ID: Type: **Oral**

Dimensional Hydroacoustic Propagation on Basin Scales

The ocean is nearly transparent to acoustic energy at low frequencies, particularly those sampled by the United Nations Comprehensive Nuclear-Test-Ban Treaty Organizations (CTBTO) hydro-acoustic network (sample rate 250 Hz). This phenomenon is specifically what makes global coverage in support of the test-ban successful. Low frequency sound is less well trapped in the global sound channel and therefore interactions with the seafloor are more significant. Lateral bathymetric changes, with seamounts, continental shelf's and mid-ocean ridges makes out of plane propagation a significant factor in determining the International Monitoring System (IMS) coverage capability. A brief overview of three-dimensional modeling will be presented including the opportunities for putting 3D modeling into the event localization system.

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Track Classification: 3. 3-D modelling for long-range hydroacoustic signal propagation