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2013 certified IMS infrasound stations: IS37 (Bardufoss, Norway) and IS58 (Midway, USA)

Georgios Haralabus, Julien Marty, Alfred Kramer, Pierrick Mialle, and James Robertson
CTBTO, Vienna, Austria

The Infrasound component of the International Monitoring System (IMS) of the Comprehensive Nuclear?Test?Ban Treaty Organization (CTBTO) includes 60 infrasound
stations out of which 47 are currently certified. The latest two additions to this Infrasound network, namely IS58 on Sand Island, Midway Atoll,
United States of America (USA), and IS37 in Bardufoss, Norway, are presented here. Both stations were certified in 2013. IS58 is a 4 element infrasound
array arranged in a triangular geometry with a central component. The triangular bases vary from 1.1 to 1.8 km. The micropressure sensors deployed at
each element were Chaparral 50A microbarometers. Signals from IS58 were processed by the International Data Centre (IDC) and detection associated not only
with microbaroms but also with the activity of the Kliuchevskoi volcano in the Russian Peninsula Kamchatka were built. These initial results indicate good
detection capability of the IS58 station for low wind conditions. In Norway the topography allowed for a large element array, so IS37 was built with 10-elements
that have average spacing of 1 km. This design allows the formation of several triangles with baseline of 1 to 2 km and also a triangular sub array with spacing
of approximately 360 m. The sensors utilized in IS37 elements were MB2005 microbarometers. Initial data analysis by IDC identified distant microbarom sources with strong azimuth and frequency content variability as well as strong detections from local sources, namely the Finnfjord ferro-alloy plant in Norway and the Kiruna iron mine in Sweden.