



Tipping point analysis of a large ocean ambient sound record

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We study a long (2003-2015) high-resolution (250Hz) sound pressure record provided by the Comprehensive Nuclear-Test-Ban Treaty Organisation (CTBTO) from the hydro-acoustic station Cape Leeuwin (Australia). We transform the hydrophone waveforms into five bands of 10-min-average sound pressure levels (including the third-octave band) and apply tipping point analysis techniques [1-3]. We report the results of the analysis of fluctuations and trends in the data and discuss the BigData challenges in processing this record, including handling data segments of large size and possible HPC solutions.

References: [1] Livina et al, GRL 2007, [2] Livina et al, Climate of the Past 2010, [3] Livina et al, Chaos 2015.