

**IAA Severo Ochoa Meeting: Addressing Key Astrophysical
Questions from Granada**
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“Small bodies of the Solar System: state of the art and future prospects”

Since the launch in the late 90s of the first mission to orbit and land on an asteroid, many other missions have been designed and launched to study in detail these and other small bodies, from fly-by missions like New Horizons to sample-return ones like OSIRIS-REx or Hayabusa2. In general, the information that is retrieved in-situ from the instruments on-board a spacecraft achieves a level of detail that cannot be compared to any other measurement from the ground. However, ground-based telescope observations are fundamental to obtain extremely valuable information from entire populations and get the "general picture": we can study the distribution of material in the asteroid belt; execute long-term monitoring programs to depict the mechanisms triggering cometary activity; even identify and design mitigation strategies for potential impactors under planetary defense programs.

In this talk I will review the current status of our knowledge on the small bodies of the Solar System and outline some the key and open questions related to these objects that will be addressed in the near future.