(45)Eugenia occults UCAC4 533-016768

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

[Date] 2025. 9.16 [Approx hour] 18.7
[Star] UCAC4 533-016768 VMag=12.51 RMag=11.87
[Asteroid] (45)Eugenia #1 13.45 mag.

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

[Event time] D: 18h36m46.258s +/- 0.007s (UTC) S/N=7.54
R: 18h36m53.912s +/- 0.006s (UTC) S/N=8.61
[Predicted Time error] 0.335 sec [RUWE] 1.05

[Recorded] From 18h36m28s
To 18h37m28s

[Mag. drop] D: Measured: Mag Drop (measured): 0.92 Mag. ; Predicted: Mag Drop (predicted): 1.3 Mag.
R: Measured: Mag Drop (measured): 0.96 Mag. ; Predicted: Mag Drop (predicted): 1.3 Mag.

[Telescope] Aperture: 40cm Type: Other F=2.6
[Camera] Analog or Digital video , Model= ASI290MM
[Exposure] Set: 55.8msec, Measure: 55.8msec
[Setting] Area: 1936x800 ; Binning=2
Gain: 400 ; Brightness: 24 ; High Speed Mode: Off
[Time keep] GPS ; Model: GT502MGG
[Evidence] GPS Time Log : Recorded ; Screen shot: Recorded

[Condition] Stability: Slight flickering Transparency: Clear
[Remarks] Mag Drop was smaller than Prediction. The target star remained visible throughout the duration of Mag Drop.

[Additional comment]
Capture ： ZWO ASI290MM imaging data to PC using SharpCap4.1.13502.0
Photometry analysis : Analyzed with software.limovie1.0.1.8 Pneuma
Photometry method：PSF photometry
(Sharp4.1 ON,Tracking=OFF, Linked Tracking=OFF,Star's Angular Diameter=ON)
Data Release Site
https://drive.google.com/drive/folders/1b8tUA30qmPJCD6LvwMLo2bpTPHEFFb23?usp=sharing

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<Observations>
<Event>
<Date>2025|9|16|18.7</Date>
<Details>
<Star>UCAC4|533-016768|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>45|Eugenia #1|0.00000000|0.00000000|0.0000000|0.0000000|0.0000000|0.0000000|1.000000|0.00000|0.0|1.0|20.00</Asteroid>
</Details>
<Observations>
<Observer>
<ID>1|Katsuhiko Kitazaki||0|Musashino, Tokyo|JP|+139 33 41.2|+35 42 37.0|66| |40|6|a|a</ID>
<Conditions>2|1|8.07||Mag Drop was smaller than Prediction. The target star remained visible throughout the duration of Mag Drop.</Conditions>
<D>18 36 46.258|D|0.007||| </D>
<R>18 36 53.912|R|0.006||| </R>
</Observer>
</Observations>
<LastEdited>2023|7|17</LastEdited>
</Event>
</Observations>

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Text-based Light curve
(45)_20250916_183640_Katsuhiko_Kitazaki.dat

Date: 2025-9-16 18:36:40.84: 18.92: 340
Star: 0: 0: 0: 0: 0-0-0: 533-016768
Observer: +139:33:41.2: +35:42:37.0: 66: Katsuhiko Kitazaki
Object: Asteroid: 45: Eugenia #1
Values:783:819:749:748:735:671:738:818:797:758:837:801:690:673:688:648:716:795:777:752:806:849:844:832:781:818:786:843:762:881:723:702:736:874:786:796:812:850:826:741:822:903:703:804:793:759:883:952:874:
704:799:743:756:831:822:794:712:765:735:702:749:780:722:652:791:790:820:853:767:831:742:834:733:795:769:773:834:766:804:755:885:776:819:747:839:862:795:837:789:813:778:786:911:799:752:817:687:520:321:
356:274:289:377:362:367:367:366:291:336:377:380:345:406:337:402:400:292:280:348:326:318:345:356:323:356:318:352:282:329:373:334:332:306:337:301:367:381:339:338:334:361:326:351:334:285:331:347:365:327:
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799:758:804:820:792:934:699:769:746:688:714:821:756:822:779:899:825:837:837:825:842:802:812:789:776:734:850:815:765:776:742:761:832:759:767:821:825:853:899:876:882:772:878:828:840:855:960:808:766:827:
840:759:738:824:719:824:745:819:836:787:925:828:728:868:808:863:843:784:838:840:875:770:882:725:873:788:784:818:835:826:811:767:837:821:823:924:898:847:837:914:863

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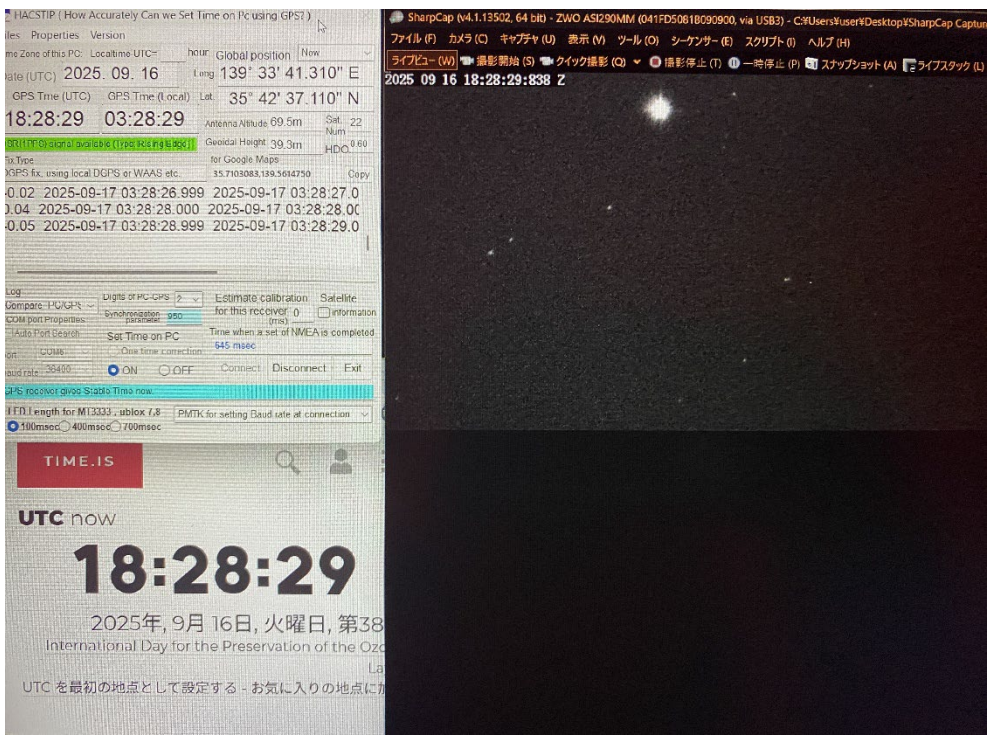
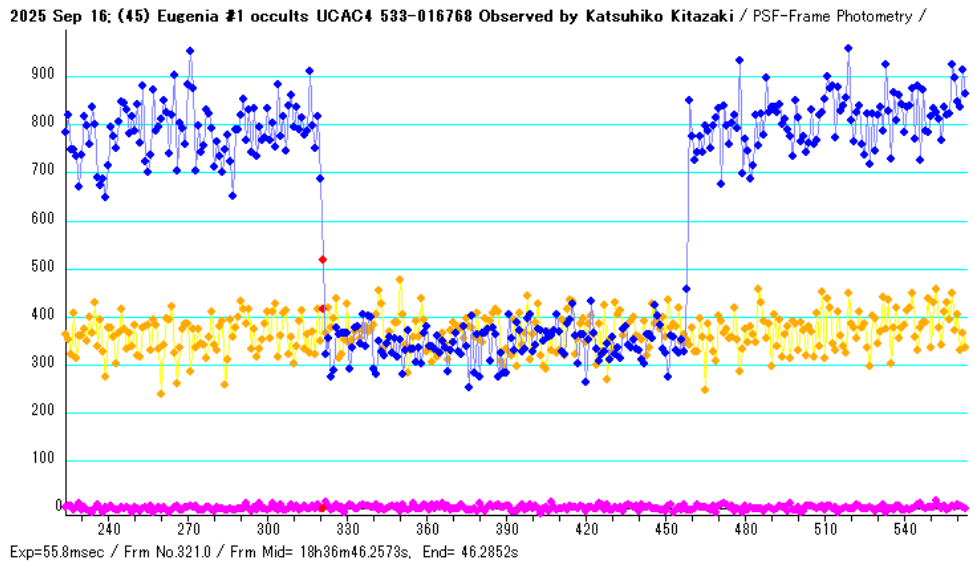
UTC Time Evidence

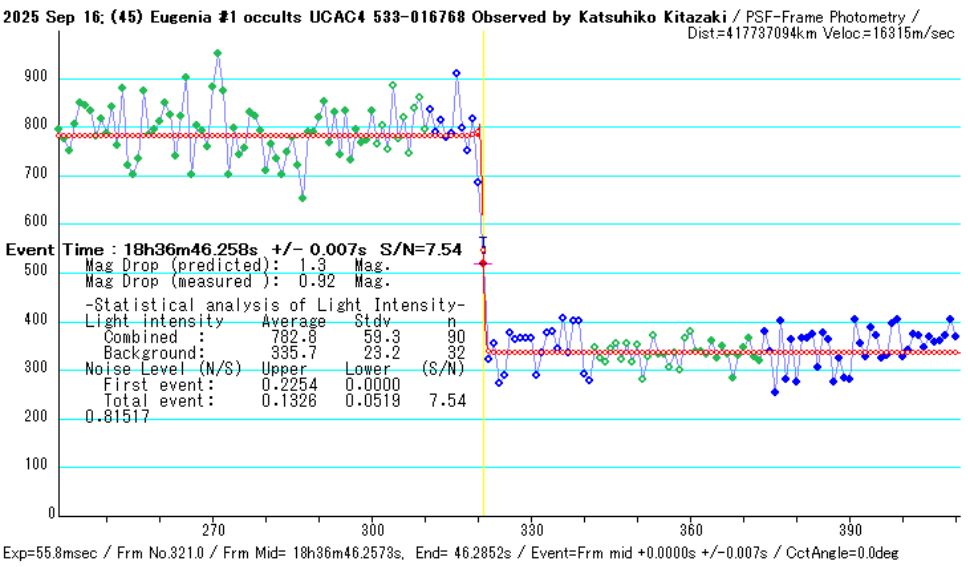


Target Star Position (Target star = Blue, Comparison star = Yellow, Pink = Background metering)

Light curve（Target star = Blue line, Target star = Yellow line）



Time analysis of disappearance



Time analysis of reappearance