# STELLAR OCCULTATION BY THE ASTEROID (853) NANSENIA ON 8 APRIL 2021

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Observations of occultations of stars by asteroids provide useful information about the shape and size of asteroids. Ground-based multisite observations are especially valuable in that regard. To this end, on the joint initiative of the Main Astronomical Observatory of the National Academy of Sciences of Ukraine and Astronomical Observatory of Taras Shevchenko National University of Kyiv, the development of Ukrainian network of stellar occultation observing stations is currently underway.

This paper presents the results of observations of the star UCAC4 516-047388 occultation by the asteroid (853) Nansenia on 8 April 2021 performed at the Kryzhanovka observation station of Odessa I.I. Mechnikov National University. A Schmidt telescope (D = 271.25 mm, F = 440 mm) and Videoscan-415-2001 CCD camera were used to carry out observations. The ICX415AL chip (with the number of effective pixels 782 (H) x 582 (V) and unit cell size of 8.3 µm x 8.3 µm) serves as an interline image sensor for the specified CCD camera. The exposure duration for the occultation recording was chosen to be 5 seconds in order to acquire an image of the star adequate for photometric measurements, on the one hand, but to minimise the exposure time thus improving temporal resolution, on the other hand.

The star UCAC4 516-047388 has a low brightness of $14^m.2$ which provides another reason for a long exposure time of 5 seconds to be used. This exposure time exceeds the maximum duration of occultation of 2.8 sec. An approach that enables us to draw a conclusion that the occultation has taken place and also to estimate the duration of such a phenomenon is adopted to construe the photometric (light) curve. Our calculations yield the duration of occultation $\tau = 2.0 \pm 1.2$ sec, which corresponds to the predicted value within the error.