Readme file for UND Doppler Lidar Data at MI6

This dataset corresponds to one of the three Halo Doppler Lidars deployed by University of Notre Dame. For more information on the data processing, please contact Raghu Krishnamurthy at rkrishn1@nd.edu or Joe Fernando at hfernand@nd.edu

The data frequency of the raw data varies for the period of study. Processed data will be submitted to the EOL archive soon.

Type of Lidar	Start Time	End Time	GPS (X, Y Z)	Data Type
Scanning Doppler	May 1, 2017 00:00 hrs	June 15, 2017 23:59 hrs	39.714904° -7.743357° 333.974	Raw (*.hpl)

Data format

The data format & parameters of the Lidar data are provided below and as well in the header of each uploaded file:

Sample Data Format of each Lidar data file below:

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Sample Filename: User1_06_20170531_101000.hpl
System ID: 116
Number of gates: 1200
Range gate length (m):18.0
Gate length (pts):   6
Pulses/ray: 5000
No. of waypoints in file:15
Focus range: 65535
Start time: 20170531 10:10:13.55
Resolution (m/s):   0.0382
Altitude of measurement (center of gate) = (range gate + 0.5) * Gate length
Data line 1: Decimal time (hours) Azimuth (degrees) Elevation (degrees) Pitch (degrees) Roll (degrees) f9.6,1x,f6.2,1x,f6.2
Data line 2: Range Gate Doppler (m/s) Intensity (SNR + 1) Beta (m-1 sr-1)
i3,1x,f6.4,1x,f8.6,1x,e12.6 - repeat for no. gates

The scanning Doppler Lidar datasets will contain the raw post-processed Doppler shifted radial velocity measurements, strength of the signal return (SNR), backscatter, and the location of the scanner (in polar Azimuth & elevation coordinates). No corrections to the Lidar azimuth or elevation angle is performed to this dataset.