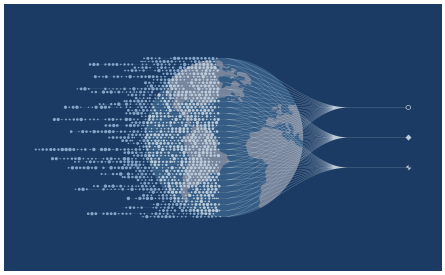

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Satellite Imagery Analysis for CTBT Verification

Recent advancements in commercial satellite technology have emerged as powerful tools to support Comprehensive Nuclear-Test-Ban Treaty (CTBT) verification efforts. This presentation explores the potential of high resolution satellite imagery to enhance monitoring and verification capabilities. It delves into recent analyses of activities at both current and former nuclear test sites, as well as ongoing evaluations on how satellite imagery can best be utilized to verify compliance with testing moratoria. Key applications include detecting visible indicators of nuclear testing activities, such as ground disturbances, infrastructure changes, and anomalous activity patterns at suspected test sites. Additionally, advanced methodologies, including synthetic aperture radar, multispectral imaging, and change detection analysis, enable the identification of subtle signs of preparatory or post-test activities that might otherwise go unnoticed. Satellite imagery offers timely, cost-effective, and non-intrusive data, complementing the International Monitoring System and on-site inspection capabilities. By leveraging the rapid evolution of commercial space technologies, CTBT verification can gain enhanced situational awareness, fostering global confidence in compliance with the Treaty.

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