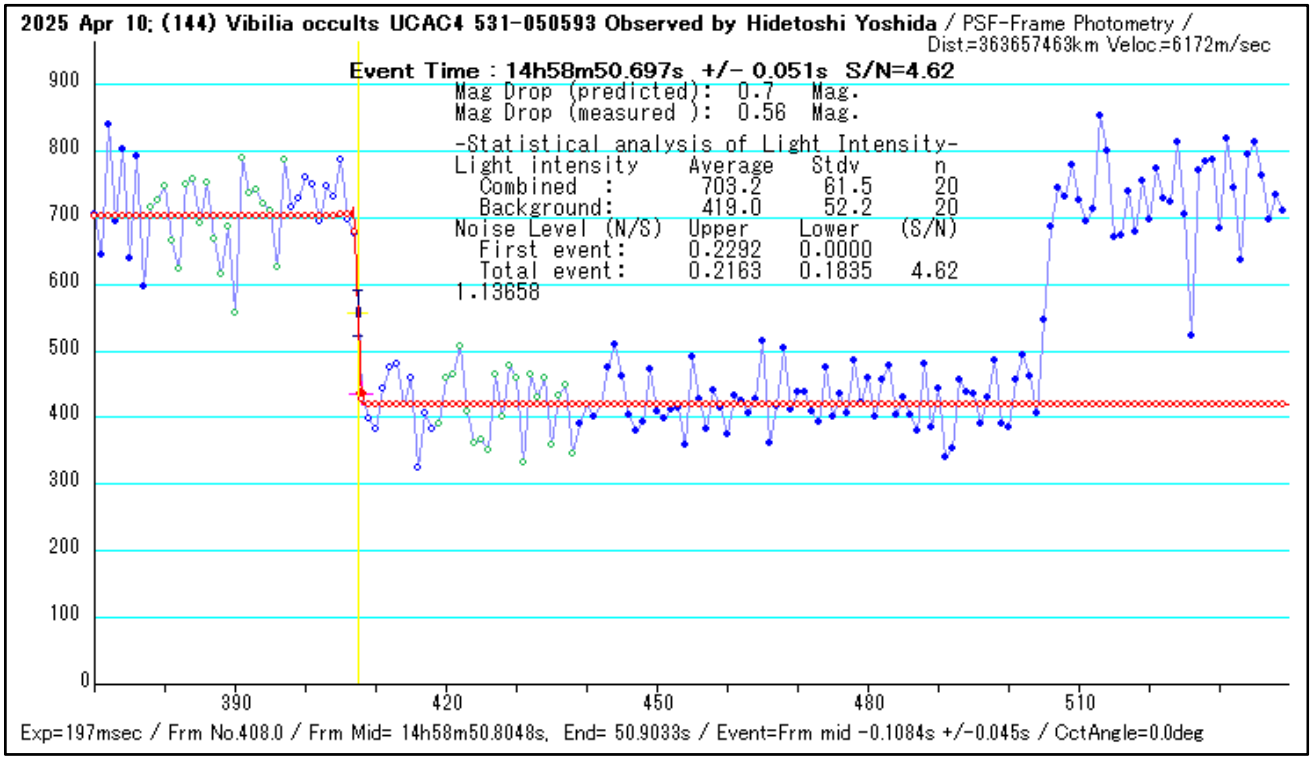
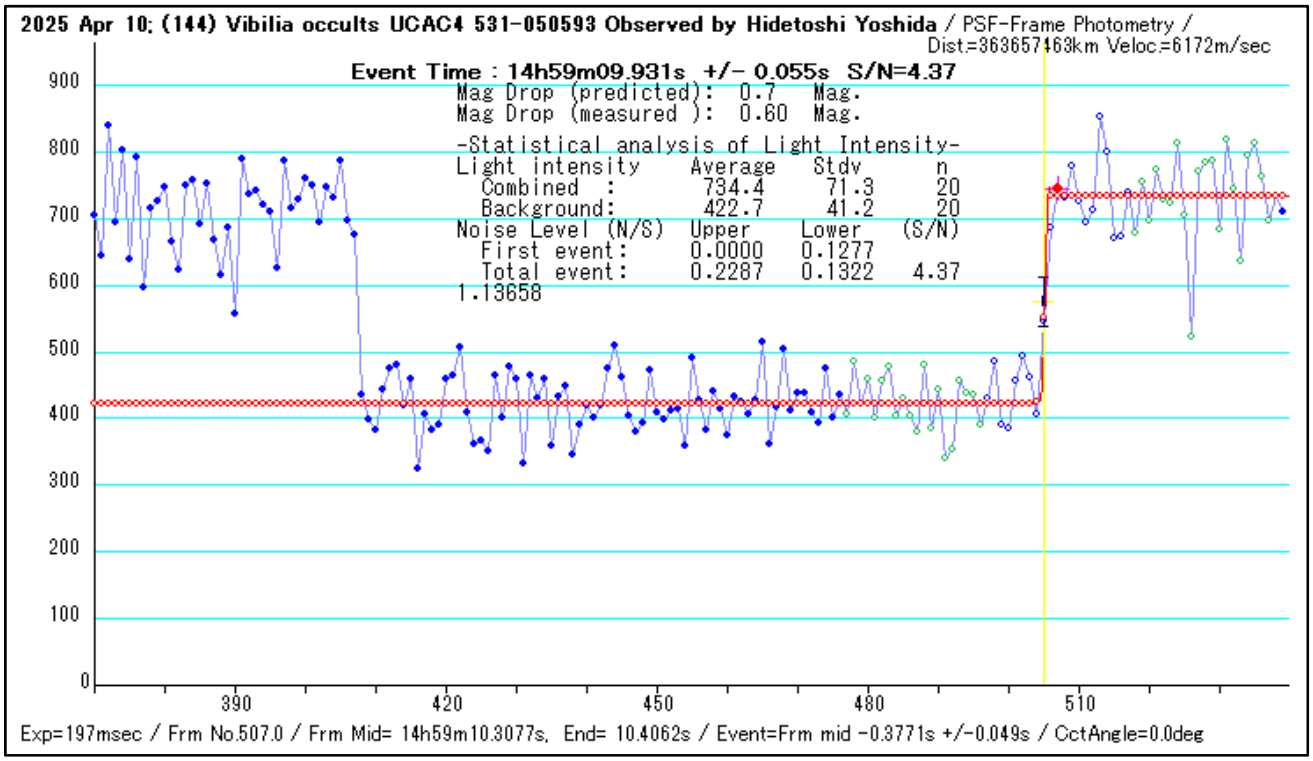
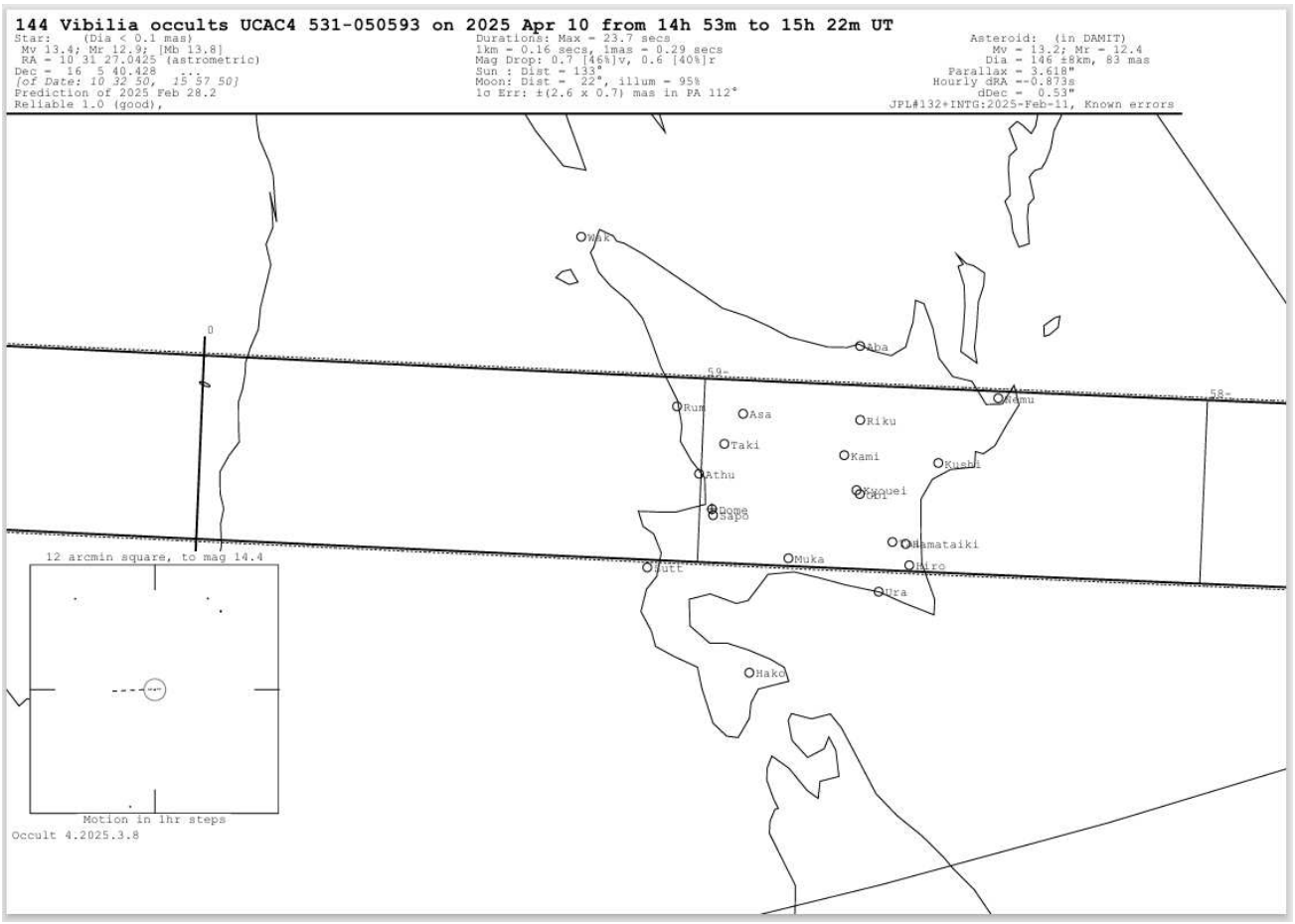
2025 Apr 10

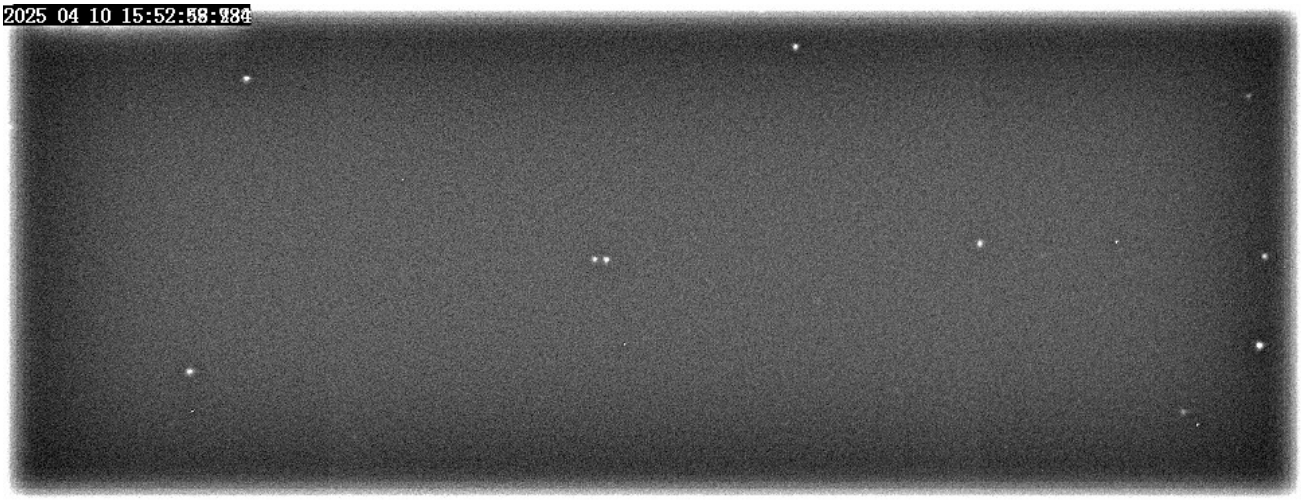
Main-belt Asteroid (144) Vibilia Occults UCAC4 531-050593

北海道札幌市　吉田秀敏

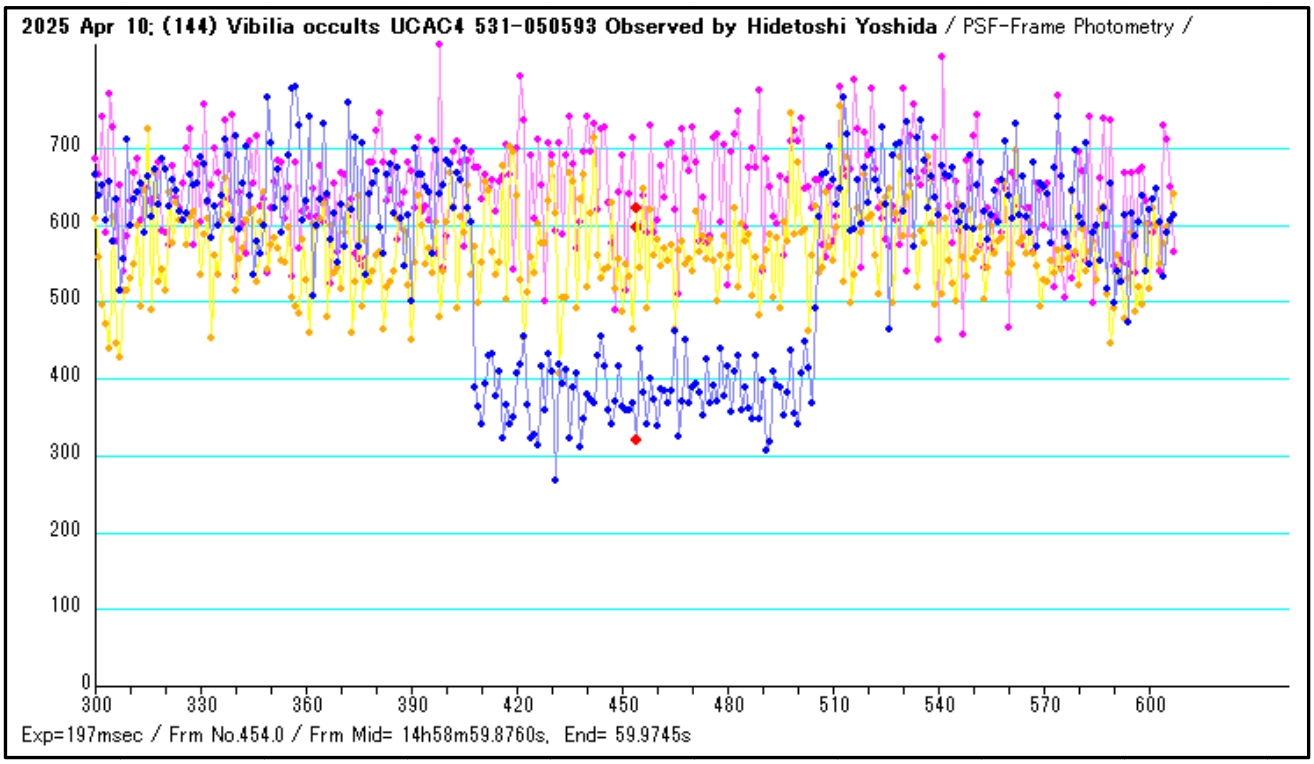




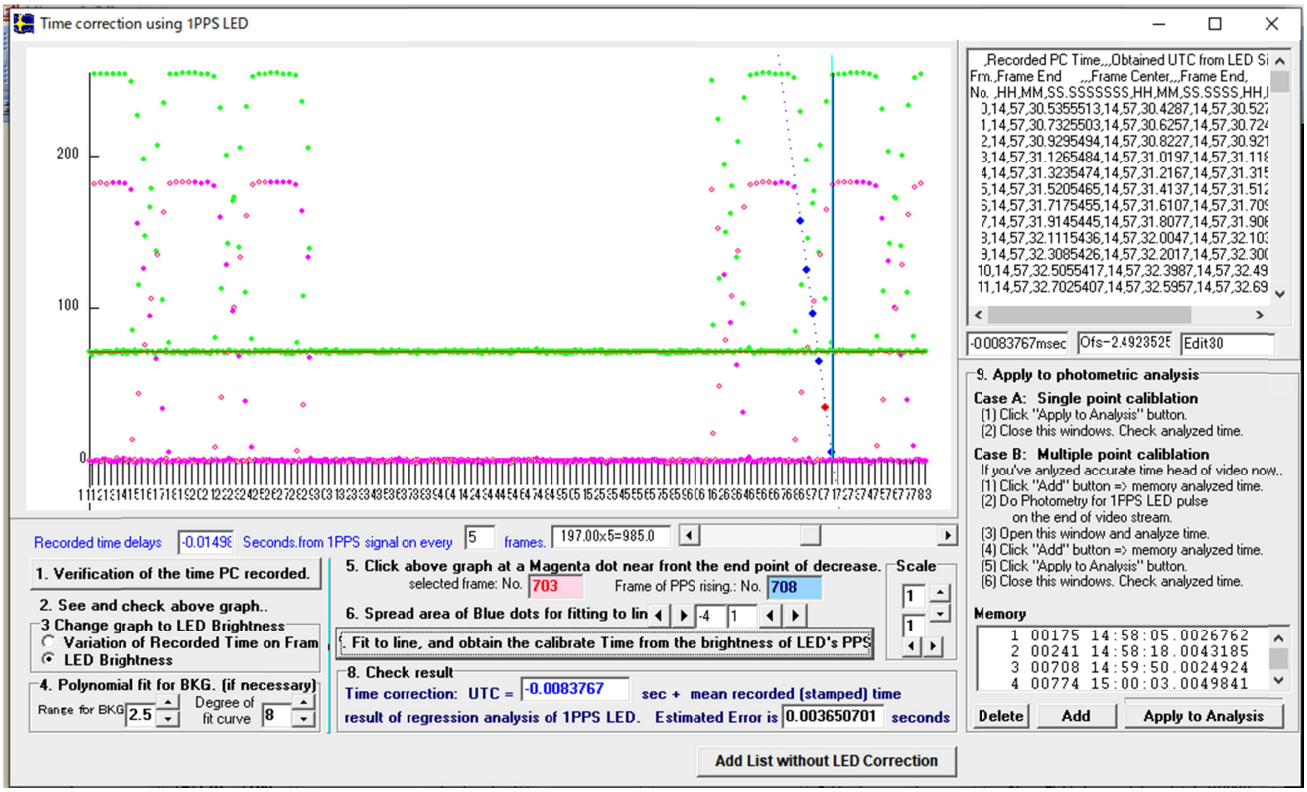


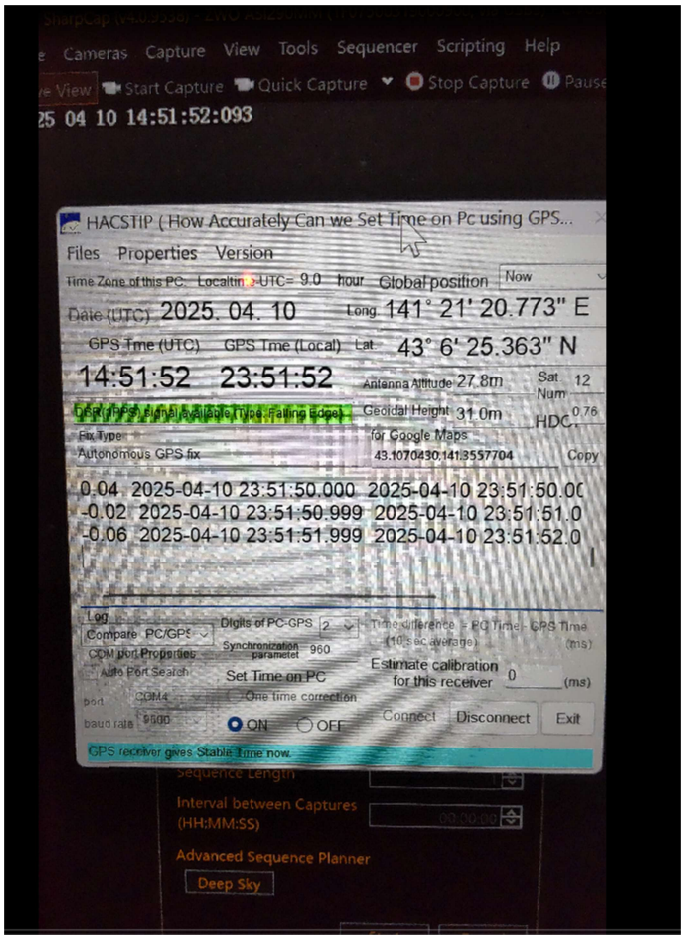


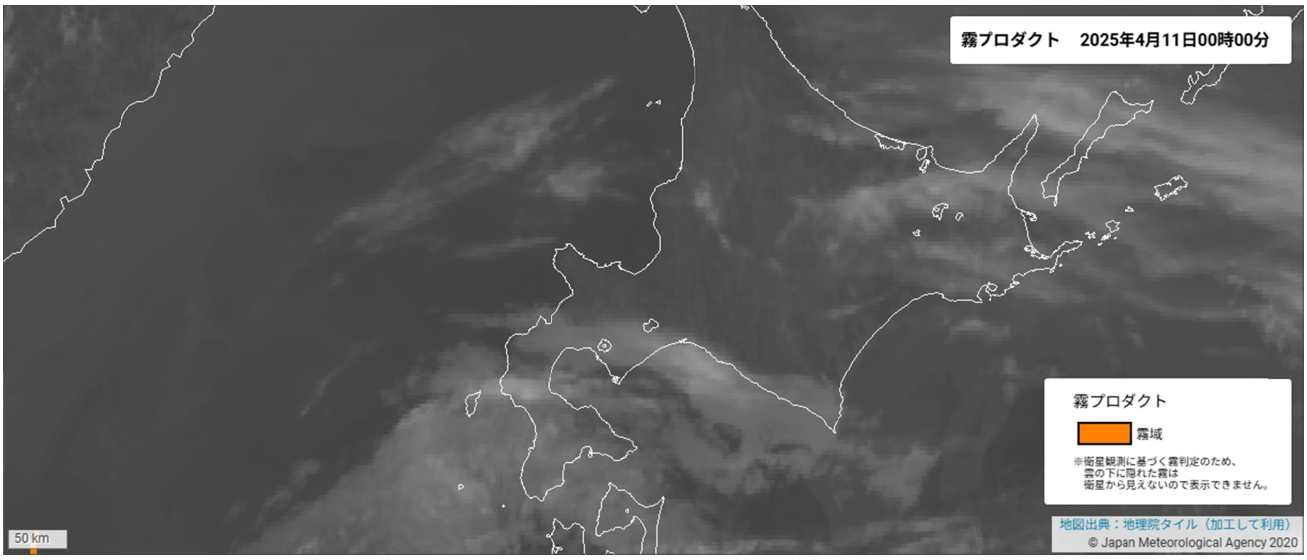
【掩蔽終了 52 分後】中央左側が恒星 UCAC4 531-050593、右側が小惑星(144) Vibilia



526 フレームに光量低下がみられる。測光範囲（ポイント）のずれはなく星像には確実に光量低下が確認できる。550 フレーム以降には比較星も含めて光量低下の傾向がみられ、潜入前にも数か所の光量低下の様があることから、シンチレーション及び春季特有の「モヤ・かすみ」の影響と判断することが順当か。







2025 Apr 12

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

[Date] 2025. 4.10 [Approx hour] 15.1
[Star] UCAC4 531-050593 VMag=13.41 RMag=12.87
[Asteroid] (144)Vibilia 13.30 mag.

[Observer] 1: Hidetoshi Yoshida 2:
[Location] Sapporo, Hokkaido, JP
[Longitude] 141o21'21.0" E
[Latitude] 43o06'25.5" N
[Altitude] 15m
[Datum] WGS84

[Event time] D: 14h58m50.697s +/- 0.051s (UTC) S/N=4.62
R: 14h59m09.931s +/- 0.055s (UTC) S/N=4.37
[Predicted Time error] 0.657 sec [RUWE] 1.00

[Recorded] From 14h57m31s
To 15h0m31s

[Mag. drop] D: Measured: Mag Drop (measured): 0.56 Mag. ; Predicted: Mag Drop (predicted): 0.7 Mag.
R: Measured: Mag Drop (measured): 0.60 Mag. ; Predicted: Mag Drop (predicted): 0.7 Mag.

[Telescope] Aperture: 30cm Type: SCT F=2.9
[Camera] Analog or Digital video , Model= ASI290MM
[Exposure] Set: 197.0msec, Measure: 197msec
[Setting] Area: 1936x740 ; Binning=2
Gain: 305 ; Brightness: 0 ; High Speed Mode: On
[Time keep] GPS ; Model: GT902MGG
[Evidence] GPS Time Log : Recorded ; Screen shot: Recorded

[Condition] Stability: Steady Transparency: Clear
[Remarks]

[Additional comment]
****

<Observations>
<Event>
<Date>2025|4|10|15.1</Date>
<Details>

<Star>UCAC4|531-050593|0|||0.0000000000|0.000000000|0.00|0.00|0.00|0|0.00000000|0.0000000|25.00|25.00|25.00|0</Star>

<Asteroid>144|Vibilia|0.00000000|0.00000000|0.0000000|0.0000000|0.0000000|0.0000000|1.00000|0.00000|0.0|1.0|20.00</Asteroid>
</Details>
<Observations>
<Observer>
<ID>1|Hidetoshi Yoshida|||0|Sapporo, Hokkaido|JP|+141 21 21.0|+43 06 25.5|15|||30|3|a|a</ID>
<Conditions>1|1|4.50|||</Conditions>
<D>14 58 50.697|D|0.051|||</D>
<R>14 59 9.931|R|0.055|||</R>

</Observer>
</Observations>
<LastEdited>2023 | 7 | 17</LastEdited>
</Event>
</Observations>

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Text-based Light curve
(144)_20250410_145843_Hidetoshi_Yoshida.dat

Date: 2025-4-10 14:58:43.32: 33.29: 170
Star: 0: 0: 0: 0: 0-0-0: 531-050593
Observer: +141:21:21.0: +43:06:25.5: 15: Hidetoshi Yoshida
Object: Asteroid: 144: Vibilia
Values:704:643:839:695:802:640:792:596:714:725:746:666:623:748:758:691:753:669:615:686:556:788:737:740:722:711:626:787:716
:730:760:751:695:746:732:785:696:676:435:398:382:443:476:480:419:458:324:405:383:
391:460:463:508:409:362:367:351:464:400:478:458:332:464:431:459:360:432:448:345:390:420:402:419:476:510:462:404:380:394:47
2:410:398:413:413:360:491:428:382:441:415:374:434:425:407:427:514:363:416:504:
412:438:439:410:394:476:401:436:407:486:423:460:400:457:478:404:431:403:381:480:386:444:339:354:456:438:436:390:430:485:39
1:385:456:494:462:406:547:686:746:730:778:725:695:712:853:798:671:672:738:678:
756:696:773:729:724:813:704:522:771:784:787:685:818:744:637:794:814:764:698:734:709