

Christian, all,

Yes, I agree that 150 mm aperture will be appropriate for the 2002 TC302 next event on [November 11](#), provided that people uses a recent Sony-based detector like those mounted in the QHY, ZWO or Watec cameras.

However I think that the owners of an eV-Scope (114 mm only, but with a recent Sony detector) should try in the same way...

I noted on [yesterday](#) evening already 113 registered observers in Occultwatcher. But accounting for the hectic bad weather we are in Europe currently suffering, 200 stations to locate the asteroid and its possible satellite would not be too many !

For information the target star will be UCAC4 616-007599 ($V \sim 12.0$, $G(aia) = 11.7$, $V-K \sim +2.8$), a giant orange star like Arcturus, although 1600 parsecs distant - i.e. farther than Arcturus by a factor about 140 -.

The apparent diameter of the star should be ~ 0.08 mas, and the trans-neptunian asteroid, of apparent size ~ 16 mas, will move at the 0.85 mas/second velocity.

Also note that the Chinese 4.7-m telescope in Xinlong Observatory has found in the course of its spectrographic multi-objects sky survey (LAMOST) that UCAC4 616-007599 might be a binary star, as its radial velocity changed from -17 km/s on 2015 [Jan 09](#) (first measurement) to -5 km/s on 2017 [Jan 31](#) (second measurement).

Generally our occultations fail to detect as binary an authentic binary target.

However we know from statistics that the targets in major part are double; but as the effects on immersion and emersion profiles often are elusive, in practice real effects are indistinguishable from the combined atmospheric and detector noises.

With a bright target (allowing short exposure) and 100 or so observers (thus several chords from one star less than 1 mas apart), chances of binary star recognition are enhanced. Besides note that at 1600 parsecs distance, 1 mas in the star system is 1.6 AU.

Cheers.

Jean Lecacheux