



## **Simulations of radar and lidar satellite observations of mid-latitude cirrus clouds, using a mesoscale model.**

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Cirrus clouds are radiatively and climatically very significant, and present a major challenge to both observers and modelers. The AQUA-Train satellite mission will provide a large set of data concerning cirrus clouds, in particular vertical profiles of lidar backscattering and radar reflectivity measurements. In this study, we used a mesoscale model derived from the French Meso-NH Atmospheric Simulation System with a new activation scheme for cirrus clouds, to simulate radar and lidar measurements. In a first step of the analysis, ground-based (from SARTA) and airborne (from FRENCH campaign) measurements are used to test our capability to retrieve lidar backscattering and radar extinction vertical profiles. First results of our study are presented here.