

3.2-P12. Enhanced Search Methods for Finding and Identifying Radioactive Material for OSI deployment

The CTBTO verification system comprises On-Site Inspection (OSI) to verify the suspicion of a banned nuclear test. One of the methods of verification is the radiological survey of the inspection area. The measurement car DeGeN of our institute, which is equipped with highly sensitive neutron and gamma detectors, is well suitable for car borne survey. The quality of the results of such a survey is in the first place dependent on the performance of the measurement system but in the second place it is also depends on the experience and the training of the user. To investigate this second factor we carried out a measurement campaign on a test area. We invited different persons with different abilities ranging from simple fireman to expert user to use our measurement car in a test course with different radioactive sources. Each participant who drove our measurement car or operated the measurement system as co-pilot was asked to fill out a questionnaire to state his previous experience. The results of the test runs were collected afterwards and compared to the information in the questionnaire. The evaluation yielded interesting results which may also be relevant to enhance OSI procedures as well as system designs.

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