



Fusion of waveform events and radionuclide detections with the help of atmospheric transport modelling

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Possibilities of associating information from four pillars constituting CTBT monitoring and verification regime, namely seismic, infrasound, hydracoustic and radionuclide networks, have been explored by the International Data Centre (IDC) of the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) for a long time. Based on a concept of overlying waveform events with the geographical regions constituting possible sources of the detected radionuclides, interactive and non-interactive tools were built in the past. Based on the same concept, a design of a prototype of a Fused Event Bulletin was proposed recently.

One of the key design elements of the proposed approach is the ability to access fusion results from either the radionuclide or from the waveform technologies products, which are available on different time scales and through various different automatic and interactive products. To accommodate various time scales a dynamic product evolving while the results of the different technologies are being processed and compiled is envisioned. The product would be available through the Secure Web Portal (SWP).

In this presentation we describe implementation of the data fusion functionality in the test framework of the SWP. In addition, we address possible refinements to the already implemented concepts.