



# Astrodienst Ephemeris Tables for the year 1611

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 D5EPH

ASTRODIENST EPHEMERIS for the year 1611  
geocentric

JANUARY 1611 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	6 40 43	10 <sup>3</sup> 18'39	6 <sup>0</sup> 22	22 <sup>27</sup> 57	26 <sup>26</sup> 39	28 <sup>27</sup> 43	20 <sup>20</sup> R50	20 <sup>20</sup> 50	14 <sup>14</sup> R33	22 <sup>22</sup> R 6	2 <sup>2</sup> R 0	29 <sup>29</sup> R21	28 <sup>28</sup> II43	5 <sup>5</sup> 3 1	7 <sup>7</sup> 311	S 1
S 2	6 44 39	11 <sup>1</sup> 19'48	21 <sup>21</sup> 10	24 <sup>24</sup> 24	27 <sup>27</sup> 32	29 <sup>29</sup> 6	20 <sup>20</sup> 542	20 <sup>20</sup> 56	14 <sup>14</sup> II31	22 <sup>22</sup> II 6	1 <sup>1</sup> 859	29 <sup>29</sup> II19	28 <sup>28</sup> 40	5 <sup>5</sup> 7	7 <sup>7</sup> 17	S 2
M 3	6 48 36	12 <sup>12</sup> 20'57	5 <sup>5</sup> II33	25 <sup>25</sup> 52	28 <sup>28</sup> 24	29 <sup>29</sup> 31	20 <sup>20</sup> 34	21 <sup>21</sup> 2	14 <sup>14</sup> 28	22 <sup>22</sup> 5	1 <sup>1</sup> 59	29 <sup>29</sup> 17	28 <sup>28</sup> 37	5 <sup>5</sup> 14	7 <sup>7</sup> 23	M 3
T 4	6 52 32	13 <sup>13</sup> 22'06	19 <sup>19</sup> 30	27 <sup>27</sup> 20	29 <sup>29</sup> 15	29 <sup>29</sup> 55	20 <sup>20</sup> 26	21 <sup>21</sup> 8	14 <sup>14</sup> 26	22 <sup>22</sup> 5	1 <sup>1</sup> 59	29 <sup>29</sup> 16	28 <sup>28</sup> 33	5 <sup>5</sup> 21	7 <sup>7</sup> 29	T 4
W 5	6 56 29	14 <sup>14</sup> 23'15	2 <sup>2</sup> 58	28 <sup>28</sup> 49	0 <sup>0</sup> 5 5	0 <sup>0</sup> 20	20 <sup>20</sup> 18	21 <sup>21</sup> 14	14 <sup>14</sup> 24	22 <sup>22</sup> 5	1 <sup>1</sup> 59	29 <sup>29</sup> 15	28 <sup>28</sup> 30	5 <sup>5</sup> 27	7 <sup>7</sup> 35	W 5
T 6	7 0 25	15 <sup>15</sup> 24'24	16 <sup>16</sup> 0	0 <sup>0</sup> 318	0 <sup>0</sup> 55	0 <sup>0</sup> 45	20 <sup>20</sup> 10	21 <sup>21</sup> 21	14 <sup>14</sup> 22	22 <sup>22</sup> 4	1 <sup>1</sup> 58	29 <sup>29</sup> D15	28 <sup>28</sup> 27	5 <sup>5</sup> 34	7 <sup>7</sup> 41	T 6
F 7	7 4 22	16 <sup>16</sup> 25'33	28 <sup>28</sup> 40	1 <sup>1</sup> 48	1 <sup>1</sup> 44	1 <sup>1</sup> 10	20 <sup>20</sup> 2	21 <sup>21</sup> 27	14 <sup>14</sup> 20	22 <sup>22</sup> 4	1 <sup>1</sup> 58	29 <sup>29</sup> 15	28 <sup>28</sup> 24	5 <sup>5</sup> 41	7 <sup>7</sup> 47	F 7
S 8	7 8 19	17 <sup>17</sup> 26'42	11 <sup>11</sup> II 0	3 <sup>3</sup> 19	2 <sup>2</sup> 31	1 <sup>1</sup> 36	19 <sup>19</sup> 54	21 <sup>21</sup> 34	14 <sup>14</sup> 18	22 <sup>22</sup> 3	1 <sup>1</sup> 58	29 <sup>29</sup> 16	28 <sup>28</sup> 21	5 <sup>5</sup> 47	7 <sup>7</sup> 52	S 8
S 9	7 12 15	18 <sup>18</sup> 27'51	23 <sup>23</sup> 6	4 <sup>4</sup> 50	3 <sup>3</sup> 18	2 <sup>2</sup> 2	19 <sup>19</sup> 46	21 <sup>21</sup> 40	14 <sup>14</sup> 16	22 <sup>22</sup> 3	1 <sup>1</sup> 58	29 <sup>29</sup> 18	28 <sup>28</sup> 18	5 <sup>5</sup> 54	7 <sup>7</sup> 58	S 9
M10	7 16 12	19 <sup>19</sup> 28'59	5 <sup>5</sup> 1 1	6 <sup>6</sup> 22	4 <sup>4</sup> 4	2 <sup>2</sup> 28	19 <sup>19</sup> 38	21 <sup>21</sup> 47	14 <sup>14</sup> 14	22 <sup>22</sup> 2	1 <sup>1</sup> 58	29 <sup>29</sup> 19	28 <sup>28</sup> 14	6 <sup>6</sup> 1	8 <sup>8</sup> 4	M10
T 11	7 20 8	20 <sup>20</sup> 30'07	16 <sup>16</sup> 51	7 <sup>7</sup> 54	4 <sup>4</sup> 49	2 <sup>2</sup> 54	19 <sup>19</sup> 30	21 <sup>21</sup> 53	14 <sup>14</sup> 12	22 <sup>22</sup> 2	1 <sup>1</sup> 58	29 <sup>29</sup> 21	28 <sup>28</sup> 11	6 <sup>6</sup> 7	8 <sup>8</sup> 10	T 11
W12	7 24 5	21 <sup>21</sup> 31'15	28 <sup>28</sup> 37	9 <sup>9</sup> 26	5 <sup>5</sup> 33	3 <sup>3</sup> 21	19 <sup>19</sup> 22	22 <sup>22</sup> 0	14 <sup>14</sup> 10	22 <sup>22</sup> 1	1 <sup>1</sup> 57	29 <sup>29</sup> R21	28 <sup>28</sup> 8	6 <sup>6</sup> 14	8 <sup>8</sup> 16	W12
T 13	7 28 1	22 <sup>22</sup> 32'22	10 <sup>10</sup> 324	10 <sup>10</sup> 59	6 <sup>6</sup> 16	3 <sup>3</sup> 48	19 <sup>19</sup> 13	22 <sup>22</sup> 6	14 <sup>14</sup> 8	22 <sup>22</sup> 0	1 <sup>1</sup> 57	29 <sup>29</sup> 21	28 <sup>28</sup> 5	6 <sup>6</sup> 20	8 <sup>8</sup> 22	T 13
F 14	7 31 58	23 <sup>23</sup> 33'29	22 <sup>22</sup> 13	12 <sup>12</sup> 33	6 <sup>6</sup> 58	4 <sup>4</sup> 15	19 <sup>19</sup> 5	22 <sup>22</sup> 13	14 <sup>14</sup> 6	22 <sup>22</sup> 0	1 <sup>1</sup> 57	29 <sup>29</sup> 19	28 <sup>28</sup> 2	6 <sup>6</sup> 27	8 <sup>8</sup> 28	F 14
S 15	7 35 54	24 <sup>24</sup> 34'35	4 <sup>4</sup> 8	14 <sup>14</sup> 7	7 <sup>7</sup> 38	4 <sup>4</sup> 42	18 <sup>18</sup> 57	22 <sup>22</sup> 20	14 <sup>14</sup> 5	21 <sup>21</sup> 59	1 <sup>1</sup> 57	29 <sup>29</sup> 16	27 <sup>27</sup> 58	6 <sup>6</sup> 34	8 <sup>8</sup> 34	S 15
S 16	7 39 51	25 <sup>25</sup> 35'41	16 <sup>16</sup> 8	15 <sup>15</sup> 42	8 <sup>8</sup> 17	5 <sup>5</sup> 10	18 <sup>18</sup> 49	22 <sup>22</sup> 26	14 <sup>14</sup> 3	21 <sup>21</sup> 58	1 <sup>1</sup> D57	29 <sup>29</sup> 12	27 <sup>27</sup> 55	6 <sup>6</sup> 40	8 <sup>8</sup> 40	S 16
M17	7 43 48	26 <sup>26</sup> 36'45	28 <sup>28</sup> 17	17 <sup>17</sup> 18	8 <sup>8</sup> 55	5 <sup>5</sup> 38	18 <sup>18</sup> 41	22 <sup>22</sup> 33	14 <sup>14</sup> 1	21 <sup>21</sup> 58	1 <sup>1</sup> 57	29 <sup>29</sup> 7	27 <sup>27</sup> 52	6 <sup>6</sup> 47	8 <sup>8</sup> 45	M17
T 18	7 47 44	27 <sup>27</sup> 37'49	10 <sup>10</sup> 36	18 <sup>18</sup> 54	9 <sup>9</sup> 32	6 <sup>6</sup> 6	18 <sup>18</sup> 34	22 <sup>22</sup> 40	14 <sup>14</sup> 0	21 <sup>21</sup> 57	1 <sup>1</sup> 57	29 <sup>29</sup> 2	27 <sup>27</sup> 49	6 <sup>6</sup> 54	8 <sup>8</sup> 51	T 18
W19	7 51 41	28 <sup>28</sup> 38'52	23 <sup>23</sup> 6	20 <sup>20</sup> 30	10 <sup>10</sup> 7	6 <sup>6</sup> 34	18 <sup>18</sup> 26	22 <sup>22</sup> 47	13 <sup>13</sup> 58	21 <sup>21</sup> 56	1 <sup>1</sup> 57	28 <sup>28</sup> 57	27 <sup>27</sup> 46	7 <sup>7</sup> 0	8 <sup>8</sup> 57	W19
T 20	7 55 37	29 <sup>29</sup> 39'53	5 <sup>5</sup> Y51	22 <sup>22</sup> 7	10 <sup>10</sup> 41	7 <sup>7</sup> 3	18 <sup>18</sup> 18	22 <sup>22</sup> 54	13 <sup>13</sup> 56	21 <sup>21</sup> 55	1 <sup>1</sup> 57	28 <sup>28</sup> 53	27 <sup>27</sup> 43	7 <sup>7</sup> 7	9 <sup>9</sup> 3	T 20
F 21	7 59 34	0 <sup>0</sup> 40'53	18 <sup>18</sup> 52	23 <sup>23</sup> 45	11 <sup>11</sup> 14	7 <sup>7</sup> 32	18 <sup>18</sup> 10	23 <sup>23</sup> 1	13 <sup>13</sup> 55	21 <sup>21</sup> 54	1 <sup>1</sup> 58	28 <sup>28</sup> 51	27 <sup>27</sup> 39	7 <sup>7</sup> 14	9 <sup>9</sup> 8	F 21
S 22	8 3 30	1 <sup>1</sup> 41'53	2 <sup>2</sup> 311	25 <sup>25</sup> 24	11 <sup>11</sup> 45	8 <sup>8</sup> 0	18 <sup>18</sup> 2	23 <sup>23</sup> 7	13 <sup>13</sup> 53	21 <sup>21</sup> 53	1 <sup>1</sup> 58	28 <sup>28</sup> D51	27 <sup>27</sup> 36	7 <sup>7</sup> 20	9 <sup>9</sup> 14	S 22
S 23	8 7 27	2 <sup>2</sup> 42'51	15 <sup>15</sup> 52	27 <sup>27</sup> 3	12 <sup>12</sup> 14	8 <sup>8</sup> 30	17 <sup>17</sup> 55	23 <sup>23</sup> 14	13 <sup>13</sup> 52	21 <sup>21</sup> 52	1 <sup>1</sup> 58	28 <sup>28</sup> 51	27 <sup>27</sup> 33	7 <sup>7</sup> 27	9 <sup>9</sup> 20	S 23
M24	8 11 23	3 <sup>3</sup> 43'48	29 <sup>29</sup> 55	28 <sup>28</sup> 42	12 <sup>12</sup> 41	8 <sup>8</sup> 59	17 <sup>17</sup> 47	23 <sup>23</sup> 21	13 <sup>13</sup> 50	21 <sup>21</sup> 51	1 <sup>1</sup> 58	28 <sup>28</sup> 53	27 <sup>27</sup> 30	7 <sup>7</sup> 34	9 <sup>9</sup> 25	M24
T 25	8 15 20	4 <sup>4</sup> 44'43	14 <sup>14</sup> II20	0 <sup>0</sup> 23	13 <sup>13</sup> 7	9 <sup>9</sup> 28	17 <sup>17</sup> 40	23 <sup>23</sup> 28	13 <sup>13</sup> 49	21 <sup>21</sup> 50	1 <sup>1</sup> 58	28 <sup>28</sup> 54	27 <sup>27</sup> 27	7 <sup>7</sup> 40	9 <sup>9</sup> 31	T 25
W26	8 19 17	5 <sup>5</sup> 45'38	29 <sup>29</sup> 4	2 <sup>2</sup> 4	13 <sup>13</sup> 31	9 <sup>9</sup> 58	17 <sup>17</sup> 33	23 <sup>23</sup> 35	13 <sup>13</sup> 48	21 <sup>21</sup> 49	1 <sup>1</sup> 58	28 <sup>28</sup> R55	27 <sup>27</sup> 24	7 <sup>7</sup> 47	9 <sup>9</sup> 36	W26
T 27	8 23 13	6 <sup>6</sup> 46'31	14 <sup>14</sup> 3 3	3 <sup>3</sup> 46	13 <sup>13</sup> 53	10 <sup>10</sup> 28	17 <sup>17</sup> 25	23 <sup>23</sup> 42	13 <sup>13</sup> 47	21 <sup>21</sup> 48	1 <sup>1</sup> 59	28 <sup>28</sup> 54	27 <sup>27</sup> 20	7 <sup>7</sup> 54	9 <sup>9</sup> 42	T 27
F 28	8 27 10	7 <sup>7</sup> 47'23	29 <sup>29</sup> 9	5 <sup>5</sup> 28	14 <sup>14</sup> 13	10 <sup>10</sup> 58	17 <sup>17</sup> 18	23 <sup>23</sup> 50	13 <sup>13</sup> 45	21 <sup>21</sup> 47	1 <sup>1</sup> 59	28 <sup>28</sup> 51	27 <sup>27</sup> 17	8 <sup>8</sup> 0	9 <sup>9</sup> 47	F 28
S 29	8 31 6	8 <sup>8</sup> 48'13	14 <sup>14</sup> II12	7 <sup>7</sup> 12	14 <sup>14</sup> 31	11 <sup>11</sup> 28	17 <sup>17</sup> 11	23 <sup>23</sup> 57	13 <sup>13</sup> 44	21 <sup>21</sup> 46	1 <sup>1</sup> 59	28 <sup>28</sup> 46	27 <sup>27</sup> 14	8 <sup>8</sup> 7	9 <sup>9</sup> 53	S 29
S 30	8 35 3	9 <sup>9</sup> 49'03	29 <sup>29</sup> 4	8 <sup>8</sup> 56	14 <sup>14</sup> 48	11 <sup>11</sup> 58	17 <sup>17</sup> 4	24 <sup>24</sup> 4	13 <sup>13</sup> 43	21 <sup>21</sup> 45	1 <sup>1</sup> 59	28 <sup>28</sup> 40	27 <sup>27</sup> 11	8 <sup>8</sup> 13	9 <sup>9</sup> 58	S 30
M31	8 38 59	10 <sup>10</sup> 49'51	13 <sup>13</sup> II37	10 <sup>10</sup> 40	15 <sup>15</sup> 11	12 <sup>12</sup> 329	16 <sup>16</sup> 57	24 <sup>24</sup> 11	13 <sup>13</sup> II42	21 <sup>21</sup> II44	2 <sup>2</sup> 3 0	28 <sup>28</sup> II33	27 <sup>27</sup> II 8	8 <sup>8</sup> 20	10 <sup>10</sup> 3 4	M31

Delta T = 75.57 sec

Greg. Calendar

FEBRUARY 1611 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	8 42 56	11 <sup>11</sup> 50'38	27 <sup>27</sup> II44	12 <sup>12</sup> 26	15 <sup>15</sup> 13	13 <sup>13</sup> 30	16 <sup>16</sup> R51	24 <sup>24</sup> 18	13 <sup>13</sup> R41	21 <sup>21</sup> R43	2 <sup>2</sup> 3 0	28 <sup>28</sup> R27	27 <sup>27</sup> II 4	8 <sup>8</sup> 327	10 <sup>10</sup> 3 9	T 1
W 2	8 46 53	12 <sup>12</sup> 51'24	11 <sup>11</sup> 52	14 <sup>14</sup> 12	15 <sup>15</sup> 23	13 <sup>13</sup> 30	16 <sup>16</sup> 544	24 <sup>24</sup> 25	13 <sup>13</sup> II40	21 <sup>21</sup> II42	2 <sup>2</sup> 1	28 <sup>28</sup> II21	27 <sup>27</sup> 1	8 <sup>8</sup> 33	10 <sup>10</sup> 14	W 2
T 3	8 50 49	13 <sup>13</sup> 52'09	24 <sup>24</sup> 32	15 <sup>15</sup> 59	15 <sup>15</sup> 30	14 <sup>14</sup> 1	16 <sup>16</sup> 38	24 <sup>24</sup> 32	13 <sup>13</sup> 39	21 <sup>21</sup> 40	2 <sup>2</sup> 1	28 <sup>28</sup> 17	26 <sup>26</sup> 58	8 <sup>8</sup> 40	10 <sup>10</sup> 20	T 3
F 4	8 54 46	14 <sup>14</sup> 52'54	7 <sup>7</sup> II16	17 <sup>17</sup> 46	15 <sup>15</sup> 35	14 <sup>14</sup> 32	16 <sup>16</sup> 31	24 <sup>24</sup> 40	13 <sup>13</sup> 38	21 <sup>21</sup> 39	2 <sup>2</sup> 1	28 <sup>28</sup> 15	26 <sup>26</sup> 55	8 <sup>8</sup> 47	10 <sup>10</sup> 25	F 4
S 5	8 58 42	15 <sup>15</sup> 53'37	19 <sup>19</sup> 38	19 <sup>19</sup> 35	15 <sup>15</sup> 37	15 <sup>15</sup> 3	16 <sup>16</sup> 25	24 <sup>24</sup> 47	13 <sup>13</sup> 37	21 <sup>21</sup> 38	2 <sup>2</sup> 2	28 <sup>28</sup> D15	26 <sup>26</sup> 52	8 <sup>8</sup> 53	10 <sup>10</sup> 30	S 5
S 6	9 2 39	16 <sup>16</sup> 54'19	1 <sup>1</sup> 43	21 <sup>21</sup> 23	15 <sup>15</sup> R37	15 <sup>15</sup> 35	16 <sup>16</sup> 19	24 <sup>24</sup> 54	13 <sup>13</sup> 36	21 <sup>21</sup> 37	2 <sup>2</sup> 2	28 <sup>28</sup> 16	26 <sup>26</sup> 49	9 <sup>9</sup> 0	10 <sup>10</sup> 35	S 6
M 7	9 6 35	17 <sup>17</sup> 55'00	13 <sup>13</sup> 37	23 <sup>23</sup> 13	15 <sup>15</sup> 35	16 <sup>16</sup> 6	16 <sup>16</sup> 13	25 <sup>25</sup> 1	13 <sup>13</sup> 36	21 <sup>21</sup> 35	2 <sup>2</sup> 3	28 <sup>28</sup> 17	26 <sup>26</sup> 45	9 <sup>9</sup> 7	10 <sup>10</sup> 40	M 7
T 8	9 10 32	18 <sup>18</sup> 55'39	25 <sup>25</sup> 24	25 <sup>25</sup> 3	15 <sup>15</sup> 30	16 <sup>16</sup> 38	16 <sup>16</sup> 7	25 <sup>25</sup> 8	13 <sup>13</sup> 35	21 <sup>21</sup> 34	2 <sup>2</sup> 3	28 <sup>28</sup> R18	26 <sup>26</sup> 42	9 <sup>9</sup> 13	10 <sup>10</sup> 45	T 8
W 9	9 14 28	19 <sup>19</sup> 56'18	7 <sup>7</sup> 310	26 <sup>26</sup> 53	15 <sup>15</sup> 23	17 <sup>17</sup> 10	16 <sup>16</sup> 2	25 <sup>25</sup> 16	13 <sup>13</sup> 34	21 <sup>21</sup> 33	2 <sup>2</sup> 4	28 <sup>28</sup> 18	26 <sup>26</sup> 39	9 <sup>9</sup> 20	10 <sup>10</sup> 50	W 9
T 10	9 18 25	20 <sup>20</sup> 56'55	18 <sup>18</sup> 58	28 <sup>28</sup> 43	15 <sup>15</sup> 13	17 <sup>17</sup> 41	15 <sup>15</sup> 56	25 <sup>25</sup> 23	13 <sup>13</sup> 34	21 <sup>21</sup> 31	2 <sup>2</sup> 4	28 <sup>28</sup> 15	26 <sup>26</sup> 36	9 <sup>9</sup> 27	10 <sup>10</sup> 55	T 10
F 11	9 22 22	21 <sup>21</sup> 57'31	0 <sup>0</sup> 52	0 <sup>0</sup> 34	15 <sup>15</sup> 0	18 <sup>18</sup> 13	15 <sup>15</sup> 51	25 <sup>25</sup> 30	13 <sup>13</sup> 33	21 <sup>21</sup> 30	2 <sup>2</sup> 5	28 <sup>28</sup> 10	26 <sup>26</sup> 33	9 <sup>9</sup> 33	11 <sup>11</sup> 0	F 11
S 12	9 26 18	22 <sup>22</sup> 58'05	12 <sup>12</sup> 55	2 <sup>2</sup> 25	14 <sup>14</sup> 46	18 <sup>18</sup> 45	15 <sup>15</sup> 46	25 <sup>25</sup> 38	13 <sup>13</sup> 33	21 <sup>21</sup> 29	2 <sup>2</sup> 5	28 <sup>28</sup> 3	26 <sup>26</sup> 30	9 <sup>9</sup> 40	11 <sup>11</sup> 5	S 12
S 13	9 30 15	23 <sup>23</sup> 58'38	25 <sup>25</sup> 7	4 <sup>4</sup> 15	14 <sup>14</sup> 28	19 <sup>19</sup> 18	15 <sup>15</sup> 41	25 <sup>25</sup> 45	13 <sup>13</sup> 32	21 <sup>21</sup> 27	2 <sup>2</sup> 6	27 <sup>27</sup> 53	26 <sup>26</sup> 26	9 <sup>9</sup> 47	11 <sup>11</sup> 10	S 13
M14	9 34 11	24 <sup>24</sup> 59'10	7 <sup>7</sup> 31	6 <sup>6</sup> 5	14 <sup>14</sup> 9	19 <sup>19</sup> 50	15 <sup>15</sup> 36	25 <sup>25</sup> 52	13 <sup>13</sup> 32	21 <sup>21</sup> 26	2 <sup>2</sup> 7	27 <sup>27</sup> 43	26 <sup>26</sup> 23	9 <sup>9</sup> 53	11 <sup>11</sup> 15	M14
T 15	9 38 8	25 <sup>25</sup> 59'39	20 <sup>20</sup> 7	7 <sup>7</sup> 54	13 <sup>13</sup> 46	20 <sup>20</sup> 22	15 <sup>15</sup> 31	25 <sup>25</sup> 59	13 <sup>13</sup> 32	21 <sup>21</sup> 24	2 <sup>2</sup> 7	27 <sup>27</sup> 31	26 <sup>26</sup> 20	10 <sup>10</sup> 0	11 <sup>11</sup> 20	T 15
W16	9 42 4	27 <sup>27</sup> 0'07	2 <sup>2</sup> Y54	9 <sup>9</sup> 42	13 <sup>13</sup> 22	20 <sup>20</sup> 55	15 <sup>15</sup> 27	26 <sup>26</sup> 7	13 <sup>13</sup> 32	21 <sup>21</sup> 23	2 <sup>2</sup> 8	27 <sup>27</sup> 21	26 <sup>26</sup> 17	10 <sup>10</sup> 6	11 <sup>11</sup> 24	W16
T 17	9 46 1	28 <sup>28</sup> 0'33	15 <sup>15</sup> 52	11 <sup>11</sup> 29	12 <sup>12</sup> 56	21 <sup>21</sup> 28	15 <sup>15</sup> 22	26 <sup>26</sup> 14	13 <sup>13</sup> 31	21 <sup>21</sup> 21	2 <sup>2</sup> 8	27 <sup>27</sup> 12	26 <sup>26</sup> 14	10 <sup>10</sup> 13	11 <sup>11</sup> 29	T 17
F 18	9 49 57	29 <sup>29</sup> 0'57	29 <sup>29</sup> 4	13 <sup>13</sup> 14	12 <sup>12</sup> 27	22 <sup>22</sup> 0	15 <sup>15</sup> 18	26 <sup>26</sup> 21	13 <sup>13</sup> 31	21 <sup>21</sup> 20	2 <sup>2</sup> 9	27 <sup>27</sup> 6	26 <sup>26</sup> 10	10 <sup>10</sup> 20	11 <sup>11</sup> 34	F 18
S 19	9 53 54	0 <sup>0</sup> 1'19	12 <sup>12</sup> 828	14 <sup>14</sup> 56	11 <sup>11</sup> 57	22 <sup>22</sup> 33	15 <sup>15</sup> 14	26 <sup>26</sup> 28	13 <sup>13</sup> 31	21 <sup>21</sup> 18	2 <sup>2</sup> 10	27 <sup>27</sup> 2	26 <sup>26</sup> 7	10 <sup>10</sup> 26	11 <sup>11</sup> 38	S 19
S 20	9 57 50	1 <sup>1</sup> 1'39	26 <sup>26</sup> 5	16 <sup>16</sup> 36	11 <sup>11</sup> 25	23 <sup>23</sup> 6	15 <sup>15</sup> 11	26 <sup>26</sup> 36	13 <sup>13</sup> D31	21 <sup>21</sup> 17	2 <sup>2</sup> 11	27 <sup>27</sup> D 0	26 <sup>26</sup> 4	10 <sup>10</sup> 33	11 <sup>11</sup> 43	S 20
M21	10 1 47	2 <sup>2</sup> 1'57	9 <sup>9</sup> II58	18 <sup>18</sup> 13	10 <sup>10</sup> 51	23 <sup>23</sup> 39	15 <sup>15</sup> 7	26 <sup>26</sup> 43	13 <sup>13</sup> 31	21 <sup>21</sup> 15	2 <sup>2</sup> 11	27 <sup>27</sup> 0	26 <sup>26</sup> 1	10 <sup>10</sup> 40	11 <sup>11</sup> 47	M21
T 22	10 5 44	3 <sup>3</sup> 2'14	24 <sup>24</sup> 6	19 <sup>19</sup> 45	10 <sup>10</sup> 17	24 <sup>24</sup> 12	15 <sup>15</sup> 4	26 <sup>26</sup> 50	13 <sup>13</sup> 31	21 <sup>21</sup> 14	2 <sup>2</sup> 12	27 <sup>27</sup> R 1	25 <sup>25</sup> 58	10 <sup>10</sup> 46	11 <sup>11</sup> 51	T 22
W23	10 9 40	4 <sup>4</sup> 2'28	8 <sup>8</sup> 528	21 <sup>21</sup> 14	9 <sup>9</sup> 41	24 <sup>24</sup> 45	15 <sup>15</sup> 0	26 <sup>26</sup> 57	13 <sup>13</sup> 31	21 <sup>21</sup> 12	2 <sup>2</sup> 13	27 <sup>27</sup> 0	25 <sup>25</sup> 55	10 <sup>10</sup> 53	11 <sup>11</sup> 56	W23
T 24	10 13 37	5 <sup>5</sup> 2'40	23 <sup>23</sup> 3	22 <sup>22</sup> 37	9 <sup>9</sup> 4	25 <sup>25</sup> 19	14 <sup>14</sup> 57	27 <sup>27</sup> 5	13 <sup>13</sup> 31	21 <sup>21</sup> 11	2 <sup>2</sup> 14	26 <sup>26</sup> 58	25 <sup>25</sup> 51	11 <sup>11</sup> 0	12 <sup>12</sup> 0	T 24
F 25	10 17 33	6 <sup>6</sup> 2'50	7 <sup>7</sup> 145	23 <sup>23</sup> 55	8 <sup>8</sup> 27	25 <sup>25</sup> 52	14 <sup>14</sup> 55	27 <sup>27</sup> 12	13 <sup>13</sup> 32	21 <sup>21</sup> 9	2 <sup>2</sup> 15	26 <sup>26</sup> 53	25 <sup>25</sup> 48	11 <sup>11</sup> 6	12 <sup>12</sup> 4	F 25
S 26	10 21 30	7 <sup>7</sup> 2'58	22 <sup>22</sup> 29	25 <sup>25</sup> 6	7 <sup>7</sup> 49	26 <sup>26</sup> 25	14 <sup>14</sup> 52	27 <sup>27</sup> 19	13 <sup>13</sup> 32	21 <sup>21</sup> 7	2 <sup>2</sup> 15	26 <sup>26</sup> 45	25 <sup>25</sup> 45	11 <sup>11</sup> 13	12 <sup>12</sup> 8	S 26
S 27	10 25 26	8 <sup>8</sup> 3'04	7 <sup>7</sup> II 7	26 <sup>26</sup> 11	7 <sup>7</sup> 11	26 <sup>26</sup> 59	14 <sup>14</sup> 49	27 <sup>27</sup> 26	13 <sup>13</sup> 32	21 <sup>21</sup> 6	2 <sup>2</sup> 16	26 <sup>26</sup> 35	25 <sup>25</sup> 42	11 <sup>11</sup> 20	12 <sup>12</sup> 12	S 27
M28	10 29 23	9 <sup>9</sup> 1'308	21 <sup>21</sup> II31	27 <sup>27</sup> 11 8	6 <sup>6</sup> 134	27 <sup>27</sup> 833	14 <sup>14</sup> 547	27 <sup>27</sup> 34	13 <sup>13</sup> II33	21 <sup>21</sup> II 4	2 <sup>2</sup> 17	26 <sup>26</sup> II23	25 <sup>25</sup> II39	11 <sup>11</sup> 26	12 <sup>12</sup> 16	M28

# ASTRODIENST EPHEMERIS for the year 1611

## geocentric

MARCH 1611 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	10 33 19	10°31'0	5°35'	27°57'	5°R56	28°8'6	14°R45	27°41'	13°II33	21°R 3	28°18'	26°R12	25°II35	11°33'	12°320	T 1
W 2	10 37 16	11°3'10	19°14'	28°39'	5°H20	28°40'	14°343	27°48'	13°34	21°H 1	2°19'	26°II 2	25°32'	11°40'	12°24	W 2
T 3	10 41 13	12°3'09	2°M27	29°11'	4°44'	29°14'	14°41'	27°55'	13°34	20°59'	2°20'	25°54'	25°29'	11°46'	12°28	T 3
F 4	10 45 9	13°3'06	15°15'	29°36'	4°10'	29°48'	14°40'	28°2'	13°35	20°58'	2°21'	25°48'	25°26'	11°53'	12°32	F 4
S 5	10 49 6	14°3'02	27°41'	29°51'	3°37'	0°II21	14°39'	28°9'	13°35	20°56'	2°22'	25°45'	25°23'	12°0'	12°36	S 5
S 6	10 53 2	15°2'56	9°A49	29°R57	3°6'	0°55'	14°38'	28°16'	13°36	20°54'	2°23'	25°44'	25°20'	12°6'	12°39	S 6
M 7	10 56 59	16°2'48	21°45'	29°54'	2°36'	1°30'	14°37'	28°23'	13°37	20°53'	2°24'	25°44'	25°16'	12°13'	12°43	M 7
T 8	11 0 55	17°2'38	3°333	29°43'	2°9'	2°4'	14°36'	28°30'	13°38	20°51'	2°25'	25°44'	25°13'	12°19'	12°46	T 8
W 9	11 4 52	18°2'27	15°20'	29°24'	1°43'	2°38'	14°35'	28°37'	13°39	20°49'	2°26'	25°43'	25°10'	12°26'	12°50	W 9
T 10	11 8 48	19°2'14	27°11'	28°57'	1°20'	3°12'	14°35'	28°44'	13°39	20°48'	2°27'	25°39'	25°7'	12°33'	12°53	T 10
F 11	11 12 45	20°1'59	9°A10	28°24'	0°59'	3°46'	14°D35	28°51'	13°40	20°46'	2°28'	25°33'	25°4'	12°39'	12°56	F 11
S 12	11 16 42	21°1'43	21°20'	27°44'	0°40'	4°21'	14°35'	28°58'	13°41	20°44'	2°29'	25°24'	25°1'	12°46'	13°0'	S 12
S 13	11 20 38	22°1'24	3°H45	26°59'	0°23'	4°55'	14°35'	29°5'	13°43	20°43'	2°30'	25°12'	24°57'	12°53'	13°3'	S 13
M14	11 24 35	23°1'03	16°24'	26°10'	0°9'	5°30'	14°36'	29°12'	13°44	20°41'	2°31'	24°59'	24°54'	12°59'	13°6'	M14
T 15	11 28 31	24°0'41	29°19'	25°18'	29°A58	6°4'	14°36'	29°19'	13°45	20°39'	2°32'	24°46'	24°51'	13°6'	13°9'	T 15
W16	11 32 28	25°0'16	12°V28	24°24'	29°49'	6°39'	14°37'	29°26'	13°46	20°38'	2°33'	24°33'	24°48'	13°13'	13°12	W16
T 17	11 36 24	25°59'49	25°49'	23°29'	29°42'	7°13'	14°38'	29°33'	13°47	20°36'	2°34'	24°22'	24°45'	13°19'	13°15	T 17
F 18	11 40 21	26°59'20	9°B21	22°35'	29°38'	7°48'	14°39'	29°39'	13°49	20°34'	2°35'	24°13'	24°41'	13°26'	13°18	F 18
S 19	11 44 17	27°58'49	23°1'	21°43'	29°D36	8°23'	14°41'	29°46'	13°50	20°33'	2°37'	24°8'	24°38'	13°33'	13°20	S 19
S 20	11 48 14	28°58'16	6°II50	20°53'	29°37'	8°58'	14°42'	29°53'	13°51	20°31'	2°38'	24°5'	24°35'	13°39'	13°23	S 20
M21	11 52 11	29°57'40	20°45'	20°7'	29°39'	9°33'	14°44'	29°59'	13°53	20°29'	2°39'	24°5'	24°32'	13°46'	13°26	M21
T 22	11 56 7	0°V57'02	4°348	19°24'	29°45'	10°7'	14°46'	0°H 6	13°54	20°28'	2°40'	24°5'	24°29'	13°53'	13°28	T 22
W23	12 0 4	1°56'22	18°57'	18°47'	29°52'	10°42'	14°48'	0°13'	13°56	20°26'	2°41'	24°4'	24°26'	13°59'	13°30	W23
T 24	12 4 0	2°55'39	3°II12	18°14'	0°H 2	11°17'	14°51'	0°19'	13°58	20°25'	2°43'	24°1'	24°22'	14°6'	13°33	T 24
F 25	12 7 57	3°54'54	17°29'	17°47'	0°14'	11°52'	14°53'	0°26'	13°59	20°23'	2°44'	23°56'	24°19'	14°13'	13°35	F 25
S 26	12 11 53	4°54'06	1°H46	17°26'	0°28'	12°27'	14°56'	0°32'	14°1	20°21'	2°45'	23°48'	24°16'	14°19'	13°37	S 26
S 27	12 15 50	5°53'16	15°58'	17°10'	0°44'	13°2'	14°59'	0°38'	14°3	20°20'	2°46'	23°38'	24°13'	14°26'	13°39	S 27
M28	12 19 46	6°52'24	29°59'	17°0'	1°2'	13°38'	15°2'	0°45'	14°5	20°18'	2°47'	23°26'	24°10'	14°33'	13°41	M28
T 29	12 23 43	7°51'30	13°A46	16°D55	1°21'	14°13'	15°5'	0°51'	14°6	20°17'	2°49'	23°14'	24°7'	14°39'	13°43	T 29
W30	12 27 39	8°50'34	27°13'	16°56'	1°43'	14°48'	15°9'	0°57'	14°8	20°15'	2°50'	23°3'	24°3'	14°46'	13°45	W30
T 31	12 31 36	9°V49'36	10°M19	17°H 3	2°H 7	15°II23	15°32'	1°H 4	14°II10	20°H14	2°51'	22°II55	24°II 0	14°52'	13°47	T 31

Delta T = 75.40 sec

Greg. Calendar

APRIL 1611 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	12 35 33	10°V48'36	23°M 4	17°H15	2°H32	15°II58	15°32'	1°H10	14°II12	20°R12	2°52'	22°R48	23°II57	14°359	13°349	F 1
S 2	12 39 29	11°47'35	5°A29	17°31'	2°59'	16°34'	15°20'	1°16'	14°14	20°H10	2°54'	22°II45	23°54'	15°6'	13°50	S 2
S 3	12 43 26	12°46'31	17°38'	17°53'	3°27'	17°9'	15°24'	1°22'	14°16	20°9'	2°55'	22°D44	23°51'	15°12'	13°52	S 3
M 4	12 47 22	13°45'26	29°35'	18°19'	3°57'	17°44'	15°28'	1°28'	14°18	20°7'	2°56'	22°44	23°47'	15°19'	13°53	M 4
T 5	12 51 19	14°44'19	11°325	18°50'	4°29'	18°20'	15°33'	1°34'	14°20	20°6'	2°58'	22°R44	23°44'	15°26'	13°55	T 5
W 6	12 55 15	15°43'10	23°14	19°25'	5°2'	18°55'	15°38'	1°40'	14°23	20°4'	2°59'	22°44	23°41'	15°32'	13°56	W 6
T 7	12 59 12	16°41'59	5°A 7	20°4'	5°36'	19°31'	15°42'	1°46'	14°25	20°3'	3°0'	22°42	23°38'	15°39'	13°57	T 7
F 8	13 3 8	17°40'47	17°9'	20°46'	6°11'	20°6'	15°47'	1°52'	14°27	20°2'	3°2'	22°38	23°35'	15°46'	13°59	F 8
S 9	13 7 5	18°39'33	29°24	21°32'	6°48'	20°42'	15°52'	1°57'	14°29	20°0'	3°3'	22°32	23°32'	15°52'	14°0'	S 9
S 10	13 11 2	19°38'17	11°H56	22°22'	7°26'	21°17'	15°58'	2°3'	14°32	19°59'	3°4'	22°23	23°28'	15°59'	14°1'	S 10
M11	13 14 58	20°36'59	24°48	23°15'	8°5'	21°53'	16°3'	2°9'	14°34	19°57'	3°6'	22°13	23°25'	16°6'	14°2'	M11
T 12	13 18 55	21°35'40	7°V58	24°11'	8°46'	22°29'	16°9'	2°14'	14°37	19°56'	3°7'	22°2	23°22	16°12'	14°2'	T 12
W13	13 22 51	22°34'18	21°27	25°10'	9°27'	23°4'	16°15'	2°20'	14°39	19°55'	3°8'	21°52	23°19'	16°19'	14°3'	W13
T 14	13 26 48	23°32'55	5°B12	26°11'	10°9'	23°40'	16°20'	2°25'	14°42	19°53'	3°10'	21°44	23°16'	16°26'	14°4'	T 14
F 15	13 30 44	24°31'29	19°9'	27°16'	10°53'	24°16'	16°26'	2°31'	14°44	19°52'	3°11'	21°37	23°12'	16°32'	14°4'	F 15
S 16	13 34 41	25°30'02	3°II14	28°23'	11°37'	24°51'	16°33'	2°36'	14°47	19°51'	3°12'	21°34	23°9'	16°39'	14°5'	S 16
S 17	13 38 37	26°28'32	17°25	29°32'	12°22'	25°27'	16°39'	2°41'	14°49	19°49'	3°14'	21°D32	23°6'	16°46'	14°5'	S 17
M18	13 42 34	27°27'01	1°36	0°V44	13°8'	26°3'	16°46'	2°47'	14°52	19°48'	3°15'	21°32	23°3'	16°52'	14°6'	M18
T 19	13 46 31	28°25'27	15°48	1°58'	13°55'	26°39'	16°52'	2°52'	14°55	19°47'	3°16'	21°33	23°0'	16°59'	14°6'	T 19
W20	13 50 27	29°23'51	29°57	3°15'	14°43'	27°15'	16°59'	2°57'	14°57	19°46'	3°18'	21°R34	22°57'	17°6'	14°6'	W20
T 21	13 54 24	0°B22'13	14°II 2	4°33'	15°31'	27°50'	17°6'	3°2'	15°0	19°45'	3°19'	21°33	22°53'	17°12'	14°R 6	T 21
F 22	13 58 20	1°20'33	28°3'	5°54'	16°20'	28°26'	17°13'	3°7'	15°3	19°43'	3°21'	21°30	22°50'	17°19'	14°6'	F 22
S 23	14 2 17	2°18'51	11°H57	7°17'	17°10'	29°2'	17°20'	3°12'	15°6	19°42'	3°22'	21°25	22°47'	17°26'	14°6'	S 23
S 24	14 6 13	3°17'06	25°42	8°42'	18°1'	29°38'	17°28'	3°16'	15°8	19°41'	3°23'	21°18	22°44'	17°32'	14°6'	S 24
M25	14 10 10	4°15'20	9°A17	10°9'	18°52'	0°314	17°35'	3°21'	15°11	19°40'	3°25'	21°11	22°41'	17°39'	14°6'	M25
T 26	14 14 6	5°13'31	22°38	11°38'	19°44'	0°50'	17°43'	3°26'	15°14	19°39'	3°26'	21°3	22°38	17°46'	14°5'	T 26
W27	14 18 3	6°11'41	5°M44	13°9'	20°36'	1°26'	17°50'	3°30'	15°17	19°38'	3°27'	20°56	22°34	17°52'	14°5'	W27
T 28	14 22 0	7°9'49	18°34	14°42'	21°30'	2°2'	17°58'	3°35'	15°20	19°37'	3°29'	20°50	22°31'	17°59'	14°4'	T 28
F 29	14 25 56	8°7'56	1°A 7	16°16'	22°23'	2°38'	18°6'	3°39'	15°23	19°36'	3°30'	20°46	22°28'	18°6'	14°4'	F 29
S 30	14 29 53	9°B 6'01	13°A26	17°V53	23°H17	3°314	18°314	3°H44	15°II26	19°H35	3°32'	20°II44	22°II25	18°312	14°3	S 30

Delta T = 75.31 sec

Greg. Calendar

# ASTRODIENST EPHEMERIS for the year 1611

## geocentric

MAY 1611 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	14 33 49	10° 8' 40"	25° 32'	19° 32'	24° 12'	3° 50'	18° 22'	3° 48'	15° 29'	19° 34'	3° 33'	20° D44	22° 22'	18° 19'	14° R 2	S 1
M 2	14 37 46	11° 2' 06"	7° 32'	21° 12'	25° 7'	4° 26'	18° 31'	3° 52'	15° 32'	19° 33'	3° 34'	20° D45	22° 18'	18° 26'	14° R 2	M 2
T 3	14 41 42	12° 0' 07"	19° 18'	22° 55'	26° 3'	5° 2'	18° 39'	3° 56'	15° 35'	19° 32'	3° 36'	20° 47'	22° 15'	18° 32'	14° 1'	T 3
W 4	14 45 39	12° 58' 06"	1° 8'	24° 39'	27° 0'	5° 38'	18° 48'	4° 0'	15° 38'	19° 31'	3° 37'	20° 48'	22° 12'	18° 39'	14° 0'	W 4
T 5	14 49 35	13° 56' 04"	13° 1'	26° 26'	27° 56'	6° 15'	18° 57'	4° 4'	15° 42'	19° 31'	3° 38'	20° R49	22° 9'	18° 45'	13° 59'	T 5
F 6	14 53 32	14° 54' 00"	25° 4'	28° 14'	28° 53'	6° 51'	19° 5'	4° 8'	15° 45'	19° 30'	3° 40'	20° 48'	22° 6'	18° 52'	13° 58'	F 6
S 7	14 57 29	15° 51' 55"	7° 20'	0° 8' 4"	29° 51'	7° 27'	19° 14'	4° 12'	15° 48'	19° 29'	3° 41'	20° 46'	22° 3'	18° 59'	13° 56'	S 7
S 8	15 1 25	16° 49' 49"	19° 55'	1° 57'	0° 49'	8° 3'	19° 23'	4° 16'	15° 51'	19° 28'	3° 42'	20° 43'	21° 59'	19° 5'	13° 55'	S 8
M 9	15 5 22	17° 47' 41"	2° 51'	3° 51'	1° 47'	8° 39'	19° 33'	4° 20'	15° 54'	19° 28'	3° 44'	20° 38'	21° 56'	19° 12'	13° 54'	M 9
T 10	15 9 18	18° 45' 33"	16° 9'	5° 47'	2° 46'	9° 16'	19° 42'	4° 23'	15° 58'	19° 27'	3° 45'	20° 33'	21° 53'	19° 19'	13° 52'	T 10
W 11	15 13 15	19° 43' 23"	29° 51'	7° 45'	3° 45'	9° 52'	19° 51'	4° 27'	16° 1'	19° 26'	3° 46'	20° 29'	21° 50'	19° 25'	13° 51'	W 11
T 12	15 17 11	20° 41' 11"	13° 8' 53"	9° 45'	4° 45'	10° 28'	20° 1'	4° 30'	16° 4'	19° 26'	3° 48'	20° 24'	21° 47'	19° 32'	13° 49'	T 12
F 13	15 21 8	21° 38' 59"	28° 13'	11° 46'	5° 45'	11° 4'	20° 10'	4° 33'	16° 7'	19° 25'	3° 49'	20° 22'	21° 44'	19° 39'	13° 48'	F 13
S 14	15 25 4	22° 36' 45"	12° 43'	13° 49'	6° 45'	11° 41'	20° 20'	4° 37'	16° 11'	19° 24'	3° 50'	20° 20'	21° 40'	19° 45'	13° 46'	S 14
S 15	15 29 1	23° 34' 29"	27° 19'	15° 54'	7° 45'	12° 17'	20° 30'	4° 40'	16° 14'	19° 24'	3° 52'	20° D20	21° 37'	19° 52'	13° 44'	S 15
M 16	15 32 58	24° 32' 12"	11° 55'	18° 1'	8° 46'	12° 53'	20° 40'	4° 43'	16° 18'	19° 23'	3° 53'	20° 21'	21° 34'	19° 59'	13° 42'	M 16
T 17	15 36 54	25° 29' 54"	26° 25'	20° 9'	9° 47'	13° 30'	20° 50'	4° 46'	16° 21'	19° 23'	3° 54'	20° 23'	21° 31'	20° 5'	13° 40'	T 17
W 18	15 40 51	26° 27' 34"	10° 45'	22° 18'	10° 49'	14° 6'	21° 0'	4° 49'	16° 24'	19° 23'	3° 56'	20° 24'	21° 28'	20° 12'	13° 38'	W 18
T 19	15 44 47	27° 25' 12"	24° 54'	24° 28'	11° 50'	14° 43'	21° 10'	4° 51'	16° 28'	19° 22'	3° 57'	20° R24	21° 24'	20° 19'	13° 36'	T 19
F 20	15 48 44	28° 22' 49"	8° 49'	26° 39'	12° 52'	15° 19'	21° 20'	4° 54'	16° 31'	19° 22'	3° 58'	20° 24'	21° 21'	20° 25'	13° 34'	F 20
S 21	15 52 40	29° 20' 24"	22° 30'	28° 50'	13° 54'	15° 56'	21° 30'	4° 57'	16° 35'	19° 21'	3° 59'	20° 23'	21° 18'	20° 32'	13° 32'	S 21
S 22	15 56 37	0° 11' 57"	5° 56'	1° 11' 2"	14° 57'	16° 32'	21° 41'	4° 59'	16° 38'	19° 21'	4° 1'	20° 21'	21° 15'	20° 39'	13° 30'	S 22
M 23	16 0 33	1° 15' 30"	19° 8'	3° 14'	15° 59'	17° 8'	21° 51'	5° 2'	16° 41'	19° 21'	4° 2'	20° 18'	21° 12'	20° 45'	13° 27'	M 23
T 24	16 4 30	2° 13' 00"	2° 15'	5° 25'	17° 2'	17° 45'	22° 2'	5° 4'	16° 45'	19° 21'	4° 3'	20° 15'	21° 9'	20° 52'	13° 25'	T 24
W 25	16 8 27	3° 10' 30"	14° 59'	7° 37'	18° 5'	18° 21'	22° 12'	5° 6'	16° 48'	19° 20'	4° 4'	20° 13'	21° 5'	20° 59'	13° 22'	W 25
T 26	16 12 23	4° 7' 59"	27° 20'	9° 47'	19° 9'	18° 58'	22° 23'	5° 8'	16° 52'	19° 20'	4° 5'	20° 11'	21° 2'	21° 5'	13° 20'	T 26
F 27	16 16 20	5° 5' 26"	9° 23'	11° 56'	20° 12'	19° 34'	22° 34'	5° 10'	16° 55'	19° 20'	4° 7'	20° 10'	20° 59'	21° 12'	13° 17'	F 27
S 28	16 20 16	6° 2' 53"	21° 47'	14° 5'	21° 16'	20° 11'	22° 45'	5° 12'	16° 59'	19° 20'	4° 8'	20° D10	20° 56'	21° 19'	13° 15'	S 28
S 29	16 24 13	7° 0' 19"	3° 36'	16° 11'	22° 20'	20° 48'	22° 56'	5° 14'	17° 2'	19° 20'	4° 9'	20° 10'	20° 53'	21° 25'	13° 12'	S 29
M 30	16 28 9	7° 57' 44"	15° 39'	18° 16'	23° 25'	21° 24'	23° 7'	5° 16'	17° 6'	19° 20'	4° 10'	20° 11'	20° 50'	21° 32'	13° 9'	M 30
T 31	16 32 6	8° 55' 08"	27° 32'	20° 11' 9"	24° 29'	22° 51'	23° 18'	5° 17'	17° 10'	19° D20	4° 11'	20° 12'	20° 46'	21° 39'	13° 6'	T 31

Delta T = 75.22 sec

Greg. Calendar

JUNE 1611 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	16 36 2	9° 52' 31"	9° 18'	22° 21'	25° 34'	22° 37'	23° 29'	5° 19'	17° 13'	19° 20'	4° 13'	20° 13'	20° 43'	21° 34'	13° R 4	W 1
T 2	16 39 59	10° 49' 54"	21° 12'	24° 20'	26° 39'	23° 14'	23° 41'	5° 20'	17° 17'	19° 20'	4° 14'	20° 14'	20° 40'	21° 52'	13° R 1	T 2
F 3	16 43 56	11° 47' 16"	3° 15'	26° 16'	27° 44'	23° 51'	23° 52'	5° 22'	17° 20'	19° 20'	4° 15'	20° 15'	20° 37'	21° 59'	12° 58'	F 3
S 4	16 47 52	12° 44' 37"	15° 30'	28° 11'	28° 49'	24° 27'	24° 3'	5° 23'	17° 24'	19° 20'	4° 16'	20° R15	20° 34'	22° 5'	12° 55'	S 4
S 5	16 51 49	13° 41' 58"	28° 3'	0° 3'	29° 54'	25° 4'	24° 15'	5° 24'	17° 27'	19° 20'	4° 17'	20° 15'	20° 30'	22° 12'	12° 52'	S 5
M 6	16 55 45	14° 39' 18"	10° 57'	1° 53'	1° 8'	25° 41'	24° 26'	5° 25'	17° 31'	19° 20'	4° 18'	20° 14'	20° 27'	22° 19'	12° 49'	M 6
T 7	16 59 42	15° 36' 38"	24° 15'	3° 40'	2° 5'	26° 17'	24° 38'	5° 26'	17° 34'	19° 20'	4° 19'	20° 14'	20° 24'	22° 25'	12° 45'	T 7
W 8	17 3 38	16° 33' 58"	7° 59'	5° 25'	3° 11'	26° 54'	24° 50'	5° 27'	17° 38'	19° 21'	4° 20'	20° 13'	20° 21'	22° 32'	12° 42'	W 8
T 9	17 7 35	17° 31' 17"	22° 8'	7° 8'	4° 17'	27° 31'	25° 2'	5° 28'	17° 42'	19° 21'	4° 21'	20° 13'	20° 18'	22° 39'	12° 39'	T 9
F 10	17 11 31	18° 28' 36"	6° 39'	8° 48'	5° 24'	28° 8'	25° 13'	5° 29'	17° 45'	19° 21'	4° 22'	20° 13'	20° 15'	22° 45'	12° 36'	F 10
S 11	17 15 28	19° 25' 54"	21° 26'	10° 25'	6° 30'	28° 44'	25° 25'	5° 29'	17° 49'	19° 22'	4° 23'	20° D13	20° 11'	22° 52'	12° 32'	S 11
S 12	17 19 25	20° 23' 12"	6° 24'	12° 0'	7° 36'	29° 21'	25° 37'	5° 30'	17° 52'	19° 22'	4° 24'	20° R13	20° 8'	22° 59'	12° 29'	S 12
M 13	17 23 21	21° 20' 29"	21° 23'	13° 32'	8° 43'	29° 58'	25° 49'	5° 30'	17° 56'	19° 22'	4° 25'	20° 13'	20° 5'	23° 5'	12° 26'	M 13
T 14	17 27 18	22° 17' 45"	6° 15'	15° 2'	9° 50'	0° 35'	26° 1'	5° 30'	17° 59'	19° 23'	4° 26'	20° 12'	20° 2'	23° 12'	12° 22'	T 14
W 15	17 31 14	23° 15' 01"	20° 54'	16° 29'	10° 56'	1° 12'	26° 13'	5° 31'	18° 3'	19° 23'	4° 27'	20° 12'	19° 59'	23° 19'	12° 19'	W 15
T 16	17 35 11	24° 12' 16"	5° 11'	17° 53'	12° 3'	1° 49'	26° 25'	5° R31	18° 7'	19° 24'	4° 28'	20° 12'	19° 56'	23° 25'	12° 15'	T 16
F 17	17 39 7	25° 9' 30"	19° 14'	19° 15'	13° 11'	2° 25'	26° 38'	5° 31'	18° 10'	19° 24'	4° 29'	20° D12	19° 52'	23° 32'	12° 12'	F 17
S 18	17 43 4	26° 6' 43"	2° 52'	20° 34'	14° 18'	3° 2'	26° 50'	5° 30'	18° 14'	19° 25'	4° 30'	20° 12'	19° 49'	23° 39'	12° 8'	S 18
S 19	17 47 1	27° 3' 56"	16° 8'	21° 51'	15° 25'	3° 39'	27° 2'	5° 30'	18° 17'	19° 25'	4° 31'	20° 12'	19° 46'	23° 45'	12° 5'	S 19
M 20	17 50 57	28° 1' 08"	29° 6'	23° 4'	16° 33'	4° 16'	27° 14'	5° 30'	18° 21'	19° 26'	4° 32'	20° 13'	19° 43'	23° 52'	12° 1'	M 20
T 21	17 54 54	28° 58' 20"	11° 46'	24° 15'	17° 40'	4° 53'	27° 27'	5° 30'	18° 24'	19° 27'	4° 33'	20° 13'	19° 40'	23° 59'	11° 58'	T 21
W 22	17 58 50	29° 55' 31"	24° 13'	25° 23'	18° 48'	5° 30'	27° 39'	5° 29'	18° 28'	19° 27'	4° 34'	20° 14'	19° 36'	24° 5'	11° 54'	W 22
T 23	18 2 47	0° 52' 42"	6° 27'	26° 28'	19° 56'	6° 7'	27° 52'	5° 28'	18° 31'	19° 28'	4° 35'	20° 15'	19° 33'	24° 12'	11° 50'	T 23
F 24	18 6 43	1° 49' 53"	18° 32'	27° 29'	21° 4'	6° 44'	28° 4'	5° 28'	18° 35'	19° 29'	4° 35'	20° R15	19° 30'	24° 19'	11° 47'	F 24
S 25	18 10 40	2° 47' 03"	0° 31'	28° 28'	22° 12'	7° 21'	28° 17'	5° 27'	18° 38'	19° 30'	4° 36'	20° 15'	19° 27'	24° 25'	11° 43'	S 25
S 26	18 14 36	3° 44' 14"	12° 24'	29° 23'	23° 20'	7° 58'	28° 29'	5° 26'	18° 42'	19° 30'	4° 37'	20° 14'	19° 24'	24° 32'	11° 39'	S 26
M 27	18 18 33	4° 41' 24"	24° 14'	0° 15'	24° 28'	8° 35'	28° 42'	5° 25'	18° 45'	19° 31'	4° 38'	20° 13'	19° 21'	24° 39'	11° 35'	M 27
T 28	18 22 30	5° 38' 34"	6° 3'	1° 4'	25° 36'	9° 12'	28° 55'	5° 24'	18° 49'	19° 32'	4° 39'	20° 11'	19° 17'	24° 45'	11° 32'	T 28
W 29	18 26 26	6° 35' 45"	17° 55'	1° 49'	26° 45'	9° 49'	29° 7'	5° 23'	18° 52'	19° 33'	4° 39'	20° 8'	19° 14'	24° 52'	11° 28'	W 29
T 30	18 30 23	7° 32' 55"	29° 50'	2° 30'	27° 54'	10° 26'	29° 20'	5° 21'	18° 56'	19° 34'	4° 40'	20° 6'	19° 11'	24° 59'	11° 24'	T 30

Delta T = 75.13 sec

Greg. Calendar

# ASTRODIENST EPHEMERIS for the year 1611

## geocentric

JULY 1611 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	18 34 19	8°30'06	11°54	3°07	29°08	11°04	29°33	5°R20	18°II59	19°19	4°41	20°R 3	19°II 8	25°35	11°R21	F 1
S 2	18 38 16	9°27'17	24° 9	3°40	0°II11	11°41	29°46	5°H19	19° 2	19°36	4°41	20°II 2	19° 5	25°12	11°317	S 2
S 3	18 42 12	10°24'29	6°V40	4°10	1°20	12°18	29°58	5°17	19° 6	19°37	4°42	20°D 1	19° 2	25°19	11°13	S 3
M 4	18 46 9	11°21'41	19°30	4°35	2°29	12°55	0°011	5°15	19° 9	19°38	4°43	20° 1	18°58	25°25	11° 9	M 4
T 5	18 50 5	12°18'53	2°B42	4°55	3°38	13°32	0°24	5°14	19°13	19°39	4°43	20° 2	18°55	25°32	11° 6	T 5
W 6	18 54 2	13°16'06	16°20	5°11	4°47	14°10	0°37	5°12	19°16	19°40	4°44	20° 4	18°52	25°39	11° 2	W 6
T 7	18 57 59	14°13'19	0°II25	5°23	5°56	14°47	0°50	5°10	19°19	19°41	4°45	20° 5	18°49	25°46	10°58	T 7
F 8	19 1 55	15°10'33	14°54	5°30	7° 6	15°24	1° 3	5° 8	19°23	19°42	4°45	20°R 6	18°46	25°52	10°54	F 8
S 9	19 5 52	16° 7'48	29°46	5°R32	8°15	16° 1	1°16	5° 6	19°26	19°43	4°46	20° 6	18°42	25°59	10°51	S 9
S 10	19 9 48	17° 5'03	14°52	5°29	9°25	16°39	1°29	5° 3	19°29	19°45	4°46	20° 4	18°39	26° 6	10°47	S 10
M 11	19 13 45	18° 2'18	0°01	5°21	10°34	17°16	1°42	5° 1	19°32	19°46	4°47	20° 1	18°36	26°12	10°43	M 11
T 12	19 17 41	18°59'33	15°14	5° 9	11°44	17°53	1°55	4°59	19°36	19°47	4°47	19°58	18°33	26°19	10°39	T 12
W 13	19 21 38	19°56'49	0°19	4°52	12°54	18°31	2° 8	4°56	19°39	19°48	4°48	19°54	18°30	26°26	10°36	W 13
T 14	19 25 34	20°54'05	14°45	4°30	14° 3	19° 8	2°21	4°54	19°42	19°50	4°48	19°50	18°27	26°32	10°32	T 14
F 15	19 29 31	21°51'21	28°55	4° 4	15°13	19°46	2°34	4°51	19°45	19°51	4°49	19°47	18°23	26°39	10°28	F 15
S 16	19 33 28	22°48'38	12°43	3°35	16°23	20°23	2°48	4°48	19°48	19°52	4°49	19°45	18°20	26°46	10°25	S 16
S 17	19 37 24	23°45'54	25°53	3° 1	17°33	21° 0	3° 1	4°46	19°51	19°54	4°50	19°D45	18°17	26°52	10°21	S 17
M 18	19 41 21	24°43'11	8°14	2°24	18°44	21°38	3°14	4°43	19°54	19°55	4°50	19°45	18°14	26°59	10°18	M 18
T 19	19 45 17	25°40'29	21°17	1°45	19°54	22°15	3°27	4°40	19°58	19°57	4°50	19°47	18°11	27° 6	10°14	T 19
W 20	19 49 14	26°37'47	3°13	1° 3	21° 4	22°53	3°40	4°37	20° 1	19°58	4°51	19°48	18° 8	27°12	10°11	W 20
T 21	19 53 10	27°35'05	15°37	0°21	22°14	23°30	3°53	4°34	20° 4	20° 0	4°51	19°R49	18° 4	27°19	10° 7	T 21
F 22	19 57 7	28°32'24	27°33	29°37	23°25	24° 8	4° 7	4°30	20° 7	20° 1	4°51	19°49	18° 1	27°26	10° 4	F 22
S 23	20 1 3	29°29'43	9°32	28°54	24°35	24°46	4°20	4°27	20°10	20° 3	4°52	19°47	17°58	27°32	10° 0	S 23
S 24	20 5 0	0°02'70	21°14	28°11	25°46	25°23	4°33	4°24	20°12	20° 4	4°52	19°43	17°55	27°39	9°57	S 24
M 25	20 8 57	1°24'25	3°44	27°31	26°57	26° 1	4°46	4°21	20°15	20° 6	4°52	19°38	17°52	27°46	9°54	M 25
T 26	20 12 53	2°21'46	14°56	26°52	28° 7	26°38	4°59	4°17	20°18	20° 8	4°52	19°31	17°48	27°52	9°50	T 26
W 27	20 16 50	3°19'09	26°52	26°17	29°18	27°16	5°13	4°14	20°21	20° 9	4°52	19°23	17°45	27°59	9°47	W 27
T 28	20 20 46	4°16'33	8°15	25°46	0°29	27°54	5°26	4°10	20°24	20°11	4°53	19°15	17°42	28° 6	9°44	T 28
F 29	20 24 43	5°13'57	21° 3	25°19	1°40	28°31	5°39	4° 6	20°27	20°13	4°53	19° 7	17°39	28°12	9°40	F 29
S 30	20 28 39	6°11'23	3°V23	24°58	2°51	29° 9	5°52	4° 3	20°29	20°14	4°53	19° 1	17°36	28°19	9°37	S 30
S 31	20 32 36	7°01'50	15°V55	24°42	4°25	29°04	6°01	3°H59	20°II32	20°16	4°53	18°II57	17°II33	28°26	9°34	S 31

Delta T = 75.04 sec

Greg. Calendar

AUGUST 1611 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	20 36 32	8°01'18	28°V43	24°R32	5°51	0°19	6°01	3°R55	20°II35	20°18	4°53	18°R55	17°II29	28°32	9°R31	M 1
T 2	20 40 29	9° 3'48	11°B51	24°D28	6°25	1° 2	6°32	3°H51	20°37	20°19	4°53	18°D54	17°26	28°39	9°38	T 2
W 3	20 44 26	10° 1'19	25°21	24°31	7°36	1°40	6°45	3°47	20°40	20°21	4°53	18°II55	17°23	28°46	9°25	W 3
T 4	20 48 22	10°58'51	9°II15	24°41	8°47	2°18	6°58	3°43	20°43	20°23	4°53	18°56	17°20	28°52	9°22	T 4
F 5	20 52 19	11°56'25	23°34	24°57	9°59	2°56	7°12	3°39	20°45	20°25	4°R53	18°R56	17°17	28°59	9°19	F 5
S 6	20 56 15	12°54'00	8°B16	25°21	11°11	3°34	7°25	3°35	20°48	20°27	4°53	18°55	17°14	29° 6	9°17	S 6
S 7	21 0 12	13°51'37	23°17	25°51	12°22	4°12	7°38	3°31	20°50	20°29	4°53	18°51	17°10	29°13	9°14	S 7
M 8	21 4 8	14°49'15	8°01	26°29	13°34	4°50	7°51	3°27	20°53	20°30	4°53	18°45	17° 7	29°19	9°11	M 8
T 9	21 8 5	15°46'54	23°41	27°13	14°46	5°28	8° 4	3°23	20°55	20°32	4°53	18°37	17° 4	29°26	9° 8	T 9
W 10	21 12 1	16°44'35	8°19	28° 4	15°57	6° 6	8°18	3°18	20°57	20°34	4°53	18°29	17° 1	29°33	9° 6	W 10
T 11	21 15 58	17°42'16	23°28	29° 1	17° 9	6°44	8°31	3°14	21° 0	20°36	4°53	18°20	16°58	29°39	9° 3	T 11
F 12	21 19 55	18°39'59	7°B48	0°01	18°21	7°22	8°44	3°10	21° 2	20°38	4°53	18°13	16°54	29°46	9° 1	F 12
S 13	21 23 51	19°37'42	21°35	1°15	19°33	8° 0	8°57	3° 5	21° 4	20°40	4°53	18° 7	16°51	29°53	8°58	S 13
S 14	21 27 48	20°35'27	4°15	2°31	20°45	8°38	9°10	3° 1	21° 6	20°42	4°52	18° 4	16°48	29°59	8°56	S 14
M 15	21 31 44	21°33'13	17°48	3°53	21°57	9°16	9°23	2°57	21° 9	20°44	4°52	18°D 3	16°45	0°46	8°54	M 15
T 16	21 35 41	22°31'00	0°19	5°20	23°10	9°55	9°36	2°52	21°11	20°46	4°52	18° 3	16°42	0°13	8°51	T 16
W 17	21 39 37	23°28'48	12°31	6°51	24°22	10°33	9°49	2°48	21°13	20°48	4°52	18°R 4	16°39	0°19	8°49	W 17
T 18	21 43 34	24°26'38	24°31	8°27	25°34	11°11	10° 2	2°43	21°15	20°50	4°52	18° 4	16°35	0°26	8°47	T 18
F 19	21 47 30	25°24'28	6°B24	10° 8	26°46	11°49	10°15	2°39	21°17	20°52	4°51	18° 2	16°32	0°33	8°45	F 19
S 20	21 51 27	26°22'20	18°13	11°51	27°59	12°27	10°28	2°34	21°19	20°54	4°51	17°58	16°29	0°39	8°43	S 20
S 21	21 55 24	27°20'14	0°46	13°38	29°11	13° 6	10°41	2°30	21°21	20°56	4°51	17°51	16°26	0°46	8°41	S 21
M 22	21 59 20	28°18'09	11°54	15°28	0°02	13°44	10°54	2°25	21°23	20°58	4°50	17°42	16°23	0°53	8°39	M 22
T 23	22 3 17	29°16'05	23°51	17°20	1°37	14°22	11° 7	2°21	21°24	21° 0	4°50	17°31	16°19	0°59	8°38	T 23
W 24	22 7 13	0°14'03	5°H55	19°13	2°49	15° 1	11°20	2°16	21°26	21° 3	4°50	17°18	16°16	1° 6	8°36	W 24
T 25	22 11 10	1°12'02	18° 8	21° 8	4° 2	15°39	11°33	2°11	21°28	21° 5	4°49	17° 5	16°13	1°13	8°34	T 25
F 26	22 15 6	2°10'03	0°V29	23° 4	5°15	16°18	11°45	2° 7	21°30	21° 7	4°49	16°53	16°10	1°19	8°33	F 26
S 27	22 19 3	3° 8'06	12°59	25° 1	6°28	16°56	11°58	2° 2	21°31	21° 9	4°48	16°43	16° 7	1°26	8°31	S 27
S 28	22 22 59	4° 6'11	25°41	26°58	7°40	17°35	12°11	1°58	21°33	21°11	4°48	16°35	16° 4	1°33	8°30	S 28
M 29	22 26 56	5° 4'17	8°B35	28°56	8°53	18°13	12°23	1°53	21°34	21°13	4°47	16°30	16° 0	1°40	8°29	M 29
T 30	22 30 53	6° 2'26	21°44	0°19	10° 6	18°52	12°36	1°49	21°36	21°15	4°47	16°28	15°57	1°46	8°27	T 30
W 31	22 34 49	7°01'37	5°II11	21°50	11°02	19°19	12°04	1°H44	21°II37	21°18	4°46	16°D28	15°II54	1°46	8°26	W 31

Delta T = 74.95 sec

Greg. Calendar

# ASTRODIENST EPHEMERIS for the year 1611

## geocentric

SEPTEMBER 1611 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	22 38 46	7 <sup>h</sup> 58'49"	18 <sup>h</sup> 56'	4 <sup>h</sup> 46'	12 <sup>h</sup> 33'	20 <sup>h</sup> 9'	13 <sup>h</sup> 1'	1 <sup>h</sup> 40'	21 <sup>h</sup> 39'	21 <sup>h</sup> 20'	4 <sup>h</sup> 46'	16 <sup>h</sup> 28'	15 <sup>h</sup> 51'	2 <sup>h</sup> 0'	8 <sup>h</sup> 25'	T 1
F 2	22 42 42	8 <sup>h</sup> 57'04"	3 <sup>h</sup> 2'	6 <sup>h</sup> 42'	13 <sup>h</sup> 46'	20 <sup>h</sup> 48'	13 <sup>h</sup> 14'	1 <sup>h</sup> 35'	21 <sup>h</sup> 40'	21 <sup>h</sup> 22'	4 <sup>h</sup> 45'	16 <sup>h</sup> 27'	15 <sup>h</sup> 48'	2 <sup>h</sup> 6'	8 <sup>h</sup> 24'	F 2
S 3	22 46 39	9 <sup>h</sup> 55'21"	17 <sup>h</sup> 28'	8 <sup>h</sup> 37'	14 <sup>h</sup> 59'	21 <sup>h</sup> 26'	13 <sup>h</sup> 26'	1 <sup>h</sup> 31'	21 <sup>h</sup> 41'	21 <sup>h</sup> 24'	4 <sup>h</sup> 45'	16 <sup>h</sup> 24'	15 <sup>h</sup> 45'	2 <sup>h</sup> 13'	8 <sup>h</sup> 23'	S 3
S 4	22 50 35	10 <sup>h</sup> 53'40"	2 <sup>h</sup> 12'	10 <sup>h</sup> 31'	16 <sup>h</sup> 13'	22 <sup>h</sup> 5'	13 <sup>h</sup> 39'	1 <sup>h</sup> 26'	21 <sup>h</sup> 43'	21 <sup>h</sup> 26'	4 <sup>h</sup> 44'	16 <sup>h</sup> 19'	15 <sup>h</sup> 41'	2 <sup>h</sup> 20'	8 <sup>h</sup> 22'	S 4
M 5	22 54 32	11 <sup>h</sup> 52'01"	17 <sup>h</sup> 8'	12 <sup>h</sup> 24'	17 <sup>h</sup> 26'	22 <sup>h</sup> 44'	13 <sup>h</sup> 51'	1 <sup>h</sup> 22'	21 <sup>h</sup> 44'	21 <sup>h</sup> 29'	4 <sup>h</sup> 43'	16 <sup>h</sup> 12'	15 <sup>h</sup> 38'	2 <sup>h</sup> 26'	8 <sup>h</sup> 22'	M 5
T 6	22 58 28	12 <sup>h</sup> 50'24"	2 <sup>h</sup> 11'	14 <sup>h</sup> 16'	18 <sup>h</sup> 39'	23 <sup>h</sup> 23'	14 <sup>h</sup> 4'	1 <sup>h</sup> 17'	21 <sup>h</sup> 45'	21 <sup>h</sup> 31'	4 <sup>h</sup> 43'	16 <sup>h</sup> 1'	15 <sup>h</sup> 35'	2 <sup>h</sup> 33'	8 <sup>h</sup> 21'	T 6
W 7	23 2 25	13 <sup>h</sup> 48'49"	17 <sup>h</sup> 2'	16 <sup>h</sup> 8'	19 <sup>h</sup> 53'	24 <sup>h</sup> 1'	14 <sup>h</sup> 16'	1 <sup>h</sup> 13'	21 <sup>h</sup> 46'	21 <sup>h</sup> 33'	4 <sup>h</sup> 42'	15 <sup>h</sup> 50'	15 <sup>h</sup> 32'	2 <sup>h</sup> 40'	8 <sup>h</sup> 20'	W 7
T 8	23 6 22	14 <sup>h</sup> 47'16"	1 <sup>h</sup> 42'	17 <sup>h</sup> 58'	21 <sup>h</sup> 6'	24 <sup>h</sup> 40'	14 <sup>h</sup> 28'	1 <sup>h</sup> 8'	21 <sup>h</sup> 47'	21 <sup>h</sup> 35'	4 <sup>h</sup> 42'	15 <sup>h</sup> 39'	15 <sup>h</sup> 29'	2 <sup>h</sup> 46'	8 <sup>h</sup> 20'	T 8
F 9	23 10 18	15 <sup>h</sup> 45'44"	16 <sup>h</sup> 1'	19 <sup>h</sup> 47'	22 <sup>h</sup> 20'	25 <sup>h</sup> 19'	14 <sup>h</sup> 40'	1 <sup>h</sup> 4'	21 <sup>h</sup> 48'	21 <sup>h</sup> 37'	4 <sup>h</sup> 41'	15 <sup>h</sup> 29'	15 <sup>h</sup> 25'	2 <sup>h</sup> 53'	8 <sup>h</sup> 19'	F 9
S 10	23 14 15	16 <sup>h</sup> 44'14"	29 <sup>h</sup> 52'	21 <sup>h</sup> 35'	23 <sup>h</sup> 34'	25 <sup>h</sup> 58'	14 <sup>h</sup> 52'	1 <sup>h</sup> 0'	21 <sup>h</sup> 49'	21 <sup>h</sup> 40'	4 <sup>h</sup> 40'	15 <sup>h</sup> 21'	15 <sup>h</sup> 22'	3 <sup>h</sup> 0'	8 <sup>h</sup> 19'	S 10
S 11	23 18 11	17 <sup>h</sup> 42'46"	13 <sup>h</sup> 15'	23 <sup>h</sup> 22'	24 <sup>h</sup> 47'	26 <sup>h</sup> 37'	15 <sup>h</sup> 5'	0 <sup>h</sup> 55'	21 <sup>h</sup> 50'	21 <sup>h</sup> 42'	4 <sup>h</sup> 39'	15 <sup>h</sup> 15'	15 <sup>h</sup> 19'	3 <sup>h</sup> 6'	8 <sup>h</sup> 18'	S 11
M 12	23 22 8	18 <sup>h</sup> 41'20"	26 <sup>h</sup> 11'	25 <sup>h</sup> 8'	26 <sup>h</sup> 1'	27 <sup>h</sup> 16'	15 <sup>h</sup> 17'	0 <sup>h</sup> 51'	21 <sup>h</sup> 51'	21 <sup>h</sup> 44'	4 <sup>h</sup> 39'	15 <sup>h</sup> 13'	15 <sup>h</sup> 16'	3 <sup>h</sup> 13'	8 <sup>h</sup> 18'	M 12
T 13	23 26 4	19 <sup>h</sup> 39'55"	8 <sup>h</sup> 44'	26 <sup>h</sup> 53'	27 <sup>h</sup> 15'	27 <sup>h</sup> 55'	15 <sup>h</sup> 29'	0 <sup>h</sup> 47'	21 <sup>h</sup> 52'	21 <sup>h</sup> 46'	4 <sup>h</sup> 38'	15 <sup>h</sup> 12'	15 <sup>h</sup> 13'	3 <sup>h</sup> 20'	8 <sup>h</sup> 18'	T 13
W 14	23 30 1	20 <sup>h</sup> 38'32"	20 <sup>h</sup> 58'	28 <sup>h</sup> 37'	28 <sup>h</sup> 28'	28 <sup>h</sup> 34'	15 <sup>h</sup> 40'	0 <sup>h</sup> 43'	21 <sup>h</sup> 53'	21 <sup>h</sup> 48'	4 <sup>h</sup> 37'	15 <sup>h</sup> 12'	15 <sup>h</sup> 10'	3 <sup>h</sup> 27'	8 <sup>h</sup> 18'	W 14
T 15	23 33 57	21 <sup>h</sup> 37'11"	2 <sup>h</sup> 58'	0 <sup>h</sup> 20'	29 <sup>h</sup> 42'	29 <sup>h</sup> 13'	15 <sup>h</sup> 52'	0 <sup>h</sup> 39'	21 <sup>h</sup> 53'	21 <sup>h</sup> 51'	4 <sup>h</sup> 37'	15 <sup>h</sup> 11'	15 <sup>h</sup> 6'	3 <sup>h</sup> 33'	8 <sup>h</sup> 18'	T 15
F 16	23 37 54	22 <sup>h</sup> 35'51"	14 <sup>h</sup> 51'	2 <sup>h</sup> 2'	0 <sup>h</sup> 56'	29 <sup>h</sup> 52'	16 <sup>h</sup> 4'	0 <sup>h</sup> 35'	21 <sup>h</sup> 54'	21 <sup>h</sup> 53'	4 <sup>h</sup> 36'	15 <sup>h</sup> 10'	15 <sup>h</sup> 3'	3 <sup>h</sup> 40'	8 <sup>h</sup> 18'	F 16
S 17	23 41 51	23 <sup>h</sup> 34'33"	26 <sup>h</sup> 40'	3 <sup>h</sup> 42'	2 <sup>h</sup> 10'	0 <sup>h</sup> 31'	16 <sup>h</sup> 16'	0 <sup>h</sup> 31'	21 <sup>h</sup> 55'	21 <sup>h</sup> 55'	4 <sup>h</sup> 35'	15 <sup>h</sup> 6'	15 <sup>h</sup> 0'	3 <sup>h</sup> 47'	8 <sup>h</sup> 18'	S 17
S 18	23 45 47	24 <sup>h</sup> 33'17"	8 <sup>h</sup> 31'	5 <sup>h</sup> 22'	3 <sup>h</sup> 24'	1 <sup>h</sup> 10'	16 <sup>h</sup> 28'	0 <sup>h</sup> 27'	21 <sup>h</sup> 55'	21 <sup>h</sup> 57'	4 <sup>h</sup> 34'	14 <sup>h</sup> 59'	14 <sup>h</sup> 57'	3 <sup>h</sup> 53'	8 <sup>h</sup> 19'	S 18
M 19	23 49 44	25 <sup>h</sup> 32'02"	20 <sup>h</sup> 27'	7 <sup>h</sup> 1'	4 <sup>h</sup> 38'	1 <sup>h</sup> 50'	16 <sup>h</sup> 39'	0 <sup>h</sup> 23'	21 <sup>h</sup> 56'	22 <sup>h</sup> 0'	4 <sup>h</sup> 33'	14 <sup>h</sup> 50'	14 <sup>h</sup> 54'	4 <sup>h</sup> 0'	8 <sup>h</sup> 19'	M 19
T 20	23 53 40	26 <sup>h</sup> 30'50"	2 <sup>h</sup> 31'	8 <sup>h</sup> 39'	5 <sup>h</sup> 52'	2 <sup>h</sup> 29'	16 <sup>h</sup> 51'	0 <sup>h</sup> 19'	21 <sup>h</sup> 56'	22 <sup>h</sup> 2'	4 <sup>h</sup> 32'	14 <sup>h</sup> 38'	14 <sup>h</sup> 51'	4 <sup>h</sup> 7'	8 <sup>h</sup> 19'	T 20
W 21	23 57 37	27 <sup>h</sup> 29'39"	14 <sup>h</sup> 35'	10 <sup>h</sup> 16'	7 <sup>h</sup> 6'	3 <sup>h</sup> 8'	17 <sup>h</sup> 2'	0 <sup>h</sup> 15'	21 <sup>h</sup> 56'	22 <sup>h</sup> 4'	4 <sup>h</sup> 32'	14 <sup>h</sup> 25'	14 <sup>h</sup> 47'	4 <sup>h</sup> 13'	8 <sup>h</sup> 20'	W 21
T 22	0 1 33	28 <sup>h</sup> 28'30"	27 <sup>h</sup> 11'	11 <sup>h</sup> 52'	8 <sup>h</sup> 20'	3 <sup>h</sup> 47'	17 <sup>h</sup> 14'	0 <sup>h</sup> 11'	21 <sup>h</sup> 57'	22 <sup>h</sup> 6'	4 <sup>h</sup> 31'	14 <sup>h</sup> 12'	14 <sup>h</sup> 44'	4 <sup>h</sup> 20'	8 <sup>h</sup> 20'	T 22
F 23	0 5 30	29 <sup>h</sup> 27'23"	9 <sup>h</sup> 48'	13 <sup>h</sup> 27'	9 <sup>h</sup> 35'	4 <sup>h</sup> 27'	17 <sup>h</sup> 25'	0 <sup>h</sup> 8'	21 <sup>h</sup> 57'	22 <sup>h</sup> 9'	4 <sup>h</sup> 30'	14 <sup>h</sup> 0'	14 <sup>h</sup> 41'	4 <sup>h</sup> 27'	8 <sup>h</sup> 21'	F 23
S 24	0 9 26	0 <sup>h</sup> 26'19"	22 <sup>h</sup> 36'	15 <sup>h</sup> 2'	10 <sup>h</sup> 49'	5 <sup>h</sup> 6'	17 <sup>h</sup> 36'	0 <sup>h</sup> 4'	21 <sup>h</sup> 57'	22 <sup>h</sup> 11'	4 <sup>h</sup> 29'	13 <sup>h</sup> 49'	14 <sup>h</sup> 38'	4 <sup>h</sup> 33'	8 <sup>h</sup> 22'	S 24
S 25	0 13 23	1 <sup>h</sup> 25'16"	5 <sup>h</sup> 35'	16 <sup>h</sup> 35'	12 <sup>h</sup> 3'	5 <sup>h</sup> 46'	17 <sup>h</sup> 47'	0 <sup>h</sup> 0'	21 <sup>h</sup> 58'	22 <sup>h</sup> 13'	4 <sup>h</sup> 28'	13 <sup>h</sup> 41'	14 <sup>h</sup> 35'	4 <sup>h</sup> 40'	8 <sup>h</sup> 23'	S 25
M 26	0 17 19	2 <sup>h</sup> 24'16"	18 <sup>h</sup> 45'	18 <sup>h</sup> 8'	13 <sup>h</sup> 18'	6 <sup>h</sup> 25'	17 <sup>h</sup> 59'	29 <sup>h</sup> 57'	21 <sup>h</sup> 58'	22 <sup>h</sup> 15'	4 <sup>h</sup> 27'	13 <sup>h</sup> 36'	14 <sup>h</sup> 31'	4 <sup>h</sup> 47'	8 <sup>h</sup> 23'	M 26
T 27	0 21 16	3 <sup>h</sup> 23'18"	2 <sup>h</sup> 11'	19 <sup>h</sup> 39'	14 <sup>h</sup> 32'	7 <sup>h</sup> 4'	18 <sup>h</sup> 10'	29 <sup>h</sup> 53'	21 <sup>h</sup> 58'	22 <sup>h</sup> 17'	4 <sup>h</sup> 26'	13 <sup>h</sup> 34'	14 <sup>h</sup> 28'	4 <sup>h</sup> 53'	8 <sup>h</sup> 24'	T 27
W 28	0 25 13	4 <sup>h</sup> 22'22"	15 <sup>h</sup> 40'	21 <sup>h</sup> 10'	15 <sup>h</sup> 46'	7 <sup>h</sup> 44'	18 <sup>h</sup> 21'	29 <sup>h</sup> 50'	21 <sup>h</sup> 58'	22 <sup>h</sup> 20'	4 <sup>h</sup> 25'	13 <sup>h</sup> 33'	14 <sup>h</sup> 25'	5 <sup>h</sup> 0'	8 <sup>h</sup> 25'	W 28
T 29	0 29 9	5 <sup>h</sup> 21'29"	29 <sup>h</sup> 26'	22 <sup>h</sup> 40'	17 <sup>h</sup> 1'	8 <sup>h</sup> 24'	18 <sup>h</sup> 31'	29 <sup>h</sup> 47'	21 <sup>h</sup> 58'	22 <sup>h</sup> 22'	4 <sup>h</sup> 24'	13 <sup>h</sup> 34'	14 <sup>h</sup> 22'	5 <sup>h</sup> 7'	8 <sup>h</sup> 27'	T 29
F 30	0 33 6	6 <sup>h</sup> 20'38"	13 <sup>h</sup> 25'	24 <sup>h</sup> 10'	18 <sup>h</sup> 15'	9 <sup>h</sup> 3'	18 <sup>h</sup> 42'	29 <sup>h</sup> 44'	21 <sup>h</sup> 58'	22 <sup>h</sup> 24'	4 <sup>h</sup> 23'	13 <sup>h</sup> 34'	14 <sup>h</sup> 19'	5 <sup>h</sup> 14'	8 <sup>h</sup> 28'	F 30

Delta T = 74.86 sec

Greg. Calendar

OCTOBER 1611 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	0 37 2	7♂19'49	27♂37	25♂38	19♂30	9♂43	18♂53	29♂40	21♂58	22♂26	4♂22	13♂32	14♂16	5♂20	8♂29	S 1
S 2	0 40 59	8°19'03	12♂1	27°5	20°44	10°22	19°4	29♂37	21♂57	22°28	4♂21	13♂28	14°12	5°27	8°30	S 2
M 3	0 44 55	9°18'19	26°34	28°32	21°59	11°2	19°14	29°34	21°57	22°30	4°20	13°22	14°9	5°34	8°32	M 3
T 4	0 48 52	10°17'37	11♂9	29°58	23°14	11°42	19°25	29°32	21°57	22°33	4°19	13°13	14°6	5°40	8°33	T 4
W 5	0 52 48	11°16'58	25°41	1♂22	24°28	12°22	19°35	29°29	21°57	22°35	4°18	13°3	14°3	5°47	8°35	W 5
T 6	0 56 45	12°16'20	10♂3	2°46	25°43	13°1	19°45	29°26	21°56	22°37	4°17	12°53	14°0	5°54	8°37	T 6
F 7	1 0 42	13°15'45	24°8	4°9	26°58	13°41	19°56	29°23	21°56	22°39	4°16	12°44	13°56	6°0	8°38	F 7
S 8	1 4 38	14°15'11	7♂51	5°31	28°12	14°21	20°6	29°21	21°55	22°41	4°15	12°37	13°53	6°7	8°40	S 8
S 9	1 8 35	15°14'40	21°11	6°52	29°27	15°1	20°16	29°18	21°55	22°43	4°14	12°33	13°50	6°14	8°42	S 9
M10	1 12 31	16°14'10	4♂7	8°12	0♂42	15°41	20°26	29°16	21°54	22°45	4°13	12°31	13°47	6°20	8°44	M10
T 11	1 16 28	17°13'43	16°41	9°30	1°57	16°21	20°35	29°14	21°53	22°47	4°12	12°D30	13°44	6°27	8°46	T 11
W12	1 20 24	18°13'17	28°56	10°48	3°12	17°1	20°45	29°11	21°53	22°49	4°11	12°31	13°41	6°34	8°48	W12
T 13	1 24 21	19°12'53	10♂58	12°4	4°27	17°41	20°55	29°9	21°52	22°52	4°10	12°32	13°37	6°41	8°51	T 13
F 14	1 28 17	20°12'31	22°52	13°19	5°42	18°21	21°4	29°7	21°51	22°54	4°9	12°R32	13°34	6°47	8°53	F 14
S 15	1 32 14	21°12'10	4♂43	14°32	6°57	19°1	21°13	29°5	21°50	22°56	4°8	12°31	13°31	6°54	8°55	S 15
S 16	1 36 11	22°11'51	16°35	15°43	8°12	19°41	21°23	29°3	21°49	22°58	4°7	12°28	13°28	7°1	8°58	S 16
M17	1 40 7	23°11'34	28°34	16°53	9°26	20°22	21°32	29°2	21°48	23°0	4°5	12°23	13°25	7°7	9°0	M17
T 18	1 44 4	24°11'19	10♂43	18°0	10°41	21°2	21°41	29°0	21°47	23°2	4°4	12°16	13°22	7°14	9°3	T 18
W19	1 48 0	25°11'05	23°6	19°6	11°57	21°42	21°50	28°58	21°46	23°4	4°3	12°7	13°18	7°21	9°6	W19
T 20	1 51 57	26°10'54	5♂43	20°9	13°12	22°22	21°59	28°57	21°45	23°5	4°2	11°59	13°15	7°27	9°8	T 20
F 21	1 55 53	27°10'44	18°36	21°9	14°27	23°3	22°7	28°56	21°44	23°7	4°1	11°51	13°12	7°34	9°11	F 21
S 22	1 59 50	28°10'36	1♂44	22°7	15°42	23°43	22°16	28°54	21°43	23°9	4°0	11°44	13°9	7°41	9°14	S 22
S 23	2 3 46	29°10'30	15°6	23°1	16°57	24°24	22°24	28°53	21°42	23°11	3°59	11°39	13°6	7°48	9°17	S 23
M24	2 7 43	0♂10'26	28°40	23°51	18°12	25°4	22°33	28°52	21°40	23°13	3°58	11°36	13°2	7°54	9°20	M24
T 25	2 11 40	1°10'24	12♂25	24°38	19°27	25°45	22°41	28°51	21°39	23°15	3°56	11°D35	12°59	8°1	9°23	T 25
W26	2 15 36	2°10'25	26°17	25°20	20°42	26°25	22°49	28°50	21°38	23°17	3°55	11°36	12°56	8°8	9°26	W26
T 27	2 19 33	3°10'27	10♂16	25°57	21°58	27°6	22°57	28°50	21°36	23°19	3°54	11°38	12°53	8°14	9°29	T 27
F 28	2 23 29	4°10'32	24°21	26°28	23°13	27°46	23°5	28°49	21°35	23°20	3°53	11°39	12°50	8°21	9°33	F 28
S 29	2 27 26	5°10'39	8♂30	26°54	24°28	28°27	23°12	28°48	21°33	23°22	3°52	11°R39	12°47	8°28	9°36	S 29
S 30	2 31 22	6°10'48	22°41	27°12	25°43	29°8	23°20	28°48	21°32	23°24	3°51	11°38	12°43	8°34	9°39	S 30
M31	2 35 19	7♂10'59	6♂53	27♂23	26♂59	29♂49	23♂27	28♂48	21♂30	23♂26	3♂50	11♂35	12♂40	8♂41	9♂43	M31

ASTRODIENST EPHEMERIS for the year 1611  
geocentric

NOVEMBER 1611 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	2 39 15	8♂11°12	21♂ 2	27°R27	28♂14	0♂29	23♂35	28°R47	21°R29	23♂27	3°R49	11°R31	12♂37	8♂48	9♂46	T 1
W 2	2 43 12	9°11'27	5♂ 5	27♂21	29°29	1°10	23°42	28♂47	21♂27	23°29	3♂47	11♂26	12°34	8°55	9°50	W 2
T 3	2 47 9	10°11'44	18°59	27° 6	0♂44	1°51	23°49	28°D47	21°25	23°31	3°46	11°21	12°31	9° 1	9°53	T 3
F 4	2 51 5	11°12'03	2♂40	26°41	2° 0	2°32	23°56	28°47	21°24	23°32	3°45	11°16	12°28	9° 8	9°57	F 4
S 5	2 55 2	12°12'23	16° 4	26° 7	3°15	3°13	24° 2	28°48	21°22	23°34	3°44	11°13	12°24	9°15	10° 1	S 5
S 6	2 58 58	13°12'46	29°10	25°22	4°30	3°54	24° 9	28°48	21°20	23°36	3°43	11°11	12°21	9°21	10° 5	S 6
M 7	3 2 55	14°13'10	11♂58	24°28	5°46	4°35	24°15	28°48	21°18	23°37	3°42	11°D10	12°18	9°28	10° 9	M 7
T 8	3 6 51	15°13'36	24°28	23°25	7° 1	5°16	24°21	28°49	21°16	23°39	3°41	11°11	12°15	9°35	10°13	T 8
W 9	3 10 48	16°14'03	6♂43	22°14	8°17	5°57	24°28	28°49	21°14	23°40	3°40	11°12	12°12	9°41	10°17	W 9
T 10	3 14 44	17°14'31	18°46	20°58	9°32	6°38	24°34	28°50	21°12	23°42	3°39	11°14	12° 8	9°48	10°21	T 10
F 11	3 18 41	18°15'01	0♂40	19°38	10°47	7°20	24°39	28°51	21°10	23°43	3°37	11°16	12° 5	9°55	10°25	F 11
S 12	3 22 38	19°15'33	12°32	18°17	12° 3	8° 1	24°45	28°52	21° 8	23°45	3°36	11°17	12° 2	10° 2	10°29	S 12
S 13	3 26 34	20°16'05	24°24	16°58	13°18	8°42	24°50	28°53	21° 6	23°46	3°35	11°R17	11°59	10° 8	10°33	S 13
M14	3 30 31	21°16'39	6♂23	15°42	14°34	9°23	24°56	28°54	21° 4	23°48	3°34	11°16	11°56	10°15	10°37	M14
T 15	3 34 27	22°17'14	18°33	14°34	15°49	10° 5	25° 1	28°55	21° 2	23°49	3°33	11°14	11°53	10°22	10°42	T 15
W16	3 38 24	23°17'50	0♂57	13°34	17° 5	10°46	25° 6	28°57	21° 0	23°50	3°32	11°12	11°49	10°28	10°46	W16
T 17	3 42 20	24°18'27	13°40	12°44	18°20	11°28	25°11	28°58	20°57	23°52	3°31	11° 9	11°46	10°35	10°50	T 17
F 18	3 46 17	25°19'06	26°43	12° 6	19°35	12° 9	25°15	29° 0	20°55	23°53	3°30	11° 7	11°43	10°42	10°55	F 18
S 19	3 50 13	26°19'46	10♂ 6	11°39	20°51	12°51	25°20	29° 1	20°53	23°54	3°29	11° 5	11°40	10°48	10°59	S 19
S 20	3 54 10	27°20'27	23°49	11°23	22° 6	13°32	25°24	29° 3	20°51	23°55	3°28	11° 3	11°37	10°55	11° 4	S 20
M21	3 58 7	28°21'10	7♂49	11°D19	23°22	14°14	25°28	29° 5	20°48	23°57	3°27	11°D 3	11°33	11° 2	11° 9	M21
T 22	4 2 3	29°21'54	22° 1	11°26	24°37	14°55	25°32	29° 7	20°46	23°58	3°26	11° 3	11°30	11° 9	11°13	T 22
W23	4 6 0	0♂22'39	6♂22	11°43	25°53	15°37	25°36	29° 9	20°44	23°59	3°25	11° 4	11°27	11°15	11°18	W23
T 24	4 9 56	1°23'26	20°47	12° 9	27° 8	16°19	25°40	29°11	20°41	24° 0	3°24	11° 5	11°24	11°22	11°23	T 24
F 25	4 13 53	2°24'15	5♂11	12°43	28°24	17° 1	25°43	29°13	20°39	24° 1	3°23	11° 5	11°21	11°29	11°27	F 25
S 26	4 17 49	3°25'04	19°30	13°24	29°39	17°42	25°46	29°16	20°37	24° 2	3°22	11° 6	11°18	11°35	11°32	S 26
S 27	4 21 46	4°25'56	3♂42	14°12	0♂55	18°24	25°49	29°18	20°34	24° 3	3°21	11°R 6	11°14	11°42	11°37	S 27
M28	4 25 42	5°26'48	17°44	15° 6	2°10	19° 6	25°52	29°21	20°32	24° 4	3°20	11° 6	11°11	11°49	11°42	M28
T 29	4 29 39	6°27'42	1♂34	16° 5	3°26	19°48	25°55	29°23	20°29	24° 5	3°19	11° 6	11° 8	11°56	11°47	T 29
W30	4 33 36	7♂28'38	15♂13	17♂ 8	4♂41	20♂30	25♂57	29♂26	20♂27	24♂ 6	3♂18	11♂ 5	11♂ 5	12♂ 2	11♂52	W30

Delta T = 74.68 sec

Greg. Calendar

DECEMBER 1611 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	4 37 32	8♂29°34	28♂39	18♂15	5♂57	21♂12	26♂0	29♂29	20°R24	24♂ 7	3°R17	11°R 5	11♂ 2	12♂ 9	11♂57	T 1
F 2	4 41 29	9°30'32	11♂53	19°26	7°12	21°54	26° 2	29°32	20♂22	24° 8	3♂17	11♂ 5	10°59	12°16	12° 2	F 2
S 3	4 45 25	10°31'31	24°52	20°39	8°28	22°36	26° 4	29°35	20°19	24° 9	3°16	11° 4	10°55	12°22	12° 7	S 3
S 4	4 49 22	11°32'31	7♂39	21°55	9°43	23°18	26° 5	29°38	20°17	24° 9	3°15	11° 4	10°52	12°29	12°12	S 4
M 5	4 53 18	12°33'32	20°12	23°12	10°59	24° 1	26° 7	29°41	20°14	24°10	3°14	11° 4	10°49	12°36	12°17	M 5
T 6	4 57 15	13°34'34	2♂33	24°32	12°14	24°43	26° 8	29°44	20°12	24°11	3°13	11° 4	10°46	12°42	12°23	T 6
W 7	5 1 11	14°35'37	14°42	25°53	13°30	25°25	26°10	29°48	20° 9	24°12	3°12	11° 4	10°43	12°49	12°28	W 7
T 8	5 5 8	15°36'40	26°42	27°16	14°45	26° 8	26°11	29°51	20° 7	24°12	3°11	11° 3	10°40	12°56	12°33	T 8
F 9	5 9 5	16°37'44	8♂36	28°40	16° 1	26°50	26°11	29°55	20° 4	24°13	3°11	11° 3	10°36	13° 3	12°38	F 9
S 10	5 13 1	17°38'49	20°27	0♂ 5	17°16	27°32	26°12	29°59	20° 2	24°13	3°10	11° 2	10°33	13° 9	12°44	S 10
S 11	5 16 58	18°39'53	2♂19	1°31	18°32	28°15	26°12	0♂ 2	19°59	24°14	3° 9	11° 1	10°30	13°16	12°49	S 11
M12	5 20 54	19°40'58	14°15	2°57	19°48	28°57	26°R12	0° 6	19°56	24°15	3° 8	11°D 1	10°27	13°23	12°54	M12
T 13	5 24 51	20°42'04	26°22	4°24	21° 3	29°40	26°12	0°10	19°54	24°15	3° 8	11° 1	10°24	13°29	13° 0	T 13
W14	5 28 47	21°43'10	8♂42	5°52	22°19	0♂22	26°12	0°14	19°51	24°15	3° 7	11° 1	10°20	13°36	13° 5	W14
T 15	5 32 44	22°44'16	21°23	7°21	23°34	1° 5	26°12	0°18	19°49	24°16	3° 6	11° 2	10°17	13°43	13°10	T 15
F 16	5 36 40	23°45'22	4♂25	8°50	24°50	1°47	26°11	0°23	19°46	24°16	3° 6	11° 3	10°14	13°50	13°16	F 16
S 17	5 40 37	24°46'29	17°52	10°19	26° 5	2°30	26°11	0°27	19°44	24°17	3° 5	11° 4	10°11	13°56	13°21	S 17
S 18	5 44 34	25°47'35	1♂44	11°49	27°21	3°13	26°10	0°31	19°41	24°17	3° 4	11° 5	10° 8	14° 3	13°27	S 18
M19	5 48 30	26°48'43	16° 1	13°19	28°36	3°56	26° 8	0°36	19°38	24°17	3° 4	11°R 5	10° 5	14°10	13°32	M19
T 20	5 52 27	27°49'50	0♂36	14°50	29°52	4°38	26° 7	0°40	19°36	24°18	3° 3	11° 5	10° 1	14°16	13°38	T 20
W21	5 56 23	28°50'58	15°25	16°21	1♂ 7	5°21	26° 5	0°45	19°33	24°18	3° 3	11° 3	9°58	14°23	13°43	W21
T 22	6 0 20	29°52'06	0♂20	17°52	2°23	6° 4	26° 4	0°50	19°31	24°18	3° 2	11° 1	9°55	14°30	13°49	T 22
F 23	6 4 16	0♂53'15	15°11	19°23	3°38	6°47	26° 2	0°54	19°28	24°18	3° 2	10°58	9°52	14°37	13°54	F 23
S 24	6 8 13	1°54'24	29°53	20°55	4°53	7°30	26° 0	0°59	19°26	24°18	3° 1	10°55	9°49	14°43	14° 0	S 24
S 25	6 12 10	2°55'33	14♂18	22°27	6° 9	8°13	25°57	1° 4	19°23	24°18	3° 0	10°53	9°46	14°50	14° 6	S 25
M26	6 16 6	3°56'43	28°25	24° 0	7°24	8°56	25°55	1° 9	19°21	24°18	3° 0	10°D52	9°42	14°57	14°11	M26
T 27	6 20 3	4°57'53	12♂11	25°33	8°40	9°39	25°52	1°14	19°18	24°R18	3° 0	10°52	9°39	15° 3	14°17	T 27
W28	6 23 59	5°59'04	25°37	27° 6	9°55	10°22	25°49	1°19	19°16	24°18	2°59	10°53	9°36	15°10	14°22	W28
T 29	6 27 56	7° 0'15	8♂45	28°39	11°11	11° 5	25°46	1°24	19°14	24°18	2°59	10°55	9°33	15°17	14°28	T 29
F 30	6 31 52	8° 1'26	21°36	0♂13	12°26	11°49	25°43	1°30	19°11	24°18	2°58	10°57	9°30	15°23	14°34	F 30
S 31	6 35 49	9♂ 2'37	4♂14	1♂47	13♂42	12♂32	25♂39	1♂35	19♂ 9	24♂18	2♂58	10♂58	9♂26	15♂30	14♂39	S 31

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