

Seminario

Martes 26 de Marzo, 2019, 11:00 hrs (PST), Auditorio IA-Ensenada

NASA Lucy Mission: How ground-based observations can support the exploration of primitive objects in the Solar System



An artist's conception of the Lucy spacecraft flying by the Trojan Eurybates
Credits: SwRI and SSL/Peter Rubin.

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Jupiter Trojans (JTs) are primitive small bodies of the Solar System that share Jupiter's orbit around the Sun, residing in the two equilibrium points, known as L4 and L5 Lagrange regions. Understanding the origin and composition of these bodies can provide valuable information to constrain dynamical models and shed light to the history of the Solar System. In this context, NASA's Lucy mission will visit five JTs and one main belt asteroid between 2027 and 2033. In order to provide valuable information for mission planning and maximizing the scientific return, in 2017, we started a ground-based observational campaign in support of NASA Lucy mission. This campaign is aimed to provide a detailed characterization of the targets of the mission, and also, to broaden the knowledge of the whole population of Jupiter trojans. In this seminar I will present rotationally resolved spectroscopy of Polymele, Eurybates and Orus, all JTs that are Lucy's targets, and the spectrum of the one main-belt asteroid, Donaldjohanson. I will also discuss how our results will support the planning of the mission, also maximizing its scientific return.