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Faint electric dynamic forces in atmosphere is a possible precursor for a Seismic events phenomena

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The objective of this paper is to monitor the propagation of faint electric forces (D.C. potentials) in Athens' atmosphere before an earthquake. Many authors refer to radio emissions (ELF,HF,VLF,UHF) before an event. Several other researches have been done with ICE (Instrument Champ Electrique), measurement of quasi-continuous electric fields and electric components of waves, from DC up to 3.5 MHz, or IMSC (Measuring the magnetic components of waves), for measuring magnetic field from a few Hz up to 18 kHz.
More studies, within the last twenty years are correlated also with monitoring underground electromagnetic fields from different countries, but few are dealing with D.C.field.
The concept is that, the aerosols are injected into the lower atmosphere due to intensifying soil gas content during the increase of seismic activity.
At our station in Athens, a continuous monitoring has been conducted by three D.C.detectors which follow the ionosphere variations of the electric field daily, for the years 2007-2008.
Multiple antennas have been posted and tested up to the height of thirty meters above the ground. The faint electro potentials received, had been continuously registered by two electrometers. A cross over study of aerosols simulation has been simultaneously done with photo detectors. For this purpose an array of four photo diodes, posted in infrared and visible band in function, and was connected to electro meters too.
Several approaches have been taken in past years by researchers attempting to correlate changes in geophysical parameters with earthquake phenomena. In particular, many works examine possible connections of Geoelectric Field (Long and Sort Term Geoelectric Potential) variations to seismic activity and their possible use as precursors of seismic events.
Long Term Geoelectric Potential (LTGP) acquisition data consists of potential difference measured between pairs of electrodes placed in the ground at specific location and distance. The electric field is continuously monitored, usually in two perpendicular directions (e.g. N-S and E-W), by two pairs of electrodes, each corresponding to a separate channel. Here we examine such possible correlations between recorded Long Term Geoelectric Potential (LTGP) acquisition data and the seismic activity observed during the same period.
In collaboration with the University of Athens, Laboratory of Climatology and Atmospheric Environment and according their given data, we avoided measurements during periods of rain, snow, storms, lightning or extreme variations of temperature and atmospheric pressure. During these observations we observed an enormous variation in the voltage signals and several potential peaks were registered before the quakes in both detectors and photodiodes. The variations noted before the events, become with an optimum peak between four hours to fourteen days. All cases are related with eight earthquakes, registered in the southern part of Greece.
Our conclusions demonstrate that charged aerosol emissions in the atmosphere are possible to influence and increase electro potentials before an earthquake event, under certain atmospheric conditions.