

AGA 1: Acoustic, Seismic and Magnetic Measurements

Time: Wednesday 14:00–14:45

Location: HSZ/0004

Invited Talk

AGA 1.1 Wed 14:00 HSZ/0004

Acoustic, Seismic and Magnetic Detection of Banned Activities – 3.5 Decades of Physics-based Peace Research — ●JÜRGEN ALTMANN — Exp. Physik III, TU Dortmund University

Since 1988 we have done experimental research for verification and monitoring for disarmament, peacekeeping and nuclear safeguards, first at Ruhr University Bochum, from 1999 on at TU Dortmund University. The goal is to detect of movements of heavy land vehicles and aircraft or other activities that would violate an agreement or are

relevant for peace in other ways. For outside, daylight and weather-independent sensing over short to medium distances (dozens of metres to kilometres) we focused on acoustic, seismic and magnetic signals. Field measurements were done at military training grounds and air bases, at an ambulance-helicopter base and at an exploratory mine for nuclear spent-fuel storage. The theoretical analyses included simulations. The talk will give an overview of the measurements, evaluations and findings. Problems and chances of such physics-based peace research will be discussed, too.