



Could the coronal Mass Injection Events be the Triggers of the Earthquakes?

L.N.Makarova

Arctic and Antarctic Research Institute Saint-Petersburg 199397 Russia

(shirmak@aari.nw.ru/Phone:+7-812-3520601)

The possible signatures of the near-Earth space disturbances were explored just before occurrence of the strong earthquakes. It was found that the most of the strong earthquakes with magnitude M more than 4.5 are usually preceded by disturbances of the solar wind caused by the Sun corona mass injection into the Space. Statistical studies showed that the earthquake energy is directly proportional to the energy of the solar wind. The found relations are explained by influence of increasing electric field in the near-Earth space during disturbances of the solar wind. Preliminary estimations demonstrated that the pondermotive force connected with increasing electric field could shift a lithospheric plate with area of $(10 \times 10 \times 10 \text{ km})$ on approximately 25 meters during 20 minutes. So, it is possible to suggest that energy of injected corona mass of the Sun can be sometimes a trigger of the earthquakes in a seismic active region.