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T4.1-P21. RECENT ADVANCES IN SIGNALS CHARACTERIZATION USING DATA FROM NIGERIAN NETWORK OF SEISMIC STATIONS

Nigerian National Network of Seismic stations (NNNSS) has been generating data since 2009 that have given operators slight insight of a trend connecting instrumentally recorded events with historical ones observed in Nigeria in the last 70 years. Recording capabilities of local and teleseismic events by the network have been boosted with deployment of more advanced seismic equipment to Nigeria recently. With these improvements and implemented noise reduction measures, new approaches have been adopted in data processing, analysis and routine screening to thoroughly scrutinize seismograms for signals arising from especially local events hitherto buried in noise; or from landslides, rock falls, quarry blasts, and other artificial sources. This signals characterization has helped operators of NNNSS to retrieve local and teleseismic events that were earlier discarded with noise, and identified and analyzed strange signals too. With these capabilities, NNNSS could also serve as a network for detecting nuclear test explosions within Nigeria and environs, thereby contributing to the monitoring of prohibited nuclear tests around the world, and through robust collaboration with end users of results.

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