

Small Bodies Section

- Present Draft has 1.25 pages on background and only 0.75 on the vision for next 20 years
- Background explains Kuiper Belt science in some detail but does not mention it at all in the future opportunities.
- Vision spends many words on ‘politics’ (NEO Alerts, DI/Rosetta co-operation) and very few on ‘science vision’

Key Questions

- What is the role of asteroid impacts on (past and future) life on Earth?
- How was the Kuiper Belt formed and how did its structure evolve? What is this structure telling us about the formation of the Solar system and extra solar planets?
- How do the samples we return from space (stardust, meteorites, NEO sample return) relate to the diverse population of objects we observe in the solar system and the ISM.

The landscape in the next decade.

- VISTA, GAIA and LSST/Panstars will change the landscape by detecting and orbitally defining thousands of asteroids and comets
- For NEO's need reliable information on sizes, compositions, structures for hazard mitigation and space mission targeting
- For KBO need statistically meaningful samples of all dynamical groups defining spins, shape, spectroscopy, albedo to probe origins, collisional history etc

Requirements

- Maintain strong EU planetary community to keep us an equal partner in International programmes.
- Regular access to 4 and 8m optical-IR telescopes for large colour/spectroscopic/thermal-IR surveys of small (+ faint) bodies and synoptic observations of 'interesting' examples so discovered. Capability of ELT for SS observations of key targets.
- Theoretical studies of K-B evolution and relationship to dust disks and planetary systems around other stars.