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from OSI field tests and exercises for the development of contextualized geophysical survey strategies and methods

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The sole purpose of an OSI as specified in Article IV of the Treaty is “to clarify whether a nuclear weapon test explosion or any other nuclear explosion has been carried out” and “to gather any facts which might assist in identifying any possible violator.” OSIs are to provide this clarity through the collection of information and the detection of relevant observables within the Inspection Area. For this, the inspection team may undertake visual observations and use imaging, radionuclide and geophysical OSI techniques.

This presentation demonstrates how, on the example of an OSI, the objectives of a particular field mission will determine the selection of the most appropriate geophysical survey strategies and methods. Actual data collected during several OSI field tests and exercises, which presented underground nuclear explosion scenarios, will be shown and discussed in the context of the rationale and timelines of different field mission objectives. Particular emphasis will be placed on how the integrated use of various inspection techniques may contribute to the characterisation of a site. In this context, the importance of accuracy and the inherent uncertainties of the application of geophysical techniques will be demonstrated as well.

Promotional text

This presentation demonstrates, on the example of an OSI, how to determine the selection of the most appropriate geophysical survey strategy and, thus, contributes to supporting the exchange of knowledge and ideas between the CTBTO and the broader scientific community.

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