

## **Detection and Location of an Earthquake Using Seismic, Infrasound and Hydroacoustic Data: A Case Study of Botswana**

Strong earthquakes are rare in southern Africa. Botswana is located in the Southern Region of Africa. Botswana experienced an earthquake on April 3, 2017 that was felt in South Africa, Zimbabwe and Swaziland. Data collected from seismic, infrasound and hydroacoustic (SHI) stations that were at local, regional and teleseismic distances were analysed to determine the epicentre of the event. The data were analysed using GPMCC. The waves were extracted and studied by methods of spectrum, azimuth and correlation between the acoustic and seismic signals for phase, magnitude, time and slowness. Results from the analysis showed that the foreshocks and aftershocks of the earthquake were detected using SHI stations. The results also showed the operational readiness of the SHI stations towards achieving nuclear test monitoring goal for which they were set up.

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**Track Classification:** Theme 3. Verification Technologies and Technique Application