

IOTA campaign occultation of 9th-mag. star in Auriga from s.Calif. to Lake Erie next week (sent to IOTAoccultations on Sept. 8)

In support of the upcoming IOTA 2023 campaign event, the Sept 13 occultation of SAO 58382 = TYC 2413-01489 by the asteroid (704) Interamnia, we will be hosting two Zoom sessions from Arizona, one on **Monday** evening, Sept. 11, to discuss and demonstrate the prepointing process, and another one during the time of the occultation event, just after 10:15 UT early **Wed.** morning, Sept. 13, during the occultation, an opportunity for observers to show live observing and discuss results. The occultation will last up to 17s with a strong 3-mag. drop.

As a reminder, the information on the event and finder charts are at

occultations.org>Citizen Science>Campaigns or directly, at <https://occultations.org/citizen-science-with-iota/campaigns/>

The star is in Auriga, about halfway between M36 and M37, and about 6 deg. north and a little east of El Nath, at J2000 RA 5h 44m 19.3s, Dec +33 deg. 57' 49". Finder charts of different scales for finding the star directly are on Steve Preston's page for the event at https://www.asteroidoccultation.com/2023_09/0913_704_81918.htm. The campaign web site has a small finder chart, as well as charts and information to support prepointing a telescope to the altitude and azimuth where the asteroid is predicted to be at the time of the occultation. With this information, observers can point simple, undriven, scopes to observe well before the event. If you have IOTA's video capture program on your computer, and a Startech video capture device to use with any sensitive video camera like the Runcam available from the IOTA store reachable from the observing>recommended equipment on the IOTA web site, you can set the time to record the occultation (it uses your PC's clock, so that should be set within a few seconds of UTC using, for example, www.time.is, it will record the occultation at the time you input); then you can set everything up at a convenient time **Tuesday** evening, go to bed, and IOTA video capture will record the occultation on your laptop at the time you specified for it to record.

If you want to try to observe the event from your home, or travel to the path in your region, you can find the local UT of the occultation, and the altitudes of the star and the Sun, by clicking on your (intended) location on the OW cloud Google map for the event at <https://cloud.occultwatcher.net/event/985-704-81496-650135-T01480-1/1087927>. The OW cloud background defaults to dark, where political boundaries and some other features virtually disappear. To toggle between dark and light background on the OW cloud Google Map, click on the "theme button" to the left of "Welcome, [your name]" in the upper right corner of the OW cloud Google map. The light theme is preferred.

Interamnia has no known satellites. But a small satellite is possible out to about ten diameters, or for locations up to ten times the 335-km path width. So an occultation by a satellite is possible, but with very low probability, throughout North America. Therefore, wherever you are

on the continent, you might try the event, at least to practice, to gain experience, with your equipment. This also means you should start observing ten times the expected central duration before the event, or 173 seconds (almost 3 minutes) before the predicted time for your location, and should record a similar amount after the predicted time. Discovery of a satellite of Interamnia could help establish its density, as its mass is poorly known.

If you are interested in attending either of these Zoom sessions, please send a message to joan_dunham@yahoo.com and state which of the Zoom sessions you want to attend.

David and Joan Dunham