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Stellar Occultations by the Trojan 1143 Odysseus

The asteroid (1143) Odysseus is a minor body of the Solar System set next to Jupiter's orbit, approximately 5.2 astronomical units (AU) from the Sun, categorizing it as Trojan. It was discovered on January 28th 1930 by Reinmuth, K. at Heidelberg, and since then, some of its physical and orbital characteristics determined, like its diameter at $114,6 \pm 0,6$ km, its rotational period at $10,114 \pm 0,079$ h, its magnitude at $8,418 \pm 0,003$, and a few others. This work utilizes the stellar occultations technique to determine its shape and dimensions more accurately. For that we use data from a multi-chord occultation observed in February 2024 and a few more recent ones as well, one with two chords and another with only one. This data set also provides precise astrometric positions that improve the object's ephemeris and prediction for future occultation events for the body, resulting in an extremely accurate physical characterization for the Trojan.

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