

May 30, Ixion: The altitude above the horizon will be too low for this faint star in its path over Canada (the predicted southern limit extends from P.E.I. to Lake Ontario and northern lower Michigan), but the path uncertainty means the occultation might be seen from Pennsylvania and possibly even southern Virginia, where the altitude should be high enough.

Nov. 6, Bienor: At 4:15 UT, the path crosses Morocco with high altitude above the horizon; Bienor’s ring will probably occult the star in the Canary Islands and western Iberia.

Nov. 23, Echeclus: At 4:03 UT, the path is over the Canary Islands with high altitude.

A good example of a successful campaign for an occultation by a rather large Kuiper Belt Object, (84522) 2002 TC302, took place in November 2021, observed by several in the USA and Europe. It’s remarkable that many amateur astronomers with relatively small telescopes could determine the size and shape of an object over 40 au away, farther than the current distance to Pluto. An account of this event is at occultations.org/publications/rasc/2022/2002TC302Results.pdf

FIGURE 4–2024 OCCULTATIONS BY DISTANT OBJECTS

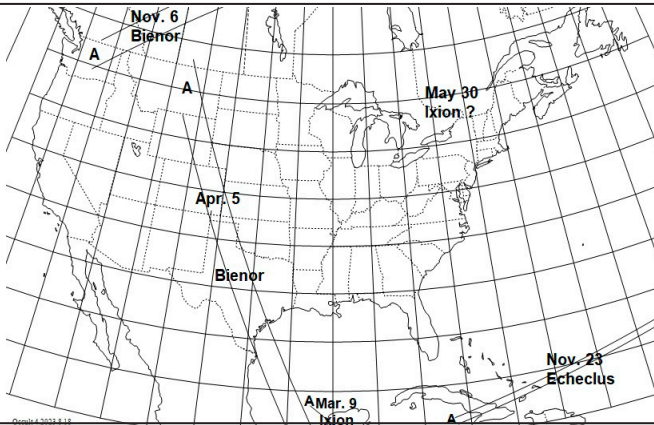
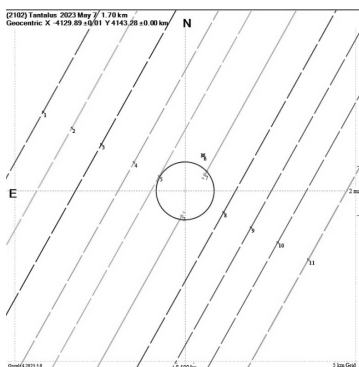


TABLE 4–2024 OCCULTATIONS BY DISTANT OBJECTS

| Date | UT | Occulting Body | Star | Mag. | RA (2000) | Dec | Dur. | Path |
|--------|-------|----------------|------------------|------|------------|-----------|----------|---------|
| | | | | | h m s | ° ' " | ΔMag. s | |
| Mar. 9 | 09:11 | 28978 Ixion | UCAC4 294-188147 | 15.6 | 18 25 42.0 | -31 12 43 | 3.9 48.6 | Mex |
| Apr. 5 | 03:08 | 54598 Bienor | UCAC4 653-044261 | 12.9 | 06 36 41.8 | +40 30 38 | 6.3 11.7 | MT-TX |
| May30 | 05:35 | 28978 Ixion | UCAC4 293-190793 | 15.2 | 18 23 43.7 | -31 35 23 | 4.2 32.4 | neUSA? |
| Nov. 6 | 04:29 | 54598 Bienor | UCAC4 644-043294 | 12.8 | 07 41 41.8 | +38 38 00 | 6.3 27.0 | SK-WA |
| Nov.23 | 04:11 | 60558 Echeclus | UCAC4 531-045449 | 14.5 | 08 13 19.7 | +16 07 04 | 6.2 6.8 | BS-Cuba |

Occultation by NEA Tantalus Observed on 2023 May 7



The image text reads “(2102) Tantalus 2023 May 7 1.70 km Geocentric X -4129.89 ±0.01 Y 4143.28 ±0.00 km”

Ted Blank, Norm Carlson, and Joan and David Dunham recorded this occultation from 10 stations spaced at 1-km intervals covering the 1σ path error zone near Socorro, New Mexico. As can be seen on the sky-plane plot, Tantalus was about 1.4 km across, less than the 2 km expected, so only Carlson got an occultation, and the predicted path had an error of less than 0.05σ. For more, see the 11th slide of occultations.org/publications/rasc/2023/1330_Dunham.pdf.