

## NOT - a telescope for the future



Contribution ID: 15

Type: **Invited Talk**

# Investigation of Primitive Bodies in the Solar System with NOT

*Wednesday, 8 June 2022 09:55 (25 minutes)*

Comets and asteroids are remnants of the solar system's original planetesimals, and act as probes of the environment where they formed. The ice-rich comets formed beyond the snow line, while asteroids accreted inside it. Both provide information about conditions in the protoplanetary disk, but at different radial distances. The newly discovered class of "active asteroids" blurs this distinction by suddenly becoming active, i.e., shedding mass and developing a transient coma. These objects show that sub-surface ice might be prevalent even in the inner solar system, and may have been a source of water on Earth.

We have been using the Nordic Optical Telescope to observe primitive bodies. Their ephemeral nature requires a telescope that is nimble enough to accommodate sudden requests for observing time, and versatile enough to accommodate different types of observations – both of which the NOT does extremely well. In this talk I will describe how the NOT has allowed us to pinpoint the mass loss origin for the active asteroid 6478 Gault, and respond to 2 interstellar objects that visited our solar system.

**Primary author:** LUU, Jane (University of Oslo)

**Co-author:** Dr JEWITT, David (UCLA)

**Presenter:** LUU, Jane (University of Oslo)