

Pressure-Based Wind Profiling

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In infrasound work, we typically try to filter the noise due to the winds blowing above an infrasound sensor. In this work we seek to exploit the wind noise to infer wind speeds at multiple heights above the sensor. That is, we seek a pressure-based wind profiler whereby a single infrasound sensor placed on the ground is able to infer the winds at multiple heights above the ground. The advantage of such a wind profiler over traditional microwave, laser, and sonic wind profilers is that it would work via “passive listening,” emitting no potentially interfering signals, and it would have all-weather capability, able to profile the winds in both precipitating and “clear-air” conditions.