



Contribution ID: 7

Type: **Oral presentation**

Met.3D: Interactive 3D visualization for rapid exploration of atmospheric ensemble simulation data

Thursday, 9 June 2022 14:00 (1 hour)

Met.3D (<https://met3d.wavestoweather.de>) is an open-source research software aiming at making novel interactive 3D and ensemble visualization techniques accessible to the atmospheric community. Since its first public release in 2015, Met.3D has been used in multiple visualization research projects targeted at atmospheric science applications, and has evolved into a feature-rich visual analysis tool facilitating rapid exploration of atmospheric simulation data. The software is based on the concept of “building a bridge” between “traditional” 2D visual analysis techniques and interactive 3D techniques powered by modern graphics hardware. It allows users to analyse data using combinations of feature-based displays (e.g., atmospheric fronts and jet streams), “traditional” 2D maps and cross-sections, meteorological diagrams, ensemble displays, and 3D visualization including direct volume rendering, isosurfaces and trajectories, all combined in an interactive 3D context. Met.3D is designed to natively support ECMWF ensemble forecast data, and in collaboration with the ECMWF visualization team an interface between ECMWF’s Metview software and Met.3D has been implemented. This workshop will introduce participants to Met.3D. We will demonstrate how to explore ECMWF forecast data interactively and in 3D, and provide information about how Met.3D can be used in research as well as operational settings.

Primary author: RAUTENHAUS, Marc (Universität Hamburg)

Co-authors: BECKERT, Andreas; HEWSON, Tim (ECMWF); RUSSELL, Iain (ECMWF)

Presenter: RAUTENHAUS, Marc (Universität Hamburg)

Session Classification: Theme: Technology to display and process meteorological data - 3D and Virtual Reality

Track Classification: UEF2022