Continuous Measurements of Atmospheric Charged Particle (Aerosol) (2)-The Relation between Atmospheric Ions and Earthquake-

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Anomalous density change of atmospheric ions is earthquake precursors. Atmospheric ions were formed from ionization of radiation. That radiation is released from radioactive nuclide in the crust or atmosphere. Atmospheric ions were formed from rainfall and lightning, too. Density change of atmospheric ions is affected the atmospheric phenomena. Therefore, it needs to identify the seismic signal from data of charged aerosol densities. But it's considered separating that it monitor the changes of each ions ratio.

Anomalous density changes of atmospheric charged aerosol were observed prior to Hanshin Earthquake (Sathutani, 1996). Atmospheric ions absorbed on the surface of aerosol. Therefore, aerosol is charged positive or negative. These are known generically as charged aerosol. Characteristics of atmospheric air have been continuously monitored for positive and negative ion distributions and densities, using ion counter of Model KSI-3500. It can measure the charged aerosol that is compounded small ions cluster and aerosol. It's measured by 3 channel. And, it's separated by size of the particles.

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It measured that small ion ratio is changed by rainfall. And, middle ion ratio is greatly changed by lightning discharge.

It's affected the atmospheric phenomena. A heavy rain and lightning discharge, typhoon are example of the atmospheric phenomena. Therefore, it needs to identify the seismic signal from data of charged aerosol densities. But it's considered separating that it monitor the changes of each ions ratio. If it can separate, it's possible to recognize the charged aerosol densities as an earthquake precursor. This is the subject to be improved the accuracy of earthquake forecasting.