



## Formation location of S-type asteroids and OCs

P. Vernazza<sup>1</sup>, R. P. Binzel<sup>2</sup>, F. E. DeMeo<sup>2</sup>, M. Birlan<sup>3</sup>. <sup>1</sup>ESO, Garching, Germany. E-mail: pvernazz@eso.org.  
<sup>2</sup>MIT, USA; <sup>3</sup>IMCCE, France.

### Abstract

An important goal of asteroid science is to link meteorites and their immediate precursors back to their parent bodies in order to constrain their formation location. To accomplish this task, we need to combine data from several different disciplines: dynamical modeling, spectroscopic observations, petrology, and mineralogy.

Here we report the result of a large observing campaign aimed at investigating the surface composition of the most massive S-type Main Belt Asteroids (MBAs). We observed about 90 of these S-types with SpeX/IRTF in the near-infrared thus complementing the existing visible part of the spectrum. We will show that by comparing the mineralogical composition of these S-type asteroids with the composition of OC meteorites we are able to constrain the formation location of OC meteorites. What's more, our observations allow us to constrain the main source region of Near Earth Asteroids.

