

## **T2.1-P07. Design and Operational Experience with an Aerial Gamma Radiation Survey System for On Site Inspection**

One of the detection modalities available for use in an On-Site-Inspection (OSI) is an aerial radiation survey which could detect the presence of nuclear explosion relevant radioactive material at the surface of the ground. Aerial surveys offer the potential of covering large geographical areas in relatively short amounts of time with a reasonable level of sensitivity; and allow access to terrain that may be difficult to reach with ground based methods. A large volume sodium iodide based scintillator detector was provided in 2013 by Canada to the CTBTO as a contribution in kind to support OSI. This detection system was used during the recent Integrated Field Exercise (IFE2014), to survey the inspection area for the presence of radioactive material. In addition a number of surveys under more controlled conditions were conducted prior to the exercise for training and development purposes. This paper describes the system and provides selected results from its use in actual field conditions.

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