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Type: **Poster**

-acoustic observation of the ocean swell sources at BURAR site

A four-element seismo-acoustic array of 1.2 km aperture is deployed in northern Romania, at BURAR site, under a joint effort of AFTAC (USA) and NIEP (Romania). To characterize the site detection background, typical sources observed by both types of sensors are investigated. Generated from non-linear interactions between ocean waves, the ambient noise – atmospheric (microbaroms) and crustal (microseisms) – could be recurrently detected, indicating that ocean swell can be considered as a seismo-acoustic source leaving imprint on both seismic and infrasonic recordings. Seismo-acoustic data have been processed and analyzed in the 0.1Hz to 0.8Hz frequency band using DTK-GPMCC and DTK-DIVA software (CTBTO NDC-in-a-Box). F-k analysis has been applied for signal interactive analysis. Two main ocean swell sources have been identified: North Atlantic Ocean and Mediterranean Sea. Microbaroms detections are strongly influenced both by seasonally dependent stratospheric winds and local turbulence-induced pressure fluctuations. Microseisms power spectral noise amplitudes correlate well at the microbarom peak (around 0.2 Hz), seismo-acoustic detections showing similar frequencies and backazimuths for the same source. Microseismic noise level varies from low during summer to high during winter, whilst a shift of the Double Frequency Peak from lower to longer periods could be correlated to seasonal atmospheric conditions.

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