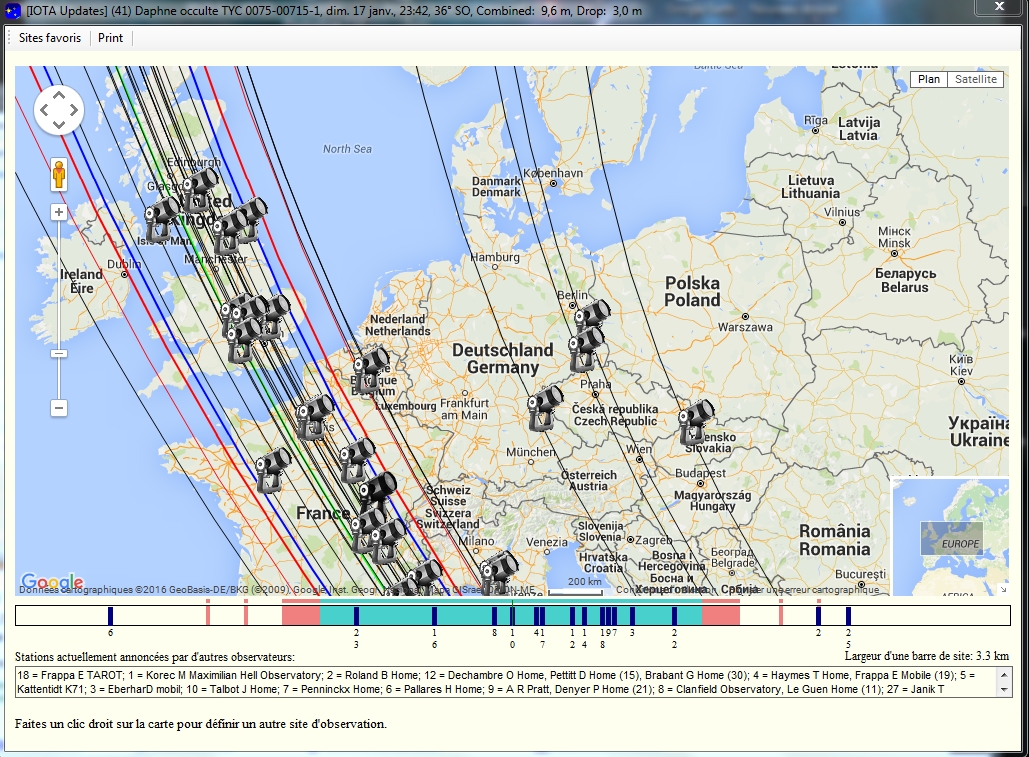
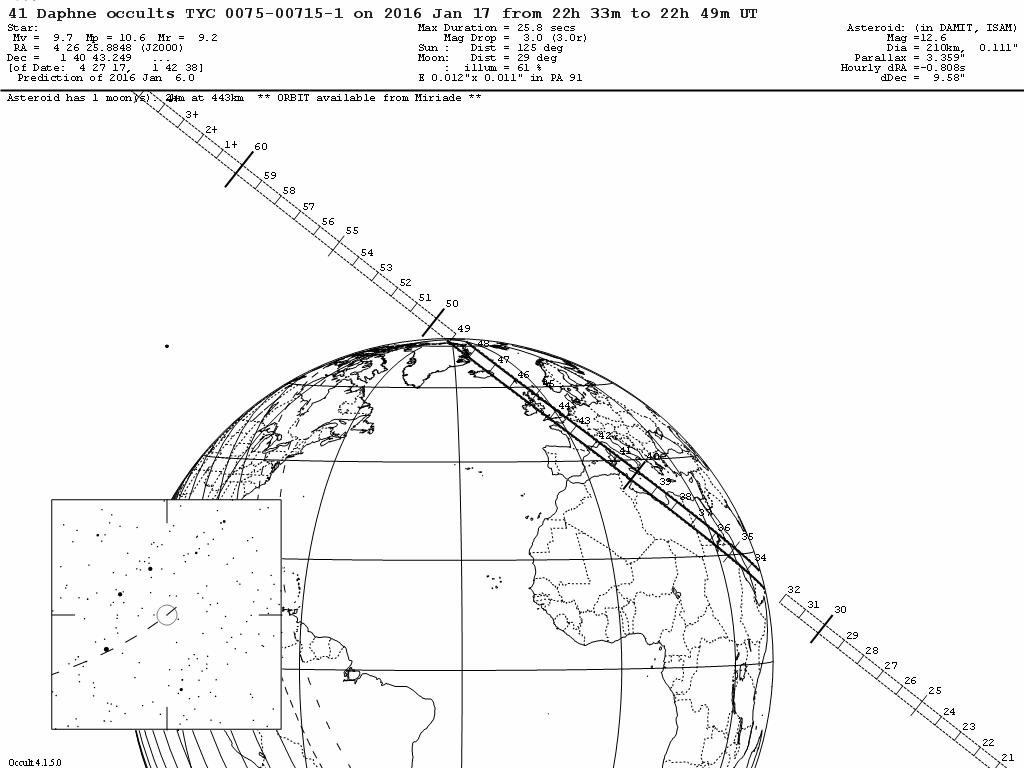
(41) Daphne occulte TYC 0075-00715-1.





IOTA/IOTA-ES occultation update for

(41) Daphne / TYC 0075-00715-1 event on 2016 Jan 17, 22:41 UT

Visible from Arabia, N Africa, Europe

Summary

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On 2016 Jan 17 UT, the 210 km diameter asteroid (41) Daphne will occult a 9.7

mag star in the constellation Taurus for observers along a path across Arabia, N

Africa, Europe.

In the case of an occultation, the combined light of the asteroid and the star

will drop by 3.0 mag to 12.6 mag (the magnitude of the asteroid) for at most

25.8 seconds.

This update is based on UNSO/Flagstaff astrometry for the asteroid kindly

provided by Alice Monet, TMO astrometry for the asteroid kindly provided by Bill

Owen, historical astrometry from the MPC files (via AstDys), and the following

catalogs for the star position: UCAC.

The event at a glimpse

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\* Rank: 100

\* date and approx. time of event: 2016 Jan 17, 22:33 - 2016 Jan 17, 22:48 UT

\* geocentric midpoint of event [JD]: 2457405.44512083

\* magnitude of target star: 9.7

\* magnitude drop [mag]: 3.0

\* estimated maximum duration [s]: 25.8

\* Moon: 60 % sunlit, 30° distance

\* Sun: 125° distance

\* rough path description: Arabia, N Africa, Europe

The occultation path

--------------------

\* approximate projected width [km]: 343

\* 1 sigma uncertainty interval [path widths]: +/- 0.10

\* 1 sigma uncertainty interval [seconds]: +/- 2.7

\* 1 sigma uncertainty interval approx RA,DE ["]: (+/- .012 +/- .011)

\* 1 sigma uncertainty ellipse (major, minor, PA): ( .012", .011", 91° )

\* approx speed of asteroid's shadow [km/s]: 8.1518

\* website for maps:

http://www.asteroidoccultation.com

Uncertainty in time = +/- 3 secs

Prediction of 2016 Jan 6.0

Data for the target star

------------------------

\* name: TYC 0075-00715-1

\* constellation : Taurus

\* J2000 position with proper motion to date of event [h,m,s ; °,',"]

RA: 04 26 25.8848 DE: +01 40 43.249

\* position source: Pos: URAT1, pm: UCAC4, pi:

\* standard error: RA,DE ["]: ( .009, .009 )

\* V mag [mag]: 9.7

\* B mag [mag]: 10.6

\* Diameter [mas]: 0

\* remarks:

Data for the minor planet

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\* general information:

(number) name: (41) Daphne

approx. diameter [km]: 210

approx. diameter ["]: .111

distance from Earth [AU]: 2.61800

\* orbital information:

orbit source: Preston

date of fit: 2016 Jan 06

source of used astrometry: FASTT TMO MPC (via Astdys)

number of used observations: 1684

number of rejected observations: 168

time covered by the observations: 1915 Jan 08 - 2015 Dec 31

1 sigma uncertainty ellipse (major, minor, PA): 0.007, 0.006, 92°

remarks:

\* orbital elements for (41) Daphne :

Mean anomaly = 237.38915308 deg

Arg. of pericenter = 45.97082715 deg

Long. of node = 178.09329119 deg

Inclination = 15.79654900 deg

Eccentricity = 0.27563636

Semimajor axis = 2.75954989 AU

Perihelion dist = 1.99891760 AU

Mag: H = 7.30, G = 0.10

Epoch of elements : MJD 57404.94500000 TDT

(2016 Jan 17.945)

------ occelmnt file for Occult BEGIN -----------------------------------

2016 Jan 17

41 Daphne

22h 41.0m UT

9.7 4 26 25.885 1 40 43.25TYC 0075-00715-1 10.6

12.6 210 25.8 2.618 -0.808 9.58

-30.4287 1.677 -157.72 -20.70

22.6829 0.48957 0.62055 -3.61245 2.84962 0.00451 0.00204

2000 236.3259582016 113.00000 45.970827178.093291 15.7965490.27563636 2.7595499 1.9989176 7.1 5.00.10

RATE 2.1500410 0.000000 0.000000 0.000000 0.0000000 0.0000000 0.0000000

Meas 0.012 0.011 91 1.10 0.011 1 2 443 0-2-1 057393.0020160117\_0715-1

------ occelmnt file for Occult END -----------------------------------

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Calculator (s): Steve Preston

Date of update: 2016 Jan 06, 15:29 UT

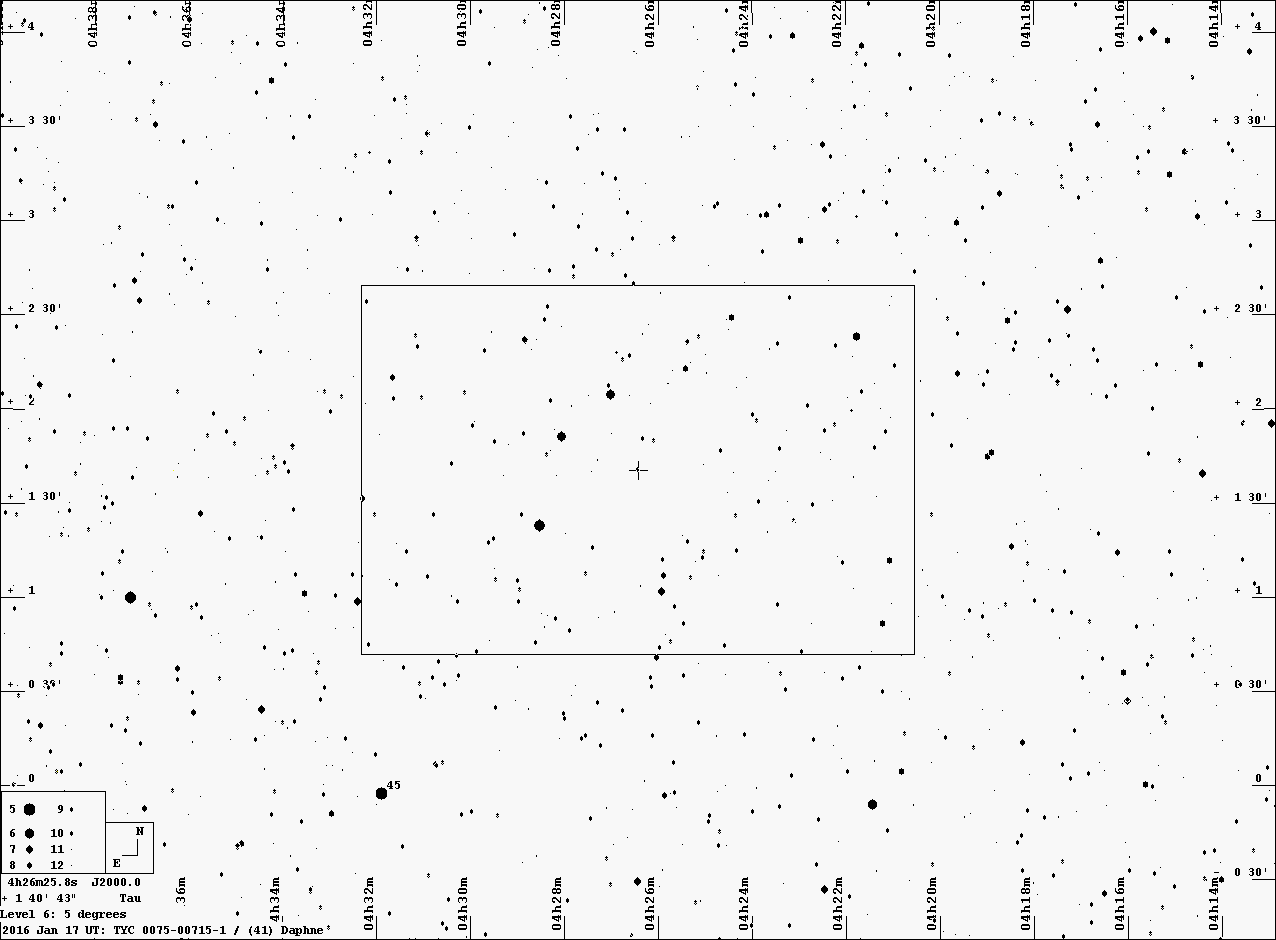
Steve Preston

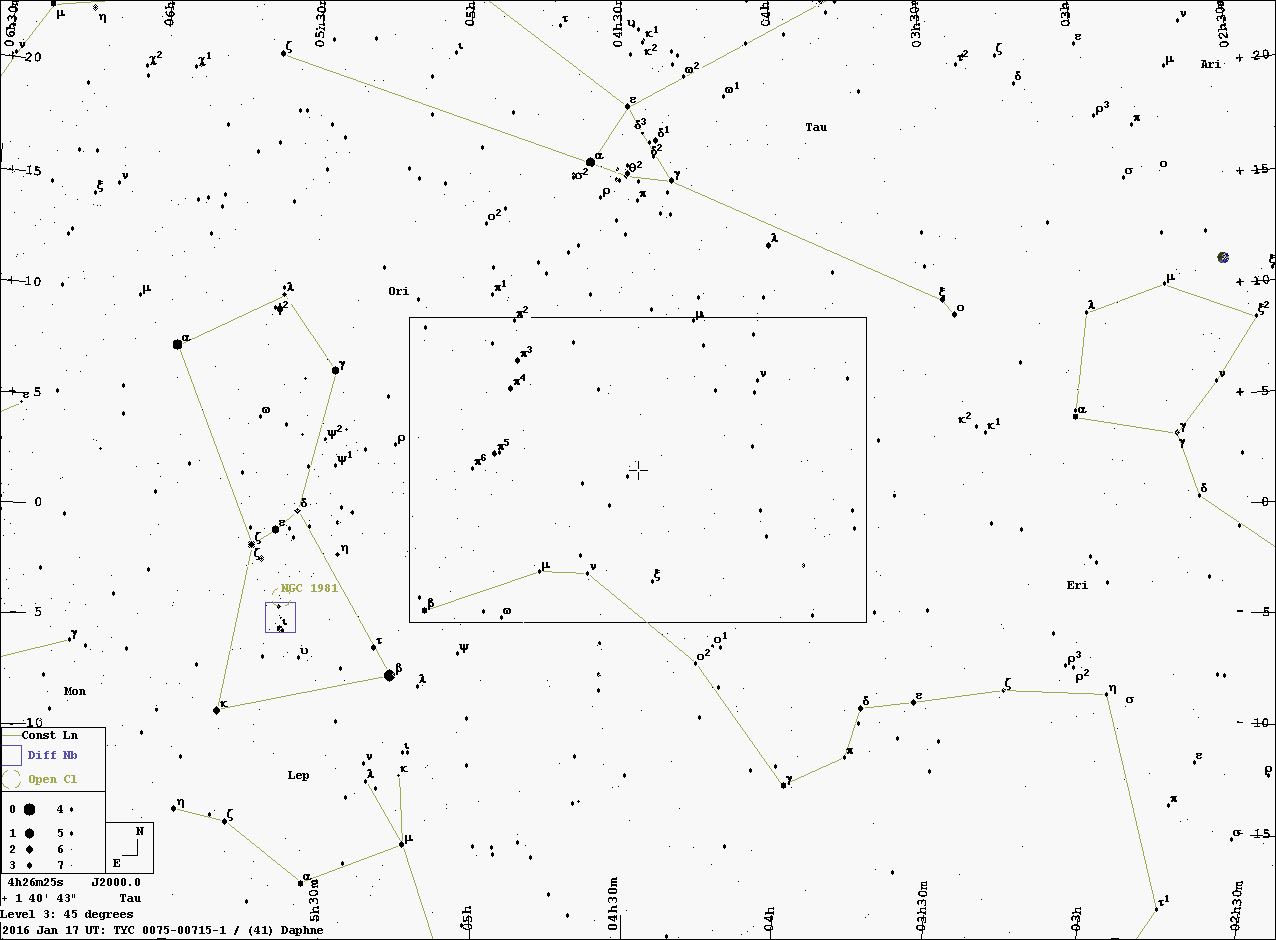
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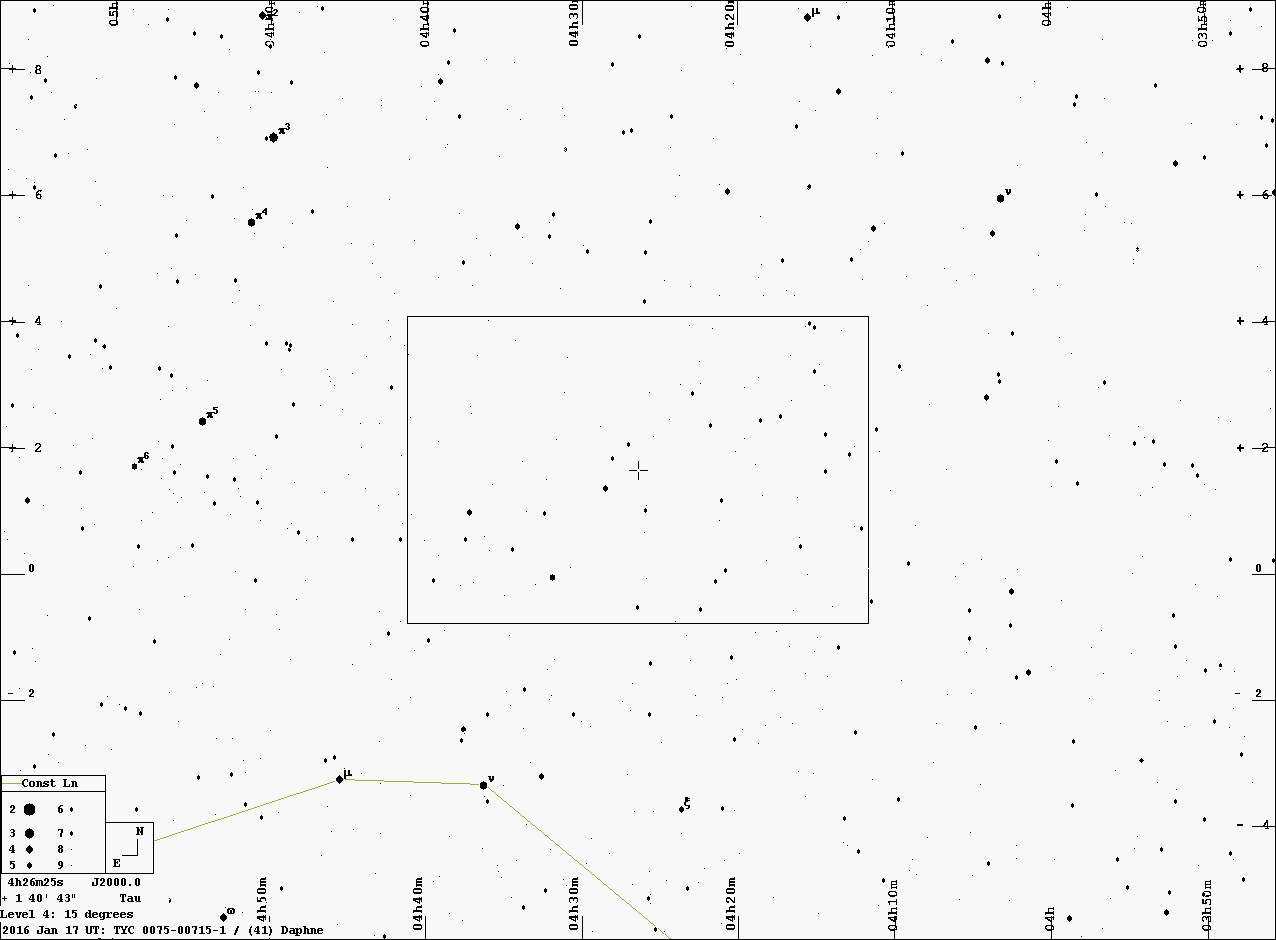
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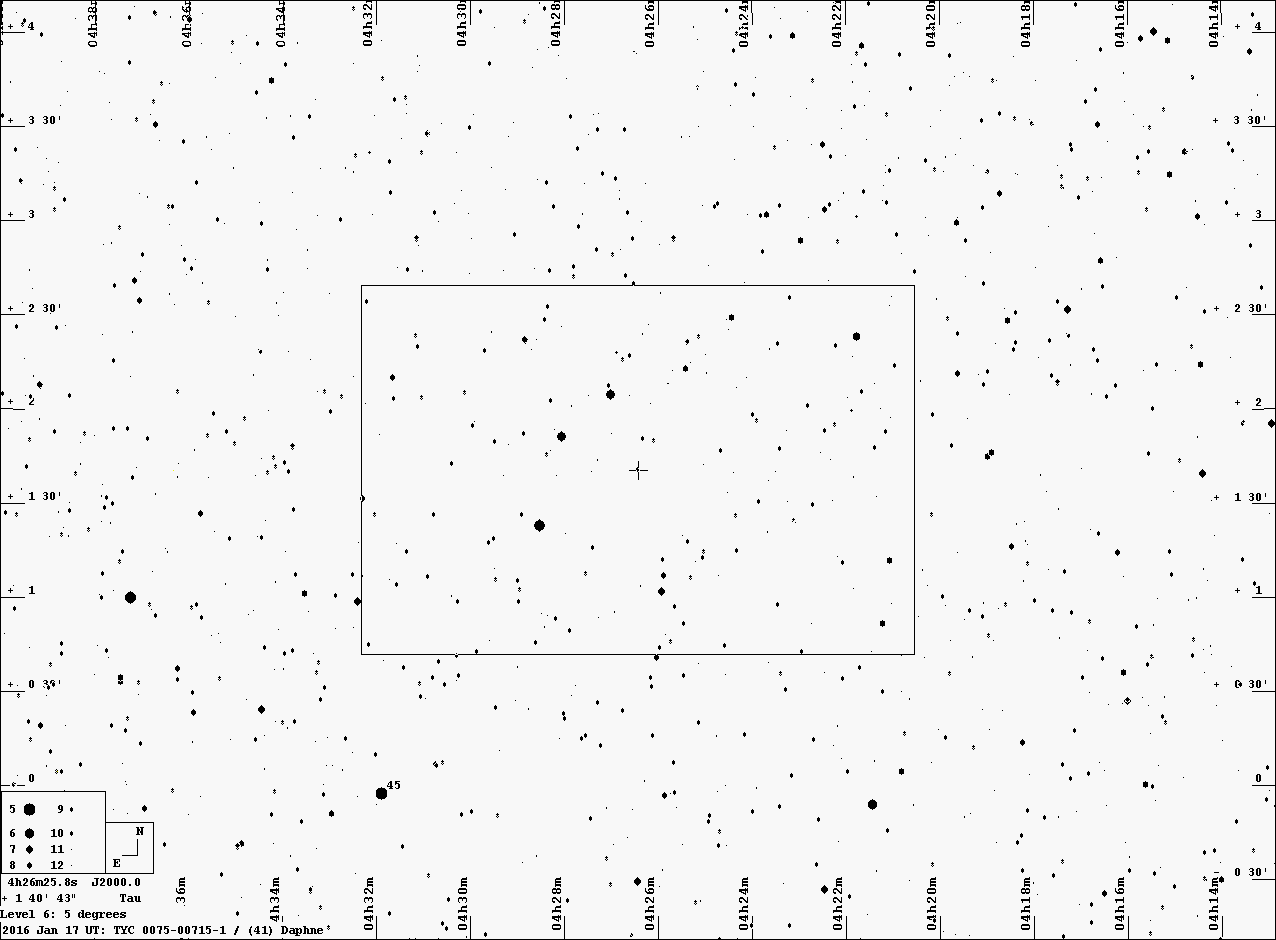
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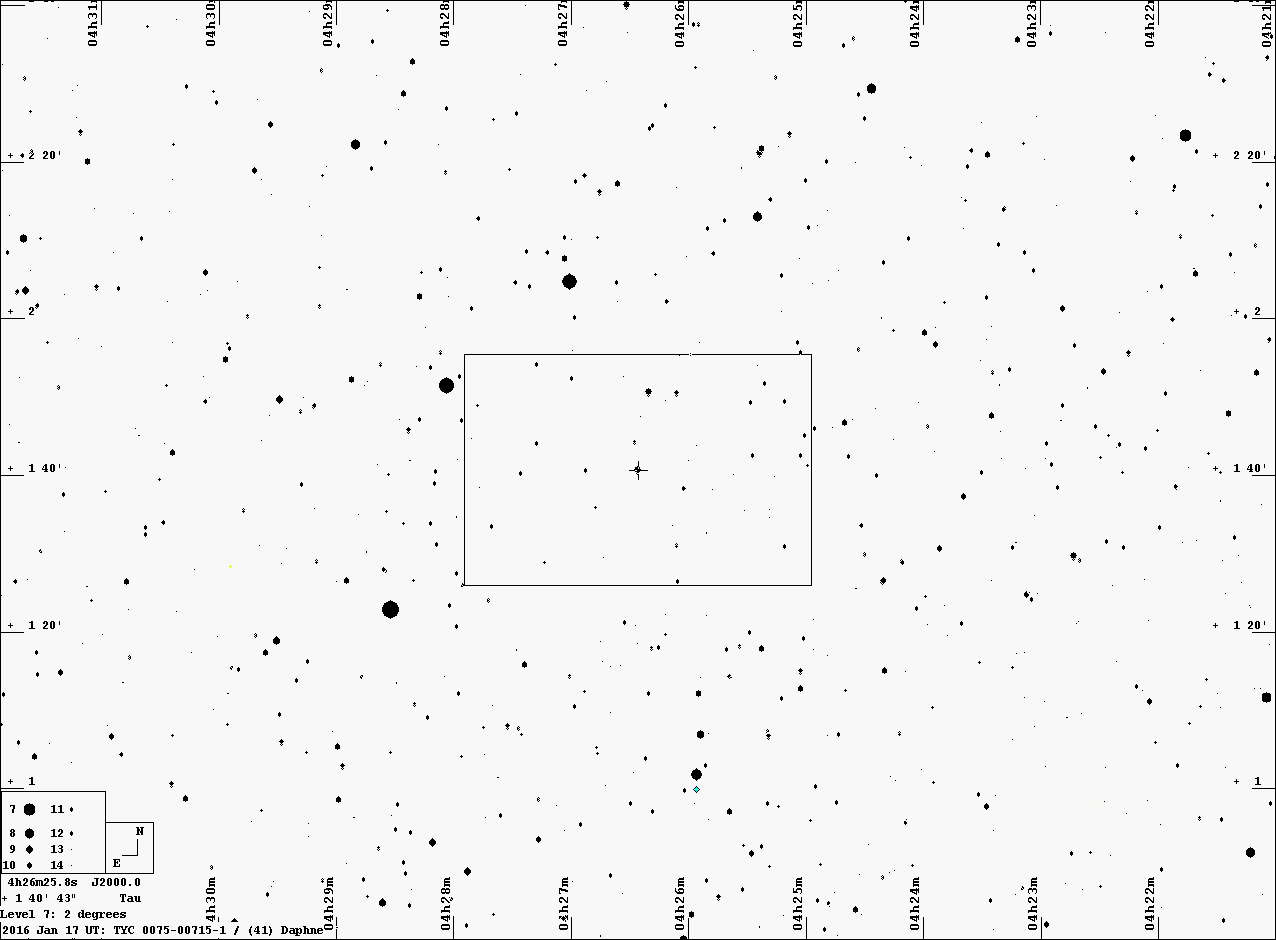
mailto: stevepr@acm.org

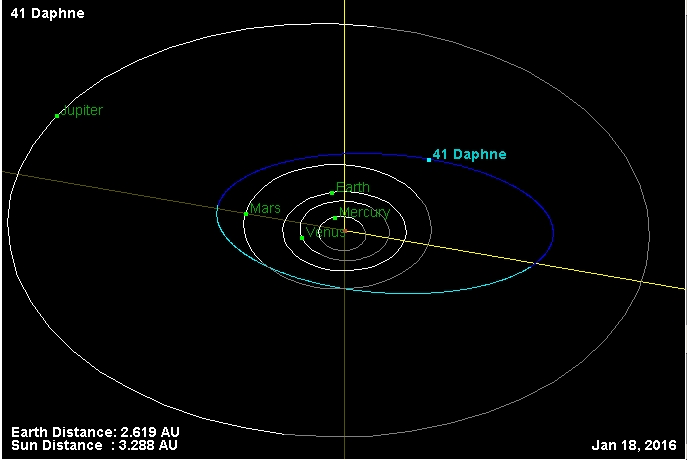


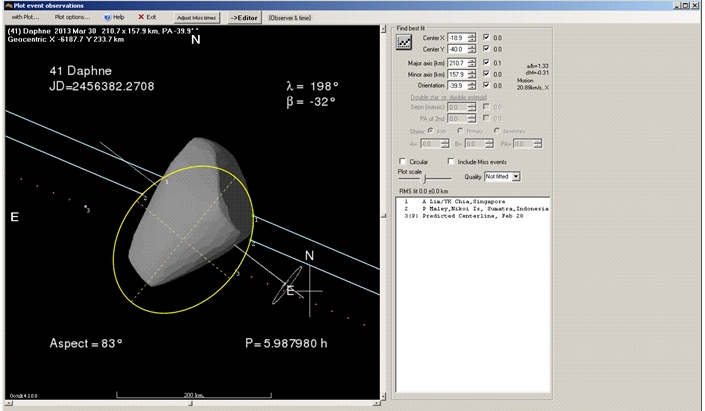




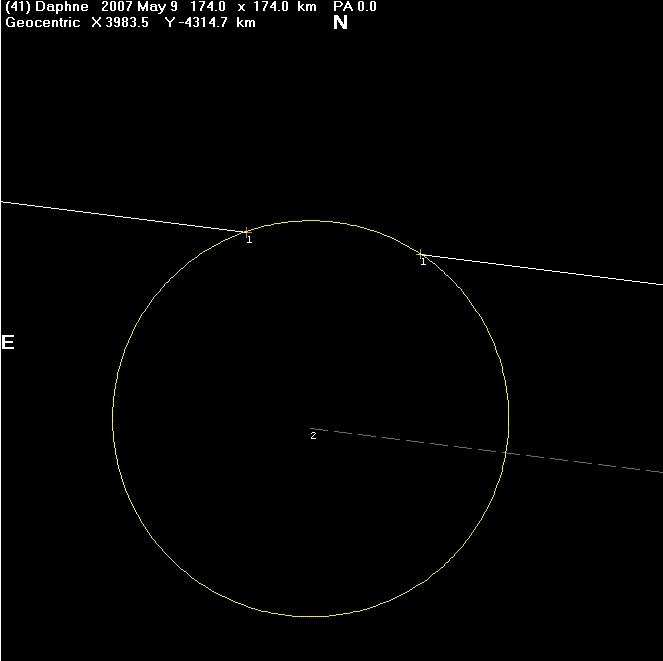


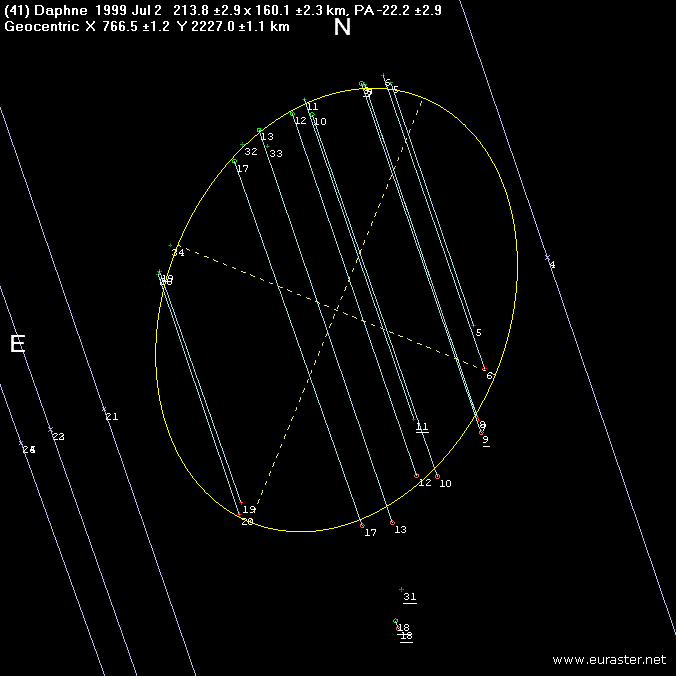




**OCCULTATION OF HIP 93026 BY 41 Daphne  
2013 March 30**

**OCCULTATION OF HIP 29994 BY 895 DAPHNE  
2007 MAY 09**





**Et enfin les résultats de cette dernière occultation:**

Avec la corde numéro 5 qui représente mon observation :