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[IJG](#) > Vol.3 No.2, May 2012



## Study on Correlation of Tidal Forces with Global Great Earthquakes

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### ABSTRACT

The correlation between the celestial tidal forces and earthquakes has been a controversial problem, although its research history is very long. This paper analyzes the relation between the tidal forces and all the earthquakes of magnitudes no less than 7.0 which occurred in the entire world from year 1900.0 to 2000.0 by calculating tidal forces and the run tests which yields the runs of earthquakes near the extreme and non-extreme values of the tidal forces. It is shown that the occurrence of an earthquake is relevant to the tidal forces. From the analysis of the relation between the ecliptic longitudes of the lunar ascending node and the seismic activities of the principal seismic belts and regions in the world, it is also shown that the lunar node tide is possibly one of the important astronomical contributing factors of the seismic activities there. The results enrich and support the relevant study of the relation between celestial tidal forces and earthquakes.

### KEYWORDS

Tidal Force; Earthquake; Run Test; Seismic Belt

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