



The development of an aerosol reference pod for airborne research by the European Fleet for Airborne Research (EUFAR)

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The European Fleet for Airborne Research (EUFAR), an infrastructures project funded through the European Union sixth framework programme, is conducting a Joint Research Activity to develop an aerosol reference pod for airborne research. The reference pod will provide a suite of aerosol instrumentation capable of characterising the microphysical properties of atmospheric aerosol and acting as reference between aircraft platforms. This is important as comparing data across platforms and conducting multi-aircraft projects is made difficult through a lack of comparison data between aircraft instruments. Typically wing-tip to wing-tip comparisons are the only reliable method of comparison and these cannot be conducted often, are expensive and only provide a brief time window for the comparison. The pod contains measurements of aerosol size distributions from probes sampling in the free stream and also from within the pod. The latter will sub-sample aerosol particles from an inlet system which is being designed to minimise particle losses using computational fluid dynamics simulations. The rationale for the pod development will be outlined, along with its main

design features and current development status.