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# Investigation of Kernel-Based Machine Learning Techniques for Infrasound Signal Classification

In IMS infrasound processing, incoming data is first treated on the level of individual array stations. Automatic station processing serves the detection of coherent wavefronts as well as estimation of their slowness and azimuth. Additionally, station processing categorizes detections into signal and noise, and also labels incoming signals based on their travel path through the atmosphere. The current contribution gives preliminary results from applying kernel-based machine learning algorithms to infrasound signal classification. This concerns both separating signal- and noise-type detections as well as discriminating signals by their travel path through the atmosphere. In addition, first investigations into the effects of seasonal variability on these classifiers are carried out.

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