HOMEWORK SET 11

Due November 30, Wednesday

FGK 10: Chap 12-Q36, Q49, Chap15-Q37, Q45

A1: Suppose that we discover another moon called Koon orbiting the Earth in an elliptical orbit with a period of 8 months. It is further found that the apparent size of Koon at perigee is 3 times its apparent size at apogee. Find the semi-major axis, apogee distance, and perigee distance of Koon’s orbit as how many times the Earth-Moon distance.

A2. Summarize the role of gravity in the solar system in the following aspects: (a) formation of the solar system; (b) motion of planets; (c) interaction between planets and satellites; (d) formation of rings; (e) asteroid belt and Kirkwood gaps; (f) sun and stars’ energy.