

## Dust Production rate by Impacts of Interstellar Dust on Trojan asteroids

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We estimated the production rate of dust grains in the Trojan asteroid region by the impact of interstellar dust on the surface of Trojan asteroids. Furthermore, the orbital evolution of resulting micron-sized dust ejecta, trapped in the 1:1 mean motion resonance with Jupiter, has been investigated by taking into account the planetary gravitational perturbation, solar radiation pressure, Poynting-Robertson drag, solar wind drag and Lorentz force. It is found that the grain with a radius of 10 micron takes the quasi-equilibrium orbit around the Lagrangian point for  $10^6$ - $10^7$  years after its ejection from the parent Trojan asteroid. The spatial density of such trapped dust grains has been estimated based on the simulation results of dynamical evolution of ejecta.