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The Globally Compact Multi-Network of the Earth: the self-controlling mechanisms in natural hazards above significant level.

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The structures both crustal and atmospheric zones are considered as complex multi-network of distributed circuits involving electromagnetic components. Variations at geo-data related to geo and/or climatic data alter electromagnetic characteristics of distributed complex multi-network. Mapping is based on transformations among both temporal and spatial variations of geo-data and/or climatic data and electromagnetic characteristics of distributed complex multi-network. Temporal variations at mappings of multi-network for specific locations extract mechanisms explaining relationships among characteristics of distributed complex multi-network and seismic and/or climatic events scheduled to future (and back to past and/or present from future, beside this timetable, through reflection and travel mechanisms of wave propagation because of higher energy density during significant seismic activities). Triggering mechanism related to these characteristics of two way propagation comes from energy levels in earthquake phenomena are as big as the energy levels in particle interactions at HEP. The energy density level in both of HEP and BIG EQs are similar: The earthquake of magnitude 7 Richter is equivalent to magnitude Es=0.71E+15 (from Me), 25.0 nuclear bombs, 474 kilotons, and 2.00 PJ that is occurred at earthquakes both 2009 Java, Indonesia and 2010 Haiti. Significance of energy of earthquake begins for seismicity over 4.5 Richter, approximately. According to observations 5.9 Richter is a threshold where physical rule of earthquake mechanism begins to alter from classical models and approximations[1].

The approach is used by considering hyperspace mapping for unique body of the Earth. This hyperspace is 53 dimensional hypersurface produced with union of seismological data set and climatical data set in Fine Model as compact case. Parameters spaces P_f and P_c of fine and/or coarse models, respectively, are inserted in globally applied equations by aid of global coupling equations. Couplings at total energy, total momentum, and total mass levels build control mechanism through waveguide models for both fault and atmospheric zones. Extra huge excavations on the Earth effectual on the changes in databases of past times so they lost their usability for future seismicity prediction processes; therefore, continuous calibration need of short term collections of seismic data prevents prediction studies from point shots. Variations of atmospheric anomalies, total rainfall, and significant earthquakes design some possible correlations, but in inversely related functional structures to each other, between atmospheric phenomena and earthquakes. Decrease at anomalous atmospheric events increases the seismic anomalies. This fact sketches self-optimization characteristic on Earth like an electromagnetic machine, say the Earth Machine. We call push\pull effect the inversely relation among different types of anomalies. According to mechanism of push\pull effect, one type of anomaly pulls the anomaly in other type but iff other type anomaly occurs then previous type of anomaly is prevented or altered; i.e., previous type pulls second but second pushes previous event.

[1]T. Sengor, " Electromagnetically Equivalent Dynamic Model of Seismic and Atmospheric and Ionospheric Conjoined Network of Turkey: the State Space Approach," URSI GASS 2011, Istanbul, Turkey, 13-20 August 2011.