ID: Type: **Oral**

# of CTBT IMS Hydroacoustic hydrophone station underwater system electronics calibration sequences

The end-to-end calibration from the hydrophone ceramic element input to the digitizer output of CTBT IMS Hydroacoustic (HA) hydrophone stations is measured in a laboratory environment before deployment. After the hydrophones are deployed permanently with the Underwater System (UWS) hydrophone triplets, the response of the digitizer component can be measured by activating remotely a relay which excludes the hydrophone ceramic, preamplifier and riser cable, and feeds a pre-stored known waveform into the digitizer circuit via a digital-to-analogue converter. Analysis of these underwater calibration sequences makes it possible to verify the stability of the digitizer response over time and obtain useful information for investigations which require an accurate knowledge of the system response. Results are presented showing the stability of the UWS electronics response over time and one case, pertaining to the H10S triplet of HA10 Ascension Island, where changes in the calibration response appeared after the onset of electronic noise in one hydrophone channel with cross-talk to the other two channels.

**Primary author:** ZAMPOLLI, Mario (CTBTO)

**Presenter:** ZAMPOLLI, Mario (CTBTO)

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