

Detection of OSI-Relevant Features Using Time-Series Radar Imagery

The availability of data and the ability to efficiently interpret those data in the context of an alleged Treaty violation are critical to the preparation of the Initial Inspection Plan during the launch phase of an On-Site Inspection. Data provided as national technical means can support authenticated data products from the CTBT International Data Centre. In this context, remotely sensed data and derived products acquired from sensors on satellites could feature prominently. To test the value of radar data in this context, a time series of radar imagery encompassing the period of site engineering modifications prior to the Integrated Field Exercise in Jordan in 2014 were analysed. The imagery, in the form of RADARSAT-2 SLA Beam Mode images at spatial resolution of approximately 1m, covering an area of 100km² were acquired between August and November 2014. Each acquisition was compared with its predecessor for OSI-relevant changes. The paper reports on the automated processing methods employed and the findings of the analyses. In this respect, the ability of the radar imagery to positively detect simulated features is addressed.

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