MPEC 2021-Y58 : 2021 YJ

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2021 YJ

Observations:

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     K21Y00J* C2021 12 26.24337800 11 29.98 +35 31 21.8          16.93oVEY058T08
     K21Y00J  C2021 12 26.24660800 11 33.05 +35 30 33.7          16.96oVEY058T08
     K21Y00J  C2021 12 26.25310000 11 39.25 +35 28 56.9          16.90oVEY058T08
     K21Y00J  C2021 12 26.27487600 12 00.07 +35 23 32.5          17.32oVEY058T08
     K21Y00J  C2021 12 26.36637400 13 28.29 +35 00 30.3          18.02oVEY058T08
     K21Y00J  C2021 12 26.36683400 13 28.81 +35 00 22.4          17.88oVEY058T08
     K21Y00J  C2021 12 26.36729400 13 29.19 +35 00 15.5          17.93oVEY058T08
     K21Y00J  C2021 12 26.36775500 13 29.66 +35 00 09.4          17.89oVEY058T08
     K21Y00J  C2021 12 26.36821500 13 30.15 +35 00 02.3          18.22oVEY058T08
     K21Y00J  C2021 12 26.41077 00 14 16.88 +34 49 27.7          17.7 RrEY058P93
     K21Y00J  C2021 12 26.41201 00 14 18.07 +34 49 08.6          17.7 RrEY058P93
     K21Y00J  C2021 12 26.41927 00 14 25.03 +34 47 18.8          17.5 RrEY058P93
     K21Y00J KC2021 12 26.61614600 17 38.925+33 56 37.70         17.7 GXEY058N82
     K21Y00J KC2021 12 26.62364600 17 46.186+33 54 40.66         16.3 GXEY058N82
     K21Y00J KC2021 12 26.63115200 17 53.495+33 52 42.99         17.6 GXEY058N82
     K21Y00J KC2021 12 26.68120 00 18 46.91 +33 39 45.8          16.7 RVEY058B15
     K21Y00J KC2021 12 26.68367 00 18 49.28 +33 39 07.4          16.7 RVEY058B15
     K21Y00J KC2021 12 26.68604 00 18 51.57 +33 38 30.5          16.6 RVEY058B15
     K21Y00J KC2021 12 26.68722 00 18 52.73 +33 38 11.9          16.6 RVEY058B15
     K21Y00J KC2021 12 26.69357 00 18 58.46 +33 36 37.2          16.9 GXEY058G02
     K21Y00J KC2021 12 26.69629 00 19 01.06 +33 35 54.5                GXEY058G02
     K21Y00J KC2021 12 26.69900 00 19 03.71 +33 35 12.1                GXEY058G02
     K21Y00J KC2021 12 26.70204 00 19 06.64 +33 34 23.6                GXEY058G02
     K21Y00J  C2021 12 26.74261 00 19 45.67 +33 23 46.1          17.1 RoEY058K88
     K21Y00J  C2021 12 26.74303 00 19 46.08 +33 23 39.4          17.2 RoEY058K88
     K21Y00J  C2021 12 26.74346 00 19 46.50 +33 23 32.8          17.2 RoEY058K88
     K21Y00J  C2021 12 26.74388 00 19 46.91 +33 23 26.0          17.3 RoEY058K88
     K21Y00J  C2021 12 26.74430 00 19 47.31 +33 23 19.3          17.2 RoEY058K88
     K21Y00J  C2021 12 26.74472 00 19 47.74 +33 23 12.6          17.3 RoEY058K88
     K21Y00J  C2021 12 26.74515 00 19 48.13 +33 23 05.8          17.3 RoEY058K88
     K21Y00J  C2021 12 26.74557 00 19 48.54 +33 22 59.2          17.2 RoEY058K88
     K21Y00J  C2021 12 26.74599 00 19 48.95 +33 22 52.3          17.2 RoEY058K88
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     K21Y00J  C2021 12 26.74683 00 19 49.76 +33 22 39.2          17.2 RoEY058K88
     K21Y00J  C2021 12 26.74725 00 19 50.17 +33 22 32.5          17.3 RoEY058K88
     K21Y00J  C2021 12 26.74768 00 19 50.57 +33 22 25.7          17.2 RoEY058K88
     K21Y00J  C2021 12 26.74810 00 19 50.98 +33 22 18.7          17.2 RoEY058K88
     K21Y00J  C2021 12 26.74853 00 19 51.40 +33 22 12.3          17.3 RoEY058K88
     K21Y00J KC2021 12 26.79060200 20 33.04 +33 11 10.6          17.1 GVEY058C95
     K21Y00J KC2021 12 26.79381900 20 36.08 +33 10 19.1          17.9 GVEY058C95
     K21Y00J KC2021 12 26.79703100 20 39.12 +33 09 28.5          17.0 GVEY058C95
     K21Y00J KC2021 12 26.80025500 20 42.35 +33 08 36.6          17.1 GVEY058C95
     K21Y00J KC2021 12 26.96298300 23 22.63 +32 26 20.3          16.5 GXEY058Y00
     K21Y00J KC2021 12 26.96681300 23 26.29 +32 25 17.7          16.6 GXEY058Y00
     K21Y00J KC2021 12 26.97053200 23 29.87 +32 24 16.3          16.5 GXEY058Y00
     K21Y00J mC2021 12 27.07745900 25 19.00 +31 54 05.4          17.72GVEY058I52
     K21Y00J mC2021 12 27.07770400 25 19.23 +31 54 01.3          17.75GVEY058I52
     K21Y00J mC2021 12 27.07794900 25 19.47 +31 53 57.3          17.70GVEY058I52
     K21Y00J  C2021 12 27.13088600 26 10.29 +31 39 17.8          17.15GVEY058703
     K21Y00J  C2021 12 27.13660300 26 15.80 +31 37 42.3          17.15GVEY058703
     K21Y00J  C2021 12 27.14232800 26 21.31 +31 36 06.4          17.14GVEY058703
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     K21Y00J  C2021 12 27.14804700 26 26.83 +31 34 30.6          17.04GVEY058703
     K21Y00J  C2021 12 27.48578100 32 02.19 +29 58 44.8          17.7 GVEY058900
     K21Y00J  C2021 12 27.48823600 32 04.55 +29 58 02.1          17.8 GVEY058900
     K21Y00J  C2021 12 27.68807400 35 27.51 +28 59 23.8                VEY058246
     K21Y00J  C2021 12 27.68829400 35 27.67 +28 59 19.3          17.1 GVEY058246
     K21Y00J  C2021 12 27.68851500 35 27.88 +28 59 16.0                VEY058246
     K21Y00J  C2021 12 27.68862500 35 27.99 +28 59 13.5          17.4 GVEY058246
     K21Y00J  C2021 12 27.68873500 35 28.08 +28 59 11.3                VEY058246
     K21Y00J KC2021 12 27.80426 00 37 20.74 +28 24 59.6          16.5 GXEY058J57
     K21Y00J KC2021 12 27.80604 00 37 22.45 +28 24 27.6          16.3 GXEY058J57
     K21Y00J KC2021 12 27.80771 00 37 24.06 +28 23 57.6          16.2 GXEY058J57

Observer details:
246 Klet Observatory-KLENOT.  Observers M. Tichy, J. Ticha, M. Honkova.
    Measurer M. Tichy.  1.06-m f/2.7 reflector + 2048x2048 CCD.
703 Catalina Sky Survey.  Observer H. Groeller.  Measurers E. J. Christensen,
    G. A. Farneth, D. C. Fuls, A. R. Gibbs, A. D. Grauer, H. Groeller, R. A.
    Kowalski, S. M. Larson, G. J. Leonard, D. Rankin, R. L. Seaman, F. C.
    Shelly, K. W. Wierzchos.  0.68-m Schmidt + 10K CCD.
900 Moriyama.  Observer Y. Ikari.  0.26-m f/7.0 reflector + CCD.
B15 Inastars Observatory, Potsdam (since 2006).  Observer B. Thinius.  0.36-m
    f/5.6 Schmidt-Cassegrain + CCD.
C95 SATINO Remote Observatory, Haute Provence.  Observer J. Jahn.  0.60-m
    f/3.2 Newtonian reflector + CCD.
G02 KYSUCE Observatory, Kysucke Nove Mesto.  Observer M. Urbanik.  0.40-m
    f/5.3 Corrected Dall-Kirkham + CCD.
I52 Steward Observatory, Mt. Lemmon Station.  Observer H. Groeller.  Measurers
    E. J. Christensen, G. A. Farneth, D. C. Fuls, A. R. Gibbs, A. D. Grauer,
    H. Groeller, R. A. Kowalski, S. M. Larson, G. J. Leonard, D. Rankin, R. L.
    Seaman, F. C. Shelly, K. W. Wierzchos.
J57 Centro Astronomico Alto Turia, Valencia.  Observer A. Fornas.  Measurers
    A. Fornas, G. Fornas, E. Arce, V. Mas.  0.43-m f/6.8 reflector + CCD.
K88 GINOP-KHK, Piszkesteto.  Observer K. Sarneczky.  0.60-m Schmidt + CCD.
N82 Multa Observatory.  Observer L. Elenin.  0.4-m f/1.25 reflector + CCD.
P93 Space Tracking and Communications Center, JAXA.  Observers S. Okumura, S.
    Urakawa.  1.0-m f/3.0 reflector + CCD.
T08 ATLAS-MLO, Mauna Loa.  Observers L. Denneau, R. Siverd, J. Tonry, H.
    Weiland.  Measurers L. Denneau, N. Erasmus, A. Fitzsimmons, A. Lawrence,
    J. Robinson, R. Siverd, J. Tonry, H. Weiland.  0.5-m reflector + CCD.
Y00 SONEAR Observatory, Oliveira.  Observer C. Jacques.  0.28-m f/2.2
    astrograph + CCD.

Orbital elements:
2021 YJ                                          PHA, Earth MOID = 0.0283 AU
Epoch 2022 Jan. 21.0 TT = JDT 2459600.5               Veres
M   6.66887             (2000.0)            P              Q
n   0.28012528     Peri.  176.45483     -0.02203396     -0.84511770
a   2.3133136      Node   274.25813     +0.90358177     +0.21180206
e   0.5629732      Incl.   32.38491     +0.42784867     -0.49083190
P   3.52           H   19.86          G   0.15           U   8
Residuals in seconds of arc
211226 T08  0.1-  0.2+    211226 G02  0.1+  0.1+    211226 Y00  0.3+  0.3-
211226 T08  0.2-  0.1+    211226 G02  0.1+  0.6-    211226 Y00  0.1+  0.2-
211226 T08  0.1+  0.3-    211226 K88  0.1-  0.1-    211226 Y00  0.1+  0.5-
211226 T08  0.4+  0.2+    211226 K88  0.0   0.2-    211227 I52  0.0   0.1+
211226 T08  0.5-  0.4+    211226 K88  0.0   0.0     211227 I52  0.1-  0.1+
211226 T08  0.4+  0.5-    211226 K88  0.1+  0.1-    211227 I52  0.1-  0.2+
211226 T08  0.5-  0.4-    211226 K88  0.0   0.2-    211227 703  0.1-  0.1+
211226 T08  0.2-  0.5+    211226 K88  0.3+  0.2-    211227 703  0.1-  0.2+
211226 T08  0.4+  0.4+    211226 K88  0.0   0.2-    211227 703  0.1-  0.1+
211226 P93  0.1-  0.0     211226 K88  0.0   0.1-    211227 703  0.1-  0.1+
211226 P93  0.0   0.3-    211226 K88  0.1+  0.4-    211227 900  0.6+  1.1-
211226 P93  0.1+  0.1-    211226 K88  0.1-  0.2-    211227 900  0.4+  0.8-
211226 N82  0.1+  0.3+    211226 K88  0.1+  0.1-    211227 246  0.6+  0.6+
211226 N82  0.2-  0.6+    211226 K88  0.1+  0.2-    211227 246  0.1-  0.0
211226 N82  0.0   0.5+    211226 K88  0.1-  0.2-    211227 246  0.1-  0.6+
211226 B15  0.1+  0.2-    211226 K88  0.0   0.5-    211227 246  0.1-  0.0
211226 B15  0.1-  0.1-    211226 K88  0.1+  0.1-    211227 246  0.3-  0.2-
211226 B15  0.1-  0.1+    211226 C95  0.7+  0.3-    211227 J57  0.2+  0.0
211226 B15  0.0   0.0     211226 C95  0.1-  0.5-    211227 J57  0.2+  0.1+
211226 G02  0.0   0.1+    211226 C95  0.9-  0.3+    211227 J57  0.3+  0.2+
211226 G02  0.3-  0.0     211226 C95  0.6+  0.1-

Ephemeris:
2021 YJ                a,e,i = 2.31, 0.56, 32                q = 1.0110
Date    TT    R. A. (2000) Decl.     Delta      r    Elong.  Phase     V
2021 11 27    20 05 41.5 +60 42 49   0.3835  1.0857    94.4    65.0    20.3
...
2021 12 12    21 16 08.9 +57 50 17   0.2351  1.0320    95.0    71.9    19.3
...
2021 12 20    22 37 29.0 +51 35 27   0.1571  1.0164    97.5    73.7    18.5
...
2021 12 26    00 07 31.6 +36 29 56   0.1095  1.0114   101.7    72.2    17.6
2021 12 27    00 24 01.8 +32 15 30   0.1038  1.0111   102.5    71.7    17.5
2021 12 28    00 40 35.6 +27 26 16   0.09917 1.0110   103.4    71.2    17.4
...
2022 01 03    02 12 57.6 -07 18 09   0.09887 1.0137   105.2    69.4    17.3
...
2022 01 11    03 39 18.4 -34 44 19   0.1567  1.0263   101.5    69.9    18.3
...
2022 01 26    05 01 03.0 -47 09 25   0.3076  1.0753    98.8    64.8    19.8
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