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VLF signal variations before and after the earthquake occurrence

Ruth Döller (1), Mohammed Y. Boudjada (2), Helfried Biernat (1,2,3), Konrad Schwingenschuh (2), J.J. Berthelier (4), M. Parrot (5), G. Stangl (6), W. Voller (2), Martin Ampferer (1), and B. Besser (2)

(1) Institute of Physics, Department of Geophysics, Astrophysics and Meteorology, KF-University Graz, Austria,(02doelle@edu.uni-graz.at), (2) Austrian Academy of Sciences, Space Research Institute, Graz, Austria , (3) Institute of Physics, Department of Theoretical Physics, KF University Graz, Austria, (4) Laboratoire Atmosphères, Milieux, Observations Spatiales, CNRS, IPSL, Vélizy, France , (5) Laboratoire de Physique et Chimie de l'Environnement, Orléans, France, (6) Federal Office of Metrology and Surveying, Vienna, Austria

The ICE experiment onboard DEMETER micro-satellite provides, since July 2004, continuous and regular observations of electromagnetic emissions in the frequency range from 20 Hz to 20 kHz. We analyse the behaviour of the natural and also the artificial signals before and after the earthquake, to find some optionally association to seismic events. We consider three transmitter signals emitted at 16.58 kHz, 17.8 kHz and 19.8 kHz by stations in Europe (Germany, DFY), in Asia (Japan, JP) and in Australia (Australia, NWC), respectively. We select specific large earthquakes, with a magnitude more than 5.5, which occurred close to the transmitter areas. We discuss particularly the variation of the VLF natural and transmitter signals and the dependence, or not, on the geomagnetic and solar activities.