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status and analysis of ongoing temporary noble gas background measurement campaign in Japan

In 2017, the Government of Japan has decided to make a voluntary contribution to further strengthen the capabilities of the CTBTO verification regime. As part of that initiative, two transportable noble gas measurement systems were deployed in Japan, in Horonobe and Mutsu. They started operations in January 2018 and March 2018, respectively. In January 2025, a third transportable measurement system was deployed in Fukuoka, Japan, completing a mini-network configuration (including the IMS system JPX38) across the country. This setup will enable observations of relevant detections using multiple measurement systems located approximately 500 km apart. Continued operation of these systems is supported financially through voluntary contributions from both the European Union and Japan.

To date, several hundred samples have been collected and measured by the three systems. Measurement spectra are automatically transmitted to the IDC, where they are processed in a non-operational database. These spectra are routinely reviewed, with particular emphasis on the four radionon isotopes of interest for CTBTO monitoring (^{131}mXe , ^{133}mXe , ^{133}Xe and ^{135}Xe). Both the analysis results and raw data are made available to State Signatories through the Secure Web Portal.

This presentation provides an updated overview of the measurement campaign, along with preliminary analysis results of observations.

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In-person or online preference

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