ABSTRACT

In this paper, we investigated the possible interactions of the moon and Earth, mainly in the period 1996-2015. Initially, we considered the gravitational force of Moon vs. Earth by Newton's equation. The Moon has an elliptical orbit around the planet that reaches two points of maximum. One is the closest, the Perigee, and other the farthest is the Apogee. The Apogee and Perigee have distinct values monthly. In our study, the Perigee force was calculated during every month, year after year. This force creates an oscillation, which in, 13 – 14 months, completes a whole cycle. The wave period is 5400 hours as calculated. The energy generated by Moon on Earth from this closest position reaches a maximum during the Full or New Moon. We observed during these phases an enhancement of earthquakes near the shorelines of the Pacific. On the other hand, the wave minimum matches with the First or Third Quarter, but in this case, the effects of earthquakes are smaller on the same regions observed for New or Full Moon. These results indicated that external forces created by Moon- Earth system allied with internal ones are responsible for increase earthquakes in the pointed out areas. Also, the oscillating movement of Moon-Earth system provides a tool for predicting the next enhancement on earthquakes cycles.