

13.24 SIMPLE YET ADJUSTABLE RADAR DATA VIEWER

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For monitoring and studying weather radar data it is important to have a good and simple tool. Therefore, the radar data viewer ScoutView2 has been developed. This visualisation software is mainly used for radar data (as single image or time series), but can also be applied to wind or satellite data. Data formats supported already comprise:

- DX, IR, PF, RQ, RW, RZ, RADOLAN, COSMO-DE etc. (German Weather Service/DWD)
- GRIB
- Rainbow (South African Weather Service/SAWS and Royal Rainmaking Department Thailand/RRD)
- HDF5 (Royal Netherlands Meteorological Institute/KNMI, ODIM, VOLTAIRE)

The radar data display can be adjusted to the user's needs for an easy analysis of radar data as well as direct comparisons to rain gauge data. ScoutView2 offers a choice of additional data to be displayed such as OpenStreetmap, Microsoft Satellite images, user defined overlay layers (shp or gen format), cluttermaps or rain gauge locations. The colour scale either adapts automatically to the radar data or can be adjusted manually.

Radar data types range from single radar images over composites with many radars to ensembles or precipitation sums. It can be switched between different ensemble or forecast runs to visually analyse the data. HDF5 volume data can be viewed step by step through the elevations or in one elevation through time. This plays an important role when detecting and correcting height-related radar problems (e.g. bright band). Moreover, accumulated precipitation of catchment areas can be displayed by ScoutView2, which is essential for hydrologists.

Another advantage of this simple radar data viewer is its applicability in both offline mode (for detailed data analysis) and online mode (for current weather observations or forecasts).

Some technical functionalities of ScoutView2 are:

- image export (jpg, gif or png) of single radar images or an entire time interval
 - customization of image animation with arrow buttons and animation speed settings
 - mouse zoom, pan or rectangle selection on the map surface
 - save zoom settings for a later comparison with modified data
 - display of pixel values and coordinates while mouse moving
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- rain sum calculation for animated time interval

ScoutView2 enormously simplifies the work with cluttermaps for quality control algorithms: It displays the cluttermap as adjustable layer over the radar image and allows to add or remove pixels in the cluttermap by mouse click.