

Monitoring of ULF (ultra-low-frequency) geomagnetic variations associated with earthquakes

Hayakawa M., Hattori K., Ohta K.

Department of Electronic Engineering, Research Station on Seismo Electromagnetics, University of Electro-Communications, 1-5-1 Chofugaoka, Chofu, Tokyo 182-8585, Japan; Faculty of Science, Chiba University, 1-33 Yayoi, Inage Chiba 263-8522, Japan; Department of Electronics, Chubu University, 1200 Matsumoto-cho, Kasugai, Aichi 487-8501, Japan

Abstract: ULF (ultra-low-frequency) electromagnetic emission is recently recognized as one of the most promising candidates for short-term earthquake prediction. This paper reviews previous convincing evidence on the presence of ULF emissions before a few large earthquakes. Then, we present our network of ULF monitoring in the Tokyo area by describing our ULF magnetic sensors and we finally present a few, latest results on seismogenic electromagnetic emissions for recent large earthquakes with the use of sophisticated signal processings. © 2007 by MDPI.

Author Keywords: Earthquake prediction; Magnetic sensors; Seismogenic ULF emissions; Signal processing

Year: 2007

Source title: Sensors

Volume: 7

Issue: 7

Page : 1108-1122

Cited by: 20

Link: Scopus Link

Document Type: Article

Source: Scopus

Authors with affiliations:

1. Hayakawa, M., Department of Electronic Engineering, Research Station on Seismo Electromagnetics, University of Electro-Communications, 1-5-1 Chofugaoka, Chofu, Tokyo 182-8585, Japan
2. Hattori, K., Faculty of Science, Chiba University, 1-33 Yayoi, Inage Chiba 263-8522, Japan
3. Ohta, K., Department of Electronics, Chubu University, 1200 Matsumoto-cho, Kasugai, Aichi 487-8501, Japan