File: 240503_000002_P00_ZEN.LV1.nc

Variables and Attributes:

Variable Name: ProgNo Dimensions: () Shape: () Data Type: int32 Name: Chirp generator program number
Variable Name: ModelNo Dimensions: () Shape: () Data Type: int32 Name: Radar configuration: 0 - 94 GHz single pol, 1 - 94 GHz STSR, 2 - 94 GHz LDR
Variable Name: Freq Dimensions: () Shape: () Data Type: float32 Name: Carrier frequency of the radar active channel Units: GHz
Variable Name: AntSep Dimensions: () Shape: () Data Type: float32 Name: Distance between antenna axes Units: m
Variable Name: AntDia Dimensions: () Shape: () Data Type: float32 Name: Antenna diameter Units: m
Variable Name: AntG Dimensions: () Shape: () Data Type: float32 Name: Antenna gain Units: linear
Variable Name: HPBW Dimensions: () Shape: () Data Type: float32 Name: Antenna one way half power beam width Units: deg
Variable Name: DualPol Dimensions: () Shape: () Data Type: |S1 Name: Polarimetric configuration. 0: Single pol, 1: LDR mode, 2: STSR mode
Variable Name: SampDur Dimensions: () Shape: () Data Type: float32 Name: Sample duration Units: s
Variable Name: GPSLat Dimensions: () Shape: () Data Type: float32 Name: GPS latitude Units: deg
Variable Name: GPSLon Dimensions: () Shape: () Data Type: float32 Name: GPS longitude Units: deg
Variable Name: CallInt Dimensions: () Shape: () Data Type: int32 Name: Time period for automatic zero calibrations Units: Number of samples
Variable Name: TAlts Dimensions: ('TAlt',) Shape: (93,) Data Type: float32 Name: Temperature profile altitude layers Units: m
Variable Name: HAlts Dimensions: ('HAlt',) Shape: (93,) Data Type: float32 Name: Humidity profile altitude layers Units: m
Variable Name: ChirpNum Dimensions: () Shape: () Data Type: int32 Name: Number of chirp sequences
Variable Name: DoppLen Dimensions: ('Chirp',) Shape: (3,) Data Type: int32 Name: Number of spectral lines in Doppler spectra
Variable Name: AvgNum Dimensions: ('Chirp',) Shape: (3,) Data Type: int32 Name: Number of chirps averaged (coherently and non-coherently) for a single time sample
Variable Name: SeqIntTime Dimensions: ('Chirp',) Shape: (3,) Data Type: float32 Name: Effective integration time Units: s
Variable Name: RangeRes Dimensions: ('Chirp',) Shape: (3,) Data Type: float32 Name: Range resolution Units: m
Variable Name: MaxVel Dimensions: ('Chirp',) Shape: (3,) Data Type: float32 Name: Unambiguous Doppler velocity (+/-) Units: m/s
Variable Name: SupPowLev Dimensions: () Shape: () Data Type: |S1 Name: Flag indicating, if power leveling has been used. 0 - yes, 1 - no
Variable Name: SpkFilEna Dimensions: () Shape: () Data Type: |S1 Name: Flag indicating, if spike/plankton filter has been used. 0 - yes, 1 - no
Variable Name: PhaseCor Dimensions: () Shape: () Data Type: |S1 Name: Flag indicating, if differential phase correction has been used (only for dual pol radars). 0 - yes, 1 - no
Variable Name: RelPowCor Dimensions: () Shape: () Data Type: |S1 Name: Flag indicating, if relative power correction has been used (only for dual pol radars). 0 - yes, 1 - no
Variable Name: FFTWin Dimensions: () Shape: () Data Type: |S1 Name: FFT windows in use (for both ranging and Doppler FFT). 0 - Square, 1 - Parzen, 2 - Blackman, 3 - Welch, 4 - Slepian2, 5 - Slepian3

Variable Name: FFTInRng Dimensions: () Shape: () Data Type: uint16 Name: ADC input voltage range (+/-) Units: mV
Variable Name: SWVersion Dimensions: () Shape: () Data Type: uint16 Name: Software version * 100. For old software versions the value is 0.
Variable Name: NoiseFilt Dimensions: () Shape: () Data Type: float32 Name: Noise filter threshold factor (multiple of power noise density STD)
Variable Name: Time Dimensions: ('Time',) Shape: (1220,) Data Type: uint32 Name: Time Units: Number of seconds since 1/1/2001 00:00:00 [UTC]
Variable Name: Timems Dimensions: ('Time',) Shape: (1220,) Data Type: int32 Name: Milliseconds Units: ms
Variable Name: QualFlag Dimensions: ('Time',) Shape: (1220,) Data Type: |S1 Name: Quality flag. Bit 1: ADC saturation, Bit 2: spectral width too high, Bit 3: no transmitter power leveling
Variable Name: Rain Dimensions: ('Time',) Shape: (1220,) Data Type: float32 Name: Rain rate from weather station Units: mm/h
Variable Name: SurfRelHum Dimensions: ('Time',) Shape: (1220,) Data Type: float32 Name: Relative humidity from weather station Units: %
Variable Name: SurfTemp Dimensions: ('Time',) Shape: (1220,) Data Type: float32 Name: Surface temperature from weather station Units: K
Variable Name: SurfPres Dimensions: ('Time',) Shape: (1220,) Data Type: float32 Name: Surface atmospheric pressure from weather station Units: hPa
Variable Name: SurfWS Dimensions: ('Time',) Shape: (1220,) Data Type: float32 Name: Surface wind speed from weather station Units: m/s
Variable Name: SurfWD Dimensions: ('Time',) Shape: (1220,) Data Type: float32 Name: Surface wind direction from weather station Units: deg
Variable Name: DDVolt Dimensions: ('Time',) Shape: (1220,) Data Type: float32 Name: Direct detection channel voltage Units: V
Variable Name: DDTb Dimensions: ('Time',) Shape: (1220,) Data Type: float32 Name: Direct detection brightness temperature Units: K
Variable Name: LWP Dimensions: ('Time',) Shape: (1220,) Data Type: float32 Name: Liquid water path Units: g/m^2
Variable Name: PowIF Dimensions: ('Time',) Shape: (1220,) Data Type: float32 Name: IF power at ADC Units: uW
Variable Name: Elv Dimensions: ('Time',) Shape: (1220,) Data Type: float32 Name: Elevation Units: deg
Variable Name: Azm Dimensions: ('Time',) Shape: (1220,) Data Type: float32 Name: Azimuth Units: deg
Variable Name: Status Dimensions: ('Time',) Shape: (1220,) Data Type: float32 Name: Mitigation status flags. 0/1: heater switch (ON/OFF), 0/10: blower switch (ON/OFF)
Variable Name: TPow Dimensions: ('Time',) Shape: (1220,) Data Type: float32 Name: Transmitted power Units: W
Variable Name: TTemp Dimensions: ('Time',) Shape: (1220,) Data Type: float32 Name: Transmitter temperature Units: K
Variable Name: RTemp Dimensions: ('Time',) Shape: (1220,) Data Type: float32 Name: Receiver temperature Units: K
Variable Name: PCTemp Dimensions: ('Time',) Shape: (1220,) Data Type: float32 Name: PC temperature Units: K
Variable Name: Res_1 Dimensions: ('Time',) Shape: (1220,) Data Type: float32 Name: Active and passive channel noise power ratio
Variable Name: Res_2 Dimensions: ('Time',) Shape: (1220,) Data Type: float32 Name: Reserved float
Variable Name: Res_3 Dimensions: ('Time',) Shape: (1220,) Data Type: float32 Name: Reserved float
Variable Name: TProf Dimensions: ('Time', 'TAlt') Shape: (1220, 93) Data Type: float32 Name: Temperature profiles from RPG radiometer Units: K

Variable Name: AHProf Dimensions: ('Time', 'HAlt') Shape: (1220, 93) Data Type: float32 Name: Absolute humidity profiles from RPG radiometer Units: g/m^3
Variable Name: RHProf Dimensions: ('Time', 'HAlt') Shape: (1220, 93) Data Type: float32 Name: Relative humidity profiles from RPG radiometer Units: %
Variable Name: C1SLv Dimensions: ('Time', 'C1Range') Shape: (1220, 20) Data Type: float32 Name: Sensitivity limit for vertical polarization: Chirp 1 Units: mm^6/m^3
Variable Name: C1SLh Dimensions: ('Time', 'C1Range') Shape: (1220, 20) Data Type: float32 Name: Sensitivity limit for horizontal polarization: Chirp 1 Units: mm^6/m^3
Variable Name: C2SLv Dimensions: ('Time', 'C2Range') Shape: (1220, 53) Data Type: float32 Name: Sensitivity limit for vertical polarization: Chirp 2 Units: mm^6/m^3
Variable Name: C2SLh Dimensions: ('Time', 'C2Range') Shape: (1220, 53) Data Type: float32 Name: Sensitivity limit for horizontal polarization: Chirp 2 Units: mm^6/m^3
Variable Name: C3SLv Dimensions: ('Time', 'C3Range') Shape: (1220, 265) Data Type: float32 Name: Sensitivity limit for vertical polarization: Chirp 3 Units: mm^6/m^3
Variable Name: C3SLh Dimensions: ('Time', 'C3Range') Shape: (1220, 265) Data Type: float32 Name: Sensitivity limit for horizontal polarization: Chirp 3 Units: mm^6/m^3
Variable Name: C1Range Dimensions: ('C1Range',) Shape: (20,) Data Type: float32 Name: Range
Variable Name: C2Range Dimensions: ('C2Range',) Shape: (53,) Data Type: float32 Name: Range
Variable Name: C3Range Dimensions: ('C3Range',) Shape: (265,) Data Type: float32 Name: Range
Variable Name: C1ZE Dimensions: ('Time', 'C1Range') Shape: (1220, 20) Data Type: float32 Name: Equivalent radar reflectivity factor: Chirp 1 Units: mm^6/m^3 _FillValue: -999.0
Variable Name: C1MeanVel Dimensions: ('Time', 'C1Range') Shape: (1220, 20) Data Type: float32 Name: Mean Doppler velocity: Chirp 1 Units: m/s _FillValue: -999.0
Variable Name: C1SpecWidth Dimensions: ('Time', 'C1Range') Shape: (1220, 20) Data Type: float32 Name: Spectrum width: Chirp 1 Units: m/s _FillValue: -999.0
Variable Name: C1Skew Dimensions: ('Time', 'C1Range') Shape: (1220, 20) Data Type: float32 Name: Skewness: Chirp 1 Units: linear _FillValue: -999.0
Variable Name: C1Kurt Dimensions: ('Time', 'C1Range') Shape: (1220, 20) Data Type: float32 Name: Kurtosis: Chirp 1 Units: linear _FillValue: -999.0
Variable Name: C1ZE45 Dimensions: ('Time', 'C1Range') Shape: (1220, 20) Data Type: float32 Name: Slanted equivalent radar reflectivity factor: Chirp 1 Units: mm^6/m^3 _FillValue: -999.0
Variable Name: C1ZDR Dimensions: ('Time', 'C1Range') Shape: (1220, 20) Data Type: float32 Name: Differential reflectivity: Chirp 1 Units: dB _FillValue: -999.0
Variable Name: C1RHV Dimensions: ('Time', 'C1Range') Shape: (1220, 20) Data Type: float32 Name: Correlation coefficient: Chirp 1 Units: linear [0...1] _FillValue: -999.0
Variable Name: C1PhiDP Dimensions: ('Time', 'C1Range') Shape: (1220, 20) Data Type: float32 Name: Differential phase shift: Chirp 1 Units: rad _FillValue: -999.0
Variable Name: C1SLDR Dimensions: ('Time', 'C1Range') Shape: (1220, 20) Data Type: float32 Name: Slanted linear depolarization ratio: Chirp 1 Units: dB _FillValue: -999.0
Variable Name: C1SRCX Dimensions: ('Time', 'C1Range') Shape: (1220, 20) Data Type: float32 Name: Co-cross-channel correlation coefficient in slanted basis: Chirp 1 Units: linear [0...1] _FillValue: -999.0
Variable Name: C1KDP Dimensions: ('Time', 'C1Range') Shape: (1220, 20) Data Type: float32 Name: Specific differential phase shift: Chirp 1 Units: rad/km _FillValue: -999.0
Variable Name: C1DiffAtt Dimensions: ('Time', 'C1Range') Shape: (1220, 20) Data Type: float32 Name: Differential attenuation: Chirp 1 Units: dB/km _FillValue: -999.0
Variable Name: C2ZE Dimensions: ('Time', 'C2Range') Shape: (1220, 53) Data Type: float32 Name: Equivalent radar reflectivity factor: Chirp 2 Units: mm^6/m^3 _FillValue: -999.0
Variable Name: C2MeanVel Dimensions: ('Time', 'C2Range') Shape: (1220, 53) Data Type: float32 Name: Mean Doppler velocity: Chirp 2 Units: m/s _FillValue: -999.0
Variable Name: C2SpecWidth Dimensions: ('Time', 'C2Range') Shape: (1220, 53) Data Type: float32 Name: Spectrum width: Chirp 2 Units: m/s _FillValue: -999.0
Variable Name: C2Skew Dimensions: ('Time', 'C2Range') Shape: (1220, 53) Data Type: float32 Name: Skewness: Chirp 2 Units: linear _FillValue: -999.0

Variable Name: C2Kurt Dimensions: ('Time', 'C2Range') Shape: (1220, 53) Data Type: float32 Name: Kurtosis: Chirp 2 Units: linear _FillValue: -999.0
Variable Name: C2ZE45 Dimensions: ('Time', 'C2Range') Shape: (1220, 53) Data Type: float32 Name: Slanted equivalent radar reflectivity factor: Chirp 2 Units: mm^6/m^3 _FillValue: -999.0
Variable Name: C2ZDR Dimensions: ('Time', 'C2Range') Shape: (1220, 53) Data Type: float32 Name: Differential reflectivity: Chirp 2 Units: dB _FillValue: -999.0
Variable Name: C2RHV Dimensions: ('Time', 'C2Range') Shape: (1220, 53) Data Type: float32 Name: Correlation coefficient: Chirp 2 Units: linear [0...1] _FillValue: -999.0
Variable Name: C2PhiDP Dimensions: ('Time', 'C2Range') Shape: (1220, 53) Data Type: float32 Name: Differential phase shift: Chirp 2 Units: rad _FillValue: -999.0
Variable Name: C2SLDR Dimensions: ('Time', 'C2Range') Shape: (1220, 53) Data Type: float32 Name: Slanted linear depolarization ratio: Chirp 2 Units: dB _FillValue: -999.0
Variable Name: C2SRCX Dimensions: ('Time', 'C2Range') Shape: (1220, 53) Data Type: float32 Name: Co-cross-channel correlation coefficient in slanted basis: Chirp 2 Units: linear [0...1] _FillValue: -999.0
Variable Name: C2KDP Dimensions: ('Time', 'C2Range') Shape: (1220, 53) Data Type: float32 Name: Specific differential phase shift: Chirp 2 Units: rad/km _FillValue: -999.0
Variable Name: C2DiffAtt Dimensions: ('Time', 'C2Range') Shape: (1220, 53) Data Type: float32 Name: Differential attenuation: Chirp 2 Units: dB/km _FillValue: -999.0
Variable Name: C3ZE Dimensions: ('Time', 'C3Range') Shape: (1220, 265) Data Type: float32 Name: Equivalent radar reflectivity factor: Chirp 3 Units: mm^6/m^3 _FillValue: -999.0
Variable Name: C3MeanVel Dimensions: ('Time', 'C3Range') Shape: (1220, 265) Data Type: float32 Name: Mean Doppler velocity: Chirp 3 Units: m/s _FillValue: -999.0
Variable Name: C3SpecWidth Dimensions: ('Time', 'C3Range') Shape: (1220, 265) Data Type: float32 Name: Spectrum width: Chirp 3 Units: m/s _FillValue: -999.0
Variable Name: C3Skew Dimensions: ('Time', 'C3Range') Shape: (1220, 265) Data Type: float32 Name: Skewness: Chirp 3 Units: linear _FillValue: -999.0
Variable Name: C3Kurt Dimensions: ('Time', 'C3Range') Shape: (1220, 265) Data Type: float32 Name: Kurtosis: Chirp 3 Units: linear _FillValue: -999.0
Variable Name: C3ZE45 Dimensions: ('Time', 'C3Range') Shape: (1220, 265) Data Type: float32 Name: Slanted equivalent radar reflectivity factor: Chirp 3 Units: mm^6/m^3 _FillValue: -999.0
Variable Name: C3ZDR Dimensions: ('Time', 'C3Range') Shape: (1220, 265) Data Type: float32 Name: Differential reflectivity: Chirp 3 Units: dB _FillValue: -999.0
Variable Name: C3RHV Dimensions: ('Time', 'C3Range') Shape: (1220, 265) Data Type: float32 Name: Correlation coefficient: Chirp 3 Units: linear [0...1] _FillValue: -999.0
Variable Name: C3PhiDP Dimensions: ('Time', 'C3Range') Shape: (1220, 265) Data Type: float32 Name: Differential phase shift: Chirp 3 Units: rad _FillValue: -999.0
Variable Name: C3SLDR Dimensions: ('Time', 'C3Range') Shape: (1220, 265) Data Type: float32 Name: Slanted linear depolarization ratio: Chirp 3 Units: dB _FillValue: -999.0
Variable Name: C3SRCX Dimensions: ('Time', 'C3Range') Shape: (1220, 265) Data Type: float32 Name: Co-cross-channel correlation coefficient in slanted basis: Chirp 3 Units: linear [0...1] _FillValue: -999.0
Variable Name: C3KDP Dimensions: ('Time', 'C3Range') Shape: (1220, 265) Data Type: float32 Name: Specific differential phase shift: Chirp 3 Units: rad/km _FillValue: -999.0
Variable Name: C3DiffAtt Dimensions: ('Time', 'C3Range') Shape: (1220, 265) Data Type: float32 Name: Differential attenuation: Chirp 3 Units: dB/km _FillValue: -999.0