Operational monitoring of absolute calibration and differential moments: longterm stabilty and specific examples

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A comprehensive monitoring system has been set up for DWDs new polarimetric weather radar systems. This monitoring system consists of

- the analysis BITE data in order to diagnose of the health of the radar system

- monitoring of the polarimetric differential offsets using a bird-bath scan at 90° elevation.

- monitoring the absolute calibration using an optical disdrometer at the radar site.

- monitoring the receiver sensitivity and antenna pointing accuracy using interferences with the sun during the operational scanning.

- using fix clutter target scans in order to monitor the coherency of the radar system.

The monitoring of the system is implemented on-site. A web-based interface provides graphical access to the results for each radar station. The most important informations about the system status are transmitted as a XML-file to the central radar processing unit POLARA.

At some stations this monitoring system is already in operation for more than 3 years. In this contribution we present results concerning the overall stability of the radar systems with respect to calibration and antenna pointing accuracy, and the consistency of among the radars. So far the results indicate, that systems are calibrated within 1 dB accuracy.