

Portable Infrasound Array in Romania

In the late September 2016, within a collaboration project between National Institute for Earth Physics (NIEP) and Provisional Technical Secretariat (PTS) of the CTBTO, a PTS infrasound portable array (I67RO) has been deployed in Romania (in Cluj County), for one year. PTS assisted NIEP with deployment and with initial training of Romanian staff involved in the operation, maintenance and data acquisition/processing. I67RO array consists of four elements distributed over a 0.9 km aperture and equipped with CEA/DAM MB2005 microbarometers and Reftek RT130 digitizers. The local data are weekly collected and transferred to NIEP, where they are converted from PASSCAL format to CSS3.0 database format. CSS data are processed into detection arrival bulletins using CEA/DASE PMCC algorithm embedded in DTK-GPMCC (extended CTBTO NDC-in-a-box). The infrasound data and detection bulletins are continuously stored at Romanian NDC. We present data processing results, plotted and analyzed using DTK-DIVA software (extended CTBTO NDC-in-a-box), in order to assess the I67RO detection capability, as well as the capacity of fusing the detections into NIEP infrasound monitoring activities. This NIEP-CTBTO joint experiment will improve the understanding of infragenic sources in Central-Europe and will contribute to European ARISE project by expanding the spatial coverage of the European infrasound network.

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Track Classification: 1. The Earth as a complex system