Fuzzy Characterisation of Near-Earth-Asteroids

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Due to their many close approaches with the inner planets (Venus, Earth, Mars), Near-Earth-Asteroids (NEAs) in general have highly chaotic orbits. This chaoticity causes problems, when one tries to classify NEAs and investigates their statistical properties over very long timescales. "Classical" classes are not stable, i.e. an asteroid assigned to a specific class will almost certainly leave this class at one point during the integration time. We show, how this problem can be solved by using methods based on *Fuzzy Logic*. A "fuzzy" characterisation of NEAs is capable of overcome the problems caused by the chaoticity and enables one to obtain a valid statistical description of NEA properties for very long timescales.