ID: Type: **Poster**

Auroral Signatures at the IS37 Station on 24 October 2017

Variations in acoustic pressure in the event of an atmospheric phenomenon such as auroral arcs occurrence generate infrasonic signals that are sensitive to microbarometer sensors of the infrasound network deployed globally. The International Monitoring System (IMS) infrasound network monitors and detects these non-verification-related low frequency acoustic signals periodically. These auroral electrojet arcs are often observed at the polar latitudes regions (i.e. Northern and Southern Hemispheres) of the Earth. The IMS infrasound station IS37 on 24 October 2017 detected the infrasound signals associated with the auroral electrojet arcs occurrence in the atmosphere. The observed infrasound waves were found to be within the frequency content <0.1 Hz, typical of the infrasound signals associated with auroral electrojet arcs. These aurora infrasound signals were observed with high trace velocity around 1km/s and showed quasi-continuous signals which have duration around 3 hours.

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Track Classification: Sources and Scientific applications