

T2.1-P15. SAUNA OSI Noble Gas equipment– System design and usage during IFE14

A high throughput system for processing and detection of radioxenon for On-Site Inspection (OSI) purposes has been developed at FOI during the last years and here the system design, performance, and experience from operation during IFE14 will be presented. The prototype was delivered to CTBTO for training of operators and initial testing in the beginning of 2014 and then used during the integrated field exercise 2014 (IFE14). An OSI puts a high demand on the performance, level of automatization, user interface, and sample traceability of the system. An OSI also poses many challenges for the processing and analysis of sub-soil noble gas samples; many samples per day that might contain high levels of Rn, CO₂ as well as other gases have to be processed and measured with a high sensitivity. To simplify the use an automatic sample scheduler and an integrated analysis tool for rapid assessment of samples were developed.

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