

Binary main-belt comet 288P

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Abstract

The binary asteroid 288P (300163) [1, 2, 3, 4] is unique among the known binary asteroids due to its combination of a large semi-major axis ($\sim 100 \times$ the radius of one of the components), near-equal component size, and sublimation-driven, comet-like activity [5]. We report on new Hubble Space Telescope observations obtained between August 2017 and May 2018 that show 288P inactive. We use a refined method to measure the component separations in both the new data set and the Hubble observations from 2016/17 [5], and derive the orbit solution from the combined data set. We also study the dust environment during the 2016/17 perihelion passage, exploiting the knowledge on the inactive components obtained from the 2017/18 data to separate the light contribution from dust and the parent bodies.

References

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