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What is Merged Sounding?

Merged Sounding is a Value Added Product that represents the thermodynamic atmospheric profile at one-minute intervals. It incorporates radiosonde, ECMWF, MWR, and surface data to create profiles from ground level to 20 km AGL.

Merged Sounding Data Availability

Two versions of Merged Sounding exist. The original version is continuing to be run for all permanent sites; the second version is in development but has been run for Point Reyes and Niamey. Merged Sounding has been run for each site for the following times:

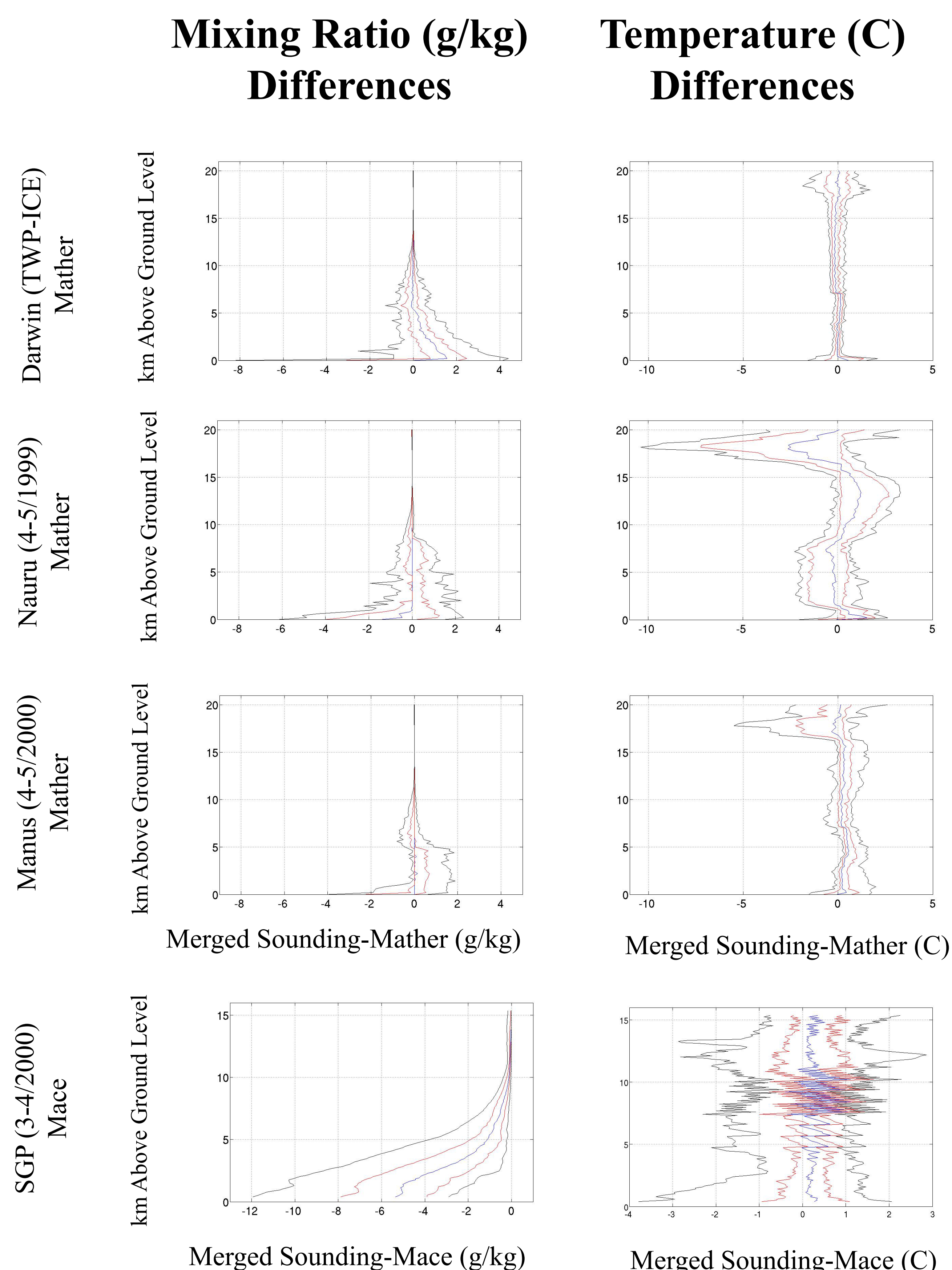
Version I (Original)		Version II (Beta)	
SGP:	2000 - 2005	PYE:	4/20/05 - 9/15/05
NSA:	2004 - 2007	NIM:	1/10/06 - 1/7/07
TWP Manus:	2006		
TWP Nauru:	2004 - 2006		
TWP Darwin:	2002 - 2006		

New Features of Version II

The following changes to the original version have been incorporated into a beta edition of Version II:

- Altitude extends to 60 km (instead of 20 km) AGL. This increases the
 - number of height levels from 266 to 315. The basis for this change is that typical ECMWF height exceeds 60 km AGL.
- ECMWF temperature has been adjusted at altitudes between 100 mb and 1 mb. The basis of this change is DY Wang et. al., 2005.
- Radiosonde Dry-Bias correction has been implemented. This
 - correction applies to the dry-bias adjustments for Vasilala RS-92 Radiosondes. See T Hume and L Miloshevich, 2007 and H. Vomel et. al., 2007.

Comparisons between Merged Sounding and Other Thermodynamic Profile PI Products



Key: Blue -- Median;
 Red -- 25th and 75th Percentile;
 Black -- 10th and 90th Percentile

- *Sondes Daily Launches:* 4 at Darwin, 2 each at Nauru and Manus, 4-6 at SGP.
- *Merged Sounding is Drier:* at low levels compared to Mace and Mather at Nauru.
- *Merged Sounding is Moister:* at low levels compared to Mather at Manus & Darwin.
- *Merged Sounding is Cooler:* at high levels compared to Mather at Nauru & Manus.