

**Ceilometer data from the University of Notre Dame measured at the  
Northwest of Granite site  
CEI-UND-NWG**

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## 1.0 Data Set Overview

### 1.1 Time period covered by the data

### 1.2 Physical location (latitude, longitude, elevation)

40.202640, -113.34833999999999, 1309

### 1.3 Instrument type

Ceilometer

### 1.4 Data provider

University of Notre Dame

### 1.5 Web address references

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

[https://www.eol.ucar.edu/field\\_projects/materhorn-x](https://www.eol.ucar.edu/field_projects/materhorn-x)

## 2.0 Instrument Description

Vaisala CL31 ceilometer



## 2.1 Instrument website

[http://www.vaisala.com/en/products/ceilometers/Pages/CL31.aspx?utm\\_medium=alias&utm\\_content=CL31](http://www.vaisala.com/en/products/ceilometers/Pages/CL31.aspx?utm_medium=alias&utm_content=CL31)

## 2.2 Table of specifications

Accuracy	Range	Frequency	Resolution
greater of $\pm 1\%$ or $\pm 5$ m	0...25,000 ft ((0...7.6 km)	programmable, 2...120 s	5 m /10 ft (units selectable)

## 3.0 Data Collection and Processing

### 3.1 Description of data collection

### 3.2 Description of derived parameters and processing techniques used

Original data files are provided.

### 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

## 4.2 File naming convention

## 4.3 Data format

## 4.4 Data layout

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

## 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

Not suitable to display
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## 5.0 Data Remarks

### 5.1 PI's assessment of the data

### 5.2 Missing data periods

### 5.3 Software compatibility

Vaisala CL-VIEW Graphical User Interface for Ceilometers -  
<http://www.vaisala.com/en/products/ceilometers/Pages/CL-VIEW.aspx>

## 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://www.vaisala.com/en/products/ceilometers/Pages/CL-VIEW.aspx>
- [3] [http://www.vaisala.com/en/products/ceilometers/Pages/CL31.aspx?utm\\_medium=alias&utm\\_content=CL31](http://www.vaisala.com/en/products/ceilometers/Pages/CL31.aspx?utm_medium=alias&utm_content=CL31)