

CHEESEHEAD MicroRain Radar Pro (MRRPro) Observations

Dataset Author(s) –

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Time of Interest – 2019/06/20 22:10:00 to 2019/10/14 23:00:00

Area of Interest – 90.272W, 45.945N

Data Frequency – Continuous at 1 minute resolution

Data Spatial Type - Profiles from near-surface (4th bin) to 6 km above ground level (bin sizes are 45 m)

General Dataset Description – This dataset includes reflectivity, Doppler velocity, and spectral width profiles from the MRRPro profiling radar. This data is final and no further QC will be performed.

File Names – The file name format is:

Directories of: YYYYMM

Within those there are directories for each day: YYYYMMDD

Within those there are NetCDF files for each hour: YYYYMMDD_HH0000.nc (HH in UTC)

There is also a daily log for instrument health: YMMDD.log

So, a specific file would be 201910/20191001/20191001_220000.nc

Parameter Information – The data are in netCDF format. Please see the file headers for more information regarding the data within each file.

nc.variables['Ze']

```
<type 'netCDF4._netCDF4.Variable'>  
float64 Ze(time, range)  
  standard_name: equivalent_reflectivity_factor  
  long_name:  
  units: dBZ  
  _FillValue: nan  
  coordinates: elevation azimuth range  
  field_folds: false  
  fold_limit_lower: 0.0  
  fold_limit_upper: 0.0  
  thresholding_xml:  
  legend_xml:  
  is_discreet: false
```

unlimited dimensions: time
current shape = (360, 128)
filling on

nc.variables['VEL']

<type 'netCDF4._netCDF4.Variable'>
float32 VEL(time, range)
standard_name: radial_velocity_of_scatterers_away_from_instrument
long_name:
units: m s-1
_FillValue: nan
coordinates: elevation azimuth range
field_folds: true
fold_limit_lower: 0.0
fold_limit_upper: 0.0
thresholding_xml:
legend_xml:
is_discreet: false
unlimited dimensions: time
current shape = (360, 128)
filling on

nc.variables['WIDTH']

<type 'netCDF4._netCDF4.Variable'>
float64 WIDTH(time, range)
standard_name: doppler_spectrum_width
long_name:
units: m/s
_FillValue: nan
coordinates: elevation azimuth range
field_folds: false
fold_limit_lower: 0.0
fold_limit_upper: 0.0
thresholding_xml:
legend_xml:
is_discreet: false
unlimited dimensions: time
current shape = (360, 128)
filling on

nc.variables.keys()

[u'volume_number',
u'time_coverage_start',
u'time_coverage_end',
u'time_reference',
u'instrument_type',
u'transfer_function',
u'calibration_constant',
u'latitude',
u'longitude',
u'altitude',
u'doppler_shift_spectrum',

u'sweep_number',
u'sweep_mode',
u'fixed_angle',
u'sweep_start_ray_index',
u'sweep_end_ray_index',
u'range',
u'time',
u'elevation',
u'azimuth',
u'Za',
u'Z',
u'Zea',
u'Ze',
u'RR',
u'LWC',
u'PIA',
u'VEL',
u'WIDTH',
u'ML',
u'SNR',
u'index_spectra',
u'spectrum_reflectivity',
u'N']

Data restrictions – None. See the [CHEESEHEAD Data Policy](#).

Digital Object Identifier (DOI) - <https://doi.org/10.26023/NGK2-63B2-MS13>