



## **Preparation of the ADM-Aeolus mission using 355nm high spectral resolution Doppler LIDAR and a Doppler cloud radar**

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We will present airborne wind profile measurements performed during the NAWDEX-EPATAN campaign held in Iceland on September 21 to October 18, 2016. The airborne high spectral resolution LNG LIDAR was taking measurements onboard the French SAFIRE falcon 20 (F20) along with the cloud Doppler radar RASTA. LNG line-of-sight can be oriented nadir/zenith and side looking with an angle of 37 degrees off vertical on request. Wind profile retrievals are possible thanks to backscattering signals incoming from thin ice clouds and aerosols. This 37° pointing configuration allows similar measurements to ALADIN onboard the ADM-Aeolus satellite to be launched end 2018. In addition to the LIDAR and radar wind measurements, in situ wind measurements were also obtained from dropsondes launched from the F20. We will give an overview of the instruments onboard the French falcon. Then we will present the principle of estimations of the horizontal wind components with the HSR LNG LIDAR operating in the ADM ALADIN mode (37°). The LIDAR measurements obtained during several flights of the NAWDEX-EPATAN campaign will be compared against measurements given by dropsondes and the combination of the three antennas of Doppler cloud radar.