

(31817)1999 RK134 occults Tycho2 1228-01069-1

\*\*\*\*\* Asteroid occultation Report \*\*\*\*\*

[Date ] 2025. 3.17 [Approx hour] 10.6
[Star ] Tycho2 1228-01069-1 VMag=10.28 RMag=9.82
[Asteroid ] (31817)1999 RK134 18.55 mag.

[Observer ] 1: Katsuhiko Kitazaki 2:
[Location ] Musasino, Tokyo, JP
[Longitude ] 139o33'41.2" E
[Latitude ] 35o42'37.0" N
[Altitude ] 66m
[Datum ] WGS84

[Event time] D: 10h40m00.081s +/- 0.010s (UTC) S/N=4.58 Ctt=59.2
D: 10h40m00.081s +/- 0.010s (UTC) S/N=4.58 Ctt=59.2
R: 10h40m00.370s +/- 0.019s (UTC) S/N=2.4
R: 10h40m00.311s +/- 0.067s (UTC) S/N=1.3
D: 10h40m00.986s +/- 0.015s (UTC) S/N=3.69 Ctt=64.1
D: 10h40m00.986s +/- 0.015s (UTC) S/N=3.69 Ctt=64.1
R: 10h40m01.843s +/- 0.014s (UTC) S/N=2.0 Ctt=35.8
R: 10h40m01.747s +/- 0.023s (UTC) S/N=1.2 Ctt=35.8

[Predicted Time error] 0.230 sec [RUWE] 1.65

[Recorded ] From 10h39m10s
To 10h40m21s

[Mag. drop ] D: Measured: Mag Drop (measured): 0.84 Mag. ; Predicted:
Mag Drop (predicted): 8.3 Mag.
D: Measured: Mag Drop (measured): 0.84 Mag. ; Predicted:
Mag Drop (predicted): 8.3 Mag.
R: Measured: ; Predicted:
R: Measured: ; Predicted:
D: Measured: Mag Drop (measured): 0.65 Mag. ; Predicted:
Mag Drop (predicted): 8.3 Mag.
D: Measured: Mag Drop (measured): 0.65 Mag. ; Predicted:
Mag Drop (predicted): 8.3 Mag.
R: Measured: ; Predicted:
R: Measured: ; Predicted:

[Telescope ] Aperture: 40cm Type: Other F=2.5
[Camera ] Analog or Digital video , Model= ASI290MM
[Exposure ] Set: 20.8msec, Measure: 20.8msec
[Setting ] Area: 1936x600 ; Binning=2
Gain: 370 ; Brightness: 65 ; High Speed Mode: Off
[Time keep ] GPS ; Model: GHS-OSD
[Evidence ] GPS Time Log : Recorded ; Screen shot: Recorded

[Condition ] Stability: Strong flickering Transparency: Clear
[Remarks ] The mag drop was much smaller than predicted. Analysis of the
light curves showed that there were two mag drops, and the two disappearances
(D1, D2) were gently descending light curves. There was no step in the two
disappearances (D1,D2), but there was a step in the reappearance (R1,R2) of
both magdrops.

[Additional comment]
Capture : ZWO ASI290MM imaging data to PC using SharpCap4.1.13131.0
Photometry analysis : Analyzed with software.limovie1.0.1.5 Pneuma
Photometry method : PSF photometry
(Sharp4.1 ON,Tracking OFF, Linked Tracking=OFF, Double Star
Analyzing=ON, Star's Angular Diameter=ON)
URL Data Release Site
https://drive.google.com/drive/folders/1DZcwhYYCY52tyRuMZQNO3rFW7t
Ve5F0a?usp=drive\_link

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<Observations>
<Event>
<Date>2025|3|17|10.6</Date>

<Details>
<Star>Tycho2|1228-01069-
1|0|0.000000000|0.000000000|0.00|0.00|0.00|0|0.00000000|0.0000000|25.
00|25.00|25.00|0</Star>
<Asteroid>31817|1999
RK134|0.000000000|0.000000000|0.00000000|0.00000000|0.00000000|0.0000000|1
.00000|0.00000|0.0|1.0|20.00</Asteroid>

</Details>
<Observations>
<Observer>
<ID>1|Katsuhiko Kitazaki||0|Musasino, Tokyo|JP|+139 33 41.2|+35
42 37.0|66| |40|6|a|a</ID>
<Conditions>3|1|3.49||The mag drop was much smaller than
predicted. Analysis of the light curves showed that there were two mag drops,
and the two disappearances (D1, D2) were gently descending light curves. There
was no step in the two disappearances (D1,D2), but there was a step in the
reappearance (R1,R2) of both magdrops.</Conditions>

<D>10 40 0.081|D|0.010||| </D>
<R>10 40 0.370|R|0.019||| </R>
</Observer>
<Observer>
<ID>2|Katsuhiko Kitazaki||0|Musasino, Tokyo|JP|+139 33 41.2|+35
42 37.0|66| |40|6|a|a</ID>

<Conditions>3|1|2.94||The mag drop was much smaller than
predicted. Analysis of the light curves showed that there were two mag drops,
and the two disappearances (D1, D2) were gently descending light curves. There
was no step in the two disappearances (D1,D2), but there was a step in the
reappearance (R1,R2) of both magdrops.</Conditions>

<D>10 40 0.081|d|0.010||| </D>
<R>10 40 0.311|r|0.067||| </R>
</Observer>
<Observer>
<ID>3|Katsuhiko Kitazaki||0|Musasino, Tokyo|JP|+139 33 41.2|+35
42 37.0|66| |40|6|a|a</ID>

<Conditions>3|1|2.84||The mag drop was much smaller than
predicted. Analysis of the light curves showed that there were two mag drops,
and the two disappearances (D1, D2) were gently descending light curves. There
was no step in the two disappearances (D1,D2), but there was a step in the
reappearance (R1,R2) of both magdrops.</Conditions>

<D>10 40 0.986|D|0.015||| </D>
<R>10 40 1.843|R|0.014||| </R>
</Observer>
<Observer>
<ID>4|Katsuhiko Kitazaki||0|Musasino, Tokyo|JP|+139 33 41.2|+35
42 37.0|66| |40|6|a|a</ID>

<Conditions>3|1|2.44||The mag drop was much smaller than
predicted. Analysis of the light curves showed that there were two mag drops,
and the two disappearances (D1, D2) were gently descending light curves. There
was no step in the two disappearances (D1,D2), but there was a step in the
reappearance (R1,R2) of both magdrops.</Conditions>

<D>10 40 0.986|d|0.015||| </D>
<R>10 40 1.747|r|0.023||| </R>
</Observer>
</Observations>
<LastEdited>2023|7|17</LastEdited>

</Event>
</Observations>

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Text-based Light curve
(31817)\_20250317\_103960\_Katsuhiko\_Kitazaki.dat
Date: 2025-3-17 10:39:59.97: 3.52: 170
Star: 0: 0: 0: 0: 1228-01069-1: 0-0
Observer: +139:33:41.2: +35:42:37.0: 66: Katsuhiko Kitazaki
Object: Asteroid: 31817: 1999 RK134
Values:1506:1383:1270:1735:917:789:645:681:703:743:646:634:609:658:920:7
27:1196:1166:1179:1891:1777:1695:1391:1312:1452:1471:1224:1601:1160:128
4:1560:1120:1484:1598:1511:1353:1412:1490:1304:1698:1602:1704:1887:1401
:1526:1266:1571:1341:841:

697:623:632:831:947:753:911:1073:677:780:724:914:752:765:553:856:778:691:  
 844:863:684:733:849:988:849:724:646:671:754:793:772:627:738:796:959:638:1  
 267:1134:1171:1091:1246:1562:1417:1327:1462:1316:1591:1386:1286:1573:  
 1287:1231:1255:1433:1523:1364:1438:1140:1440:976:1341:1459:1332:1136:11  
 35:1222:1227:1407:1283:1290:1259:1221:1142:1417:1571:1578:1854:1211:104  
 5:1577:1470:1402:1319:1393:1151:1124:1367:1528:1368:1745:1656:1886:1608  
 :1275:1387:1312:1166:1465:1019:1377:  
 1401:1365:1462:1354:1477:1603:1729:1279:1402:1068:1492:1445:1428:1738:1  
 415:1502:1788:1270:1087:1555:1264

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HACSTIP (How Accurately Can we Set Time on Pc using GPS?)

Files Properties Version

Time Zone of this PC: Localtime-UTC= hour Global position Now

Date (UTC) 2025. 03. 17 Long. 139° 33' 41.154" E

GPS Tme (UTC) GPS Time (Local) Lat. 35° 42' 37.074" N

10:33:00 19:33:00

Antenna Altitude 66.0m Sat 9 Num

Geoidal Height 35.5m HDOP 1.0

DSR(1PPS) signal available (Type: Rising Edge)

Fix Type

DGPS fix, using local DGPS or WAAS etc. 35.7102995,139.5614317 Copy

0.02 2025-03-17 19:32:58.000 2025-03-17 19:32:58.000

-0.03 2025-03-17 19:32:58.999 2025-03-17 19:32:59.000

-0.02 2025-03-17 19:32:59.999 2025-03-17 19:33:00.000

Log Compare PC/GPS Digits of PC-GPS 2 Estimate calibration Satellite for this receiver 0 Information

COM port Properties Synchronization parameter 965

Auto Port Search Set Time on PC Time when a set of NMEA is completed 595 msec

port COM4 One time correction ON OFF Connect Disconnect Exit

GPS receiver gives Stable Time now

LED Length for MT3333, ublox 7.8 PMTK for setting Baud rate at connection

100msec 400msec 700msec

UTC: 10:33

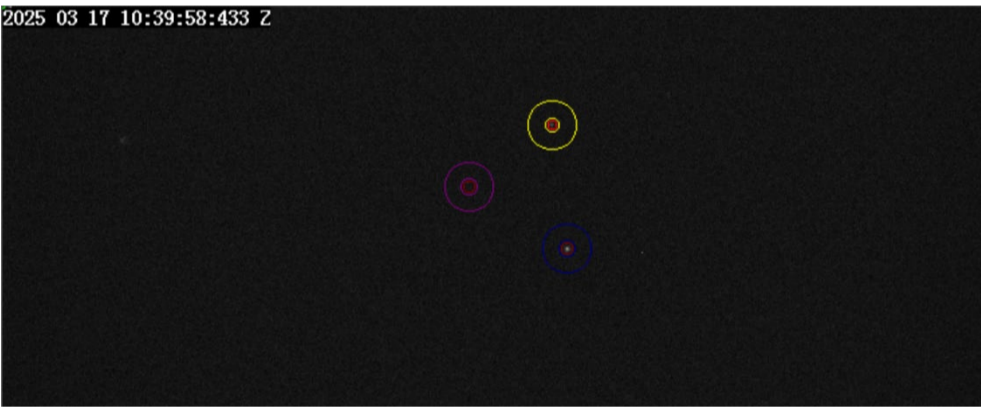
time.is/UTC

TIME.IS

UTC now

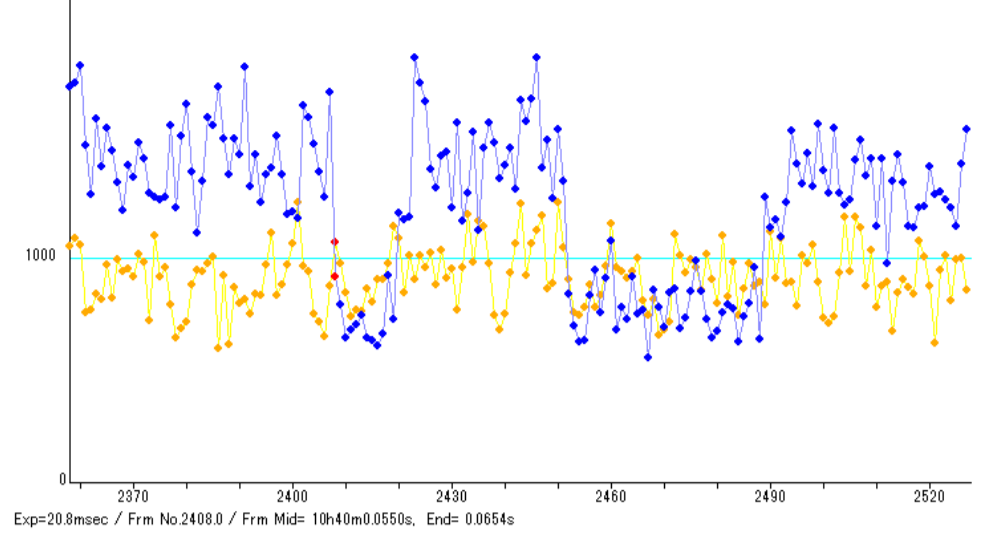
10:33:00

Previewing: 18741 frames (0 dropped) in 0:06:29.481 fms

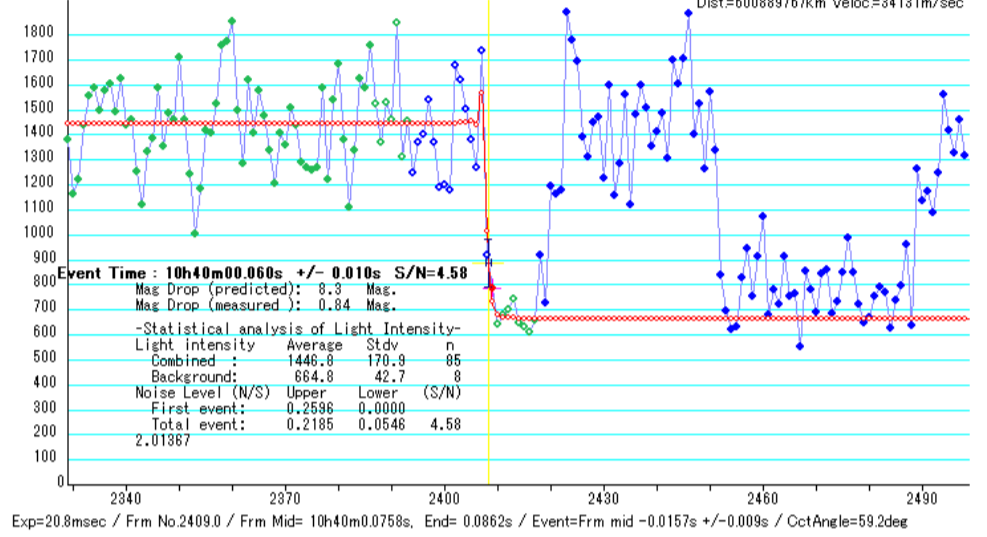


South and north, east and west are reversed

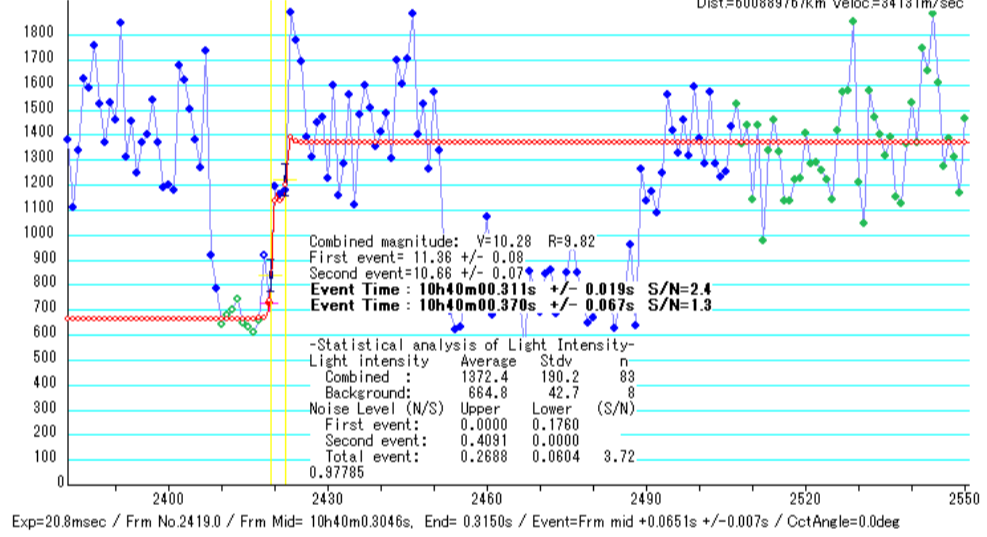
2025 Mar 17: (31817) 1999 RK134 occults TYC 1228-01069-1 Observed by Katsuhiko Kitazaki / PSF-Frame Photometry /



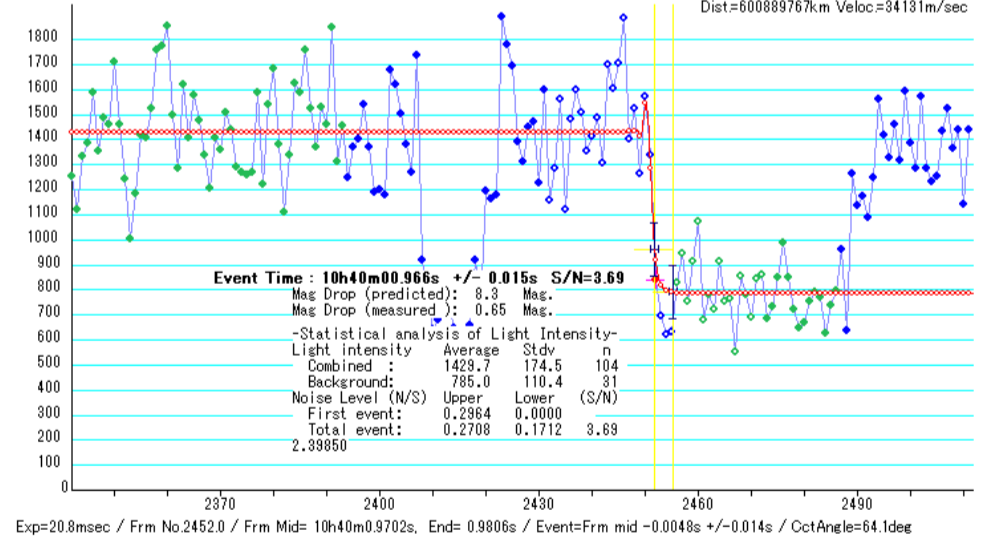
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