 1 3 | 1 22 | 2 25 | 17 38 | 0 17 | 22 10 |
| S 20 | 12 40 | 17 42 | 4 57 | 11 15 | 1 35 | 19 27 | 3 31 | 23 37 | 0 18 | 12 0  | 1 3 | 1 24 | 2 25 | 17 38 | 0 17 | 22 10 |
| S 21 | 12 21 | 21 59 | 5 15 | 10 30 | 1 32 | 19 27 | 3 27 | 23 36 | 0 19 | 12 3  | 1 2 | 1 25 | 2 26 | 17 38 | 0 17 | 22 10 |
| M22  | 12 1  | 25 19 | 5 17 | 9 45  | 1 27 | 19 27 | 3 22 | 23 35 | 0 20 | 12 6  | 1 2 | 1 27 | 2 26 | 17 39 | 0 17 | 22 10 |
| T 23 | 11 41 | 27 23 | 5 2  | 8 59  | 1 23 | 19 26 | 3 18 | 23 34 | 0 20 | 12 9  | 1 2 | 1 28 | 2 26 | 17 39 | 0 17 | 22 10 |
| W24  | 11 21 | 27 52 | 4 30 | 8 13  | 1 18 | 19 25 | 3 13 | 23 32 | 0 21 | 12 12 | 1 2 | 1 30 | 2 26 | 17 39 | 0 17 | 22 10 |
| T 25 | 11 0  | 26 34 | 3 40 | 7 27  | 1 13 | 19 23 | 3 8  | 23 31 | 0 22 | 12 16 | 1 2 | 1 31 | 2 26 | 17 40 | 0 17 | 22 10 |
| F 26 | 10 40 | 23 28 | 2 35 | 6 41  | 1 7  | 19 21 | 3 4  | 23 29 | 0 23 | 12 19 | 1 1 | 1 33 | 2 26 | 17 40 | 0 17 | 22 10 |
| S 27 | 10 19 | 18 44 | 1 19 | 5 55  | 1 1  | 19 19 | 2 59 | 23 27 | 0 24 | 12 22 | 1 1 | 1 35 | 2 27 | 17 41 | 0 17 | 22 10 |
| S 28 | 9 58  | 12 45 | 0s4  | 5 9   | 0 55 | 19 16 | 2 54 | 23 25 | 0 25 | 12 25 | 1 1 | 1 36 | 2 27 | 17 41 | 0 17 | 22 10 |
| M29  | 9 37  | 5 59  | 1 28 | 4 24  | 0 49 | 19 13 | 2 49 | 23 23 | 0 26 | 12 28 | 1 1 | 1 38 | 2 27 | 17 41 | 0 17 | 22 9  |
| T 30 | 9 16  | 1s4   | 2 44 | 3 38  | 0 42 | 19 9  | 2 44 | 23 21 | 0 27 | 12 31 | 1 1 | 1 40 | 2 27 | 17 42 | 0 17 | 22 9  |
| W31  | 8n54  | 7s56  | 3s48 | 2n53  | 0n35 | 19n5  | 2s39 | 23n18 | 0n28 | 12s35 | 1n0 | 1s41 | 2s27 | 17s42 | 0n17 | 22n9  |

Julian Day Number = 2536127.5, Delta T = 197.21 sec  
 Ecliptic obliquity = 23°24'41, Nutation = 0°00'11, out-of-bounds declination in red  
 Ayanamsha: Fagan/Bradley = 27°58'36, Lahiri = 27°05'37

# ASTRODIENST EPHEMERIS for the year 2231

## geocentric

SEPTEMBER 2231

00:00 UT

| Day  | Sid.t    | ☉                     | ☽                  | ♂                  | ♀                  | ♂                  | ♂                  | ♂                  | ♂                  | ♂                 | ♂                 | ♂                  | ♂                  | ♂                  | ♂                  | Day  |
|------|----------|-----------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|-------------------|--------------------|--------------------|--------------------|--------------------|------|
| T 1  | 22 38 9  | 8 <sup>h</sup> 2'35   | 25 <sup>h</sup> 44 | 25 <sup>h</sup> 43 | 22 <sup>h</sup> 52 | 12 <sup>h</sup> 57 | 6 <sup>h</sup> 13  | 1 <sup>h</sup> 21  | 20 <sup>h</sup> 58 | 6 <sup>h</sup> 37 | 1 <sup>h</sup> 0  | 25 <sup>h</sup> 12 | 24 <sup>h</sup> 27 | 29 <sup>h</sup> 31 | 29 <sup>h</sup> 51 | T 1  |
| F 2  | 22 42 6  | 9 <sup>h</sup> 0'33   | 9 <sup>h</sup> 48  | 27 <sup>h</sup> 19 | 23 <sup>h</sup> 25 | 13 <sup>h</sup> 35 | 6 <sup>h</sup> 23  | 1 <sup>h</sup> 17  | 21 <sup>h</sup> 0  | 6 <sup>h</sup> 38 | 1 <sup>h</sup> 2  | 25 <sup>h</sup> 11 | 24 <sup>h</sup> 24 | 29 <sup>h</sup> 38 | 29 <sup>h</sup> 51 | F 2  |
| S 3  | 22 46 2  | 9 <sup>h</sup> 58'32  | 23 <sup>h</sup> 26 | 28 <sup>h</sup> 54 | 24 <sup>h</sup> 25 | 14 <sup>h</sup> 13 | 6 <sup>h</sup> 33  | 1 <sup>h</sup> 13  | 21 <sup>h</sup> 2  | 6 <sup>h</sup> 39 | 1 <sup>h</sup> 3  | 25 <sup>h</sup> 10 | 24 <sup>h</sup> 21 | 29 <sup>h</sup> 45 | 29 <sup>h</sup> 51 | S 3  |
| S 4  | 22 49 59 | 10 <sup>h</sup> 56'33 | 6 <sup>h</sup> 37  | 0 <sup>h</sup> 28  | 25 <sup>h</sup> 26 | 14 <sup>h</sup> 51 | 6 <sup>h</sup> 42  | 1 <sup>h</sup> 8   | 21 <sup>h</sup> 4  | 6 <sup>h</sup> 41 | 1 <sup>h</sup> 5  | 25 <sup>h</sup> 9  | 24 <sup>h</sup> 18 | 29 <sup>h</sup> 51 | 29 <sup>h</sup> 51 | S 4  |
| M 5  | 22 53 55 | 11 <sup>h</sup> 54'35 | 19 <sup>h</sup> 24 | 2 <sup>h</sup> 0   | 26 <sup>h</sup> 28 | 15 <sup>h</sup> 30 | 6 <sup>h</sup> 52  | 1 <sup>h</sup> 4   | 21 <sup>h</sup> 6  | 6 <sup>h</sup> 42 | 1 <sup>h</sup> 7  | 25 <sup>h</sup> 9  | 24 <sup>h</sup> 15 | 29 <sup>h</sup> 58 | 29 <sup>h</sup> 51 | M 5  |
| T 6  | 22 57 52 | 12 <sup>h</sup> 52'38 | 1 <sup>h</sup> 31  | 3 <sup>h</sup> 31  | 27 <sup>h</sup> 30 | 16 <sup>h</sup> 8  | 7 <sup>h</sup> 2   | 1 <sup>h</sup> 0   | 21 <sup>h</sup> 7  | 6 <sup>h</sup> 43 | 1 <sup>h</sup> 9  | 25 <sup>h</sup> 10 | 24 <sup>h</sup> 11 | 0 <sup>h</sup> 5   | 29 <sup>h</sup> 51 | T 6  |
| W 7  | 23 1 49  | 13 <sup>h</sup> 50'43 | 14 <sup>h</sup> 3  | 5 <sup>h</sup> 1   | 28 <sup>h</sup> 32 | 16 <sup>h</sup> 45 | 7 <sup>h</sup> 12  | 0 <sup>h</sup> 56  | 21 <sup>h</sup> 9  | 6 <sup>h</sup> 44 | 1 <sup>h</sup> 10 | 25 <sup>h</sup> 11 | 24 <sup>h</sup> 8  | 0 <sup>h</sup> 11  | 29 <sup>h</sup> 51 | W 7  |
| T 8  | 23 5 45  | 14 <sup>h</sup> 48'49 | 26 <sup>h</sup> 2  | 6 <sup>h</sup> 29  | 29 <sup>h</sup> 34 | 17 <sup>h</sup> 23 | 7 <sup>h</sup> 22  | 0 <sup>h</sup> 51  | 21 <sup>h</sup> 11 | 6 <sup>h</sup> 45 | 1 <sup>h</sup> 12 | 25 <sup>h</sup> 13 | 24 <sup>h</sup> 5  | 0 <sup>h</sup> 18  | 29 <sup>h</sup> 51 | T 8  |
| F 9  | 23 9 42  | 15 <sup>h</sup> 46'56 | 7 <sup>h</sup> 54  | 7 <sup>h</sup> 56  | 0 <sup>h</sup> 37  | 18 <sup>h</sup> 1  | 7 <sup>h</sup> 33  | 0 <sup>h</sup> 47  | 21 <sup>h</sup> 13 | 6 <sup>h</sup> 46 | 1 <sup>h</sup> 14 | 25 <sup>h</sup> 14 | 24 <sup>h</sup> 2  | 0 <sup>h</sup> 25  | 29 <sup>h</sup> 51 | F 9  |
| S 10 | 23 13 38 | 16 <sup>h</sup> 45'05 | 19 <sup>h</sup> 43 | 9 <sup>h</sup> 22  | 1 <sup>h</sup> 39  | 18 <sup>h</sup> 39 | 7 <sup>h</sup> 43  | 0 <sup>h</sup> 42  | 21 <sup>h</sup> 15 | 6 <sup>h</sup> 47 | 1 <sup>h</sup> 16 | 25 <sup>h</sup> 15 | 23 <sup>h</sup> 59 | 0 <sup>h</sup> 31  | 29 <sup>h</sup> 51 | S 10 |
| S 11 | 23 17 35 | 17 <sup>h</sup> 43'16 | 1 <sup>h</sup> 30  | 10 <sup>h</sup> 46 | 2 <sup>h</sup> 43  | 19 <sup>h</sup> 16 | 7 <sup>h</sup> 53  | 0 <sup>h</sup> 38  | 21 <sup>h</sup> 18 | 6 <sup>h</sup> 48 | 1 <sup>h</sup> 18 | 25 <sup>h</sup> 15 | 23 <sup>h</sup> 56 | 0 <sup>h</sup> 38  | 29 <sup>h</sup> 50 | S 11 |
| M 12 | 23 21 31 | 18 <sup>h</sup> 41'28 | 13 <sup>h</sup> 19 | 12 <sup>h</sup> 9  | 3 <sup>h</sup> 46  | 19 <sup>h</sup> 54 | 8 <sup>h</sup> 4   | 0 <sup>h</sup> 33  | 21 <sup>h</sup> 20 | 6 <sup>h</sup> 49 | 1 <sup>h</sup> 20 | 25 <sup>h</sup> 14 | 23 <sup>h</sup> 52 | 0 <sup>h</sup> 44  | 29 <sup>h</sup> 50 | M 12 |
| T 13 | 23 25 28 | 19 <sup>h</sup> 39'42 | 25 <sup>h</sup> 13 | 13 <sup>h</sup> 31 | 4 <sup>h</sup> 50  | 20 <sup>h</sup> 31 | 8 <sup>h</sup> 14  | 0 <sup>h</sup> 29  | 21 <sup>h</sup> 22 | 6 <sup>h</sup> 50 | 1 <sup>h</sup> 21 | 25 <sup>h</sup> 12 | 23 <sup>h</sup> 49 | 0 <sup>h</sup> 51  | 29 <sup>h</sup> 49 | T 13 |
| W 14 | 23 29 24 | 20 <sup>h</sup> 37'57 | 7 <sup>h</sup> 13  | 14 <sup>h</sup> 51 | 5 <sup>h</sup> 54  | 21 <sup>h</sup> 8  | 8 <sup>h</sup> 25  | 0 <sup>h</sup> 24  | 21 <sup>h</sup> 24 | 6 <sup>h</sup> 51 | 1 <sup>h</sup> 23 | 25 <sup>h</sup> 8  | 23 <sup>h</sup> 46 | 0 <sup>h</sup> 58  | 29 <sup>h</sup> 49 | W 14 |
| T 15 | 23 33 21 | 21 <sup>h</sup> 36'15 | 19 <sup>h</sup> 21 | 16 <sup>h</sup> 10 | 6 <sup>h</sup> 58  | 21 <sup>h</sup> 45 | 8 <sup>h</sup> 36  | 0 <sup>h</sup> 20  | 21 <sup>h</sup> 26 | 6 <sup>h</sup> 52 | 1 <sup>h</sup> 25 | 25 <sup>h</sup> 4  | 23 <sup>h</sup> 43 | 1 <sup>h</sup> 4   | 29 <sup>h</sup> 48 | T 15 |
| F 16 | 23 37 18 | 22 <sup>h</sup> 34'34 | 1 <sup>h</sup> 39  | 17 <sup>h</sup> 27 | 8 <sup>h</sup> 3   | 22 <sup>h</sup> 22 | 8 <sup>h</sup> 46  | 0 <sup>h</sup> 15  | 21 <sup>h</sup> 29 | 6 <sup>h</sup> 53 | 1 <sup>h</sup> 27 | 24 <sup>h</sup> 59 | 23 <sup>h</sup> 40 | 1 <sup>h</sup> 11  | 29 <sup>h</sup> 48 | F 16 |
| S 17 | 23 41 14 | 23 <sup>h</sup> 32'56 | 14 <sup>h</sup> 8  | 18 <sup>h</sup> 42 | 9 <sup>h</sup> 8   | 22 <sup>h</sup> 59 | 8 <sup>h</sup> 57  | 0 <sup>h</sup> 11  | 21 <sup>h</sup> 31 | 6 <sup>h</sup> 53 | 1 <sup>h</sup> 29 | 24 <sup>h</sup> 55 | 23 <sup>h</sup> 36 | 1 <sup>h</sup> 18  | 29 <sup>h</sup> 47 | S 17 |
| S 18 | 23 45 11 | 24 <sup>h</sup> 31'19 | 26 <sup>h</sup> 51 | 19 <sup>h</sup> 56 | 10 <sup>h</sup> 13 | 23 <sup>h</sup> 36 | 9 <sup>h</sup> 8   | 0 <sup>h</sup> 6   | 21 <sup>h</sup> 33 | 6 <sup>h</sup> 54 | 1 <sup>h</sup> 31 | 24 <sup>h</sup> 51 | 23 <sup>h</sup> 33 | 1 <sup>h</sup> 24  | 29 <sup>h</sup> 46 | S 18 |
| M 19 | 23 49 7  | 25 <sup>h</sup> 29'45 | 9 <sup>h</sup> 11  | 21 <sup>h</sup> 8  | 11 <sup>h</sup> 18 | 24 <sup>h</sup> 13 | 9 <sup>h</sup> 19  | 0 <sup>h</sup> 1   | 21 <sup>h</sup> 36 | 6 <sup>h</sup> 55 | 1 <sup>h</sup> 33 | 24 <sup>h</sup> 49 | 23 <sup>h</sup> 30 | 1 <sup>h</sup> 31  | 29 <sup>h</sup> 45 | M 19 |
| T 20 | 23 53 4  | 26 <sup>h</sup> 28'13 | 23 <sup>h</sup> 7  | 22 <sup>h</sup> 19 | 12 <sup>h</sup> 24 | 24 <sup>h</sup> 50 | 9 <sup>h</sup> 30  | 29 <sup>h</sup> 57 | 21 <sup>h</sup> 38 | 6 <sup>h</sup> 56 | 1 <sup>h</sup> 35 | 24 <sup>h</sup> 48 | 23 <sup>h</sup> 27 | 1 <sup>h</sup> 38  | 29 <sup>h</sup> 44 | T 20 |
| W 21 | 23 57 0  | 27 <sup>h</sup> 26'43 | 6 <sup>h</sup> 44  | 23 <sup>h</sup> 27 | 13 <sup>h</sup> 30 | 25 <sup>h</sup> 26 | 9 <sup>h</sup> 42  | 29 <sup>h</sup> 52 | 21 <sup>h</sup> 41 | 6 <sup>h</sup> 56 | 1 <sup>h</sup> 38 | 24 <sup>h</sup> 48 | 23 <sup>h</sup> 24 | 1 <sup>h</sup> 44  | 29 <sup>h</sup> 43 | W 21 |
| T 22 | 0 0 57   | 28 <sup>h</sup> 25'15 | 20 <sup>h</sup> 42 | 24 <sup>h</sup> 34 | 14 <sup>h</sup> 36 | 26 <sup>h</sup> 3  | 9 <sup>h</sup> 53  | 29 <sup>h</sup> 48 | 21 <sup>h</sup> 43 | 6 <sup>h</sup> 57 | 1 <sup>h</sup> 40 | 24 <sup>h</sup> 49 | 23 <sup>h</sup> 21 | 1 <sup>h</sup> 51  | 29 <sup>h</sup> 42 | T 22 |
| F 23 | 0 4 53   | 29 <sup>h</sup> 23'50 | 5 <sup>h</sup> 1   | 25 <sup>h</sup> 38 | 15 <sup>h</sup> 42 | 26 <sup>h</sup> 39 | 10 <sup>h</sup> 4  | 29 <sup>h</sup> 43 | 21 <sup>h</sup> 46 | 6 <sup>h</sup> 58 | 1 <sup>h</sup> 42 | 24 <sup>h</sup> 51 | 23 <sup>h</sup> 17 | 1 <sup>h</sup> 58  | 29 <sup>h</sup> 41 | F 23 |
| S 24 | 0 8 50   | 0 <sup>h</sup> 22'26  | 19 <sup>h</sup> 39 | 26 <sup>h</sup> 40 | 16 <sup>h</sup> 49 | 27 <sup>h</sup> 15 | 10 <sup>h</sup> 16 | 29 <sup>h</sup> 38 | 21 <sup>h</sup> 49 | 6 <sup>h</sup> 58 | 1 <sup>h</sup> 44 | 24 <sup>h</sup> 52 | 23 <sup>h</sup> 14 | 2 <sup>h</sup> 4   | 29 <sup>h</sup> 40 | S 24 |
| S 25 | 0 12 47  | 1 <sup>h</sup> 21'05  | 4 <sup>h</sup> 32  | 27 <sup>h</sup> 40 | 17 <sup>h</sup> 55 | 27 <sup>h</sup> 51 | 10 <sup>h</sup> 27 | 29 <sup>h</sup> 34 | 21 <sup>h</sup> 51 | 6 <sup>h</sup> 59 | 1 <sup>h</sup> 46 | 24 <sup>h</sup> 51 | 23 <sup>h</sup> 11 | 2 <sup>h</sup> 11  | 29 <sup>h</sup> 39 | S 25 |
| M 26 | 0 16 43  | 2 <sup>h</sup> 19'46  | 19 <sup>h</sup> 33 | 28 <sup>h</sup> 36 | 19 <sup>h</sup> 2  | 28 <sup>h</sup> 27 | 10 <sup>h</sup> 39 | 29 <sup>h</sup> 29 | 21 <sup>h</sup> 54 | 6 <sup>h</sup> 59 | 1 <sup>h</sup> 48 | 24 <sup>h</sup> 49 | 23 <sup>h</sup> 8  | 2 <sup>h</sup> 17  | 29 <sup>h</sup> 38 | M 26 |
| T 27 | 0 20 40  | 3 <sup>h</sup> 18'28  | 4 <sup>h</sup> 35  | 29 <sup>h</sup> 31 | 20 <sup>h</sup> 9  | 29 <sup>h</sup> 3  | 10 <sup>h</sup> 50 | 29 <sup>h</sup> 24 | 21 <sup>h</sup> 57 | 7 <sup>h</sup> 0  | 1 <sup>h</sup> 50 | 24 <sup>h</sup> 46 | 23 <sup>h</sup> 5  | 2 <sup>h</sup> 24  | 29 <sup>h</sup> 36 | T 27 |
| W 28 | 0 24 36  | 4 <sup>h</sup> 17'13  | 19 <sup>h</sup> 27 | 0 <sup>h</sup> 22  | 21 <sup>h</sup> 17 | 29 <sup>h</sup> 39 | 11 <sup>h</sup> 2  | 29 <sup>h</sup> 20 | 22 <sup>h</sup> 0  | 7 <sup>h</sup> 0  | 1 <sup>h</sup> 53 | 24 <sup>h</sup> 40 | 23 <sup>h</sup> 2  | 2 <sup>h</sup> 31  | 29 <sup>h</sup> 35 | W 28 |
| T 29 | 0 28 33  | 5 <sup>h</sup> 15'59  | 4 <sup>h</sup> 2   | 1 <sup>h</sup> 9   | 22 <sup>h</sup> 24 | 0 <sup>h</sup> 14  | 11 <sup>h</sup> 14 | 29 <sup>h</sup> 15 | 22 <sup>h</sup> 2  | 7 <sup>h</sup> 1  | 1 <sup>h</sup> 55 | 24 <sup>h</sup> 34 | 22 <sup>h</sup> 58 | 2 <sup>h</sup> 37  | 29 <sup>h</sup> 34 | T 29 |
| F 30 | 0 32 29  | 6 <sup>h</sup> 14'48  | 18 <sup>h</sup> 13 | 1 <sup>h</sup> 54  | 23 <sup>h</sup> 32 | 0 <sup>h</sup> 50  | 11 <sup>h</sup> 26 | 29 <sup>h</sup> 10 | 22 <sup>h</sup> 5  | 7 <sup>h</sup> 2  | 1 <sup>h</sup> 57 | 24 <sup>h</sup> 28 | 22 <sup>h</sup> 55 | 2 <sup>h</sup> 44  | 29 <sup>h</sup> 32 | F 30 |

| Day  | ☉    | ☽     | ♂    | ♀     | ♂    | ♂     | ♂    | ♂     | ♂    | ♂     | ♂    | ♂    | ♂    | ♂     | ♂    | ♂     |
|------|------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|-------|------|-------|
|      | decl | decl  | lat  | decl  | lat  | decl  | lat  | decl  | lat  | decl  | lat  | decl | lat  | decl  | lat  | lat   |
| T 1  | 8n33 | 14s13 | 4s36 | 2n 7  | 0n28 | 19n 1 | 2s35 | 23n15 | 0n29 | 12s38 | 1n 0 | 1s43 | 2s27 | 17s43 | 0n17 | 22n 9 |
| F 2  | 8 11 | 19 34 | 5 5  | 1 22  | 0 20 | 18 56 | 2 30 | 23 12 | 0 29 | 12 41 | 1 0  | 1 45 | 2 28 | 17 43 | 0 17 | 22 9  |
| S 3  | 7 49 | 23 43 | 5 17 | 0 38  | 0 13 | 18 50 | 2 25 | 23 9  | 0 30 | 12 45 | 1 0  | 1 47 | 2 28 | 17 44 | 0 17 | 22 9  |
| S 4  | 7 27 | 26 29 | 5 10 | 0s 6  | 0 5  | 18 44 | 2 20 | 23 6  | 0 31 | 12 48 | 1 0  | 1 49 | 2 28 | 17 44 | 0 17 | 22 9  |
| M 5  | 7 5  | 27 47 | 4 49 | 0 50  | 0s 3 | 18 38 | 2 15 | 23 3  | 0 32 | 12 51 | 0 59 | 1 50 | 2 28 | 17 45 | 0 16 | 22 9  |
| T 6  | 6 43 | 27 38 | 4 14 | 1 34  | 0 11 | 18 31 | 2 10 | 22 59 | 0 33 | 12 55 | 0 59 | 1 52 | 2 28 | 17 45 | 0 16 | 22 9  |
| W 7  | 6 21 | 26 8  | 3 29 | 2 17  | 0 19 | 18 24 | 2 5  | 22 56 | 0 34 | 12 58 | 0 59 | 1 54 | 2 28 | 17 46 | 0 16 | 22 9  |
| T 8  | 5 58 | 23 27 | 2 35 | 2 59  | 0 27 | 18 16 | 2 0  | 22 52 | 0 35 | 13 2  | 0 59 | 1 56 | 2 28 | 17 46 | 0 16 | 22 9  |
| F 9  | 5 36 | 19 47 | 1 34 | 3 41  | 0 35 | 18 8  | 1 55 | 22 48 | 0 36 | 13 5  | 0 59 | 1 58 | 2 28 | 17 47 | 0 16 | 22 9  |
| S 10 | 5 13 | 15 22 | 0 31 | 4 22  | 0 43 | 17 59 | 1 50 | 22 43 | 0 37 | 13 9  | 0 59 | 2 0  | 2 29 | 17 47 | 0 16 | 22 8  |
| S 11 | 4 51 | 10 24 | 0n34 | 5 3   | 0 52 | 17 50 | 1 45 | 22 39 | 0 38 | 13 12 | 0 58 | 2 1  | 2 29 | 17 48 | 0 16 | 22 8  |
| M 12 | 4 28 | 5 2   | 1 38 | 5 43  | 1 0  | 17 40 | 1 40 | 22 35 | 0 39 | 13 16 | 0 58 | 2 3  | 2 29 | 17 49 | 0 16 | 22 8  |
| T 13 | 4 5  | 0n31  | 2 38 | 6 23  | 1 8  | 17 30 | 1 35 | 22 30 | 0 40 | 13 19 | 0 58 | 2 5  | 2 29 | 17 49 | 0 16 | 22 8  |
| W 14 | 3 42 | 6 5   | 3 31 | 7 2   | 1 17 | 17 19 | 1 30 | 22 25 | 0 41 | 13 23 | 0 58 | 2 7  | 2 29 | 17 50 | 0 16 | 22 8  |
| T 15 | 3 20 | 11 29 | 4 15 | 7 40  | 1 25 | 17 8  | 1 25 | 22 20 | 0 42 | 13 26 | 0 58 | 2 9  | 2 29 | 17 50 | 0 16 | 22 8  |
| F 16 | 2 57 | 16 31 | 4 48 | 8 17  | 1 34 | 16 56 | 1 20 | 22 15 | 0 43 | 13 30 | 0 58 | 2 11 | 2 29 | 17 51 | 0 16 | 22 8  |
| S 17 | 2 34 | 20 57 | 5 8  | 8 53  | 1 42 | 16 44 | 1 15 | 22 10 | 0 44 | 13 34 | 0 57 | 2 13 | 2 29 | 17 52 | 0 16 | 22 8  |
| S 18 | 2 10 | 24 30 | 5 13 | 9 29  | 1 50 | 16 32 | 1 11 | 22 5  | 0 45 | 13 37 | 0 57 | 2 15 | 2 29 | 17 52 | 0 16 | 22 8  |
| M 19 | 1 47 | 26 53 | 5 2  | 10 4  | 1 58 | 16 19 | 1 6  | 22 0  | 0 46 | 13 41 | 0 57 | 2 16 | 2 29 | 17 53 | 0 16 | 22 8  |
| T 20 | 1 24 | 27 49 | 4 36 | 10 38 | 2 6  | 16 5  | 1 1  | 21 54 | 0 47 | 13 44 | 0 57 | 2 18 | 2 29 | 17 54 | 0 16 | 22 8  |
| W 21 | 1 1  | 27 7  | 3 53 | 11 11 | 2 14 | 15 51 | 0 56 | 21 48 | 0 47 | 13 48 | 0 57 | 2 20 | 2 29 | 17 54 | 0 16 | 22 8  |
| T 22 | 0 38 | 24 43 | 2 56 | 11 42 | 2 22 | 15 37 | 0 52 | 21 43 | 0 48 | 13 52 | 0 57 | 2 22 | 2 30 | 17 55 | 0 16 | 22 8  |
| F 23 | 0 14 | 20 43 | 1 46 | 12 13 | 2 29 | 15 22 | 0 47 | 21 37 | 0 49 | 13 55 | 0 57 | 2 24 | 2 30 | 17 56 | 0 16 | 22 8  |
| S 24 | 0s 9 | 15 22 | 0 28 | 12 43 | 2 37 | 15 6  | 0 42 | 21 31 | 0 50 | 13 59 | 0 56 | 2 26 | 2 30 | 17 56 | 0 16 |       |

# ASTRODIENST EPHEMERIS for the year 2231

## geocentric

OCTOBER 2231

00:00 UT

| Day  | Sid.t   | ☉        | ☽     | ♂      | ♀     | ♂     | ♂     | ♂      | ♂     | ♂     | ♂    | ♂      | ♂     | ♂    | ♂      | Day  |
|------|---------|----------|-------|--------|-------|-------|-------|--------|-------|-------|------|--------|-------|------|--------|------|
| S 1  | 0 36 26 | 7♂13'38  | 1♂58  | 2♂34   | 24♂40 | 1♂25  | 11♂37 | 29°R 6 | 22♂ 8 | 7♂ 1  | 1♂59 | 24°R22 | 22♂52 | 2♂51 | 29°R30 | S 1  |
| S 2  | 0 40 22 | 8°12'30  | 15°14 | 3°10   | 25°48 | 2° 1  | 11°49 | 29°R 1 | 22°11 | 7° 2  | 2° 1 | 24°R18 | 22°49 | 2°57 | 29°R29 | S 2  |
| M 3  | 0 44 19 | 9°11'24  | 28° 4 | 3°42   | 26°56 | 2°36  | 12° 1 | 28°57  | 22°14 | 7° 2  | 2° 4 | 24°15  | 22°46 | 3° 4 | 29°27  | M 3  |
| T 4  | 0 48 16 | 10°10'19 | 10♂32 | 4° 9   | 28° 4 | 3°11  | 12°13 | 28°52  | 22°17 | 7° 2  | 2° 6 | 24°D15 | 22°42 | 3°11 | 29°26  | T 4  |
| W 5  | 0 52 12 | 11° 9'17 | 22°42 | 4°30   | 29°13 | 3°46  | 12°25 | 28°48  | 22°20 | 7° 2  | 2° 8 | 24°15  | 22°39 | 3°17 | 29°24  | W 5  |
| T 6  | 0 56 9  | 12° 8'15 | 4♂39  | 4°46   | 0♂21  | 4°20  | 12°38 | 28°43  | 22°23 | 7° 2  | 2°11 | 24°17  | 22°36 | 3°24 | 29°22  | T 6  |
| F 7  | 1 0 5   | 13° 7'16 | 16°29 | 4°56   | 1°30  | 4°55  | 12°50 | 28°39  | 22°26 | 7° 3  | 2°13 | 24°18  | 22°33 | 3°31 | 29°20  | F 7  |
| S 8  | 1 4 2   | 14° 6'18 | 28°16 | 4°R59  | 2°39  | 5°29  | 13° 2 | 28°34  | 22°29 | 7° 3  | 2°15 | 24°R18 | 22°30 | 3°37 | 29°18  | S 8  |
| S 9  | 1 7 58  | 15° 5'23 | 10♂5  | 4°55   | 3°48  | 6° 4  | 13°14 | 28°30  | 22°32 | 7° 3  | 2°17 | 24°17  | 22°27 | 3°44 | 29°16  | S 9  |
| M10  | 1 11 55 | 16° 4'29 | 21°58 | 4°43   | 4°58  | 6°38  | 13°27 | 28°26  | 22°36 | 7° 3  | 2°20 | 24°13  | 22°23 | 3°51 | 29°14  | M10  |
| T 11 | 1 15 51 | 17° 3'37 | 4°Y 0 | 4°24   | 6° 7  | 7°12  | 13°39 | 28°21  | 22°39 | 7°R 3 | 2°22 | 24° 7  | 22°20 | 3°57 | 29°12  | T 11 |
| W12  | 1 19 48 | 18° 2'47 | 16°11 | 3°57   | 7°17  | 7°46  | 13°52 | 28°17  | 22°42 | 7° 3  | 2°25 | 23°59  | 22°17 | 4° 4 | 29°10  | W12  |
| T 13 | 1 23 45 | 19° 1'59 | 28°33 | 3°21   | 8°27  | 8°20  | 14° 4 | 28°13  | 22°45 | 7° 3  | 2°27 | 23°49  | 22°14 | 4°10 | 29° 8  | T 13 |
| F 14 | 1 27 41 | 20° 1'13 | 11♂8  | 2°38   | 9°37  | 8°54  | 14°16 | 28° 9  | 22°48 | 7° 3  | 2°29 | 23°39  | 22°11 | 4°17 | 29° 6  | F 14 |
| S 15 | 1 31 38 | 21° 0'29 | 23°53 | 1°47   | 10°47 | 9°27  | 14°29 | 28° 5  | 22°52 | 7° 3  | 2°32 | 23°28  | 22° 7 | 4°24 | 29° 3  | S 15 |
| S 16 | 1 35 34 | 21°59'48 | 6♂51  | 0°50   | 11°57 | 10° 1 | 14°42 | 28° 1  | 22°55 | 7° 2  | 2°34 | 23°20  | 22° 4 | 4°30 | 29° 1  | S 16 |
| M17  | 1 39 31 | 22°59'08 | 20° 1 | 29♂46  | 13° 7 | 10°34 | 14°54 | 27°57  | 22°58 | 7° 2  | 2°36 | 23°13  | 22° 1 | 4°37 | 28°59  | M17  |
| T 18 | 1 43 27 | 23°58'32 | 3♂24  | 28°37  | 14°18 | 11° 7 | 15° 7 | 27°53  | 23° 2 | 7° 2  | 2°39 | 23° 8  | 21°58 | 4°44 | 28°56  | T 18 |
| W19  | 1 47 24 | 24°57'57 | 17° 0 | 27°26  | 15°28 | 11°40 | 15°20 | 27°49  | 23° 5 | 7° 2  | 2°41 | 23° 7  | 21°55 | 4°50 | 28°54  | W19  |
| T 20 | 1 51 20 | 25°57'25 | 0♂50  | 26°12  | 16°39 | 12°13 | 15°32 | 27°45  | 23° 9 | 7° 1  | 2°44 | 23°D 6 | 21°52 | 4°57 | 28°51  | T 20 |
| F 21 | 1 55 17 | 26°56'55 | 14°55 | 25° 0  | 17°50 | 12°45 | 15°45 | 27°41  | 23°12 | 7° 1  | 2°46 | 23° 7  | 21°48 | 5° 4 | 28°49  | F 21 |
| S 22 | 1 59 14 | 27°56'27 | 29°13 | 23°51  | 19° 1 | 13°18 | 15°58 | 27°38  | 23°16 | 7° 1  | 2°48 | 23°R 7 | 21°45 | 5°10 | 28°46  | S 22 |
| S 23 | 2 3 10  | 28°56'01 | 13♂44 | 22°46  | 20°12 | 13°50 | 16°11 | 27°34  | 23°19 | 7° 0  | 2°51 | 23° 5  | 21°42 | 5°17 | 28°44  | S 23 |
| M24  | 2 7 7   | 29°55'38 | 28°24 | 21°48  | 21°23 | 14°22 | 16°24 | 27°30  | 23°22 | 7° 0  | 2°53 | 23° 1  | 21°39 | 5°24 | 28°41  | M24  |
| T 25 | 2 11 3  | 0♂55'17  | 13♂6  | 20°59  | 22°34 | 14°54 | 16°37 | 27°27  | 23°26 | 6°59  | 2°56 | 22°54  | 21°36 | 5°30 | 28°38  | T 25 |
| W26  | 2 15 0  | 1°54'58  | 27°43 | 20°20  | 23°46 | 15°26 | 16°50 | 27°23  | 23°30 | 6°59  | 2°58 | 22°45  | 21°33 | 5°37 | 28°36  | W26  |
| T 27 | 2 18 56 | 2°54'41  | 12♂9  | 19°51  | 24°57 | 15°58 | 17° 3 | 27°20  | 23°33 | 6°58  | 3° 1 | 22°34  | 21°29 | 5°44 | 28°33  | T 27 |
| F 28 | 2 22 53 | 3°54'26  | 26°15 | 19°33  | 26° 9 | 16°29 | 17°16 | 27°17  | 23°37 | 6°58  | 3° 3 | 22°23  | 21°26 | 5°50 | 28°30  | F 28 |
| S 29 | 2 26 49 | 4°54'13  | 9♂58  | 19°D27 | 27°21 | 17° 0 | 17°29 | 27°14  | 23°40 | 6°57  | 3° 5 | 22°12  | 21°23 | 5°57 | 28°27  | S 29 |
| S 30 | 2 30 46 | 5°54'02  | 23°16 | 19°32  | 28°33 | 17°32 | 17°42 | 27°11  | 23°44 | 6°57  | 3° 8 | 22° 3  | 21°20 | 6° 3 | 28°24  | S 30 |
| M31  | 2 34 43 | 6♂53'53  | 6♂9   | 19♂48  | 29♂45 | 18♂2  | 17♂55 | 27♂8   | 23♂47 | 6♂56  | 3♂10 | 21♂57  | 21♂17 | 6♂10 | 28♂22  | M31  |

| Day  | ☉     | ☾     |      | ♂     |      | ♀     |      | ♂     |      | ♂     |      | ♂    |      | ♂     |      | ♂     |      | ♂    |       | ♂     |       | ♂    |       | ♂    |      |
|------|-------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|-------|------|-------|------|------|-------|-------|-------|------|-------|------|------|
|      | decl  | decl  | lat  | decl  | lat  | decl  | lat  | decl  | lat  | decl  | lat  | decl | lat  | decl  | lat  | decl  | lat  | decl | lat   | decl  | lat   | decl | lat   | decl | lat  |
| S 1  | 2s52  | 25s32 | 5s 7 | 15s29 | 3s20 | 13n 7 | 0s11 | 20n45 | 0n58 | 14s25 | 0n55 | 2s39 | 2s30 | 18s 1 | 0n16 | 22n 7 | 1s 6 | 3n18 | 16n25 | 13s23 | 13s53 | 9s37 | 17n 2 | 3s 4 | 3s 4 |
| S 2  | 3 15  | 27 23 | 4 50 | 15 46 | 3 25 | 12 48 | 0 7  | 20 39 | 0 59 | 14 29 | 0 55 | 2 41 | 2 30 | 18 2  | 0 16 | 22 7  | 1 6  | 3 17 | 16 25 | 13 24 | 13 54 | 9 34 | 17 1  | 3 4  | 3 4  |
| M 3  | 3 38  | 27 42 | 4 18 | 16 1  | 3 29 | 12 29 | 0 3  | 20 32 | 1 0  | 14 33 | 0 55 | 2 42 | 2 30 | 18 3  | 0 16 | 22 7  | 1 7  | 3 16 | 16 25 | 13 25 | 13 55 | 9 30 | 17 0  | 3    | 3    |
| T 4  | 4 1   | 26 34 | 3 35 | 16 13 | 3 32 | 12 9  | 0n 1 | 20 25 | 1 1  | 14 37 | 0 55 | 2 44 | 2 30 | 18 4  | 0 16 | 22 7  | 1 7  | 3 15 | 16 24 | 13 25 | 13 56 | 9 27 | 17 0  | 3    | 3    |
| W 5  | 4 25  | 24 10 | 2 43 | 16 22 | 3 35 | 11 49 | 0 5  | 20 17 | 1 2  | 14 41 | 0 55 | 2 46 | 2 30 | 18 5  | 0 16 | 22 7  | 1 7  | 3 14 | 16 24 | 13 25 | 13 57 | 9 24 | 16 59 | 3    | 3    |
| T 6  | 4 48  | 20 46 | 1 44 | 16 29 | 3 36 | 11 29 | 0 9  | 20 10 | 1 3  | 14 44 | 0 55 | 2 48 | 2 30 | 18 5  | 0 16 | 22 7  | 1 7  | 3 13 | 16 24 | 13 25 | 13 58 | 9 21 | 16 59 | 3    | 3    |
| F 7  | 5 11  | 16 33 | 0 42 | 16 33 | 3 37 | 11 8  | 0 13 | 20 3  | 1 4  | 14 48 | 0 55 | 2 50 | 2 30 | 18 6  | 0 16 | 22 7  | 1 7  | 3 12 | 16 24 | 13 24 | 13 59 | 9 18 | 16 58 | 3    | 3    |
| S 8  | 5 33  | 11 44 | 0n21 | 16 34 | 3 36 | 10 47 | 0 17 | 19 56 | 1 5  | 14 52 | 0 55 | 2 51 | 2 30 | 18 7  | 0 16 | 22 7  | 1 7  | 3 11 | 16 24 | 13 24 | 14 0  | 9 14 | 16 57 | 3    | 6    |
| S 9  | 5 56  | 6 29  | 1 24 | 16 31 | 3 35 | 10 26 | 0 21 | 19 48 | 1 6  | 14 56 | 0 54 | 2 53 | 2 30 | 18 8  | 0 16 | 22 7  | 1 7  | 3 10 | 16 23 | 13 25 | 14 1  | 9 11 | 16 57 | 3    | 6    |
| M10  | 6 19  | 0 59  | 2 23 | 16 24 | 3 32 | 10 4  | 0 25 | 19 41 | 1 7  | 14 59 | 0 54 | 2 55 | 2 29 | 18 9  | 0 16 | 22 7  | 1 7  | 3 9  | 16 23 | 13 26 | 14 2  | 9 8  | 16 56 | 3    | 6    |
| T 11 | 6 42  | 4n36  | 3 17 | 16 13 | 3 27 | 9 42  | 0 29 | 19 33 | 1 8  | 15 3  | 0 54 | 2 56 | 2 29 | 18 9  | 0 16 | 22 7  | 1 7  | 3 8  | 16 23 | 13 28 | 14 3  | 9 5  | 16 55 | 3    | 6    |
| W12  | 7 4   | 10 4  | 4 2  | 15 58 | 3 21 | 9 20  | 0 32 | 19 25 | 1 9  | 15 7  | 0 54 | 2 58 | 2 29 | 18 10 | 0 16 | 22 7  | 1 7  | 3 7  | 16 23 | 13 31 | 14 4  | 9 2  | 16 55 | 3    | 7    |
| T 13 | 7 27  | 15 15 | 4 36 | 15 39 | 3 14 | 8 57  | 0 36 | 19 18 | 1 10 | 15 11 | 0 54 | 3 0  | 2 29 | 18 11 | 0 16 | 22 7  | 1 7  | 3 7  | 16 23 | 13 34 | 14 5  | 8 58 | 16 54 | 3    | 7    |
| F 14 | 7 49  | 19 51 | 4 58 | 15 15 | 3 4  | 8 34  | 0 39 | 19 10 | 1 12 | 15 15 | 0 54 | 3 1  | 2 29 | 18 12 | 0 16 | 22 7  | 1 7  | 3 6  | 16 23 | 13 37 | 14 6  | 8 55 | 16 53 | 3    | 7    |
| S 15 | 8 11  | 23 38 | 5 5  | 14 47 | 2 53 | 8 11  | 0 43 | 19 2  | 1 13 | 15 18 | 0 54 | 3 3  | 2 29 | 18 13 | 0 16 | 22 7  | 1 7  | 3 5  | 16 22 | 13 41 | 14 7  | 8 52 | 16 53 | 3    | 7    |
| S 16 | 8 34  | 26 18 | 4 56 | 14 15 | 2 40 | 7 47  | 0 46 | 18 54 | 1 14 | 15 22 | 0 54 | 3 4  | 2 29 | 18 14 | 0 16 | 22 7  | 1 7  | 3 4  | 16 22 | 13 44 | 14 8  | 8 49 | 16 52 | 3    | 7    |
| M17  | 8 56  | 27 34 | 4 32 | 13 38 | 2 25 | 7 23  | 0 49 | 18 46 | 1 15 | 15 26 | 0 54 | 3 6  | 2 29 | 18 14 | 0 16 | 22 7  | 1 7  | 3 3  | 16 22 | 13 46 | 14 9  | 8 45 | 16 51 | 3    | 8    |
| T 18 | 9 17  | 27 15 | 3 53 | 12 58 | 2 8  | 6 59  | 0 52 | 18 38 | 1 16 | 15 30 | 0 54 | 3 7  | 2 29 | 18 15 | 0 16 | 22 7  | 1 7  | 3 2  | 16 22 | 13 47 | 14 10 | 8 42 | 16 50 | 3    | 8    |
| W19  | 9 39  | 25 19 | 3 0  | 12 16 | 1 50 | 6 34  | 0 55 | 18 30 | 1 17 | 15 34 | 0 53 | 3 9  | 2 29 | 18 16 | 0 16 | 22 7  | 1 7  | 3 1  | 16 22 | 13 48 | 14 11 | 8 39 | 16 50 | 3    | 8    |
| T 20 | 10 1  | 21 50 | 1 56 | 11 31 | 1 31 | 6 10  | 0 59 | 18 22 | 1 18 | 15 37 | 0 53 | 3 10 | 2 29 | 18 17 | 0 16 | 22 7  | 1 7  | 3 1  | 16 22 | 13 48 | 14 12 | 8 36 | 16 49 | 3    | 8    |
| F 21 | 10 22 | 17 2  | 0 44 | 10 46 | 1 11 | 5 45  | 1 1  | 18 14 | 1 20 | 15 41 | 0 53 | 3 11 | 2 29 | 18 18 | 0 16 | 22 7  | 1 7  | 3 0  | 16 22 | 13 48 | 14 13 | 8 33 | 16 48 | 3    | 8    |
| S 22 | 10 44 | 11 13 | 0s33 | 10 1  | 0 50 | 5 20  | 1 4  | 18 6  | 1 21 | 15 45 | 0 53 | 3 13 | 2 29 | 18 19 | 0 16 | 22 7  | 1 7  | 2 59 | 16 22 | 13 48 | 14 14 | 8 29 | 16 48 | 3    | 9    |
| S 23 | 11 5  | 4 44  | 1 48 | 9 18  | 0 30 | 4 54  | 1 7  | 17 58 | 1 22 | 15 49 | 0 53 | 3 14 | 2 28 | 18 20 | 0 16 | 22 7  | 1 7  | 2 58 | 16 22 | 13 48 | 14 15 | 8 26 | 16 47 | 3    | 9    |
| M24  | 11 26 | 2s 3  | 2 56 | 8 38  | 0 9  | 4 29  | 1 10 | 17 50 | 1 23 | 15 53 | 0 53 | 3 16 | 2 28 | 18 21 | 0 16 | 22 7  | 1 7  | 2 57 | 16 22 | 13 50 | 14 16 | 8 23 | 16 46 | 3    | 9    |
| T 25 | 11 47 | 8 44  | 3 53 | 8 1   | 0n10 | 4 3   | 1 12 | 17 41 | 1 24 | 15 56 | 0 53 | 3 17 | 2 28 | 18 22 | 0 16 | 22 7  | 1 7  | 2 56 | 16 22 | 13 52 | 14 17 | 8 20 | 16 45 | 3    | 9    |
| W26  | 12 8  | 14 55 | 4 34 | 7 29  | 0 29 | 3 37  | 1 15 | 17 33 | 1 25 | 16 0  | 0 53 | 3 18 | 2 28 | 18 22 | 0 16 | 22 7  | 1 7  | 2 56 | 16 22 | 13 55 | 14 18 | 8 16 | 16 44 | 3    | 9    |
| T 27 | 12 28 | 20 10 | 4 57 | 7 2   | 0 46 | 3 11  | 1 17 | 17 25 | 1 27 | 16 4  | 0 53 | 3 19 | 2 28 | 18 23 | 0 16 | 22 7  | 1 7  | 2 55 | 16 22 | 13 59 | 14 19 | 8 13 | 16 44 | 3    | 10   |
| F 28 | 12 48 | 24 10 | 5 1  | 6 41  | 1 2  | 2 45  | 1 20 | 17 16 | 1 28 | 16 8  | 0 53 | 3 20 | 2 28 | 18 24 | 0 16 | 22 7  | 1 7  | 2 54 | 16 22 | 14 2  | 14 20 | 8 10 | 16 43 | 3    | 10   |
| S 29 | 13 8  | 26 40 | 4 48 | 6 26  | 1 16 | 2 18  | 1 22 | 17 8  | 1 29 | 16 11 | 0 53 | 3 22 | 2 28 | 18 25 | 0 15 | 22 7  | 1 7  | 2 53 | 16 22 | 14 6  | 14 21 | 8 7  | 16 42 | 3    | 10   |
| S 30 | 13 28 | 27 33 | 4 19 | 6 16  | 1 28 | 1 52  | 1 24 | 17 0  | 1 30 | 16 15 | 0 52 | 3 23 | 2 28 | 18 26 | 0 15 | 22 7  | 1 7  | 2 52 | 16 22 | 14 9  | 14 22 | 8 4  | 16 41 | 3    | 10   |
| M31  | 13s48 | 26s53 | 3s38 | 6s12  | 1n39 | 1n25  | 1n26 | 16n52 | 1n32 | 16s19 | 0n52 | 3s24 | 2s27 | 18s27 | 0n15 | 22n 7 | 1s 7 | 2n52 | 16n22 | 14s11 | 14s23 | 8s 0 | 16n41 | 3s10 | 3s10 |

ASTRODIENST EPHEMERIS for the year 2231  
geocentric

NOVEMBER 2231

00:00 UT

| Day  | Sid.t   | ☉        | ☽     | ♂     | ♀     | ♂     | ♂     | ♂      | ♂     | ♂     | ♂    | ♂      | ♂     | ♂    | ♂      | Day  |
|------|---------|----------|-------|-------|-------|-------|-------|--------|-------|-------|------|--------|-------|------|--------|------|
| T 1  | 2 38 39 | 7♈53°45  | 18♊38 | 20♈13 | 0♈57  | 18♊33 | 18♈8  | 27°R 5 | 23♈51 | 6°R55 | 3♈13 | 21°R53 | 21♈13 | 6♈17 | 28°R19 | T 1  |
| W 2  | 2 42 36 | 8°53'39  | 0♈50  | 20°49 | 2° 9  | 19° 4 | 18°21 | 27♈2   | 23°55 | 6♈55  | 3°15 | 21°R52 | 21°10 | 6°23 | 28♈16  | W 2  |
| T 3  | 2 46 32 | 9°53'34  | 12°48 | 21°33 | 3°21  | 19°34 | 18°34 | 26°59  | 23°58 | 6°54  | 3°17 | 21°D51 | 21° 7 | 6°30 | 28°13  | T 3  |
| F 4  | 2 50 29 | 10°53'31 | 24°37 | 22°24 | 4°33  | 20° 4 | 18°47 | 26°56  | 24° 2 | 6°53  | 3°20 | 21°R51 | 21° 4 | 6°37 | 28°10  | F 4  |
| S 5  | 2 54 25 | 11°53'30 | 6♈25  | 23°23 | 5°46  | 20°34 | 19° 0 | 26°54  | 24° 6 | 6°52  | 3°22 | 21°51  | 21° 1 | 6°43 | 28° 7  | S 5  |
| S 6  | 2 58 22 | 12°53'30 | 18°15 | 24°28 | 6°58  | 21° 4 | 19°13 | 26°51  | 24° 9 | 6°52  | 3°25 | 21°48  | 20°58 | 6°50 | 28° 4  | S 6  |
| M 7  | 3 2 18  | 13°53'32 | 0♈13  | 25°38 | 8°11  | 21°33 | 19°27 | 26°49  | 24°13 | 6°51  | 3°27 | 21°43  | 20°54 | 6°57 | 28° 1  | M 7  |
| T 8  | 3 6 15  | 14°53'35 | 12°22 | 26°52 | 9°23  | 22° 2 | 19°40 | 26°46  | 24°17 | 6°50  | 3°29 | 21°35  | 20°51 | 7° 3 | 27°58  | T 8  |
| W 9  | 3 10 12 | 15°53'41 | 24°45 | 28°10 | 10°36 | 22°31 | 19°53 | 26°44  | 24°20 | 6°49  | 3°32 | 21°24  | 20°48 | 7°10 | 27°55  | W 9  |
| T 10 | 3 14 8  | 16°53'48 | 7♈22  | 29°32 | 11°49 | 23° 0 | 20° 6 | 26°42  | 24°24 | 6°48  | 3°34 | 21°11  | 20°45 | 7°17 | 27°52  | T 10 |
| F 11 | 3 18 5  | 17°53'57 | 20°16 | 0♈57  | 13° 2 | 23°29 | 20°19 | 26°40  | 24°28 | 6°47  | 3°37 | 20°58  | 20°42 | 7°23 | 27°48  | F 11 |
| S 12 | 3 22 1  | 18°54'07 | 3♈23  | 2°23  | 14°15 | 23°57 | 20°33 | 26°38  | 24°32 | 6°46  | 3°39 | 20°45  | 20°39 | 7°30 | 27°45  | S 12 |
| S 13 | 3 25 58 | 19°54'20 | 16°44 | 3°52  | 15°28 | 24°25 | 20°46 | 26°36  | 24°35 | 6°45  | 3°41 | 20°33  | 20°35 | 7°37 | 27°42  | S 13 |
| M14  | 3 29 54 | 20°54'34 | 0♈51  | 5°22  | 16°41 | 24°53 | 20°59 | 26°34  | 24°39 | 6°44  | 3°44 | 20°23  | 20°32 | 7°43 | 27°39  | M14  |
| T 15 | 3 33 51 | 21°54'51 | 13°55 | 6°54  | 17°54 | 25°21 | 21°12 | 26°33  | 24°43 | 6°43  | 3°46 | 20°17  | 20°29 | 7°50 | 27°36  | T 15 |
| W16  | 3 37 47 | 22°55'09 | 27°43 | 8°27  | 19° 7 | 25°49 | 21°26 | 26°31  | 24°47 | 6°42  | 3°48 | 20°14  | 20°26 | 7°57 | 27°33  | W16  |
| T 17 | 3 41 44 | 23°55'29 | 11♈37 | 10° 0 | 20°21 | 26°16 | 21°39 | 26°30  | 24°50 | 6°41  | 3°51 | 20°13  | 20°23 | 8° 3 | 27°30  | T 17 |
| F 18 | 3 45 41 | 24°55'51 | 25°38 | 11°34 | 21°34 | 26°43 | 21°52 | 26°28  | 24°54 | 6°39  | 3°53 | 20°12  | 20°19 | 8°10 | 27°26  | F 18 |
| S 19 | 3 49 37 | 25°56'15 | 9♈44  | 13° 9 | 22°48 | 27° 9 | 22° 5 | 26°27  | 24°58 | 6°38  | 3°55 | 20°12  | 20°16 | 8°17 | 27°23  | S 19 |
| S 20 | 3 53 34 | 26°56'41 | 23°56 | 14°44 | 24° 1 | 27°36 | 22°18 | 26°26  | 25° 1 | 6°37  | 3°57 | 20°10  | 20°13 | 8°23 | 27°20  | S 20 |
| M21  | 3 57 30 | 27°57'09 | 8♈11  | 16°19 | 25°15 | 28° 2 | 22°32 | 26°25  | 25° 5 | 6°36  | 4° 0 | 20° 5  | 20°10 | 8°30 | 27°17  | M21  |
| T 22 | 4 1 27  | 28°57'39 | 22°26 | 17°54 | 26°28 | 28°28 | 22°45 | 26°24  | 25° 9 | 6°35  | 4° 2 | 19°58  | 20° 7 | 8°36 | 27°14  | T 22 |
| W23  | 4 5 23  | 29°58'10 | 6♈38  | 19°30 | 27°42 | 28°53 | 22°58 | 26°23  | 25°13 | 6°33  | 4° 4 | 19°48  | 20° 4 | 8°43 | 27°10  | W23  |
| T 24 | 4 9 20  | 0♈58'43  | 20°40 | 21° 5 | 28°56 | 29°18 | 23°11 | 26°22  | 25°16 | 6°32  | 4° 6 | 19°36  | 20° 0 | 8°50 | 27° 7  | T 24 |
| F 25 | 4 13 16 | 1°59'18  | 4♈29  | 22°41 | 0♈10  | 29°43 | 23°24 | 26°22  | 25°20 | 6°31  | 4° 9 | 19°23  | 19°57 | 8°56 | 27° 4  | F 25 |
| S 26 | 4 17 13 | 2°59'55  | 17°59 | 24°16 | 1°24  | 0♈8   | 23°38 | 26°21  | 25°24 | 6°29  | 4°11 | 19°11  | 19°54 | 9° 3 | 27° 1  | S 26 |
| S 27 | 4 21 10 | 4° 0'32  | 1♈9   | 25°51 | 2°38  | 0°32  | 23°51 | 26°21  | 25°28 | 6°28  | 4°13 | 19° 1  | 19°51 | 9°10 | 26°58  | S 27 |
| M28  | 4 25 6  | 5° 1'11  | 13°58 | 27°27 | 3°51  | 0°56  | 24° 4 | 26°21  | 25°31 | 6°27  | 4°15 | 18°53  | 19°48 | 9°16 | 26°55  | M28  |
| T 29 | 4 29 3  | 6° 1'52  | 26°26 | 29° 2 | 5° 6  | 1°20  | 24°17 | 26°20  | 25°35 | 6°25  | 4°17 | 18°49  | 19°45 | 9°23 | 26°51  | T 29 |
| W30  | 4 32 59 | 7° 2'33  | 8♈38  | 0♈37  | 6♈20  | 1♈43  | 24♈30 | 26°D20 | 25♈39 | 6♈24  | 4♈19 | 18♈46  | 19♈41 | 9♈30 | 26♈48  | W30  |

| Day  | ☉     | ☾     |      | ♂     |      | ♀     |      | ♂     |      | ♂     |      | ♂    |      | ♂     |      | ♂     |      | ♂    |       | ♂     |       | ♂    |       | ♂    |     | ♂    |     |
|------|-------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|-------|------|-------|------|------|-------|-------|-------|------|-------|------|-----|------|-----|
|      | decl  | decl  | lat  | decl  | lat  | decl  | lat  | decl  | lat  | decl  | lat  | decl | lat  | decl  | lat  | decl  | lat  | decl | lat   | decl  | lat   | decl | lat   | decl | lat | decl | lat |
| T 1  | 14s 8 | 24s52 | 2s47 | 6s13  | 1n48 | 0n58  | 1n28 | 16n43 | 1n33 | 16s22 | 0n52 | 3s25 | 2s27 | 18s28 | 0n15 | 22n 7 | 1s 7 | 2n51 | 16n22 | 14s12 | 14s25 | 7s57 | 16n40 | 3s11 |     |      |     |
| W 2  | 14 27 | 21 44 | 1 49 | 6 20  | 1 55 | 0 32  | 1 30 | 16 35 | 1 34 | 16 26 | 0 52 | 3 26 | 2 27 | 18 29 | 0 15 | 22 7  | 1 7  | 2 50 | 16 22 | 14 12 | 14 26 | 7 54 | 16 39 | 3 11 |     |      |     |
| T 3  | 14 46 | 17 43 | 0 48 | 6 31  | 2 1  | 0 5   | 1 32 | 16 27 | 1 35 | 16 30 | 0 52 | 3 27 | 2 27 | 18 30 | 0 15 | 22 7  | 1 7  | 2 50 | 16 22 | 14 12 | 14 27 | 7 51 | 16 38 | 3 11 |     |      |     |
| F 4  | 15 5  | 13 4  | 0n15 | 6 46  | 2 6  | 0s23  | 1 34 | 16 18 | 1 37 | 16 33 | 0 52 | 3 28 | 2 27 | 18 31 | 0 15 | 22 7  | 1 7  | 2 49 | 16 22 | 14 12 | 14 28 | 7 47 | 16 37 | 3 11 |     |      |     |
| S 5  | 15 23 | 7 58  | 1 16 | 7 5   | 2 9  | 0 50  | 1 35 | 16 10 | 1 38 | 16 37 | 0 52 | 3 29 | 2 27 | 18 31 | 0 15 | 22 7  | 1 7  | 2 48 | 16 22 | 14 13 | 14 29 | 7 44 | 16 37 | 3 11 |     |      |     |
| S 6  | 15 41 | 2 34  | 2 15 | 7 27  | 2 11 | 1 17  | 1 37 | 16 2  | 1 39 | 16 41 | 0 52 | 3 29 | 2 26 | 18 32 | 0 15 | 22 7  | 1 7  | 2 47 | 16 22 | 14 13 | 14 30 | 7 41 | 16 36 | 3 11 |     |      |     |
| M 7  | 15 59 | 2n58  | 3 8  | 7 51  | 2 11 | 1 44  | 1 38 | 15 53 | 1 41 | 16 44 | 0 52 | 3 30 | 2 26 | 18 33 | 0 15 | 22 7  | 1 7  | 2 47 | 16 22 | 14 15 | 14 31 | 7 38 | 16 35 | 3 11 |     |      |     |
| T 8  | 16 17 | 8 28  | 3 53 | 8 18  | 2 11 | 2 11  | 1 40 | 15 45 | 1 42 | 16 48 | 0 52 | 3 31 | 2 26 | 18 34 | 0 15 | 22 7  | 1 7  | 2 46 | 16 22 | 14 18 | 14 32 | 7 34 | 16 34 | 3 12 |     |      |     |
| W 9  | 16 35 | 13 44 | 4 29 | 8 47  | 2 10 | 2 39  | 1 41 | 15 37 | 1 43 | 16 51 | 0 52 | 3 32 | 2 26 | 18 35 | 0 15 | 22 7  | 1 8  | 2 45 | 16 22 | 14 21 | 14 33 | 7 31 | 16 33 | 3 12 |     |      |     |
| T 10 | 16 52 | 18 33 | 4 51 | 9 18  | 2 8  | 3 6   | 1 42 | 15 29 | 1 45 | 16 55 | 0 52 | 3 32 | 2 26 | 18 36 | 0 15 | 22 7  | 1 8  | 2 45 | 16 22 | 14 25 | 14 34 | 7 28 | 16 33 | 3 12 |     |      |     |
| F 11 | 17 9  | 22 36 | 5 0  | 9 50  | 2 5  | 3 33  | 1 43 | 15 21 | 1 46 | 16 59 | 0 52 | 3 33 | 2 26 | 18 37 | 0 15 | 22 7  | 1 8  | 2 44 | 16 23 | 14 30 | 14 35 | 7 25 | 16 32 | 3 12 |     |      |     |
| S 12 | 17 25 | 25 36 | 4 53 | 10 23 | 2 2  | 4 1   | 1 44 | 15 12 | 1 47 | 17 2  | 0 52 | 3 34 | 2 25 | 18 38 | 0 15 | 22 7  | 1 8  | 2 43 | 16 23 | 14 34 | 14 36 | 7 21 | 16 31 | 3 12 |     |      |     |
| S 13 | 17 42 | 27 13 | 4 30 | 10 57 | 1 58 | 4 28  | 1 45 | 15 4  | 1 49 | 17 6  | 0 52 | 3 34 | 2 25 | 18 39 | 0 15 | 22 7  | 1 8  | 2 43 | 16 23 | 14 37 | 14 37 | 7 18 | 16 30 | 3 12 |     |      |     |
| M14  | 17 58 | 27 16 | 3 51 | 11 31 | 1 53 | 4 55  | 1 46 | 14 56 | 1 50 | 17 9  | 0 51 | 3 35 | 2 25 | 18 40 | 0 15 | 22 7  | 1 8  | 2 42 | 16 23 | 14 40 | 14 38 | 7 15 | 16 29 | 3 12 |     |      |     |
| T 15 | 18 13 | 25 39 | 2 59 | 12 6  | 1 48 | 5 22  | 1 47 | 14 48 | 1 51 | 17 13 | 0 51 | 3 35 | 2 25 | 18 41 | 0 15 | 22 7  | 1 8  | 2 42 | 16 23 | 14 42 | 14 39 | 7 12 | 16 28 | 3 12 |     |      |     |
| W16  | 18 29 | 22 29 | 1 56 | 12 40 | 1 43 | 5 49  | 1 47 | 14 40 | 1 53 | 17 16 | 0 51 | 3 36 | 2 25 | 18 42 | 0 15 | 22 7  | 1 8  | 2 41 | 16 23 | 14 43 | 14 40 | 7 8  | 16 28 | 3 13 |     |      |     |
| T 17 | 18 44 | 18 0  | 0 45 | 13 15 | 1 38 | 6 16  | 1 48 | 14 32 | 1 54 | 17 20 | 0 51 | 3 36 | 2 24 | 18 42 | 0 15 | 22 7  | 1 8  | 2 40 | 16 23 | 14 44 | 14 41 | 7 5  | 16 27 | 3 13 |     |      |     |
| F 18 | 18 59 | 12 31 | 0s29 | 13 50 | 1 32 | 6 43  | 1 48 | 14 25 | 1 56 | 17 23 | 0 51 | 3 36 | 2 24 | 18 43 | 0 15 | 22 7  | 1 8  | 2 40 | 16 24 | 14 44 | 14 42 | 7 2  | 16 26 | 3 13 |     |      |     |
| S 19 | 19 13 | 6 21  | 1 41 | 14 24 | 1 26 | 7 10  | 1 49 | 14 17 | 1 57 | 17 27 | 0 51 | 3 37 | 2 24 | 18 44 | 0 15 | 22 7  | 1 8  | 2 39 | 16 24 | 14 44 | 14 43 | 6 59 | 16 25 | 3 13 |     |      |     |
| S 20 | 19 27 | 0s10  | 2 48 | 14 58 | 1 19 | 7 37  | 1 49 | 14 9  | 1 59 | 17 30 | 0 51 | 3 37 | 2 24 | 18 45 | 0 15 | 22 7  | 1 8  | 2 39 | 16 24 | 14 45 | 14 44 | 6 55 | 16 24 | 3 13 |     |      |     |
| M21  | 19 41 | 6 41  | 3 45 | 15 32 | 1 13 | 8 4   | 1 49 | 14 1  | 2 0  | 17 33 | 0 51 | 3 37 | 2 24 | 18 46 | 0 15 | 22 7  | 1 8  | 2 38 | 16 24 | 14 46 | 14 45 | 6 52 | 16 24 | 3 13 |     |      |     |
| T 22 | 19 54 | 12 51 | 4 27 | 16 5  | 1 6  | 8 30  | 1 49 | 13 54 | 2 2  | 17 37 | 0 51 | 3 37 | 2 24 | 18 47 | 0 15 | 22 7  | 1 8  | 2 38 | 16 24 | 14 48 | 14 46 | 6 49 | 16 23 | 3 13 |     |      |     |
| W23  | 20 7  | 18 19 | 4 53 | 16 38 | 1 0  | 8 56  | 1 50 | 13 46 | 2 3  | 17 40 | 0 51 | 3 38 | 2 23 | 18 48 | 0 15 | 22 7  | 1 8  | 2 37 | 16 25 | 14 52 | 14 47 | 6 46 | 16 22 | 3 13 |     |      |     |
| T 24 | 20 20 | 22 43 | 5 1  | 17 10 | 0 53 | 9 22  | 1 49 | 13 39 | 2 5  | 17 43 | 0 51 | 3 38 | 2 23 | 18 49 | 0 15 | 22 7  | 1 8  | 2 37 | 16 25 | 14 55 | 14 48 | 6 42 | 16 21 | 3 13 |     |      |     |
| F 25 | 20 32 | 25 46 | 4 50 | 17 41 | 0 46 | 9 48  | 1 49 | 13 31 | 2 6  | 17 47 | 0 51 | 3 38 | 2 23 | 18 50 | 0 15 | 22 7  | 1 8  | 2 36 | 16 25 | 14 59 | 14 49 | 6 39 | 16 20 | 3 13 |     |      |     |
| S 26 | 20 44 | 27 15 | 4 24 | 18 11 | 0 39 | 10 14 | 1 49 | 13 24 | 2 8  | 17 50 | 0 51 | 3 38 | 2 23 | 18 51 | 0 15 | 22 7  | 1 8  | 2 36 | 16 25 | 15 3  | 14 50 | 6 36 | 16 20 | 3 14 |     |      |     |
| S 27 | 20 55 | 27 8  | 3 44 | 18 41 | 0 32 | 10 40 | 1 49 | 13 17 | 2 9  | 17 53 | 0 51 | 3 38 | 2 22 | 18 51 | 0 15 | 22 7  | 1 8  | 2 35 | 16 26 | 15 6  | 14 51 | 6 33 | 16 19 | 3 14 |     |      |     |
| M28  | 21 7  | 25 33 | 2 54 | 19 10 | 0 25 | 11 5  | 1 49 | 13 10 | 2 11 | 17 57 | 0 51 | 3 38 | 2 22 | 18 52 | 0 15 | 22 8  | 1 8  | 2 35 | 16 26 | 15 9  | 14 52 | 6 29 | 16 18 | 3 14 |     |      |     |
| T 29 | 21 17 | 22 44 | 1 56 | 19 37 | 0 18 | 11 30 | 1 48 | 13 3  | 2 12 | 18 0  | 0 51 | 3 38 | 2 22 | 18 53 | 0 15 | 22 8  | 1 8  | 2 35 | 16 26 | 15 10 | 14 53 | 6 26 | 16 17 | 3 14 |     |      |     |
| W30  | 21s28 | 18s57 | 0s54 | 20s 4 | 0n11 | 11s55 | 1n48 | 12n56 | 2n14 | 18s 3 | 0n51 | 3s37 | 2s22 | 18s54 | 0n15 | 22n 8 | 1s 8 | 2n34 | 16n26 | 15s11 | 14s54 | 6s23 | 16n17 | 3s14 |     |      |     |

ASTRODIENST EPHEMERIS for the year 2231  
geocentric

DECEMBER 2231

00:00 UT

| Day  | Sid.t   | ☉           | ☽       | ♀       | ♂       | ♂       | ♂       | ♂       | ♂       | ♂      | ♂      | ♂       | ♂       | ♂       | ♂       | Day  |
|------|---------|-------------|---------|---------|---------|---------|---------|---------|---------|--------|--------|---------|---------|---------|---------|------|
| T 1  | 4 36 56 | 8° 3' 15"   | 20° 36' | 2° 12'  | 7° 34'  | 2° 6'   | 24° 43' | 26° 20' | 25° 42' | 6° 22' | 4° 22' | 18° 46' | 19° 38' | 9° 36'  | 26° 45' | T 1  |
| F 2  | 4 40 52 | 9° 3' 59"   | 2° 27'  | 3° 47'  | 8° 48'  | 2° 29'  | 24° 56' | 26° 21' | 25° 46' | 6° 21' | 4° 24' | 18° 46' | 19° 35' | 9° 43'  | 26° 42' | F 2  |
| S 3  | 4 44 49 | 10° 4' 43"  | 14° 15' | 5° 21'  | 10° 2'  | 2° 51'  | 25° 9'  | 26° 21' | 25° 50' | 6° 19' | 4° 26' | 18° 46' | 19° 32' | 9° 50'  | 26° 39' | S 3  |
| S 4  | 4 48 45 | 11° 5' 28"  | 26° 6'  | 6° 56'  | 11° 16' | 3° 13'  | 25° 22' | 26° 21' | 25° 53' | 6° 18' | 4° 28' | 18° 45' | 19° 29' | 9° 56'  | 26° 36' | S 4  |
| M 5  | 4 52 42 | 12° 6' 15"  | 8° 7'   | 8° 31'  | 12° 30' | 3° 35'  | 25° 35' | 26° 22' | 25° 57' | 6° 16' | 4° 30' | 18° 42' | 19° 25' | 10° 3'  | 26° 33' | M 5  |
| T 6  | 4 56 39 | 13° 7' 02"  | 20° 17' | 10° 5'  | 13° 45' | 3° 56'  | 25° 48' | 26° 22' | 26° 1'  | 6° 15' | 4° 32' | 18° 36' | 19° 22' | 10° 10' | 26° 30' | T 6  |
| W 7  | 5 0 35  | 14° 7' 50"  | 2° 46'  | 11° 39' | 14° 59' | 4° 16'  | 26° 1'  | 26° 23' | 26° 4'  | 6° 13' | 4° 34' | 18° 27' | 19° 19' | 10° 16' | 26° 27' | W 7  |
| T 8  | 5 4 32  | 15° 8' 40"  | 15° 35' | 13° 14' | 16° 13' | 4° 37'  | 26° 14' | 26° 24' | 26° 8'  | 6° 12' | 4° 36' | 18° 17' | 19° 16' | 10° 23' | 26° 24' | T 8  |
| F 9  | 5 8 28  | 16° 9' 30"  | 28° 44' | 14° 48' | 17° 28' | 4° 57'  | 26° 27' | 26° 24' | 26° 11' | 6° 10' | 4° 38' | 18° 6'  | 19° 13' | 10° 30' | 26° 21' | F 9  |
| S 10 | 5 12 25 | 17° 10' 21" | 12° 12' | 16° 22' | 18° 42' | 5° 17'  | 26° 40' | 26° 25' | 26° 15' | 6° 9'  | 4° 40' | 17° 55' | 19° 10' | 10° 36' | 26° 18' | S 10 |
| S 11 | 5 16 21 | 18° 11' 14" | 25° 56' | 17° 56' | 19° 57' | 5° 36'  | 26° 53' | 26° 27' | 26° 18' | 6° 7'  | 4° 42' | 17° 45' | 19° 6'  | 10° 43' | 26° 15' | S 11 |
| M 12 | 5 20 18 | 19° 12' 07" | 9° 54'  | 19° 31' | 21° 11' | 5° 54'  | 27° 5'  | 26° 28' | 26° 22' | 6° 5'  | 4° 44' | 17° 38' | 19° 3'  | 10° 50' | 26° 12' | M 12 |
| T 13 | 5 24 14 | 20° 13' 02" | 24° 1'  | 21° 5'  | 22° 26' | 6° 13'  | 27° 18' | 26° 29' | 26° 26' | 6° 4'  | 4° 45' | 17° 33' | 19° 0'  | 10° 56' | 26° 9'  | T 13 |
| W 14 | 5 28 11 | 21° 13' 57" | 8° 12'  | 22° 39' | 23° 40' | 6° 31'  | 27° 31' | 26° 30' | 26° 29' | 6° 2'  | 4° 47' | 17° 30' | 18° 57' | 11° 3'  | 26° 7'  | W 14 |
| T 15 | 5 32 8  | 22° 14' 54" | 22° 25' | 24° 13' | 24° 55' | 6° 48'  | 27° 43' | 26° 32' | 26° 33' | 6° 1'  | 4° 49' | 17° 30' | 18° 54' | 11° 10' | 26° 4'  | T 15 |
| F 16 | 5 36 4  | 23° 15' 52" | 6° 36'  | 25° 48' | 26° 10' | 7° 5'   | 27° 56' | 26° 34' | 26° 36' | 5° 59' | 4° 51' | 17° 31' | 18° 51' | 11° 16' | 26° 1'  | F 16 |
| S 17 | 5 40 1  | 24° 16' 51" | 20° 44' | 27° 22' | 27° 24' | 7° 22'  | 28° 9'  | 26° 35' | 26° 39' | 5° 57' | 4° 53' | 17° 32' | 18° 47' | 11° 23' | 25° 58' | S 17 |
| S 18 | 5 43 57 | 25° 17' 51" | 4° 48'  | 28° 57' | 28° 39' | 7° 38'  | 28° 21' | 26° 37' | 26° 43' | 5° 56' | 4° 54' | 17° 31' | 18° 44' | 11° 29' | 25° 56' | S 18 |
| M 19 | 5 47 54 | 26° 18' 52" | 18° 47' | 0° 31'  | 29° 54' | 7° 53'  | 28° 34' | 26° 39' | 26° 46' | 5° 54' | 4° 56' | 17° 29' | 18° 41' | 11° 36' | 25° 53' | M 19 |
| T 20 | 5 51 50 | 27° 19' 54" | 2° 6'   | 1° 7'   | 9° 8'   | 8° 8'   | 28° 46' | 26° 41' | 26° 50' | 5° 52' | 4° 58' | 17° 24' | 18° 38' | 11° 43' | 25° 50' | T 20 |
| W 21 | 5 55 47 | 28° 20' 57" | 16° 24' | 3° 41'  | 2° 23'  | 8° 23'  | 28° 58' | 26° 43' | 26° 53' | 5° 51' | 4° 59' | 17° 18' | 18° 35' | 11° 49' | 25° 48' | W 21 |
| T 22 | 5 59 44 | 29° 22' 02" | 29° 59' | 5° 16'  | 3° 38'  | 8° 37'  | 29° 11' | 26° 46' | 26° 56' | 5° 49' | 5° 1'  | 17° 10' | 18° 31' | 11° 56' | 25° 45' | T 22 |
| F 23 | 6 3 40  | 0° 23' 07"  | 13° 21' | 6° 51'  | 4° 53'  | 8° 50'  | 29° 23' | 26° 48' | 26° 59' | 5° 47' | 5° 3'  | 17° 1'  | 18° 28' | 12° 3'  | 25° 43' | F 23 |
| S 24 | 6 7 37  | 1° 24' 12"  | 26° 29' | 8° 26'  | 6° 8'   | 9° 3'   | 29° 35' | 26° 50' | 27° 3'  | 5° 45' | 5° 4'  | 16° 53' | 18° 25' | 12° 9'  | 25° 40' | S 24 |
| S 25 | 6 11 33 | 2° 25' 19"  | 9° 32'  | 10° 2'  | 7° 23'  | 9° 15'  | 29° 48' | 26° 53' | 27° 6'  | 5° 44' | 5° 6'  | 16° 46' | 18° 22' | 12° 16' | 25° 38' | S 25 |
| M 26 | 6 15 30 | 3° 26' 25"  | 21° 59' | 11° 37' | 8° 38'  | 9° 27'  | 29° 59' | 26° 56' | 27° 9'  | 5° 42' | 5° 7'  | 16° 41' | 18° 19' | 12° 23' | 25° 36' | M 26 |
| T 27 | 6 19 26 | 4° 27' 32"  | 4° 20'  | 13° 13' | 9° 52'  | 9° 38'  | 0° 12'  | 26° 58' | 27° 12' | 5° 40' | 5° 9'  | 16° 38' | 18° 16' | 12° 29' | 25° 33' | T 27 |
| W 28 | 6 23 23 | 5° 28' 40"  | 16° 28' | 14° 49' | 11° 7'  | 9° 49'  | 0° 24'  | 27° 1'  | 27° 16' | 5° 39' | 5° 10' | 16° 37' | 18° 12' | 12° 36' | 25° 31' | W 28 |
| T 29 | 6 27 19 | 6° 29' 47"  | 28° 25' | 16° 24' | 12° 22' | 9° 59'  | 0° 36'  | 27° 4'  | 27° 19' | 5° 37' | 5° 12' | 16° 37' | 18° 9'  | 12° 43' | 25° 29' | T 29 |
| F 30 | 6 31 16 | 7° 30' 55"  | 10° 15' | 18° 0'  | 13° 37' | 10° 8'  | 0° 48'  | 27° 7'  | 27° 22' | 5° 35' | 5° 13' | 16° 39' | 18° 6'  | 12° 49' | 25° 27' | F 30 |
| S 31 | 6 35 13 | 8° 32' 03"  | 22° 3'  | 19° 36' | 14° 52' | 10° 17' | 0° 59'  | 27° 10' | 27° 25' | 5° 34' | 5° 14' | 16° 41' | 18° 3'  | 12° 56' | 25° 25' | S 31 |

| Day  | ☉     | ☽     | ♀    | ♂     | ♂    | ♂     | ♂    | ♂     | ♂    | ♂     | ♂    | ♂    | ♂    | ♂     | ♂    | ♂     |
|------|-------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|-------|------|-------|
|      | decl  | decl  | lat  | decl  | lat  | decl  | lat  | decl  | lat  | decl  | lat  | decl | lat  | decl  | lat  | lat   |
| T 1  | 21s38 | 14s27 | 0n10 | 20s30 | 0n 4 | 12s20 | 1n47 | 12n49 | 2n16 | 18s 6 | 0n51 | 3s37 | 2s22 | 18s55 | 0n15 | 22n 8 |
| F 2  | 21 47 | 9 28  | 1 12 | 20 55 | 0s 3 | 12 44 | 1 46 | 12 43 | 2 17 | 18 9  | 0 51 | 3 37 | 2 21 | 18 56 | 0 15 | 22 8  |
| S 3  | 21 56 | 4 10  | 2 11 | 21 19 | 0 9  | 13 8  | 1 46 | 12 36 | 2 19 | 18 13 | 0 51 | 3 37 | 2 21 | 18 57 | 0 15 | 22 8  |
| S 4  | 22 5  | 1n17  | 3 5  | 21 42 | 0 16 | 13 32 | 1 45 | 12 30 | 2 21 | 18 16 | 0 51 | 3 36 | 2 21 | 18 58 | 0 15 | 22 8  |
| M 5  | 22 13 | 6 45  | 3 51 | 22 4  | 0 23 | 13 55 | 1 44 | 12 24 | 2 22 | 18 19 | 0 51 | 3 36 | 2 21 | 18 58 | 0 15 | 22 8  |
| T 6  | 22 21 | 12 3  | 4 28 | 22 25 | 0 29 | 14 19 | 1 43 | 12 17 | 2 24 | 18 22 | 0 51 | 3 36 | 2 21 | 18 59 | 0 15 | 22 8  |
| W 7  | 22 28 | 17 0  | 4 52 | 22 45 | 0 36 | 14 41 | 1 42 | 12 11 | 2 26 | 18 25 | 0 51 | 3 35 | 2 20 | 19 0  | 0 15 | 22 8  |
| T 8  | 22 35 | 21 19 | 5 3  | 23 3  | 0 42 | 15 4  | 1 41 | 12 6  | 2 27 | 18 28 | 0 51 | 3 35 | 2 20 | 19 1  | 0 15 | 22 8  |
| F 9  | 22 42 | 24 42 | 4 58 | 23 21 | 0 48 | 15 26 | 1 39 | 12 0  | 2 29 | 18 31 | 0 51 | 3 34 | 2 20 | 19 2  | 0 15 | 22 8  |
| S 10 | 22 48 | 26 48 | 4 37 | 23 37 | 0 54 | 15 48 | 1 38 | 11 54 | 2 31 | 18 34 | 0 51 | 3 33 | 2 20 | 19 3  | 0 15 | 22 8  |
| S 11 | 22 53 | 27 20 | 4 0  | 23 52 | 1 0  | 16 9  | 1 37 | 11 49 | 2 33 | 18 37 | 0 51 | 3 33 | 2 20 | 19 4  | 0 15 | 22 8  |
| M 12 | 22 58 | 26 9  | 3 7  | 24 6  | 1 6  | 16 30 | 1 36 | 11 43 | 2 34 | 18 40 | 0 51 | 3 32 | 2 19 | 19 4  | 0 15 | 22 8  |
| T 13 | 23 3  | 23 17 | 2 2  | 24 18 | 1 12 | 16 50 | 1 34 | 11 38 | 2 36 | 18 43 | 0 51 | 3 31 | 2 19 | 19 5  | 0 15 | 22 8  |
| W 14 | 23 7  | 19 0  | 0 50 | 24 29 | 1 17 | 17 10 | 1 33 | 11 33 | 2 38 | 18 46 | 0 51 | 3 31 | 2 19 | 19 6  | 0 15 | 22 9  |
| T 15 | 23 11 | 13 37 | 0s26 | 24 39 | 1 22 | 17 30 | 1 31 | 11 29 | 2 40 | 18 48 | 0 51 | 3 30 | 2 19 | 19 7  | 0 15 | 22 9  |
| F 16 | 23 14 | 7 31  | 1 41 | 24 48 | 1 27 | 17 49 | 1 29 | 11 24 | 2 42 | 18 51 | 0 51 | 3 29 | 2 18 | 19 8  | 0 15 | 22 9  |
| S 17 | 23 17 | 1 5   | 2 49 | 24 55 | 1 32 | 18 8  | 1 28 | 11 20 | 2 43 | 18 54 | 0 51 | 3 28 | 2 18 | 19 8  | 0 15 | 22 9  |
| S 18 | 23 20 | 5s22  | 3 46 | 25 1  | 1 37 | 18 26 | 1 26 | 11 15 | 2 45 | 18 57 | 0 51 | 3 27 | 2 18 | 19 9  | 0 15 | 22 9  |
| M 19 | 23 22 | 11 30 | 4 30 | 25 6  | 1 41 | 18 44 | 1 24 | 11 11 | 2 47 | 19 0  | 0 51 | 3 26 | 2 18 | 19 10 | 0 15 | 22 9  |
| T 20 | 23 23 | 17 2  | 4 57 | 25 9  | 1 45 | 19 1  | 1 22 | 11 7  | 2 49 | 19 2  | 0 51 | 3 25 | 2 18 | 19 11 | 0 15 | 22 9  |
| W 21 | 23 24 | 21 37 | 5 7  | 25 11 | 1 49 | 19 18 | 1 20 | 11 4  | 2 51 | 19 5  | 0 51 | 3 24 | 2 17 | 19 12 | 0 15 | 22 9  |
| T 22 | 23 25 | 25 0  | 5 0  | 25 11 | 1 53 | 19 34 | 1 18 | 11 0  | 2 53 | 19 8  | 0 51 | 3 23 | 2 17 | 19 12 | 0 15 | 22 9  |
| F 23 | 23 25 | 26 56 | 4 36 | 25 10 | 1 56 | 19 50 | 1 16 | 10 57 | 2 55 | 19 10 | 0 51 | 3 22 | 2 17 | 19 13 | 0 15 | 22 9  |
| S 24 | 23 24 | 27 19 | 3 58 | 25 8  | 1 59 | 20 5  | 1 14 | 10 54 | 2 57 | 19 13 | 0 51 | 3 21 | 2 17 | 19 14 | 0 15 | 22 9  |
| S 25 | 23 23 | 26 12 | 3 8  | 25 4  | 2 2  | 20 20 | 1 12 | 10 51 | 2 59 | 19 15 | 0 51 | 3 20 | 2 17 | 19 15 | 0 15 | 22 9  |
| M 26 | 23 22 | 23 45 | 2 10 | 24 58 | 2 5  | 20 34 | 1 10 | 10 49 | 3 1  | 19 18 | 0 51 | 3 18 | 2 16 | 19 15 | 0 15 | 22 9  |
| T 27 | 23 20 | 20 13 | 1 6  | 24 51 | 2 7  | 20 47 | 1 8  | 10 46 | 3 3  | 19 20 | 0 51 | 3 17 | 2 16 | 19 16 | 0 15 | 22 10 |
| W 28 | 23 18 | 15 54 | 0 1  | 24 43 | 2 8  | 21 0  | 1 6  | 10 44 | 3 5  | 19 23 | 0 51 | 3 16 | 2 16 | 19 17 | 0 15 | 22 10 |
| T 29 | 23 15 | 11 1  | 1n 4 | 24 33 | 2 10 | 21 12 | 1 4  | 10 42 | 3 7  | 19 25 | 0 51 | 3 14 | 2 16 | 19 17 | 0 15 | 22 10 |
| F 30 | 23 12 | 5 47  | 2 5  | 24 22 | 2 11 | 21 24 | 1 1  | 10 41 | 3 9  | 19 28 | 0 51 | 3 13 | 2 16 | 19 18 | 0 15 | 22 10 |
| S 31 | 23s 8 | 0s23  | 3n 1 | 24s 9 | 2s11 | 21s35 | 0n59 | 10n39 | 3n11 | 19s30 | 0n51 | 3s12 | 2s15 | 19s19 | 0n15 | 22n10 |

Julian Day Number = 2536249.5, Delta T = 197.61 sec  
Ecliptic obliquity = 23°24'39", Nutation = 0°00'10", out-of-bounds declination in red  
Ayanamsha: Fagan/Bradley = 27°58'53", Lahiri = 27°05'54"