

## Study of Orbital Elements of Asteroids in Cometary Orbits Using 2.4 m and 0.7 m Diameter Telescopes

Classification criterion for identifying asteroid and comet has been developed continually for several decades. However the main concepts for the criterion remain unchanged. Comet has gas, which vaporizes from its surface when it travels into inner solar system (about 2 astronomical units). On the other hand, an asteroid does not emit gas anywhere in its orbit. The discoveries of asteroids and comets have increased for the past few years. Therefore, new classification methods of asteroid and comet based mainly on their orbital elements, which are used to calculate the Tisserand's parameter of Jupiter ( $T_J$ ). In this work, the orbital elements of asteroids in cometary orbits are studied by using 2.4 m and 0.7 m diameter telescopes based on celestial coordinates from images of asteroids. The study uses astrometry technique to find the real position of asteroid in space and calculate its orbital elements. This work focuses on asteroids with high variation in position by selecting asteroids, which have  $T_J < 3$  and are disturbed by the gravity of Jupiter. Orbital elements and the Minimum Orbit Intersection Distance (MOID) are calculated and compared with astrometry result of other observations, which is acquired from Minor Planet Center database.

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