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Monitoring System's Detection and Screening Capability in Australia

Tuesday, 25 June 2019 16:45 (15 minutes)

The completeness and accuracy of the CTBT Reviewed Event Bulletin (REB) is assessed in the Australian region through comparison with a local bulletin. We compare the REB to Australia's National Earthquake Alerts Centre (NEAC) bulletin for all events in Australia between May 23rd and December 31st 2018. Australia is an intra-plate tectonic environment and as such experiences around 100 magnitude 3 earthquakes every year. The continent is also home to a multitude of mining facilities and NEAC's seismologists locate mining blast events daily and, where possible, confirm these events with local mines. The bulletins are compared to quantitatively show the IMS performance in a setting with sparse station coverage; the benefits of using 3D travel times in Australia and how well the REB events are screened. In addition the contribution of the NET-VISA bulletin to the REB is examined. Both feedback and suggestions are provided, not only on the performance improvement but also on the NET-VISA's prior probability distribution functions.

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