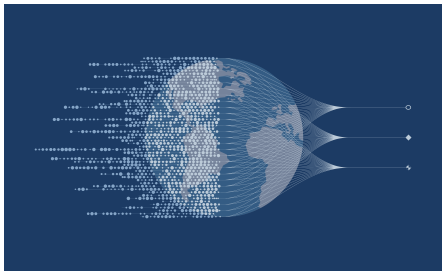

ID: **O5.2-828** Type: **Oral**

Recent Seismic Activity & Improvements with Earthquake Monitoring in Jamaica

Wednesday 10 September 2025 14:30 (15 minutes)

Jamaica is located in a seismically active zone in the northern Caribbean where historical events including the 1692 Port Royal and 1907 Kingston earthquakes resulted in significant loss. The 2023 magnitude 5.6 earthquake and 2024 magnitude 5.2 earthquake highlighted the continued risk from significant ground shaking and the propagation of seismic hazards. Over the last two years, the Earthquake Unit (NDC-JM) in Jamaica located 653 local and 285 near region earthquakes. Additionally, the Jamaica Seismic Network recorded over 80 possible explosions most likely related to local mining and quarrying activities. Recent improvements to the seismic network include the addition of 11 new low cost seismographs along with station enhancements including upgraded power systems at several broadband sites. The incorporation of these new sensors contributes to improved event detection and enhanced data quality for the national seismic monitoring programme. Results from waveform analysis show a significant decrease in RMS location errors and provides a solid foundation for earthquake catalogue work including refining the 1-D velocity model and for event relocation. The NDC-JM will continue to build out the seismograph network, incorporate regional data and CTBTO's IDC data to fill existing gaps and improve the data quality for seismic monitoring and research.

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