

processing with DTK suite of software: Application to hydroacoustic data

The CEA/DAM has developed the DTK (Dase ToolKit) suite of software dedicated to array processing, which is available in the NDC-in-a-Box package delivered by the PTS since 2016. Originally designed for processing infrasound and seismic data, the software package has evolved during the past two years, with significant efforts carried out to extend the existing functionalities to hydroacoustic technology. To illustrate the capability of last released DTK-DIVA and DTK-(G)PMCC software to process triplets of hydrophones data and display results over large periods of time, several examples will be presented. First, routine analysis of several years of detections from stations in Indian and Pacific Oceans will be shown. Acoustic events from the obtained detections have been built and results will be discussed in terms of location accuracy and low level monitoring of oceanic seismicity. For the biggest events, expert analysis is performed to efficiently map zones of T-wave excitation from P/S to T wave conversion and T wave reflection. Finally, special focus will be made on the location results associated to the loss of Argentinian ARA San Juan submarine.

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