



# Intercomparison of Aircraft-Derived Wind Profiles with Measurements from Radiosondes and a VHF Wind Profiler



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**Aircraft:** ARA High altitude research aircraft Grob G520T Egrett

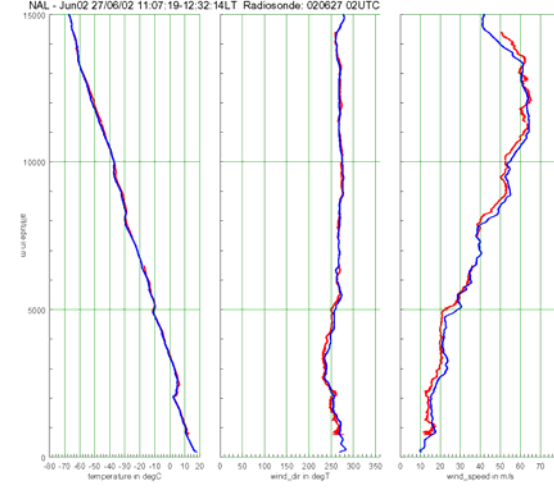
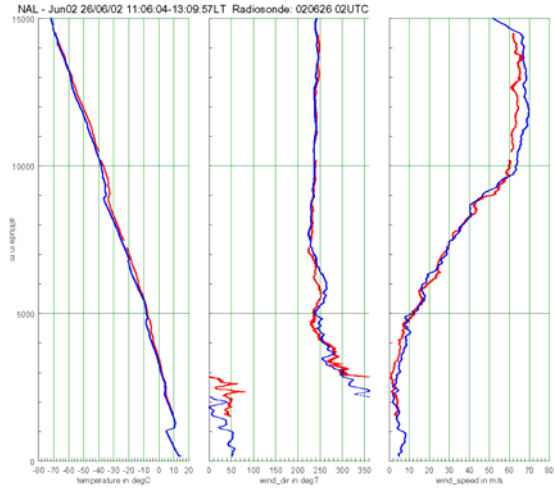
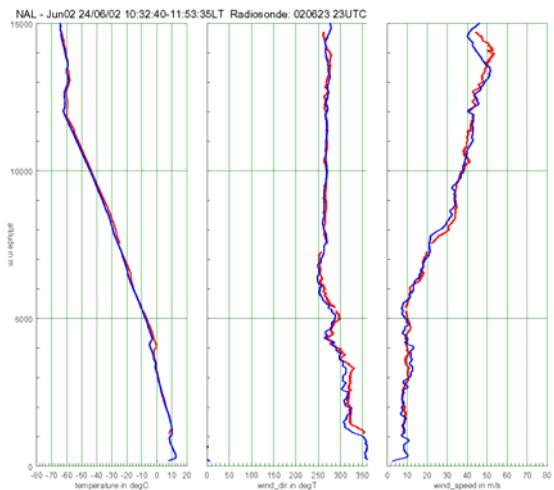
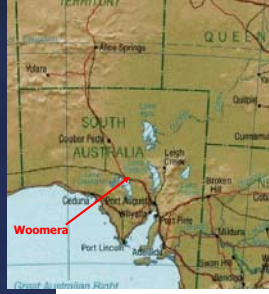
**Instrumentation:** Rosemount Turbulence Probe  
Novatel differential GPS  
Trimble TANS Vector attitude GPS

**Location:** Woomera, South Australia, 22 to 28 June 2002

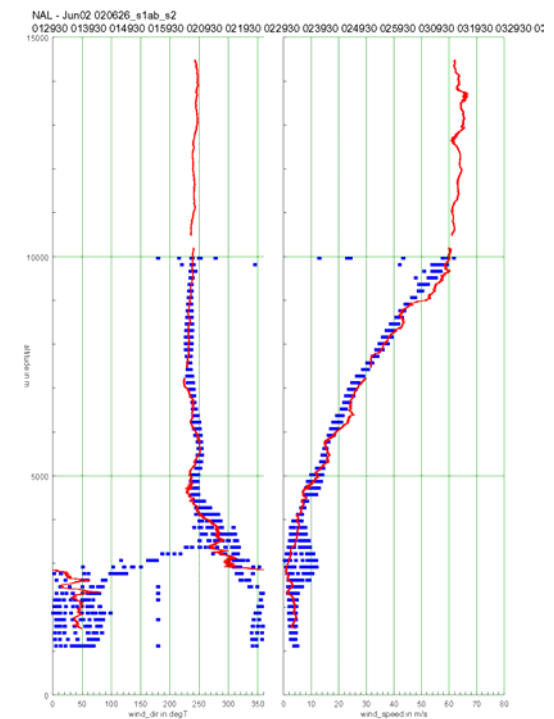
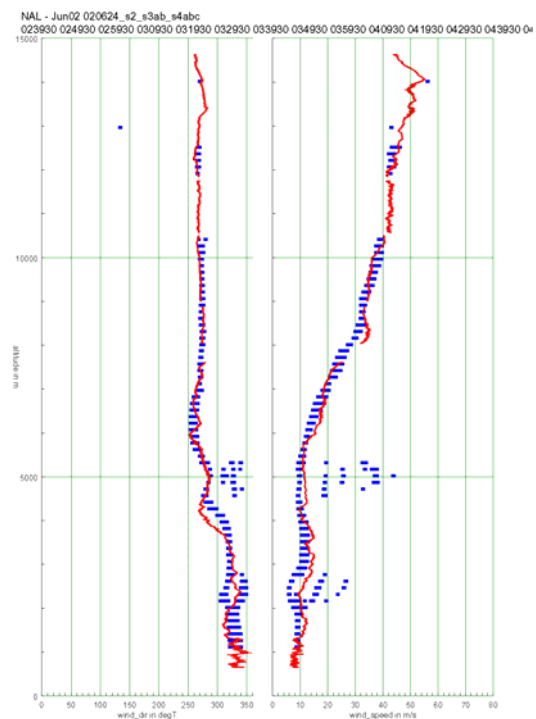
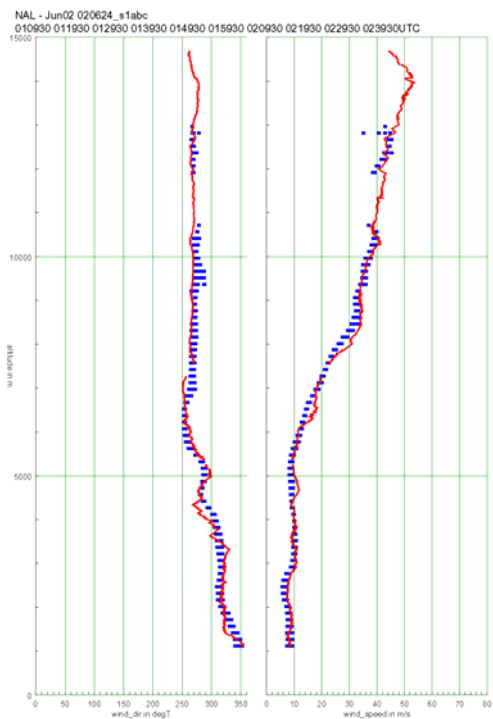
**Altitude:** Surface to 14.7km (47,000ft) MSL

**Radiosondes:** Bureau of Meteorology

**VHF-Profiler:** ATRAD  
ST Class Doppler  
55.0 MHz  
100 kW peak power



Intercomparison between GPS-radiosondes and aircraft wind measurements - radiosonde data in blue; aircraft data in red. Shown are, from left to right in each diagram: air temperature in ° C; wind direction in ° true; and horizontal wind speed in m/s.



Intercomparison between VHF Wind Profiler and aircraft wind measurements - profiler data in blue; aircraft data in red. VHF profiler data are averages over 10 minutes; measurements with a signal-to-noise ratio smaller than -13.0 are not plotted. Shown are, from left to right in each diagram: wind direction in ° true; and horizontal wind speed in m/s.

The work was carried out in the context of – and fully funded by - the NEXST project (National Experimental Supersonic Transport) of the National Aerospace Laboratory, Japan (now part of JAXA).

[www.nal.go.jp/sst/eng/index.html](http://www.nal.go.jp/sst/eng/index.html)

