

KSIEŻYC

| d | Wsch. | Kulm. | Zach. | A _w | A _z | α | δ | D | F |
|--------------------|-------|-------|-------|----------------|----------------|-------------------|----------|------|-------|
| | λ=0° | | φ=50° | | | 0 ^h UT | | | |
| LIPIEC 2021 | | | | | | | | | |
| | h m | h m | h m | -° | +° | h m s | ° ' " | ' " | |
| 1 | — | 5 38 | 11 37 | — | 86 | 0 05 19 | - 4 49.5 | 30.4 | -0.59 |
| 2 | 0 07 | 6 20 | 12 45 | 91 | 95 | 0 49 57 | 0 29.7 | 30.0 | -0.49 |
| 3 | 0 23 | 7 00 | 13 52 | 99 | 103 | 1 33 44 | 5 41.5 | 29.8 | -0.39 |
| 4 | 0 38 | 7 42 | 15 00 | 107 | 111 | 2 17 40 | 10 36.5 | 29.6 | -0.30 |
| 5 | 0 56 | 8 25 | 16 07 | 114 | 118 | 3 02 38 | 15 06.1 | 29.5 | -0.22 |
| 6 | 1 18 | 9 09 | 17 15 | 121 | 124 | 3 49 21 | 19 00.8 | 29.5 | -0.15 |
| 7 | 1 44 | 9 57 | 18 20 | 126 | 129 | 4 38 16 | 22 10.2 | 29.5 | -0.09 |
| 8 | 2 19 | 10 47 | 19 21 | 130 | 132 | 5 29 30 | 24 23.4 | 29.7 | -0.04 |
| 9 | 3 02 | 11 38 | 20 14 | 132 | 132 | 6 22 42 | 25 30.6 | 29.8 | -0.01 |
| 10 | 3 57 | 12 31 | 20 58 | 131 | 130 | 7 17 05 | 25 24.3 | 30.0 | -0.00 |
| 11 | 5 01 | 13 23 | 21 33 | 128 | 125 | 8 11 37 | 24 02.0 | 30.3 | 0.01 |
| 12 | 6 12 | 14 14 | 22 00 | 123 | 119 | 9 05 20 | 21 26.5 | 30.5 | 0.04 |
| 13 | 7 27 | 15 03 | 22 23 | 116 | 111 | 9 57 38 | 17 45.3 | 30.8 | 0.09 |
| 14 | 8 42 | 15 50 | 22 42 | 108 | 103 | 10 48 23 | 13 09.7 | 31.1 | 0.16 |
| 15 | 9 59 | 16 37 | 23 00 | 98 | 94 | 11 37 59 | 7 52.7 | 31.4 | 0.24 |
| 16 | 11 16 | 17 24 | 23 17 | 89 | 84 | 12 27 07 | 2 08.4 | 31.7 | 0.34 |
| 17 | 12 35 | 18 12 | 23 36 | 79 | 75 | 13 16 45 | - 3 48.0 | 32.0 | 0.45 |
| 18 | 13 57 | 19 03 | 23 58 | 70 | 66 | 14 07 58 | - 9 39.6 | 32.2 | 0.57 |
| 19 | 15 21 | 19 58 | — | 61 | — | 15 01 49 | -15 06.9 | 32.5 | 0.68 |
| 20 | 16 45 | 20 57 | 0 25 | 54 | 58 | 15 59 07 | -19 47.7 | 32.7 | 0.78 |
| 21 | 18 05 | 21 59 | 1 01 | 49 | 52 | 17 00 01 | -23 18.3 | 32.8 | 0.87 |
| 22 | 19 13 | 23 02 | 1 50 | 48 | 48 | 18 03 45 | -25 17.1 | 32.8 | 0.94 |
| 23 | 20 06 | — | 2 53 | 50 | 48 | 19 08 28 | -25 31.3 | 32.6 | 0.98 |
| 24 | 20 46 | 0 04 | 4 07 | 55 | 51 | 20 11 51 | -24 01.2 | 32.4 | 1.00 |
| 25 | 21 15 | 1 03 | 5 28 | 62 | 57 | 21 11 58 | -21 00.7 | 32.1 | -0.99 |
| 26 | 21 38 | 1 56 | 6 48 | 70 | 65 | 22 07 55 | -16 51.3 | 31.7 | -0.95 |
| 27 | 21 56 | 2 46 | 8 05 | 79 | 74 | 22 59 47 | -11 56.8 | 31.2 | -0.90 |
| 28 | 22 12 | 3 31 | 9 19 | 87 | 83 | 23 48 15 | - 6 37.8 | 30.8 | -0.82 |
| 29 | 22 28 | 4 14 | 10 30 | 96 | 92 | 0 34 19 | - 1 11.2 | 30.4 | -0.74 |
| 30 | 22 43 | 4 56 | 11 39 | 104 | 100 | 1 19 01 | 4 09.9 | 30.1 | -0.65 |
| 31 | 23 00 | 5 38 | 12 47 | 112 | 108 | 2 03 23 | 9 15.4 | 29.8 | -0.55 |

| | | | | | | |
|------------------|--------|---------------------------------|--------|-------------------|---------|-----|
| ostatnia kwadra: | 1 VII | 21 ^h 11 ^m | 4 VII | 15.5 ^h | Uran | 2°N |
| nów: | 10 VII | 1 ^h 17 ^m | 8 VII | 4.7 ^h | Merkury | 4°S |
| pierwsza kwadra: | 17 VII | 10 ^h 11 ^m | 12 VII | 9.2 ^h | Wenus | 3°S |
| pełnia: | 24 VII | 2 ^h 37 ^m | 12 VII | 10.2 ^h | Mars | 4°S |
| ostatnia kwadra: | 31 VII | 13 ^h 16 ^m | 24 VII | 16.7 ^h | Saturn | 4°N |
| | | | 26 VII | 1.4 ^h | Jowisz | 4°N |
| apogeum: | 5 VII | 14 ^h 46 ^m | 27 VII | 17.8 ^h | Neptun | 4°N |
| perygeum: | 21 VII | 10 ^h 27 ^m | | | | |