

WACR-ARSCL Known Issues

Last Updated 2016.10.14

There are several DQRs covering periods that the transmitter of MWACR at AWR (AWARE) was not working properly. Here is an approximate list of time periods for which cloud boundaries are less reliable (since there were determined using only Micropulse lidar observations) and for which radar moments are not available:

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01/28/2016 16:58:00 UTC - 01/28/2016 18:07:00 UTC
01/29/2016 17:29:00 UTC - 01/30/2016 06:33:59 UTC
02/02/2016 15:21:00 UTC - 02/02/2016 20:16:59 UTC
02/17/2016 19:46:00 UTC - 01/13/2017 23:59:59 UTC
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Note that WACR-ARSCL was not produced after 03/04/2016 the MWACR was no longer operating. AWR MWACR DQRs will be extended to cover WACR-ARSCL data for AWR once the data are in the archive.

The WACR-ARSCL datastream has known errors in the 'mean_doppler_velocity' field for the TMP (Finland) and MAO (Brazil) sites only. The WACR sign convention for the mean doppler velocity moments changed, beginning with the 2012 MAGIC deployment, to match that of the newer KAZR and Ka/W/X-SACR systems and to agree with the typical weather radar convention. The new convention is that Doppler velocity is positive going away from the radar. However, the WACR-ARSCL VAP was not updated to account for this change. As a result, velocity dealiasing was done incorrectly in the VAP, producing incorrect velocities where unfolding was needed. This error affects only the 'mean_doppler_velocity' field of the 'arsclwacr1kollias' datastream for the TMP and MAO sites. WACR-ARSCL data for these sites will be reprocessed soon to correct the issue. **(This issue has been corrected)**

There is also an issue with fields 'cloud_layer_base_height' and 'cloud_layer_top_height' for the TMP and PVC sites. Some low level 'cloud' layers are actually 'clutter' layers and should have been omitted. To determine whether a given low-level cloud layer is clutter, users should look at the 'cloud_mask_95ghz_kollias' field, which marks clutter regions with the value '7.' **(This issue has been corrected)**