

Seminar über Microwavephysics and Atmospheric Physics

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Titel: Rayleigh-Mie Doppler lidar for wind measurements in the middle atmosphere: design, performance and observations.

A unique Rayleigh-Mie Doppler wind lidar, measuring Doppler shift between the emitted and backscattered light using direct-detection technique is deployed at Haute-Provence Observatory (Southern France) and at Reunion island (tropical Indian Ocean). The instrument was shown capable of wind measurements between 5 and 50 km with accuracy better than 1 m/s up to 30 km. We evaluate instrument's capacities in capturing fine structures in stratospheric wind profiles and their temporal and spatial variability through comparison with collocated radiosoundings and ECMWF analysis. Perturbations in the wind velocity are used to retrieve gravity wave frequency spectrum. Application of Doppler lidar for validation of the forthcoming ADM-Aeolus satellite mission is discussed as well.

Zeit: Freitag, 17.03.2017, 10:15 Uhr

Ort: Hörsaal A97, Gebäude exakte Wissenschaften, Sidlerstrasse 5, Bern, Schweiz