**Turbo** ARSCL Towards Near Real-Time Availability With Enhanced Accuracy

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**Quick Summary**

Work is underway to expedite ARSCL processing AND enhance accuracy. Elements of the plan include:

- Incorporating Micro-ARSCL clutter and hydrometeor masks
- Acquiring Micropulse Lidar cloud masks as input, rather than producing them as a by-product
- Developing a graphical user interface to facilitate remaining “hands-on” QC

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**Turbo-ARSCL Project**

The goal is to speed delivery of the widely-used ARSCL product while improving the accuracy of cloud boundaries.

1) **ARSCL VAP* processing backlog persists.**

   *Active Remote Sensing of Clouds Value-Added Product provides cloud boundaries, hydrometeor reflectivity, vertical velocities and spectral widths.

2) **What slows the processing?**

ARSCL requires hands-on corrections, or “QC,” between automatic processing iterations.

3) **Do “hands-on” corrections add value?**

On individual days, corrections clearly make a difference. In long term averages, impact of QC varies from site-to-site, with most at TWP sites. At SGP, uncorrected errors tend to cancel out in averages.

**Monthly-averaged Cloud Fractions**

- Darwin TWP-C3 200703
- Manus TWP-C1 200703

4) **Solution #1: Acquire MPL Cloud Masks from automated source**

Lidar Focus Group is evaluating automated MPL Cloud masking algorithms.

Preliminary work suggests that a Neural network approach looks feasible.

5) **Solution #2: Include Micro-ARSCL**

Micro-ARSCL (spectra-based) clutter and hydrometeor masks seem quite reliable.

6) **Solution #3: Graphical user interface for any “hands on” QC**

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