CAESAR, Flight #tf01, 02/09/2024, 15:52:39-23:02:13

For position, it is hard to beat our research GPS w/ Terrastar.
Centimeter
accuracy. All those variables start with 'GG'.

Where you see redundant variables and one ends in 'X', you want that, it
is the reference assignment. e.g.

```
#
# C130 Reference Sensor Assignments
#
ATX           ATH1         Ambient Temp
EWX           EW_DPB       Water Vapor Pressure
DPXC          DP_DPB       Dew Point
PSX           PSFRD        Static Pressure
PSXC          PSFC         Static Pressure, Corrected
QCX           QCFR         Dynamic Pressure
QCXC          QCFRC        Dynamic Pressure, Corrected
TASX          TASFR        True Airspeed
WIX           WIC          Vertical Windspeed, Corrected
```

Master list. Most duplicates removed. e.g. example we are flying two
CDP's,_LWI & _LWO, I removed _LWI (left wing inboard).

```
A2DTEMP_GPDACQ_319    cnts        A2D Temperature
ACGAIN_VXL            count       VCSEL AC Gain
ACINS                 m/s2        IRS Vertical Acceleration
ADIFR                 hPa         Vertical Differential Pressure, Radome
ADIFRTEMP             deg_C       Temperature of ADIFR Probe
AKRD                  degree      Attack Angle, Radome Diff. Pressure
AKY                   degree      Attack Angle, Radome Diff. Pressure
ALT                   m           IRS Altitude
ALTHYB                feet        Hybrid Altitude - 261
ALT_A                 m           Avionics GPS Altitude (MSL)
AQRATIO                           Al's Fudge Factor
AREA_RPC              mm2         Fast 2DC Total Area of Shadowed Pixels
ARMRXT_HVPS           deg_C       HVPS Arm Temperature
ARMTXT_HVPS           deg_C       HVPS Arm Temperature
ASTAT                 V           W-CCN status
ATF1                  deg_C       Ambient Temperature, Unheated
ATH1                  deg_C       Ambient Temperature, Deiced Left
ATH2                  deg_C       Ambient Temperature, Deiced Left
ATTACK                degree      Attack Angle, Reference
ATX                   deg_C       Ambient Temperature, Reference
AT_A                  deg_C       ADC Ambient Air Temperature
AT_VXL                deg_K       VCSEL Ambient Temperature
AVGTRNS_LWO           microsecond CDP Average Transit Time
BALNC_DPB             unk         Dew/Frost Point Balance
BALNC_DPT             unk         Dew/Frost Point Balance
BALT1_A               m           ADC Baro Altitude
BAROCOR1_A            hPa         ADC baro correction #1 mB
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BDIFR              hPa        Horizontal Differential Pressure, Radome
BDIFRTEMP          deg_C      Temperature of BDIFR Probe
BLATA              m/s2       IRS Body Latitudal Acceleration
BLONGA             m/s2       IRS Body Longitudal Acceleration
BNORMA             m/s2       IRS Body Normal Acceleration
BPITCHR            deg/s      IRS Body Pitch Rate
BROLLR             deg/s      IRS Body Roll Rate
BSN_RPC            #          Fast 2DC Board Serial Number
BTMP_RPC           deg_C      Fast 2DC Board Temperature
BYAWR              deg/s      IRS Body Yaw Rate
BYPFLW_CVI         slpm       CVI Bypass Flow
CANP_2DS           psi        2DS Internal Pressure
CANP_HVPS          psi        HVPS Internal Pressure
CAS_A              m/s        ADC Computed Air Speed
CAVP_DPB           hPa        Raw Dynamic Pressure, Fuselage
CAVP_DPT           hPa        Raw Dynamic Pressure, Fuselage
CAVP_WVISO1        torr       Cavity Pressure
CAVT_WVISO1        deg_C      Cavity Temperature
CDP5VMON_LWO       Vdc        CDP 5 Vdc Monitor
CDPCBTMP_LWO       deg_C      CDP Control Board Temperature
CDPLBTMP_LWO       deg_C      CDP Laser Block Temperature
CDPLSRC_LWO        mAmp       CDP Laser Current
CDPLSRP_LWO        V          CDP Laser Power Monitor
CDPQBDW_LWO        unk        CDP Qualifier DT Bandwidth
CDPQBLINE_LWO      Vdc        CDP Qualifier Baseline
CDPQTHRSH_LWO      unk        CDP Qualifier Dynamic Threshold
CDPSBDW_LWO        unk        CDP Sizer DT Bandwidth
CDPSBLINE_LWO      Vdc        CDP Sizer Baseline
CDPSTHRSH_LWO      unk        CDP Sizer Dynamic Threshold
CDPWBTMP_LWO       deg_C      CDP Wing Board Temperature
CNTEMP             deg_C      BCN Counter Inlet Temperature
CNTRCUR_VXL        count      VCSEL Center Current
CNTS               count      TSI CN Counter Output
CNTS_CFDC          counts/sec CFDC Total Count
COA_ARI            ppbv       Aerodyne Mini 108 Ambient FSO Carbon
                                 Monoxide Fit Correction Factor
COCAL_ARI          ppbv       Corrected Carbon Monoxide Concentration
COCOR_ARI          V          Raw Carbon Monoxide, Baseline Corrected
CONC1DC100_RPC     #/L        2D-C Concentration 100u and larger,
                                 Center-in (all cells)
CONC1DC150_RPC     #/L        2D-C Concentration 150u and larger,
                                 Center-in (all cells)
CONC1DC_RPC        #/L        2D-C Concentration, 260X Emulation (all
                                 cells)
CONC2D             #/L        No title
CONCD_LWO          #/cm3      CDP Concentration (all cells)
CONCN              #/cm3      Condensation Nuclei (CN) Concentration
CONCN_CFDC         #/cm3      Condensation Nuclei (CN) Concentration
CONCP_RWO          #/cm3      PCAS Concentration (all cells)
CONCS_2DS          #/cm3      2DS Total Number Particles
CONCS_HVPS         #/cm3      HVPS Total Number Particles
CONCU100_WYO       #/cm3      UHSAS Ambient Concentration, .1 micron
                                 and bigger
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CONCU500_WYO          #/cm3      UHSAS Ambient Concentration, .5 micron
                                    and bigger
CONCU_WYO             #/cm3      UHSAS Ambient Concentration (all cells)
CONCV_VXL             #/cm3      VCSEL Moisture Number Density
COZRO_ARI             V          Carbon Monoxide Baseline Zero Signal
CO_ARI                ppbv       Aerodyne Mini 108 Carbon Monoxide Mixing
                                    Ratio
CT2_CFDC              deg_C      CFDC Aerosol Location Temperature
DAST_WVISO1           deg_C      DAS Temperature
DATE_RPC              count      Fast 2DC Date / Time Stamp
DBAR1DC_RPC           um         2D-C Mean Particle Diameter, 260X
                                    Emulation
DBAR2D                um         No title
DBARD_LWO             um         CDP Mean Particle Diameter
DBARP_RWO             um         PCAS Mean Particle Diameter
DBARS_2DS             um         2DS Mean Particle Diameter
DBARS_HVPS            um         HVPS Mean Particle Diameter
DBARU_WYO             um         UHSAS Mean Particle Diameter
DBZ1DC_RPC            dBZ        2D-C Calculated Reflectivity, 260X
                                    Emulation
DBZ2D                 Unk        No title
DBZD_LWO              dBZ        CDP Calculated Reflectivity
DCUT50_CVI            units      CVI D Cut 50 um
DELTAT_LWO            msec       CDP Time between last sample and this
                                    sample
DELTAT_RWO            msec       SPP-200 Time between last sample and this
                                    sample
DIOV01_RPC            Vdc        Fast 2DC Diode Voltage, Diode 1
DIOV32_RPC            Vdc        Fast 2DC Diode Voltage, Diode 32
DIOV64_RPC            Vdc        Fast 2DC Diode Voltage, Diode 64
DIOVH01_2DS           Vdc        2DS Diode Voltage, Horizontal Diode 1
DIOVH128_2DS          Vdc        2DS Diode Voltage, Horizontal Diode 128
DIOVH64_2DS           Vdc        2DS Diode Voltage, Horizontal Diode 64
DIOVV01_2DS           Vdc        2DS Diode Voltage, Vertical Diode 1
DIOVV01_HVPS          Vdc        HVPS Diode Voltage, Diode 1
DIOVV128_2DS          Vdc        2DS Diode Voltage, Vertical Diode 128
DIOVV128_HVPS         Vdc        HVPS Diode Voltage, Diode 128
DIOVV64_2DS           Vdc        2DS Diode Voltage, Vertical Diode 64
DIOVV64_HVPS          Vdc        HVPS Diode Voltage, Diode 64
DISP1DC_RPC           none       2D-C Dispersion, 260X Emulation
                                    (sigma/dbarx)
DISP2D                Unk        No title
DISPD_LWO             none       CDP Dispersion (sigma/dbarx)
DISPP_RWO             none       PCAS Dispersion (sigma/dbarx)
DISPU_WYO             none       UHSAS Dispersion (sigma/dbarx)
DOFOR_RPC             count      Fast 2DC DOF Reject Count
DPXC                  deg_C      Dew/Frost Point Temperature, Reference
DP_DPB                deg_C      Dew/Frost Point Temperature
DP_DPT                deg_C      Dew/Frost Point Temperature
DP_VXL                deg_C      Dew/Frost Point Temperature
DRFTA                 degree     IRS Drift Angle
DRYFLW_CVI            slpm       CVI Flow Dry
DSMTEMP_318           degC       DSM Temperature
DSPT_2DS              deg_C      2DS DSP Board Temperature
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DSPT_HVPS          deg_C      HVPS DSP Board Temperature
DT1DC_RPC          msec       Fast 2DC Probe Dead Time
DTEMP              V          W-CCN plate temperature diff
DVALUE             m          D-VALUE (GGALT - PALT)
EWX                hPa        Ambient Water Vapor Pressure, Reference
EW_DPB             hPa        Ambient Water Vapor Pressure
EW_DPT             hPa        Ambient Water Vapor Pressure
EW_VXL             hPa        Ambient Water Vapor Pressure (VCSEL)
FCN                vlpm       Raw BCN Counter Sample Flow Rate
FCNC               vlpm       Corrected BCN Counter Sample Flow Rate
FILTER_CFDC        bool       CFDC Filter (ON=1)
FO3C_ACD           ppbv       Fast Response Ozone Mixing Ratio,
                                 Corrected
FO3_ACD            ppbv       Fast Response Ozone Mixing Ratio
FVT_2DS            deg_C      2DS Forward Vessel Temperature
GEOPTH             m          Geopotential height [MSL]
GGALT              m          Reference GPS Altitude (MSL)
GGALTSD            m          Standard Deviation of Reference GPS
                                 Altitude (MSL)
GGDAGE             s          Time in seconds since last DGPS update
GGEOIDHT           m          Reference GPS Height of geoid (MSL) above
                                 WGS84 ellipsoid
GGHDOP             none       Reference GPS Horizontal dilution of
                                 position
GGLAT              degree_N   Reference GPS Latitude
GGLATSD            m          Standard Deviation of Reference GPS
                                 Latitude
GGLON              degree_E   Reference GPS Longitude
GGLONSD            m          Standard Deviation of Reference GPS
                                 Longitude
GGNSAT             number     Reference GPS number of satellites used
                                 in solution
GGNSATL1           number     Reference GPS number of satellites with
                                 L1/E1/B1 signals used in solution
GGNSATMULTI        number     Reference GPS number of satellites with
                                 multi-frequency signals used in
                                 solution
GGNSATTRK          number     Reference GPS number of satellites
                                 tracked
GGQUAL             none       Reference GPS Qual,
                                 0=inval,1=GPS,2=DGPS,5=FRTK
GGREFID            none       DGPS station ID number
GGRepLag           s          GPS reporting lag: (data sys time tag of
                                 NMEA receipt)-(NMEA time)
GGSPD              m/s        Reference GPS Ground Speed
GGSTATUS           none       Reference GPS rcvr status: 1=OK(A),
                                 0=warning(V)
GGTRK              degree_T   Reference GPS Track Angle
GGVEW              m/s        Reference GPS Ground Speed Vector, East
                                 Component
GGVNS              m/s        Reference GPS Ground Speed Vector, North
                                 Component
GGVSPD             m/s        Reference GPS Vertical Speed
GSPD               m/s        IRS Aircraft Ground Speed
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GSPDHYB              knots      Hybrid Ground Speed - 175
GSPD_A               m/s        Avionics GPS Ground Speed
GSTAT_A              none       Avionics GPS Sensor Status
GTIME_A              s          Avionics GPS UTC Measure Time
GVEW_A               m/s        Avionics GPS Ground Speed Vector, East
                                   Component
GVNS_A               m/s        Avionics GPS Ground Speed Vector, North
                                   Component
H2OR_CVI             g/m^3      TDL Water Concentration
H2O_ARI              ppbv       Aerodyne Mini 108 Water Mixing Ratio
H2O_WVISO1           ppmv       H2O
HGM232               feet       Altitude above ground (radar altimeter)
HKR_2DS              counts     2DS Housekeeping Packets Received
HKR_HVPS             counts     HVPS Housekeeping Packets Received
HMASK_2DS            none       2DS Horizontal Mask
HPDMON_2DS           deg_C      2DS Horizonal PD Monitor
HTEMP1               deg_C      Holodec temperature, zone 1, Camera
HTEMP2               deg_C      Holodec temperature, zone 2, Laser Head
HTEMP3               deg_C      Holodec temperature, zone 3, Laser Arm
HTEMP4               deg_C      Holodec temperature, zone 4, Camera Arm
HTEMP5               deg_C      Holodec temperature, zone 5, Laser
                                   Controller
HYBHFOM              feet       Hybrid Horizontal Figure of Merit- 264
HYBVFOM              feet       Hybrid Vertical Figure of Merit - 135
ICOL_LWC             A          Nevzorov LWC collector current
ICOL_TWC             A          Nevzorov TWC collector current
INC_CFDC             counts/sec CFDC IN Count
IRBC                 W/m2       Corrected Infrared Irradiance, Bottom
IRBHT                deg_C      Pyrgeometer (IR) Housing Temperature,
                                   Bottom
IRBV                 V          Pyrgeometer Raw Infrared Irradiance,
                                   Bottom
IREF_LWC             A          Nevzorov LWC reference current
IREF_TWC             A          Nevzorov TWC reference current
IRIG_Status_319      bits       IRIG status: bit 0=SYNC, 1=NOCODE,
                                   2=NOPPS,3=NOMAJT,4=NOYEAR,5=NOSYNC
IRIG_Status_AENT1    bits       ENET IRIG Detect status: 0=NODETECT,
                                   8=DETECT
IRIG_Tdiff_319       sec        IRIG-UNIX clock diff
IRTC                 W/m2       Corrected Infrared Irradiance, Top
IRTHT                deg_C      Pyrgeometer (IR) Housing Temperature, Top
IRTV                 V          Pyrgeometer Raw Infrared Irradiance, Top
IWC1DC_RPC           g m-3      2D-C Ice Water Content Estimate
IWD                  degree_T   IRS Wind Direction
IWS                  m/s        IRS Wind Speed
LAT                  degree_N   IRS Latitude
LATC                 degree_N   GPS-Corrected Inertial Latitude
LATF_A               degree_N   Avionics GPS Latitude Fine
LATHYB               deg_N      Hybrid Lat - 254
LAT_A                degree_N   Avionics GPS Latitude
LIMIT_SPB            bits       Platform Attitude Limited
                                   (=0:Norm,!=0:Limit)
LIMIT_SPT            bits       Platform Attitude Limited
                                   (=0:Norm,!=0:Limit)
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LON                 degree_E   IRS Longitude
LONC                degree_E   GPS-Corrected Inertial Longitude
LONF_A              degree_E   Avionics GPS Longitude Fine
LONHYB              deg_E      Hybrid Lon - 255
LON_A               degree_E   Avionics GPS Longitude
LSRTMP_VXL          ohm        VCSEL Laser Temperature
LWC_CVI             g/m^3      CVI Liquid Water Content
MACHF               none       Aircraft Mach Number, Fuselage
MACHFR              none       Aircraft Mach Number, Fuselage Right
MACHR               none       Aircraft Mach Number, Radome
MACHX               none       Aircraft Mach Number, Reference
MACH_A              none       ADC Mach Number
MAXS_2DS            um         2DS Max Particle Diameter
MAXS_HVPS           um         HVPS Max Particle Diameter
MHDG                deg        IRS Aircraft Magnetic Heading Angle
MIRRTMP_DPB         deg_C      Raw Dew/Frost Point Temperature
MIRRTMP_DPT         deg_C      Raw Dew/Frost Point Temperature
MODE_VXL            none       VCSEL Mode
MR                  gram/kg    Mixing Ratio, T-Electric
N2OA_ARI            ppbv       Aerodyne Mini 108 Ambient FSO Nitrous
                                 Oxide Mixing Ratio
N2O_ARI             ppbv       Aerodyne Mini 108 Nitrous Oxide Mixing
                                 Ratio
N7V_2DS             Vdc        2DS Negative seven volts DC
N7V_HVPS            Vdc        HVPS Negative seven volts DC
NACCEPT2D           Unk        No title
NETEMP_HVPS         deg_C      HVPS Nose Edge Temperature
NOCAL               bool       Do Not Calibrate
NOREC               bool       Do Not Record
NREJECT2D           Unk        No title
NSTEMP_HVPS         deg_C      HVPS Nose Surface Temperature
ONE                 none       Constant value of 1.
OVFLW_LWO           count      CDP AtoD Converter Overflow/Overrange
P7V_2DS             Vdc        2DS Positive seven volts DC
P7V_HVPS            Vdc        HVPS Positive seven volts DC
PALT                m          NACA Pressure Altitude
PALTF               feet       NACA Pressure Altitude
PALT_A              m          ADC Pressure Altitude
PBIT_AENT1          bits       ENET Periodic BIT test: 0=good
PBRDSTAT_AENT1      bits       ENET Periodic BIT read status: 0=success
PBYP_CVI            hpa        CVI Bypass Pressure
PCAB                hPa        Interior Cabin Static Pressure
PCAB_WVISO1         torr       Ambient Pressure
PCN                 hPa        BCN Counter Inlet Pressure
PDRY                W          Power Dry Calculated
PEBIT_AENT1         bits       ENET PE BIT Register
PECTRL_AENT1        bits       ENET ROOT PE Control-Status Register
PENC_SPB            cnts       Platform Pitch Encoder
PENC_SPT            cnts       Platform Pitch Encoder
PESTS_AENT1         bits       ENET ROOT PE Status Register
PFLWC_RWO           vol cm3/s  PCAS Corrected Flow
PFLWS_RWO           std cm3/s  SPP-200 Sheath Flow
PFLW_RWO            std cm3/s  SPP-200 Flow
PHGB_RWO            V          SPP-200 High-Gain Baseline
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PITCH                degree    IRS Aircraft Pitch Angle
PITCHA_SPB           degree    Bottom Pyrgeometer Stabilized Platform
                                   Pitch Angle
PITCHA_SPT           degree    Top Pyrgeometer Stabilized Platform Pitch
                                   Angle
PITCH_SPB            deg       Platform Pitch Angle
PITCH_SPT            deg       Platform Pitch Angle
PKPOS_VXL            count     VCSEL Peak Position
PLFB_SPB             deg       Platform Pitch Loop FB
PLFB_SPT             deg       Platform Pitch Loop FB
PLGB_RWO             V         SPP-200 Low-Gain Baseline
PLWC                 W         Raw PMS-King Liquid Water Content Output
PLWC1DC_RPC          g m-3     2D-C Water/Ice Content, 260X Emulation
PLWC2D               g m-3     No title
PLWCC                g m-3     Corrected PMS-King Liquid Water Content
PLWCD_LWO            g m-3     CDP Water/Ice Content
PMGB_RWO             V         SPP-200 Mid-Gain Baseline
PONB_CVI             hpa       CVI Pressure ONB
POVCR_SPB            cnts      Platform Pitch Motor Current Monitor
POVCR_SPT            cnts      Platform Pitch Motor Current Monitor
PPWM_SPB             cnts      Platform Pitch Motor PWM
PPWM_SPT             cnts      Platform Pitch Motor PWM
PREF_RWO             V         SPP-200 Laser Reference Voltage
PREGAIN_VXL          count     VCSEL Pre Gain
PSAMP_CVI            hpa       CVI Sample Pressure
PSFC                 hPa       Corrected Static Pressure, Fuselage
PSFD                 hPa       Raw Static Pressure, Fuselage
PSFDC                hPa       Corrected Static Pressure, Fuselage
                                   Digital
PSFRD                hPa       Raw Static Pressure, Fuselage
PSURF                hPa       Calculated Surface Pressure
PSX                  hPa       Raw Static Pressure, Reference
PSXC                 hPa       Corrected Static Pressure, Reference
PS_A                 hPa       ADC Static Pressure
PS_VXL               hPa       VCSEL Ambient Pressure
PTDLR_CVI            mb        TDL Pressure
PTMP_RWO             deg_C     SPP-200 Detector Temperature
PT_2DS               deg_C     2DS Power Supply Temperature
PT_A                 hPa       ADC Total Pressure
PT_HVPS              deg_C     HVPS Power Supply Temperature
PUSER_CVI            hpa       CVI User Pressure
PVOLP_RWO            um3/m3    PCASP Equivalent Volume
PVOLU_WYO            um3/m3    UHSAS Equivalent Volume
P_ARI                Torr      Aerodyne Mini 108 Pressure
P_CFDC               hPa       CFDC Pressure
QCF                  hPa       Raw Dynamic Pressure, Fuselage
QCFC                 hPa       Corrected Dynamic Pressure, Fuselage
QCFR                 hPa       Raw Dynamic Pressure, Fuselage Right
QCFRC                hPa       Raw Dynamic Pressure, Fuselage Right,
                                   Corrected
QCFRTEMP             deg_C     Temperature of QCFR Probe
QCFTEMP              deg_C     Temperature of QCF Probe
QCR                  hPa       Raw Dynamic Pressure, Radome
QCRC                 hPa       Corrected Dynamic Pressure, Radome
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QCRTEMP              deg_C      Temperature of QCR Probe
QCX                  hPa        Raw Dynamic Pressure, Reference
QCXC                 hPa        Corrected Dynamic Pressure, Reference
QC_A                 hPa        ADC Impact Pressure
RALT                 m          Geometric (Radar) Altitude (APN-232)
RAWCONC_VXL          #/cm3      VCSEL Moisture Number Density
REFF2D               Unk        No title
REFF2DC_RPC          um         1DC Effective Radius
REFFD_LWO            um         CDP Effective Diameter
REJDOF_LWO           count      CDP Rejected Particle Count (Outside
                                   Depth-of-Field)
RENC_SPB             cnts       Platform Roll Encoder
RENC_SPT             cnts       Platform Roll Encoder
RHODT                g m-3      Absolute Humidity, T-Electric
RHUM                 %          Relative Humidity
RH_2DS               %          2DS Relative Humidity
RICE                 V          Raw Icing-Rate Indicator
RLFB_SPB             deg        Platform Roll Loop FB
RLFB_SPT             deg        Platform Roll Loop FB
ROLL                 degree     IRS Aircraft Roll Angle
ROLLA_SPB            degree     Bottom Pyrgeometer Stabilized Platform
                                   Roll Angle
ROLLA_SPT            degree     Top Pyrgeometer Stabilized Platform Roll
                                   Angle
ROLL_SPB             deg        Platform Roll Angle
ROLL_SPT             deg        Platform Roll Angle
ROVCR_SPB            cnts       Platform Roll Motor Current Monitor
ROVCR_SPT            cnts       Platform Roll Motor Current Monitor
RPS_RPC              count      Fast 2DC Records per Second
RPWM_SPB             cnts       Platform Roll Motor PWM
RPWM_SPT             cnts       Platform Roll Motor PWM
RSTB                 deg_C      Radiometric Surface Temperature
RSTB1                deg_C      Radiometric Surface Temperature
RSTT                 deg_C      Radiometric Sky/Cloud-Base Temperature
RTF1                 deg_C      Recovery Air Temperature, ADS Rack
RTH1                 deg_C      Recovery Air Temperature, Heated Left
RTH2                 deg_C      Recovery Air Temperature, Heated Left
RTX                  deg_C      Recovery Temperature, Reference
RT_A                 deg_C      ADC Recovery Air Temperature
SAT_CFDC             %          CFDC Saturation Water
SELHYB               none       Hybrid Maintenance Word - 353
SETTMP_VXL           ohm        VCSEL Set Temperature
SFLOW_CFDC           L/min      CFDC Sheath Flow
SHDOR_RPC            count      Fast 2DC Shadow OR Count
SMPLSRINT_VXL        mV         VCSEL Sample Laser Intensity
SOLAZ                radian     Solar Azimuth Angle
SOLDE                radian     Solar Declination Angle
SOLEL                radian     Solar Elevation Angle
SOLZE                radian     Solar Zenith Angle
SSLIP                degree     Sideslip Angle, Reference
SSRD                 degree     Sideslip Angle, Radome Diff. Pressure
STATUS_GPDACQ_319    counter    Status: 0=NOPPS, 1=PPSDET,
                                   2=PPSLOCK,3=PPSSET
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STATUS_TDACQ_321      counter      Status: 0=NOPPS, 1=PPSDET,
                                     2=PPSLOCK,3=PPSSET
STATUS_VXL            none         VCSEL Status Code
Stratum_318                        NTP stratum
TACT2H_2DS            count        2DS Total Particles Horizontal
TACT2V_2DS            count        2DS Total Particles Vertical
TACT2V_HVPS          count        HVPS Total Particles
TACTU_WYO            count        UHSAS Total Counts (all cells)
TASDRY               m/s          Aircraft True Airspeed, Dry Air
TASF                 m/s          Aircraft True Airspeed, Fuselage
TASFLG               bool         True Airspeed Humidity Correction Flag
TASFR                m/s          Aircraft True Airspeed, Fuselage Right
TASR                 m/s          Aircraft True Airspeed, Radome
TASX                 m/s          Aircraft True Airspeed, Reference
TAS_A                m/s          ADC True Air Speed
TAS_RPC              m/s          Fast 2DC Diode TAS
TBACK_CVI            deg_C        CVI Temperature back
TCNTD_LWO            count        CDP Total Counts (all cells)
TCNTP_RWO            count        PCAS Total Counts (all cells)
TCNTU_WYO            count        UHSAS Total Counts (all cells)
TCPFAILS_AENT1       #            ENET Number of Failures
TCPRTRY_AENT1        #            ENET Number of Retries
TCPTRANS_AENT1       #            ENET Number of Transactions
TEC_DPB              unk          Dew/Frost Point TEC
TEC_DPT              unk          Dew/Frost Point TEC
TEXT_CVI             deg_C        CVI External Temperature
TFAN_CVI             deg_C        CVI Fan Temperature
TFLOW_CFDC           L/min        CFDC Total Flow
THDG                 degree_T     IRS Aircraft True Heading Angle
THDGHYB              deg_T        Hybrid True Heading - 132
THETA                K            Potential Temperature
THETAE               K            Equivalent Potential Temperature
THETAP               K            Pseudo-adiabatic Equivalent Potential
                                   Temperature
THETAQ               K            Wet Equivalent Potential Temperature
THETAV               K            Virtual Potential Temperature
TKAT                 degree_T     IRS Aircraft Track Angle
TKAT_A               degree_T     Avionics GPS Track Angle
TOPTMP               V            W-CCN top plate temperature
TRSTB                deg_C        RSTB Sensor Heater Unit Settings
TTDLR_CVI            deg_C        TDL Temperature
TVIR                 deg_C        Virtual Temperature
T_ARI                K            Aerodyne Mini 108 Temperature
Time                 seconds since 2024-02-09 00:00:00 +0000 time of
                                   measurement
Timeoffset_318       usec         Clock offset, system-reference
UACC_WYO             sec          UHSAS Accumulation
UCURR_WYO            V            UHSAS Laser Current
UFLWC_WYO            vol cm3/s    UHSAS Sample Flow at Ambient Conditions
UFT_4                deg_C        Under Floor Temperature
UI                   m/s          Wind Vector, East Component
UIC                  m/s          GPS-Corrected Wind Vector, East Component
ULSRTEMP_WYO         V            UHSAS Laser Temperature
UPRESS_WYO           kPa          UHSAS Absolute Ambient Pressure
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UPRGFLW_WYO            sccm       UHSAS Purge Flow
UREF_WYO               V          UHSAS Reference Intensity
USCAT_WYO              V          UHSAS Background Scatter
USHFLW_WYO             sccm       UHSAS Air Sheath Flow
USMPFLW_WYO            sccm       UHSAS Sample Flow
USRFLW_CVI             slpm       CVI User Flow
UTMP_WYO               K          UHSAS Temperature as Sample enters the
                                     Instrument
UTSEC_GPDACQ_319       seconds    Time; Seconds Since Midnight
UTSEC_TDACQ_321        seconds    Time; Seconds Since Midnight
UX                     m/s        Wind Vector, Longitudinal Component
UXC                    m/s        GPS-Corrected Wind Vector, Longitudinal
                                     Component
VCOL_LWC               V          Nevzorov LWC collector voltage
VCOL_TWC               V          Nevzorov TWC collector voltage
VDET                   V          W-CCN detector
VELOCIM1               V          Engine 1 Velocimeter
VELOCIM2               V          Engine 2 Velocimeter
VELOCIM3               V          Engine 3 Velocimeter
VELOCIM4               V          Engine 4 Velocimeter
VELOCIMP1                         Velocimeter Processed, Engine1
VELOCIMP2                         Velocimeter Processed, Engine2
VELOCIMP3                         Velocimeter Processed, Engine3
VELOCIMP4                         Velocimeter Processed, Engine4
VEW                    m/s        IRS Ground Speed Vector, East Component
VEWC                   m/s        GPS-Corrected Inertial Ground Speed
                                     Vector, East Component
VEWHYB                 knots      Hybrid Velocity EW - 267
VFLOW_CVI              units      CVI V Flow
VI                     m/s        Wind Vector, North Component
VIC                    m/s        GPS-Corrected Wind Vector, North
                                     Component
VISB                   W/m2       Pyrgeometer Raw Visible Irradiance,
                                     Bottom
VISBHT                 V          Pyrgeometer (Visible) Housing
                                     Temperature, Bottom
VIST                   W/m2       Pyrgeometer Raw Visible Irradiance, Top
VISTHT                 V          Pyrgeometer (Visible) Housing
                                     Temperature, Top
VLT_2DS                deg_C      2DS Vertical Laser Temperature
VLT_HVPS               deg_C      HVPS Laser Temperature
VMASK_2DS              none       2DS Vertical Mask
VMASK_HVPS             none       HVPS Mask
VMR_VXL                ppmv       Volume Mixing Ratio
VNS                    m/s        IRS Ground Speed Vector, North Component
VNSC                   m/s        GPS-Corrected Inertial Ground Speed
                                     Vector, North Component
VNSHYB                 knots      Hybrid Velocity NS - 266
VPDMON_2DS             deg_C      2DS Vertical PD Monitor
VREF_LWC               V          Nevzorov LWC reference voltage
VREF_TWC               V          Nevzorov TWC reference voltage
VSPD                   m/s        IRS Vertical Speed
VSPD_A                 m/s        Avionics GPS Vertical Velocity
VY                     m/s        Wind Vector, Lateral Component
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VYC                 m/s         GPS-Corrected Wind Vector, Lateral
                                    Component
WD                  degree_T    Horizontal Wind Direction
WDC                 degree_T    GPS-Corrected Horizontal Wind Direction
WI                  m/s         Wind Vector, Vertical Gust Component
WIC                 m/s         GPS-Corrected Wind Vector, Vertical Gust
                                    Component
WINRXT_HVPS         deg_C       HVPS Window Temperature
WINTXT_HVPS         deg_C       HVPS Window Temperature
WIX                 m/s         Wind Vector, Vertical Gust Component,
                                    Reference
WIY                 m/s         GPS-Corrected Wind Vector, Vertical Gust
                                    Component
WOW_A               bool        ADC Weight On Wheels
WS                  m/s         Horizontal Wind Speed
WSC                 m/s         GPS-Corrected Horizontal Wind Speed
XICN                vlpm        BCN Isokinetic Side Flow Rate
XICNC               vlpm        Corrected CN Isokinetic Side Flow Rate
ZERO                none        Constant value of 0.
d18O_WVISO1         permil      Stable Water Isotope Ratio For Oxygen
dD_WVISO1           permil      Stable Water Isotope Ratio For Hydrogen
dilution_CVI        units       CVI Dilution
enhancement_CVI     units       CVI Enhancement Factor
```