Geophysical Research Abstracts, Vol. 7, 00357, 2005

SRef-ID: 1607-7962/gra/EGU05-A-00357 © European Geosciences Union 2005



0.0.1 Statistically study of correlation between P&T axis of source of earthquakes and tidal effects

N. Kamalian (1), Gh. Afshar (2)

(1) Institute of Geophysics, University of Tehran, Tehran, Iran, (2) Alzahra University, Department of Physics, Tehran, Iran, (ghazaleh_afshar@hotmail.com / Phone: +98-21-8024454)

All earthquakes with M>6.5 for the period of 1973-2004 that have occurred in the world , have been studied statistically and about %65 of these earthquakes have occurred when the position of Moon or Sun had the azimuth of around 90 or 270 degree with respect to the position of each epicenter . Also more than %75 of these earthquakes have occurred when both of Moon and Sun had one of the azimuth of around 90 or 270 degree .In addition ,we have studied (again statistically) about triggering earthquakes with respect to the vertical component of tidal force and the gradient of this force at the origin time of the earthquakes and on the epicenter of them. The result of this study shows that most of these earthquakes have occurred when the magnitude of vertical component of tidal force was around zero and majority of these earthquakes have occurred when the gradient of this force was around zero .

In this research we have studied statistically about the correlation between these tidal effects and the direction of the P&T axis of the mechanism of earthquake's source (the available earthquakes data with their mechanism's information was for the period of 1980-2003).