

### Jasne planetoidy przebywające w pobliżu opozycji w 2015 roku

| Nazwa             | a<br>[j.a.] | e      | i      | Typ | S<br>[km] | P      | H(0) | Data max.<br>jasności | m <sub>max</sub> | Nr<br>mapy |
|-------------------|-------------|--------|--------|-----|-----------|--------|------|-----------------------|------------------|------------|
| ( 29) Amphitrite  | 2.555       | 0.0722 | 6.089  | S   | 212       | 5.390  | 5.85 | 28 X                  | 8.7              | 2, 4       |
| ( 64) Angelina    | 2.682       | 0.1268 | 1.310  | E   | 60        | 8.752  | 7.67 | 21 IV                 | 10.9             | 9          |
| (129) Antigone    | 2.869       | 0.2111 | 12.263 | UX  | 125       | 4.957  | 7.07 | 25 VI                 | 9.9              | 12         |
| ( 43) Ariadne     | 2.203       | 0.1687 | 3.471  | S   | 66        | 5.753  | 7.93 | 17 XI                 | 10.8             | 4, 5       |
| ( 5) Astraea      | 2.574       | 0.1911 | 5.368  | S   | 119       | 16.812 | 6.85 | 31 XII                | 10.0             | 7          |
| (230) Athamantis  | 2.382       | 0.0616 | 9.443  | S   | 109       | 23.990 | 7.35 | 7 XII                 | 10.0             | 5          |
| ( 1) Ceres        | 2.767       | 0.0758 | 10.594 | G?  | 848       | 9.076  | 3.34 | 25 VII                | 7.5              | 13         |
| (511) Davida      | 3.167       | 0.1884 | 15.944 | C   | 326       | 5.167  | 6.22 | 17 III                | 10.8             | 8          |
| (349) Dembowska   | 2.923       | 0.0916 | 8.247  | r   | 140       | 4.701  | 5.93 | 11 V                  | 10.2             | 9, 10      |
| (106) Dione       | 3.176       | 0.1671 | 4.597  | G   | 147       | —      | 7.41 | 2 XI                  | 10.9             | 2, 3, 4    |
| ( 13) Egeria      | 2.577       | 0.0838 | 16.538 | G   | 208       | 7.045  | 6.74 | 13 IX                 | 10.7             | 14, 15     |
| (354) Eleonora    | 2.799       | 0.1155 | 18.400 | S   | 155       | 4.277  | 6.44 | 2 III                 | 9.6              | 8          |
| ( 15) Eunomia     | 2.644       | 0.1875 | 11.739 | S   | 255       | 6.081  | 5.28 | 8 X                   | 7.9              | 1, 2       |
| ( 27) Euterpe     | 2.347       | 0.1723 | 1.584  | S   | 116       | 8.500  | 7.00 | 27 XII                | 8.5              | 6          |
| ( 8) Flora        | 2.202       | 0.1562 | 5.888  | S   | 136       | 12.348 | 6.49 | 15 II                 | 9.1              | 7, 8       |
| ( 19) Fortuna     | 2.442       | 0.1587 | 1.573  | C   | 198       | 7.445  | 7.13 | 21 IV                 | 10.9             | 9          |
| ( 74) Galatea     | 2.778       | 0.2400 | 4.077  | C   | 119       | 9.000  | 8.66 | 28 IX                 | 10.8             | 1, 2       |
| ( 40) Harmonia    | 2.267       | 0.0468 | 4.258  | S   | 108       | 9.136  | 7.00 | 31 XII                | 10.5             | 7          |
| ( 6) Hebe         | 2.425       | 0.2015 | 14.748 | S   | 185       | 7.275  | 5.71 | 1 I                   | 8.9              | 3          |
| (100) Hekate      | 3.089       | 0.1682 | 6.430  | SU  | 89        | 10.000 | 7.67 | 30 VII                | 10.9             | 13         |
| (532) Herculina   | 2.773       | 0.1759 | 16.316 | S   | 222       | 9.408  | 5.81 | 16 V                  | 9.1              | 9, 10      |
| (346) Hermentaria | 2.796       | 0.0993 | 8.759  | S   | 107       | 26.000 | 7.13 | 1 I                   | 10.7             | 6          |
| (135) Hertha      | 2.427       | 0.2077 | 2.306  | M   | 79        | 8.400  | 8.23 | 10 VII                | 9.9              | 13         |
| ( 69) Hesperia    | 2.976       | 0.1703 | 8.586  | M   | 138       | 5.655  | 7.05 | 16 I                  | 10.3             | 6          |
| ( 10) Hygiea      | 3.138       | 0.1155 | 3.842  | C   | 407       | 17.495 | 5.43 | 1 I                   | 10.1             | 6          |
| ( 14) Irene       | 2.587       | 0.1660 | 9.118  | S   | 150       | 9.350  | 6.30 | 28 X                  | 10.4             | 1, 2, 3    |
| ( 7) Iris         | 2.387       | 0.2306 | 5.524  | S   | 200       | 7.135  | 5.51 | 7 III                 | 8.9              | 8          |
| ( 89) Julia       | 2.552       | 0.1827 | 16.140 | S   | 152       | 11.380 | 6.60 | 5 II                  | 10.5             | 6          |
| ( 3) Juno         | 2.670       | 0.2553 | 12.981 | S   | 234       | 7.210  | 5.33 | 26 I                  | 8.2              | 7          |
| ( 22) Kalliope    | 2.911       | 0.0998 | 13.716 | M   | 181       | 4.148  | 6.45 | 8 IX                  | 10.5             | 14, 15     |
| ( 39) Laetitia    | 2.769       | 0.1140 | 10.380 | S   | 150       | 5.138  | 6.00 | 7 XI                  | 9.4              | 3, 4       |
| ( 68) Leto        | 2.781       | 0.1872 | 7.972  | S   | 123       | 14.848 | 6.78 | 30 VII                | 9.8              | 13         |
| (356) Liguria     | 2.759       | 0.2375 | 8.223  | C   | 131       | 31.820 | 8.22 | 18 X                  | 10.9             | 2          |
| ( 21) Lutetia     | 2.434       | 0.1646 | 3.064  | M   | 96        | 8.173  | 7.35 | 19 VIII               | 9.3              | 14         |
| ( 20) Massalia    | 2.409       | 0.1430 | 0.708  | S   | 146       | 8.098  | 6.50 | 21 IV                 | 9.3              | 9          |
| ( 18) Melpomene   | 2.295       | 0.2188 | 10.133 | S   | 141       | 11.572 | 6.51 | 1 V                   | 10.3             | 9          |
| ( 9) Metis        | 2.386       | 0.1224 | 5.575  | S   | 158       | 5.079  | 6.28 | 8 IX                  | 9.2              | 14, 15     |
| (192) Nausikaa    | 2.403       | 0.2461 | 6.814  | S   | 103       | 13.622 | 7.13 | 17 XI                 | 9.0              | 4, 5       |
| ( 51) Nemausa     | 2.365       | 0.0670 | 9.980  | G   | 148       | 7.786  | 7.35 | 10 VI                 | 10.4             | 10, 12     |
| ( 71) Niobe       | 2.757       | 0.1744 | 23.267 | S   | 83        | 28.800 | 7.30 | 5 II                  | 10.7             | 7          |
| ( 44) Nysa        | 2.424       | 0.1488 | 3.707  | E   | 71        | 6.422  | 7.03 | 22 III                | 9.4              | 8          |
| ( 49) Pales       | 3.094       | 0.2275 | 3.174  | C   | 150       | 10.400 | 7.80 | 27 XI                 | 10.8             | 4, 5       |
| (914) Palisana    | 2.458       | 0.2145 | 25.206 | T   | 77        | —      | 8.76 | 31 V                  | 10.9             | 12         |
| ( 2) Pallas       | 2.772       | 0.2313 | 34.841 | m   | 498       | 7.811  | 4.13 | 31 V                  | 9.4              | 11         |
| (471) Papagena    | 2.889       | 0.2319 | 14.977 | S   | 134       | 7.113  | 6.73 | 18 X                  | 9.5              | 1, 3       |
| ( 11) Parthenope  | 2.453       | 0.0998 | 4.630  | S   | 153       | 7.830  | 6.55 | 26 IV                 | 9.8              | 9          |
| (201) Penelope    | 2.678       | 0.1812 | 5.758  | M   | 68        | 3.747  | 8.43 | 8 IX                  | 10.7             | 14, 15     |
| ( 32) Pomona      | 2.587       | 0.0802 | 5.524  | S   | 81        | 9.443  | 7.56 | 20 VI                 | 10.7             | 10, 12     |
| ( 16) Psyche      | 2.923       | 0.1364 | 3.099  | M   | 253       | 4.196  | 5.90 | 7 XII                 | 9.4              | 5          |
| (386) Siegena     | 2.897       | 0.1711 | 20.255 | C   | 165       | 9.763  | 7.43 | 2 XI                  | 10.9             | 3          |
| ( 23) Thalia      | 2.625       | 0.2354 | 10.115 | S   | 108       | 12.308 | 6.95 | 1 I                   | 10.0             | 4, 5       |
| ( 17) Thetis      | 2.472       | 0.1326 | 5.591  | S   | 90        | 12.275 | 7.76 | 7 III                 | 10.9             | 8          |
| (405) Thia        | 2.586       | 0.2425 | 11.939 | C   | 125       | 10.080 | 8.46 | 31 V                  | 10.4             | 10, 12     |
| (115) Thyra       | 2.380       | 0.1919 | 11.600 | S   | 80        | 7.244  | 7.51 | 31 XII                | 10.4             | 7          |

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|------------------|-------------|--------|--------|-----|-----------|--------|------|-----------------------|------------------|------------|
| ( 92) Undina     | 3.186       | 0.1038 | 9.931  | M   | 126       | 15.940 | 6.61 | 20 VI                 | 10.8             | 10, 12     |
| (306) Unitas     | 2.358       | 0.1512 | 7.278  | S   | 47        | 8.750  | 8.96 | 10 VII                | 10.9             | 13         |
| ( 30) Urania     | 2.366       | 0.1268 | 2.098  | S   | 100       | 13.686 | 7.57 | 27 XII                | 10.6             | 6, 7       |
| ( 4) Vesta       | 2.362       | 0.0887 | 7.141  | r   | 468       | 5.342  | 3.20 | 28 IX                 | 6.2              | 1, 15      |
| (747) Winchester | 3.001       | 0.3404 | 18.167 | C   | 172       | 9.400  | 7.69 | 7 XII                 | 10.3             | 16         |
| (654) Zelinda    | 2.297       | 0.2312 | 18.127 | C   | 127       | 31.900 | 8.52 | 31 XII                | 10.5             | 7          |