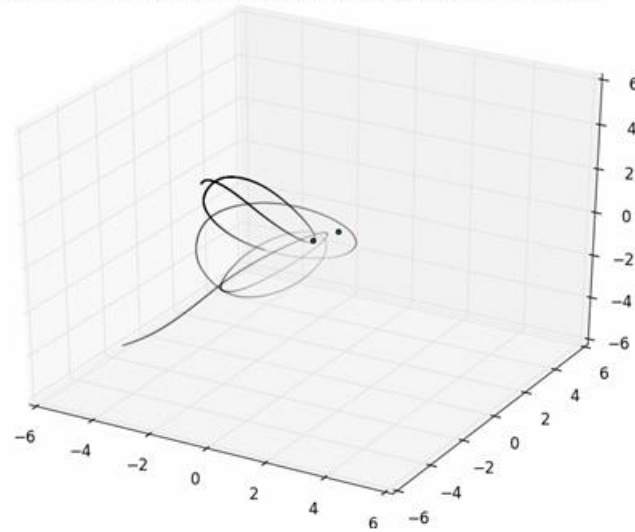


Synthetic orbit designation: NESC0000ijw1, at 09- DEC-2011, 16:37:46 UTC.



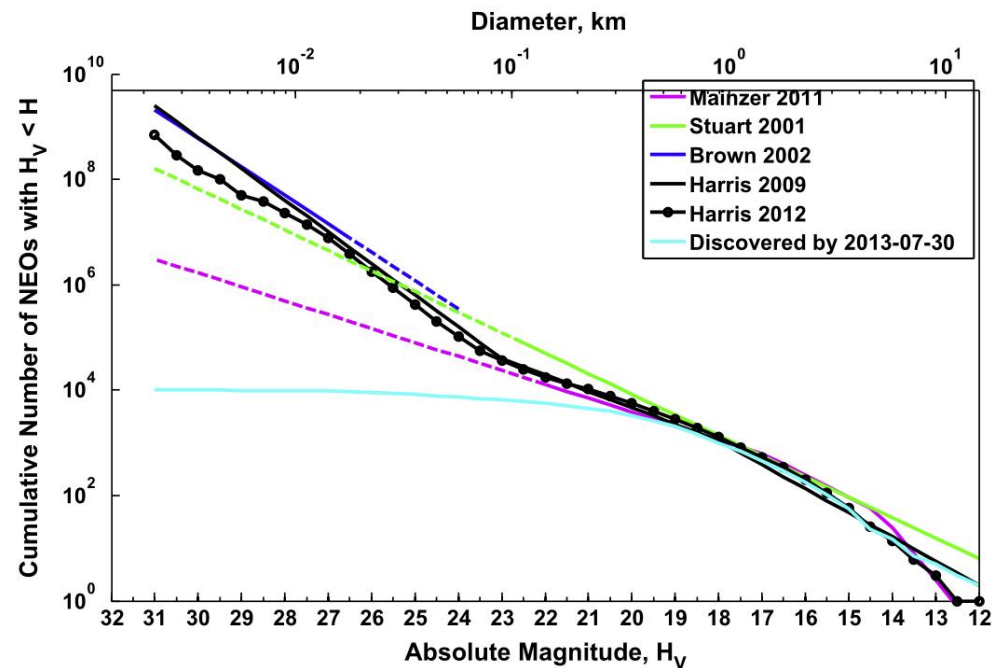
Properties of Earth's temporarily-captured satellites

Grigori Fedorets

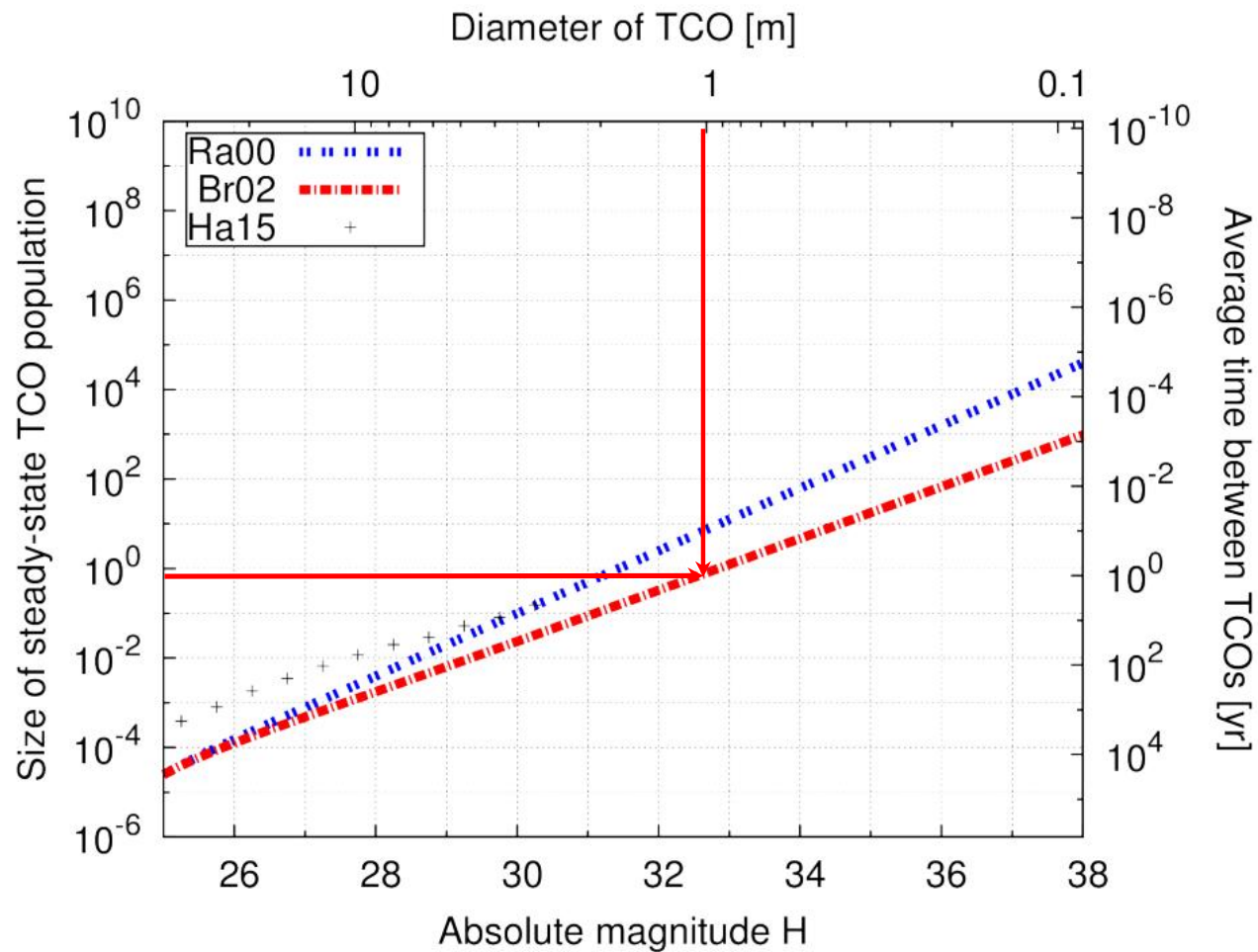
PAPU meeting, Botta, 02 Dec 2015

Earth's temporary natural satellites

- A constant population of natural bodies (=asteroids) on a geocentric orbit (Granvik et al. 2012)
- One confirmed TCO detected so far, 2006 RH₁₂₀ (Kwiatkowski et al. 2009)
- NES are formidable asteroid mission targets – low Δv and a rather long opportunity window
- NES are well suited for probing the lower end of asteroid size distribution.



Steady-state population



Topics under research

- Population statistics
- Optimizing observational strategy with LSST
- Defining best orbital inversion strategy
- Dedicated survey & target-of-opportunity observations

