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Augmented State of Health Sensors for Predictive Failure analysis

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Continued sustainment of the International Monitoring System (IMS) network is of critical importance to the longer term viability of the Comprehensive Nuclear-Test-Ban Treaty. Increasing global costs and budget constraints may limit the level of future investment in the maintenance and operational costs of the IMS. To mitigate this financial restriction, individual sub-systems of radionuclide stations will have to demonstrate increased lifetimes between failures. This work presents initial efforts towards the augmentation of the existing state of health sensors deployed on radionuclide systems. Additionally, analysis techniques aimed towards the accurate prediction of subsystem degradation and failure is presented.

E-mail

vincent.woods@ctbto.org

In-person or online preference

Primary authors: Ms CAMPUS, Paola (CTBTO Preparatory Commission); Mr BRITTON, Richard (CTBTO Preparatory Commission)

Co-author: Mr WOODS, Vincent (CTBTO Preparatory Commission)

Presenter: Mr WOODS, Vincent (CTBTO Preparatory Commission)

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