

SWISS EPHEMERIS for the year 2455

JANUARY 2455

00:00 UT

| Day  | Sid.t   | ☉                      | ☽                    | ♀                   | ♁                   | ♂                    | ♃                  | ♄                   | ♅                    | ♆                   | ♇                    | ♈                    | ♉                   | ♊                    | ♋                   | ♌ | ♍ |
|------|---------|------------------------|----------------------|---------------------|---------------------|----------------------|--------------------|---------------------|----------------------|---------------------|----------------------|----------------------|---------------------|----------------------|---------------------|---|---|
| F 1  | 6 43 5  | 10 <sup>26</sup> 26'56 | 4 <sup>II</sup> 24   | 14 <sup>3</sup> 20  | 25 <sup>22</sup> 14 | 6 <sup>22</sup> 47   | 2 <sup>22</sup> 23 | 17 <sup>18</sup> 14 | 14 <sup>14</sup> R27 | 16 <sup>16</sup> 38 | 10 <sup>10</sup> R55 | 23 <sup>23</sup> R31 | 24 <sup>24</sup> 56 | 26 <sup>26</sup> 48  | 22 <sup>22</sup> 32 |   |   |
| S 2  | 6 47 2  | 11 <sup>28</sup> 01    | 16 <sup>22</sup>     | 15 <sup>15</sup> 56 | 26 <sup>26</sup> 23 | 7 <sup>7</sup> 34    | 2 <sup>2</sup> 26  | 17 <sup>17</sup> 20 | 14 <sup>14</sup> 25  | 16 <sup>16</sup> 39 | 10 <sup>10</sup> 54  | 23 <sup>23</sup> 22  | 24 <sup>24</sup> 53 | 26 <sup>26</sup> 55  | 22 <sup>22</sup> 34 |   |   |
| S 3  | 6 50 58 | 12 <sup>29</sup> 06    | 28 <sup>28</sup> 26  | 17 <sup>17</sup> 33 | 27 <sup>27</sup> 31 | 8 <sup>8</sup> 21    | 2 <sup>2</sup> 29  | 17 <sup>17</sup> 25 | 14 <sup>14</sup> 22  | 16 <sup>16</sup> 41 | 10 <sup>10</sup> 54  | 23 <sup>23</sup> 14  | 24 <sup>24</sup> 50 | 27 <sup>27</sup> 1   | 22 <sup>22</sup> 36 |   |   |
| M 4  | 6 54 55 | 13 <sup>30</sup> 12    | 10 <sup>10</sup> 39  | 19 <sup>19</sup> 9  | 28 <sup>28</sup> 40 | 9 <sup>9</sup> 8     | 2 <sup>2</sup> 31  | 17 <sup>17</sup> 30 | 14 <sup>14</sup> 20  | 16 <sup>16</sup> 42 | 10 <sup>10</sup> 53  | 23 <sup>23</sup> 7   | 24 <sup>24</sup> 47 | 27 <sup>27</sup> 8   | 22 <sup>22</sup> 37 |   |   |
| T 5  | 6 58 51 | 14 <sup>31</sup> 18    | 23 <sup>23</sup> 0   | 20 <sup>20</sup> 46 | 29 <sup>29</sup> 48 | 9 <sup>9</sup> 55    | 2 <sup>2</sup> 34  | 17 <sup>17</sup> 35 | 14 <sup>14</sup> 17  | 16 <sup>16</sup> 44 | 10 <sup>10</sup> 52  | 23 <sup>23</sup> 1   | 24 <sup>24</sup> 44 | 27 <sup>27</sup> 15  | 22 <sup>22</sup> 39 |   |   |
| W 6  | 7 2 48  | 15 <sup>32</sup> 24    | 5 <sup>5</sup> 32    | 22 <sup>22</sup> 23 | 0 <sup>0</sup> 56   | 10 <sup>10</sup> 42  | 2 <sup>2</sup> 36  | 17 <sup>17</sup> 40 | 14 <sup>14</sup> 14  | 16 <sup>16</sup> 45 | 10 <sup>10</sup> 52  | 22 <sup>22</sup> 58  | 24 <sup>24</sup> 41 | 27 <sup>27</sup> 22  | 22 <sup>22</sup> 41 |   |   |
| T 7  | 7 6 44  | 16 <sup>33</sup> 31    | 18 <sup>18</sup> 14  | 24 <sup>24</sup> 1  | 2 <sup>2</sup> 4    | 11 <sup>11</sup> 29  | 2 <sup>2</sup> 38  | 17 <sup>17</sup> 45 | 14 <sup>14</sup> 12  | 16 <sup>16</sup> 47 | 10 <sup>10</sup> 51  | 22 <sup>22</sup> D56 | 24 <sup>24</sup> 37 | 27 <sup>27</sup> 28  | 22 <sup>22</sup> 43 |   |   |
| F 8  | 7 10 41 | 17 <sup>34</sup> 37    | 1 <sup>1</sup> 7     | 25 <sup>25</sup> 38 | 3 <sup>3</sup> 12   | 12 <sup>12</sup> 16  | 2 <sup>2</sup> 40  | 17 <sup>17</sup> 50 | 14 <sup>14</sup> 9   | 16 <sup>16</sup> 48 | 10 <sup>10</sup> 50  | 22 <sup>22</sup> 57  | 24 <sup>24</sup> 34 | 27 <sup>27</sup> 35  | 22 <sup>22</sup> 45 |   |   |
| S 9  | 7 14 38 | 18 <sup>35</sup> 44    | 14 <sup>14</sup> 14  | 27 <sup>27</sup> 16 | 4 <sup>4</sup> 20   | 13 <sup>13</sup> 3   | 2 <sup>2</sup> 42  | 17 <sup>17</sup> 54 | 14 <sup>14</sup> 7   | 16 <sup>16</sup> 49 | 10 <sup>10</sup> 49  | 22 <sup>22</sup> 58  | 24 <sup>24</sup> 31 | 27 <sup>27</sup> 42  | 22 <sup>22</sup> 47 |   |   |
| S 10 | 7 18 34 | 19 <sup>36</sup> 51    | 27 <sup>27</sup> 34  | 28 <sup>28</sup> 54 | 5 <sup>5</sup> 27   | 13 <sup>13</sup> 50  | 2 <sup>2</sup> 43  | 17 <sup>17</sup> 59 | 14 <sup>14</sup> 4   | 16 <sup>16</sup> 50 | 10 <sup>10</sup> 49  | 23 <sup>23</sup> 0   | 24 <sup>24</sup> 28 | 27 <sup>27</sup> 49  | 22 <sup>22</sup> 50 |   |   |
| M 11 | 7 22 31 | 20 <sup>37</sup> 59    | 11 <sup>11</sup> 10  | 0 <sup>0</sup> 32   | 6 <sup>6</sup> 34   | 14 <sup>14</sup> 38  | 2 <sup>2</sup> 44  | 18 <sup>18</sup> 4  | 14 <sup>14</sup> 2   | 16 <sup>16</sup> 52 | 10 <sup>10</sup> 48  | 23 <sup>23</sup> 1   | 24 <sup>24</sup> 25 | 27 <sup>27</sup> 55  | 22 <sup>22</sup> 52 |   |   |
| T 12 | 7 26 27 | 21 <sup>39</sup> 07    | 25 <sup>25</sup> 3   | 2 <sup>2</sup> 10   | 7 <sup>7</sup> 41   | 15 <sup>15</sup> 25  | 2 <sup>2</sup> 45  | 18 <sup>18</sup> 8  | 13 <sup>13</sup> 59  | 16 <sup>16</sup> 53 | 10 <sup>10</sup> 47  | 23 <sup>23</sup> R 1 | 24 <sup>24</sup> 22 | 28 <sup>28</sup> 2   | 22 <sup>22</sup> 54 |   |   |
| W 13 | 7 30 24 | 22 <sup>40</sup> 15    | 9 <sup>9</sup> 12    | 3 <sup>3</sup> 48   | 8 <sup>8</sup> 48   | 16 <sup>16</sup> 12  | 2 <sup>2</sup> 46  | 18 <sup>18</sup> 12 | 13 <sup>13</sup> 56  | 16 <sup>16</sup> 54 | 10 <sup>10</sup> 46  | 23 <sup>23</sup> 0   | 24 <sup>24</sup> 18 | 28 <sup>28</sup> 9   | 22 <sup>22</sup> 56 |   |   |
| T 14 | 7 34 20 | 23 <sup>41</sup> 24    | 23 <sup>23</sup> 36  | 5 <sup>5</sup> 26   | 9 <sup>9</sup> 54   | 16 <sup>16</sup> 59  | 2 <sup>2</sup> 47  | 18 <sup>18</sup> 17 | 13 <sup>13</sup> 54  | 16 <sup>16</sup> 55 | 10 <sup>10</sup> 45  | 22 <sup>22</sup> 58  | 24 <sup>24</sup> 15 | 28 <sup>28</sup> 15  | 22 <sup>22</sup> 59 |   |   |
| F 15 | 7 38 17 | 24 <sup>42</sup> 32    | 8 <sup>8</sup> 12    | 7 <sup>7</sup> 4    | 11 <sup>11</sup> 0  | 17 <sup>17</sup> 47  | 2 <sup>2</sup> 48  | 18 <sup>18</sup> 21 | 13 <sup>13</sup> 51  | 16 <sup>16</sup> 56 | 10 <sup>10</sup> 44  | 22 <sup>22</sup> 54  | 24 <sup>24</sup> 12 | 28 <sup>28</sup> 22  | 23 <sup>23</sup> 1  |   |   |
| S 16 | 7 42 13 | 25 <sup>43</sup> 41    | 22 <sup>22</sup> 54  | 8 <sup>8</sup> 41   | 12 <sup>12</sup> 6  | 18 <sup>18</sup> 34  | 2 <sup>2</sup> 48  | 18 <sup>18</sup> 25 | 13 <sup>13</sup> 49  | 16 <sup>16</sup> 57 | 10 <sup>10</sup> 43  | 22 <sup>22</sup> 50  | 24 <sup>24</sup> 9  | 28 <sup>28</sup> 29  | 23 <sup>23</sup> 4  |   |   |
| S 17 | 7 46 10 | 26 <sup>44</sup> 50    | 7 <sup>7</sup> 36    | 10 <sup>10</sup> 19 | 13 <sup>13</sup> 12 | 19 <sup>19</sup> 21  | 2 <sup>2</sup> R48 | 18 <sup>18</sup> 29 | 13 <sup>13</sup> 46  | 16 <sup>16</sup> 58 | 10 <sup>10</sup> 42  | 22 <sup>22</sup> 46  | 24 <sup>24</sup> 6  | 28 <sup>28</sup> 36  | 23 <sup>23</sup> 6  |   |   |
| M 18 | 7 50 7  | 27 <sup>45</sup> 59    | 22 <sup>22</sup> 10  | 11 <sup>11</sup> 55 | 14 <sup>14</sup> 18 | 20 <sup>20</sup> 9   | 2 <sup>2</sup> 48  | 18 <sup>18</sup> 33 | 13 <sup>13</sup> 44  | 16 <sup>16</sup> 59 | 10 <sup>10</sup> 41  | 22 <sup>22</sup> 43  | 24 <sup>24</sup> 2  | 28 <sup>28</sup> 42  | 23 <sup>23</sup> 9  |   |   |
| T 19 | 7 54 3  | 28 <sup>47</sup> 08    | 6 <sup>6</sup> 29    | 13 <sup>13</sup> 31 | 15 <sup>15</sup> 23 | 20 <sup>20</sup> 56  | 2 <sup>2</sup> 48  | 18 <sup>18</sup> 37 | 13 <sup>13</sup> 41  | 17 <sup>17</sup> 0  | 10 <sup>10</sup> 40  | 22 <sup>22</sup> 41  | 23 <sup>23</sup> 59 | 28 <sup>28</sup> 49  | 23 <sup>23</sup> 11 |   |   |
| W 20 | 7 58 0  | 29 <sup>48</sup> 16    | 20 <sup>20</sup> 28  | 15 <sup>15</sup> 6  | 16 <sup>16</sup> 28 | 21 <sup>21</sup> 43  | 2 <sup>2</sup> 47  | 18 <sup>18</sup> 41 | 13 <sup>13</sup> 39  | 17 <sup>17</sup> 1  | 10 <sup>10</sup> 39  | 22 <sup>22</sup> D40 | 23 <sup>23</sup> 56 | 28 <sup>28</sup> 56  | 23 <sup>23</sup> 14 |   |   |
| T 21 | 8 1 56  | 0 <sup>0</sup> 49'23   | 4 <sup>4</sup> 5     | 16 <sup>16</sup> 40 | 17 <sup>17</sup> 32 | 22 <sup>22</sup> 31  | 2 <sup>2</sup> 47  | 18 <sup>18</sup> 45 | 13 <sup>13</sup> 36  | 17 <sup>17</sup> 2  | 10 <sup>10</sup> 38  | 22 <sup>22</sup> 40  | 23 <sup>23</sup> 53 | 29 <sup>29</sup> 3   | 23 <sup>23</sup> 17 |   |   |
| F 22 | 8 5 53  | 1 <sup>1</sup> 50'30   | 17 <sup>17</sup> 18  | 18 <sup>18</sup> 12 | 18 <sup>18</sup> 37 | 23 <sup>23</sup> 18  | 2 <sup>2</sup> 46  | 18 <sup>18</sup> 48 | 13 <sup>13</sup> 34  | 17 <sup>17</sup> 3  | 10 <sup>10</sup> 37  | 22 <sup>22</sup> 41  | 23 <sup>23</sup> 50 | 29 <sup>29</sup> 9   | 23 <sup>23</sup> 19 |   |   |
| S 23 | 8 9 49  | 2 <sup>2</sup> 51'37   | 0 <sup>0</sup> 7     | 19 <sup>19</sup> 42 | 19 <sup>19</sup> 41 | 24 <sup>24</sup> 5   | 2 <sup>2</sup> 45  | 18 <sup>18</sup> 52 | 13 <sup>13</sup> 32  | 17 <sup>17</sup> 4  | 10 <sup>10</sup> 36  | 22 <sup>22</sup> 43  | 23 <sup>23</sup> 47 | 29 <sup>29</sup> 16  | 23 <sup>23</sup> 22 |   |   |
| S 24 | 8 13 46 | 3 <sup>3</sup> 52'42   | 12 <sup>12</sup> 37  | 21 <sup>21</sup> 9  | 20 <sup>20</sup> 45 | 24 <sup>24</sup> 53  | 2 <sup>2</sup> 43  | 18 <sup>18</sup> 56 | 13 <sup>13</sup> 29  | 17 <sup>17</sup> 5  | 10 <sup>10</sup> 35  | 22 <sup>22</sup> 44  | 23 <sup>23</sup> 43 | 29 <sup>29</sup> 23  | 23 <sup>23</sup> 25 |   |   |
| M 25 | 8 17 42 | 4 <sup>4</sup> 53'47   | 24 <sup>24</sup> 50  | 22 <sup>22</sup> 34 | 21 <sup>21</sup> 48 | 25 <sup>25</sup> 40  | 2 <sup>2</sup> 42  | 18 <sup>18</sup> 59 | 13 <sup>13</sup> 27  | 17 <sup>17</sup> 6  | 10 <sup>10</sup> 34  | 22 <sup>22</sup> 46  | 23 <sup>23</sup> 40 | 29 <sup>29</sup> 29  | 23 <sup>23</sup> 28 |   |   |
| T 26 | 8 21 39 | 5 <sup>5</sup> 54'51   | 6 <sup>6</sup> 52    | 23 <sup>23</sup> 56 | 22 <sup>22</sup> 51 | 26 <sup>26</sup> 28  | 2 <sup>2</sup> 40  | 19 <sup>19</sup> 2  | 13 <sup>13</sup> 25  | 17 <sup>17</sup> 6  | 10 <sup>10</sup> 32  | 22 <sup>22</sup> R46 | 23 <sup>23</sup> 37 | 29 <sup>29</sup> 36  | 23 <sup>23</sup> 31 |   |   |
| W 27 | 8 25 36 | 6 <sup>6</sup> 55'55   | 18 <sup>18</sup> 46  | 25 <sup>25</sup> 13 | 23 <sup>23</sup> 54 | 27 <sup>27</sup> 15  | 2 <sup>2</sup> 39  | 19 <sup>19</sup> 5  | 13 <sup>13</sup> 22  | 17 <sup>17</sup> 7  | 10 <sup>10</sup> 31  | 22 <sup>22</sup> 45  | 23 <sup>23</sup> 34 | 29 <sup>29</sup> 43  | 23 <sup>23</sup> 33 |   |   |
| T 28 | 8 29 32 | 7 <sup>7</sup> 56'57   | 0 <sup>0</sup> 11'38 | 26 <sup>26</sup> 26 | 24 <sup>24</sup> 56 | 28 <sup>28</sup> 3   | 2 <sup>2</sup> 37  | 19 <sup>19</sup> 9  | 13 <sup>13</sup> 20  | 17 <sup>17</sup> 8  | 10 <sup>10</sup> 30  | 22 <sup>22</sup> 44  | 23 <sup>23</sup> 31 | 29 <sup>29</sup> 50  | 23 <sup>23</sup> 36 |   |   |
| F 29 | 8 33 29 | 8 <sup>8</sup> 57'59   | 12 <sup>12</sup> 32  | 27 <sup>27</sup> 34 | 25 <sup>25</sup> 58 | 28 <sup>28</sup> 50  | 2 <sup>2</sup> 34  | 19 <sup>19</sup> 12 | 13 <sup>13</sup> 18  | 17 <sup>17</sup> 9  | 10 <sup>10</sup> 29  | 22 <sup>22</sup> 42  | 23 <sup>23</sup> 28 | 29 <sup>29</sup> 56  | 23 <sup>23</sup> 39 |   |   |
| S 30 | 8 37 25 | 9 <sup>9</sup> 59'00   | 24 <sup>24</sup> 32  | 28 <sup>28</sup> 35 | 27 <sup>27</sup> 0  | 29 <sup>29</sup> 37  | 2 <sup>2</sup> 32  | 19 <sup>19</sup> 14 | 13 <sup>13</sup> 15  | 17 <sup>17</sup> 9  | 10 <sup>10</sup> 27  | 22 <sup>22</sup> 40  | 23 <sup>23</sup> 24 | 0 <sup>0</sup> 11'3  | 23 <sup>23</sup> 42 |   |   |
| S 31 | 8 41 22 | 11 <sup>11</sup> 00'00 | 6 <sup>6</sup> 52    | 29 <sup>29</sup> 29 | 28 <sup>28</sup> 51 | 0 <sup>0</sup> 11'25 | 2 <sup>2</sup> 29  | 19 <sup>19</sup> 17 | 13 <sup>13</sup> 13  | 17 <sup>17</sup> 10 | 10 <sup>10</sup> 26  | 22 <sup>22</sup> 39  | 23 <sup>23</sup> 21 | 0 <sup>0</sup> 11'10 | 23 <sup>23</sup> 46 |   |   |

Delta T = 20m29s

FEBRUARY 2455

00:00 UT

| Day  | Sid.t   | ☉                      | ☽                     | ♀                    | ♁                     | ♂                    | ♃                  | ♄                   | ♅                    | ♆                   | ♇                    | ♈                    | ♉                   | ♊                    | ♋                   | ♌ | ♍ |
|------|---------|------------------------|-----------------------|----------------------|-----------------------|----------------------|--------------------|---------------------|----------------------|---------------------|----------------------|----------------------|---------------------|----------------------|---------------------|---|---|
| M 1  | 8 45 18 | 12 <sup>22</sup> 05'59 | 19 <sup>19</sup> 26 3 | 0 <sup>0</sup> 11'15 | 29 <sup>29</sup> 51 2 | 1 <sup>1</sup> 11'12 | 2 <sup>2</sup> R27 | 19 <sup>19</sup> 20 | 13 <sup>13</sup> R11 | 17 <sup>17</sup> 10 | 10 <sup>10</sup> R25 | 22 <sup>22</sup> R37 | 23 <sup>23</sup> 18 | 0 <sup>0</sup> 11'16 | 23 <sup>23</sup> 49 |   |   |
| T 2  | 8 49 15 | 13 <sup>23</sup> 1'57  | 1 <sup>1</sup> 38     | 0 <sup>0</sup> 53    | 0 <sup>0</sup> 7 2    | 2 <sup>2</sup> 0     | 2 <sup>2</sup> 24  | 19 <sup>19</sup> 23 | 13 <sup>13</sup> 9   | 17 <sup>17</sup> 11 | 10 <sup>10</sup> 24  | 22 <sup>22</sup> 36  | 23 <sup>23</sup> 15 | 0 <sup>0</sup> 23    | 23 <sup>23</sup> 52 |   |   |
| W 3  | 8 53 12 | 14 <sup>24</sup> 2'55  | 14 <sup>14</sup> 28   | 1 <sup>1</sup> 21    | 1 <sup>1</sup> 2      | 2 <sup>2</sup> 47    | 2 <sup>2</sup> 21  | 19 <sup>19</sup> 25 | 13 <sup>13</sup> 7   | 17 <sup>17</sup> 11 | 10 <sup>10</sup> 22  | 22 <sup>22</sup> 35  | 23 <sup>23</sup> 12 | 0 <sup>0</sup> 30    | 23 <sup>23</sup> 55 |   |   |
| T 4  | 8 57 8  | 15 <sup>25</sup> 3'51  | 27 <sup>27</sup> 32   | 1 <sup>1</sup> 39    | 2 <sup>2</sup> 1      | 3 <sup>3</sup> 35    | 2 <sup>2</sup> 17  | 19 <sup>19</sup> 28 | 13 <sup>13</sup> 5   | 17 <sup>17</sup> 12 | 10 <sup>10</sup> 21  | 22 <sup>22</sup> D35 | 23 <sup>23</sup> 8  | 0 <sup>0</sup> 37    | 23 <sup>23</sup> 58 |   |   |
| F 5  | 9 1 5   | 16 <sup>26</sup> 4'47  | 10 <sup>10</sup> 50   | 1 <sup>1</sup> R46   | 3 <sup>3</sup> 0      | 4 <sup>4</sup> 22    | 2 <sup>2</sup> 14  | 19 <sup>19</sup> 30 | 13 <sup>13</sup> 3   | 17 <sup>17</sup> 12 | 10 <sup>10</sup> 20  | 22 <sup>22</sup> 36  | 23 <sup>23</sup> 5  | 0 <sup>0</sup> 43    | 24 <sup>24</sup> 1  |   |   |
| S 6  | 9 5 1   | 17 <sup>27</sup> 5'41  | 24 <sup>24</sup> 20   | 1 <sup>1</sup> 41    | 3 <sup>3</sup> 59     | 5 <sup>5</sup> 10    | 2 <sup>2</sup> 10  | 19 <sup>19</sup> 32 | 13 <sup>13</sup> 1   | 17 <sup>17</sup> 13 | 10 <sup>10</sup> 18  | 22 <sup>22</sup> 36  | 23 <sup>23</sup> 2  | 0 <sup>0</sup> 50    | 24 <sup>24</sup> 5  |   |   |
| S 7  | 9 8 58  | 18 <sup>28</sup> 6'35  | 8 <sup>8</sup> 3      | 1 <sup>1</sup> 26    | 4 <sup>4</sup> 56     | 5 <sup>5</sup> 57    | 2 <sup>2</sup> 6   | 19 <sup>19</sup> 34 | 12 <sup>12</sup> 59  | 17 <sup>17</sup> 13 | 10 <sup>10</sup> 17  | 22 <sup>22</sup> 37  | 22 <sup>22</sup> 59 | 0 <sup>0</sup> 57    | 24 <sup>24</sup> 8  |   |   |
| M 8  | 9 12 54 | 19 <sup>29</sup> 7'29  | 21 <sup>21</sup> 55   | 0 <sup>0</sup> 59    | 5 <sup>5</sup> 54     | 6 <sup>6</sup> 44    | 2 <sup>2</sup> 2   | 19 <sup>19</sup> 36 | 12 <sup>12</sup> 57  | 17 <sup>17</sup> 13 | 10 <sup>10</sup> 15  | 22 <sup>22</sup> 37  | 22 <sup>22</sup> 56 | 1 <sup>1</sup> 4     | 24 <sup>24</sup> 11 |   |   |
| T 9  | 9 16 51 | 20 <sup>30</sup> 8'21  | 5 <sup>5</sup> 35     | 0 <sup>0</sup> 22    | 6 <sup>6</sup> 51     | 7 <sup>7</sup> 32    | 1 <sup>1</sup> 58  | 19 <sup>19</sup> 38 | 12 <sup>12</sup> 55  | 17 <sup>17</sup> 14 | 10 <sup>10</sup> 14  | 22 <sup>22</sup> 37  | 22 <sup>22</sup> 53 | 1 <sup>1</sup> 10    | 24 <sup>24</sup> 15 |   |   |
| W 10 | 9 20 47 | 21 <sup>31</sup> 9'13  | 20 <sup>20</sup> 4    | 29 <sup>29</sup> 35  | 7 <sup>7</sup> 47     | 8 <sup>8</sup> 19    | 1 <sup>1</sup> 54  | 19 <sup>19</sup> 40 | 12 <sup>12</sup> 53  | 17 <sup>17</sup> 14 | 10 <sup>10</sup> 13  | 22 <sup>22</sup> R37 | 22 <sup>22</sup> 49 | 1 <sup>1</sup> 17    | 24 <sup>24</sup> 18 |   |   |
| T 11 | 9 24 44 | 22 <sup>32</sup> 10'05 | 4 <sup>4</sup> 17     | 28 <sup>28</sup> 39  | 8 <sup>8</sup> 42     | 9 <sup>9</sup> 7     | 1 <sup>1</sup> 50  | 19 <sup>19</sup> 42 | 12 <sup>12</sup> 51  | 17 <sup>17</sup> 14 | 10 <sup>10</sup> 11  | 22 <sup>22</sup> D37 | 22 <sup>22</sup> 46 | 1 <sup>1</sup> 24    | 24 <sup>24</sup> 21 |   |   |
| F 12 | 9 28 41 | 23 <sup>33</sup> 10'55 | 18 <sup>18</sup> 32   | 27 <sup>27</sup> 36  | 9 <sup>9</sup> 37     | 9 <sup>9</sup> 54    | 1 <sup>1</sup> 45  | 19 <sup>19</sup> 44 | 12 <sup>12</sup> 49  | 17 <sup>17</sup> 14 | 10 <sup>10</sup> 10  | 22 <sup>22</sup> 37  | 22 <sup>22</sup> 43 | 1 <sup>1</sup> 30    | 24 <sup>24</sup> 25 |   |   |
| S 13 | 9 32 37 | 24 <sup>34</sup> 11'45 | 2 <sup>2</sup> 36     | 26 <sup>26</sup> 28  | 10 <sup>10</sup> 32   | 10 <sup>10</sup> 42  | 1 <sup>1</sup> 40  | 19 <sup>19</sup> 45 | 12 <sup>12</sup> 47  | 17 <sup>17</sup> 15 | 10 <sup>10</sup> 8   | 22 <sup>22</sup> 37  | 22 <sup>22</sup> 40 | 1 <sup>1</sup> 37    | 24 <sup>24</sup> 28 |   |   |
| S 14 | 9 36 34 | 25 <sup>35</sup> 12'34 | 16 <sup>16</sup> 58   | 25 <sup>25</sup> 17  | 11 <sup>11</sup> 26   | 11 <sup>11</sup> 29  | 1 <sup>1</sup> 35  | 19 <sup>19</sup> 47 | 12 <sup>12</sup> 46  | 17 <sup>17</sup> 15 | 10 <sup>10</sup> 7   | 22 <sup>22</sup> 38  | 22 <sup>22</sup> 37 | 1 <sup>1</sup> 44    | 24 <sup>24</sup> 32 |   |   |
| M 15 | 9 40 30 | 26 <sup>36</sup> 13'21 | 1 <sup>1</sup> 2      | 24 <sup>24</sup> 5   | 12 <sup>12</sup> 19   | 12 <sup>12</sup> 16  | 1 <sup>1</sup> 30  | 19 <sup>19</sup> 48 | 12 <sup>12</sup> 44  | 17 <sup>17</sup> 15 | 10 <sup>10</sup>     |                      |                     |                      |                     |   |   |

SWISS EPHEMERIS for the year 2455

MARCH 2455

00:00 UT

| Day  | Sid.t    | ☉        | ☽     | ♀     | ♂     | ♂     | ♂     | ♂      | ♂      | ♂      | ♂     | ♂      | ♂     | ♂    | ♂     |
|------|----------|----------|-------|-------|-------|-------|-------|--------|--------|--------|-------|--------|-------|------|-------|
| M 1  | 10 35 42 | 10♋21'58 | 26♄57 | 16♃36 | 23♄13 | 23♋19 | 0°R 4 | 19°R56 | 12°R25 | 17°R12 | 9°R44 | 22♃36  | 21♃49 | 3♄25 | 25♋27 |
| T 2  | 10 39 39 | 11°22'22 | 9♌41  | 16°55 | 23°52 | 24° 6 | 29♎57 | 19♍56  | 12♄24  | 17♍12  | 9♎43  | 22°37  | 21°46 | 3°31 | 25°31 |
| W 3  | 10 43 35 | 12°22'44 | 22°44 | 17°20 | 24°30 | 24°53 | 29°50 | 19°55  | 12°23  | 17°12  | 9°41  | 22°R37 | 21°43 | 3°38 | 25°34 |
| T 4  | 10 47 32 | 13°23'05 | 6♎8   | 17°50 | 25° 6 | 25°40 | 29°42 | 19°55  | 12°22  | 17°11  | 9°40  | 22°37  | 21°40 | 3°45 | 25°38 |
| F 5  | 10 51 28 | 14°23'24 | 19°50 | 18°24 | 25°41 | 26°27 | 29°35 | 19°54  | 12°21  | 17°11  | 9°38  | 22°35  | 21°36 | 3°52 | 25°42 |
| S 6  | 10 55 25 | 15°23'41 | 3♏50  | 19° 3 | 26°14 | 27°14 | 29°28 | 19°54  | 12°21  | 17°10  | 9°37  | 22°32  | 21°33 | 3°58 | 25°46 |
| S 7  | 10 59 21 | 16°23'57 | 18° 2 | 19°47 | 26°46 | 28° 1 | 29°20 | 19°53  | 12°20  | 17° 9  | 9°35  | 22°29  | 21°30 | 4° 5 | 25°50 |
| M 8  | 11 3 18  | 17°24'11 | 2♎22  | 20°33 | 27°17 | 28°49 | 29°13 | 19°52  | 12°19  | 17° 9  | 9°34  | 22°25  | 21°27 | 4°12 | 25°54 |
| T 9  | 11 7 14  | 18°24'23 | 16°44 | 21°24 | 27°46 | 29°36 | 29° 5 | 19°51  | 12°19  | 17° 8  | 9°32  | 22°22  | 21°24 | 4°18 | 25°57 |
| W10  | 11 11 11 | 19°24'35 | 1♏5   | 22°17 | 28°13 | 0♄23  | 28°58 | 19°50  | 12°18  | 17° 8  | 9°31  | 22°20  | 21°20 | 4°25 | 26° 1 |
| T 11 | 11 15 7  | 20°24'45 | 15°20 | 23°14 | 28°38 | 1° 9  | 28°50 | 19°49  | 12°17  | 17° 7  | 9°29  | 22°D19 | 21°17 | 4°32 | 26° 5 |
| F 12 | 11 19 4  | 21°24'53 | 29°27 | 24°13 | 29° 2 | 1°56  | 28°42 | 19°48  | 12°17  | 17° 6  | 9°28  | 22°19  | 21°14 | 4°39 | 26° 9 |
| S 13 | 11 23 1  | 22°25'00 | 13♄25 | 25°15 | 29°24 | 2°43  | 28°35 | 19°46  | 12°16  | 17° 5  | 9°26  | 22°20  | 21°11 | 4°45 | 26°13 |
| S 14 | 11 26 57 | 23°25'05 | 27°13 | 26°20 | 29°44 | 3°30  | 28°27 | 19°45  | 12°16  | 17° 5  | 9°25  | 22°21  | 21° 8 | 4°52 | 26°17 |
| M15  | 11 30 54 | 24°25'09 | 10♃49 | 27°27 | 0♄2   | 4°17  | 28°19 | 19°43  | 12°16  | 17° 4  | 9°23  | 22°23  | 21° 5 | 4°59 | 26°21 |
| T 16 | 11 34 50 | 25°25'11 | 24°15 | 28°36 | 0°18  | 5° 4  | 28°11 | 19°42  | 12°16  | 17° 3  | 9°22  | 22°R23 | 21° 1 | 5° 5 | 26°25 |
| W17  | 11 38 47 | 26°25'11 | 7♋29  | 29°47 | 0°32  | 5°51  | 28° 4 | 19°40  | 12°15  | 17° 2  | 9°20  | 22°22  | 20°58 | 5°12 | 26°28 |
| T 18 | 11 42 43 | 27°25'09 | 20°31 | 1♋0   | 0°44  | 6°37  | 27°56 | 19°38  | 12°15  | 17° 1  | 9°19  | 22°19  | 20°55 | 5°19 | 26°32 |
| F 19 | 11 46 40 | 28°25'06 | 3♄20  | 2°15  | 0°54  | 7°24  | 27°48 | 19°36  | 12°15  | 17° 0  | 9°17  | 22°15  | 20°52 | 5°26 | 26°36 |
| S 20 | 11 50 36 | 29°25'01 | 15°56 | 3°31  | 1° 1  | 8°11  | 27°40 | 19°34  | 12°15  | 16°59  | 9°16  | 22° 9  | 20°49 | 5°32 | 26°40 |
| S 21 | 11 54 33 | 0♄24'53  | 28°20 | 4°50  | 1° 7  | 8°58  | 27°32 | 19°32  | 12°D15 | 16°58  | 9°15  | 22° 2  | 20°46 | 5°39 | 26°44 |
| M22  | 11 58 30 | 1°24'44  | 10♄31 | 6°10  | 1° 9  | 9°44  | 27°25 | 19°30  | 12°15  | 16°57  | 9°13  | 21°54  | 20°42 | 5°46 | 26°48 |
| T 23 | 12 2 26  | 2°24'32  | 22°34 | 7°31  | 1°R10 | 10°31 | 27°17 | 19°28  | 12°15  | 16°56  | 9°12  | 21°48  | 20°39 | 5°52 | 26°52 |
| W24  | 12 6 23  | 3°24'19  | 4♄29  | 8°54  | 1° 8  | 11°17 | 27° 9 | 19°25  | 12°15  | 16°55  | 9°10  | 21°42  | 20°36 | 5°59 | 26°56 |
| T 25 | 12 10 19 | 4°24'03  | 16°20 | 10°19 | 1° 3  | 12° 4 | 27° 1 | 19°23  | 12°16  | 16°54  | 9° 9  | 21°38  | 20°33 | 6° 6 | 27° 0 |
| F 26 | 12 14 16 | 5°23'45  | 28°12 | 11°45 | 0°56  | 12°50 | 26°54 | 19°20  | 12°16  | 16°53  | 9° 8  | 21°36  | 20°30 | 6°13 | 27° 3 |
| S 27 | 12 18 12 | 6°23'25  | 10♄10 | 13°13 | 0°46  | 13°37 | 26°46 | 19°18  | 12°16  | 16°52  | 9° 6  | 21°D36 | 20°26 | 6°19 | 27° 7 |
| S 28 | 12 22 9  | 7°23'03  | 22°19 | 14°42 | 0°34  | 14°23 | 26°38 | 19°15  | 12°16  | 16°51  | 9° 5  | 21°37  | 20°23 | 6°26 | 27°11 |
| M29  | 12 26 5  | 8°22'38  | 4♌43  | 16°12 | 0°20  | 15°10 | 26°31 | 19°12  | 12°17  | 16°50  | 9° 4  | 21°38  | 20°20 | 6°33 | 27°15 |
| T 30 | 12 30 2  | 9°22'11  | 17°27 | 17°43 | 0° 3  | 15°56 | 26°23 | 19° 9  | 12°17  | 16°48  | 9° 3  | 21°R39 | 20°17 | 6°40 | 27°19 |
| W31  | 12 33 59 | 10♄21'42 | 0♎36  | 19♋17 | 29♄43 | 16♄42 | 26♎16 | 19♍6   | 12♄18  | 16♍47  | 9♎1   | 21♃39  | 20♃14 | 6♄46 | 27♋23 |

Delta T = 20m30s

APRIL 2455

00:00 UT

| Day  | Sid.t    | ☉        | ☽     | ♀     | ♂      | ♂     | ♂      | ♂      | ♂     | ♂      | ♂     | ♂      | ♂     | ♂     | ♂     |
|------|----------|----------|-------|-------|--------|-------|--------|--------|-------|--------|-------|--------|-------|-------|-------|
| T 1  | 12 37 55 | 11♄21'10 | 14♎9  | 20♋51 | 29°R21 | 17♄28 | 26°R 9 | 19°R 3 | 12♄19 | 16°R46 | 9°R 0 | 21°R37 | 20♃11 | 6♄53  | 27♋26 |
| F 2  | 12 41 52 | 12°20'37 | 28° 9 | 22°27 | 28♄57  | 18°15 | 26♎1   | 19♍0   | 12°19 | 16♍45  | 8♎59  | 21♃32  | 20° 7 | 7° 0  | 27°30 |
| S 3  | 12 45 48 | 13°20'01 | 12♏31 | 24° 4 | 28°31  | 19° 1 | 25°54  | 18°57  | 12°20 | 16°43  | 8°58  | 21°26  | 20° 4 | 7° 6  | 27°34 |
| S 4  | 12 49 45 | 14°19'23 | 27°10 | 25°42 | 28° 3  | 19°47 | 25°47  | 18°53  | 12°21 | 16°42  | 8°56  | 21°18  | 20° 1 | 7°13  | 27°38 |
| M 5  | 12 53 41 | 15°18'44 | 11♍59 | 27°22 | 27°33  | 20°33 | 25°40  | 18°50  | 12°21 | 16°41  | 8°55  | 21° 9  | 19°58 | 7°20  | 27°41 |
| T 6  | 12 57 38 | 16°18'02 | 26°48 | 29° 3 | 27° 1  | 21°19 | 25°33  | 18°47  | 12°22 | 16°39  | 8°54  | 21° 1  | 19°55 | 7°27  | 27°45 |
| W 7  | 13 1 34  | 17°17'19 | 11♏31 | 0♄45  | 26°28  | 22° 5 | 25°26  | 18°43  | 12°23 | 16°38  | 8°53  | 20°55  | 19°51 | 7°33  | 27°49 |
| T 8  | 13 5 31  | 18°16'34 | 26° 1 | 2°29  | 25°53  | 22°51 | 25°19  | 18°40  | 12°24 | 16°37  | 8°52  | 20°51  | 19°48 | 7°40  | 27°53 |
| F 9  | 13 9 28  | 19°15'48 | 10♄14 | 4°15  | 25°17  | 23°37 | 25°13  | 18°36  | 12°25 | 16°35  | 8°51  | 20°49  | 19°45 | 7°47  | 27°56 |
| S 10 | 13 13 24 | 20°14'59 | 24° 9 | 6° 1  | 24°41  | 24°23 | 25° 6  | 18°32  | 12°26 | 16°34  | 8°50  | 20°D48 | 19°42 | 7°53  | 28° 0 |
| S 11 | 13 17 21 | 21°14'09 | 7♃46  | 7°49  | 24° 3  | 25° 9 | 25° 0  | 18°29  | 12°27 | 16°33  | 8°49  | 20°49  | 19°39 | 8° 0  | 28° 4 |
| M12  | 13 21 17 | 22°13'17 | 21° 6 | 9°39  | 23°26  | 25°55 | 24°54  | 18°25  | 12°29 | 16°31  | 8°47  | 20°R49 | 19°36 | 8° 7  | 28° 7 |
| T 13 | 13 25 14 | 23°12'24 | 4♋11  | 11°30 | 22°48  | 26°40 | 24°47  | 18°21  | 12°30 | 16°30  | 8°46  | 20°48  | 19°32 | 8°14  | 28°11 |
| W14  | 13 29 10 | 24°11'28 | 17° 3 | 13°22 | 22°10  | 27°26 | 24°41  | 18°17  | 12°31 | 16°28  | 8°45  | 20°45  | 19°29 | 8°20  | 28°14 |
| T 15 | 13 33 7  | 25°10'31 | 29°44 | 15°16 | 21°33  | 28°12 | 24°35  | 18°13  | 12°32 | 16°27  | 8°45  | 20°40  | 19°26 | 8°27  | 28°18 |
| F 16 | 13 37 3  | 26° 9'31 | 12♄15 | 17°11 | 20°56  | 28°57 | 24°30  | 18° 9  | 12°34 | 16°25  | 8°44  | 20°31  | 19°23 | 8°34  | 28°21 |
| S 17 | 13 41 0  | 27° 8'30 | 24°37 | 19° 8 | 20°21  | 29°43 | 24°24  | 18° 5  | 12°35 | 16°24  | 8°43  | 20°20  | 19°20 | 8°40  | 28°25 |
| S 18 | 13 44 57 | 28° 7'27 | 6♄50  | 21° 6 | 19°46  | 0♄28  | 24°18  | 18° 1  | 12°37 | 16°22  | 8°42  | 20° 8  | 19°17 | 8°47  | 28°28 |
| M19  | 13 48 53 | 29° 6'22 | 18°54 | 23° 6 | 19°12  | 1°14  | 24°13  | 17°57  | 12°38 | 16°21  | 8°41  | 19°55  | 19°13 | 8°54  | 28°32 |
| T 20 | 13 52 50 | 0♄5'15   | 0♄52  | 25° 6 | 18°40  | 1°59  | 24° 8  | 17°53  | 12°40 | 16°19  | 8°40  | 19°43  | 19°10 | 9° 1  | 28°35 |
| W21  | 13 56 46 | 1° 4'05  | 12°45 | 27° 8 | 18°10  | 2°45  | 24° 3  | 17°48  | 12°41 | 16°17  | 8°39  | 19°32  | 19° 7 | 9° 7  | 28°39 |
| T 22 | 14 0 43  | 2° 2'54  | 24°35 | 29°12 | 17°41  | 3°30  | 23°58  | 17°44  | 12°43 | 16°16  | 8°38  | 19°24  | 19° 4 | 9°14  | 28°42 |
| F 23 | 14 4 39  | 3° 1'41  | 6♄26  | 1♄16  | 17°15  | 4°15  | 23°53  | 17°40  | 12°45 | 16°14  | 8°38  | 19°18  | 19° 1 | 9°21  | 28°46 |
| S 24 | 14 8 36  | 4° 0'25  | 18°21 | 3°22  | 16°50  | 5° 1  | 23°49  | 17°36  | 12°46 | 16°13  | 8°37  | 19°15  | 18°57 | 9°27  | 28°49 |
| S 25 | 14 12 32 | 4°59'07  | 0♄27  | 5°28  | 16°28  | 5°46  | 23°44  | 17°31  | 12°48 | 16°11  | 8°36  | 19°D14 | 18°54 | 9°34  | 28°52 |
| M26  | 14 16 29 | 5°57'47  | 12°48 | 7°35  | 16° 8  | 6°31  | 23°40  | 17°27  | 12°50 | 16°10  | 8°35  | 19°R14 | 18°51 | 9°41  | 28°55 |
| T 27 | 14 20 26 | 6°56'24  | 25°29 | 9°42  | 15°50  | 7°16  | 23°36  | 17°22  | 12°52 | 16° 8  | 8°35  | 19°14  | 18°48 | 9°48  | 28°59 |
| W28  | 14 24 22 | 7°55'00  | 8♎34  | 11°50 | 15°34  | 8° 1  | 23°32  | 17°18  | 12°54 | 16° 6  | 8°34  | 19°13  | 18°45 | 9°54  | 29° 2 |
| T 29 | 14 28 19 | 8°53'33  | 22° 8 | 13°58 | 15°21  | 8°46  | 23°28  | 17°13  | 12°56 | 16° 5  | 8°34  | 19°10  | 18°42 | 10° 1 | 29° 5 |
| F 30 | 14 32 15 | 9♄52'04  | 6♏11  | 16♄5  | 15♄11  | 9♄31  | 23♎24  | 17♍9   | 12♄58 | 16♍3   | 8♎33  | 19♃4   | 18♃38 | 10♄8  | 29♋8  |

Delta T = 20m30s

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SWISS EPHEMERIS for the year 2455

MAY 2455

00:00 UT

| Day  | Sid.t    | ☉        | ☽      | ♀     | ♁      | ♂     | ♃      | ♄      | ♅     | ♆      | ♇     | ♈      | ♉     | ♊     | ♋     | ♌ | ♍ | ♎ | ♏ | ♐ | ♑ | ♒ | ♓ |
|------|----------|----------|--------|-------|--------|-------|--------|--------|-------|--------|-------|--------|-------|-------|-------|---|---|---|---|---|---|---|---|
| S 1  | 14 36 12 | 10♂50'33 | 20♎42  | 18♂12 | 15°R 3 | 10♂16 | 23°R21 | 17°R 4 | 13♁ 0 | 16°R 1 | 8°R32 | 18°R55 | 18♎35 | 10♐14 | 29♋11 |   |   |   |   |   |   |   |   |
| S 2  | 14 40 8  | 11°49'00 | 5♐.36  | 20°18 | 14°Y57 | 11° 1 | 23♐18  | 17♐. 0 | 13° 2 | 16♐. 0 | 8♐32  | 18♎45  | 18°32 | 10°21 | 29°14 |   |   |   |   |   |   |   |   |
| M 3  | 14 44 5  | 12°47'25 | 20°44  | 22°23 | 14°54  | 11°46 | 23°15  | 16°55  | 13° 4 | 15°58  | 8°31  | 18°34  | 18°29 | 10°28 | 29°18 |   |   |   |   |   |   |   |   |
| T 4  | 14 48 1  | 13°45'49 | 5♁756  | 24°26 | 14°D53 | 12°30 | 23°12  | 16°51  | 13° 6 | 15°57  | 8°31  | 18°23  | 18°26 | 10°35 | 29°21 |   |   |   |   |   |   |   |   |
| W 5  | 14 51 58 | 14°44'11 | 21° 0  | 26°28 | 14°54  | 13°15 | 23° 9  | 16°46  | 13° 9 | 15°55  | 8°30  | 18°14  | 18°23 | 10°41 | 29°24 |   |   |   |   |   |   |   |   |
| T 6  | 14 55 55 | 15°42'31 | 5♁49   | 28°28 | 14°58  | 14° 0 | 23° 6  | 16°42  | 13°11 | 15°53  | 8°30  | 18° 8  | 18°19 | 10°48 | 29°26 |   |   |   |   |   |   |   |   |
| F 7  | 14 59 51 | 16°40'50 | 20°17  | 0♐25  | 15° 4  | 14°44 | 23° 4  | 16°37  | 13°13 | 15°52  | 8°30  | 18° 4  | 18°16 | 10°55 | 29°29 |   |   |   |   |   |   |   |   |
| S 8  | 15 3 48  | 17°39'07 | 4♎19   | 2°19  | 15°13  | 15°29 | 23° 2  | 16°33  | 13°15 | 15°50  | 8°29  | 18° 3  | 18°13 | 11° 1 | 29°32 |   |   |   |   |   |   |   |   |
| S 9  | 15 7 44  | 18°37'23 | 17°57  | 4°11  | 15°23  | 16°13 | 23° 0  | 16°28  | 13°18 | 15°48  | 8°29  | 18° 2  | 18°10 | 11° 8 | 29°35 |   |   |   |   |   |   |   |   |
| M10  | 15 11 41 | 19°35'37 | 1♋13   | 6° 0  | 15°36  | 16°58 | 22°58  | 16°24  | 13°20 | 15°47  | 8°29  | 18° 2  | 18° 7 | 11°15 | 29°38 |   |   |   |   |   |   |   |   |
| T 11 | 15 15 37 | 20°33'50 | 14° 9  | 7°45  | 15°50  | 17°42 | 22°56  | 16°19  | 13°23 | 15°45  | 8°28  | 18° 1  | 18° 3 | 11°22 | 29°41 |   |   |   |   |   |   |   |   |
| W12  | 15 19 34 | 21°32'01 | 26°49  | 9°27  | 16° 7  | 18°26 | 22°55  | 16°15  | 13°25 | 15°44  | 8°28  | 17°57  | 18° 0 | 11°28 | 29°43 |   |   |   |   |   |   |   |   |
| T 13 | 15 23 30 | 22°30'11 | 9♐16   | 11° 6 | 16°26  | 19°11 | 22°53  | 16°10  | 13°28 | 15°42  | 8°28  | 17°51  | 17°57 | 11°35 | 29°46 |   |   |   |   |   |   |   |   |
| F 14 | 15 27 27 | 23°28'20 | 21°33  | 12°40 | 16°46  | 19°55 | 22°52  | 16° 6  | 13°30 | 15°40  | 8°28  | 17°42  | 17°54 | 11°42 | 29°49 |   |   |   |   |   |   |   |   |
| S 15 | 15 31 24 | 24°26'26 | 3♁42   | 14°11 | 17° 8  | 20°39 | 22°51  | 16° 1  | 13°33 | 15°39  | 8°28  | 17°30  | 17°51 | 11°48 | 29°51 |   |   |   |   |   |   |   |   |
| S 16 | 15 35 20 | 25°24'32 | 15°45  | 15°39 | 17°32  | 21°23 | 22°51  | 15°57  | 13°36 | 15°37  | 8°27  | 17°16  | 17°48 | 11°55 | 29°54 |   |   |   |   |   |   |   |   |
| M17  | 15 39 17 | 26°22'36 | 27°42  | 17° 2 | 17°58  | 22° 7 | 22°50  | 15°52  | 13°38 | 15°35  | 8°27  | 17° 2  | 17°44 | 12° 2 | 29°56 |   |   |   |   |   |   |   |   |
| T 18 | 15 43 13 | 27°20'38 | 9♐35   | 18°21 | 18°25  | 22°51 | 22°50  | 15°48  | 13°41 | 15°34  | 8°27  | 16°49  | 17°41 | 12° 9 | 29°59 |   |   |   |   |   |   |   |   |
| W19  | 15 47 10 | 28°18'39 | 21°25  | 19°37 | 18°54  | 23°35 | 22°49  | 15°43  | 13°44 | 15°32  | 8°27  | 16°37  | 17°38 | 12°15 | 0♐ 1  |   |   |   |   |   |   |   |   |
| T 20 | 15 51 6  | 29°16'38 | 3♁15   | 20°48 | 19°24  | 24°19 | 22°D49 | 15°39  | 13°47 | 15°31  | 8°D27 | 16°28  | 17°35 | 12°22 | 0° 4  |   |   |   |   |   |   |   |   |
| F 21 | 15 55 3  | 0♐14'35  | 15° 7  | 21°55 | 19°56  | 25° 3 | 22°50  | 15°35  | 13°49 | 15°29  | 8°27  | 16°21  | 17°32 | 12°29 | 0° 6  |   |   |   |   |   |   |   |   |
| S 22 | 15 58 59 | 1°12'31  | 27° 4  | 22°58 | 20°29  | 25°47 | 22°50  | 15°30  | 13°52 | 15°28  | 8°27  | 16°18  | 17°29 | 12°35 | 0° 8  |   |   |   |   |   |   |   |   |
| S 23 | 16 2 56  | 2°10'25  | 9♐10   | 23°56 | 21° 3  | 26°31 | 22°50  | 15°26  | 13°55 | 15°26  | 8°27  | 16°16  | 17°25 | 12°42 | 0°11  |   |   |   |   |   |   |   |   |
| M24  | 16 6 53  | 3° 8'17  | 21°30  | 24°51 | 21°39  | 27°15 | 22°51  | 15°22  | 13°58 | 15°24  | 8°27  | 16°D16 | 17°22 | 12°49 | 0°13  |   |   |   |   |   |   |   |   |
| T 25 | 16 10 49 | 4° 6'07  | 4♐ 8   | 25°40 | 22°16  | 27°58 | 22°52  | 15°18  | 14° 1 | 15°23  | 8°28  | 16°R16 | 17°19 | 12°55 | 0°15  |   |   |   |   |   |   |   |   |
| W26  | 16 14 46 | 5° 3'56  | 17° 9  | 26°26 | 22°54  | 28°42 | 22°53  | 15°14  | 14° 4 | 15°21  | 8°28  | 16°16  | 17°16 | 13° 2 | 0°17  |   |   |   |   |   |   |   |   |
| T 27 | 16 18 42 | 6° 1'43  | 0♎37   | 27° 6 | 23°33  | 29°25 | 22°54  | 15° 9  | 14° 7 | 15°20  | 8°28  | 16°13  | 17°13 | 13° 9 | 0°19  |   |   |   |   |   |   |   |   |
| F 28 | 16 22 39 | 6°59'28  | 14°35  | 27°42 | 24°13  | 0♐ 9  | 22°56  | 15° 5  | 14°10 | 15°18  | 8°28  | 16° 9  | 17° 9 | 13°16 | 0°21  |   |   |   |   |   |   |   |   |
| S 29 | 16 26 35 | 7°57'12  | 29° 1  | 28°14 | 24°54  | 0°52  | 22°57  | 15° 1  | 14°13 | 15°17  | 8°28  | 16° 2  | 17° 6 | 13°22 | 0°23  |   |   |   |   |   |   |   |   |
| S 30 | 16 30 32 | 8°54'54  | 13♐.54 | 28°41 | 25°36  | 1°36  | 22°59  | 14°57  | 14°16 | 15°15  | 8°29  | 15°53  | 17° 3 | 13°29 | 0°25  |   |   |   |   |   |   |   |   |
| M31  | 16 34 28 | 9♐52'35  | 29♐. 5 | 29♐ 3 | 26°Y20 | 2♐19  | 23♐ 1  | 14♐.53 | 14♁19 | 15♐.14 | 8♐29  | 15♎44  | 17♎ 0 | 13♐36 | 0°Y27 |   |   |   |   |   |   |   |   |

Delta T = 20m31s

JUNE 2455

00:00 UT

| Day  | Sid.t    | ☉        | ☽     | ♀      | ♁      | ♂     | ♃     | ♄      | ♅     | ♆      | ♇    | ♈      | ♉     | ♊     | ♋    | ♌ | ♍ | ♎ | ♏ | ♐ | ♑ | ♒ | ♓ |
|------|----------|----------|-------|--------|--------|-------|-------|--------|-------|--------|------|--------|-------|-------|------|---|---|---|---|---|---|---|---|
| T 1  | 16 38 25 | 10♐50'15 | 14♁24 | 29♐20  | 27°Y 4 | 3♐ 2  | 23♐ 3 | 14°R50 | 14♁22 | 15°R13 | 8♐29 | 15°R34 | 16♎57 | 13♐42 | 0♐29 |   |   |   |   |   |   |   |   |
| W 2  | 16 42 22 | 11°47'54 | 29°40 | 29°32  | 27°49  | 3°45  | 23° 6 | 14♐.46 | 14°26 | 15♐.11 | 8°30 | 15♎27  | 16°54 | 13°49 | 0°30 |   |   |   |   |   |   |   |   |
| T 3  | 16 46 18 | 12°45'31 | 14♁42 | 29°40  | 28°35  | 4°29  | 23° 8 | 14°42  | 14°29 | 15°10  | 8°30 | 15°21  | 16°50 | 13°56 | 0°32 |   |   |   |   |   |   |   |   |
| F 4  | 16 50 15 | 13°43'07 | 29°23 | 29°R43 | 29°21  | 5°12  | 23°11 | 14°38  | 14°32 | 15° 8  | 8°31 | 15°18  | 16°47 | 14° 3 | 0°34 |   |   |   |   |   |   |   |   |
| S 5  | 16 54 11 | 14°40'43 | 13♎37 | 29°41  | 0♁ 9   | 5°55  | 23°14 | 14°35  | 14°35 | 15° 7  | 8°31 | 15°D17 | 16°44 | 14° 9 | 0°35 |   |   |   |   |   |   |   |   |
| S 6  | 16 58 8  | 15°38'17 | 27°24 | 29°35  | 0°57   | 6°38  | 23°17 | 14°31  | 14°38 | 15° 6  | 8°32 | 15°17  | 16°41 | 14°16 | 0°37 |   |   |   |   |   |   |   |   |
| M 7  | 17 2 4   | 16°35'51 | 10♁44 | 29°25  | 1°46   | 7°21  | 23°20 | 14°28  | 14°42 | 15° 4  | 8°32 | 15°R18 | 16°38 | 14°23 | 0°39 |   |   |   |   |   |   |   |   |
| T 8  | 17 6 1   | 17°33'23 | 23°41 | 29°10  | 2°36   | 8° 4  | 23°23 | 14°24  | 14°45 | 15° 3  | 8°33 | 15°18  | 16°35 | 14°29 | 0°40 |   |   |   |   |   |   |   |   |
| W 9  | 17 9 57  | 18°30'55 | 6♐18  | 28°52  | 3°26   | 8°47  | 23°27 | 14°21  | 14°48 | 15° 2  | 8°33 | 15°16  | 16°31 | 14°36 | 0°41 |   |   |   |   |   |   |   |   |
| T 10 | 17 13 54 | 19°28'26 | 18°40 | 28°30  | 4°18   | 9°29  | 23°30 | 14°18  | 14°52 | 15° 0  | 8°34 | 15°13  | 16°28 | 14°43 | 0°43 |   |   |   |   |   |   |   |   |
| F 11 | 17 17 51 | 20°25'57 | 0♁49  | 28° 5  | 5° 9   | 10°12 | 23°34 | 14°14  | 14°55 | 14°59  | 8°34 | 15° 7  | 16°25 | 14°50 | 0°44 |   |   |   |   |   |   |   |   |
| S 12 | 17 21 47 | 21°23'27 | 12°50 | 27°37  | 6° 2   | 10°55 | 23°38 | 14°11  | 14°58 | 14°58  | 8°35 | 14°59  | 16°22 | 14°56 | 0°45 |   |   |   |   |   |   |   |   |
| S 13 | 17 25 44 | 22°20'56 | 24°46 | 27° 7  | 6°55   | 11°38 | 23°42 | 14° 8  | 15° 2 | 14°57  | 8°36 | 14°49  | 16°19 | 15° 3 | 0°46 |   |   |   |   |   |   |   |   |
| M14  | 17 29 40 | 23°18'24 | 6♐38  | 26°36  | 7°48   | 12°20 | 23°47 | 14° 5  | 15° 5 | 14°55  | 8°36 | 14°39  | 16°15 | 15°10 | 0°48 |   |   |   |   |   |   |   |   |
| T 15 | 17 33 37 | 24°15'51 | 18°29 | 26° 3  | 8°42   | 13° 3 | 23°51 | 14° 2  | 15° 9 | 14°54  | 8°37 | 14°30  | 16°12 | 15°16 | 0°49 |   |   |   |   |   |   |   |   |
| W16  | 17 37 33 | 25°13'18 | 0♁20  | 25°29  | 9°37   | 13°45 | 23°56 | 13°59  | 15°12 | 14°53  | 8°38 | 14°22  | 16° 9 | 15°23 | 0°50 |   |   |   |   |   |   |   |   |
| T 17 | 17 41 30 | 26°10'44 | 12°13 | 24°56  | 10°32  | 14°28 | 24° 0 | 13°56  | 15°15 | 14°52  | 8°39 | 14°15  | 16° 6 | 15°30 | 0°51 |   |   |   |   |   |   |   |   |
| F 18 | 17 45 27 | 27° 8'08 | 24°10 | 24°23  | 11°27  | 15°10 | 24° 5 | 13°54  | 15°19 | 14°51  | 8°40 | 14°11  | 16° 3 | 15°36 | 0°52 |   |   |   |   |   |   |   |   |
| S 19 | 17 49 23 | 28° 5'32 | 6♐13  | 23°51  | 12°23  | 15°52 | 24°10 | 13°51  | 15°22 | 14°50  | 8°40 | 14° 9  | 16° 0 | 15°43 | 0°53 |   |   |   |   |   |   |   |   |
| S 20 | 17 53 20 | 29° 2'55 | 18°25 | 23°21  | 13°20  | 16°35 | 24°16 | 13°49  | 15°26 | 14°49  | 8°41 | 14°D 9 | 15°56 | 15°50 | 0°53 |   |   |   |   |   |   |   |   |
| M21  | 17 57 16 | 0♁ 0'17  | 0♐50  | 22°53  | 14°16  | 17°17 | 24°21 | 13°46  | 15°29 | 14°48  | 8°42 | 14° 9  | 15°53 | 15°57 | 0°54 |   |   |   |   |   |   |   |   |
| T 22 | 18 1 13  | 0°57'39  | 13°31 | 22°27  | 15°14  | 17°59 | 24°27 | 13°44  | 15°33 | 14°47  | 8°43 | 14°11  | 15°50 | 16° 3 | 0°55 |   |   |   |   |   |   |   |   |
| W23  | 18 5 9   | 1°54'59  | 26°31 | 22° 4  | 16°11  | 18°41 | 24°32 | 13°42  | 15°37 | 14°46  | 8°44 | 14°R12 | 15°47 | 16°10 | 0°55 |   |   |   |   |   |   |   |   |
| T 24 | 18 9 6   | 2°52'18  | 9♎55  | 21°45  | 17° 9  | 19°23 | 24°38 | 13°39  | 15°40 | 14°45  | 8°45 | 14°12  | 15°44 | 16°17 | 0°56 |   |   |   |   |   |   |   |   |
| F 25 | 18 13 2  | 3°49'36  | 23°45 | 21°30  | 18° 8  | 20° 5 | 24°44 | 13°37  | 15°44 | 14°44  | 8°46 | 14°10  | 15°41 | 16°23 | 0°57 |   |   |   |   |   |   |   |   |
| S 26 | 18 16 59 | 4°46'54  | 8♐. 0 | 21°19  | 19° 7  | 20°47 | 24°50 | 13°35  | 15°47 | 14°43  | 8°47 | 14° 7  | 15°37 | 16°30 | 0°57 |   |   |   |   |   |   |   |   |
| S 27 | 18 20 56 | 5°44'11  | 22°40 | 21°11  | 20° 6  | 21°29 | 24°56 | 13°33  | 15°51 | 14°42  | 8°48 | 14° 2  | 15°34 | 16°37 | 0°57 |   |   |   |   |   |   |   |   |
| M28  | 18 24 52 | 6°41'27  | 7♁39  | 21°D 9 | 21° 5  | 22°11 | 25    |        |       |        |      |        |       |       |      |   |   |   |   |   |   |   |   |

SWISS EPHEMERIS for the year 2455

JULY 2455

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| Day  | Sid.t    | ☉                      | ☽                      | ♀                      | ♁                      | ♂                      | ♃                      | ♅                      | ♁                      | ♄                      | ♁                     | ♁                      | ♁                      | ♁                      | ♁                     |
|------|----------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------------------|------------------------|------------------------|------------------------|-----------------------|
| T 1  | 18 36 42 | 9 <sup>h</sup> 33'12"  | 23 <sup>h</sup> 3' 2"  | 21 <sup>h</sup> 11'28" | 24 <sup>h</sup> 8' 6"  | 24 <sup>h</sup> 11'16" | 25 <sup>h</sup> 11'23" | 13 <sup>h</sup> 26'26" | 16 <sup>h</sup> 5' 5"  | 14 <sup>h</sup> 39'39" | 8 <sup>h</sup> 53'53" | 13 <sup>h</sup> 45'45" | 15 <sup>h</sup> 21'21" | 17 <sup>h</sup> 11'11" | 0 <sup>h</sup> 59'59" |
| F 2  | 18 40 38 | 10 <sup>h</sup> 30'27" | 7 <sup>h</sup> 47' 7"  | 21 <sup>h</sup> 44' 2" | 25 <sup>h</sup> 7' 2"  | 24 <sup>h</sup> 58' 2" | 25 <sup>h</sup> 30' 2" | 13 <sup>h</sup> 26'26" | 16 <sup>h</sup> 9' 9"  | 14 <sup>h</sup> 38'38" | 8 <sup>h</sup> 54'54" | 13 <sup>h</sup> 45'45" | 15 <sup>h</sup> 18'18" | 17 <sup>h</sup> 10'10" | 0 <sup>h</sup> 59'59" |
| S 3  | 18 44 35 | 11 <sup>h</sup> 27'41" | 22 <sup>h</sup> 8' 8"  | 22 <sup>h</sup> 5' 5"  | 26 <sup>h</sup> 8' 8"  | 25 <sup>h</sup> 39' 2" | 25 <sup>h</sup> 37' 2" | 13 <sup>h</sup> 24'24" | 16 <sup>h</sup> 12'12" | 14 <sup>h</sup> 37'37" | 8 <sup>h</sup> 55'55" | 13 <sup>h</sup> 44'44" | 15 <sup>h</sup> 15'15" | 17 <sup>h</sup> 17'17" | 0 <sup>h</sup> 59'59" |
| S 4  | 18 48 31 | 12 <sup>h</sup> 24'55" | 6 <sup>h</sup> 3' 3"   | 22 <sup>h</sup> 30' 2" | 27 <sup>h</sup> 9' 2"  | 26 <sup>h</sup> 21' 2" | 25 <sup>h</sup> 44' 2" | 13 <sup>h</sup> 22'22" | 16 <sup>h</sup> 16'16" | 14 <sup>h</sup> 36'36" | 8 <sup>h</sup> 56'56" | 13 <sup>h</sup> 45'45" | 15 <sup>h</sup> 12'12" | 17 <sup>h</sup> 24'24" | 0 <sup>h</sup> 59'59" |
| M 5  | 18 52 28 | 13 <sup>h</sup> 22'09" | 19 <sup>h</sup> 31' 2" | 23 <sup>h</sup> 0' 0"  | 28 <sup>h</sup> 11' 2" | 27 <sup>h</sup> 3' 2"  | 25 <sup>h</sup> 51' 2" | 13 <sup>h</sup> 21'21" | 16 <sup>h</sup> 20'20" | 14 <sup>h</sup> 36'36" | 8 <sup>h</sup> 58'58" | 13 <sup>h</sup> 46'46" | 15 <sup>h</sup> 9' 9"  | 17 <sup>h</sup> 30'30" | 0 <sup>h</sup> 59'59" |
| T 6  | 18 56 25 | 14 <sup>h</sup> 19'22" | 2 <sup>h</sup> 33'33"  | 23 <sup>h</sup> 35' 2" | 29 <sup>h</sup> 13' 2" | 27 <sup>h</sup> 44' 2" | 25 <sup>h</sup> 59' 2" | 13 <sup>h</sup> 20'20" | 16 <sup>h</sup> 23'23" | 14 <sup>h</sup> 35'35" | 8 <sup>h</sup> 59'59" | 13 <sup>h</sup> 47'47" | 15 <sup>h</sup> 6' 6"  | 17 <sup>h</sup> 37'37" | 0 <sup>h</sup> 59'59" |
| W 7  | 19 0 21  | 15 <sup>h</sup> 16'36" | 15 <sup>h</sup> 13' 2" | 24 <sup>h</sup> 15' 2" | 0 <sup>h</sup> 11'15"  | 28 <sup>h</sup> 25' 2" | 26 <sup>h</sup> 6' 6"  | 13 <sup>h</sup> 19'19" | 16 <sup>h</sup> 27'27" | 14 <sup>h</sup> 34'34" | 9 <sup>h</sup> 0' 0"  | 13 <sup>h</sup> 48'48" | 15 <sup>h</sup> 2' 2"  | 17 <sup>h</sup> 44'44" | 0 <sup>h</sup> 59'59" |
| T 8  | 19 4 18  | 16 <sup>h</sup> 13'50" | 27 <sup>h</sup> 35' 2" | 24 <sup>h</sup> 58' 2" | 1 <sup>h</sup> 18' 2"  | 29 <sup>h</sup> 7' 2"  | 26 <sup>h</sup> 14' 2" | 13 <sup>h</sup> 18'18" | 16 <sup>h</sup> 30'30" | 14 <sup>h</sup> 34'34" | 9 <sup>h</sup> 2' 2"  | 13 <sup>h</sup> 47'47" | 14 <sup>h</sup> 59'59" | 17 <sup>h</sup> 51'51" | 0 <sup>h</sup> 58'58" |
| F 9  | 19 8 14  | 17 <sup>h</sup> 11'05" | 9 <sup>h</sup> 43'43"  | 25 <sup>h</sup> 47' 2" | 2 <sup>h</sup> 21' 2"  | 29 <sup>h</sup> 48' 2" | 26 <sup>h</sup> 22' 2" | 13 <sup>h</sup> 17'17" | 16 <sup>h</sup> 34'34" | 14 <sup>h</sup> 33'33" | 9 <sup>h</sup> 3' 3"  | 13 <sup>h</sup> 46'46" | 14 <sup>h</sup> 56'56" | 17 <sup>h</sup> 57'57" | 0 <sup>h</sup> 58'58" |
| S 10 | 19 12 11 | 18 <sup>h</sup> 8'19"  | 21 <sup>h</sup> 42' 2" | 26 <sup>h</sup> 40' 2" | 3 <sup>h</sup> 24' 2"  | 0 <sup>h</sup> 29'29"  | 26 <sup>h</sup> 30' 2" | 13 <sup>h</sup> 17'17" | 16 <sup>h</sup> 38'38" | 14 <sup>h</sup> 33'33" | 9 <sup>h</sup> 4' 4"  | 13 <sup>h</sup> 43'43" | 14 <sup>h</sup> 53'53" | 18 <sup>h</sup> 4' 4"  | 0 <sup>h</sup> 58'58" |
| S 11 | 19 16 7  | 19 <sup>h</sup> 5'33"  | 3 <sup>h</sup> 11'35"  | 27 <sup>h</sup> 37' 2" | 4 <sup>h</sup> 27' 2"  | 1 <sup>h</sup> 10' 2"  | 26 <sup>h</sup> 38' 2" | 13 <sup>h</sup> 16'16" | 16 <sup>h</sup> 41'41" | 14 <sup>h</sup> 32'32" | 9 <sup>h</sup> 6' 6"  | 13 <sup>h</sup> 39'39" | 14 <sup>h</sup> 50'50" | 18 <sup>h</sup> 11'11" | 0 <sup>h</sup> 58'58" |
| M12  | 19 20 4  | 20 <sup>h</sup> 2'48"  | 15 <sup>h</sup> 25' 2" | 28 <sup>h</sup> 39' 2" | 5 <sup>h</sup> 30' 2"  | 1 <sup>h</sup> 52' 2"  | 26 <sup>h</sup> 46' 2" | 13 <sup>h</sup> 15'15" | 16 <sup>h</sup> 45'45" | 14 <sup>h</sup> 32'32" | 9 <sup>h</sup> 7' 7"  | 13 <sup>h</sup> 35'35" | 14 <sup>h</sup> 47'47" | 18 <sup>h</sup> 17'17" | 0 <sup>h</sup> 57'57" |
| T13  | 19 24 0  | 21 <sup>h</sup> 0'03"  | 27 <sup>h</sup> 16' 2" | 29 <sup>h</sup> 44' 2" | 6 <sup>h</sup> 34' 2"  | 2 <sup>h</sup> 33' 2"  | 26 <sup>h</sup> 54' 2" | 13 <sup>h</sup> 15'15" | 16 <sup>h</sup> 48'48" | 14 <sup>h</sup> 31'31" | 9 <sup>h</sup> 9' 9"  | 13 <sup>h</sup> 31'31" | 14 <sup>h</sup> 43'43" | 18 <sup>h</sup> 24'24" | 0 <sup>h</sup> 57'57" |
| W14  | 19 27 57 | 21 <sup>h</sup> 57'41" | 9 <sup>h</sup> 21'10"  | 0 <sup>h</sup> 55'55"  | 7 <sup>h</sup> 38' 2"  | 3 <sup>h</sup> 14' 2"  | 27 <sup>h</sup> 2' 2"  | 13 <sup>h</sup> 15'15" | 16 <sup>h</sup> 52'52" | 14 <sup>h</sup> 31'31" | 9 <sup>h</sup> 10'10" | 13 <sup>h</sup> 28'28" | 14 <sup>h</sup> 40'40" | 18 <sup>h</sup> 31'31" | 0 <sup>h</sup> 56'56" |
| T15  | 19 31 54 | 22 <sup>h</sup> 54'33" | 21 <sup>h</sup> 10' 2" | 2 <sup>h</sup> 9' 2"   | 8 <sup>h</sup> 42' 2"  | 3 <sup>h</sup> 55' 2"  | 27 <sup>h</sup> 11' 2" | 13 <sup>h</sup> 15'15" | 16 <sup>h</sup> 56'56" | 14 <sup>h</sup> 31'31" | 9 <sup>h</sup> 12'12" | 13 <sup>h</sup> 26'26" | 14 <sup>h</sup> 37'37" | 18 <sup>h</sup> 37'37" | 0 <sup>h</sup> 56'56" |
| F16  | 19 35 50 | 23 <sup>h</sup> 51'48" | 3 <sup>h</sup> 16'16"  | 3 <sup>h</sup> 27' 2"  | 9 <sup>h</sup> 47' 2"  | 4 <sup>h</sup> 36' 2"  | 27 <sup>h</sup> 20' 2" | 13 <sup>h</sup> 14'14" | 16 <sup>h</sup> 59'59" | 14 <sup>h</sup> 30'30" | 9 <sup>h</sup> 13'13" | 13 <sup>h</sup> 24'24" | 14 <sup>h</sup> 34'34" | 18 <sup>h</sup> 44'44" | 0 <sup>h</sup> 55'55" |
| S17  | 19 39 47 | 24 <sup>h</sup> 49'03" | 15 <sup>h</sup> 31' 2" | 4 <sup>h</sup> 49' 2"  | 10 <sup>h</sup> 51' 2" | 5 <sup>h</sup> 17' 2"  | 27 <sup>h</sup> 28' 2" | 13 <sup>h</sup> 14'14" | 17 <sup>h</sup> 3' 3"  | 14 <sup>h</sup> 30'30" | 9 <sup>h</sup> 15'15" | 13 <sup>h</sup> 24'24" | 14 <sup>h</sup> 31'31" | 18 <sup>h</sup> 51'51" | 0 <sup>h</sup> 54'54" |
| S18  | 19 43 43 | 25 <sup>h</sup> 46'18" | 27 <sup>h</sup> 56' 2" | 6 <sup>h</sup> 16' 2"  | 11 <sup>h</sup> 56' 2" | 5 <sup>h</sup> 57' 2"  | 27 <sup>h</sup> 37' 2" | 13 <sup>h</sup> 14'14" | 17 <sup>h</sup> 6' 6"  | 14 <sup>h</sup> 30'30" | 9 <sup>h</sup> 16'16" | 13 <sup>h</sup> 25'25" | 14 <sup>h</sup> 27'27" | 18 <sup>h</sup> 58'58" | 0 <sup>h</sup> 53'53" |
| M19  | 19 47 40 | 26 <sup>h</sup> 43'33" | 10 <sup>h</sup> 11'34" | 7 <sup>h</sup> 46' 2"  | 13 <sup>h</sup> 1' 2"  | 6 <sup>h</sup> 38' 2"  | 27 <sup>h</sup> 46' 2" | 13 <sup>h</sup> 15'15" | 17 <sup>h</sup> 10'10" | 14 <sup>h</sup> 29'29" | 9 <sup>h</sup> 18'18" | 13 <sup>h</sup> 26'26" | 14 <sup>h</sup> 24'24" | 19 <sup>h</sup> 4' 4"  | 0 <sup>h</sup> 53'53" |
| T20  | 19 51 36 | 27 <sup>h</sup> 40'49" | 23 <sup>h</sup> 26' 2" | 9 <sup>h</sup> 20' 2"  | 14 <sup>h</sup> 6' 2"  | 7 <sup>h</sup> 19' 2"  | 27 <sup>h</sup> 55' 2" | 13 <sup>h</sup> 15'15" | 17 <sup>h</sup> 14'14" | 14 <sup>h</sup> 29'29" | 9 <sup>h</sup> 19'19" | 13 <sup>h</sup> 27'27" | 14 <sup>h</sup> 21'21" | 19 <sup>h</sup> 11'11" | 0 <sup>h</sup> 52'52" |
| W21  | 19 55 33 | 28 <sup>h</sup> 38'04" | 6 <sup>h</sup> 43'35"  | 10 <sup>h</sup> 58' 2" | 15 <sup>h</sup> 11' 2" | 8 <sup>h</sup> 0' 2"   | 28 <sup>h</sup> 4' 2"  | 13 <sup>h</sup> 15'15" | 17 <sup>h</sup> 17'17" | 14 <sup>h</sup> 29'29" | 9 <sup>h</sup> 21'21" | 13 <sup>h</sup> 28'28" | 14 <sup>h</sup> 18'18" | 19 <sup>h</sup> 18'18" | 0 <sup>h</sup> 51'51" |
| T22  | 19 59 29 | 29 <sup>h</sup> 35'19" | 20 <sup>h</sup> 1' 2"  | 12 <sup>h</sup> 39' 2" | 16 <sup>h</sup> 17' 2" | 8 <sup>h</sup> 40' 2"  | 28 <sup>h</sup> 13' 2" | 13 <sup>h</sup> 16'16" | 17 <sup>h</sup> 21'21" | 14 <sup>h</sup> 29'29" | 9 <sup>h</sup> 22'22" | 13 <sup>h</sup> 29'29" | 14 <sup>h</sup> 15'15" | 19 <sup>h</sup> 24'24" | 0 <sup>h</sup> 50'50" |
| F23  | 20 3 26  | 0 <sup>h</sup> 32'34"  | 3 <sup>h</sup> 11'48"  | 14 <sup>h</sup> 24' 2" | 17 <sup>h</sup> 22' 2" | 9 <sup>h</sup> 21' 2"  | 28 <sup>h</sup> 23' 2" | 13 <sup>h</sup> 16'16" | 17 <sup>h</sup> 24'24" | 14 <sup>h</sup> 29'29" | 9 <sup>h</sup> 24'24" | 13 <sup>h</sup> 29'29" | 14 <sup>h</sup> 12'12" | 19 <sup>h</sup> 31'31" | 0 <sup>h</sup> 49'49" |
| S24  | 20 7 23  | 1 <sup>h</sup> 29'49"  | 17 <sup>h</sup> 53' 2" | 16 <sup>h</sup> 12' 2" | 18 <sup>h</sup> 28' 2" | 10 <sup>h</sup> 1' 2"  | 28 <sup>h</sup> 32' 2" | 13 <sup>h</sup> 17'17" | 17 <sup>h</sup> 28'28" | 14 <sup>h</sup> 29'29" | 9 <sup>h</sup> 26'26" | 13 <sup>h</sup> 29'29" | 14 <sup>h</sup> 8' 8"  | 19 <sup>h</sup> 38'38" | 0 <sup>h</sup> 48'48" |
| S25  | 20 11 19 | 2 <sup>h</sup> 27'04"  | 2 <sup>h</sup> 17'17"  | 18 <sup>h</sup> 3' 2"  | 19 <sup>h</sup> 34' 2" | 10 <sup>h</sup> 42' 2" | 28 <sup>h</sup> 42' 2" | 13 <sup>h</sup> 18'18" | 17 <sup>h</sup> 31'31" | 14 <sup>h</sup> 29'29" | 9 <sup>h</sup> 27'27" | 13 <sup>h</sup> 28'28" | 14 <sup>h</sup> 5' 5"  | 19 <sup>h</sup> 44'44" | 0 <sup>h</sup> 47'47" |
| M26  | 20 15 16 | 3 <sup>h</sup> 24'20"  | 16 <sup>h</sup> 56' 2" | 19 <sup>h</sup> 57' 2" | 20 <sup>h</sup> 40' 2" | 11 <sup>h</sup> 22' 2" | 28 <sup>h</sup> 51' 2" | 13 <sup>h</sup> 19'19" | 17 <sup>h</sup> 35'35" | 14 <sup>h</sup> 29'29" | 9 <sup>h</sup> 29'29" | 13 <sup>h</sup> 27'27" | 14 <sup>h</sup> 2' 2"  | 19 <sup>h</sup> 51'51" | 0 <sup>h</sup> 45'45" |
| T27  | 20 19 12 | 4 <sup>h</sup> 21'36"  | 1 <sup>h</sup> 35'45"  | 21 <sup>h</sup> 54' 2" | 21 <sup>h</sup> 46' 2" | 12 <sup>h</sup> 3' 2"  | 29 <sup>h</sup> 1' 2"  | 13 <sup>h</sup> 20'20" | 17 <sup>h</sup> 38'38" | 14 <sup>h</sup> 29'29" | 9 <sup>h</sup> 31'31" | 13 <sup>h</sup> 26'26" | 13 <sup>h</sup> 59'59" | 19 <sup>h</sup> 58'58" | 0 <sup>h</sup> 44'44" |
| W28  | 20 23 9  | 5 <sup>h</sup> 18'52"  | 16 <sup>h</sup> 36' 2" | 23 <sup>h</sup> 53' 2" | 22 <sup>h</sup> 53' 2" | 12 <sup>h</sup> 43' 2" | 29 <sup>h</sup> 11' 2" | 13 <sup>h</sup> 21'21" | 17 <sup>h</sup> 42'42" | 14 <sup>h</sup> 29'29" | 9 <sup>h</sup> 32'32" | 13 <sup>h</sup> 25'25" | 13 <sup>h</sup> 56'56" | 20 <sup>h</sup> 5' 5"  | 0 <sup>h</sup> 43'43" |
| T29  | 20 27 5  | 6 <sup>h</sup> 16'08"  | 1 <sup>h</sup> 42'24"  | 25 <sup>h</sup> 54' 2" | 23 <sup>h</sup> 59' 2" | 13 <sup>h</sup> 23' 2" | 29 <sup>h</sup> 21' 2" | 13 <sup>h</sup> 22'22" | 17 <sup>h</sup> 45'45" | 14 <sup>h</sup> 29'29" | 9 <sup>h</sup> 34'34" | 13 <sup>h</sup> 24'24" | 13 <sup>h</sup> 53'53" | 20 <sup>h</sup> 11'11" | 0 <sup>h</sup> 42'42" |
| F30  | 20 31 2  | 7 <sup>h</sup> 13'25"  | 15 <sup>h</sup> 59' 2" | 27 <sup>h</sup> 57' 2" | 25 <sup>h</sup> 6' 2"  | 14 <sup>h</sup> 4' 2"  | 29 <sup>h</sup> 31' 2" | 13 <sup>h</sup> 23'23" | 17 <sup>h</sup> 49'49" | 14 <sup>h</sup> 29'29" | 9 <sup>h</sup> 36'36" | 13 <sup>h</sup> 24'24" | 13 <sup>h</sup> 49'49" | 20 <sup>h</sup> 18'18" | 0 <sup>h</sup> 40'40" |
| S31  | 20 34 59 | 8 <sup>h</sup> 10'42"  | 0 <sup>h</sup> 16'16"  | 0 <sup>h</sup> 1 1' 2" | 26 <sup>h</sup> 11'13" | 14 <sup>h</sup> 24'44" | 29 <sup>h</sup> 41'41" | 13 <sup>h</sup> 24'24" | 17 <sup>h</sup> 52'52" | 14 <sup>h</sup> 29'29" | 9 <sup>h</sup> 38'38" | 13 <sup>h</sup> 24'24" | 13 <sup>h</sup> 46'46" | 20 <sup>h</sup> 25'25" | 0 <sup>h</sup> 39'39" |

Delta T = 20m31s

AUGUST 2455

00:00 UT

| Day | Sid.t    | ☉                      | ☽                      | ♀                      | ♁                      | ♂                      | ♃                      | ♅                      | ♁                      | ♄                      | ♁                     | ♁                      | ♁                      | ♁                      | ♁                     |
|-----|----------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------------------|------------------------|------------------------|------------------------|-----------------------|
| S 1 | 20 38 55 | 9 <sup>h</sup> 18'00"  | 14 <sup>h</sup> 11'11" | 2 <sup>h</sup> 18' 7"  | 27 <sup>h</sup> 11'20" | 15 <sup>h</sup> 24'24" | 29 <sup>h</sup> 11'51" | 13 <sup>h</sup> 26'26" | 17 <sup>h</sup> 56'56" | 14 <sup>h</sup> 29'29" | 9 <sup>h</sup> 39'39" | 13 <sup>h</sup> 25'25" | 13 <sup>h</sup> 43'43" | 20 <sup>h</sup> 11'11" | 0 <sup>h</sup> 37'37" |
| M 2 | 20 42 52 | 10 <sup>h</sup> 5'19"  | 27 <sup>h</sup> 42' 2" | 4 <sup>h</sup> 13' 2"  | 28 <sup>h</sup> 27' 2" | 16 <sup>h</sup> 4' 2"  | 0 <sup>h</sup> 11'11"  | 13 <sup>h</sup> 27'27" | 17 <sup>h</sup> 59'59" | 14 <sup>h</sup> 29'29" | 9 <sup>h</sup> 41'41" | 13 <sup>h</sup> 25'25" | 13 <sup>h</sup> 40'40" | 20 <sup>h</sup> 38'38" | 0 <sup>h</sup> 36'36" |
| T 3 | 20 46 48 | 11 <sup>h</sup> 2'38"  | 10 <sup>h</sup> 49'49" | 6 <sup>h</sup> 19' 2"  | 29 <sup>h</sup> 35' 2" | 16 <sup>h</sup> 44' 2" | 0 <sup>h</sup> 12'12"  | 13 <sup>h</sup> 29'29" | 18 <sup>h</sup> 3' 3"  | 14 <sup>h</sup> 30'30" | 9 <sup>h</sup> 43'43" | 13 <sup>h</sup> 25'25" | 13 <sup>h</sup> 37'37" | 20 <sup>h</sup> 45'45" | 0 <sup>h</sup> 34'34" |
| W 4 | 20 50 45 | 11 <sup>h</sup> 59'59" | 23 <sup>h</sup> 33' 2" | 8 <sup>h</sup> 26' 2"  | 0 <sup>h</sup> 54'42"  | 17 <sup>h</sup> 24' 2" | 0 <sup>h</sup> 22'22"  | 13 <sup>h</sup> 31'31" | 18 <sup>h</sup> 6' 6"  | 14 <sup>h</sup> 30'30" | 9 <sup>h</sup> 45'45" | 13 <sup>h</sup> 25'25" | 13 <sup>h</sup> 33'33" | 20 <sup>h</sup> 51'51" | 0 <sup>h</sup> 33'33" |
| T 5 | 20 54 41 | 12 <sup>h</sup> 57'20" | 5 <sup>h</sup> 58'58"  | 10 <sup>h</sup> 33' 2" | 1 <sup>h</sup> 50' 2"  | 18 <sup>h</sup> 4' 2"  | 0 <sup>h</sup> 33'33"  | 13 <sup>h</sup> 33'33" | 18 <sup>h</sup> 9' 9"  | 14 <sup>h</sup> 30'30" | 9 <sup>h</sup> 47'47" | 13 <sup>h</sup> 26'26" | 13 <sup>h</sup> 30'30" | 20 <sup>h</sup> 58'58" | 0 <sup>h</sup> 31'31" |
| F 6 | 20 58 38 | 13 <sup>h</sup> 54'43" | 18 <sup>h</sup> 8' 8"  | 12 <sup>h</sup> 39' 2" | 2 <sup>h</sup> 58' 2"  | 18 <sup>h</sup> 44' 2" | 0 <sup>h</sup> 43'43"  | 13 <sup>h</sup> 34'34" | 18 <sup>h</sup> 13'13" | 14 <sup>h</sup> 30'30" | 9 <sup>h</sup> 49'49" | 13 <sup>h</sup> 26'26" | 13 <sup>h</sup> 27'27" | 21 <sup>h</sup> 5' 5"  | 0 <sup>h</sup> 29'29" |
| S 7 | 21 2 34  | 14 <sup>h</sup> 52'06" | 0 <sup>h</sup> 11' 7"  | 14 <sup>h</sup> 45' 2" | 4 <sup>h</sup> 6' 2"   | 19 <sup>h</sup> 24' 2" | 0 <sup>h</sup> 54'54"  | 13 <sup>h</sup> 36'36" | 18 <sup>h</sup> 16'16" | 14 <sup>h</sup> 31'31" | 9 <sup>h</sup> 50'50" | 13 <sup>h</sup> 26'26" | 13 <sup>h</sup> 24'24" | 21 <sup>h</sup> 11'11" | 0 <sup>h</sup> 28'28" |
| S 8 | 21 6 31  | 15 <sup>h</sup> 49'31" | 11 <sup>h</sup> 59' 2" | 16 <sup>h</sup> 50' 2" | 5 <sup>h</sup> 14' 2"  | 20 <sup>h</sup> 4' 2"  | 1 <sup>h</sup> 4' 2"   | 13 <sup>h</sup> 39'39" | 18 <sup>h</sup> 19'19" | 14 <sup>h</sup> 31'31" | 9 <sup>h</sup> 52'52" | 13 <sup>h</sup> 26'26" | 13 <sup>h</sup> 21'21" | 21 <sup>h</sup> 18'18" | 0 <sup>h</sup> 26'26" |
| M 9 | 21 10 27 | 16 <sup>h</sup> 46'57" | 23 <sup>h</sup> 50' 2" | 18 <sup>h</sup> 54' 2" | 6 <sup>h</sup> 22' 2"  | 20 <sup>h</sup> 43' 2" | 1 <sup>h</sup> 15'15"  | 13 <sup>h</sup> 41'41" | 18 <sup>h</sup> 23'23" | 14 <sup>h</sup> 32'32" | 9 <sup>h</sup> 54'54" | 13 <sup>h</sup> 26'26" | 13 <sup>h</sup> 18'18" | 21 <sup>h</sup> 25'25" | 0 <sup>h</sup> 24'24" |
| T10 | 21 14 24 | 17 <sup>h</sup> 44'24" | 5 <sup>h</sup> 43'43"  | 20 <sup>h</sup> 58' 2" | 7 <sup>h</sup> 30' 2"  | 21 <sup>h</sup> 23' 2" | 1 <sup>h</sup> 26'26"  | 13 <sup>h</sup> 43'43" | 18 <sup>h</sup> 26'26" | 14 <sup>h</sup> 32'32" | 9 <sup>h</sup> 56'56" | 13 <sup>h</sup> 26'26" | 13 <sup>h</sup> 14'14" | 21 <sup>h</sup> 32'32" | 0 <sup>h</sup> 22'22  |

SWISS EPHEMERIS for the year 2455

SEPTEMBER 2455

00:00 UT

| Day  | Sid.t    | ☉        | ☽     | ♀     | ♂     | ♃     | ♄     | ♅     | ♆     | ♇     | ♁     | ♂      | ♆     | ♁     | ♂      |
|------|----------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|--------|
| W 1  | 22 41 8  | 8♎52'22  | 1♁32  | 0♌3   | 3♌0   | 5♌45  | 5♌41  | 14♎56 | 19♎31 | 14♎50 | 10♎39 | 13°R10 | 12♌4  | 23♎59 | 29°R31 |
| T 2  | 22 45 5  | 9°50'15  | 13°58 | 1°33  | 4°11  | 6°23  | 5°54  | 15° 0 | 19°34 | 14°51 | 10°41 | 13♌7   | 12° 1 | 24° 5 | 29♎28  |
| F 3  | 22 49 1  | 10°48'08 | 26° 9 | 3° 2  | 5°22  | 7° 2  | 6° 6  | 15° 4 | 19°37 | 14°52 | 10°43 | 13° 5  | 11°58 | 24°12 | 29°26  |
| S 4  | 22 52 58 | 11°46'04 | 8♎9   | 4°29  | 6°33  | 7°40  | 6°18  | 15° 9 | 19°39 | 14°53 | 10°45 | 13°D 4 | 11°55 | 24°19 | 29°23  |
| S 5  | 22 56 54 | 12°44'02 | 20° 2 | 5°54  | 7°44  | 8°19  | 6°30  | 15°13 | 19°42 | 14°55 | 10°47 | 13° 4  | 11°52 | 24°25 | 29°20  |
| M 6  | 23 0 51  | 13°42'01 | 1♁52  | 7°19  | 8°55  | 8°57  | 6°43  | 15°18 | 19°44 | 14°56 | 10°49 | 13° 5  | 11°49 | 24°32 | 29°17  |
| T 7  | 23 4 48  | 14°40'02 | 13°46 | 8°41  | 10° 6 | 9°36  | 6°55  | 15°22 | 19°47 | 14°57 | 10°51 | 13° 7  | 11°45 | 24°39 | 29°15  |
| W 8  | 23 8 44  | 15°38'05 | 25°48 | 10° 3 | 11°17 | 10°14 | 7° 8  | 15°27 | 19°49 | 14°59 | 10°53 | 13° 8  | 11°42 | 24°46 | 29°12  |
| T 9  | 23 12 41 | 16°36'10 | 8♎1   | 11°22 | 12°29 | 10°52 | 7°20  | 15°32 | 19°51 | 15° 0 | 10°55 | 13°R 9 | 11°39 | 24°52 | 29° 9  |
| F 10 | 23 16 37 | 17°34'16 | 20°30 | 12°41 | 13°40 | 11°31 | 7°33  | 15°36 | 19°54 | 15° 1 | 10°57 | 13° 9  | 11°36 | 24°59 | 29° 6  |
| S 11 | 23 20 34 | 18°32'24 | 3♎16  | 13°57 | 14°52 | 12° 9 | 7°45  | 15°41 | 19°56 | 15° 3 | 10°59 | 13° 8  | 11°33 | 25° 6 | 29° 3  |
| S 12 | 23 24 30 | 19°30'34 | 16°20 | 15°12 | 16° 3 | 12°47 | 7°58  | 15°46 | 19°58 | 15° 4 | 11° 1 | 13° 4  | 11°30 | 25°12 | 29° 1  |
| M13  | 23 28 27 | 20°28'46 | 29°42 | 16°25 | 17°15 | 13°25 | 8°10  | 15°51 | 20° 0 | 15° 6 | 11° 3 | 12°59  | 11°26 | 25°19 | 28°58  |
| T 14 | 23 32 23 | 21°26'59 | 13♌20 | 17°36 | 18°27 | 14° 3 | 8°23  | 15°56 | 20° 3 | 15° 7 | 11° 5 | 12°53  | 11°23 | 25°26 | 28°55  |
| W15  | 23 36 20 | 22°25'14 | 27°12 | 18°45 | 19°39 | 14°41 | 8°36  | 16° 2 | 20° 5 | 15° 9 | 11° 7 | 12°47  | 11°20 | 25°32 | 28°52  |
| T 16 | 23 40 17 | 23°23'30 | 11♎14 | 19°52 | 20°51 | 15°19 | 8°48  | 16° 7 | 20° 7 | 15°10 | 11° 9 | 12°41  | 11°17 | 25°39 | 28°49  |
| F 17 | 23 44 13 | 24°21'48 | 25°22 | 20°58 | 22° 3 | 15°57 | 9° 1  | 16°12 | 20° 9 | 15°12 | 11°11 | 12°37  | 11°14 | 25°46 | 28°46  |
| S 18 | 23 48 10 | 25°20'08 | 9♎33  | 22° 0 | 23°15 | 16°35 | 9°14  | 16°17 | 20°11 | 15°13 | 11°13 | 12°34  | 11°10 | 25°52 | 28°43  |
| S 19 | 23 52 6  | 26°18'29 | 23°44 | 23° 1 | 24°27 | 17°13 | 9°27  | 16°23 | 20°13 | 15°15 | 11°15 | 12°D33 | 11° 7 | 25°59 | 28°41  |
| M20  | 23 56 3  | 27°16'51 | 7♁54  | 23°58 | 25°39 | 17°50 | 9°39  | 16°28 | 20°15 | 15°16 | 11°17 | 12°33  | 11° 4 | 26° 6 | 28°38  |
| T 21 | 23 59 59 | 28°15'16 | 22° 0 | 24°54 | 26°51 | 18°28 | 9°52  | 16°34 | 20°16 | 15°18 | 11°19 | 12°34  | 11° 1 | 26°12 | 28°35  |
| W22  | 0 3 56   | 29°13'41 | 6♌2   | 25°46 | 28° 4 | 19° 6 | 10° 5 | 16°39 | 20°18 | 15°20 | 11°21 | 12°R35 | 10°58 | 26°19 | 28°32  |
| T 23 | 0 7 52   | 0♌12'08  | 19°57 | 26°35 | 29°16 | 19°43 | 10°18 | 16°45 | 20°20 | 15°21 | 11°23 | 12°35  | 10°55 | 26°26 | 28°29  |
| F 24 | 0 11 49  | 1°10'37  | 3♎45  | 27°20 | 0♎29  | 20°21 | 10°31 | 16°51 | 20°22 | 15°23 | 11°25 | 12°33  | 10°51 | 26°33 | 28°26  |
| S 25 | 0 15 46  | 2° 9'07  | 17°22 | 28° 2 | 1°41  | 20°58 | 10°44 | 16°56 | 20°23 | 15°25 | 11°27 | 12°29  | 10°48 | 26°39 | 28°23  |
| S 26 | 0 19 42  | 3° 7'39  | 0♎47  | 28°40 | 2°54  | 21°36 | 10°56 | 17° 2 | 20°25 | 15°27 | 11°29 | 12°22  | 10°45 | 26°46 | 28°20  |
| M27  | 0 23 39  | 4° 6'13  | 13°58 | 29°14 | 4° 6  | 22°13 | 11° 9 | 17° 8 | 20°27 | 15°28 | 11°31 | 12°14  | 10°42 | 26°53 | 28°17  |
| T 28 | 0 27 35  | 5° 4'50  | 26°53 | 29°43 | 5°19  | 22°51 | 11°22 | 17°14 | 20°28 | 15°30 | 11°33 | 12° 5  | 10°39 | 26°59 | 28°15  |
| W29  | 0 31 32  | 6° 3'28  | 9♁32  | 0♎8   | 6°32  | 23°28 | 11°35 | 17°20 | 20°30 | 15°32 | 11°35 | 11°55  | 10°36 | 27° 6 | 28°12  |
| T 30 | 0 35 28  | 7° 2'08  | 21♁55 | 0♎27  | 7°45  | 24° 5 | 11°48 | 17°26 | 20°31 | 15°34 | 11°36 | 11°46  | 10°32 | 27°13 | 28° 9  |

Delta T = 20m32s

OCTOBER 2455

00:00 UT

| Day  | Sid.t   | ☉        | ☽     | ♀      | ♂     | ♃     | ♄     | ♅     | ♆      | ♇     | ♁     | ♂      | ♆     | ♁     | ♂      |
|------|---------|----------|-------|--------|-------|-------|-------|-------|--------|-------|-------|--------|-------|-------|--------|
| F 1  | 0 39 25 | 8♌0'50   | 4♎4   | 0♎40   | 8♎58  | 24♌42 | 12♌1  | 17♎32 | 20♎32  | 15♎36 | 11♎38 | 11°R39 | 10♌29 | 27♎19 | 28°R 6 |
| S 2  | 0 43 21 | 8°59'35  | 16° 2 | 0°47   | 10°11 | 25°19 | 12°14 | 17°38 | 20°34  | 15°38 | 11°40 | 11°R34 | 10°26 | 27°26 | 28°R 3 |
| S 3  | 0 47 18 | 9°58'22  | 27°54 | 0°R48  | 11°24 | 25°57 | 12°27 | 17°44 | 20°35  | 15°39 | 11°42 | 11°31  | 10°23 | 27°33 | 28° 0  |
| M 4  | 0 51 15 | 10°57'11 | 9♎44  | 0°42   | 12°37 | 26°34 | 12°40 | 17°51 | 20°36  | 15°41 | 11°44 | 11°D30 | 10°20 | 27°39 | 27°58  |
| T 5  | 0 55 11 | 11°56'02 | 21°37 | 0°29   | 13°51 | 27°11 | 12°53 | 17°57 | 20°37  | 15°43 | 11°46 | 11°31  | 10°16 | 27°46 | 27°55  |
| W 6  | 0 59 8  | 12°54'55 | 3♎38  | 0° 9   | 15° 4 | 27°48 | 13° 6 | 18° 3 | 20°38  | 15°45 | 11°47 | 11°32  | 10°13 | 27°53 | 27°52  |
| T 7  | 1 3 4   | 13°53'51 | 15°54 | 29♌41  | 16°17 | 28°24 | 13°19 | 18° 9 | 20°40  | 15°47 | 11°49 | 11°R32 | 10°10 | 27°59 | 27°49  |
| F 8  | 1 7 1   | 14°52'49 | 28°27 | 29° 5  | 17°31 | 29° 1 | 13°32 | 18°16 | 20°41  | 15°49 | 11°51 | 11°30  | 10° 7 | 28° 6 | 27°47  |
| S 9  | 1 10 57 | 15°51'49 | 11♎23 | 28°23  | 18°44 | 29°38 | 13°45 | 18°22 | 20°42  | 15°51 | 11°53 | 11°27  | 10° 4 | 28°13 | 27°44  |
| S 10 | 1 14 54 | 16°50'51 | 24°42 | 27°33  | 19°58 | 0♎15  | 13°58 | 18°29 | 20°42  | 15°53 | 11°54 | 11°20  | 10° 1 | 28°19 | 27°41  |
| M11  | 1 18 50 | 17°49'55 | 8♌24  | 26°36  | 21°11 | 0°51  | 14°11 | 18°35 | 20°43  | 15°55 | 11°56 | 11°12  | 9°57  | 28°26 | 27°38  |
| T 12 | 1 22 47 | 18°49'01 | 22°27 | 25°34  | 22°25 | 1°28  | 14°24 | 18°42 | 20°44  | 15°57 | 11°58 | 11° 1  | 9°54  | 28°33 | 27°36  |
| W13  | 1 26 43 | 19°48'10 | 6♎47  | 24°28  | 23°39 | 2° 5  | 14°37 | 18°48 | 20°45  | 15°59 | 11°59 | 10°51  | 9°51  | 28°39 | 27°33  |
| T 14 | 1 30 40 | 20°47'20 | 21°16 | 23°18  | 24°52 | 2°41  | 14°50 | 18°55 | 20°46  | 16° 1 | 12° 1 | 10°40  | 9°48  | 28°46 | 27°31  |
| F 15 | 1 34 37 | 21°46'32 | 5♎49  | 22° 8  | 26° 6 | 3°18  | 15° 3 | 19° 2 | 20°46  | 16° 3 | 12° 3 | 10°32  | 9°45  | 28°53 | 27°28  |
| S 16 | 1 38 33 | 22°45'46 | 20°19 | 20°58  | 27°20 | 3°54  | 15°15 | 19° 8 | 20°47  | 16° 5 | 12° 4 | 10°25  | 9°41  | 28°59 | 27°26  |
| S 17 | 1 42 30 | 23°45'02 | 4♁40  | 19°51  | 28°34 | 4°30  | 15°28 | 19°15 | 20°47  | 16° 8 | 12° 6 | 10°22  | 9°38  | 29° 6 | 27°23  |
| M18  | 1 46 26 | 24°44'20 | 18°52 | 18°48  | 29°48 | 5° 7  | 15°41 | 19°22 | 20°48  | 16°10 | 12° 8 | 10°21  | 9°35  | 29°13 | 27°21  |
| T 19 | 1 50 23 | 25°43'39 | 2♌51  | 17°52  | 1♌2   | 5°43  | 15°54 | 19°29 | 20°48  | 16°12 | 12° 9 | 10°21  | 9°32  | 29°20 | 27°18  |
| W20  | 1 54 19 | 26°43'00 | 16°38 | 17° 4  | 2°16  | 6°19  | 16° 7 | 19°35 | 20°49  | 16°14 | 12°11 | 10°21  | 9°29  | 29°26 | 27°16  |
| T 21 | 1 58 16 | 27°42'23 | 0♎13  | 16°25  | 3°30  | 6°55  | 16°20 | 19°42 | 20°49  | 16°16 | 12°12 | 10°19  | 9°26  | 29°33 | 27°13  |
| F 22 | 2 2 13  | 28°41'47 | 13°37 | 15°56  | 4°44  | 7°31  | 16°33 | 19°49 | 20°49  | 16°18 | 12°14 | 10°16  | 9°22  | 29°40 | 27°11  |
| S 23 | 2 6 9   | 29°41'13 | 26°51 | 15°38  | 5°58  | 8° 7  | 16°46 | 19°56 | 20°50  | 16°20 | 12°15 | 10° 9  | 9°19  | 29°46 | 27° 9  |
| S 24 | 2 10 6  | 0♎40'41  | 9♎53  | 15°D31 | 7°13  | 8°43  | 16°58 | 20° 3 | 20°50  | 16°23 | 12°17 | 10° 0  | 9°16  | 29°53 | 27° 6  |
| M25  | 2 14 2  | 1°40'10  | 22°45 | 15°35  | 8°27  | 9°19  | 17°11 | 20°10 | 20°50  | 16°25 | 12°18 | 9°48   | 9°13  | 0♎0   | 27° 4  |
| T 26 | 2 17 59 | 2°39'42  | 5♁24  | 15°50  | 9°41  | 9°54  | 17°24 | 20°17 | 20°50  | 16°27 | 12°20 | 9°34   | 9°10  | 0° 6  | 27° 2  |
| W27  | 2 21 55 | 3°39'16  | 17°51 | 16°15  | 10°56 | 10°30 | 17°37 | 20°24 | 20°R50 | 16°29 | 12°21 | 9°21   | 9° 7  | 0°13  | 27° 0  |
| T 28 | 2 25 52 | 4°38'52  | 0♎6   | 16°50  | 12°10 | 11° 6 | 17°49 | 20°31 | 20°50  | 16°31 | 12°22 | 9° 8   | 9° 3  | 0°20  | 26°58  |
| F 29 | 2 29 48 | 5°38'30  | 12°10 | 17°33  | 13°24 | 11°41 | 18° 2 | 20°38 | 20°50  | 16°34 | 12°24 | 8°56   | 9° 0  | 0°26  | 26°56  |
| S 30 | 2 33 45 | 6°38'10  | 24° 5 | 18°25  | 14°39 | 12°17 | 18°15 | 20°45 | 20°50  | 16°36 | 12°25 | 8°48   | 8°57  | 0°33  | 26°53  |
| S 31 | 2 37 41 | 7♎37'52  | 5♁55  | 19♌24  | 15♌53 | 12♎52 | 18♌27 | 20♎52 | 20°50  | 16°38 | 12°26 | 8°42   | 8°54  | 0°40  | 26°51  |

Delta T = 20m32s

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SWISS EPHEMERIS for the year 2455

NOVEMBER 2455

00:00 UT

| Day  | Sid.t   | ☉        | ☽     | ♀     | ♂     | ♂     | ♂     | ♂     | ♂      | ♂     | ♂     | ♂     | ♂    | ♂    | ♂      |
|------|---------|----------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|------|------|--------|
| M 1  | 2 41 38 | 8♏37'37  | 17♌43 | 20♌29 | 17♌ 8 | 13♏28 | 18♌40 | 20♏59 | 20°R49 | 16♏40 | 12♏28 | 8°R39 | 8♏51 | 0♌46 | 26°R49 |
| T 2  | 2 45 35 | 9°37'24  | 29°33 | 21°40 | 18°22 | 14° 3 | 18°52 | 21° 6 | 20♌49  | 16°42 | 12°29 | 8♏38  | 8°47 | 0°53 | 26°R48 |
| W 3  | 2 49 31 | 10°37'12 | 11♏33 | 22°56 | 19°37 | 14°38 | 19° 5 | 21°13 | 20°49  | 16°45 | 12°30 | 8°38  | 8°44 | 1° 0 | 26°46  |
| T 4  | 2 53 28 | 11°37'03 | 23°45 | 24°15 | 20°52 | 15°13 | 19°17 | 21°20 | 20°48  | 16°47 | 12°31 | 8°38  | 8°41 | 1° 6 | 26°44  |
| F 5  | 2 57 24 | 12°36'57 | 6♏18  | 25°39 | 22° 6 | 15°49 | 19°30 | 21°27 | 20°48  | 16°49 | 12°33 | 8°36  | 8°38 | 1°13 | 26°42  |
| S 6  | 3 1 21  | 13°36'52 | 19°14 | 27° 5 | 23°21 | 16°24 | 19°42 | 21°35 | 20°47  | 16°51 | 12°34 | 8°32  | 8°35 | 1°20 | 26°40  |
| S 7  | 3 5 17  | 14°36'49 | 2♌37  | 28°34 | 24°36 | 16°59 | 19°55 | 21°42 | 20°47  | 16°54 | 12°35 | 8°26  | 8°32 | 1°26 | 26°39  |
| M 8  | 3 9 14  | 15°36'49 | 16°29 | 0♏ 5  | 25°51 | 17°34 | 20° 7 | 21°49 | 20°46  | 16°56 | 12°36 | 8°17  | 8°28 | 1°33 | 26°37  |
| T 9  | 3 13 10 | 16°36'50 | 0♏47  | 1°37  | 27° 5 | 18° 8 | 20°19 | 21°56 | 20°45  | 16°58 | 12°37 | 8° 6  | 8°25 | 1°40 | 26°35  |
| W10  | 3 17 7  | 17°36'54 | 15°27 | 3°11  | 28°20 | 18°43 | 20°32 | 22° 3 | 20°45  | 17° 0 | 12°38 | 7°54  | 8°22 | 1°46 | 26°34  |
| T 11 | 3 21 4  | 18°36'59 | 0♌20  | 4°46  | 29°35 | 19°18 | 20°44 | 22°11 | 20°44  | 17° 3 | 12°39 | 7°42  | 8°19 | 1°53 | 26°32  |
| F 12 | 3 25 0  | 19°37'07 | 15°19 | 6°21  | 0♏50  | 19°52 | 20°56 | 22°18 | 20°43  | 17° 5 | 12°40 | 7°33  | 8°16 | 2° 0 | 26°31  |
| S 13 | 3 28 57 | 20°37'16 | 0♌12  | 7°57  | 2° 5  | 20°27 | 21° 8 | 22°25 | 20°42  | 17° 7 | 12°41 | 7°26  | 8°13 | 2° 6 | 26°30  |
| S 14 | 3 32 53 | 21°37'26 | 14°54 | 9°34  | 3°20  | 21° 1 | 21°20 | 22°32 | 20°41  | 17° 9 | 12°42 | 7°22  | 8° 9 | 2°13 | 26°28  |
| M15  | 3 36 50 | 22°37'38 | 29°19 | 11°11 | 4°35  | 21°36 | 21°32 | 22°39 | 20°40  | 17°12 | 12°43 | 7°20  | 8° 6 | 2°20 | 26°27  |
| T 16 | 3 40 46 | 23°37'52 | 13♌24 | 12°48 | 5°50  | 22°10 | 21°44 | 22°47 | 20°39  | 17°14 | 12°44 | 7°D20 | 8° 3 | 2°26 | 26°26  |
| W17  | 3 44 43 | 24°38'07 | 27°10 | 14°25 | 7° 5  | 22°44 | 21°56 | 22°54 | 20°38  | 17°16 | 12°45 | 7°R20 | 8° 0 | 2°33 | 26°25  |
| T 18 | 3 48 40 | 25°38'23 | 10♌37 | 16° 3 | 8°20  | 23°18 | 22° 8 | 23° 1 | 20°37  | 17°18 | 12°46 | 7°19  | 7°57 | 2°40 | 26°23  |
| F 19 | 3 52 36 | 26°38'40 | 23°47 | 17°40 | 9°35  | 23°52 | 22°20 | 23° 8 | 20°36  | 17°21 | 12°47 | 7°16  | 7°53 | 2°46 | 26°22  |
| S 20 | 3 56 33 | 27°38'59 | 6♏43  | 19°17 | 10°50 | 24°26 | 22°31 | 23°15 | 20°35  | 17°23 | 12°47 | 7°10  | 7°50 | 2°53 | 26°21  |
| S 21 | 4 0 29  | 28°39'19 | 19°27 | 20°54 | 12° 5 | 25° 0 | 22°43 | 23°23 | 20°33  | 17°25 | 12°48 | 7° 2  | 7°47 | 3° 0 | 26°20  |
| M22  | 4 4 26  | 29°39'41 | 2♌ 0  | 22°31 | 13°20 | 25°34 | 22°55 | 23°30 | 20°32  | 17°27 | 12°49 | 6°51  | 7°44 | 3° 6 | 26°20  |
| T 23 | 4 8 22  | 0♌40'05  | 14°23 | 24° 7 | 14°35 | 26° 7 | 23° 6 | 23°37 | 20°31  | 17°29 | 12°49 | 6°39  | 7°41 | 3°13 | 26°19  |
| W24  | 4 12 19 | 1°40'30  | 26°36 | 25°44 | 15°51 | 26°41 | 23°18 | 23°44 | 20°29  | 17°32 | 12°50 | 6°26  | 7°38 | 3°20 | 26°18  |
| T 25 | 4 16 15 | 2°40'56  | 8♏41  | 27°20 | 17° 6 | 27°14 | 23°29 | 23°51 | 20°28  | 17°34 | 12°51 | 6°14  | 7°34 | 3°26 | 26°17  |
| F 26 | 4 20 12 | 3°41'24  | 20°38 | 28°56 | 18°21 | 27°48 | 23°40 | 23°58 | 20°26  | 17°36 | 12°51 | 6° 4  | 7°31 | 3°33 | 26°17  |
| S 27 | 4 24 9  | 4°41'54  | 2♌30  | 0♌32  | 19°36 | 28°21 | 23°52 | 24° 5 | 20°25  | 17°38 | 12°52 | 5°56  | 7°28 | 3°40 | 26°16  |
| S 28 | 4 28 5  | 5°42'25  | 14°17 | 2° 7  | 20°51 | 28°54 | 24° 3 | 24°13 | 20°23  | 17°40 | 12°53 | 5°51  | 7°25 | 3°46 | 26°15  |
| M29  | 4 32 2  | 6°42'58  | 26° 4 | 3°43  | 22° 7 | 29°27 | 24°14 | 24°20 | 20°22  | 17°42 | 12°53 | 5°48  | 7°22 | 3°53 | 26°15  |
| T 30 | 4 35 58 | 7°43'33  | 7♏55  | 5♌18  | 23♏22 | 0♌ 0  | 24°25 | 24♏27 | 20°20  | 17♏45 | 12♏54 | 5°D48 | 7♏19 | 4♌ 0 | 26°R14 |

Delta T = 20m33s

DECEMBER 2455

00:00 UT

| Day  | Sid.t   | ☉        | ☽     | ♀     | ♂     | ♂     | ♂     | ♂     | ♂      | ♂     | ♂      | ♂     | ♂    | ♂    | ♂      |
|------|---------|----------|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|------|------|--------|
| W 1  | 4 39 55 | 8♌44'09  | 19♏52 | 6♌53  | 24♏37 | 0♌33  | 24°36 | 24♏34 | 20°R18 | 17♏47 | 12♏54  | 5♏48  | 7♏15 | 4♌ 6 | 26°R14 |
| T 2  | 4 43 51 | 9°44'47  | 2♏ 3  | 8°28  | 25°52 | 1° 6  | 24°47 | 24°41 | 20°16  | 17°49 | 12°54  | 5°49  | 7°12 | 4°13 | 26°R14 |
| F 3  | 4 47 48 | 10°45'26 | 14°31 | 10° 3 | 27° 8 | 1°39  | 24°58 | 24°48 | 20°15  | 17°51 | 12°55  | 5°R50 | 7° 9 | 4°20 | 26°13  |
| S 4  | 4 51 44 | 11°46'07 | 27°22 | 11°37 | 28°23 | 2°11  | 25° 9 | 24°55 | 20°13  | 17°53 | 12°55  | 5°48  | 7° 6 | 4°26 | 26°13  |
| S 5  | 4 55 41 | 12°46'50 | 10♌40 | 13°12 | 29°38 | 2°44  | 25°19 | 25° 2 | 20°11  | 17°55 | 12°55  | 5°45  | 7° 3 | 4°33 | 26°13  |
| M 6  | 4 59 38 | 13°47'34 | 24°27 | 14°46 | 0♌54  | 3°16  | 25°30 | 25° 9 | 20° 9  | 17°57 | 12°56  | 5°39  | 6°59 | 4°40 | 26°13  |
| T 7  | 5 3 34  | 14°48'20 | 8♏44  | 16°20 | 2° 9  | 3°48  | 25°40 | 25°16 | 20° 7  | 17°59 | 12°56  | 5°32  | 6°56 | 4°46 | 26°D13 |
| W 8  | 5 7 31  | 15°49'07 | 23°28 | 17°54 | 3°24  | 4°20  | 25°51 | 25°23 | 20° 5  | 18° 1 | 12°56  | 5°24  | 6°53 | 4°53 | 26°13  |
| T 9  | 5 11 27 | 16°49'56 | 8♌31  | 19°28 | 4°40  | 4°52  | 26° 1 | 25°30 | 20° 3  | 18° 3 | 12°56  | 5°16  | 6°50 | 5° 0 | 26°13  |
| F 10 | 5 15 24 | 17°50'46 | 23°44 | 21° 2 | 5°55  | 5°24  | 26°11 | 25°36 | 20° 1  | 18° 5 | 12°57  | 5° 9  | 6°47 | 5° 6 | 26°13  |
| S 11 | 5 19 20 | 18°51'37 | 8♌57  | 22°36 | 7°10  | 5°56  | 26°22 | 25°43 | 19°59  | 18° 7 | 12°57  | 5° 4  | 6°44 | 5°13 | 26°14  |
| S 12 | 5 23 17 | 19°52'29 | 23°59 | 24°10 | 8°26  | 6°28  | 26°32 | 25°50 | 19°57  | 18° 9 | 12°57  | 5° 2  | 6°40 | 5°20 | 26°14  |
| M13  | 5 27 13 | 20°53'22 | 8♏43  | 25°44 | 9°41  | 6°59  | 26°42 | 25°57 | 19°55  | 18°11 | 12°57  | 5°D 2 | 6°37 | 5°26 | 26°14  |
| T 14 | 5 31 10 | 21°54'15 | 23° 4 | 27°18 | 10°57 | 7°31  | 26°51 | 26° 4 | 19°52  | 18°13 | 12°57  | 5° 2  | 6°34 | 5°33 | 26°15  |
| W15  | 5 35 7  | 22°55'09 | 7♌ 0  | 28°52 | 12°12 | 8° 2  | 27° 1 | 26°10 | 19°50  | 18°15 | 12°R57 | 5° 4  | 6°31 | 5°40 | 26°15  |
| T 16 | 5 39 3  | 23°56'04 | 20°32 | 0♌26  | 13°28 | 8°33  | 27°11 | 26°17 | 19°48  | 18°17 | 12°57  | 5°R 5 | 6°28 | 5°46 | 26°15  |
| F 17 | 5 43 0  | 24°57'00 | 3♏41  | 2° 0  | 14°43 | 9° 4  | 27°20 | 26°24 | 19°46  | 18°19 | 12°57  | 5° 4  | 6°25 | 5°53 | 26°16  |
| S 18 | 5 46 56 | 25°57'56 | 16°30 | 3°34  | 15°58 | 9°35  | 27°30 | 26°30 | 19°43  | 18°21 | 12°57  | 5° 2  | 6°21 | 6° 0 | 26°17  |
| S 19 | 5 50 53 | 26°58'53 | 29° 4 | 5° 8  | 17°14 | 10° 5 | 27°39 | 26°37 | 19°41  | 18°23 | 12°57  | 4°58  | 6°18 | 6° 6 | 26°17  |
| M20  | 5 54 49 | 27°59'50 | 11♌24 | 6°42  | 18°29 | 10°36 | 27°48 | 26°43 | 19°39  | 18°25 | 12°57  | 4°53  | 6°15 | 6°13 | 26°18  |
| T 21 | 5 58 46 | 29° 0'48 | 23°34 | 8°16  | 19°45 | 11° 6 | 27°58 | 26°50 | 19°36  | 18°26 | 12°56  | 4°46  | 6°12 | 6°20 | 26°19  |
| W22  | 6 2 42  | 0♌ 1'47  | 5♏35  | 9°50  | 21° 0 | 11°37 | 28° 7 | 26°56 | 19°34  | 18°28 | 12°56  | 4°40  | 6° 9 | 6°26 | 26°20  |
| T 23 | 6 6 39  | 1° 2'46  | 17°31 | 11°24 | 22°16 | 12° 7 | 28°15 | 27° 3 | 19°32  | 18°30 | 12°56  | 4°33  | 6° 5 | 6°33 | 26°21  |
| F 24 | 6 10 36 | 2° 3'46  | 29°23 | 12°58 | 23°31 | 12°37 | 28°24 | 27° 9 | 19°29  | 18°32 | 12°56  | 4°28  | 6° 2 | 6°40 | 26°22  |
| S 25 | 6 14 32 | 3° 4'47  | 11♌12 | 14°32 | 24°47 | 13° 7 | 28°33 | 27°15 | 19°27  | 18°34 | 12°55  | 4°24  | 5°59 | 6°46 | 26°23  |
| S 26 | 6 18 29 | 4° 5'48  | 23° 0 | 16° 6 | 26° 2 | 13°36 | 28°41 | 27°22 | 19°24  | 18°35 | 12°55  | 4°21  | 5°56 | 6°53 | 26°24  |
| M27  | 6 22 25 | 5° 6'50  | 4♏50  | 17°40 | 27°17 | 14° 6 | 28°50 | 27°28 | 19°22  | 18°37 | 12°55  | 4°D21 | 5°53 | 7° 0 | 26°25  |
| T 28 | 6 26 22 | 6° 7'53  | 16°44 | 19°14 | 28°33 | 14°35 | 28°58 | 27°34 | 19°19  | 18°39 | 12°54  | 4°21  | 5°50 | 7° 6 | 26°26  |
| W29  | 6 30 18 | 7° 8'56  | 28°46 | 20°47 | 29°48 | 15° 4 | 29° 6 | 27°40 | 19°17  | 18°40 | 12°54  | 4°23  | 5°46 | 7°13 | 26°27  |
| T 30 | 6 34 15 | 8°10'00  | 10♏59 | 22°20 | 1♌ 4  | 15°33 | 29°14 | 27°46 | 19°14  | 18°42 | 12°54  | 4°25  | 5°43 | 7°20 | 26°29  |
| F 31 | 6 38 12 | 9♌11'05  | 23♏27 | 23♌53 | 2♌19  | 16° 2 | 29°22 | 27♏52 | 19°12  | 18♏43 | 12♏53  | 4°26  | 5°40 | 7°26 | 26°R30 |

Delta T = 20m33s

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