The research group on **Object-based Analysis and SEamless prediction (OASE)** assembles scientists from the **Meteorological Institute, University of Bonn (MIUB)**, the **Leibniz-Institute for Tropospheric Research (IfT)**, Leipzig, and the **German Weather Service (DWD)**, Offenbach a. M., and is funded by the **Hans Ertel Centre** for Weather Research (HErZ).
The research group, part of Theme 1 of HErZ, will address the seamless prediction of convective events from nowcasting to daily prediction by combining radar/satellite compositing and tracking with high-resolution model-based ensemble generation and prediction. An object-based approach to weather analysis will be used to better understand, efficiently characterize, and quantify the process structure and life cycles of severe weather events. This methodology will also be exploited for the development of novel tracking and tracking-based nowcasting strategies, as well as for the generation and initialization of the model prediction ensembles.

Figure: Radar cross section (RHI-scan of polarimetric X-Band precipitation radar in Bonn) showing horizontal reflectivity of a convective storm which passed the Aachen-Bonn-Cologne-Jülich (ABC/J) area on 03 July 2010 and caused centennial rainfall in Wachtberg, severe crop damage, and flooded streets and basements.