

ASTEROIDAL OCCULTATION - REPORT FORM

EAON	IOTA/ES
EUROPEAN ASTEROIDAL OCCULTATION NETWORK	INTERNATIONAL OCCULTATION TIMING ASSOCIATION EUROPEAN SECTION

1 DATE: 2020/08/22 STAR: TYC 6947-00591-1 ASTEROID: Gudrun N°: 328

2 OBSERVER: Name: Sylvain Chapeland EAON Abbr:  
 E-mail: syc.astram at [gmail.com](mailto:syc.astram@gmail.com)  
 Address: 95 rue des Bergeronnettes 01710 Thoiry, France

3 OBSERVING STATION: Nearest city: Valdrôme (26 - France)  
 Longitude: E 05 36 17.0 (WGS84)  
 Latitude: N 44 28 57.7 (WGS84)  
 Altitude: 1313m (MSL)  
 (from IGN website)  
 Single station

4 TIMING OF EVENTS:

EVENT REPORTED: POSITIVE
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Event code

S: observation Start I: Interruption start  
 D: Disappearance J: Interruption end  
 R: Reappearance B: Blink F: Flash  
 E: observation End O: Other (specify)

Abbreviations

P.E.: Personal Equation = reaction time (for visual obs)  
 Acc.: Accuracy (overall accuracy of the given time)

Event Code	Time (UT)	P.E.	Acc.	Comments
	HH:MM:SS.ss	S.ss	S.ss	
S	- 23:09:30	-	-	:
D	- 23:10:52.3	-	-	:
R	- 23:10:58.1	-	-	:
E	- 23:11:10	-	-	:

Duration : 5.8s  
 Mid-event : 23:10:55.2

Was your reaction time applied to the above timings? No (~0.5s)

I expect the accuracy of above timings to be reasonably less than 1.0s, but have no mean to confirm this.

5 TELESCOPE: Type: Mirror Aperture: 460mm Magnification:  
 65x (82° FOV)  
 Mount: AltAz Motor drive: No

6 TIMING & RECORDING:

Time source: GPS Ublox: PPS output to LED, NMEA time to screen, Phone chronometer in lap mode

Sensor: eye

Recording:

Time insertion (specify):

Event insertion (specify):

7 OBSERVING CONDITIONS:

Atmospheric transparency: Good      Wind: No      Temperature: 16°

Star image stability: Good      Minor planet visible: No

8 ADDITIONAL COMMENTS:

This is my first observation and report. Initial plan was to image the event with a refractor/cmso camera, but the GPS trigger cable was missing. So, as the 460mm Dobson was readily available, I improvised a visual observation with equipment at hand.

Field was not difficult to find using Cartes du Ciel and Extended Hipparcos catalog, target star appearing bright and yellow with a well recognizable star pattern around. Asteroid was not seen at this low magnification.

For the timing, I used the chronometer app of my phone: launching it at the start of observation and recording events with the 'lap' mode.

As I did not practice before and was not used to the device, I expect reaction time was quite high, 0.5-1s.

I was surprised at the short reappearance after ~5s, expecting something more like 10s.

The T0 of the chronometer was then measured twice using a GPS with PPS output connected to a led (blinking for 0.1s), and NMEA message UTC time + PPS to NMEA delay displayed on PC screen. This was really a nice event to watch, and concluded nicely a full week of stargazing in the mountains.

I put the timings for reference, they should not be too far off, but I have no mean to check their accuracy given the lack of preparation: I'm curious to see how this compares to reliable measurements. What for sure did happen is that the star disappeared for about 5 seconds at my location.