

Vier Asteroiden sind an diesem Wochenende auf dem Weg zur Erde. Der größte unter ihnen, Asteroid 2020 DP4, wird am 22. März um 14:34 Uhr EDT (19:34 MEZ, Berlin) in einer Entfernung von etwa 0,00903 astronomischen Einheiten oder 840.000 Meilen (1,35 Millionen Kilometer) die Erde passieren. Laut CNEOS (NASA-Zentrum für erdnahe Objektstudien) hat dieses Weltraumgestein einen geschätzten Durchmesser von 180 Fuß (55 Meter). Es bewegt sich derzeit mit einer Geschwindigkeit von 18.000 Meilen (29.000 Kilometer) pro Stunde durch das Sonnensystem.

*EDT Early Decay Time ist die Sommerzeit der Zonenzeit EST in Nord- und Südamerika, vier Stunden hinter der Mitteleuropäischen Zeit (MEZ, Greenwich), fünf Stunden hinter der Berliner Zeit.*

**(2020 DP4)**

| <b>Classification:</b> Apollo [NEO] <b>SPK-ID:</b> 54006021<br><a href="#">[ Ephemeris ]</a>   <a href="#">Orbit Diagram</a>   <a href="#">Orbital Elements</a>   <a href="#">Mission Design</a>   <a href="#">Physical Parameters</a>   <a href="#">Close-Approach Data</a>   |  |                          |                          |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
|--|--|--------------------------|--------------------------|-------|---|-------------------|------------|--|---|------------------|------------|----|---|-------------------|------------|----|---|------------------|------------|-----|------|-------------------|------------|-----|------|-------------------|------------|-----|---|-------------------|-----------|-----|----------------|--|-----------|-----|--------|---------------------------|----------------------|---------|---|-------------------|------------|-------|---|-------------------|------------|----|--|---------------------|-----|---------------|---------|-----------------|------------|----------------|------------|------------------|-------|-----------------|-----------|----------------|---|------------------|--------|--------|-----|----------|------------|---------------|----------------------|
| <a href="#">[ show orbit diagram ]</a>   |  |                          |                          |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| <b>Orbital Elements at Epoch 2459000.5 (2020-May-31.0) TDB</b><br>Reference: <a href="#">JPL 13 (heliocentric ecliptic J2000)</a> <table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr> <th style="text-align: left;">Element</th> <th style="text-align: left;">Value</th> <th style="text-align: left;">Uncertainty (1-sigma)</th> <th style="text-align: left;">Units</th> </tr> </thead> <tbody> <tr> <td>e</td> <td>.2810901056471691</td> <td>0.00016122</td> <td></td> </tr> <tr> <td>a</td> <td>1.21980541897085</td> <td>0.00020229</td> <td>au</td> </tr> <tr> <td>q</td> <td>.8769301848833444</td> <td>5.1232e-05</td> <td>au</td> </tr> <tr> <td>i</td> <td>1.45073782395561</td> <td>0.00068528</td> <td>deg</td> </tr> <tr> <td>node</td> <td>2.556220790564897</td> <td>0.00028235</td> <td>deg</td> </tr> <tr> <td>peri</td> <td>243.8905379057471</td> <td>0.00066648</td> <td>deg</td> </tr> <tr> <td>M</td> <td>13.11338166670381</td> <td>0.0011736</td> <td>deg</td> </tr> <tr> <td>t<sub>p</sub></td> <td>2458982.575524132304<br/>(2020-May-13.07552413)</td> <td>0.0060622</td> <td>TDB</td> </tr> <tr> <td>period</td> <td>492.0783575418265<br/>1.35</td> <td>0.12241<br/>0.0003351</td> <td>d<br/>yr</td> </tr> <tr> <td>n</td> <td>.7315908015105096</td> <td>0.00018199</td> <td>deg/d</td> </tr> <tr> <td>Q</td> <td>1.562680653058356</td> <td>0.00025915</td> <td>au</td> </tr> </tbody> </table> | Element  | Value                    | Uncertainty (1-sigma)    | Units | e | .2810901056471691 | 0.00016122 |  | a | 1.21980541897085 | 0.00020229 | au | q | .8769301848833444 | 5.1232e-05 | au | i | 1.45073782395561 | 0.00068528 | deg | node | 2.556220790564897 | 0.00028235 | deg | peri | 243.8905379057471 | 0.00066648 | deg | M | 13.11338166670381 | 0.0011736 | deg | t <sub>p</sub> | 2458982.575524132304<br>(2020-May-13.07552413) | 0.0060622 | TDB | period | 492.0783575418265<br>1.35 | 0.12241<br>0.0003351 | d<br>yr | n | .7315908015105096 | 0.00018199 | deg/d | Q | 1.562680653058356 | 0.00025915 | au | <b>Orbit Determination Parameters</b> <table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <tbody> <tr> <td># obs. used (total)</td> <td>115</td> </tr> <tr> <td>data-arc span</td> <td>23 days</td> </tr> <tr> <td>first obs. used</td> <td>2020-02-27</td> </tr> <tr> <td>last obs. used</td> <td>2020-03-21</td> </tr> <tr> <td>planetary ephem.</td> <td>DE431</td> </tr> <tr> <td>SB-pert. ephem.</td> <td>SB431-N16</td> </tr> <tr> <td>condition code</td> <td>6</td> </tr> <tr> <td>norm. resid. RMS</td> <td>.40813</td> </tr> <tr> <td>source</td> <td>ORB</td> </tr> <tr> <td>producer</td> <td>Otto Matic</td> </tr> <tr> <td>solution date</td> <td>2020-Mar-21 06:54:43</td> </tr> </tbody> </table> | # obs. used (total) | 115 | data-arc span | 23 days | first obs. used | 2020-02-27 | last obs. used | 2020-03-21 | planetary ephem. | DE431 | SB-pert. ephem. | SB431-N16 | condition code | 6 | norm. resid. RMS | .40813 | source | ORB | producer | Otto Matic | solution date | 2020-Mar-21 06:54:43 |
| Element  | Value  | Uncertainty (1-sigma)    | Units                    |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| e  | .2810901056471691                              | 0.00016122               |                          |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| a  | 1.21980541897085                               | 0.00020229               | au                       |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| q  | .8769301848833444                              | 5.1232e-05               | au                       |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| i  | 1.45073782395561                               | 0.00068528               | deg                      |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| node   | 2.556220790564897                              | 0.00028235               | deg                      |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| peri   | 243.8905379057471                              | 0.00066648               | deg                      |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| M  | 13.11338166670381                              | 0.0011736                | deg                      |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| t <sub>p</sub>   | 2458982.575524132304<br>(2020-May-13.07552413) | 0.0060622                | TDB                      |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| period   | 492.0783575418265<br>1.35                      | 0.12241<br>0.0003351     | d<br>yr                  |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| n  | .7315908015105096                              | 0.00018199               | deg/d                    |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| Q  | 1.562680653058356                              | 0.00025915               | au                       |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| # obs. used (total)  | 115  |                          |                          |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| data-arc span  | 23 days  |                          |                          |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| first obs. used  | 2020-02-27                                     |                          |                          |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| last obs. used   | 2020-03-21                                     |                          |                          |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| planetary ephem.   | DE431  |                          |                          |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| SB-pert. ephem.  | SB431-N16                                      |                          |                          |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| condition code   | 6  |                          |                          |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| norm. resid. RMS   | .40813   |                          |                          |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| source   | ORB  |                          |                          |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| producer   | Otto Matic                                     |                          |                          |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| solution date  | 2020-Mar-21 06:54:43                           |                          |                          |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| <b>Additional Information</b> <table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <tbody> <tr> <td>Earth MOID = .000301547 au</td> </tr> <tr> <td>Jupiter MOID = 3.4604 au</td> </tr> <tr> <td>T<sub>jup</sub> = 5.195</td> </tr> </tbody> </table>   | Earth MOID = .000301547 au                     | Jupiter MOID = 3.4604 au | T <sub>jup</sub> = 5.195 |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| Earth MOID = .000301547 au   |  |                          |                          |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| Jupiter MOID = 3.4604 au   |  |                          |                          |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |
| T <sub>jup</sub> = 5.195   |  |                          |                          |       |   |                   |            |  |   |                  |            |    |   |                   |            |    |   |                  |            |     |      |                   |            |     |      |                   |            |     |   |                   |           |     |                |  |           |     |        |                           |                      |         |   |                   |            |       |   |                   |            |    |  |                     |     |               |         |                 |            |                |            |                  |       |                 |           |                |   |                  |        |        |     |          |            |               |                      |

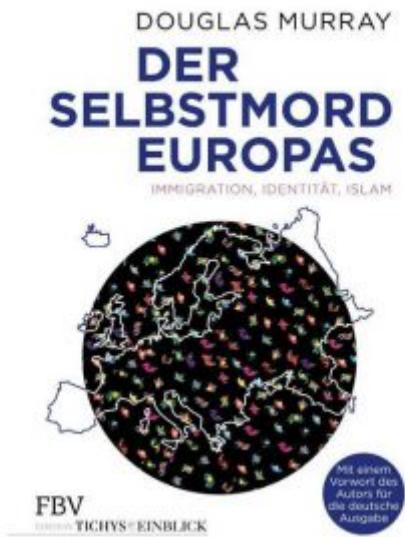
<https://www.ibtimes.com/nasa-spots-4-asteroids-headed-earth-weekend-2943375>

Der Asteroid, der am 30. Juni 1908 in der einsamen Tunguska-Region in Sibirien einschlug, hatte einen geschätzten Durchmesser von 40 Metern. Die Explosion fegte Millionen Bäume auf einer Fläche fast so groß wie das Saarland weg. Aufgrund dieses Ereignisses riefen die Vereinten Nationen 2016 den 30. Juni zum Internationalen Asteroidentag aus.

Die letzte atmosphärische Explosion eines Asteroiden fand 2013 über der Stadt

Tscheljabinsk in Russland statt. Sie erzeugte einen Blitz, der 30-mal heller als die Sonne war. Er führte in 180 Fällen zu Augenschmerzen und in 70 Fällen zu vorübergehender Blitzblindheit.

Als Asteroiden bezeichnen Weltraumexperten astronomische Kleinkörper mit einem Durchmesser ab einem Meter, die die Sonne umrunden. „Ein-Meter-Objekte treffen uns regelmäßig, das kommt mehrfach im Jahr vor“, sagt Jehn. Bei den Objekten bis 100 Meter Durchmesser gehen Schätzungen von rund 40.000 Brocken aus, von denen nach Esa-Angaben erst rund 20 Prozent entdeckt wurden.



CNEOS gibt an, dass am 29. April um 4:56 Uhr EST (Eastern Standard Time (North America), 9:56 Uhr deutscher Zeit) ein Asteroid die Erde in etwa 6,5 Millionen Kilometern und mit einer Geschwindigkeit von 31.320 Kilometern pro Stunde passieren wird. Er misst bis zu 4 Kilometer in der Breite. Der Asteroid ist der NASA zufolge “groß genug, um globale Effekte zu verursachen”.

## Quellen:

- <https://ssd.jpl.nasa.gov/sbdb.cgi?sstr=2020%20DP4>
- <https://www.ibtimes.com/nasa-spots-4-asteroids-headed-earth-weekend-29433>

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- <https://unserplanet.net/nasa-warnt-ein-asteroid-konnte-diese-woche-eine-atmospharische-explosion-uber-der-erde-auslosen/>
- [https://www.t-online.de/nachrichten/wissen/id\\_86010114/internationaler-asteroidentag-die-gefahr-aus-dem-all-asteroiden-auf-kollisionskurs.html](https://www.t-online.de/nachrichten/wissen/id_86010114/internationaler-asteroidentag-die-gefahr-aus-dem-all-asteroiden-auf-kollisionskurs.html)

*Titelfoto: TBIT, pixabay*

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(Bitte beachten Sie unseren [Datenschutzhinweis](#).)

[embedyt] https://www.youtube.com/watch?v=IPnpi2iRDII[/embedyt]



Werbung

