```
netcdf VOCALSrf01h {
dimensions:
       Time = 12241 ;
        sps1 = 1;
       Vector64 = 64;
        sps10 = 10 ;
       Vector31 = 31;
        sps25 = 25;
variables:
        int Time(Time) ;
               Time:long_name = "time of measurement" ;
               Time:standard name = "time" ;
               Time:units = "seconds since 2008-10-15 16:48:00 +0000";
               Time:strptime format = "seconds since %F %T %z";
        float A1DC_RPC(Time, sps1, Vector64);
               A1DC RPC: FillValue = -32767.f;
               A1DC RPC:units = "count";
               A1DC RPC:long name = "Fast 2DC Raw Accumulation, entire-in (per cell)";
               A1DC_RPC:Category = "PMS Probe";
               A1DC RPC:SerialNumber = "F2DC001"
               A1DC RPC:SampledRate = 1;
               A1DC_RPC:DataQuality = "Good";
               A1DC_RPC:Resolution = 25;
               A1DC RPC:nDiodes = 64;
               A1DC RPC:ResponseTime = 0.4f;
               A1DC RPC:ArmDistance = 61.f;
               A1DC_RPC:ParticleAcceptMethod = "Entire In" ;
        float A1DC RPI(Time, sps1, Vector64);
               A1DC RPI: FillValue = -32767.f;
               A1DC_RPI:units = "count";
               A1DC RPI:long name = "Fast 2DC Raw Accumulation, entire-in (per cell)";
               A1DC RPI:Category = "PMS Probe";
               A1DC RPI:SerialNumber = "F2DC002" :
               A1DC RPI:SampledRate = 1;
               A1DC_RPI:DataQuality = "Good";
               A1DC RPI:Resolution = 10;
               A1DC RPI:nDiodes = 64;
               A1DC RPI:ResponseTime = 0.4f;
               A1DC RPI:ArmDistance = 61.f;
               A1DC RPI:ParticleAcceptMethod = "Entire In" ;
        float ACDP RWO(Time, sps10, Vector31);
               ACDP RWO: FillValue = -32767.f;
               ACDP RWO:units = "count";
               ACDP_RWO:long_name = "CDP Raw Accumulation (per cell)";
               ACDP_RWO:Category = "PMS Probe" ;
               ACDP RWO:SerialNumber = "CDP001";
               ACDP RWO:SampledRate = 10 ;
               ACDP RWO: DataQuality = "Good";
        float ACINS(Time, sps25);
               ACINS: FillValue = -32767.f;
               ACINS:units = "m/s2";
               ACINS:long name = "IRS Vertical Acceleration";
               ACINS:Category = "Aircraft State";
               ACINS:SampledRate = 50;
               ACINS: TimeLag = -80;
               ACINS:TimeLagUnits = "milliseconds";
               ACINS:DespikeSlope = 4.f;
               ACINS:DataQuality = "Good" ;
        float ADIFR(Time, sps25);
               ADIFR: FillValue = -32767.f;
               ADIFR:units = "hPa" ;
               ADIFR:long name = "Vertical Differential Pressure, Radome" ;
               ADIFR:Category = "Analog" ;
               ADIFR:SampledRate = 500;
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ADIFR: DataQuality = "Good";
               ADIFR: Calibration Coefficients = -0.0156321f, 6.93387f, 0.00545018f;
        float AS100 RWI(Time, sps10, Vector31);
               AS100 RWI: FillValue = -32767.f;
               AS100 RWI:units = "count";
               AS100 RWI:long name = "SPP-100 Raw Accumulation (per cell) - DMT";
               AS100 RWI:Category = "PMS Probe";
               AS100 RWI:SerialNumber = "FSSP109";
               AS100 RWI:SampledRate = 10;
               AS100 RWI:DataQuality = "Good";
       float AS200 LWO(Time, sps10, Vector31);
               AS200 LWO: FillValue = -32767.f;
               AS200_LWO:units = "count";
               AS200_LWO:long_name = "SPP-200 (PCASP) Raw Accumulation (per cell) - DMT";
               AS200_LWO:Category = "PMS Probe"
               AS200 LWO:SerialNumber = "PCAS108";
               AS200 LWO:SampledRate = 10;
               AS200_LWO:DataQuality = "Good";
        float AS300_LWI(Time, sps10, Vector31);
               AS300 LWI: FillValue = -32767.f;
               AS300 LWI:units = "count";
               AS300 LWI:long name = "SPP-300 (FSSP-300) Raw Accumulation (per cell) - DMT"
;
               AS300 LWI:Category = "PMS Probe";
               AS300 LWI:SerialNumber = "FSSP305";
               AS300 LWI:SampledRate = 10;
               AS300 LWI:DataQuality = "Good";
       float AVGTRNS RWO(Time, sps10);
               AVGTRNS RWO: FillValue = -32767.f;
               AVGTRNS_RWO:units = "";
               AVGTRNS RWO:long name = "CDP Average Transit Time";
               AVGTRNS RWO:Category = "Raw" ;
               AVGTRNS RWO:SerialNumber = "CDP001";
               AVGTRNS RWO:SampledRate = 10 ;
               AVGTRNS RWO:DataQuality = "Good";
       float BDIFR(Time, sps25);
               BDIFR: FillValue = -32767.f;
               BDIFR:units = "hPa";
               BDIFR:long name = "Horizontal Differential Pressure, Radome";
               BDIFR:Category = "Analog" ;
               BDIFR:SampledRate = 500;
               BDIFR:DataQuality = "Good";
               BDIFR: Calibration Coefficients = -0.0323812f, 5.13826f, 8.09753e-05f;
       float CDPLBTMP RWO(Time, sps10);
               CDPLBTMP RWO: FillValue = -32767.f;
               CDPLBTMP RWO:units = "deg C";
               CDPLBTMP RWO:long name = "CDP Laser Block Temperature";
               CDPLBTMP RWO:Category = "Raw";
               CDPLBTMP RWO:SerialNumber = "CDP001";
               CDPLBTMP RWO:SampledRate = 10 ;
               CDPLBTMP RWO: DataQuality = "Good";
        float CDPLSRC RWO(Time, sps10);
               CDPLSRC RWO: FillValue = -32767.f;
               CDPLSRC RWO:units = "mAmp";
               CDPLSRC RWO:long name = "CDP Laser Current" ;
               CDPLSRC RWO:Category = "Raw" ;
               CDPLSRC RWO:SerialNumber = "CDP001";
               CDPLSRC RWO:SampledRate = 10 ;
               CDPLSRC RWO:DataQuality = "Good" ;
       float CDPLSRP_RWO(Time, sps10);
               CDPLSRP RWO: FillValue = -32767.f;
               CDPLSRP RWO:units = "V";
               CDPLSRP RWO:long name = "CDP Laser Power Monitor" ;
               CDPLSRP RWO:Category = "Raw";
               CDPLSRP RWO:SerialNumber = "CDP001";
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CDPLSRP RWO:SampledRate = 10 ;
       CDPLSRP RWO: DataQuality = "Good";
float CDPWBTMP RWO(Time, sps10);
       CDPWBTMP RWO: FillValue = -32767.f;
       CDPWBTMP RWO:units = "deg_C";
       CDPWBTMP RWO:long name = "CDP Wing Board Temperature";
       CDPWBTMP RWO:Category = "Raw";
       CDPWBTMP_RWO:SerialNumber = "CDP001" ;
       CDPWBTMP RWO:SampledRate = 10;
       CDPWBTMP RWO:DataQuality = "Good";
float CNT1(Time);
       CNT1: FillValue = -32767.f;
       CNT1: units = "";
       CNT1:long_name = "CN Counts" ;
       CNT1:Category = "Raw" ;
       CNT1:SampledRate = 1 ;
       CNT1:DataQuality = "Good" ;
float CNTEMP(Time) ;
       CNTEMP: FillValue = -32767.f;
       CNTEMP:units = "deg_C";
       CNTEMP:long name = "CN Counter Inlet Temperature";
       CNTEMP:Category = "Analog";
       CNTEMP:SampledRate = 10 ;
       CNTEMP:DataQuality = "Good" ;
       CNTEMP:CalibrationCoefficients = 13.85f, 4.668f, -0.0056f;
float CNTS(Time, sps25);
       CNTS: FillValue = -32767.f;
       CNTS:units = "count";
       CNTS:long_name = "TSI CN Counter Output" ;
       CNTS:Category = "Uncorr\'d Raw" ;
       CNTS:SampledRate = 100 ;
       CNTS: TimeLag = -2000;
       CNTS:TimeLagUnits = "milliseconds" ;
       CNTS:DataQuality = "Good" ;
float COMR AL(Time) ;
       COMR AL: FillValue = -32767.f;
       COMR AL:units = "ppbv";
       COMR AL:long name = "Carbon Monoxide Mixing Ratio";
       COMR AL: Category = "Analog";
       COMR AL:SampledRate = 5 ;
       COMR AL: DataQuality = "Bad" ;
       COMR AL: CalibrationCoefficients = 0.f, 1.f;
float DPB(Time) ;
       DPB: FillValue = -32767.f;
       DPB:units = "deg C";
       DPB:long name = "Dew/Frost Point Temperature, Fuselage Bottom" ;
       DPB:Category = "Atmos. State";
       DPB:standard name = "dew point temperature" ;
       DPB:SampledRate = 1 ;
       DPB:DataQuality = "Preliminary" ;
       DPB:CalibrationCoefficients = -0.72f, 1.0573f, -0.00027f;
float DPT(Time) ;
       DPT: FillValue = -32767.f;
       DPT:units = "deg C" ;
       DPT:long name = "Dew/Frost Point Temperature, Fuselage Top" ;
       DPT:Category = "Atmos. State" ;
       DPT:standard name = "dew point temperature" ;
       DPT:SampledRate = 1 ;
       DPT:DataQuality = "Preliminary" ;
       DPT:CalibrationCoefficients = -0.392f, 1.006f, -0.0005f;
float DTB(Time) ;
       DTB: FillValue = -32767.f;
       DTB:units = "deg C";
       DTB:long name = "Pyrgeometer Dome Temperature, Bottom";
       DTB:Category = "Analog";
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DTB:SampledRate = 100;
       DTB:DataQuality = "Preliminary";
       DTB:CalibrationCoefficients = 58.4f, -26.19f, 3.2516f, -0.1668f;
float DTT(Time) ;
       DTT: FillValue = -32767.f;
       DTT:units = "deg C";
       DTT:long name = "Pyrgeometer Dome Temperature, Top";
       DTT:Category = "Analog";
       DTT:SampledRate = 100 ;
       DTT:DataQuality = "Preliminary";
       DTT:CalibrationCoefficients = 58.3f, -25.966f, 3.2056f, -0.1637f;
float FCN(Time);
       FCN: FillValue = -32767.f;
       FCN:units = "vlpm" ;
       FCN:long name = "Raw CN Counter Sample Flow Rate";
       FCN:Category = "Analog" ;
       FCN:SampledRate = 10 ;
       FCN:DataQuality = "Preliminary" ;
       FCN:CalibrationCoefficients = 0.3f, 0.3229f;
float FREF3_LWI(Time, sps10) ;
       FREF3_LWI:_FillValue = -32767.f ;
       FREF3 LWI:units = "V";
       FREF3_LWI:long_name = "SPP-300 Laser Reference Voltage" ;
       FREF3 LWI:Category = "PMS Probe" ;
       FREF3 LWI:SerialNumber = "FSSP305"
       FREF3 LWI:SampledRate = 10 ;
       FREF3 LWI:DataQuality = "Good" ;
float FREF RWI(Time, sps10);
       FREF RWI: FillValue = -32767.f;
       FREF RWI:units = "V";
       FREF RWI:long name = "SPP-100 Laser Reference Voltage";
       FREF RWI:Category = "PMS Probe" ;
       FREF RWI:SerialNumber = "FSSP109";
       FREF RWI:SampledRate = 10 ;
       FREF RWI:DataQuality = "Good" ;
float FRNG RWI(Time, sps10) ;
       FRNG RWI: FillValue = -32767.f;
       FRNG RWI:units = "";
       FRNG RWI:long name = "SPP-100 Size Range Category";
       FRNG RWI: Category = "PMS Probe";
       FRNG_RWI:SerialNumber = "FSSP109" ;
       FRNG RWI:SampledRate = 10 ;
       FRNG RWI:DataQuality = "Good";
float FTMP3 LWI(Time, sps10);
       FTMP3 LWI: FillValue = -32767.f;
       FTMP3 LWI:units = "deg C";
       FTMP3 LWI:long name = "SPP-300 Housekeeping Data";
       FTMP3 LWI:Category = "PMS Probe";
       FTMP3 LWI:SerialNumber = "FSSP305";
       FTMP3 LWI:SampledRate = 10;
       FTMP3 LWI:DataQuality = "Good";
float FTMP RWI(Time, sps10);
       FTMP RWI: FillValue = -32767.f;
       FTMP RWI:units = "deg C";
       FTMP RWI:long name = "SPP-100 Housekeeping Data";
       FTMP RWI:Category = "PMS Probe"
       FTMP_RWI:SerialNumber = "FSSP109";
       FTMP RWI:SampledRate = 10;
       FTMP RWI:DataQuality = "Good";
float GGALT NTL(Time) ;
       GGALT NTL: FillValue = -32767.f;
       GGALT NTL:units = "m" ;
       GGALT NTL:long name = "Reference GPS Altitude (MSL)";
       GGALT NTL:Category = "Position";
       GGALT NTL:standard name = "altitude";
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GGALT NTL:SampledRate = 5;
       GGALT NTL: DataQuality = "Good";
float GGLAT NTL(Time) ;
       GGLAT NTL: FillValue = -32767.f;
       GGLAT NTL:units = "degree N" ;
       GGLAT NTL:long name = "Reference GPS Latitude" ;
       GGLAT NTL:valid_range = -90.f, 90.f;
       GGLAT NTL: Category = "Position";
       GGLAT NTL:standard name = "latitude";
       GGLAT NTL:SampledRate = 5 ;
       GGLAT NTL:DataQuality = "Good";
float GGLON NTL(Time) ;
       GGLON NTL: FillValue = -32767.f;
       GGLON_NTL:units = "degree_E" ;
       GGLON NTL:long_name = "Reference GPS Longitude" ;
       GGLON NTL: valid range = -180.f, 180.f;
       GGLON NTL: Category = "Position";
       GGLON_NTL:standard_name = "longitude" ;
       GGLON NTL:SampledRate = 5 ;
       GGLON NTL:DataQuality = "Good";
       GGLON_NTL:modulus_range = -180.f, 180.f;
float GGNSAT NTL(Time) ;
       GGNSAT NTL: FillValue = -32767.f;
       GGNSAT NTL:units = "number";
       GGNSAT NTL:long name = "Reference GPS number of satellites tracked" ;
       GGNSAT NTL:Category = "Raw";
       GGNSAT NTL:SampledRate = 5 ;
       GGNSAT NTL:DataQuality = "Good";
float GGSPD NTL(Time) ;
       GGSPD NTL: FillValue = -32767.f;
       GGSPD NTL:units = "m/s";
       GGSPD NTL:long name = "Reference GPS Ground Speed";
       GGSPD NTL:Category = "Raw" ;
       GGSPD NTL:SampledRate = 5 ;
       GGSPD NTL:DataQuality = "Good";
float GGSTATUS_NTL(Time) ;
       GGSTATUS NTL: FillValue = -32767.f;
       GGSTATUS NTL:units = "none";
       GGSTATUS NTL:long name = "Reference GPS rcvr status: 1=OK(A), 0=warning(V)";
       GGSTATUS NTL:Category = "Raw";
       GGSTATUS NTL:SampledRate = 5;
       GGSTATUS NTL:DataQuality = "Good";
float GGTRK NTL(Time) ;
       GGTRK NTL: FillValue = -32767.f;
       GGTRK NTL:units = "degree T";
       GGTRK NTL:long name = "Reference GPS Track Angle";
       GGTRK NTL:valid range = 0.f, 360.f;
       GGTRK_NTL:Category = "Aircraft State" ;
       GGTRK NTL:SampledRate = 5 ;
       GGTRK NTL:DataQuality = "Good";
       GGTRK_NTL:modulus_range = 0.f, 360.f ;
float GGVEW_NTL(Time) ;
       GGVEW NTL: FillValue = -32767.f;
       GGVEW NTL:units = "m/s" ;
       GGVEW NTL:long name = "Reference GPS Ground Speed Vector, East Component";
       GGVEW NTL: Category = "Aircraft State";
       GGVEW NTL:SampledRate = 5;
       GGVEW NTL:DataQuality = "Good";
float GGVNS NTL(Time) ;
       GGVNS NTL: FillValue = -32767.f;
       GGVNS_NTL:units = "m/s";
       GGVNS NTL:long name = "Reference GPS Ground Speed Vector, North Component";
       GGVNS NTL:Category = "Aircraft State";
       GGVNS NTL:SampledRate = 5 ;
       GGVNS NTL:DataQuality = "Good";
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float GNI1(Time) ;
        GNI1: FillValue = -32767.f;
        GNI1:units = "V"
       GNI1:long name = "GNI Sample Stage" ;
        GNI1:Category = "Raw" ;
       GNI1:SampledRate = 10 ;
       GNI1:DataQuality = "Good" ;
float GSF(Time) ;
       GSF: FillValue = -32767.f;
       GSF:units = "m/s";
       GSF:long_name = "IRS Aircraft Ground Speed" ;
        GSF:Category = "Aircraft State" ;
        GSF:standard_name = "platform_speed_wrt_ground" ;
       GSF:SampledRate = 10 ;
       GSF:DataQuality = "Good" ;
float HGM232(Time, sps25);
        HGM232:_FillValue = -32767.f;
        HGM232:units = "feet" ;
        HGM232:long_name = "Altitude above ground (radar altimeter)" ;
        HGM232:Category = "Position" ;
        HGM232:standard_name = "height" ;
       HGM232:SampledRate = 25 ;
       HGM232:DespikeSlope = 20.f ;
       HGM232:DataQuality = "Good" ;
float IRB(Time, sps25);
        IRB:_FillValue = -32767.f;
        IRB:units = "W/m2" ;
        IRB:long name = "Raw Infrared Irradiance, Bottom" ;
        IRB:Category = "Analog" ;
        IRB:SampledRate = 100 ;
        IRB:DataQuality = "Good" ;
        IRB:CalibrationCoefficients = -1074.5f, 2540.16f, 120.528f ;
float IRT(Time) ;
        IRT: FillValue = -32767.f;
        IRT:units = "W/m2" ;
        IRT:long name = "Raw Infrared Irradiance, Top" ;
        IRT:Category = "Analog" ;
        IRT:SampledRate = 100 ;
        IRT:DataQuality = "Preliminary" ;
        IRT:CalibrationCoefficients = -1194.f, 2817.8f, -43.803f ;
float LAT(Time) ;
       LAT: FillValue = -32767.f;
       LAT:units = "degree N" ;
       LAT:long name = "IRS Latitude" ;
       LAT: valid range = -90.f, 90.f;
       LAT: Category = "Position";
       LAT: standard name = "latitude";
       LAT:SampledRate = 5;
       LAT:DespikeSlope = 0.05f;
       LAT: DataQuality = "Good";
float LON(Time) ;
       LON: FillValue = -32767.f;
       LON:units = "degree E";
       LON:long name = "IRS Longitude";
       LON:valid_range = -180.f, 180.f;
       LON:Category = "Position";
       LON:standard name = "longitude";
       LON:SampledRate = 5;
       LON:DespikeSlope = 0.05f;
       LON: DataQuality = "Good";
       LON:modulus range = -180.f, 180.f;
float OVFLW RWI(Time, sps10);
        OVFLW RWI: FillValue = -32767.f;
        OVFLW RWI:units = "" ;
        OVFLW RWI:long name = "SPP-100 AtoD Converter Overflow/Overrange";
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OVFLW RWI:Category = "PMS Probe" ;
               OVFLW RWI:SerialNumber = "FSSP109";
               OVFLW RWI:SampledRate = 10 ;
               OVFLW RWI:DataQuality = "Good";
        float OVFLW_RWO(Time, sps10) ;
               OVFLW_RWO:_FillValue = -32767.f;
               OVFLW RWO:units = "";
               OVFLW RWO:long name = "CDP AtoD Converter Overflow/Overrange";
               OVFLW RWO:Category = "PMS Probe";
               OVFLW_RWO:SerialNumber = "CDP001";
               OVFLW_RWO:SampledRate = 10 ;
               OVFLW RWO: DataQuality = "Good";
       float PCAB(Time) ;
               PCAB:_FillValue = -32767.f;
               PCAB:units = "hPa";
               PCAB:long name = "Interior Cabin Static Pressure";
               PCAB:Category = "Analog" ;
               PCAB:standard_name = "air_pressure" ;
               PCAB:SampledRate = 10 ;
               PCAB:DataQuality = "Good";
               PCAB:CalibrationCoefficients = -1.19357f, 108.496f, -0.0272088f;
        float PCN(Time) ;
               PCN:_FillValue = -32767.f;
               PCN:units = "hPa";
               PCN:long name = "CN Counter Inlet Pressure";
               PCN:Category = "Analog";
               PCN:SampledRate = 10 ;
               PCN:DataQuality = "Good";
               PCN:CalibrationCoefficients = 9.25361f, 106.036f, -0.0205082f;
       float PFLWS_LWO(Time, sps10) ;
               PFLWS LWO: FillValue = -32767.f;
               PFLWS LWO:units = "std cm3/s";
               PFLWS LWO:long name = "SPP-200 Sheath Flow";
               PFLWS LWO:Category = "Analog";
               PFLWS LWO:SerialNumber = "PCAS108";
               PFLWS LWO:SampledRate = 10 ;
               PFLWS LWO:DataQuality = "Good";
               PFLWS LWO:CalibrationCoefficients = -729.57f, 0.87564f, -0.00035197f,
4.75037e-08f;
       float PFLW LWO(Time, sps10);
               PFLW LWO: FillValue = -32767.f;
               PFLW LWO:units = "std cm3/s";
               PFLW LWO:long name = "SPP-200 Flow";
               PFLW LWO:Category = "Analog" ;
               PFLW LWO:SerialNumber = "PCAS108";
               PFLW LWO:SampledRate = 10 ;
               PFLW LWO:DataQuality = "Good" ;
               PFLW LWO:CalibrationCoefficients = -0.0165f, 7.9354e-05f, 1.1453e-07f;
       float PHGB LWO(Time, sps10);
               PHGB LWO: FillValue = -32767.f;
               PHGB_LWO:units = "V";
               PHGB_LWO:long_name = "SPP-200 High-Gain Baseline" ;
               PHGB LWO:Category = "PMS Probe";
               PHGB LWO:SerialNumber = "PCAS108";
               PHGB LWO:SampledRate = 10;
               PHGB LWO:DataQuality = "Good";
       float PITCH(Time, sps25);
               PITCH: FillValue = -32767.f;
               PITCH:units = "degree";
               PITCH:long name = "IRS Aircraft Pitch Angle";
               PITCH: valid range = -180.f, 180.f;
               PITCH: Category = "Analog";
               PITCH:standard name = "platform pitch angle";
               PITCH:SampledRate = 50;
               PITCH: TimeLag = -180;
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PITCH: TimeLagUnits = "milliseconds";
       PITCH:DespikeSlope = 0.5f;
       PITCH:DataQuality = "Good";
       PITCH:CalibrationCoefficients = -0.08f, 1.f;
float PLGB LWO(Time, sps10) ;
       PLGB_LWO:_FillValue = -32767.f;
       PLGB_LWO:units = "V";
       PLGB LWO:long name = "SPP-200 Low-Gain Baseline";
       PLGB LWO:Category = "PMS Probe";
       PLGB_LWO:SerialNumber = "PCAS108" ;
       PLGB LWO:SampledRate = 10;
       PLGB LWO:DataQuality = "Good";
float PLWC1(Time, sps25);
       PLWC1:_FillValue = -32767.f;
       PLWC1:units = "W" ;
       PLWC1:long name = "Raw PMS-King Liquid Water Content Output" ;
       PLWC1:Category = "Analog";
       PLWC1:SampledRate = 100;
       PLWC1:DataQuality = "Good" ;
       PLWC1:CalibrationCoefficients = 0.f, 10.f;
float PMGB LWO(Time, sps10);
       PMGB LWO: FillValue = -32767.f;
       PMGB LWO:units = "V";
       PMGB LWO:long name = "SPP-200 Mid-Gain Baseline";
       PMGB LWO:Category = "PMS Probe" ;
       PMGB_LWO:SerialNumber = "PCAS108" ;
       PMGB LWO:SampledRate = 10;
       PMGB LWO:DataQuality = "Good";
float PREF_LWO(Time, sps10);
       PREF LWO: FillValue = -32767.f;
       PREF_LWO:units = "V" ;
       PREF LWO:long name = "SPP-200 Laser Reference Voltage";
       PREF LWO:Category = "PMS Probe" ;
       PREF LWO:SerialNumber = "PCAS108"
       PREF LWO:SampledRate = 10 ;
       PREF LWO:DataQuality = "Good";
float PSFD(Time, sps25);
       PSFD: FillValue = -32767.f;
       PSFD:units = "hPa" ;
       PSFD:long name = "Raw Static Pressure, Fuselage" ;
       PSFD:Category = "Analog";
       PSFD:standard name = "air pressure" ;
       PSFD:SampledRate = 50;
       PSFD:DataQuality = "Good" ;
       PSFD:CalibrationCoefficients = -0.11361f, 0.999666f, 4.46795e-07f;
float PSFRD(Time, sps25);
       PSFRD: FillValue = -32767.f;
       PSFRD:units = "hPa" ;
       PSFRD:long name = "Raw Static Pressure, Fuselage";
       PSFRD:Category = "Analog" ;
       PSFRD:standard_name = "air pressure" ;
       PSFRD:SampledRate = 50 ;
       PSFRD:DespikeSlope = 20.f;
       PSFRD:DataQuality = "Good" ;
       PSFRD:CalibrationCoefficients = -0.168825f, 1.00007f, 1.18961e-08f;
float PTMP LWO(Time, sps10);
       PTMP LWO: FillValue = -32767.f;
       PTMP_LWO:units = "deg_C";
       PTMP LWO:long name = "SPP-200 Detector Temperature";
       PTMP_LWO:Category = "PMS Probe" ;
       PTMP LWO:SerialNumber = "PCAS108";
       PTMP LWO:SampledRate = 10;
       PTMP LWO:DataQuality = "Good";
float QCF(Time) ;
       QCF: FillValue = -32767.f;
```

```
QCF:units = "hPa" ;
               QCF:long name = "Raw Dynamic Pressure, Fuselage";
               QCF:Category = "Analog";
               QCF:SampledRate = 500 ;
               QCF:DataQuality = "Preliminary" ;
                QCF:CalibrationCoefficients = 0.390809f, 17.2321f, -0.00393028f;
        float QCFR(Time) ;
               QCFR: FillValue = -32767.f;
               QCFR:units = "hPa" ;
               QCFR:long_name = "Raw Dynamic Pressure, Fuselage Right";
               QCFR:Category = "Analog";
               QCFR:SampledRate = 500;
               QCFR:DataQuality = "Preliminary";
               QCFR:CalibrationCoefficients = -0.827737f, 13.798f, -0.00460835f;
       float QCR(Time) ;
               QCR: FillValue = -32767.f;
               QCR:units = "hPa" ;
               QCR:long_name = "Raw Dynamic Pressure, Radome";
               QCR:Category = "Analog";
               QCR:SampledRate = 500;
               QCR:DataQuality = "Preliminary";
               QCR:CalibrationCoefficients = -1.62563f, 17.3035f, -0.00514298f;
       float REJAT RWI(Time, sps10);
               REJAT RWI: FillValue = -32767.f;
               REJAT RWI:units = "";
               REJAT_RWI:long_name = "SPP-100 Average Transit Rejected Particles" ;
               REJAT RWI:Category = "Housekeeping";
               REJAT_RWI:SerialNumber = "FSSP109";
               REJAT RWI:SampledRate = 10 ;
               REJAT RWI: DataQuality = "Good";
        float REJAT RWO(Time, sps10);
               REJAT RWO: FillValue = -32767.f;
               REJAT RWO:units = "";
               REJAT RWO:long name = "CDP Average Transit Rejected Particles";
               REJAT RWO:Category = "Housekeeping";
               REJAT RWO:SerialNumber = "CDP001";
               REJAT RWO:SampledRate = 10 ;
               REJAT_RWO:DataQuality = "Good" ;
       float REJDOF RWI(Time, sps10);
               REJDOF RWI: FillValue = -32767.f;
               REJDOF RWI:units = "count";
               REJDOF RWI:long name = "SPP-100 Particles Rejected (Outside Depth-of-Field))"
;
               REJDOF RWI:Category = "Housekeeping" ;
               REJDOF RWI:SerialNumber = "FSSP109";
               REJDOF RWI:SampledRate = 10 ;
               REJDOF RWI:DataQuality = "Good" ;
       float REJDOF_RWO(Time, sps10) ;
               REJDOF RWO: FillValue = -32767.f;
               REJDOF RWO:units = "count";
               REJDOF RWO:long name = "CDP Particles Rejected (Outside Depth-of-Field))";
               REJDOF RWO:Category = "Housekeeping";
               REJDOF RWO:SerialNumber = "CDP001";
               REJDOF RWO:SampledRate = 10 ;
               REJDOF RWO:DataQuality = "Good" ;
       float RICE(Time, sps25);
               RICE: FillValue = -32767.f;
               RICE:units = "V" ;
               RICE:long_name = "Raw Icing-Rate Indicator" ;
               RICE:Category = "Uncorr\'d Raw" ;
               RICE:SampledRate = 100 ;
               RICE:DataQuality = "Good" ;
        float ROLL(Time, sps25);
               ROLL: FillValue = -32767.f;
               ROLL:units = "degree" ;
```

```
ROLL:long name = "IRS Aircraft Roll Angle" ;
       ROLL: valid range = -180.f, 180.f;
       ROLL:Category = "Analog";
       ROLL:standard_name = "platform_roll_angle" ;
       ROLL:SampledRate = 50 ;
       ROLL: TimeLag = -180;
       ROLL:TimeLagUnits = "milliseconds";
       ROLL:DespikeSlope = 0.5f ;
       ROLL:DataOuality = "Good" ;
       ROLL:CalibrationCoefficients = 0.f, 1.f;
float RSTB(Time) ;
       RSTB: FillValue = -32767.f;
       RSTB:units = "deg_C";
       RSTB:long_name = "Radiometric Surface Temperature" ;
       RSTB:Category = "Analog";
       RSTB:SampledRate = 100;
       RSTB:DataQuality = "Preliminary" ;
       RSTB:CalibrationCoefficients = -47.098f, 8.4341f, 0.1757f;
float RSTB1(Time) ;
       RSTB1:_FillValue = -32767.f;
       RSTB1:units = "deg_C";
       RSTB1:long name = "Radiometric Surface Temperature" ;
       RSTB1:Category = "Analog";
       RSTB1:SampledRate = 100;
       RSTB1:DataQuality = "Preliminary" ;
       RSTB1:CalibrationCoefficients = -53.531f, 10.405f, 0.0201f;
float RSTT(Time) ;
       RSTT: FillValue = -32767.f;
       RSTT:units = "deg_C";
       RSTT:long name = "Radiometric Sky/Cloud-Base Temperature" ;
       RSTT:Category = "Analog";
       RSTT:SampledRate = 10;
       RSTT:DataQuality = "Preliminary";
       RSTT:CalibrationCoefficients = -55.6f, 11.723f, -0.096f;
float SHDORC_RPC(Time) ;
        SHDORC RPC: FillValue = -32767.f;
       SHDORC RPC:units = "count";
       SHDORC RPC:long name = "Fast 2DC Shadow OR Count";
       SHDORC RPC:Category = "PMS Probe";
       SHDORC RPC:SerialNumber = "F2DC001" ;
       SHDORC RPC:SampledRate = 10 ;
       SHDORC RPC:DataQuality = "Good";
float SHDORC RPI(Time) ;
       SHDORC RPI: FillValue = -32767.f;
       SHDORC RPI:units = "count";
       SHDORC RPI:long name = "Fast 2DC Shadow OR Count";
       SHDORC RPI:Category = "PMS Probe";
       SHDORC RPI:SerialNumber = "F2DC002";
       SHDORC RPI:SampledRate = 10 ;
       SHDORC RPI:DataQuality = "Good";
float STB(Time) ;
       STB:_FillValue = -32767.f;
       STB:units = "deg C";
       STB:long name = "Pyrgeometer Sink Temperature, Bottom";
       STB:Category = "Analog" ;
       STB:SampledRate = 100;
       STB:DataQuality = "Preliminary" ;
       STB:CalibrationCoefficients = 58.6f, -26.228f, 3.256f, -0.16705f;
float STT(Time) ;
       STT: FillValue = -32767.f;
       STT:units = "deg C";
       STT:long name = "Pyrgeometer Sink Temperature, Top";
       STT:Category = "Analog" ;
       STT:SampledRate = 100 ;
       STT:DataQuality = "Preliminary";
```

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STT:CalibrationCoefficients = 58.2f, -26.173f, 3.258f, -0.1675f;
float SWB(Time) ;
       SWB: FillValue = -32767.f;
       SWB:units = "W/m2";
       SWB:long name = "Shortwave Irradiance, Bottom";
       SWB:Category = "Analog" ;
       SWB:SampledRate = 100;
       SWB:DataQuality = "Preliminary" ;
       SWB:CalibrationCoefficients = -12.2258f, 1077.62f, -0.06222f;
float SWT(Time) ;
       SWT: FillValue = -32767.f;
       SWT:units = "W/m2";
       SWT:long name = "Shortwave Irradiance, Top";
       SWT:Category = "Analog" ;
       SWT:SampledRate = 100 ;
       SWT:DataQuality = "Preliminary";
        SWT:CalibrationCoefficients = -24.49f, 1071.8f, 0.378357f;
float THDG(Time, sps25);
       THDG:_FillValue = -32767.f;
       THDG:units = "degree_T" ;
       THDG:long_name = "IRS Aircraft True Heading Angle" ;
       THDG:valid range = 0.f, 360.f;
       THDG:Category = "Analog";
       THDG:standard name = "platform orientation";
       THDG:SampledRate = 25 ;
       THDG:DespikeSlope = 0.5f ;
       THDG:DataQuality = "Good" ;
       THDG:CalibrationCoefficients = 0.475f, 1.f;
       THDG:modulus_range = 0.f, 360.f ;
float TTRL(Time, sps25);
       TTRL: FillValue = -32767.f;
       TTRL:units = "deg C";
       TTRL:long name = "Total Temperature, Radome Left";
       TTRL:Category = "Analog";
       TTRL:SampledRate = 100;
       TTRL:DataQuality = "Good";
       TTRL:CalibrationCoefficients = -62.6034f, 24.727f, -0.125968f;
float TTRR(Time, sps25);
        TTRR: FillValue = -32767.f;
       TTRR:units = "deg C" ;
       TTRR:long name = "Total Temperature, Radome Right";
       TTRR:Category = "Analog";
       TTRR:SampledRate = 100;
       TTRR:DataQuality = "Good";
       TTRR:CalibrationCoefficients = -64.553f, 25.1259f, -0.190518f;
float TTWH(Time, sps25);
       TTWH: FillValue = -32767.f;
       TTWH:units = "deg C";
       TTWH:long name = "Total Temperature, Deiced Wing";
       TTWH:Category = "Analog";
       TTWH:SampledRate = 100;
       TTWH:DataQuality = "Good";
       TTWH:CalibrationCoefficients = -65.9606f, 26.7273f, -0.321917f;
float UVB(Time, sps25);
       UVB: FillValue = -32767.f;
       UVB:units = "W/m2";
       UVB:long name = "Ultraviolet Irradiance, Bottom" ;
       UVB:Category = "Analog" ;
       UVB:SampledRate = 100 ;
       UVB:DataQuality = "Good" ;
       UVB:CalibrationCoefficients = -0.0554596f, 16.2247f, 4.79291e-05f;
float UVT(Time) ;
        UVT: FillValue = -32767.f;
        UVT:units = "W/m2";
       UVT:long name = "Ultraviolet Irradiance, Top" ;
```

```
UVT:Category = "Analog" ;
        UVT:SampledRate = 100 ;
       UVT:DataQuality = "Good" ;
        UVT: CalibrationCoefficients = -1.0635f, 45.0913f, -0.00286905f;
float VEW(Time) ;
       VEW: FillValue = -32767.f;
       VEW:units = "m/s";
       VEW:long name = "IRS Ground Speed Vector, East Component" ;
       VEW:Category = "Aircraft State" ;
       VEW:SampledRate = 10 ;
       VEW:DespikeSlope = 20.f ;
       VEW:DataQuality = "Good" ;
float VNS(Time);
       VNS:_FillValue = -32767.f;
       VNS:units = "m/s";
        VNS:long name = "IRS Ground Speed Vector, North Component";
       VNS:Category = "Aircraft State" ;
       VNS:SampledRate = 10 ;
       VNS:DespikeSlope = 20.f ;
       VNS:DataQuality = "Good" ;
float VSPD(Time) ;
       VSPD: FillValue = -32767.f;
       VSPD:units = "degree" ;
       VSPD:long name = "IRS Vertical Speed" ;
       VSPD:Category = "Analog" ;
       VSPD:SampledRate = 25 ;
       VSPD:DespikeSlope = 0.6f ;
       VSPD:DataQuality = "Preliminary" ;
       VSPD:CalibrationCoefficients = 0.f, 1.f ;
float XASTAT(Time) ;
       XASTAT: FillValue = -32767.f;
        XASTAT:units = "V" ;
       XASTAT:long name = "UWyo CCN Status" ;
       XASTAT:Category = "Raw" ;
        XASTAT:SampledRate = 10 ;
        XASTAT:DataQuality = "Good" ;
float XCNCold(Time, sps10);
        XCNCold: FillValue = -32767.f;
        XCNCold:units = "N/cc" ;
       XCNCold:long name = "Condensation Nuclei un-heated" ;
       XCNCold:Category = "Analog" ;
       XCNCold:SampledRate = 10 ;
        XCNCold:DataQuality = "Good" ;
        XCNCold:CalibrationCoefficients = 0.f, 1000.f ;
float XCNHot(Time, sps10);
       XCNHot: FillValue = -32767.f;
        XCNHot:units = "N/cc" ;
       XCNHot:long name = "Condensation Nuclei heated" ;
       XCNHot:Category = "Analog" ;
       XCNHot:SampledRate = 10 ;
        XCNHot:DataQuality = "Good" ;
       XCNHot:CalibrationCoefficients = 0.f, 1000.f;
float XDTEMP(Time) ;
        XDTEMP: FillValue = -32767.f;
        XDTEMP:units = "deg C";
       XDTEMP:long_name = "UWyo CCN Differential Temperature" ;
       XDTEMP:Category = "Analog" ;
        XDTEMP:SampledRate = 10 ;
        XDTEMP:DataQuality = "Good" ;
       XDTEMP:CalibrationCoefficients = 0.0576f, 2.3518f;
float XGLWC(Time) ;
        XGLWC: FillValue = -32767.f;
        XGLWC:units = "gram/m3";
        XGLWC:long name = "Gerber PV-100 Probe Liquid Water Content" ;
       XGLWC:Category = "Analog" ;
```

```
XGLWC:SampledRate = 500 ;
        XGLWC:DataQuality = "Preliminary";
       XGLWC:CalibrationCoefficients = -0.0177f, 1.f;
float XGREFF(Time, sps25);
        XGREFF: FillValue = -32767.f;
        XGREFF: units = "V";
       XGREFF:long_name = "Gerber PV-100 Effective Droplet Radius" ;
       XGREFF:Category = "Uncorr\'d Raw" ;
       XGREFF:SampledRate = 500 ;
       XGREFF: DataQuality = "Good";
float XGSFC(Time) ;
       XGSFC: FillValue = -32767.f;
        XGSFC:units = "cm2/m3";
        XGSFC:long_name = "Gerber PV-100 Particle Surface Area (Raw)" ;
       XGSFC:Category = "Analog" ;
        XGSFC:SampledRate = 500;
       XGSFC:DataQuality = "Preliminary";
       XGSFC:CalibrationCoefficients = 0.f, 1000.f ;
float XICN(Time, sps25);
        XICN: FillValue = -32767.f;
        XICN:units = "vlpm" ;
       XICN:long name = "CN Isokinetic Side Flow Rate" ;
       XICN:Category = "Analog";
       XICN:SampledRate = 100 ;
       XICN:DataQuality = "Good" ;
       XICN:CalibrationCoefficients = 0.03f, 1.118f;
float XNEPH(Time, sps10);
        XNEPH: FillValue = -32767.f;
        XNEPH:units = "V" ;
       XNEPH:long_name = "U of H Nephelometer" ;
        XNEPH:Category = "Raw" ;
       XNEPH:SampledRate = 10 ;
       XNEPH:DataQuality = "Good" ;
float XPPRES(Time) ;
        XPPRES: FillValue = -32767.f;
        XPPRES:units = "hPa" ;
       XPPRES:long name = "UWyo Vacuum Pump Pressure" ;
       XPPRES:Category = "Analog" ;
       XPPRES:SampledRate = 10 ;
       XPPRES:DataQuality = "Good" ;
       XPPRES:CalibrationCoefficients = -103.f, 206.f;
float XSDIIMP(Time, sps25);
        XSDIIMP: FillValue = -32767.f;
       XSDIIMP:units = "V";
       XSDIIMP:long name = "Anderson Flow Rate" ;
       XSDIIMP:Category = "Raw" ;
       XSDIIMP:SampledRate = 500 ;
       XSDIIMP:DataQuality = "Good" ;
float XSDISTR(Time) ;
        XSDISTR: FillValue = -32767.f;
        XSDISTR:units = "V" ;
       XSDISTR:long name = "Anderson Flow Rate" ;
       XSDISTR:Category = "Raw" ;
        XSDISTR:SampledRate = 10 ;
       XSDISTR:DataQuality = "Good" ;
float XTOPTMP(Time) ;
        XTOPTMP: FillValue = -32767.f;
        XTOPTMP:units = "deg_C";
        XTOPTMP:long name = "UWyo CCN Top Plate Temperature" ;
       XTOPTMP:Category = "Analog" ;
       XTOPTMP:SampledRate = 10 ;
       XTOPTMP:DataQuality = "Good" ;
        XTOPTMP:CalibrationCoefficients = -1.1017f, 4.9497f ;
float XUCN(Time, sps10);
        XUCN: FillValue = -32767.f;
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XUCN:units = "N/cc";
       XUCN:long name = "Ultra-fine Condensation Nuclei" ;
       XUCN:Category = "Analog";
       XUCN:SampledRate = 10 ;
       XUCN: DataQuality = "Good";
       XUCN:CalibrationCoefficients = 0.f, 10000.f;
float XUVI(Time) ;
       XUVI: FillValue = -32767.f;
       XUVI:units = "V";
       XUVI:long_name = "UV Hygrometer Intensity" ;
       XUVI:Category = "Raw";
       XUVI:SampledRate = 500;
       XUVI:DataQuality = "Preliminary" ;
       XUVI:CalibrationCoefficients = 14.935f, -0.9741f, -0.26044f, 0.02096f;
float XUVP(Time, sps25);
       XUVP: FillValue = -32767.f;
       XUVP:units = "hPa" ;
       XUVP:long_name = "UV Hygrometer Pressure" ;
       XUVP:Category = "Analog";
       XUVP:SampledRate = 500;
       XUVP:DataQuality = "Good" ;
       XUVP:CalibrationCoefficients = 229.3f, 188.86f, 0.0034f;
float XUVT(Time, sps25);
       XUVT: FillValue = -32767.f;
       XUVT:units = "deg_C";
       XUVT:long name = "UV Hygrometer Temperature" ;
       XUVT:Category = "Analog";
       XUVT:SampledRate = 500 ;
       XUVT:DataQuality = "Good";
       XUVT:CalibrationCoefficients = 70.84f, -18.295f;
float XVDET(Time) ;
       XVDET: FillValue = -32767.f;
       XVDET:units = "V";
       XVDET:long name = "UWyo CCN Detector Voltage" ;
       XVDET:Category = "Raw" ;
       XVDET:SampledRate = 10 ;
       XVDET:DataQuality = "Good" ;
float XWCN10(Time, sps10);
       XWCN10: FillValue = -32767.f;
       XWCN10:units = "#/cm3";
       XWCN10:long name = "UWyo CPC 3010 Concentration";
       XWCN10:Category = "Analog" ;
       XWCN10:SampledRate = 10 ;
       XWCN10:DataQuality = "Preliminary";
       XWCN10:CalibrationCoefficients = -39.2f, 980.4f;
float XWCN25(Time, sps10);
       XWCN25: FillValue = -32767.f;
       XWCN25:units = \#/cm3;
       XWCN25:long name = "UWyo CN 3025 Concentration";
       XWCN25:Category = "Analog";
       XWCN25:SampledRate = 10 ;
       XWCN25:DataQuality = "Preliminary";
       XWCN25:CalibrationCoefficients = -343.2f, 8475.f;
float AKRD(Time, sps25);
       AKRD: FillValue = -32767.f;
       AKRD:units = "degree";
       AKRD:long name = "Attack Angle, Radome Diff. Pressure";
       AKRD:Category = "Aircraft State" ;
       AKRD:DataQuality = "Good";
       AKRD:Dependencies = "3 ADIFR QCXC XMACH2";
float ALTVOC(Time) ;
       ALTVOC: FillValue = -32767.f;
       ALTVOC:units = "m";
       ALTVOC:long name = "Blended Radar and GPS Altitudes";
       ALTVOC: Category = "Position";
```

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ALTVOC:standard name = "altitude";
       ALTVOC: DataQuality = "Preliminary";
       ALTVOC: Dependencies = "2 RALT GGALT NTL";
float ALTX(Time, sps25);
       ALTX: FillValue = -32767.f;
       ALTX:units = "m";
       ALTX:long name = "Altitude, Reference (MSL)";
       ALTX:Category = "Position";
       ALTX:standard name = "altitude" ;
       ALTX:DataQuality = "Good";
       ALTX:Dependencies = "1 ALTVOC" ;
float AQRATIO(Time, sps25) ;
       AQRATIO: FillValue = -32767.f;
       AQRATIO:units = "";
       AQRATIO:long_name = "Al\'s Fudge Factor" ;
       AQRATIO:Category = "Derived";
       AQRATIO: DataQuality = "Good";
       AQRATIO:Dependencies = "2 ADIFR QCF";
float ATRL(Time, sps25);
       ATRL: FillValue = -32767.f;
       ATRL:units = "deg_C";
       ATRL:long name = "Ambient Temperature, Radome Left";
       ATRL:Category = "Atmos. State";
       ATRL:standard name = "air temperature";
       ATRL:DataQuality = "Good";
       ATRL:Dependencies = "3 TTRL XMACH2 A2DTEMP FWDFS0";
       ATRL:RecoveryFactor = 0.95f;
float ATRR(Time, sps25);
       ATRR:_FillValue = -32767.f;
       ATRR:units = "deg_C";
       ATRR:long name = "Ambient Temperature, Radome Right";
       ATRR:Category = "Atmos. State";
       ATRR:standard name = "air temperature";
       ATRR:DataQuality = "Good";
       ATRR:Dependencies = "3 TTRR XMACH2 A2DTEMP FWDFS0";
       ATRR:RecoveryFactor = 0.95f;
float ATTACK(Time, sps25);
       ATTACK: FillValue = -32767.f;
       ATTACK:units = "degree";
       ATTACK:long_name = "Attack Angle, Reference";
       ATTACK: Category = "Aircraft State";
       ATTACK: DataQuality = "Good";
       ATTACK: Dependencies = "1 AKRD";
float ATWH(Time, sps25);
       ATWH: FillValue = -32767.f;
       ATWH:units = "deg C";
       ATWH:long name = "Ambient Temperature, Deiced Wing";
       ATWH:Category = "Atmos. State";
       ATWH:standard name = "air temperature";
       ATWH:DataQuality = "Good";
       ATWH:Dependencies = "3 TTWH XMACH2 A2DTEMP FWDFS0";
       ATWH: RecoveryFactor = 0.985f;
float ATX(Time, sps25);
       ATX: FillValue = -32767.f;
       ATX:units = "deg C";
       ATX:long name = "Ambient Temperature, Reference";
       ATX:Category = "Atmos. State";
       ATX:standard name = "air temperature";
       ATX:DataQuality = "Good";
       ATX:Dependencies = "1 ATRR";
float C1DC RPC(Time, sps1, Vector64);
       C1DC RPC: FillValue = -32767.f;
       C1DC RPC:units = "#/L";
       C1DC RPC:long name = "2D-C Concentration, 260X Emulation (per cell)";
       C1DC RPC:Category = "PMS Probe" ;
```

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C1DC RPC:SerialNumber = "F2DC001" ;
               C1DC RPC:DataQuality = "Good" ;
               C1DC RPC:Dependencies = "3 A1DC RPC TASX DT1DC RPC";
                C1DC RPC:EffectiveAreaWidth = 0.f, 1.55f, 1.525f, 1.5f, 1.475f, 1.45f,
1.425f, 1.4f, 1.375f, 1.35f, 1.325f, 1.3f, 1.275f, 1.25f, 1.225f, 1.2f, 1.175f, 1.15f,
1.125f, 1.1f, 1.075f, 1.05f, 1.025f, 1.f, 0.975f, 0.95f, 0.925f, 0.9f, 0.875f, 0.85f, 0.825f,
0.8f, 0.775f, 0.75f, 0.725f, 0.7f, 0.675f, 0.65f, 0.625f, 0.6f, 0.575f, 0.55f, 0.525f, 0.5f,
0.475f, 0.45f, 0.425f, 0.4f, 0.375f, 0.35f, 0.325f, 0.3f, 0.275f, 0.25f, 0.225f, 0.2f,
0.175f, 0.15f, 0.125f, 0.1f, 0.075f, 0.05f, 0.025f, 0.f;
                C1DC RPC:DepthOfField = 0.f, 1.422593f, 5.807093f, 13.15409f, 23.46359f,
36.73559f, 52.97009f, 61.f, 61.f,
61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f,
61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f,
61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f,
               C1DC RPC:FirstBin = 3 ;
               C1DC RPC:LastBin = 63;
                C1DC_RPC:CellSizes = 12.5f, 37.5f, 62.5f, 87.5f, 112.5f, 137.5f, 162.5f,
187.5f, 212.5f, 237.5f, 262.5f, 287.5f, 312.5f, 337.5f, 362.5f, 387.5f, 412.5f, 437.5f,
462.5f, 487.5f, 512.5f, 537.5f, 562.5f, 587.5f, 612.5f, 637.5f, 662.5f, 687.5f, 712.5f,
737.5f, 762.5f, 787.5f, 812.5f, 837.5f, 862.5f, 887.5f, 912.5f, 937.5f, 962.5f, 987.5f,
1012.5f, 1037.5f, 1062.5f, 1087.5f, 1112.5f, 1137.5f, 1162.5f, 1187.5f, 1212.5f, 1237.5f,
1262.5f, 1287.5f, 1312.5f, 1337.5f, 1362.5f, 1387.5f, 1412.5f, 1437.5f, 1462.5f, 1487.5f,
1512.5f, 1537.5f, 1562.5f, 1587.5f;
               C1DC RPC:CellSizeUnits = "micrometers" ;
               C1DC RPC:Density = 1.f ;
               C1DC RPC:PLWfactor = 1.e-09f ;
                C1DC RPC:DBZfactor = 1000.f ;
        float C1DC_RPI(Time, sps1, Vector64);
               C1DC_RPI:_FillValue = -32767.f;
               C1DC RPI:units = "#/L";
               C1DC RPI:long name = "2D-C Concentration, 260X Emulation (per cell)";
               C1DC_RPI:Category = "PMS Probe" ;
               C1DC RPI:SerialNumber = "F2DC002";
               C1DC_RPI:DataQuality = "Good" ;
               C1DC RPI:Dependencies = "3 A1DC RPI TASX DT1DC RPI";
                C1DC_RPI:EffectiveAreaWidth = 0.f, 0.62f, 0.61f, 0.6f, 0.59f, 0.58f, 0.57f,
0.56f, 0.55f, 0.54f, 0.53f, 0.52f, 0.51f, 0.5f, 0.49f, 0.48f, 0.47f, 0.46f, 0.45f, 0.44f,
0.43f, 0.42f, 0.41f, 0.4f, 0.39f, 0.38f, 0.37f, 0.36f, 0.35f, 0.34f, 0.33f, 0.32f, 0.31f,
0.3f, 0.29f, 0.28f, 0.27f, 0.26f, 0.25f, 0.24f, 0.23f, 0.22f, 0.21f, 0.2f, 0.19f, 0.18f,
0.17f, 0.16f, 0.15f, 0.14f, 0.13f, 0.12f, 0.11f, 0.1f, 0.09f, 0.08f, 0.07f, 0.06f, 0.05f,
0.04f, 0.03f, 0.02f, 0.01f, 0.f;
               C1DC RPI:DepthOfField = 0.f, 0.237f, 0.948f, 2.133f, 3.792f, 5.925f, 8.532f,
11.613f, 15.168f, 19.197f, 23.7f, 28.677f, 34.128f, 40.053f, 46.452f, 53.325f, 60.672f, 61.f,
61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f,
61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f,
61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f, 61.f,
61.f;
               C1DC RPI:FirstBin = 6 ;
               C1DC RPI:LastBin = 63;
                C1DC_RPI:CellSizes = 5.f, 15.f, 25.f, 35.f, 45.f, 55.f, 65.f, 75.f, 85.f,
95.f, 105.f, 115.f, 125.f, 135.f, 145.f, 155.f, 165.f, 175.f, 185.f, 195.f, 205.f, 215.f,
225.f, 235.f, 245.f, 255.f, 265.f, 275.f, 285.f, 295.f, 305.f, 315.f, 325.f, 335.f, 345.f,
355.f, 365.f, 375.f, 385.f, 395.f, 405.f, 415.f, 425.f, 435.f, 445.f, 455.f, 465.f, 475.f,
485.f, 495.f, 505.f, 515.f, 525.f, 535.f, 545.f, 555.f, 565.f, 575.f, 585.f, 595.f, 605.f,
615.f, 625.f, 635.f;
                C1DC RPI:CellSizeUnits = "micrometers" ;
                C1DC RPI:Density = 1.f;
                C1DC RPI:PLWfactor = 1.e-09f;
                C1DC_RPI:DBZfactor = 1000.f ;
        float CCDP_RWO(Time, sps10, Vector31);
                CCDP RWO: FillValue = -32767.f;
                CCDP RWO:units = "#/cm3";
               CCDP RWO:long name = "CDP Concentration (per cell)" ;
               CCDP RWO:Category = "PMS Probe" ;
                CCDP RWO:SerialNumber = "CDP001"
```

```
CCDP RWO: DataQuality = "Good";
               CCDP RWO: Dependencies = "2 ACDP RWO TASX";
               CCDP RWO:FirstBin = 1 ;
               CCDP RWO:LastBin = 29;
               CCDP_RWO:CellSizes = 1.f, 1.5f, 1.75f, 2.94f, 4.125f, 5.31f, 6.5f, 7.69f,
8.875f, 10.06f, 11.25f, 12.44f, 13.625f, 14.81f, 16.f, 17.19f, 18.375f, 19.56f, 20.75f,
23.03f, 25.31f, 27.59f, 29.87f, 32.15f, 34.43f, 36.71f, 38.99f, 41.27f, 43.55f, 45.83f,
48.11f;
               CCDP RWO:CellSizeUnits = "micrometers" ;
               CCDP RWO:DepthOfField = 1.38f ;
               CCDP RWO:BeamDiameter = 0.192f ;
               CCDP RWO:Density = 1.f;
               CCDP RWO:PLWfactor = 1.e-06f ;
               CCDP_RWO:DBZfactor = 1000000.f ;
       float CONC1DC_RPC(Time) ;
               CONC1DC RPC: FillValue = -32767.f;
               CONC1DC RPC:units = "#/L" ;
               CONC1DC_RPC:long_name = "2D-C Concentration, 260X Emulation (all cells)";
               CONC1DC_RPC:Category = "PMS Probe";
               CONC1DC_RPC:SerialNumber = "F2DC001"
               CONC1DC_RPC:DataQuality = "Good" ;
               CONC1DC RPC:Dependencies = "1 C1DC RPC";
       float CONC1DC RPI(Time) ;
               CONC1DC RPI: FillValue = -32767.f;
               CONC1DC RPI:units = "#/L" ;
               CONCIDC RPI:long name = "2D-C Concentration, 260% Emulation (all cells)";
               CONC1DC RPI:Category = "PMS Probe";
               CONC1DC_RPI:SerialNumber = "F2DC002"
               CONC1DC_RPI:DataQuality = "Good" ;
               CONC1DC RPI:Dependencies = "1 C1DC RPI" ;
       float CONC3 LWI(Time, sps10);
               CONC3 LWI: FillValue = -32767.f;
               CONC3 LWI:units = "#/cm3";
               CONC3 LWI:long name = "FSSP-300 Concentration (all cells)";
               CONC3 LWI:Category = "PMS Probe";
               CONC3_LWI:SerialNumber = "FSSP305" ;
               CONC3 LWI:DataQuality = "Good";
               CONC3 LWI:Dependencies = "1 CS300 LWI";
       float CONCD RWO(Time, sps10);
               CONCD RWO: FillValue = -32767.f;
               CONCD RWO:units = "#/cm3";
               CONCD RWO: long name = "CDP Concentration (all cells)";
               CONCD RWO:Category = "PMS Probe" ;
               CONCD RWO:SerialNumber = "CDP001" ;
               CONCD RWO: DataQuality = "Good";
               CONCD RWO: Dependencies = "1 CCDP RWO";
       float CONCF RWI(Time, sps10);
               CONCF RWI: FillValue = -32767.f;
               CONCF RWI:units = "#/cm3";
               CONCF RWI:long name = "FSSP-100 Concentration (all cells)";
               CONCF RWI:Category = "PMS Probe";
               CONCF RWI:SerialNumber = "FSSP109"
               CONCF_RWI:DataQuality = "Good" ;
               CONCF RWI:Dependencies = "1 CS100 RWI";
       float CONCN(Time, sps25);
               CONCN: FillValue = -32767.f;
               CONCN:units = "#/cm3";
               CONCN:long name = "Condensation Nuclei (CN) Concentration" ;
               CONCN:Category = "Chemistry" ;
               CONCN:DataQuality = "Good";
               CONCN:Dependencies = "6 CNTS FCNC PCN CNTEMP PSXC ATX";
               CONCN:DIV = 1.f;
        float CONCP LWO(Time, sps10);
               CONCP LWO: FillValue = -32767.f;
               CONCP LWO:units = "#/cm3";
```

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CONCP LWO:long name = "PCAS Concentration (all cells)";
               CONCP LWO:Category = "PMS Probe";
               CONCP LWO:SerialNumber = "PCAS108"
               CONCP_LWO:DataQuality = "Good" ;
               CONCP LWO: Dependencies = "1 CS200 LWO";
       float CONCUD(Time, sps25);
               CONCUD: FillValue = -32767.f;
               CONCUD:units = "#/cm3";
               CONCUD: long name = "UHSAS CVI Drop Concentration (all cells)";
               CONCUD:Category = "PMS Probe" ;
               CONCUD:DataQuality = "Good" ;
               CONCUD:Dependencies = "3 UHSAS_CNTS_CVI CVCFACT USMPFLW CVI" ;
       float CS100_RWI(Time, sps10, Vector31);
               CS100_RWI:_FillValue = -32767.f;
               CS100_RWI:units = "#/cm3";
               CS100 RWI:long name = "FSSP-100 Concentration (per cell) - DMT";
               CS100_RWI:Category = "PMS Probe" ;
               CS100_RWI:SerialNumber = "FSSP109";
               CS100_RWI:DataQuality = "Good" ;
               CS100 RWI:Dependencies = "5 AS100 RWI TASX REJAT RWI OVFLW RWI FRNG RWI" ;
               CS100_RWI:FirstBin = 6 ;
               CS100 RWI:LastBin = 29;
               CS100 RWI:CellSizes = 5.5f, 6.625f, 7.75f, 8.875f, 10.f, 11.125f, 12.25f,
13.375f, 14.5f, 15.625f, 16.75f, 17.875f, 19.f, 20.125f, 21.25f, 22.375f, 23.5f, 24.625f,
25.75f, 26.875f, 28.f, 29.125f, 30.25f, 31.375f, 32.5f, 33.625f, 34.75f, 35.875f, 37.f,
38.125f, 39.25f;
               CS100 RWI:CellSizeUnits = "micrometers";
               CS100 RWI:DepthOfField = 2.63f;
               CS100 RWI:BeamDiameter = 0.19f;
               CS100_RWI:Density = 1.f ;
               CS100 RWI:PLWfactor = 1.e-06f;
               CS100_RWI:DBZfactor = 1000000.f;
       float CS200 LWO(Time, sps10, Vector31);
               CS200 LWO: FillValue = -32767.f;
               CS200 LWO:units = \#/cm3;
               CS200_LWO:long_name = "SPP-200 (PCASP) Concentration (per cell) - DMT";
               CS200 LWO:Category = "PMS Probe";
               CS200 LWO:SerialNumber = "PCAS108";
               CS200 LWO:DataQuality = "Good";
               CS200 LWO: Dependencies = "2 AS200 LWO PFLWC LWO";
               CS200 LWO:FirstBin = 2;
               CS200 LWO:LastBin = 30;
               CS200 LWO:CellSizes = 0.117f, 0.123f, 0.131f, 0.14f, 0.156f, 0.168f, 0.181f,
0.199f, 0.222f, 0.245f, 0.262f, 0.27f, 0.298f, 0.444f, 0.526f, 0.622f, 0.724f, 0.833f,
0.935f, 1.036f, 1.1f, 1.211f, 1.326f, 1.459f, 1.638f, 1.83f, 2.044f, 2.24f, 2.444f, 2.69f,
2.94f;
               CS200 LWO:CellSizeUnits = "micrometers" :
       float CS300 LWI(Time, sps10, Vector31);
               CS300 LWI: FillValue = -32767.f;
               CS300 LWI:units = \#/cm3;
               CS300 LWI:long name = "FSSP-300 Concentration (per cell) - DMT";
               CS300 LWI:Category = "PMS Probe";
               CS300 LWI:SerialNumber = "FSSP305";
               CS300 LWI:DataQuality = "Good";
               CS300 LWI:Dependencies = "2 AS300 LWI TASX";
               CS300 LWI:FirstBin = 2;
               CS300 LWI:LastBin = 30;
               CS300_LWI:CellSizes = 0.3f, 0.36f, 0.42f, 0.48f, 0.54f, 0.6f, 0.66f, 0.72f,
0.78f, 0.9f, 1.75f, 2.7f, 3.65f, 4.6f, 5.55f, 6.5f, 7.45f, 8.4f, 9.35f, 10.3f, 11.25f, 12.2f,
13.15f, 14.1f, 15.05f, 16.f, 16.95f, 17.9f, 18.85f, 19.8f, 20.75f;
               CS300 LWI:CellSizeUnits = "micrometers";
               CS300 LWI:SampleArea = 0.15f;
       float DBAR1DC RPC(Time) ;
               DBAR1DC RPC: FillValue = -32767.f;
               DBAR1DC RPC:units = "um";
```

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DBAR1DC RPC:long name = "2D-C Mean Particle Diameter, 260X Emulation";
        DBAR1DC RPC:Category = "PMS Probe";
       DBAR1DC RPC:SerialNumber = "F2DC001"
       DBAR1DC RPC:DataQuality = "Good" ;
        DBAR1DC RPC:Dependencies = "1 C1DC_RPC";
float DBAR1DC RPI(Time) ;
        DBAR1DC RPI: FillValue = -32767.f;
        DBAR1DC RPI:units = "um";
        DBAR1DC RPI:long name = "2D-C Mean Particle Diameter, 260X Emulation";
       DBAR1DC_RPI:Category = "PMS Probe" ;
        DBAR1DC_RPI:SerialNumber = "F2DC002" ;
       DBAR1DC_RPI:DataQuality = "Good" ;
        DBAR1DC_RPI:Dependencies = "1 C1DC_RPI" ;
float DBAR3_LWI(Time, sps10);
        DBAR3 LWI: FillValue = -32767.f;
        DBAR3 LWI:units = "um" ;
        DBAR3_LWI:long_name = "FSSP-300 Mean Particle Diameter" ;
        DBAR3_LWI:Category = "PMS Probe";
       DBAR3_LWI:SerialNumber = "FSSP305" ;
       DBAR3_LWI:DataQuality = "Good" ;
        DBAR3_LWI:Dependencies = "1 CS300_LWI";
float DBARD RWO(Time, sps10) ;
        DBARD_RWO:_FillValue = -32767.f ;
        DBARD RWO:units = "um";
        DBARD_RWO:long_name = "CDP Mean Particle Diameter" ;
        DBARD_RWO:Category = "PMS Probe" ;
       DBARD_RWO:SerialNumber = "CDP001";
        DBARD_RWO:DataQuality = "Good" ;
        DBARD_RWO:Dependencies = "1 CCDP_RWO" ;
float DBARF_RWI(Time, sps10);
       DBARF RWI: FillValue = -32767.f;
        DBARF RWI:units = "um" ;
        DBARF RWI:long name = "FSSP-100 Mean Particle Diameter";
       DBARF RWI:Category = "PMS Probe" ;
        DBARF RWI:SerialNumber = "FSSP109";
        DBARF RWI:DataQuality = "Good" ;
        DBARF RWI:Dependencies = "1 CS100 RWI";
float DBARP LWO(Time, sps10);
        DBARP LWO: FillValue = -32767.f;
        DBARP LWO:units = "um" ;
        DBARP_LWO:long_name = "PCAS Mean Particle Diameter" ;
        DBARP LWO:Category = "PMS Probe"
        DBARP LWO:SerialNumber = "PCAS108"
        DBARP LWO:DataQuality = "Good" ;
        DBARP LWO: Dependencies = "1 CS200 LWO";
float DPBC(Time) ;
        DPBC: FillValue = -32767.f;
       DPBC:units = "deg C" ;
       DPBC:long name = "Dew Point Temperature, T-Electric Bottom" ;
       DPBC:Category = "Atmos. State" ;
        DPBC:standard name = "dew point temperature" ;
       DPBC:DataQuality = "Good" ;
        DPBC:Dependencies = "1 DPB" ;
float DPTC(Time) ;
        DPTC: FillValue = -32767.f;
        DPTC:units = "deg C" ;
        DPTC:long name = "Dew Point Temperature, T-Electric Top" ;
        DPTC:Category = "Atmos. State" ;
        DPTC:standard_name = "dew_point_temperature" ;
       DPTC:DataQuality = "Good" ;
       DPTC:Dependencies = "1 DPT" ;
float DPUV(Time, sps25);
        DPUV: FillValue = -32767.f;
        DPUV:units = "deg C" ;
        DPUV:long name = "Dew Point Temperature, Fast Humidity";
```

```
DPUV:Category = "Atmos. State";
                DPUV:standard_name = "dew_point_temperature" ;
               DPUV:DataQuality = "Good";
                DPUV:Dependencies = "2 RHOUV ATX";
        float DPXC(Time, sps25);
                DPXC:_FillValue = -32767.f ;
                DPXC:units = "deg_C" ;
               DPXC:long name = "Dew Point Temperature, Reference" ;
                DPXC:Category = "Atmos. State" ;
               DPXC:standard_name = "dew_point_temperature" ;
               DPXC:DataQuality = "Good";
               DPXC:Dependencies = "1 DPBC" ;
        float EDPC(Time, sps25);
               EDPC:_FillValue = -32767.f ;
               EDPC:units = "hPa" ;
               EDPC:long name = "Ambient Water Vapor Pressure, Reference" ;
               EDPC:Category = "Thermodynamic" ;
               EDPC:standard_name = "water_vapor_pressure" ;
               EDPC:DataQuality = "Good" ;
               EDPC:Dependencies = "2 DPXC PSXC" ;
        float EDPUV(Time, sps25);
               EDPUV: FillValue = -32767.f;
               EDPUV:units = "hPa" ;
               EDPUV:long name = "Ambient Water Vapor Pressure, UV Hygrometer" ;
               EDPUV:Category = "Thermodynamic" ;
               EDPUV:standard name = "water vapor pressure" ;
               EDPUV:DataQuality = "Good" ;
               EDPUV:Dependencies = "2 DPUV PSXC";
        float FCNC(Time) ;
               FCNC: FillValue = -32767.f;
               FCNC:units = "vlpm" ;
                FCNC:long name = "Corrected CN Counter Sample Flow Rate";
               FCNC:Category = "Chemistry";
               FCNC:DataQuality = "Good" ;
                FCNC:Dependencies = "3 FCN PCN CNTEMP";
        float IRBC(Time) ;
                IRBC: FillValue = -32767.f;
                IRBC:units = "W/m2";
                IRBC:long name = "Corrected Infrared Irradiance, Bottom" ;
                IRBC:Category = "Radiation" ;
                IRBC:DataQuality = "Good" ;
                IRBC:Dependencies = "3 IRB STB DTB" ;
        float IRTC(Time) ;
                IRTC: FillValue = -32767.f;
                IRTC:units = "W/m2";
                IRTC:long name = "Corrected Infrared Irradiance, Top" ;
                IRTC:Category = "Radiation" ;
                IRTC:DataQuality = "Good" ;
                IRTC:Dependencies = "3 IRT STT DTT" ;
        float LATC(Time) ;
               LATC: FillValue = -32767.f;
               LATC:units = "degree N" ;
               LATC:long name = "GPS-Corrected Inertial Latitude";
               LATC: valid range = -90.f, 90.f;
               LATC:Category = "Position";
               LATC:standard name = "latitude" ;
               LATC: DataQuality = "Preliminary";
               LATC: Dependencies = "11 LAT LON GGLAT NTL GGLON NTL VNS VEW GGVNS NTL
GGVEW NTL ROLL GGNSAT NTL GGSTATUS NTL" ;
               LATC:GPS ROLL MAX = 40.f;
               LATC:GPS TAUP = 600.f;
               LATC:GPS TAU = 120.f;
               LATC:coordinate system = "WGS84";
        float LONC(Time, sps25);
               LONC: FillValue = -32767.f;
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LONC:units = "degree E" ;
       LONC:long name = "GPS-Corrected Inertial Longitude";
       LONC: valid range = -180.f, 180.f;
       LONC: Category = "Position";
       LONC:standard name = "longitude";
       LONC: DataQuality = "Good";
       LONC: Dependencies = "1 LATC";
       LONC:coordinate system = "WGS84";
float MR(Time, sps25);
       MR: FillValue = -32767.f;
       MR:units = "gram/kg";
       MR:long_name = "Mixing Ratio, T-Electric" ;
       MR:Category = "Atmos. State" ;
       MR:standard_name = "humidity_mixing_ratio" ;
       MR:DataQuality = "Good" ;
       MR:Dependencies = "2 PSXC EDPC";
float MRUV(Time, sps25) ;
       MRUV:_FillValue = -32767.f ;
       MRUV:units = "gram/kg";
       MRUV:long_name = "UV Hygrometer Mixing Ratio" ;
       MRUV:Category = "Atmos. State" ;
       MRUV:standard name = "humidity mixing ratio";
       MRUV:DataQuality = "Good" ;
       MRUV:Dependencies = "2 PSXC EDPUV" ;
float OAT(Time) ;
       OAT: FillValue = -32767.f;
       OAT:units = "deg C";
       OAT:long name = "Ambient Temperature, Ophir III";
       OAT:Category = "Non-Standard";
       OAT:standard_name = "air_temperature" ;
       OAT: DataQuality = "Good";
       OAT: Dependencies = "7 OBBCOD ODETDC OTDET OTBBC ODETSG OTSNT OTBNCH";
       OAT:MAXCNT = 62500.f;
       OAT: THERM BIAS = 5.f;
       OAT: THERM RZ = 36.4f;
       OAT: THERM COEFF = -2700.f;
       OAT:DFLT OFFSET = 31515.f;
       OAT:A1 = -3.456e-05f;
       OAT:A2 = -8.481e-06f;
       OAT:A3 = 0.f;
       OAT:A4 = 1.0915f;
       OAT:A5 = 0.f;
float ONE(Time) ;
       ONE: FillValue = -32767.f;
       ONE:units = "none";
       ONE:long name = "Constant value of 1.";
       ONE:Category = "Housekeeping" ;
       ONE: DataQuality = "Good";
       ONE:Dependencies = "0";
float PALT(Time, sps25);
       PALT: FillValue = -32767.f;
       PALT:units = "m" ;
       PALT:long name = "NACA Pressure Altitude" ;
       PALT:Category = "Position";
       PALT:standard_name = "altitude" ;
       PALT: DataQuality = "Good";
       PALT:Dependencies = "1 PSXC";
       PALT:ASTG = 1013.246f;
       PALT:SFCT = 296.15f;
float PALTF(Time, sps25);
       PALTF: FillValue = -32767.f;
       PALTF:units = "feet";
       PALTF:long name = "NACA Pressure Altitude" ;
       PALTF: Category = "Position";
       PALTF:standard name = "altitude";
```

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PALTF: DataQuality = "Good";
       PALTF:Dependencies = "1 PALT";
float PFLWC LWO(Time, sps10) ;
       PFLWC LWO: FillValue = -32767.f;
       PFLWC LWO:units = "vol cm3/s";
       PFLWC_LWO:long_name = "PCAS Corrected Flow" ;
       PFLWC LWO:Category = "PMS Probe" ;
       PFLWC LWO:SerialNumber = "PCAS108" ;
       PFLWC LWO:DataQuality = "Good";
       PFLWC_LWO:Dependencies = "3 PFLW_LWO PSXC ATX" ;
float PLWC1DC RPC(Time) ;
       PLWC1DC RPC: FillValue = -32767.f;
       PLWC1DC_RPC:units = "gram/m3";
       PLWC1DC_RPC:long_name = "2D-C Water/Ice Content, 260X Emulation";
       PLWC1DC_RPC:Category = "PMS Probe";
       PLWC1DC RPC:SerialNumber = "F2DC001";
       PLWC1DC RPC:DataQuality = "Good";
       PLWC1DC_RPC:Dependencies = "1 C1DC_RPC";
float PLWC1DC_RPI(Time) ;
       PLWC1DC RPI: FillValue = -32767.f;
       PLWC1DC_RPI:units = "gram/m3";
       PLWC1DC RPI:long name = "2D-C Water/Ice Content, 260X Emulation";
       PLWC1DC RPI:Category = "PMS Probe";
       PLWC1DC RPI:SerialNumber = "F2DC002";
       PLWC1DC RPI:DataQuality = "Good";
       PLWC1DC RPI:Dependencies = "1 C1DC RPI";
float PLWCC1(Time, sps25);
       PLWCC1: FillValue = -32767.f;
       PLWCC1:units = "gram/m3";
       PLWCC1:long name = "Corrected PMS-King Liquid Water Content";
       PLWCC1:Category = "Liquid Water";
       PLWCC1:DataQuality = "Good";
       PLWCC1:Dependencies = "5 PLWC1 TASX ATX PSXC XGLWC";
       PLWCC1:TWIRE PMS1 = 162.f;
       PLWCC1:TWIRE TASFAC1 = 1.f;
       PLWCC1:TWIRE DIAM1 = 0.1805f;
float PLWCD_RWO(Time, sps10) ;
       PLWCD RWO: FillValue = -32767.f;
       PLWCD RWO:units = "gram/m3";
       PLWCD RWO:long name = "CDP Water/Ice Content";
       PLWCD RWO:Category = "PMS Probe";
       PLWCD RWO:SerialNumber = "CDP001";
       PLWCD_RWO:DataQuality = "Good";
       PLWCD RWO: Dependencies = "1 CCDP RWO";
float PLWCF RWI(Time, sps10);
       PLWCF RWI: FillValue = -32767.f;
       PLWCF RWI:units = "gram/m3";
       PLWCF RWI:long name = "FSSP-100 Water/Ice Content";
       PLWCF RWI:Category = "PMS Probe";
       PLWCF RWI:SerialNumber = "FSSP109";
       PLWCF RWI:DataQuality = "Good";
       PLWCF RWI:Dependencies = "1 CS100 RWI";
float PSFC(Time, sps25);
       PSFC: FillValue = -32767.f;
       PSFC:units = "hPa" ;
       PSFC:long name = "Corrected Static Pressure, Fuselage";
       PSFC:Category = "Atmos. State" ;
       PSFC:standard name = "air pressure";
       PSFC:DataQuality = "Good";
       PSFC:Dependencies = "2 PSFRD QCFR";
float PSFDC(Time, sps25);
       PSFDC: FillValue = -32767.f;
       PSFDC:units = "hPa" ;
       PSFDC:long name = "Corrected Static Pressure, Fuselage Digital" ;
       PSFDC:Category = "Atmos. State" ;
```

```
PSFDC:standard name = "air pressure" ;
       PSFDC:DataQuality = "Good" ;
       PSFDC:Dependencies = "2 PSFD AQRATIO";
float PSX(Time, sps25);
       PSX: FillValue = -32767.f;
       PSX:units = "hPa" ;
       PSX:long name = "Raw Static Pressure, Reference";
       PSX:Category = "Uncorr\'d Raw";
       PSX:standard name = "air pressure";
       PSX:DataQuality = "Good";
       PSX:Dependencies = "1 PSFRD" ;
float PSXC(Time, sps25);
       PSXC:_FillValue = -32767.f;
       PSXC:units = "hPa" ;
       PSXC:long_name = "Corrected Static Pressure, Reference" ;
       PSXC:Category = "Atmos. State";
       PSXC:standard_name = "air_pressure" ;
       PSXC:DataQuality = "Good";
       PSXC:Dependencies = "1 PSFC" ;
float QCFC(Time, sps25);
       QCFC:_FillValue = -32767.f;
       QCFC:units = "hPa" ;
       QCFC:long name = "Corrected Dynamic Pressure, Fuselage";
       QCFC:Category = "Aircraft State";
       QCFC:DataQuality = "Good" ;
       QCFC:Dependencies = "2 QCF AQRATIO";
float QCFRC(Time, sps25);
       QCFRC: FillValue = -32767.f;
       QCFRC:units = "hPa" ;
       QCFRC:long name = "Raw Dynamic Pressure, Fuselage Right, Corrected" ;
       QCFRC:Category = "Derived" ;
       QCFRC:DataQuality = "Good" ;
       QCFRC:Dependencies = "2 QCFR PSFRD";
float QCRC(Time, sps25);
       QCRC: FillValue = -32767.f;
       QCRC:units = "hPa" ;
       QCRC:long name = "Corrected Dynamic Pressure, Radome";
       QCRC:Category = "Aircraft State";
       QCRC:DataQuality = "Good" ;
       QCRC:Dependencies = "4 QCR ADIFR BDIFR AQRATIO";
float QCX(Time, sps25);
       QCX: FillValue = -32767.f;
       QCX:units = "hPa" ;
       QCX:long name = "Raw Dynamic Pressure, Reference";
       QCX:Category = "Uncorr\'d Raw" ;
       QCX:DataQuality = "Good";
       QCX:Dependencies = "1 QCR";
float QCXC(Time, sps25);
       QCXC: FillValue = -32767.f;
       QCXC:units = "hPa" ;
       QCXC:long name = "Corrected Dynamic Pressure, Reference";
       QCXC:Category = "Aircraft State";
       QCXC:DataQuality = "Good" ;
       QCXC:Dependencies = "1 QCRC";
float RALT(Time, sps25);
       RALT: FillValue = -32767.f;
       RALT:units = "m" ;
       RALT:long name = "Geometric (Radar) Altitude (APN-232)";
       RALT:Category = "Position"
       RALT:standard name = "height" ;
       RALT:DataQuality = "Good" ;
       RALT:Dependencies = "1 HGM232";
float REFFD RWO(Time, sps10);
       REFFD RWO: FillValue = -32767.f;
       REFFD RWO:units = "um" ;
```

```
REFFD RWO:long name = "CDP Effective Radius" ;
       REFFD RWO:Category = "PMS Probe" ;
       REFFD RWO:SerialNumber = "CDP001";
       REFFD RWO:DataQuality = "Good";
       REFFD RWO:Dependencies = "1 CCDP RWO" ;
float REFFF_RWI(Time, sps10);
       REFFF RWI: FillValue = -32767.f;
       REFFF RWI:units = "um" ;
       REFFF RWI:long name = "FSSP-100 Effective Radius";
       REFFF_RWI:Category = "PMS Probe" ;
       REFFF_RWI:SerialNumber = "FSSP109" ;
       REFFF_RWI:DataQuality = "Good" ;
       REFFF_RWI:Dependencies = "1 CS100_RWI" ;
float RHODT(Time) ;
       RHODT:_FillValue = -32767.f;
       RHODT:units = "gram/m3";
       RHODT:long_name = "Absolute Humidity, T-Electric Top" ;
       RHODT: Category = "Atmos. State";
       RHODT:DataQuality = "Good" ;
       RHODT: Dependencies = "2 ATX EDPC";
float RHOUV(Time, sps25);
       RHOUV: FillValue = -32767.f;
       RHOUV:units = "gram/m3";
       RHOUV:long name = "Absolute Humidity, RAF Fast Hygrometer" ;
       RHOUV: Category = "Atmos. State";
       RHOUV:standard name = "relative humidity";
       RHOUV:DataQuality = "Good";
       RHOUV: Dependencies = "4 XUVI RHODT DPXC ATX";
       RHOUV:RHOUV CAL = 0.25f, 60.f, 0.f, 0.f;
float RHUM(Time, sps25);
       RHUM: FillValue = -32767.f;
       RHUM:units = "%";
       RHUM: long name = "Relative Humidity";
       RHUM:Category = "Atmos. State" ;
       RHUM: standard name = "relative humidity";
       RHUM:DataQuality = "Good" ;
       RHUM: Dependencies = "3 ATX PSXC EDPUV";
float SSLIP(Time, sps25);
        SSLIP: FillValue = -32767.f;
       SSLIP:units = "degree";
       SSLIP:long name = "Sideslip Angle, Reference" ;
       SSLIP:Category = "Aircraft State" ;
       SSLIP:DataQuality = "Good" ;
       SSLIP:Dependencies = "1 SSRD";
float SSRD(Time, sps25);
       SSRD: FillValue = -32767.f;
       SSRD:units = "degree";
       SSRD:long name = "Sideslip Angle, Radome Diff. Pressure";
       SSRD:Category = "Aircraft State" ;
       SSRD:DataQuality = "Good";
        SSRD:Dependencies = "3 BDIFR QCXC XMACH2";
float TASF(Time, sps25);
       TASF: FillValue = -32767.f;
       TASF:units = "m/s";
       TASF:long name = "Aircraft True Airspeed, Fuselage" ;
       TASF:Category = "Aircraft State";
       TASF:standard_name = "platform_speed_wrt_air" ;
       TASF:DataQuality = "Good";
       TASF:Dependencies = "3 QCFC PSFC TTX";
float TASHC(Time, sps25);
       TASHC: FillValue = -32767.f;
       TASHC:units = "m/s";
       TASHC:long name = "Aircraft True Airspeed, Humidity Corrected" ;
       TASHC:Category = "Aircraft State";
       TASHC:standard name = "platform speed wrt air";
```

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TASHC:DataQuality = "Good";
       TASHC: Dependencies = "2 TASX MR";
float TASR(Time, sps25);
       TASR: FillValue = -32767.f;
       TASR:units = "m/s";
       TASR:long_name = "Aircraft True Airspeed, Radome" ;
       TASR:Category = "Aircraft State";
       TASR:standard name = "platform speed wrt air";
       TASR:DataQuality = "Good";
       TASR:Dependencies = "3 QCRC PSFC TTX";
float TASX(Time, sps25);
       TASX:_FillValue = -32767.f;
       TASX:units = m/s;
       TASX:long_name = "Aircraft True Airspeed, Reference";
       TASX:Category = "Aircraft State";
       TASX:standard name = "platform speed wrt air";
       TASX:DataQuality = "Good";
       TASX:Dependencies = "1 TASR";
float THETA(Time, sps25);
       THETA: FillValue = -32767.f;
       THETA:units = "K";
       THETA: long name = "Potential Temperature";
       THETA: Category = "Thermodynamic";
       THETA: standard name = "air potential temperature";
       THETA: DataQuality = "Good";
       THETA: Dependencies = "2 ATX PSXC";
float THETAE(Time, sps25);
       THETAE: FillValue = -32767.f;
       THETAE: units = "K";
       THETAE:long name = "Equivalent Potential Temperature" ;
       THETAE:Category = "Thermodynamic";
       THETAE: standard name = "equivelent potential temperature";
       THETAE: DataQuality = "Good";
       THETAE: Dependencies = "4 ATX PSXC EDPUV MRUV";
float THETAV(Time, sps25);
       THETAV: FillValue = -32767.f;
       THETAV:units = "K";
       THETAV:long name = "Virtual Potential Temperature" ;
       THETAV:Category = "Thermodynamic";
       THETAV:DataQuality = "Good";
       THETAV: Dependencies = "3 ATX PSXC EDPUV";
float TTWHC(Time, sps25);
        TTWHC: FillValue = -32767.f;
       TTWHC:units = "deg C";
       TTWHC: long name = "Total Temperature, Deiced Wing, Corrected" ;
       TTWHC:Category = "Uncorr\'d Raw";
       TTWHC:DataQuality = "Good";
       TTWHC:Dependencies = "3 TTWH XMACH2 PSXC";
       TTWHC: Calibrations = -1.4025f, -1.7841f;
float TTX(Time, sps25);
        TTX: FillValue = -32767.f;
       TTX:units = "deg C";
       TTX:long name = "Total Temperature, Reference";
       TTX:Category = "Uncorr\'d Raw";
       TTX:DataQuality = "Good";
       TTX:Dependencies = "1 TTRR";
float UI(Time, sps25);
        UI: FillValue = -32767.f;
       UI:units = "m/s";
       UI:long name = "Wind Vector, East Component" ;
       UI:Category = "Wind" ;
       UI:standard name = "eastward wind" ;
       UI:DataQuality = "Good" ;
        UI:Dependencies = "1 WI" ;
float UIC(Time, sps25);
```

```
UIC: FillValue = -32767.f;
               UIC:units = "m/s" ;
               UIC:long name = "GPS-Corrected Wind Vector, East Component" ;
               UIC:Category = "Wind" ;
               UIC:standard name = "eastward wind" ;
               UIC:DataQuality = "Good" ;
               UIC:Dependencies = "1 WIC" ;
       float UX(Time, sps25);
               UX:_FillValue = -32767.f;
               UX:units = m/s;
               UX:long name = "Wind Vector, Longitudinal Component" ;
               UX:Category = "Wind" ;
               UX:DataQuality = "Good" ;
               UX:Dependencies = "1 WI" ;
       float UXC(Time, sps25);
               UXC: FillValue = -32767.f;
               UXC:units = "m/s" ;
               UXC:long_name = "GPS-Corrected Wind Vector, Longitudinal Component" ;
               UXC:Category = "Wind" ;
               UXC:DataQuality = "Good" ;
               UXC:Dependencies = "1 WIC" ;
        float VEWC(Time, sps25);
               VEWC:_FillValue = -32767.f ;
               VEWC:units = "m/s" ;
               VEWC:long name = "GPS-Corrected Inertial Ground Speed Vector, East Component"
;
               VEWC:Category = "Aircraft State" ;
               VEWC:DataQuality = "Good" ;
               VEWC:Dependencies = "6 LATC UI VI UX VY WI" ;
       float VI(Time, sps25);
               VI: FillValue = -32767.f;
               VI:units = "m/s";
               VI:long name = "Wind Vector, North Component";
               VI:Category = "Wind" ;
               VI:standard name = "northward wind";
               VI:DataQuality = "Good";
               VI:Dependencies = "1 WI" ;
       float VIC(Time, sps25);
               VIC: FillValue = -32767.f;
               VIC:units = "m/s" ;
               VIC:long name = "GPS-Corrected Wind Vector, North Component";
               VIC:Category = "Wind" ;
               VIC:standard name = "northward wind";
               VIC:DataQuality = "Good" ;
               VIC:Dependencies = "1 WIC" ;
       float VNSC(Time, sps25);
               VNSC: FillValue = -32767.f;
               VNSC:units = "m/s";
               VNSC:long name = "GPS-Corrected Inertial Ground Speed Vector, North
Component";
               VNSC:Category = "Aircraft State" ;
               VNSC:DataQuality = "Good" ;
               VNSC:Dependencies = "1 LATC" ;
       float VY(Time, sps25);
               VY: FillValue = -32767.f;
               VY:units = "m/s";
               VY:long name = "Wind Vector, Lateral Component" ;
               VY:Category = "Wind" ;
               VY:DataQuality = "Good" ;
               VY:Dependencies = "1 WI" ;
        float VYC(Time, sps25);
               VYC: FillValue = -32767.f;
               VYC:units = "m/s" ;
               VYC:long name = "GPS-Corrected Wind Vector, Lateral Component";
               VYC:Category = "Wind" ;
```

```
VYC:DataQuality = "Good" ;
       VYC:Dependencies = "1 WIC" ;
float WD(Time, sps25);
       WD: FillValue = -32767.f;
       WD:units = "degree T";
       WD:long_name = "Horizontal Wind Direction" ;
       WD:valid_range = 0.f, 360.f;
       WD:Category = "Wind";
       WD:standard name = "wind from direction";
       WD:DataQuality = "Good";
       WD:Dependencies = "2 UI VI" ;
       WD:modulus_range = 0.f, 360.f;
float WDC(Time, sps25);
       WDC:_FillValue = -32767.f;
       WDC:units = "degree_T" ;
       WDC:long name = "GPS-Corrected Horizontal Wind Direction";
       WDC:valid_range = 0.f, 360.f;
       WDC:Category = "Wind";
       WDC:standard_name = "wind_from_direction" ;
       WDC:DataQuality = "Good";
       WDC:Dependencies = "2 UIC VIC";
       WDC:modulus range = 0.f, 360.f;
float WI(Time, sps25);
       WI: FillValue = -32767.f;
       WI:units = "m/s";
       WI:long name = "Wind Vector, Vertical Gust Component";
       WI:Category = "Wind";
       WI:standard name = "upward air velocity";
       WI:DataQuality = "Good" ;
       WI:Dependencies = "9 TASX VEW VNS PITCH ROLL THDG ATTACK SSLIP VSPD";
float WIC(Time, sps25);
       WIC: FillValue = -32767.f;
       WIC:units = "m/s";
       WIC: long name = "GPS-Corrected Wind Vector, Vertical Gust Component";
       WIC:Category = "Wind" ;
       WIC:standard name = "upward air velocity";
       WIC: DataQuality = "Good";
       WIC:Dependencies = "9 TASX VEWC VNSC PITCH ROLL THDG ATTACK SSLIP VSPD" ;
float WP3(Time, sps25);
       WP3:_FillValue = -32767.f;
       WP3:units = "m/s";
       WP3:long name = "Damped Aircraft Vertical Velocity";
       WP3:Category = "Aircraft State" ;
       WP3:DataQuality = "Good";
       WP3:Dependencies = "5 LAT VEW VNS PALT ACINS";
float WS(Time, sps25);
       WS: FillValue = -32767.f;
       WS:units = "m/s";
       WS:long name = "Horizontal Wind Speed";
       WS:Category = "Wind";
       WS:standard name = "wind speed";
       WS:DataQuality = "Good";
       WS:Dependencies = "2 UI VI" ;
float WSC(Time, sps25);
       WSC: FillValue = -32767.f;
       WSC:units = "m/s";
       WSC:long name = "GPS-Corrected Horizontal Wind Speed";
       WSC:Category = "Wind" ;
       WSC:standard_name = "wind_speed" ;
       WSC:DataQuality = "Good";
       WSC:Dependencies = "2 UIC VIC" ;
float XGRFF(Time, sps25);
       XGRFF: FillValue = -32767.f;
       XGRFF:units = "um" ;
       XGRFF:long name = "Gerber PV-100 Effective Droplet Radius" ;
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XGRFF:Category = "Derived";
       XGRFF:DataQuality = "Good" ;
       XGRFF: Dependencies = "2 XGLWC XGSFC";
float XICNC(Time) ;
       XICNC: FillValue = -32767.f;
       XICNC:units = "vlpm";
       XICNC:long name = "Corrected CN Isokinetic Side Flow Rate" ;
       XICNC:Category = "Chemistry";
       XICNC:DataQuality = "Good" ;
       XICNC:Dependencies = "3 XICN PCN CNTEMP" ;
float XMACH2(Time, sps25);
       XMACH2:_FillValue = -32767.f;
       XMACH2:units = "none" ;
       XMACH2:long_name = "Aircraft Mach Number Squared" ;
       XMACH2:Category = "Thermodynamic";
       XMACH2:DataQuality = "Good" ;
       XMACH2:Dependencies = "2 QCXC PSXC";
float XNEPHC(Time, sps25);
       XNEPHC:_FillValue = -32767.f ;
       XNEPHC:units = "/Mm" ;
       XNEPHC:long_name = "Aerosol Scattering at 550 nm" ;
       XNEPHC:Category = "Derived" ;
       XNEPHC:DataQuality = "Good" ;
       XNEPHC:Dependencies = "1 XNEPH" ;
float ZERO(Time) ;
       ZERO: FillValue = -32767.f;
       ZERO:units = "none" ;
        ZERO:long_name = "Constant value of 0." ;
       ZERO:Category = "Housekeeping" ;
       ZERO:DataQuality = "Good" ;
       ZERO:Dependencies = "0" ;
float TSURF(Time) ;
       TSURF: FillValue = -32767.f;
       TSURF:units = "deg C";
       TSURF: long name = "Sea Surface Temperature";
       TSURF:Category = "Derived";
       TSURF: DataQuality = "Preliminary" ;
       TSURF: Dependencies = "2 RSTB PALT";
float CVINLET(Time) ;
       CVINLET: FillValue = -32767.f;
       CVINLET:units = "none";
       CVINLET:long_name = "CVI Inlet Flag: 0=CVI, 1=ambient" ;
float CVFXFLOWS(Time) ;
       CVFXFLOWS: FillValue = -32767.f;
       CVFXFLOWS:units = "none";
       CVFXFLOWS:long name = "CVI Flow Flag";
float CVPCN(Time) ;
       CVPCN: FillValue = -32767.f;
       CVPCN:units = "mb" ;
       CVPCN:long name = "CVI CN inlet pressure";
float CVTCN(Time) ;
       CVTCN: FillValue = -32767.f;
       CVTCN:units = "deg C";
       CVTCN:long name = "CVI CN inlet temp";
float CVFX5C(Time) ;
       CVFX5C: FillValue = -32767.f;
       CVFX5C:units = "vlpm";
       CVFX5C:long name = "CVI user flow 5, Anderson SEM";
float CVFX6C(Time) ;
       CVFX6C: FillValue = -32767.f;
       CVFX6C:units = "vlpm";
       CVFX6C:long name = "CVI user flow 6, Anderson TEM";
float CVFX7C(Time) ;
       CVFX7C:_FillValue = -32767.f;
       CVFX7C:units = "vlpm";
```

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CVFX7C:long name = "CVI user flow 7, UHawaii AMS";
        float CVFX8C(Time) ;
                CVFX8C: FillValue = -32767.f;
                CVFX8C:units = "vlpm";
                CVFX8C:long name = "CVI user flow 8, unused";
        float CVCWC(Time) ;
                CVCWC: FillValue = -32767.f;
                CVCWC:units = "g/m-3";
                CVCWC:long name = "CVI condensed water content";
        float CVRAD(Time) ;
                CVRAD: FillValue = -32767.f;
                CVRAD:units = "microns";
                CVRAD:long_name = "CVI cut radius";
        float CVCFACT(Time) ;
                CVCFACT:_FillValue = -32767.f;
                CVCFACT:units = "none";
                CVCFACT:long name = "CVI concentration factor";
// global attributes:
                :Source = "NCAR Research Aviation Facility" ;
                :Address = "P.O. Box 3000, Boulder, CO 80307-3000";
                :Phone = (303) 497-1030'';
                :Conventions = "NCAR-RAF/nimbus";
                :ConventionsURL = "http://www.eol.ucar.edu/raf/Software/netCDF.html";
                :ConventionsVersion = "1.3";
                :ProcessorRevision = "4470";
                :ProcessorURL = "http://svn/svn/raf/trunk/nimbus" ;
                :DateProcessed = "2009-06-24 21:43:16 +0000";
                :ProjectName = "VOCALS" ;
                :Platform = "N130AR";
                :ProjectNumber = "VOCALS";
                :FlightNumber = "rf01";
                :FlightDate = "10/15/2008";
                :InterpolationMethod = "Linear" ;
                :coordinates = "LONC LATC GGALT Time" ;
                :wind field = "WSC WDC WIC" ;
                :landmarks = "39.9088 -105.117 jeffco,-12.0833 -77 lima,-18.4833 -70.3167
arica, -20.2167 -70.166 iquique";
                :TimeInterval = "16:48:00-20:12:00";
                :Categories = "Position, Thermodynamic, Aircraft State, Atmos. State, Liquid
Water, Uncorr \ 'd Raw, Wind, PMS Probe, Housekeeping, Chemistry, Radiation, Non-Standard ;
```