

Direct Impact mission to (3200) Phaethon: Artificial meteor shower of the once-active comet

T. Kasuga (1), J. Watanabe(1), M. Sato(2)

(1) NAOJ, (2) NMS

Asteroid (3200) Phaethon is suggested for a candidate of the direct Impact research. The object is considered to be the extinct comet and the parent of the Geminid meteor shower. Phaethon Impact mission is predicted to cause great activity of meteor showers. Ejection of dust, and surface of the extinct comet will be firstly observed by the space probe's camera and the ground telescope. On the basis of dust trail theory, a bundle of trails' distribution are calculated. This result indicate that meteor showers are seen on Earth about 200 years later from the event on 12 April in 2022. There is little risk of Impact hazard on spacecrafts caused by meteor showers.