



Windcube pulsed lidar compact wind profiler: Overview on 1 year of comparison campaigns with calibrated sensors at different locations

R. Parmentier, C. Aussibal, J.P. Cariou, L. Sauvage

LEOSPHERE, Bat. 503, Centre Scientifique d'Orsay, Plateau du Moulon, 91400 ORSAY,
France (rparmentier@leosphere.fr)

LEOSPHERE recently introduced its new eye-safe $1.5\mu\text{m}$ coherent Pulsed Doppler Lidar system for wind profiling in the first few hundred meters of the PBL. Windcube technology and measurement specifications were already presented elsewhere (*An innovative compact heterodyne pulsed Doppler lidar for wind profiling in the PBL*, R. Parmentier et al., EGU2007-A-10972 / *An innovative and autonomous $1.5\mu\text{m}$ Coherent lidar for PBL wind profiling*, J.P. Cariou et al., 14th CLRC Conference, Snowmass, Colorado, July 2007).

We focus this paper on more than a year of lidar vs. met masts comparison campaigns at many locations (from north of Denmark to Spain) under diverse weather conditions (from snow to heavy rain, fog, and scorching heat).

Operational aspects such as deployment, power, and remote access are briefly described. Agreement between reference and calibrated sensors is described and analysed with emphasize on Windcube accuracy in flat and complex terrains. Impact of weather, surface roughness, topography and trees are described and discussed against Windcube measurement process.