# The Orbital Stability of the Sun-Jupiter-Saturn System

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Kuiper (1973) suggested that the stability of the Sun-Jupiter-Saturn System may be meaningfully investigated by studying the stability of the Sun-Jupiter-Saturnthree-body System. Numerical investigations by Nacozy (1976) showed that mass enhancement of the two planets beyong a factor of 29.25 led to instabilities in the system. In this new investigation similar mass enhancements are studied in detail numerically and compared with the analytical values derived from the $c^2H$ method. In addition, the eccentricities of the two planets were varied as well as an enhancement of their masses. It was found that the system soon showed signs of instability for the increased eccentricities when the masses of the planets were enhanced by fairly small factors.