Assessing and Mitigating the Impact of Seismic Surveys on CTBTO Hydroacoustic Detections

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Marine air-gun seismic surveys are a prevalent source of background signals detected at hydroacoustic stations. They give rise to false detections and a raised noise floor, which can impact the quality of automatic bulletins and obscure valid signals to the analysts. Using a ground truth data set of air gun shots (Brouwer et al., 2017), we assess the impact on the detection capability of CTBTO automated hydroacoustic processing for the entire timespan of the two surveys involved. Means of evaluating the time-dependent evolution of the number of surveys, as well as detecting and mitigating survey signals are discussed.