

Radiometrics Microwave Radiometer Profiler from NOAA located at the Northwest of Granite site

P-NWGP

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1.0 Data Set Overview

1.1 Time period covered by the data

1.2 Physical location (latitude, longitude, elevation)

40.202720, -113.34857, 1309.05

1.3 Instrument type

Profiler

1.4 Data provider

Cooperative Institute for Research in Environmental Sciences / National Oceanic and Atmospheric Administration / University of Colorado

1.5 Web address references

<http://www3.nd.edu/~dynamics/materhorn/>

https://www.eol.ucar.edu/field_projects/materhorn-x

2.0 Instrument Description

Radiometrics Microwave Profiler capable of passive measurements of Temperature and Humidity from the surface to 10km on every 10 min interval



2.1 Instrument website

<http://radiometrics.com/>

<http://radiometrics.com/data/uploads/2014/08/MP-3000A-Operator-Manual-RevG.pdf>

2.2 Table of specifications

| Accuracy | Range | Frequency | Resolution |
|--|--|--|--|
| Consult the manufacturer specifications. | Consult the manufacturer specifications. | Consult the manufacturer specifications. | Consult the manufacturer specifications. |

3.0 Data Collection and Processing

3.1 Description of data collection

3.2 Description of derived parameters and processing techniques used

Data files were split into a more user friendly format

3.3 Description of quality assurance and control procedures

This dataset was not subject to any quality control or processing it has been provided in its original form.

3.4 Data intercomparisons

4.0 Data Format

4.1 Data file structure

ASCII comma separated, the exact structure provided by the file description.

4.2 File naming convention

dataProvider_instrument[_identifier]_instrumentType_startDateAndTime_endDateAndTime_ObservationType.extension

4.3 Data format

4.4 Data layout

_ * First description:

GPS = Global Positioning Satellite Data

Met = meteorological observations

Liq = cloud liquid water content

T_K = temperature in Kelvins

Vap = tropospheric water vapor

ColInt = column integrated liquid and vapor

RH = Relative Humidity

_ * _ * Second description:

15N = vertical profile oriented at 15 degrees from vertical to the north

15S = vertical profile oriented at 15 degrees from vertical to the South

15Avg = average of the 15N and 15S profiles

Zen = vertical profile

4.5 List of parameters with units, sampling intervals, frequency, range

Consult individual file headers.

4.6 Data version number and date

raw, v1.0, October 2016

4.7 Description of flags, codes used in the data, and definitions

4.8 Data sample

```
Record,Date_Time,Record_Type,GPS_Date_Time,Latitude,Longitude,Magneti
c_Variation,Status,Quality,Number_Satellites,Altitude_m
5,04/29/13 18:21:51,31,04/29/2013 18:21:51, 4012.1647,-11320.9148,
13.6000,Good Fix,2,11,1308.9
```

5.0 Data Remarks

5.1 PI's assessment of the data

5.2 Missing data periods

5.3 Software compatibility

6.0 References

- [1] Fernando, H. J. S., E. R. Pardyjak, S. Di Sabatino, F. K. Chow, S. F. J. DeWekker, S. W. Hoch, J. Hacker, J. C. Pace, T. Pratt, Z. Pu, J. W. Steenburgh, C. D. Whiteman, Y. Wang, D. Zajic, B. Balsley, R. Dimitrova, G. D. Emmitt, C. W. Higgins, J. C. R. Hunt, J. G. Knievel, D. Lawrence, Y. Liu, D. F. Nadeau, E. Kit, B. W. Blomquist, P. Conry, R. S. Coppersmith, E. Creegan, M. Felton, A. Grachev, N. Gunawardena, C. Hang, C. M. Hocut, G. Huynh, M. E. Jeglum, D. Jensen, V. Kulandaivelu, M. Lehner, L. S. Leo, D. Liberzon, J. D. Massey, K. McEnerney, S. Pal, T. Price, M. Sghiatti, Z. Silver, M. Thompson, H. Zhang, T. Zsedrovits, 2015: The MATERHORN – Unraveling the Intricacies of Mountain Weather, BAMS, doi: <http://dx.doi.org/10.1175/BAMS-D-13-00131.1>.
- [2] <http://radiometrics.com/data/uploads/2014/08/MP-3000A-Operator-Manual-RevG.pdf>