

First observational results of electromagnetic wave detection system in VLF range, Tokai University

*Toshiyasu Nagao¹, Masashi Kamogawa², Jun Izutsu³, Hisatoshi Baba⁴

1.Institute of Oceanic Research and development, Tokai University, 2.Tokyo Gakugei University, 3.Chubu University, 4.School of Marine Science and Technology, Tokai University

It has been well known that the preseismic VLF pulse-like electromagnetic signals sometimes increases a few days before the sizable earthquakes especially in-land earthquakes. Almost two decades ago, Tokai University group developed a digital recording system and published remarkable results. However, at the time, due to the limitation of personal computer's data storage and CPU power, they quitted the observation. Therefore, we would like to re-start the research by using current technology. Fortunately, What we call "Japanese National Earthquake Prediction Project" decided to support our proposal. This is a preliminary report of the development of the new observation system. The system has a 12 bits A/D converter and 100MHz sampling capability. We can determine locations of signal source not only direction finding method but also time of arrival (TOA) method.

This study was supported by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan, under its Earthquake and Volcano Hazards Observation and Research Program.

Keywords: precursory phenomena, VLF range