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## Seismo-Acoustic Study in Israel

We explored joined analysis of seismic and infrasonic signals for improvement in automatic monitoring of small events using collocated seismic and infrasonic networks operating in Israel during 2012-2017 within the Bi-national USA-Israel Science Foundation (BSF) project. The network covering Israel territory comprised 14 stations hosting a microphone and a seismic sensor (seismometer or accelerometer) plus a temporary small infrasonic sensor array LEVY and the two permanent infrasonic arrays of the National Data Center: one in the South IOB and one in the North of Israel IMA, collocated with the secondary CTBTO seismic array on Mt. Meron, MMAI. The main project results are: 1) Large database of continuous seismo-acoustic recordings have been accumulated and processed including many GT0 events; 2) The new seismo-acoustic software for automatic detection and location of seismo-acoustic events have been created and tested, based on Bayesian probabilistic approach and the database of explosions from the Utah Test and Training Range; 3) Regional infrasound propagation characteristics have been assessed via a combination of the local meteorological sounding information with global meteorological specifications and GeoAc raytracer of Los Alamos making the unique Israeli database of meteorological specifications for the range of altitudes from 0 to 150 km.

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