

Title: EMEX Radiosonde Data

Author(s):

- Australian Bureau of Meteorology (BoM) (<http://www.bom.gov.au/>)

1.0 Data Set Overview:

- This radiosonde data was collected in Jan/Feb of 1987 as part of the AMEX/EMEX field campaign. The network consisted of 13 land-based sites and one ship-borne site (on the PRC5) in the north of Australia.
- [Webster, P. J., and R. A. Houze, Jr., 1991: The Equatorial Mesoscale Experiment \(EMEX\): An overview. Bull. Amer. Meteor. Soc., 72, 1481-1505.](#)
- Time period covered by the data: January 9, 1987 – February 14, 1987
- Physical location: 14 locations in Australia and nearby islands.

2.0 Instrument Description:

- Most of these radiosondes were from Philips but there is no further documentation

3.0 Data Collection and Processing:

- The data were collected in Jan/Feb of 1987 and were discovered on a server at the University of Washington. There is no record of what QC, if any, was performed.

4.0 Data Format:

- The data are available in 4x daily, ascii and netcdf files, by site.
- The ascii data format is as follows:
 - first line: date (YYMMDD), time (HHMM), site ID
 - remainder of lines contain, in order, pressure (10ths of Pa), temperature (10th of deg C), specific humidity (100ths of g/kg), u-component of wind (10ths m/s), v-component of wind (10ths m/s), and height (meters)
- The netcdf files contain metadata including site name, latitude, longitude and altitude.
- The netcdf files contain units, FillValue, and long_name attributes for each variable.

5.0 Data Remarks:

Station Locations

WMO ID	Station	Latitude	Longitude	Elevation (m)
94120	Darwin	-12.43	130.867	32
94150	Gove	-12.26	136.817	54
94175	Thursday Island	-10.58	142.217	61
94190	Weipa	-12.67	141.930	18
94191	Burketown	-17.75	139.550	7
94192	Borrooloola	-16.07	136.305	18

94203	Broome	-17.95	122.220	9
94212	Halls Creek	-18.23	127.667	407
94238	Tennant Creek	-19.63	134.183	374
94287	Cairns	-16.58	145.733	2
94294	Townsville	-19.25	146.750	5
94299	Willis Island	-16.30	150.000	6
94332	Mount Isa	-20.65	139.480	344
SHIP	PRC Ship #5	-11.50	139.000	6

- All site location information is sourced from the Integrated Global Radiosonde Archive (IGRA) except for the Borroloola and PRC Ship #5 release locations.
- The exact location of Weipa during EMEX is uncertain as the IRGA Weipa station started in 1998.
- The exact location of Borroloola is uncertain and there is no mention of it in the IRGA. The location used is the airport in town.
- The location given for PRC Ship #5 is the on-station location. It is not clear if the dataset includes any releases during transit.