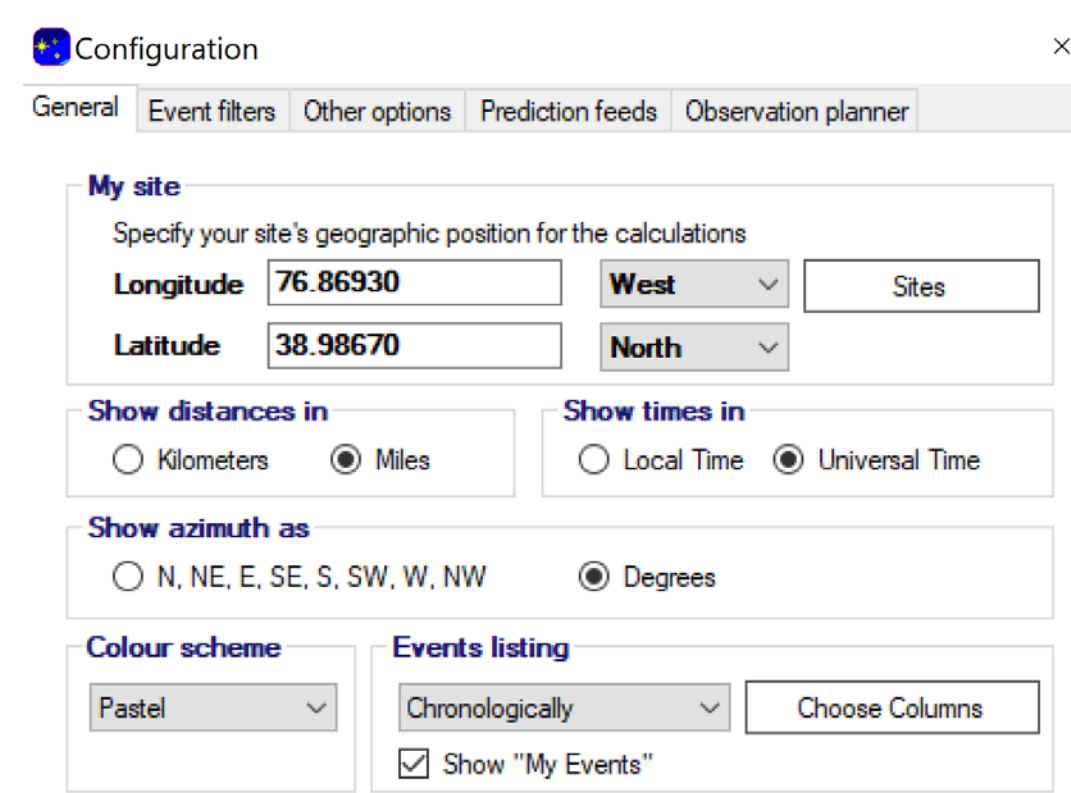


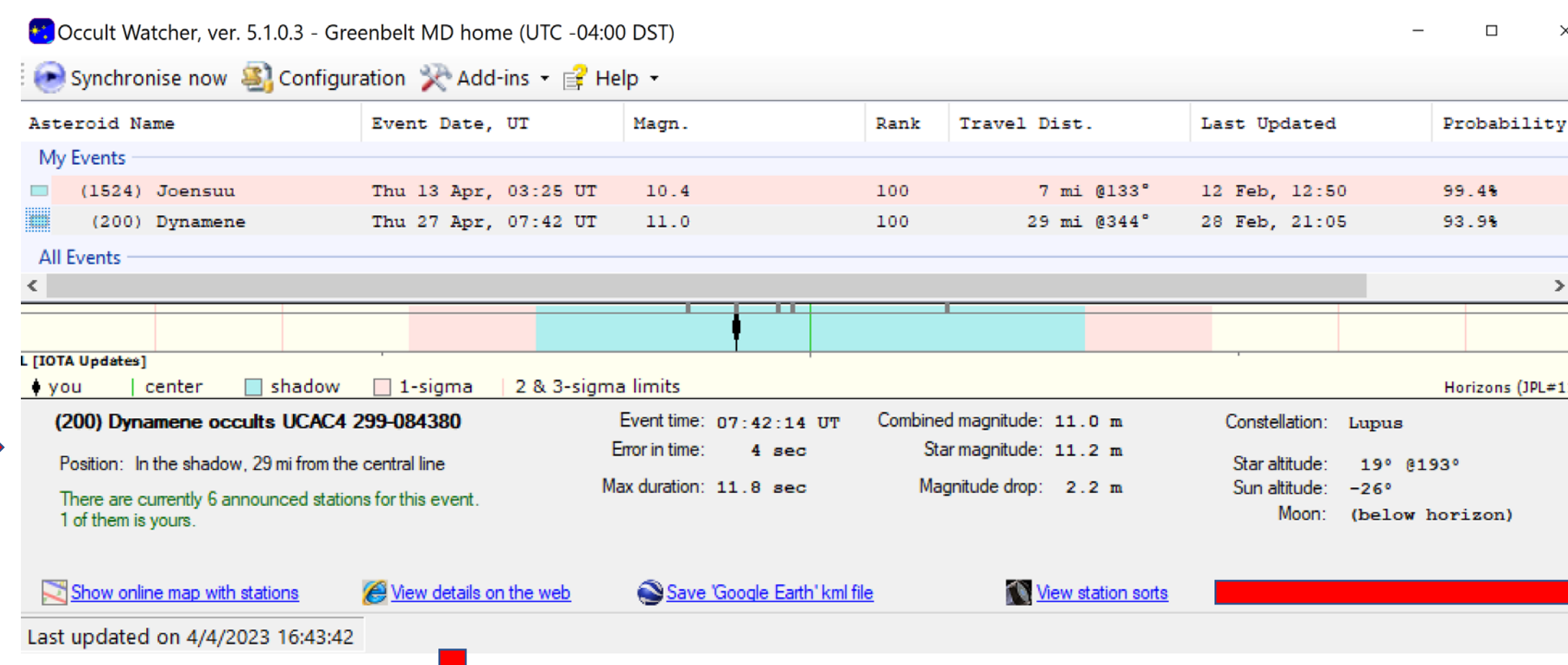
Prepointing for Unattended Occultation Recording

Select which event to observe by examining event data and parameters using Occult Watcher, a free online service

Observers set their **site location, coverage area, magnitude limits, travel distance, and prediction sources** via the Configuration tab at the top of the OW display.

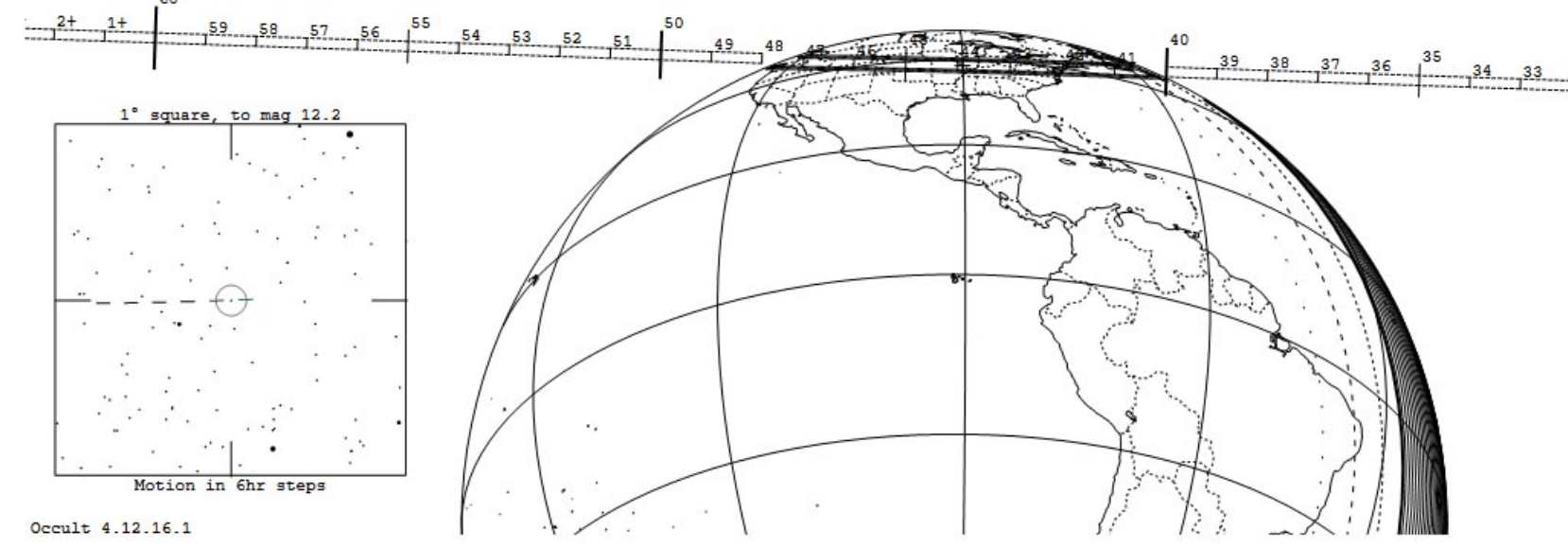


Here is the UTC event time and the circumstances of the occultation.



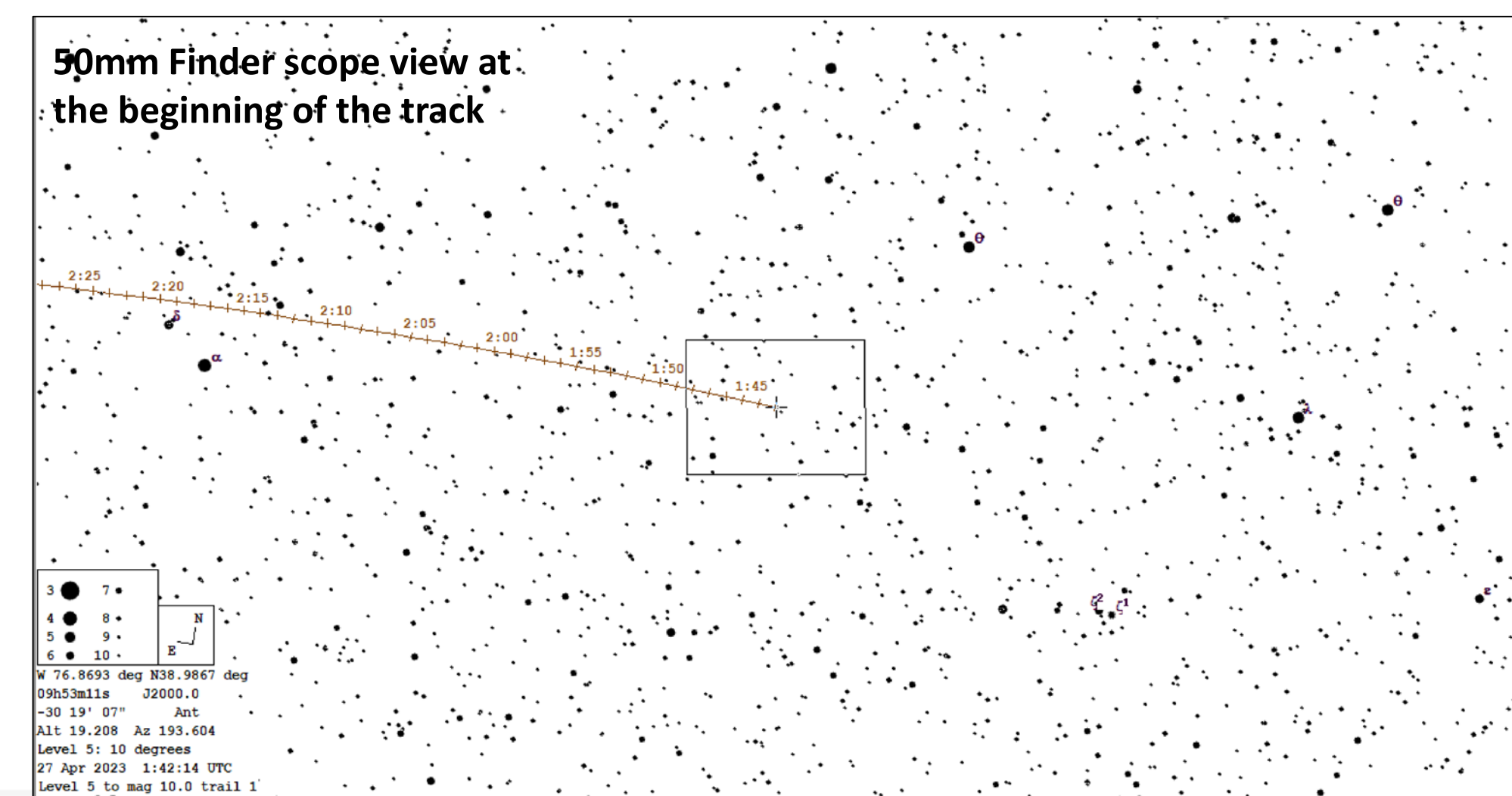
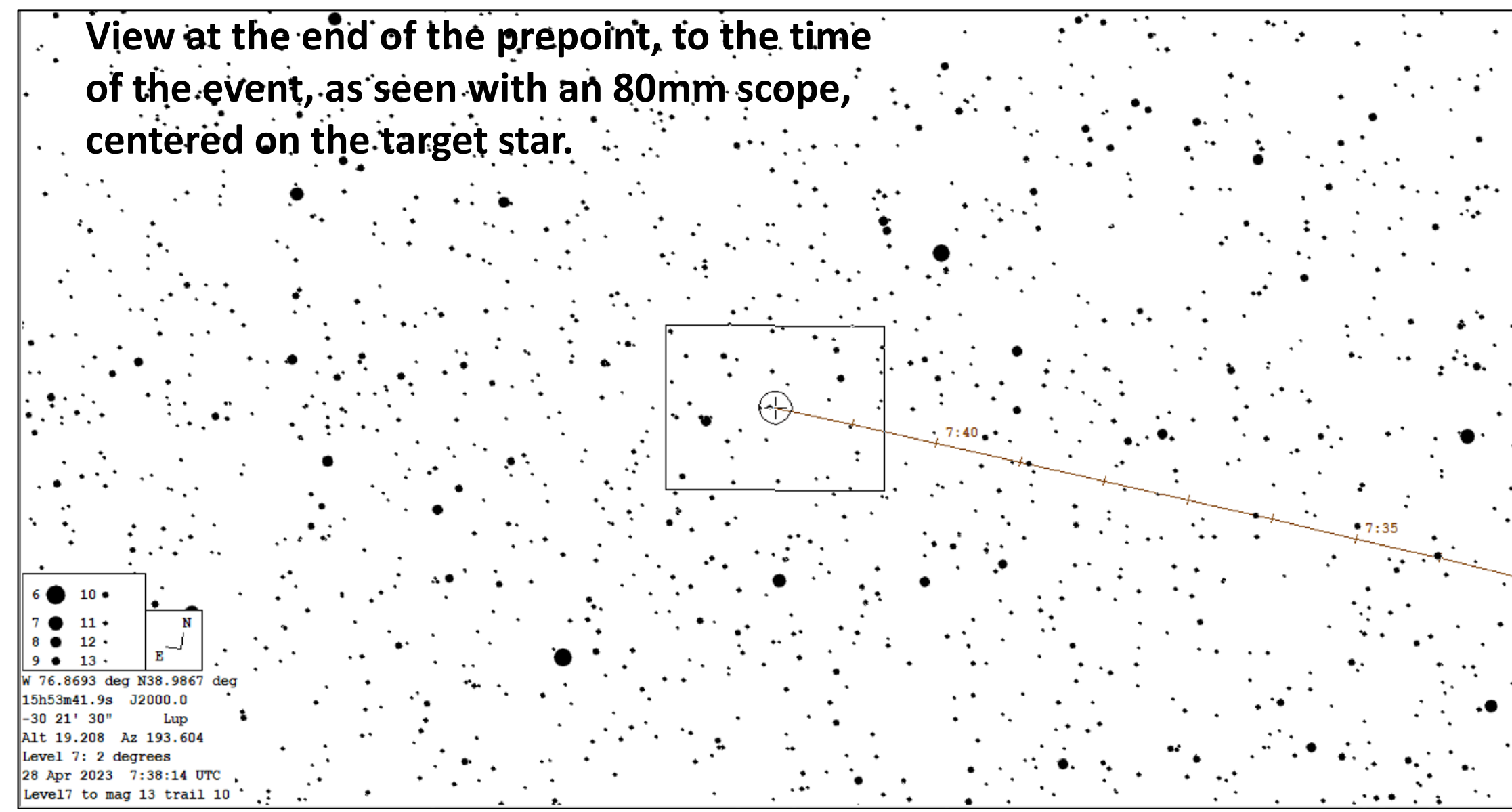
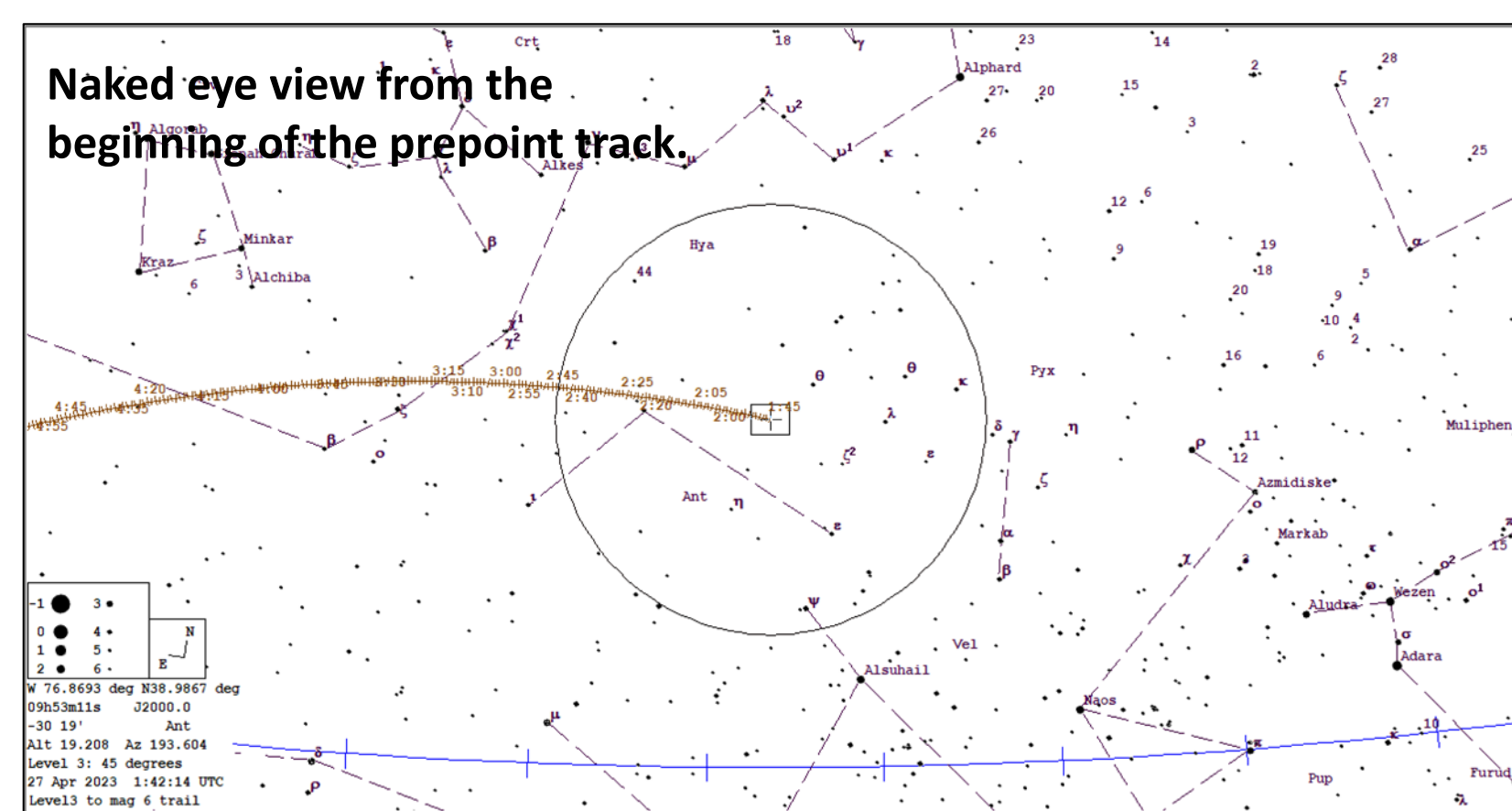
Distance (Occ...)	Prob.	Cloudy	Station info	City
413.8 km	0.1%	-	== Right limit plus 3-Sigma ==	
333.7 km	2.3%	-	== Right limit plus 2-Sigma ==	
253.6 km	15.9%	-	== Right limit plus 1-Sigma ==	
173.4 km	50.0%	-	== Right limit ==	
86.9 km @340°	85.9%	-	(3) Green K Home : video + gps	Westport
86.8 km @341°	86.0%	-	(5) MAH Observatory : video + gps	Greenwich
0.0 km	97.0%	-	==== Centre Line =====	
-11.7 km @203°	96.8%	-	(6) New Station : video + gps	Chelan
-20.7 km @160°	96.4%	-	(1) Hartnett K Home : video + gps	Brookeville
-47.4 km @164°	93.9%	-	(4) Dunham J Home : video + gps	Fountain Hills, AZ
-78.2 km @203°	88.2%	-	(2) Nikitin V Home : video + gps	Boulder
-173.4 km	50.0%	-	== Left limit ==	
-253.6 km	15.9%	-	== Left limit plus 1-Sigma ==	
-333.7 km	2.3%	-	== Left limit plus 2-Sigma ==	
-413.8 km	0.1%	-	== Left limit plus 3-Sigma ==	

The **globe map** shows the predicted observation track and times across the Earth, basic information on the star and asteroid, and a finder chart. It can be accessed by clicking on the link "view details on the web" and then, at the bottom of that page, click on "show Occult Map".



The Observation Planning service allows observers from all over the world to plan better their observations by coordinating their site positions with everyone else, avoiding duplicated chords and helping to get better results. Observers can also report their observations.
There are: 1891 users; 701 coordinated events; 12861 stations;

Finder charts prepared for the observation site longitude and latitude at the time of the event. These illustrate the use of a **prepoint line**, a line of constant altitude & azimuth that is where the event will occur as seen from that location. These were generated using **Guide 9**.



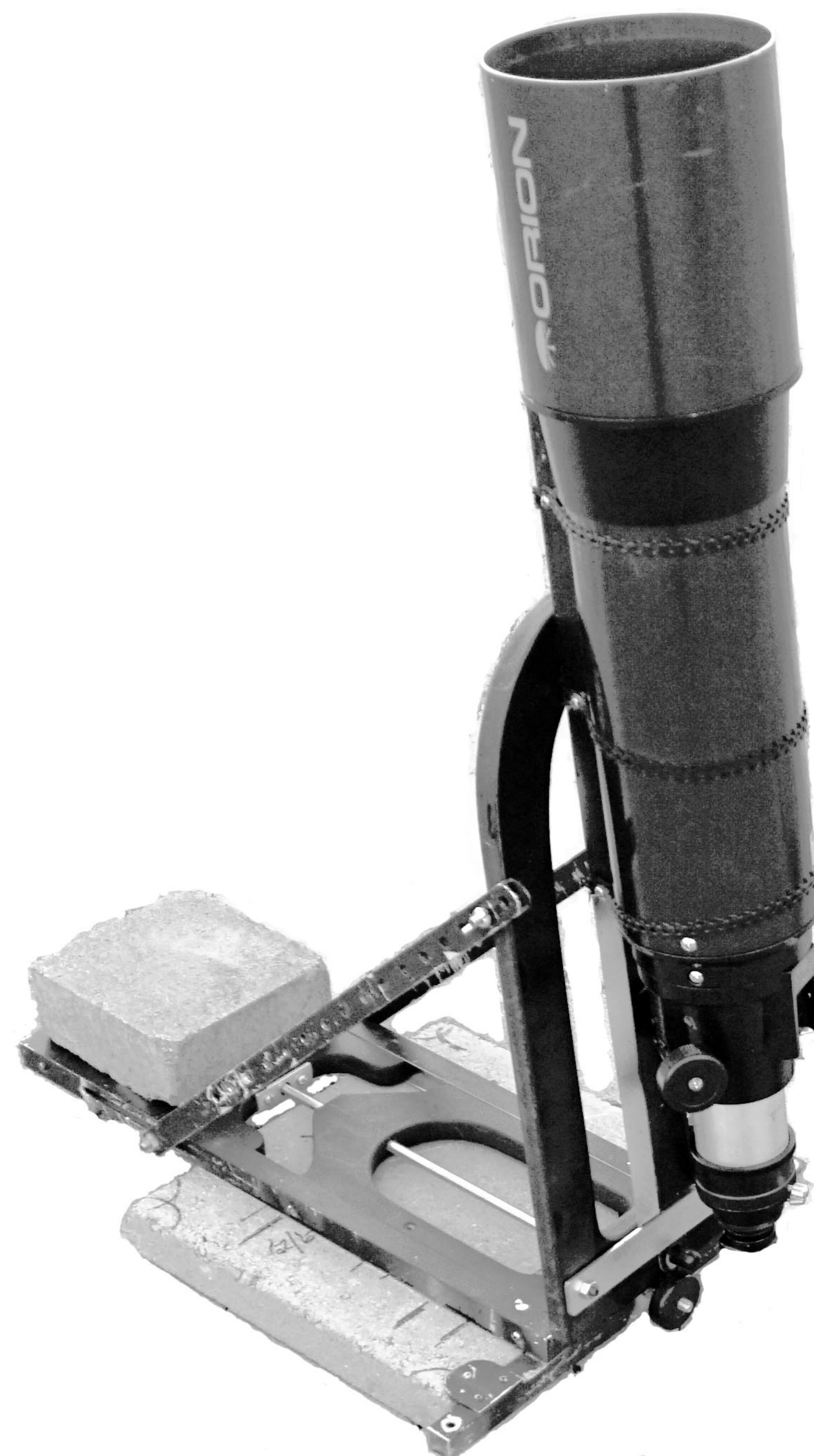
This features the occultation of 11th magnitude UCAC4 299-084380 by (200) Dynamene on 2023 April 27, to be observed from Maryland. The prediction information provided by Occult Watcher uses predictions generated by Occult.

This telescope is an Orion 120mm refractor on a John Broughton alt-az mount. This mount is specifically designed for remote station occultation observing.

An 80 mm refractor used with a RunCam NightEagle 2 or a Watec 910HX is sufficient for observing an occultation of an 11th magnitude star at 30fps.

The equipment shown is for illustrative purposes. Observers select their observing setups from the scopes, cameras, etc., they have or can borrow to meet the conditions of the event. *It is highly recommended that equipment be tested, batteries charged, and computer drives or data capture media be checked for sufficient storage before each event.*

Data are captured by specialized software on a small computer or on a recorder.



Cameras used for observing need to be able to reliably capture analog or digital video at a sufficient rate to time the occultation and sensitive enough to record the star image at those rates.



Windows software available for data capture includes **IOTA Video Capture, limovie, VirtualDub, Tangra, SharpCap, Fire Capture**, all of which are freely distributed or available for a nominal cost. IOTA Video Capture, shown in this image, includes an event scheduler to aid in unattended data capture.

StarTech SVID2USB232



Analog data must be **digitized** for capture on a computer.

StarTech equipment is sold on Amazon. Other digitizers are available, but many are not able to provide fast and accurate digitization.



Precise timing of the data is an absolute necessity for usable observation data. GPS time stamps can be placed on analog video by passing it through the VTI for time stamping as it is fed to the capture computer or recorder.

Very few digital cameras used for astronomy have precise GPS-based timing capability, and those that do are expensive to quite expensive. Some observers have built GPS-referenced flashers to give the data a time base. More development is on-going.

The observing location selected should be one that offers some protection from passerby, either on protected private property (with permission) or concealed in some way on public property.

Individual observers prepare and deploy multiple remote stations for a given event, from only one or two to as many as the record number of 12 that Scotty Degenhardt achieved.

More information on technique, software, equipment, and access to Occult Watcher is available via <https://occultations.org>, the official IOTA website. Also recommended is becoming a user of one of the occultation observers mail lists, such as IOTAoccultations@groups.io.