

Combining direct and coherent detection for Doppler wind lidar

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Abstract

Using a combination of two modest sized coherent and direct detection Doppler lidars may offer significant advantages over the single detection method approaches. All space-based Doppler wind lidar proposed missions to date have been based upon a single detection scheme, either coherent (WINDSAT, LAWS, SPARCLE, JEM/CDL) or direct (Zephyr, ALADIN, ADM) detection. A hybrid detection wind lidar has been proposed and is undergoing a feasibility study. The hybrid wind lidar is currently being baselined for an airborne test bed and is funded for a weather forecasting impact evaluations at NOAA and NASA.