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Identifying and tracking regional storms with infrasound data

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The infrasound array at Piszkés-tető, Hungary (PSZI) has been operational since May, 2017. Since then PSZI has collected hundreds of thousands detections. These include detections both from known and unknown sources. The categorization of the detections would be important for future automation. The objective of this study is to identify and collect those detections that belong to local and regional storms and lightnings. We present a methodology to identify storms by correlating lightning data from the Blitzortung database we consider as ground truth with the PMCC infrasound detections at PSZI. We also analyze the seasonal variations in the directions and distances of the detected storms.

Promotional text

We build a ground truth database of regional storms and lighting detected by the PSZI infrasound array that in the future allow us to apply machine learning technologies for the automatic screening of storms and lightnings in infrasound records.

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