Some important weather radar correction algorithms and the development of the new 3D radar composite product at the Hungarian Meteorological Service.

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In the last few years important weather radar based developments took place at the Remote Sensing Division of the HMS (Hungarian Meteorological Service). Some of these developments will be presented in this paper.

In the last decade the number of RLANs (Radio Local Area Networks) was dynamically increasing all over the world. This fact led to the situation that our C-band radar system was affected more and more by RLAN interferences. Despite the collaboration with the National Media and Infocommunications Authority, it is not possible to detect and remove all interfering devices, especially near big towns. That is why an own correction algorithm was developed, which we call WifiFilter. This algorithm has been in operative use at the HMS since 2008. The essential parts of this filter and our experience of using it in our radar network will be presented.

In case of intensive precipitation a well known phenomena is the attenuation of the radar echo. In order to improve the quality of radar reflectivity in such cases a polarimetric based attenuation correction algorithm is just under implementation. Our experiences with this algorithm and some of our preliminary results will be shown.

Nowadays most of the radar systems are able to draw individual three dimensional representation of a radar volume scan. Our goal was to develop a national 3D radar composite product, which can be visualized in our HAWK-3 (Hungarian Advanced WorKstation) system. In the last part of the paper the structure of this product and our possibilities of visualize it within HAWK-3 will be demonstrated.