

**GLOBAL PRECIPITATION MEASUREMENT
PRECIPITATION PROCESSING SYSTEM**

**File Specification
3DPR**

Preliminary Version

September 21, 2015

0.1 3DPR - DPR Full Product

3DPR, "DPR Full Product", computes statistics of the DPR measurements at both a low horizontal resolution (G1, $5^\circ \times 5^\circ$ latitude/longitude) and a high horizontal resolution (G2, $0.25^\circ \times 0.25^\circ$ latitude/longitude). The product can be monthly or daily.

Histograms have the following category thresholds, where
 $\text{histbin}(i) = \text{cat}(i)$ less than x less than or equal to $\text{cat}(i+1)$

```
cat rain = [ 0.01,      ! mm/h (logarithmic steps)
             0.10,    0.13,    0.17,    0.23,    0.30,    0.40,
             0.52,    0.69,    0.91,    1.20,    1.58,    2.08,
             2.75,    3.62,    4.77,    6.29,    8.29,    10.92,
             14.40,   18.97,   25.00,   32.95,   43.43,   57.24,
             75.44,   99.43,  131.04,  172.71,  227.63,  300.00 ],
```

```
cat Z = [ 0.01,      ! dBZ
          6.0,     8.0,    10.0,   12.0,   14.0,   16.0,
          18.0,   20.0,   22.0,   24.0,   26.0,   28.0,
          30.0,   32.0,   34.0,   36.0,   38.0,   40.0,
          42.0,   44.0,   46.0,   48.0,   50.0,   52.0,
          54.0,   56.0,   58.0,   60.0,   62.0,   64.0 ],
```

```
cat integratedWater = [ 0.0,      ! kg/m^2
                       200.0,   400.0,   600.0,   800.0,  1000.0,  1200.0,
                       1400.0,  1600.0,  1800.0,  2000.0,  2200.0,  2400.0,
                       2600.0,  2800.0,  3000.0,  3200.0,  3400.0,  3600.0,
                       3800.0,  4000.0,  4200.0,  4400.0,  4600.0,  4800.0,
                       5000.0,  5200.0,  5400.0,  5600.0,  5800.0,  6000.0 ],
```

```
cat bbhgt = [ 10.0,      ! meters
              250.0,   500.0,   750.0,  1000.0,  1250.0,  1500.0,
              1750.0,  2000.0,  2250.0,  2500.0,  2750.0,  3000.0,
              3250.0,  3500.0,  3750.0,  4000.0,  4250.0,  4500.0,
              4750.0,  5000.0,  5250.0,  5500.0,  5750.0,  6000.0,
              6250.0,  6500.0,  6750.0,  7000.0,  7500.0, 20000.0 ],
```

```
cat bbwidth = [ 0.0,      ! meters
                125.0,   250.0,   375.0,   500.0,   625.0,   750.0,
                875.0,  1000.0,  1125.0,  1250.0,  1375.0,  1500.0,
                1625.0,  1750.0,  1875.0,  2000.0,  2125.0,  2250.0,
                2375.0,  2500.0,  2625.0,  2750.0,  2875.0,  3000.0,
                3125.0,  3250.0,  3375.0,  3500.0,  3625.0,  3750.0 ],
```

```

cat stormh = 1000.0*[ 0.01,    ! km (convert m > km)
    0.5,    1.0,    1.5,    2.0,    2.5,    3.0,
    3.5,    4.0,    4.5,    5.0,    5.5,    6.0,
    6.5,    7.0,    7.5,    8.0,    8.5,    9.0,
    9.5,    10.0,   10.5,   11.0,   11.5,   12.0,
    12.5,   13.0,   14.0,   15.0,   16.0,   20.0 ],

cat epsilon = [ 0.0,
    0.1,    0.2,    0.3,    0.4,    0.5,    0.6,
    0.7,    0.8,    0.9,    1.0,    1.1,    1.2,
    1.3,    1.4,    1.5,    1.6,    1.7,    1.8,
    1.9,    2.0,    2.1,    2.2,    2.3,    2.4,
    2.5,    2.6,    2.7,    2.8,    2.9,    3.0 ],

cat nubf = [ 1.0,
    1.05,   1.1,    1.15,   1.2,    1.25,   1.3,
    1.35,   1.4,    1.45,   1.5,    1.55,   1.6,
    1.65,   1.7,    1.75,   1.8,    1.85,   1.9,
    1.95,   2.0,    2.1,    2.2,    2.3,    2.4,
    2.5,    2.6,    2.7,    2.8,    2.9,    3.0 ],

cat pia = [ 0.01,
    0.1,    0.2,    0.3,    0.4,    0.5,    0.6,
    0.8,    1.0,    1.2,    1.4,    1.6,    1.8,
    2.0,    2.5,    3.0,    3.5,    4.0,    4.5,
    5.0,    5.5,    6.0,    7.0,    8.0,    9.0,
    10.0,   15.0,   20.0,   25.0,   30.0,   100.0 ],

cat dBNw = [ 0.1,
    1.0,    2.0,    4.0,    6.0,    8.0,    10.0,
    12.0,   14.0,   16.0,   18.0,   20.0,   22.0,
    24.0,   26.0,   28.0,   30.0,   32.0,   34.0,
    36.0,   38.0,   40.0,   42.0,   44.0,   46.0,
    48.0,   50.0,   52.0,   54.0,   56.0,   60.0 ],

cat Dm = [ 0.1,    ! mm
    0.2,    0.3,    0.4,    0.5,    0.6,    0.7,
    0.8,    0.9,    1.0,    1.1,    1.2,    1.3,
    1.4,    1.5,    1.6,    1.7,    1.8,    1.9,
    2.0,    2.1,    2.2,    2.3,    2.4,    2.5,
    2.6,    2.7,    2.8,    2.9,    3.0,    4.0 ]

```

Dimension definitions:

ltL	28	Number of low resolution 5° grid intervals of latitude from 70°S to 70°N .
lnL	72	Number of low resolution 5° grid intervals of longitude from 180°W to 180°E .
ltH	536	Number of high resolution 0.25° grid intervals of latitude from 67°S to 67°N .
lnH	1440	Number of high resolution 0.25° grid intervals of longitude from 180°W to 180°E .
chn	5	Number of channels: Ku, Ka, KaHS, DPR, KuMS.
inst	4	Number of instruments: Ku, Ka, KaHS, KuMS.
hgt	5	Number of heights above the earth ellipsoid: 2, 4, 6, 10, and 15 km.
tim	24	Number of hours (local time).
ang	7	Number of angles. The meaning of ang is different for each channel. For Ku channel all indeces are used with the meaning 0, 1, 2,...,6 = angle bins 24, (20,28), (16,32), (12,36), (8,40), (3,44), and (0,48). For Ka channel 4 indeces are used with the meaning 0, 1, 2, 3 = angle bins 12, (8,16), (4,20), and (0,24). For KaHS channel 4 indeces are used with the meaning 0, 1, 2, 3 = angle bins (11,2), (7,16), (3,20), and (0,23).
rt	3	Number of rain types: stratiform, convective, all.
st	3	Number of surface types: ocean, land, all.
bin	30	Number of bins in histogram. The thresholds are different for different variables. See the introduction to this algorithm.

Figure 1 through Figure 74 show the structure of this product. The text below describes the contents of objects in the structure, the C Structure Header File and the Fortran Structure Header File.

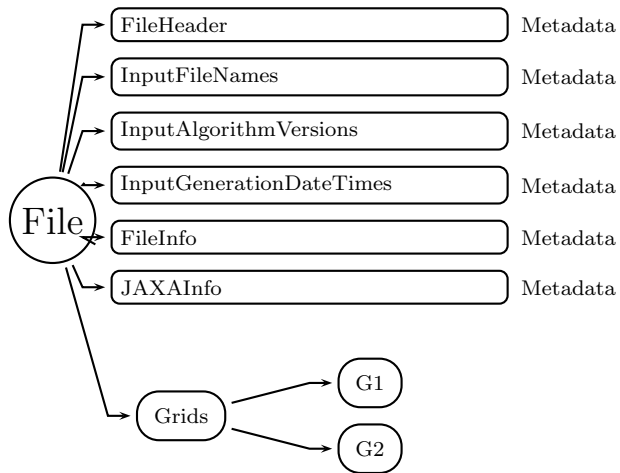
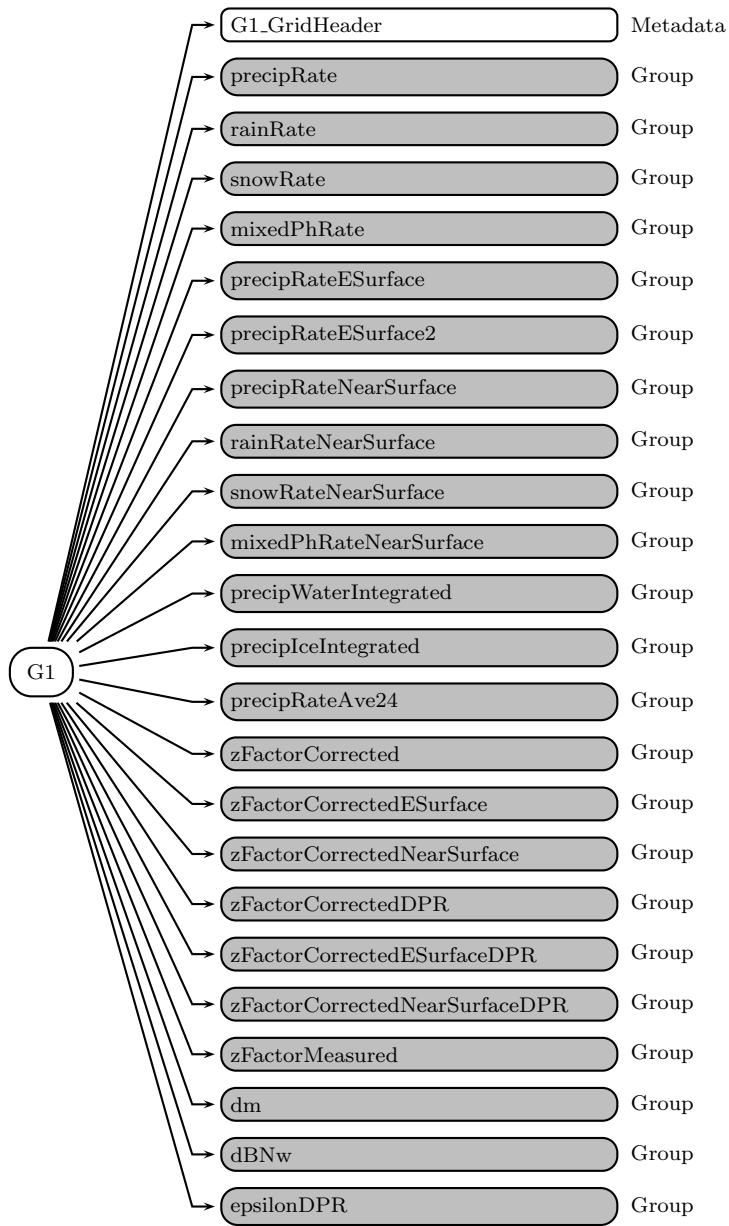


Figure 1: Data Format Structure for 3DPR, DPR Full Product



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Figure 2: Data Format Structure for 3DPR, G1, G1

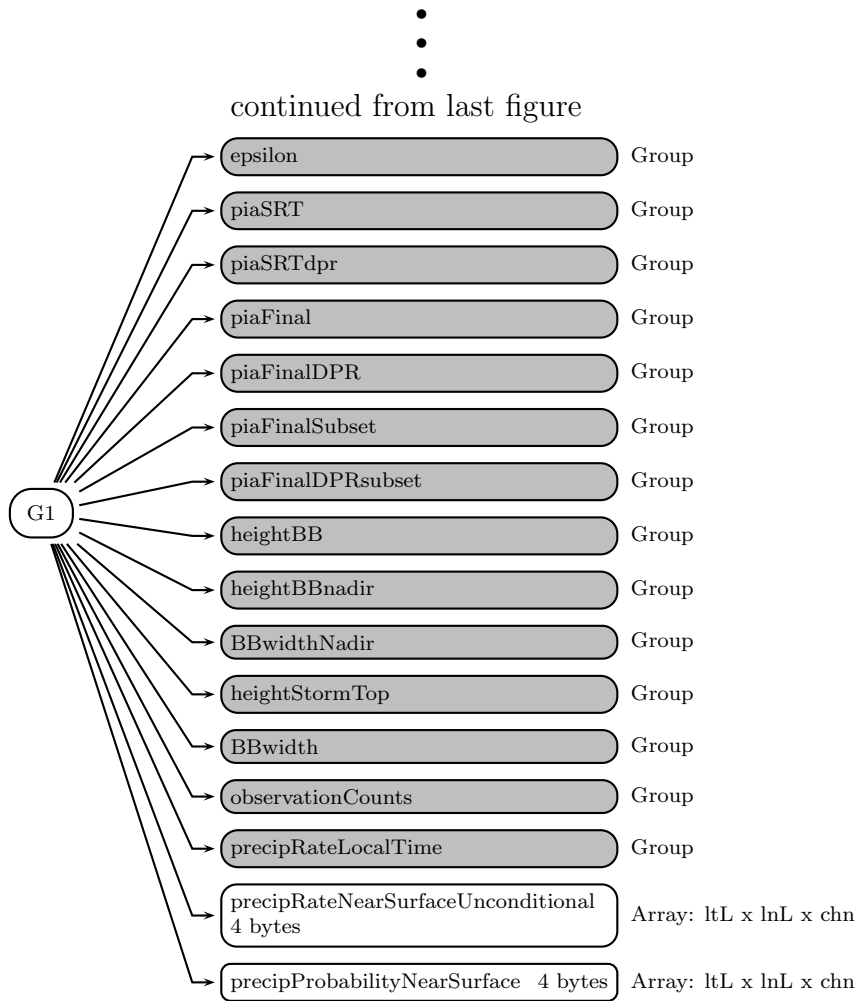
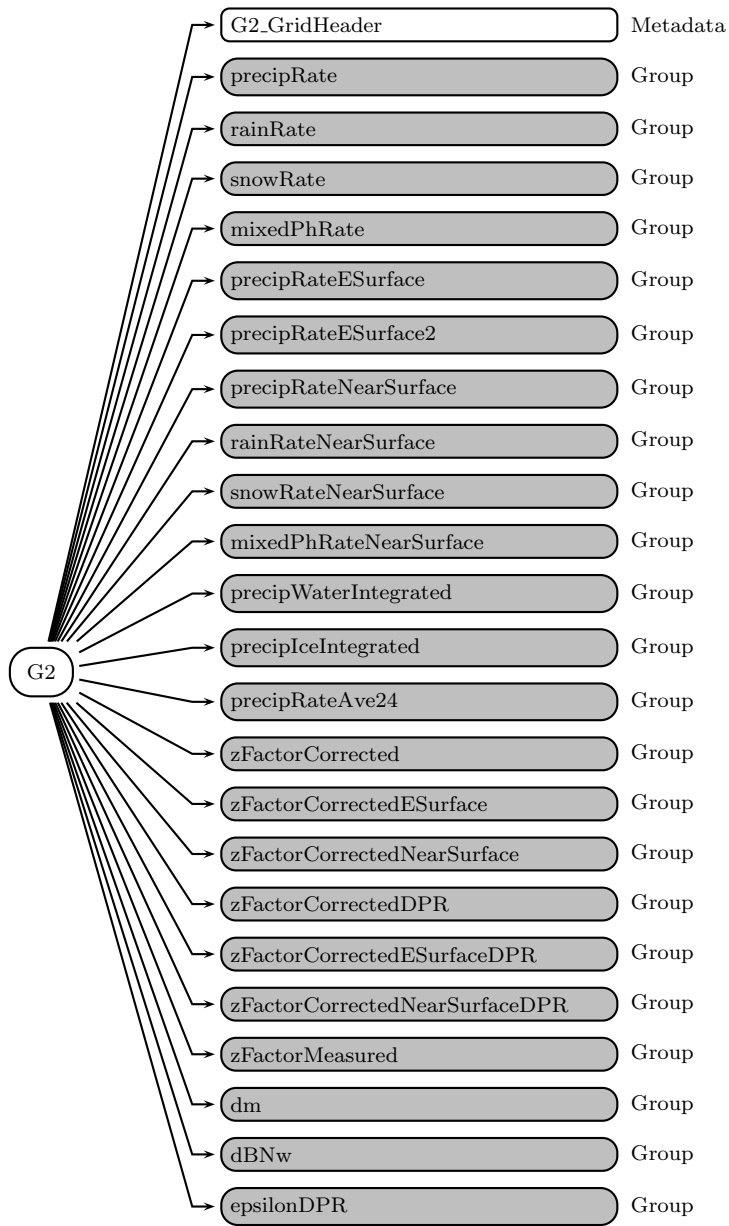


Figure 3: Data Format Structure for 3DPR, G1



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Figure 4: Data Format Structure for 3DPR, G2, G2

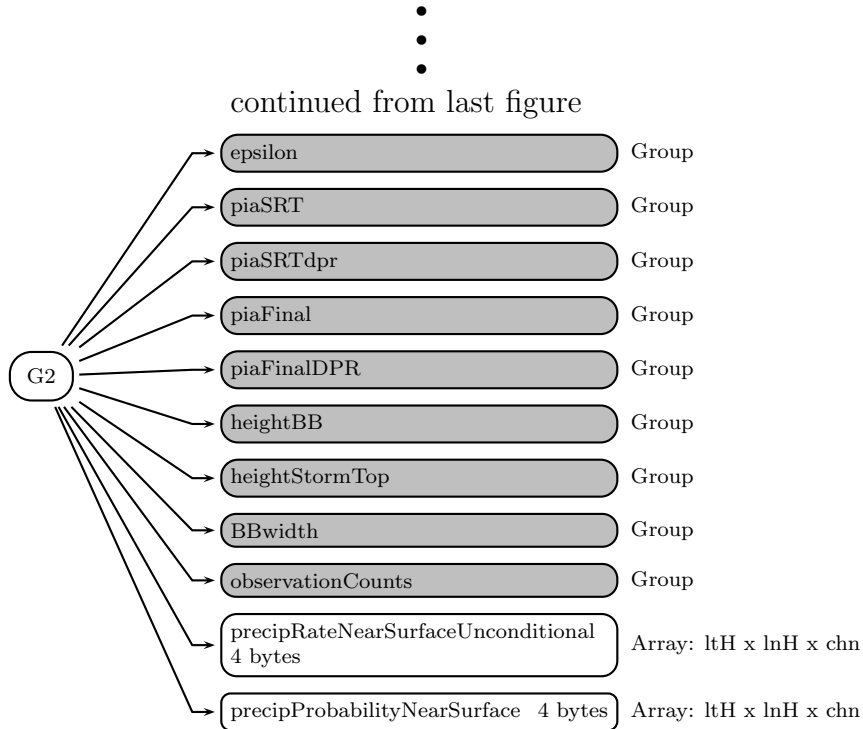


Figure 5: Data Format Structure for 3DPR, G2

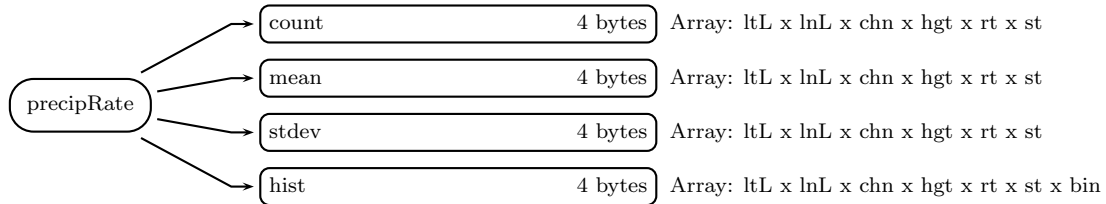


Figure 6: Data Format Structure for 3DPR, G1, precipRate

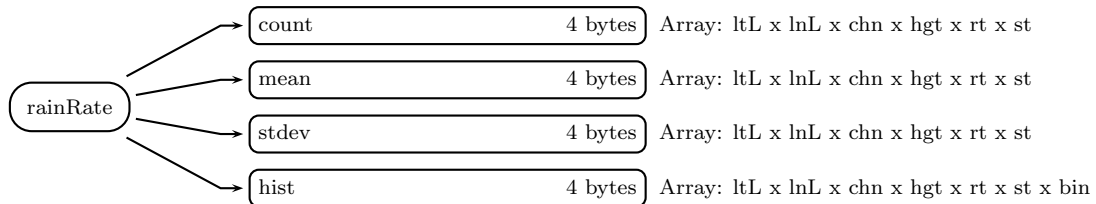


Figure 7: Data Format Structure for 3DPR, G1, rainRate

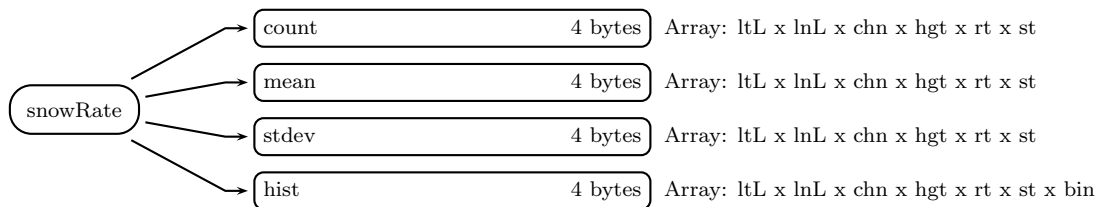


Figure 8: Data Format Structure for 3DPR, G1, snowRate

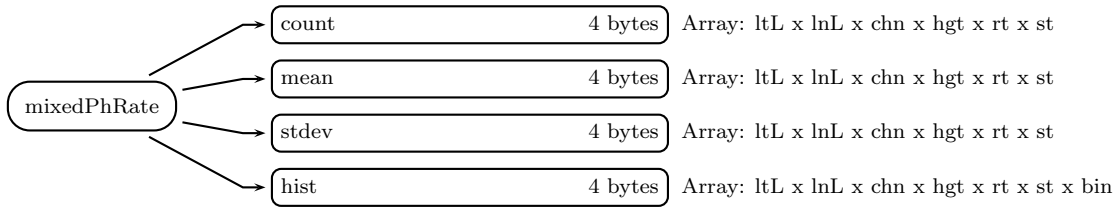


Figure 9: Data Format Structure for 3DPR, G1, `mixedPhRate`

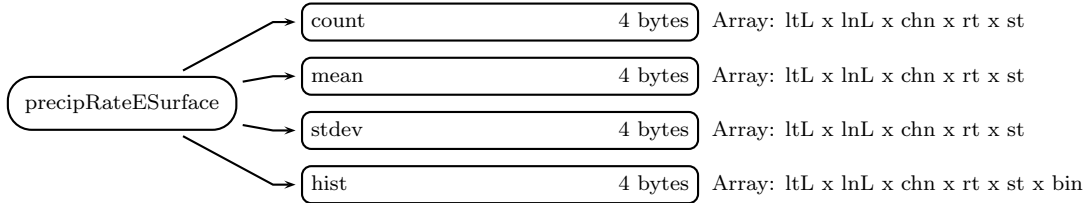


Figure 10: Data Format Structure for 3DPR, G1, `precipRateESurface`

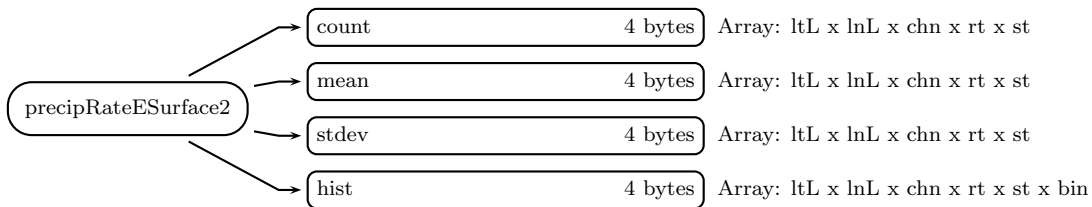


Figure 11: Data Format Structure for 3DPR, G1, `precipRateESurface2`

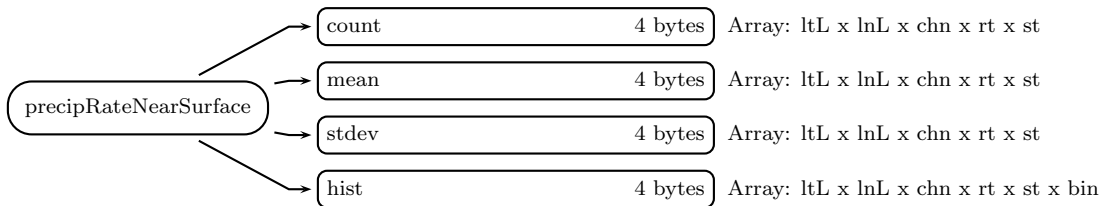


Figure 12: Data Format Structure for 3DPR, G1, `precipRateNearSurface`

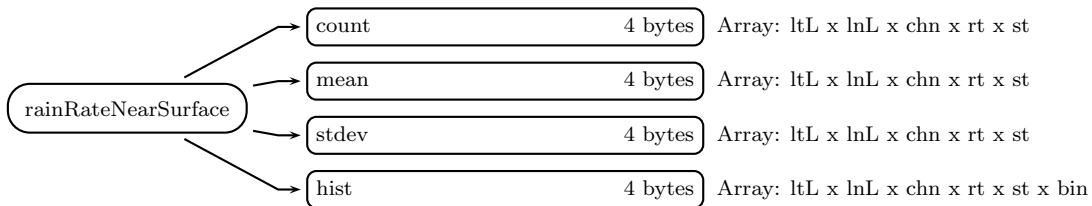


Figure 13: Data Format Structure for 3DPR, G1, `rainRateNearSurface`

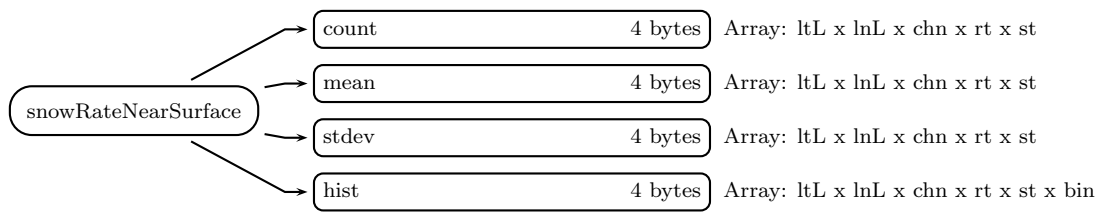


Figure 14: Data Format Structure for 3DPR, G1, snowRateNearSurface

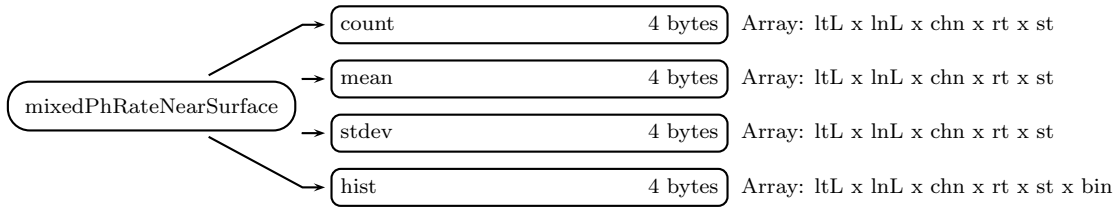


Figure 15: Data Format Structure for 3DPR, G1, `mixedPhRateNearSurface`

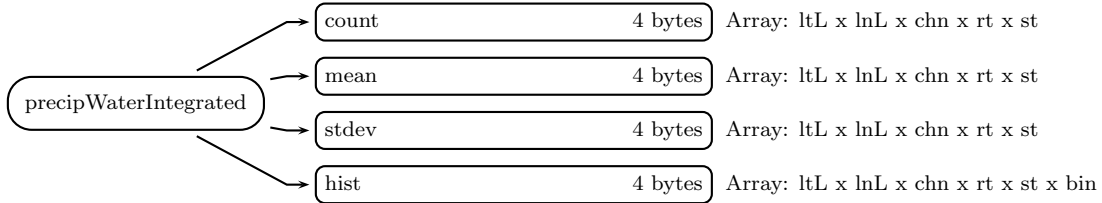


Figure 16: Data Format Structure for 3DPR, G1, `precipWaterIntegrated`

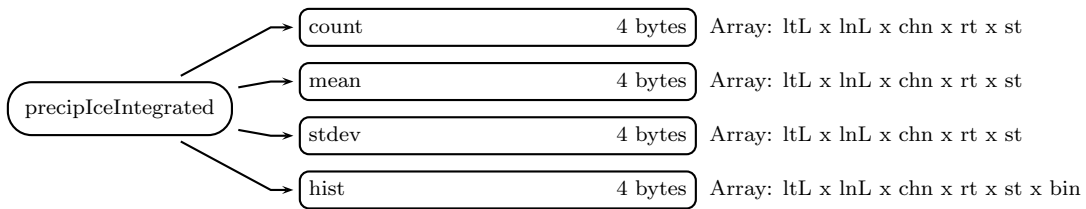


Figure 17: Data Format Structure for 3DPR, G1, `precipIceIntegrated`

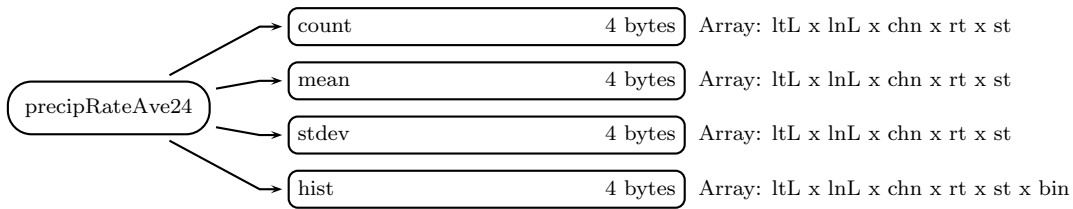


Figure 18: Data Format Structure for 3DPR, G1, `precipRateAve24`

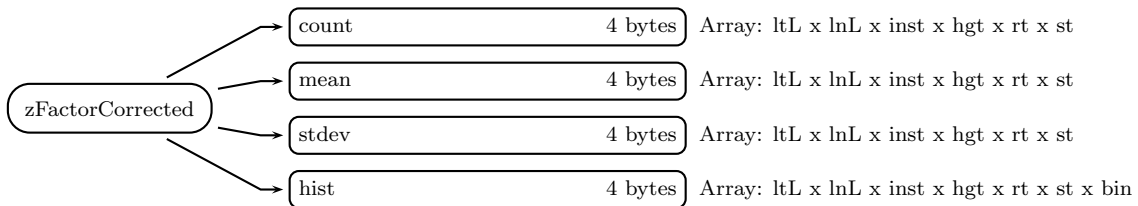


Figure 19: Data Format Structure for 3DPR, G1, `zFactorCorrected`

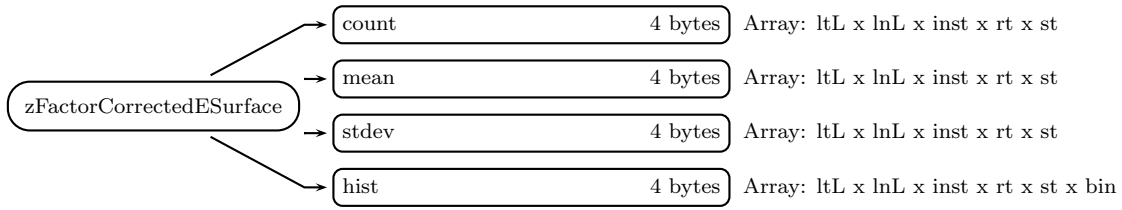


Figure 20: Data Format Structure for 3DPR, G1, zFactorCorrectedESurface



Figure 21: Data Format Structure for 3DPR, G1, zFactorCorrectedNearSurface

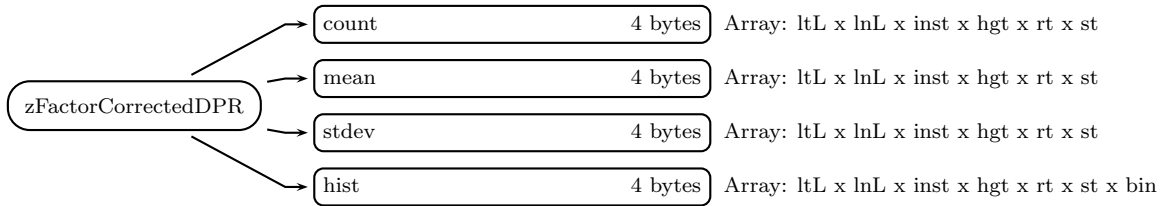


Figure 22: Data Format Structure for 3DPR, G1, zFactorCorrectedDPR

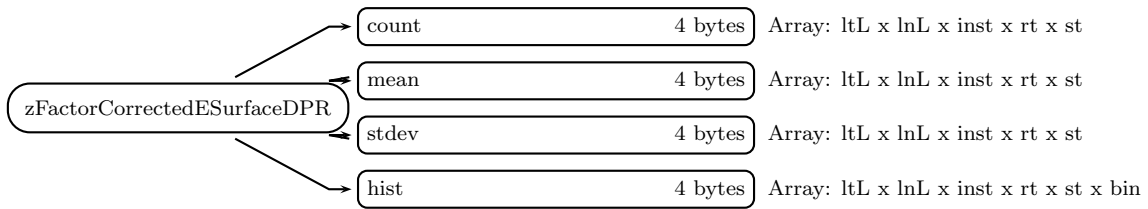


Figure 23: Data Format Structure for 3DPR, G1, zFactorCorrectedESurfaceDPR

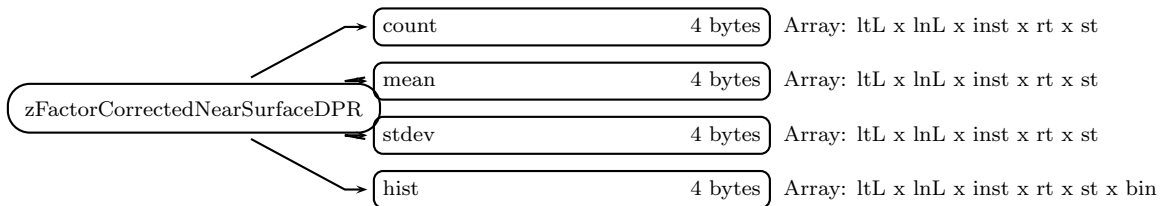


Figure 24: Data Format Structure for 3DPR, G1, zFactorCorrectedNearSurfaceDPR

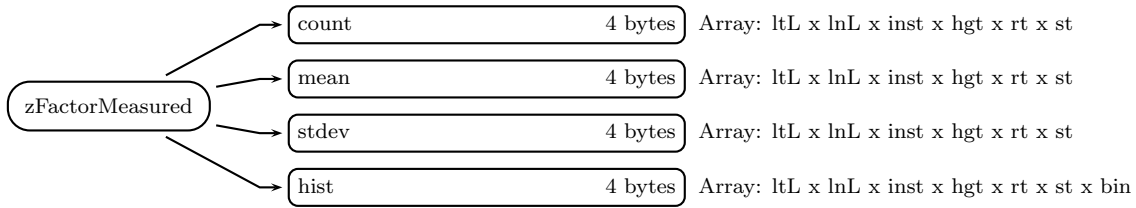


Figure 25: Data Format Structure for 3DPR, G1, zFactorMeasured

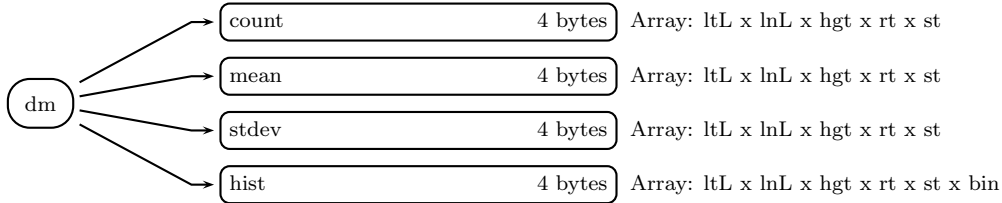


Figure 26: Data Format Structure for 3DPR, G1, dm

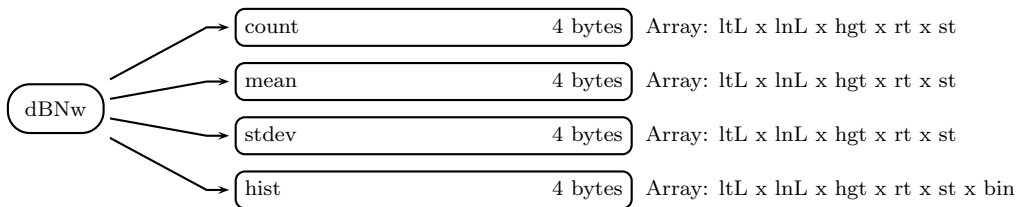


Figure 27: Data Format Structure for 3DPR, G1, dBnw

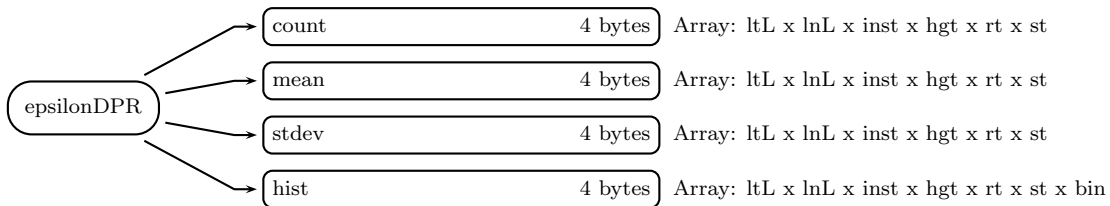


Figure 28: Data Format Structure for 3DPR, G1, epsilonDPR

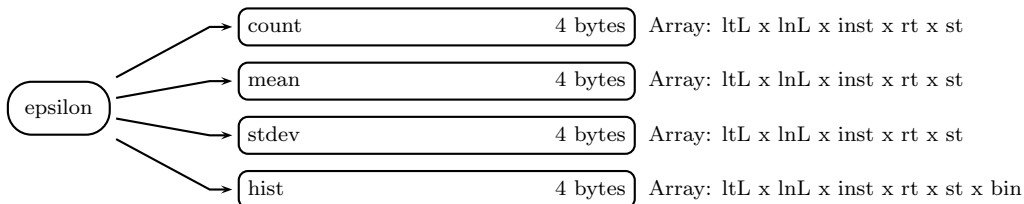


Figure 29: Data Format Structure for 3DPR, G1, epsilon

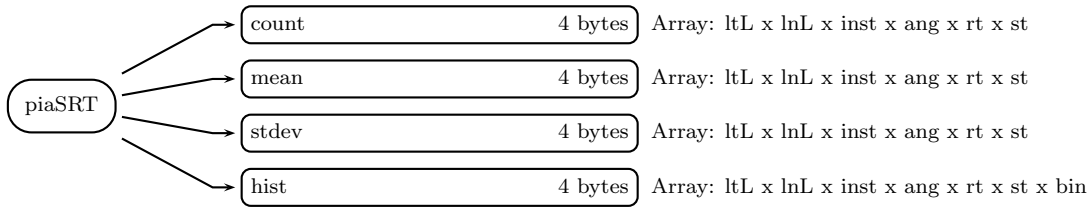


Figure 30: Data Format Structure for 3DPR, G1, `piaSRT`

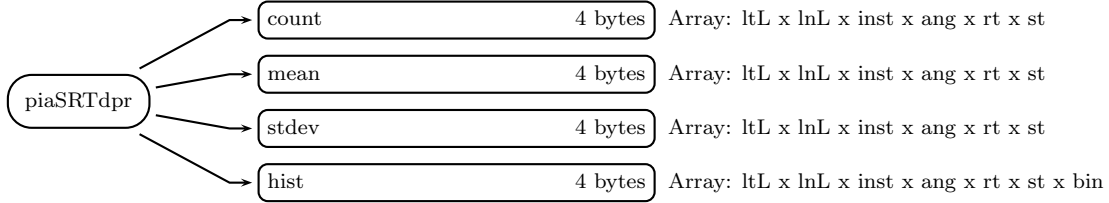


Figure 31: Data Format Structure for 3DPR, G1, `piaSRTdpr`

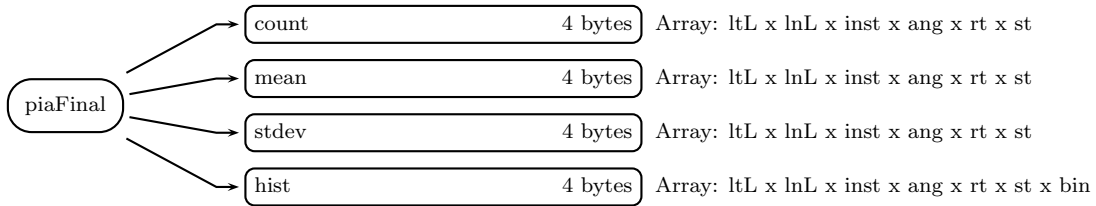


Figure 32: Data Format Structure for 3DPR, G1, `piaFinal`

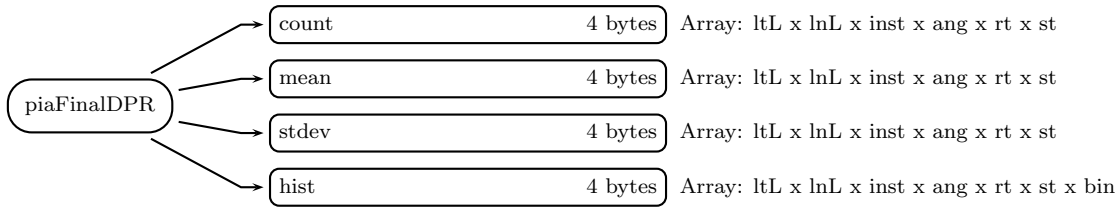


Figure 33: Data Format Structure for 3DPR, G1, `piaFinalDPR`

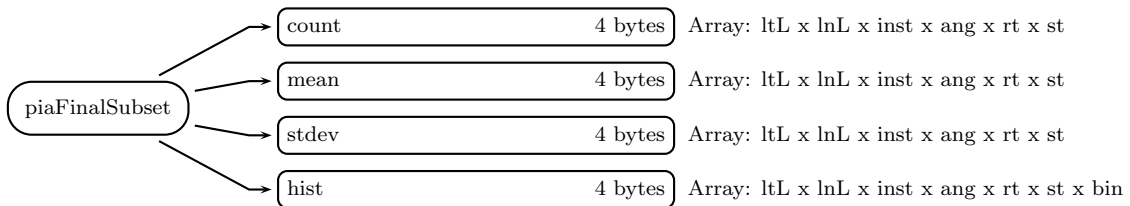


Figure 34: Data Format Structure for 3DPR, G1, `piaFinalSubset`

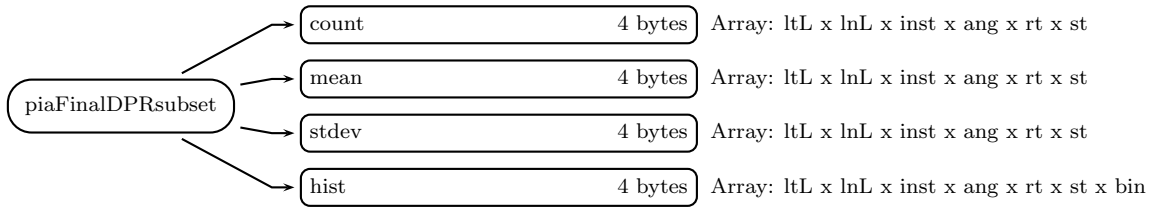


Figure 35: Data Format Structure for 3DPR, G1, `piaFinalDPRsubset`

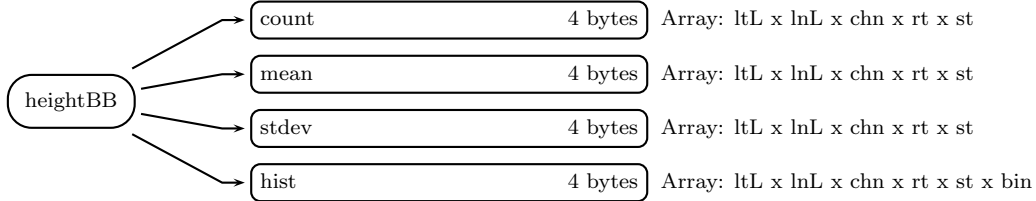


Figure 36: Data Format Structure for 3DPR, G1, `heightBB`

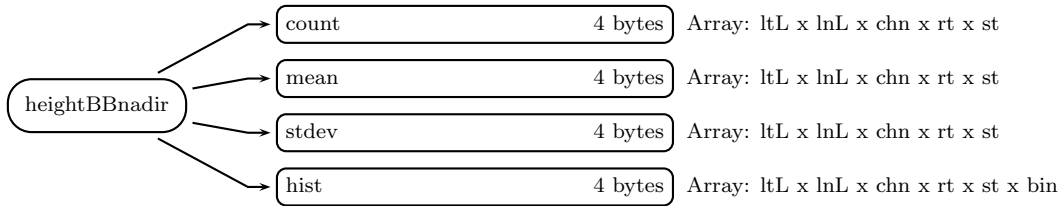


Figure 37: Data Format Structure for 3DPR, G1, `heightBBnadir`

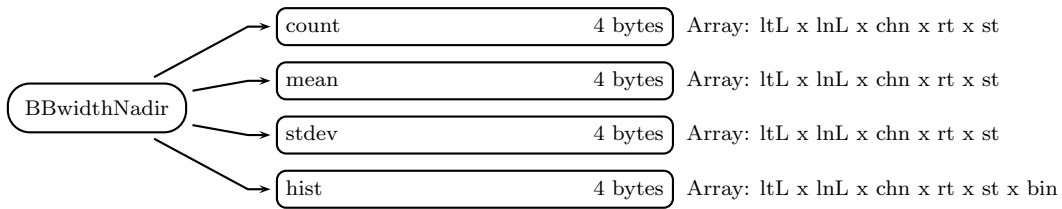


Figure 38: Data Format Structure for 3DPR, G1, `BBwidthNadir`

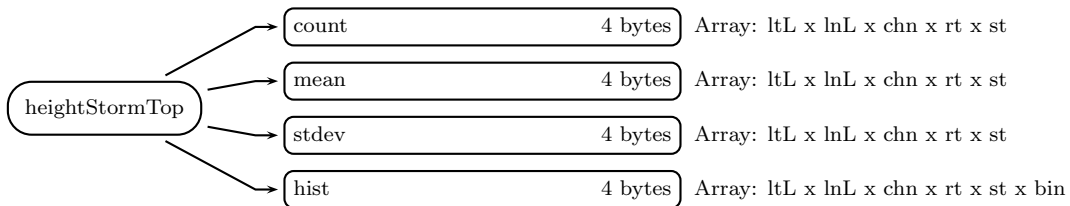


Figure 39: Data Format Structure for 3DPR, G1, `heightStormTop`

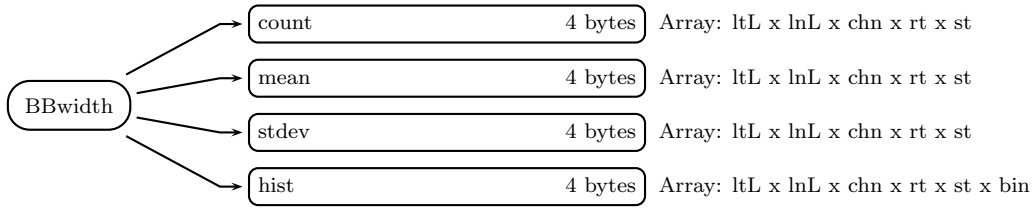


Figure 40: Data Format Structure for 3DPR, G1, BBwidth

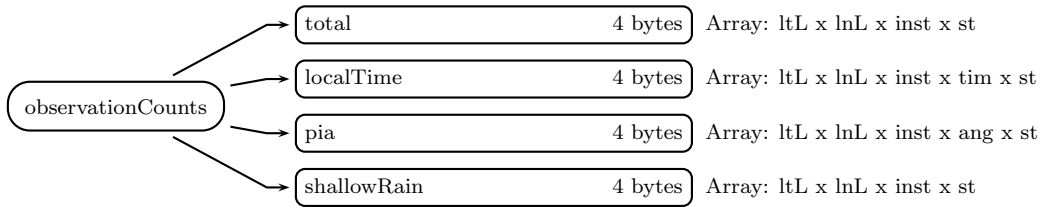


Figure 41: Data Format Structure for 3DPR, G1, observationCounts

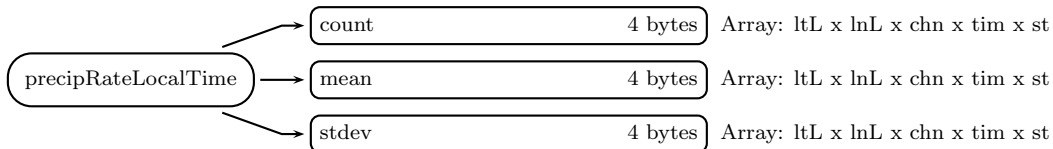


Figure 42: Data Format Structure for 3DPR, G1, precipRateLocalTime

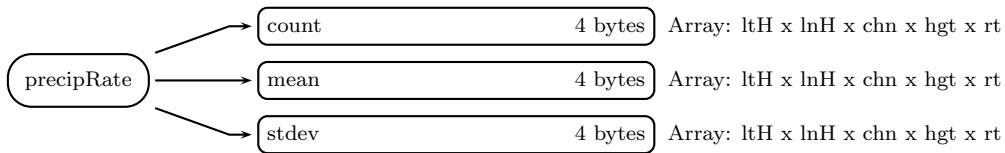


Figure 43: Data Format Structure for 3DPR, G2, precipRate

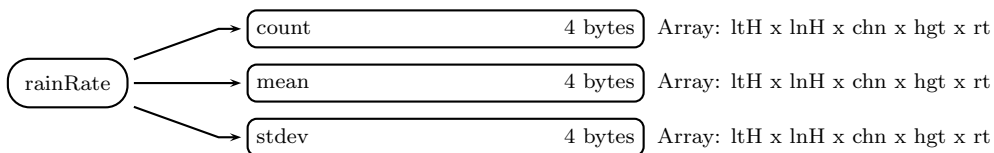


Figure 44: Data Format Structure for 3DPR, G2, rainRate

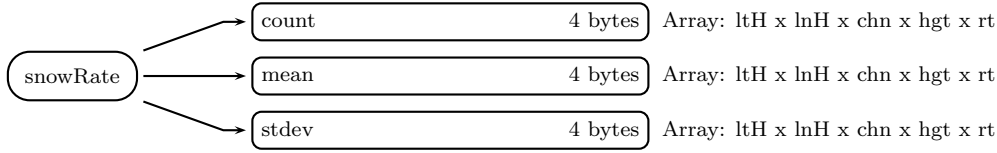


Figure 45: Data Format Structure for 3DPR, G2, snowRate

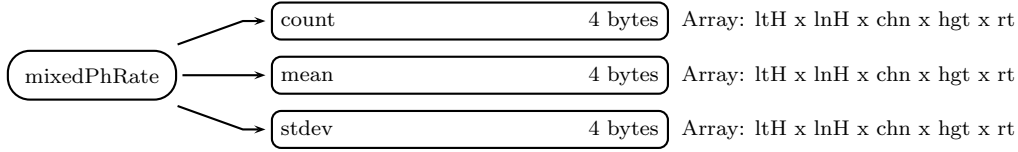


Figure 46: Data Format Structure for 3DPR, G2, mixedPhRate

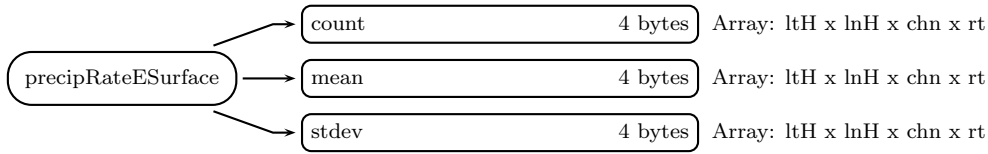


Figure 47: Data Format Structure for 3DPR, G2, precipRateESurface

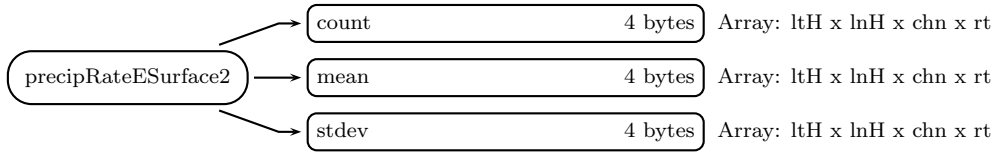


Figure 48: Data Format Structure for 3DPR, G2, precipRateESurface2

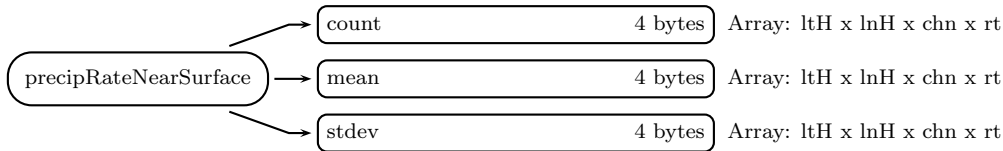


Figure 49: Data Format Structure for 3DPR, G2, precipRateNearSurface

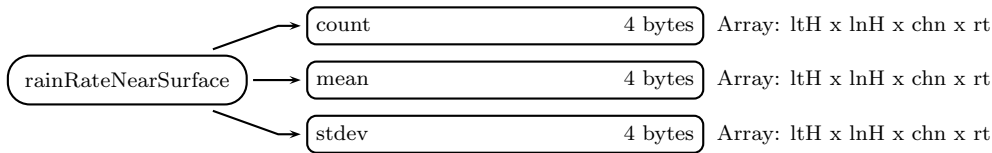


Figure 50: Data Format Structure for 3DPR, G2, rainRateNearSurface

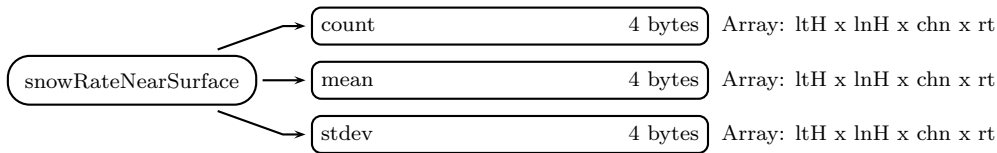


Figure 51: Data Format Structure for 3DPR, G2, snowRateNearSurface

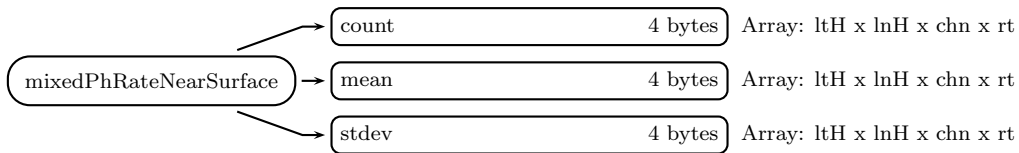


Figure 52: Data Format Structure for 3DPR, G2, `mixedPhRateNearSurface`

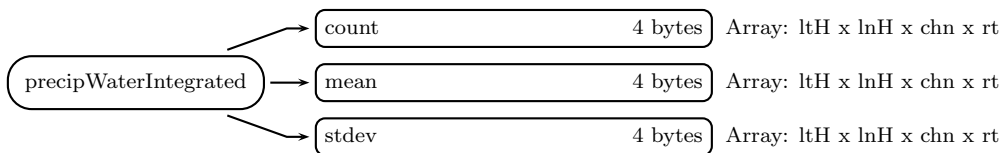


Figure 53: Data Format Structure for 3DPR, G2, `precipWaterIntegrated`

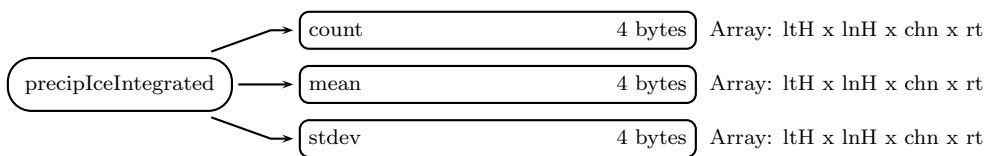


Figure 54: Data Format Structure for 3DPR, G2, `precipIceIntegrated`

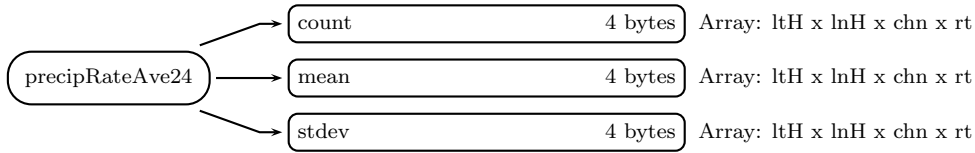


Figure 55: Data Format Structure for 3DPR, G2, precipRateAve24

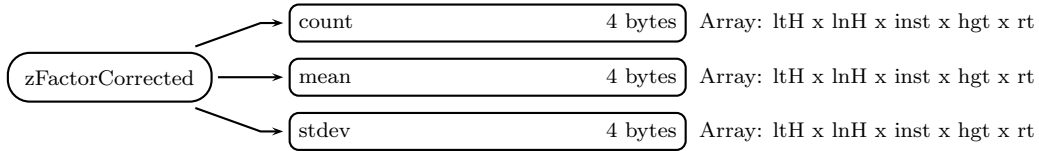


Figure 56: Data Format Structure for 3DPR, G2, zFactorCorrected

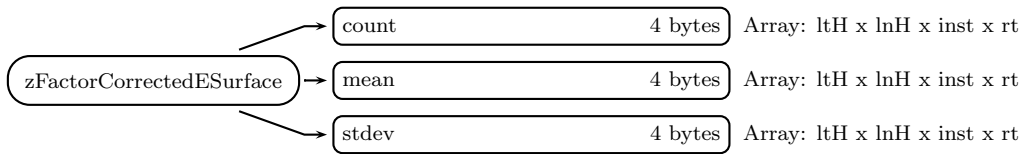


Figure 57: Data Format Structure for 3DPR, G2, zFactorCorrectedESurface

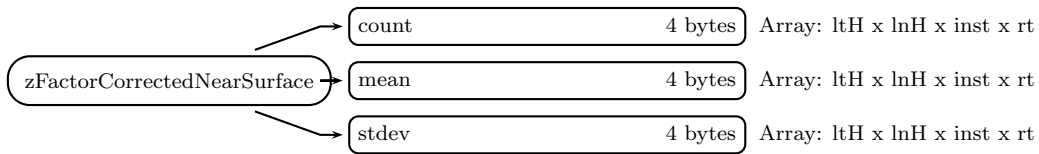


Figure 58: Data Format Structure for 3DPR, G2, zFactorCorrectedNearSurface

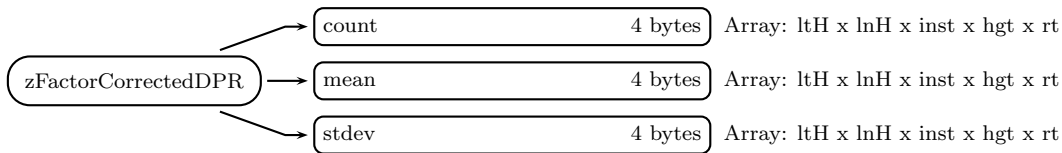


Figure 59: Data Format Structure for 3DPR, G2, zFactorCorrectedDPR

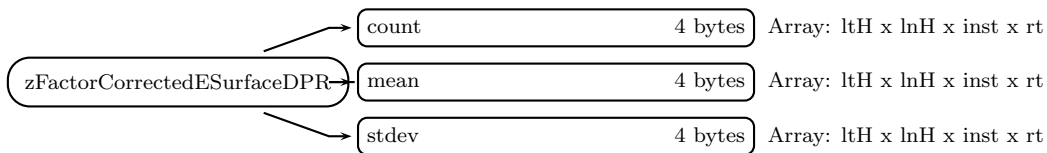


Figure 60: Data Format Structure for 3DPR, G2, zFactorCorrectedESurfaceDPR

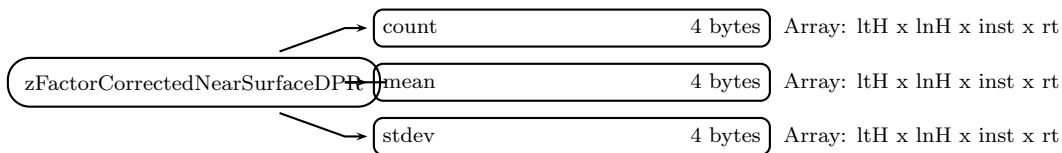


Figure 61: Data Format Structure for 3DPR, G2, zFactorCorrectedNearSurfaceDPR

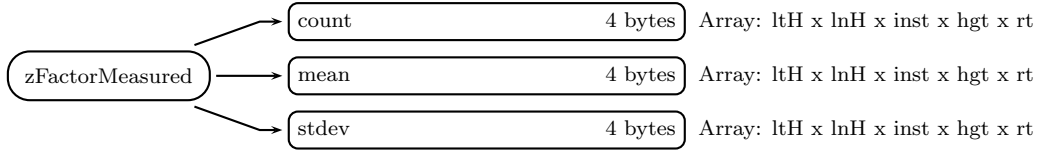


Figure 62: Data Format Structure for 3DPR, G2, zFactorMeasured

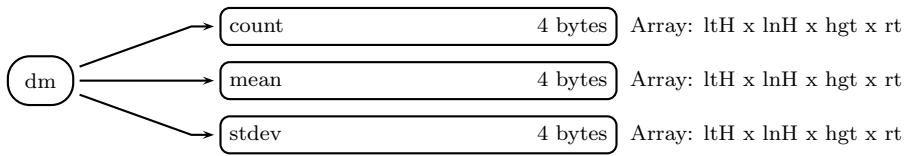


Figure 63: Data Format Structure for 3DPR, G2, dm

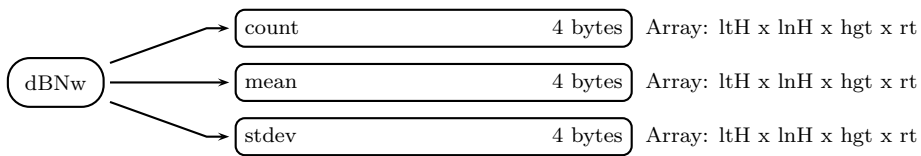


Figure 64: Data Format Structure for 3DPR, G2, dBNw

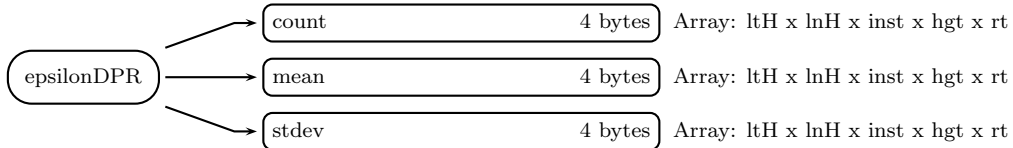


Figure 65: Data Format Structure for 3DPR, G2, epsilonDPR

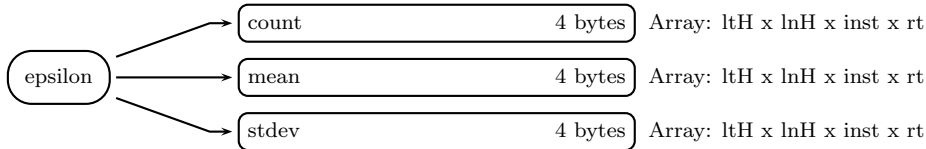


Figure 66: Data Format Structure for 3DPR, G2, epsilon

FileHeader (Metadata):

FileHeader contains general metadata. This group appears in all data products. See Metadata for GPM Products for details.

InputFileNames (Metadata):

InputFileNames contains a list of input file names for this granule. See Metadata for GPM Products for details.

InputAlgorithmVersions (Metadata):

InputAlgorithmVersions contains a list of input algorithm versions for this granule. See Metadata for GPM Products for details.

InputGenerationDateTimes (Metadata):

InputGenerationDateTimes contains a list of input generation datetimes. See Metadata for GPM Products for details.

FileInfo (Metadata):

FileInfo contains metadata used by the PPS I/O Toolkit (TKIO). This group appears in all data products. See Metadata for GPM Products for details.

JAXAInfo (Metadata):

JAXAInfo contains metadata requested by JAXA. Used by DPR algorithms and GSMaP. See Metadata for GPM Products for details.

Grids (Group)

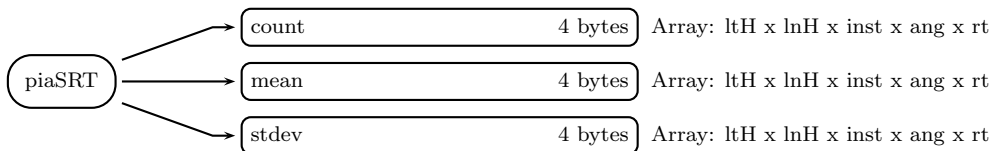


Figure 67: Data Format Structure for 3DPR, G2, piaSRT

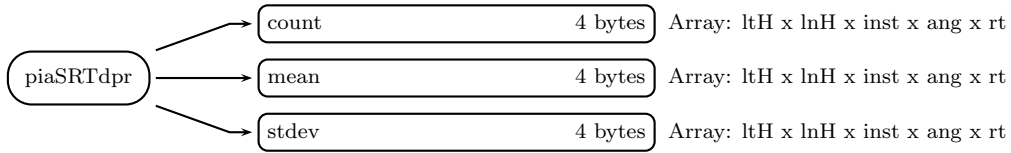


Figure 68: Data Format Structure for 3DPR, G2, piaSRTdpr

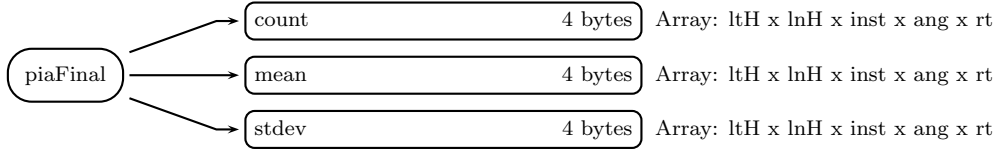


Figure 69: Data Format Structure for 3DPR, G2, piaFinal

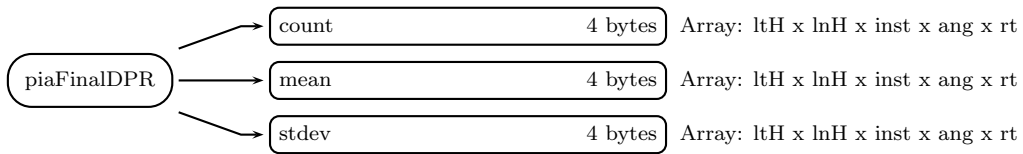


Figure 70: Data Format Structure for 3DPR, G2, piaFinalDPR

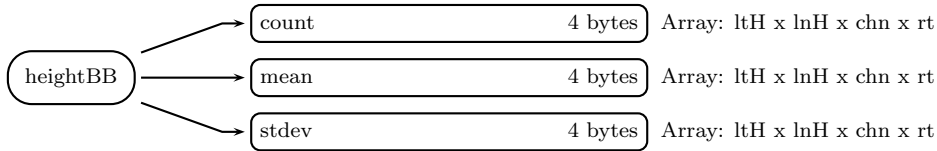


Figure 71: Data Format Structure for 3DPR, G2, heightBB

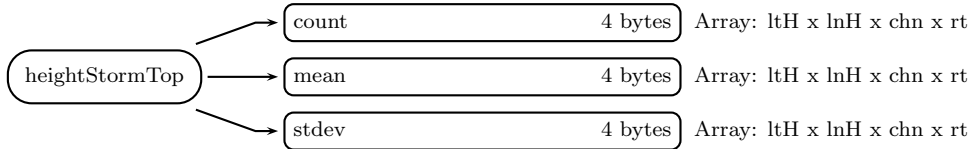


Figure 72: Data Format Structure for 3DPR, G2, heightStormTop

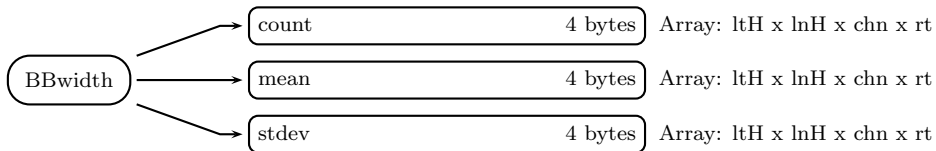


Figure 73: Data Format Structure for 3DPR, G2, BBwidth

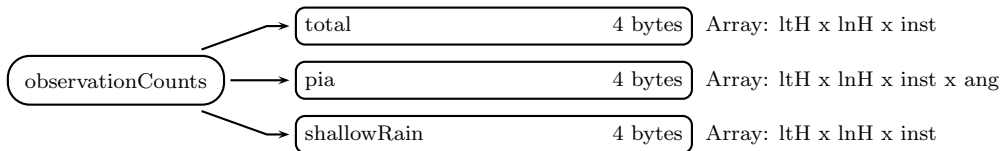


Figure 74: Data Format Structure for 3DPR, G2, observationCounts

G1 (Grid)

G1_GridHeader (Metadata):

GridHeader contains metadata defining the grids in the grid structure. See Metadata for GPM Products for details.

precipRate (Group in G1)

Conditional Precipitation Rate.

count (4-byte integer, array size: ltL x lnL x chn x hgt x rt x st):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltL x lnL x chn x hgt x rt x st):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x chn x hgt x rt x st):

Standard deviation. Special values are defined as:

-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x chn x hgt x rt x st x bin):

Histogram. Special values are defined as:

-9999 Missing value

rainRate (Group in G1)

Conditional liquid water Rain Rate.

count (4-byte integer, array size: ltL x lnL x chn x hgt x rt x st):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltL x lnL x chn x hgt x rt x st):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x chn x hgt x rt x st):

Standard deviation. Special values are defined as:

-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x chn x hgt x rt x st x bin):

Histogram. Special values are defined as:

-9999 Missing value

snowRate (Group in G1)

Conditional Snowfall Rate.

count (4-byte integer, array size: ltL x lnL x chn x hgt x rt x st):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltL x lnL x chn x hgt x rt x st):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x chn x hgt x rt x st):

Standard deviation. Special values are defined as:

-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x chn x hgt x rt x st x bin):

Histogram. Special values are defined as:

-9999 Missing value

mixedPhRate (Group in G1)

Conditional Mixed Phase Precipitation Rate.

count (4-byte integer, array size: ltL x lnL x chn x hgt x rt x st):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltL x lnL x chn x hgt x rt x st):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x chn x hgt x rt x st):

Standard deviation. Special values are defined as:

-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x chn x hgt x rt x st x bin):

Histogram. Special values are defined as:

-9999 Missing value

precipRateESurface (Group in G1)

Conditional Estimated Surface Precipitation Rate.

count (4-byte integer, array size: ltL x lnL x chn x rt x st):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltL x lnL x chn x rt x st):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x chn x rt x st):
Standard deviation. Special values are defined as:
-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x chn x rt x st x bin):
Histogram. Special values are defined as:
-9999 Missing value

precipRateESurface2 (Group in G1)

Alternate Conditional Estimated Surface Precipitation Rate.

count (4-byte integer, array size: ltL x lnL x chn x rt x st):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltL x lnL x chn x rt x st):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x chn x rt x st):
Standard deviation. Special values are defined as:
-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x chn x rt x st x bin):
Histogram. Special values are defined as:
-9999 Missing value

precipRateNearSurface (Group in G1)

Conditional Precipitation Rate at Near Surface Level.

count (4-byte integer, array size: ltL x lnL x chn x rt x st):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltL x lnL x chn x rt x st):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x chn x rt x st):
Standard deviation. Special values are defined as:
-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x chn x rt x st x bin):
Histogram. Special values are defined as:
-9999 Missing value

rainRateNearSurface (Group in G1)

Unconditional liquid Rain Rate at Near Surface Level.

count (4-byte integer, array size: ltL x lnL x chn x rt x st):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltL x lnL x chn x rt x st):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x chn x rt x st):
Standard deviation. Special values are defined as:
-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x chn x rt x st x bin):
Histogram. Special values are defined as:
-9999 Missing value

snowRateNearSurface (Group in G1)

Conditional Snow Rate at Near Surface Level.

count (4-byte integer, array size: ltL x lnL x chn x rt x st):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltL x lnL x chn x rt x st):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x chn x rt x st):
Standard deviation. Special values are defined as:
-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x chn x rt x st x bin):
Histogram. Special values are defined as:
-9999 Missing value

mixedPhRateNearSurface (Group in G1)

Conditional Mixed Phase Precipitation Rate at Near Surface Level.

count (4-byte integer, array size: ltL x lnL x chn x rt x st):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltL x lnL x chn x rt x st):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x chn x rt x st):
Standard deviation. Special values are defined as:
-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x chn x rt x st x bin):
Histogram. Special values are defined as:
-9999 Missing value

precipWaterIntegrated (Group in G1)

Integrated Precipitable Water (g/m^2).

count (4-byte integer, array size: ltL x lnL x chn x rt x st):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltL x lnL x chn x rt x st):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x chn x rt x st):
Standard deviation. Special values are defined as:
-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x chn x rt x st x bin):
Histogram. Special values are defined as:
-9999 Missing value

precipIceIntegrated (Group in G1)

Integrated Precipitable Ice

count (4-byte integer, array size: ltL x lnL x chn x rt x st):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltL x lnL x chn x rt x st):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x chn x rt x st):
Standard deviation. Special values are defined as:
-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x chn x rt x st x bin):
Histogram. Special values are defined as:
-9999 Missing value

precipRateAve24 (Group in G1)

Average Precipitation Rate in 24hrs.

count (4-byte integer, array size: ltL x lnL x chn x rt x st):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltL x lnL x chn x rt x st):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x chn x rt x st):
Standard deviation. Special values are defined as:
-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x chn x rt x st x bin):
Histogram. Special values are defined as:
-9999 Missing value

zFactorCorrected (Group in G1)

Corrected Reflectivity

count (4-byte integer, array size: ltL x lnL x inst x hgt x rt x st):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltL x lnL x inst x hgt x rt x st):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x inst x hgt x rt x st):
Standard deviation. Special values are defined as:
-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x inst x hgt x rt x st x bin):
Histogram. Special values are defined as:
-9999 Missing value

zFactorCorrectedESurface (Group in G1)

Corrected Reflectivity at the Estimated Surface

count (4-byte integer, array size: ltL x lnL x inst x rt x st):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltL x lnL x inst x rt x st):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x inst x rt x st):

Standard deviation. Special values are defined as:

-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x inst x rt x st x bin):

Histogram. Special values are defined as:

-9999 Missing value

zFactorCorrectedNearSurface (Group in G1)

Corrected Reflectivity at the Near Surface Level.

count (4-byte integer, array size: ltL x lnL x inst x rt x st):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltL x lnL x inst x rt x st):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x inst x rt x st):

Standard deviation. Special values are defined as:

-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x inst x rt x st x bin):

Histogram. Special values are defined as:

-9999 Missing value

zFactorCorrectedDPR (Group in G1)

Corrected Reflectivity from DPR

count (4-byte integer, array size: ltL x lnL x inst x hgt x rt x st):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltL x lnL x inst x hgt x rt x st):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x inst x hgt x rt x st):

Standard deviation. Special values are defined as:

-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x inst x hgt x rt x st x bin):

Histogram. Special values are defined as:

-9999 Missing value

zFactorCorrectedESurfaceDPR (Group in G1)

Corrected Reflectivity from DPR at Estimated Surface.

count (4-byte integer, array size: ltL x lnL x inst x rt x st):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltL x lnL x inst x rt x st):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x inst x rt x st):

Standard deviation. Special values are defined as:

-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x inst x rt x st x bin):

Histogram. Special values are defined as:

-9999 Missing value

zFactorCorrectedNearSurfaceDPR (Group in G1)

Corrected Reflectivity from DPR at the Near Surface Level.

count (4-byte integer, array size: ltL x lnL x inst x rt x st):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltL x lnL x inst x rt x st):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x inst x rt x st):

Standard deviation. Special values are defined as:

-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x inst x rt x st x bin):
Histogram. Special values are defined as:
-9999 Missing value

zFactorMeasured (Group in G1)

Measured Reflectivity

count (4-byte integer, array size: ltL x lnL x inst x hgt x rt x st):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltL x lnL x inst x hgt x rt x st):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x inst x hgt x rt x st):
Standard deviation. Special values are defined as:
-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x inst x hgt x rt x st x bin):
Histogram. Special values are defined as:
-9999 Missing value

dm (Group in G1)

count (4-byte integer, array size: ltL x lnL x hgt x rt x st):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltL x lnL x hgt x rt x st):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x hgt x rt x st):
Standard deviation. Special values are defined as:
-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x hgt x rt x st x bin):
Histogram. Special values are defined as:
-9999 Missing value

dBnw (Group in G1)

count (4-byte integer, array size: ltL x lnL x hgt x rt x st):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltL x lnL x hgt x rt x st):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x hgt x rt x st):

Standard deviation. Special values are defined as:

-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x hgt x rt x st x bin):

Histogram. Special values are defined as:

-9999 Missing value

epsilonDPR (Group in G1)

count (4-byte integer, array size: ltL x lnL x inst x hgt x rt x st):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltL x lnL x inst x hgt x rt x st):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x inst x hgt x rt x st):

Standard deviation. Special values are defined as:

-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x inst x hgt x rt x st x bin):

Histogram. Special values are defined as:

-9999 Missing value

epsilon (Group in G1)

count (4-byte integer, array size: ltL x lnL x inst x rt x st):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltL x lnL x inst x rt x st):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x inst x rt x st):
Standard deviation. Special values are defined as:
-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x inst x rt x st x bin):
Histogram. Special values are defined as:
-9999 Missing value

piaSRT (Group in G1)

Path Integrated Attenuation from SRT.

count (4-byte integer, array size: ltL x lnL x inst x ang x rt x st):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltL x lnL x inst x ang x rt x st):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x inst x ang x rt x st):
Standard deviation. Special values are defined as:
-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x inst x ang x rt x st x bin):
Histogram. Special values are defined as:
-9999 Missing value

piaSRTdpr (Group in G1)

Path Integrated Attenuation from SRT DPR

count (4-byte integer, array size: ltL x lnL x inst x ang x rt x st):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltL x lnL x inst x ang x rt x st):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x inst x ang x rt x st):
Standard deviation. Special values are defined as:
-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x inst x ang x rt x st x bin):
Histogram. Special values are defined as:
-9999 Missing value

piaFinal (Group in G1)

Final Path Integrated Attenuation

count (4-byte integer, array size: ltL x lnL x inst x ang x rt x st):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltL x lnL x inst x ang x rt x st):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x inst x ang x rt x st):

Standard deviation. Special values are defined as:

-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x inst x ang x rt x st x bin):

Histogram. Special values are defined as:

-9999 Missing value

piaFinalDPR (Group in G1)

Final Path Integrated Attenuation from DPR

count (4-byte integer, array size: ltL x lnL x inst x ang x rt x st):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltL x lnL x inst x ang x rt x st):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x inst x ang x rt x st):

Standard deviation. Special values are defined as:

-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x inst x ang x rt x st x bin):

Histogram. Special values are defined as:

-9999 Missing value

piaFinalSubset (Group in G1)

Final Path Integrated Attenuation Subset

count (4-byte integer, array size: ltL x lnL x inst x ang x rt x st):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltL x lnL x inst x ang x rt x st):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x inst x ang x rt x st):

Standard deviation. Special values are defined as:

-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x inst x ang x rt x st x bin):

Histogram. Special values are defined as:

-9999 Missing value

piaFinalDPRsubset (Group in G1)

Final Path Integrated Attenuation from DPR Subset

count (4-byte integer, array size: ltL x lnL x inst x ang x rt x st):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltL x lnL x inst x ang x rt x st):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x inst x ang x rt x st):

Standard deviation. Special values are defined as:

-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x inst x ang x rt x st x bin):

Histogram. Special values are defined as:

-9999 Missing value

heightBB (Group in G1)

Height of Bright Band.

count (4-byte integer, array size: ltL x lnL x chn x rt x st):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltL x lnL x chn x rt x st):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x chn x rt x st):

Standard deviation. Special values are defined as:

-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x chn x rt x st x bin):
Histogram. Special values are defined as:
-9999 Missing value

heightBBnadir (Group in G1)

Height of Bright Band from Nadir.

count (4-byte integer, array size: ltL x lnL x chn x rt x st):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltL x lnL x chn x rt x st):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x chn x rt x st):
Standard deviation. Special values are defined as:
-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x chn x rt x st x bin):
Histogram. Special values are defined as:
-9999 Missing value

BBwidthNadir (Group in G1)

Width of Bright Band at Nadir

count (4-byte integer, array size: ltL x lnL x chn x rt x st):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltL x lnL x chn x rt x st):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x chn x rt x st):
Standard deviation. Special values are defined as:
-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x chn x rt x st x bin):
Histogram. Special values are defined as:
-9999 Missing value

heightStormTop (Group in G1)

Storm Top Height

count (4-byte integer, array size: ltL x lnL x chn x rt x st):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltL x lnL x chn x rt x st):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x chn x rt x st):
Standard deviation. Special values are defined as:
-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x chn x rt x st x bin):
Histogram. Special values are defined as:
-9999 Missing value

BBwidth (Group in G1)

Bright Band Width

count (4-byte integer, array size: ltL x lnL x chn x rt x st):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltL x lnL x chn x rt x st):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x chn x rt x st):
Standard deviation. Special values are defined as:
-9999.9 Missing value

hist (4-byte integer, array size: ltL x lnL x chn x rt x st x bin):
Histogram. Special values are defined as:
-9999 Missing value

observationCounts (Group in G1)

Observation Counts

total (4-byte integer, array size: ltL x lnL x inst x st):
Total obs. Special values are defined as:
-9999 Missing value

localTime (4-byte integer, array size: ltL x lnL x inst x tim x st):
obs time. Special values are defined as:
-9999 Missing value

pia (4-byte integer, array size: ltL x lnL x inst x ang x st):
obs PIA. Special values are defined as:
-9999 Missing value

shallowRain (4-byte integer, array size: ltL x lnL x inst x st):
obs time. Special values are defined as:
-9999 Missing value

precipRateLocalTime (Group in G1)

Precipitation Rate by Local Time

count (4-byte integer, array size: ltL x lnL x chn x tim x st):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltL x lnL x chn x tim x st):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltL x lnL x chn x tim x st):
Standard deviation. Special values are defined as:
-9999.9 Missing value

precipRateNearSurfaceUnconditional (4-byte float, array size: ltL x lnL x chn):
Rain, not conditioned on rain. Special values are defined as:
-9999.9 Missing value

precipProbabilityNearSurface (4-byte float, array size: ltL x lnL x chn):
Probability of rain. Special values are defined as:
-9999.9 Missing value

G2 (Grid)

G2_GridHeader (Metadata):

GridHeader contains metadata defining the grids in the grid structure. See Metadata for GPM Products for details.

precipRate (Group in G2)

Conditional Precipitation Rate

count (4-byte integer, array size: ltH x lnH x chn x hgt x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x chn x hgt x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x chn x hgt x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

rainRate (Group in G2)

Conditional Liquid Rain Rate

count (4-byte integer, array size: ltH x lnH x chn x hgt x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x chn x hgt x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x chn x hgt x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

snowRate (Group in G2)

Conditional Snow Rate

count (4-byte integer, array size: ltH x lnH x chn x hgt x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x chn x hgt x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x chn x hgt x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

mixedPhRate (Group in G2)

Conditional Precipitation Rate of Mixed Phase

count (4-byte integer, array size: ltH x lnH x chn x hgt x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x chn x hgt x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x chn x hgt x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

precipRateESurface (Group in G2)

Conditional Estimated Precipitation Rate at the Surface

count (4-byte integer, array size: ltH x lnH x chn x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x chn x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x chn x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

precipRateESurface2 (Group in G2)

Alternate Conditional Estimated Precipitation Rate at the Surface

count (4-byte integer, array size: ltH x lnH x chn x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x chn x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x chn x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

precipRateNearSurface (Group in G2)

Conditional Precipitation Rate at the Near Surface Level.

count (4-byte integer, array size: ltH x lnH x chn x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x chn x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x chn x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

rainRateNearSurface (Group in G2)

Conditional Liquid Rain Rate at the Near Surface Level.

count (4-byte integer, array size: ltH x lnH x chn x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x chn x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x chn x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

snowRateNearSurface (Group in G2)

Conditional Snow Rate at the Near Surface Level.

count (4-byte integer, array size: ltH x lnH x chn x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x chn x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x chn x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

mixedPhRateNearSurface (Group in G2)

Conditional Precipitation Rate of Mixed Phase at the Near Surface Level.

count (4-byte integer, array size: ltH x lnH x chn x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x chn x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x chn x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

precipWaterIntegrated (Group in G2) Integrated Precipitable Water (g/m^2).

count (4-byte integer, array size: ltH x lnH x chn x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x chn x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x chn x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

precipIceIntegrated (Group in G2) Integrated Precipitable Ice

count (4-byte integer, array size: ltH x lnH x chn x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x chn x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x chn x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

precipRateAve24 (Group in G2) Conditional Precipitation Rate Averaged for 24hrs.

count (4-byte integer, array size: ltH x lnH x chn x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x chn x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x chn x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

zFactorCorrected (Group in G2)

Corrected Reflectivity.

count (4-byte integer, array size: ltH x lnH x inst x hgt x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x inst x hgt x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x inst x hgt x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

zFactorCorrectedESurface (Group in G2)

Corrected Reflectivity Estimate at the Surface

count (4-byte integer, array size: ltH x lnH x inst x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x inst x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x inst x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

zFactorCorrectedNearSurface (Group in G2)

Corrected Reflectivity at the Near Surface Level.

count (4-byte integer, array size: ltH x lnH x inst x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x inst x rt):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x inst x rt):

Standard deviation. Special values are defined as:

-9999.9 Missing value

zFactorCorrectedDPR (Group in G2)

Corrected Reflectivity from DPR

count (4-byte integer, array size: ltH x lnH x inst x hgt x rt):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltH x lnH x inst x hgt x rt):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x inst x hgt x rt):

Standard deviation. Special values are defined as:

-9999.9 Missing value

zFactorCorrectedESurfaceDPR (Group in G2)

Estimated Corrected Reflectivity at the Surface

count (4-byte integer, array size: ltH x lnH x inst x rt):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltH x lnH x inst x rt):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x inst x rt):

Standard deviation. Special values are defined as:

-9999.9 Missing value

zFactorCorrectedNearSurfaceDPR (Group in G2)

Corrected Reflectivity at the Near Surface Level for DPR

count (4-byte integer, array size: ltH x lnH x inst x rt):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltH x lnH x inst x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x inst x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

zFactorMeasured (Group in G2)

Corrected Reflectivity

count (4-byte integer, array size: ltH x lnH x inst x hgt x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x inst x hgt x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x inst x hgt x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

dm (Group in G2)

Mean Mass-Weighted Drop Diameter

count (4-byte integer, array size: ltH x lnH x hgt x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x hgt x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x hgt x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

dBW (Group in G2)

Normalized Drop Concentration Parameter

count (4-byte integer, array size: ltH x lnH x hgt x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x hgt x rt):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x hgt x rt):

Standard deviation. Special values are defined as:

-9999.9 Missing value

epsilonDPR (Group in G2)

count (4-byte integer, array size: ltH x lnH x inst x hgt x rt):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltH x lnH x inst x hgt x rt):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x inst x hgt x rt):

Standard deviation. Special values are defined as:

-9999.9 Missing value

epsilon (Group in G2)

count (4-byte integer, array size: ltH x lnH x inst x rt):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltH x lnH x inst x rt):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x inst x rt):

Standard deviation. Special values are defined as:

-9999.9 Missing value

piaSRT (Group in G2)

Path Integrated Attenuation from SRT.

count (4-byte integer, array size: ltH x lnH x inst x ang x rt):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltH x lnH x inst x ang x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x inst x ang x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

piaSRTdpr (Group in G2)

Path Integrated Attenuation from SRT for DPR.

count (4-byte integer, array size: ltH x lnH x inst x ang x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x inst x ang x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x inst x ang x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

piaFinal (Group in G2)

Final Path Integrated Attenuation Estimate.

count (4-byte integer, array size: ltH x lnH x inst x ang x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x inst x ang x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x inst x ang x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

piaFinalDPR (Group in G2)

Final Path Integrated Attenuation Estimage for DPR.

count (4-byte integer, array size: ltH x lnH x inst x ang x rt):
Count. Special values are defined as:
-9999 Missing value

mean (4-byte float, array size: ltH x lnH x inst x ang x rt):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x inst x ang x rt):

Standard deviation. Special values are defined as:

-9999.9 Missing value

heightBB (Group in G2)

Height Of the Bright Band.

count (4-byte integer, array size: ltH x lnH x chn x rt):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltH x lnH x chn x rt):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x chn x rt):

Standard deviation. Special values are defined as:

-9999.9 Missing value

heightStormTop (Group in G2)

Height of the Storm Top.

count (4-byte integer, array size: ltH x lnH x chn x rt):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltH x lnH x chn x rt):

mean. Special values are defined as:

-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x chn x rt):

Standard deviation. Special values are defined as:

-9999.9 Missing value

BBwidth (Group in G2)

Bright Band Width

count (4-byte integer, array size: ltH x lnH x chn x rt):

Count. Special values are defined as:

-9999 Missing value

mean (4-byte float, array size: ltH x lnH x chn x rt):
mean. Special values are defined as:
-9999.9 Missing value

stdev (4-byte float, array size: ltH x lnH x chn x rt):
Standard deviation. Special values are defined as:
-9999.9 Missing value

observationCounts (Group in G2)

Observation Counts.

total (4-byte integer, array size: ltH x lnH x inst):
Total obs. Special values are defined as:
-9999 Missing value

pia (4-byte integer, array size: ltH x lnH x inst x ang):
obs PIA. Special values are defined as:
-9999 Missing value

shallowRain (4-byte integer, array size: ltH x lnH x inst):
obs time. Special values are defined as:
-9999 Missing value

precipRateNearSurfaceUnconditional (4-byte float, array size: ltH x lnH x chn):
Rain, not conditioned on rain. Special values are defined as:
-9999.9 Missing value

precipProbabilityNearSurface (4-byte float, array size: ltH x lnH x chn):
Probability of rain. Special values are defined as:
-9999.9 Missing value

C Structure Header file:

```
#ifndef _TK_3DPR_H_
#define _TK_3DPR_H_

#ifdef _L3DPR_G2_OBSERVATIONCOUNTS_
#define _L3DPR_G2_OBSERVATIONCOUNTS_

typedef struct {
    int total[4][1440][536];
    int pia[7][4][1440][536];
    int shallowRain[4][1440][536];
} L3DPR_G2_OBSERVATIONCOUNTS;

#endif
```

```

#ifndef _L3DPR_G2_BBWIDTH_
#define _L3DPR_G2_BBWIDTH_

typedef struct {
    int count[3][5][1440][536];
    float mean[3][5][1440][536];
    float stdev[3][5][1440][536];
} L3DPR_G2_BBWIDTH;

#endif

#ifndef _L3DPR_G2_HEIGHTSTORMTOP_
#define _L3DPR_G2_HEIGHTSTORMTOP_

typedef struct {
    int count[3][5][1440][536];
    float mean[3][5][1440][536];
    float stdev[3][5][1440][536];
} L3DPR_G2_HEIGHTSTORMTOP;

#endif

#ifndef _L3DPR_G2_HEIGHTBB_
#define _L3DPR_G2_HEIGHTBB_

typedef struct {
    int count[3][5][1440][536];
    float mean[3][5][1440][536];
    float stdev[3][5][1440][536];
} L3DPR_G2_HEIGHTBB;

#endif

#ifndef _L3DPR_G2_PIAFINALDPR_
#define _L3DPR_G2_PIAFINALDPR_

typedef struct {
    int count[3][7][4][1440][536];
    float mean[3][7][4][1440][536];
    float stdev[3][7][4][1440][536];
} L3DPR_G2_PIAFINALDPR;

```

```

#endif

#ifndef _L3DPR_G2_PIAFINAL_
#define _L3DPR_G2_PIAFINAL_

typedef struct {
    int count[3][7][4][1440][536];
    float mean[3][7][4][1440][536];
    float stdev[3][7][4][1440][536];
} L3DPR_G2_PIAFINAL;

#endif

#ifndef _L3DPR_G2_PIASRTDPR_
#define _L3DPR_G2_PIASRTDPR_

typedef struct {
    int count[3][7][4][1440][536];
    float mean[3][7][4][1440][536];
    float stdev[3][7][4][1440][536];
} L3DPR_G2_PIASRTDPR;

#endif

#ifndef _L3DPR_G2_PIASRT_
#define _L3DPR_G2_PIASRT_

typedef struct {
    int count[3][7][4][1440][536];
    float mean[3][7][4][1440][536];
    float stdev[3][7][4][1440][536];
} L3DPR_G2_PIASRT;

#endif

#ifndef _L3DPR_G2_EPSILON_
#define _L3DPR_G2_EPSILON_

typedef struct {
    int count[3][4][1440][536];
    float mean[3][4][1440][536];
    float stdev[3][4][1440][536];
} L3DPR_G2_EPSILON;

```

```

#endif

#ifndef _L3DPR_G2_EPSILONDPR_
#define _L3DPR_G2_EPSILONDPR_

typedef struct {
    int count[3][5][4][1440][536];
    float mean[3][5][4][1440][536];
    float stdev[3][5][4][1440][536];
} L3DPR_G2_EPSILONDPR;

#endif

#ifndef _L3DPR_G2_DBNW_
#define _L3DPR_G2_DBNW_

typedef struct {
    int count[3][5][1440][536];
    float mean[3][5][1440][536];
    float stdev[3][5][1440][536];
} L3DPR_G2_DBNW;

#endif

#ifndef _L3DPR_G2_DM_
#define _L3DPR_G2_DM_

typedef struct {
    int count[3][5][1440][536];
    float mean[3][5][1440][536];
    float stdev[3][5][1440][536];
} L3DPR_G2_DM;

#endif

#ifndef _L3DPR_G2_ZFACTORMEASURED_
#define _L3DPR_G2_ZFACTORMEASURED_

typedef struct {
    int count[3][5][4][1440][536];
    float mean[3][5][4][1440][536];
    float stdev[3][5][4][1440][536];
}

```

```

} L3DPR_G2_ZFACTORMEASURED;

#endif

#ifndef _L3DPR_G2_ZFACTORCORRECTEDNEARSURFACEDPR_
#define _L3DPR_G2_ZFACTORCORRECTEDNEARSURFACEDPR_

typedef struct {
    int count[3][4][1440][536];
    float mean[3][4][1440][536];
    float stdev[3][4][1440][536];
} L3DPR_G2_ZFACTORCORRECTEDNEARSURFACEDPR;

#endif

#ifndef _L3DPR_G2_ZFACTORCORRECTEDESURFACEDPR_
#define _L3DPR_G2_ZFACTORCORRECTEDESURFACEDPR_

typedef struct {
    int count[3][4][1440][536];
    float mean[3][4][1440][536];
    float stdev[3][4][1440][536];
} L3DPR_G2_ZFACTORCORRECTEDESURFACEDPR;

#endif

#ifndef _L3DPR_G2_ZFACTORCORRECTEDDPR_
#define _L3DPR_G2_ZFACTORCORRECTEDDPR_

typedef struct {
    int count[3][5][4][1440][536];
    float mean[3][5][4][1440][536];
    float stdev[3][5][4][1440][536];
} L3DPR_G2_ZFACTORCORRECTEDDPR;

#endif

#ifndef _L3DPR_G2_ZFACTORCORRECTEDNEARSURFACE_
#define _L3DPR_G2_ZFACTORCORRECTEDNEARSURFACE_

typedef struct {
    int count[3][4][1440][536];
    float mean[3][4][1440][536];

```

```

        float stdev[3][4][1440][536];
    } L3DPR_G2_ZFACTORCORRECTEDNEARSURFACE;

#endif

#ifndef _L3DPR_G2_ZFACTORCORRECTEDESURFACE_
#define _L3DPR_G2_ZFACTORCORRECTEDESURFACE_

typedef struct {
    int count[3][4][1440][536];
    float mean[3][4][1440][536];
    float stdev[3][4][1440][536];
} L3DPR_G2_ZFACTORCORRECTEDESURFACE;

#endif

#ifndef _L3DPR_G2_ZFACTORCORRECTED_
#define _L3DPR_G2_ZFACTORCORRECTED_

typedef struct {
    int count[3][5][4][1440][536];
    float mean[3][5][4][1440][536];
    float stdev[3][5][4][1440][536];
} L3DPR_G2_ZFACTORCORRECTED;

#endif

#ifndef _L3DPR_G2_PRECIPRATEAVE24_
#define _L3DPR_G2_PRECIPRATEAVE24_

typedef struct {
    int count[3][5][1440][536];
    float mean[3][5][1440][536];
    float stdev[3][5][1440][536];
} L3DPR_G2_PRECIPRATEAVE24;

#endif

#ifndef _L3DPR_G2_PRECIPICEINTEGRATED_
#define _L3DPR_G2_PRECIPICEINTEGRATED_

typedef struct {
    int count[3][5][1440][536];

```

```

        float mean[3][5][1440][536];
        float stdev[3][5][1440][536];
    } L3DPR_G2_PRECIPICEINTEGRATED;

#endif

#ifndef _L3DPR_G2_PRECIPWATERINTEGRATED_
#define _L3DPR_G2_PRECIPWATERINTEGRATED_

typedef struct {
    int count[3][5][1440][536];
    float mean[3][5][1440][536];
    float stdev[3][5][1440][536];
} L3DPR_G2_PRECIPWATERINTEGRATED;

#endif

#ifndef _L3DPR_G2_MIXEDPHRATENEARSURFACE_
#define _L3DPR_G2_MIXEDPHRATENEARSURFACE_

typedef struct {
    int count[3][5][1440][536];
    float mean[3][5][1440][536];
    float stdev[3][5][1440][536];
} L3DPR_G2_MIXEDPHRATENEARSURFACE;

#endif

#ifndef _L3DPR_G2_SNOWRATENEARSURFACE_
#define _L3DPR_G2_SNOWRATENEARSURFACE_

typedef struct {
    int count[3][5][1440][536];
    float mean[3][5][1440][536];
    float stdev[3][5][1440][536];
} L3DPR_G2_SNOWRATENEARSURFACE;

#endif

#ifndef _L3DPR_G2_RAINRATENEARSURFACE_
#define _L3DPR_G2_RAINRATENEARSURFACE_

typedef struct {

```



```

        int count[3][5][1440][536];
        float mean[3][5][1440][536];
        float stdev[3][5][1440][536];
    } L3DPR_G2_RAINRATENEARSURFACE;

#endif

#ifndef _L3DPR_G2_PRECIPRATENEARSURFACE_
#define _L3DPR_G2_PRECIPRATENEARSURFACE_

typedef struct {
    int count[3][5][1440][536];
    float mean[3][5][1440][536];
    float stdev[3][5][1440][536];
} L3DPR_G2_PRECIPRATENEARSURFACE;

#endif

#ifndef _L3DPR_G2_PRECIPRATEESURFACE2_
#define _L3DPR_G2_PRECIPRATEESURFACE2_

typedef struct {
    int count[3][5][1440][536];
    float mean[3][5][1440][536];
    float stdev[3][5][1440][536];
} L3DPR_G2_PRECIPRATEESURFACE2;

#endif

#ifndef _L3DPR_G2_PRECIPRATEESURFACE_
#define _L3DPR_G2_PRECIPRATEESURFACE_

typedef struct {
    int count[3][5][1440][536];
    float mean[3][5][1440][536];
    float stdev[3][5][1440][536];
} L3DPR_G2_PRECIPRATEESURFACE;

#endif

#ifndef _L3DPR_G2_MIXEDPHRATE_
#define _L3DPR_G2_MIXEDPHRATE_

```

```

typedef struct {
    int count[3][5][5][1440][536];
    float mean[3][5][5][1440][536];
    float stdev[3][5][5][1440][536];
} L3DPR_G2_MIXEDPHRATE;

#endif

#ifndef _L3DPR_G2_SNOWRATE_
#define _L3DPR_G2_SNOWRATE_

typedef struct {
    int count[3][5][5][1440][536];
    float mean[3][5][5][1440][536];
    float stdev[3][5][5][1440][536];
} L3DPR_G2_SNOWRATE;

#endif

#ifndef _L3DPR_G2_RAINRATE_
#define _L3DPR_G2_RAINRATE_

typedef struct {
    int count[3][5][5][1440][536];
    float mean[3][5][5][1440][536];
    float stdev[3][5][5][1440][536];
} L3DPR_G2_RAINRATE;

#endif

#ifndef _L3DPR_G2_PRECIPRATE_
#define _L3DPR_G2_PRECIPRATE_

typedef struct {
    int count[3][5][5][1440][536];
    float mean[3][5][5][1440][536];
    float stdev[3][5][5][1440][536];
} L3DPR_G2_PRECIPRATE;

#endif

#ifndef _L3DPR_G2_
#define _L3DPR_G2_

```

```

typedef struct {
    L3DPR_G2_PRECIPRATE precipRate;
    L3DPR_G2_RAINRATE rainRate;
    L3DPR_G2_SNOWRATE snowRate;
    L3DPR_G2_MIXEDPHRATE mixedPhRate;
    L3DPR_G2_PRECIPRATEESURFACE precipRateESurface;
    L3DPR_G2_PRECIPRATEESURFACE2 precipRateESurface2;
    L3DPR_G2_PRECIPRATENEARSURFACE precipRateNearSurface;
    L3DPR_G2_RAINRATENEARSURFACE rainRateNearSurface;
    L3DPR_G2_SNOWRATENEARSURFACE snowRateNearSurface;
    L3DPR_G2_MIXEDPHRATENEARSURFACE mixedPhRateNearSurface;
    L3DPR_G2_PRECIPWATERINTEGRATED precipWaterIntegrated;
    L3DPR_G2_PRECIPICEINTEGRATED precipIceIntegrated;
    L3DPR_G2_PRECIPRATEAVE24 precipRateAve24;
    L3DPR_G2_ZFACTORCORRECTED zFactorCorrected;
    L3DPR_G2_ZFACTORCORRECTEDESURFACE zFactorCorrectedESurface;
    L3DPR_G2_ZFACTORCORRECTEDNEARSURFACE zFactorCorrectedNearSurface;
    L3DPR_G2_ZFACTORCORRECTEDDPR zFactorCorrectedDPR;
    L3DPR_G2_ZFACTORCORRECTEDESURFACEDPR zFactorCorrectedESurfaceDPR;
    L3DPR_G2_ZFACTORCORRECTEDNEARSURFACEDPR zFactorCorrectedNearSurfaceDPR;
    L3DPR_G2_ZFACTORMEASURED zFactorMeasured;
    L3DPR_G2_DM dm;
    L3DPR_G2_DBNW dBNw;
    L3DPR_G2_EPSILONDPR epsilonDPR;
    L3DPR_G2_EPSILON epsilon;
    L3DPR_G2_PIASRT piaSRT;
    L3DPR_G2_PIASRTDPR piaSRTdpr;
    L3DPR_G2_PIAFINAL piaFinal;
    L3DPR_G2_PIAFINALDPR piaFinalDPR;
    L3DPR_G2_HEIGHTBB heightBB;
    L3DPR_G2_HEIGHTSTORMTOP heightStormTop;
    L3DPR_G2_BBWIDTH BBwidth;
    L3DPR_G2_OBSERVATIONCOUNTS observationCounts;
    float precipRateNearSurfaceUnconditional[5][1440][536];
    float precipProbabilityNearSurface[5][1440][536];
} L3DPR_G2;

#endif

#ifdef _L3DPR_G1_PRECIPRATELOCALTIME_
#define _L3DPR_G1_PRECIPRATELOCALTIME_

```

```

typedef struct {
    int count[3][24][5][72][28];
    float mean[3][24][5][72][28];
    float stdev[3][24][5][72][28];
} L3DPR_G1_PRECIPRATELOCALTIME;

#endif

#ifndef _L3DPR_G1_OBSERVATIONCOUNTS_
#define _L3DPR_G1_OBSERVATIONCOUNTS_

typedef struct {
    int total[3][4][72][28];
    int localTime[3][24][4][72][28];
    int pia[3][7][4][72][28];
    int shallowRain[3][4][72][28];
} L3DPR_G1_OBSERVATIONCOUNTS;

#endif

#ifndef _L3DPR_G1_BBWIDTH_
#define _L3DPR_G1_BBWIDTH_

typedef struct {
    int count[3][3][5][72][28];
    float mean[3][3][5][72][28];
    float stdev[3][3][5][72][28];
    int hist[30][3][3][5][72][28];
} L3DPR_G1_BBWIDTH;

#endif

#ifndef _L3DPR_G1_HEIGHTSTORMTOP_
#define _L3DPR_G1_HEIGHTSTORMTOP_

typedef struct {
    int count[3][3][5][72][28];
    float mean[3][3][5][72][28];
    float stdev[3][3][5][72][28];
    int hist[30][3][3][5][72][28];
} L3DPR_G1_HEIGHTSTORMTOP;

#endif

```

```

#ifndef _L3DPR_G1_BBWIDTHNADIR_
#define _L3DPR_G1_BBWIDTHNADIR_

typedef struct {
    int count[3][3][5][72][28];
    float mean[3][3][5][72][28];
    float stdev[3][3][5][72][28];
    int hist[30][3][3][5][72][28];
} L3DPR_G1_BBWIDTHNADIR;

#endif

#ifndef _L3DPR_G1_HEIGHTBBNADIR_
#define _L3DPR_G1_HEIGHTBBNADIR_

typedef struct {
    int count[3][3][5][72][28];
    float mean[3][3][5][72][28];
    float stdev[3][3][5][72][28];
    int hist[30][3][3][5][72][28];
} L3DPR_G1_HEIGHTBBNADIR;

#endif

#ifndef _L3DPR_G1_HEIGHTBB_
#define _L3DPR_G1_HEIGHTBB_

typedef struct {
    int count[3][3][5][72][28];
    float mean[3][3][5][72][28];
    float stdev[3][3][5][72][28];
    int hist[30][3][3][5][72][28];
} L3DPR_G1_HEIGHTBB;

#endif

#ifndef _L3DPR_G1_PIAFINALDPRSUBSET_
#define _L3DPR_G1_PIAFINALDPRSUBSET_

typedef struct {
    int count[3][3][7][4][72][28];
    float mean[3][3][7][4][72][28];

```

```

        float stdev[3][3][7][4][72][28];
        int hist[30][3][3][7][4][72][28];
    } L3DPR_G1_PIAFINALDPRSUBSET;

#endif

#ifndef _L3DPR_G1_PIAFINALSUBSET_
#define _L3DPR_G1_PIAFINALSUBSET_

typedef struct {
    int count[3][3][7][4][72][28];
    float mean[3][3][7][4][72][28];
    float stdev[3][3][7][4][72][28];
    int hist[30][3][3][7][4][72][28];
} L3DPR_G1_PIAFINALSUBSET;

#endif

#ifndef _L3DPR_G1_PIAFINALDPR_
#define _L3DPR_G1_PIAFINALDPR_

typedef struct {
    int count[3][3][7][4][72][28];
    float mean[3][3][7][4][72][28];
    float stdev[3][3][7][4][72][28];
    int hist[30][3][3][7][4][72][28];
} L3DPR_G1_PIAFINALDPR;

#endif

#ifndef _L3DPR_G1_PIAFINAL_
#define _L3DPR_G1_PIAFINAL_

typedef struct {
    int count[3][3][7][4][72][28];
    float mean[3][3][7][4][72][28];
    float stdev[3][3][7][4][72][28];
    int hist[30][3][3][7][4][72][28];
} L3DPR_G1_PIAFINAL;

#endif

#ifndef _L3DPR_G1_PIASRTDPR_

```

```

#define _L3DPR_G1_PIASRTDPR_

typedef struct {
    int count[3][3][7][4][72][28];
    float mean[3][3][7][4][72][28];
    float stdev[3][3][7][4][72][28];
    int hist[30][3][3][7][4][72][28];
} L3DPR_G1_PIASRTDPR;

#endif

#ifndef _L3DPR_G1_PIASRT_
#define _L3DPR_G1_PIASRT_

typedef struct {
    int count[3][3][7][4][72][28];
    float mean[3][3][7][4][72][28];
    float stdev[3][3][7][4][72][28];
    int hist[30][3][3][7][4][72][28];
} L3DPR_G1_PIASRT;

#endif

#ifndef _L3DPR_G1_EPSILON_
#define _L3DPR_G1_EPSILON_

typedef struct {
    int count[3][3][4][72][28];
    float mean[3][3][4][72][28];
    float stdev[3][3][4][72][28];
    int hist[30][3][3][4][72][28];
} L3DPR_G1_EPSILON;

#endif

#ifndef _L3DPR_G1_EPSILONDPR_
#define _L3DPR_G1_EPSILONDPR_

typedef struct {
    int count[3][3][5][4][72][28];
    float mean[3][3][5][4][72][28];
    float stdev[3][3][5][4][72][28];
    int hist[30][3][3][5][4][72][28];
}

```

```

} L3DPR_G1_EPSILON DPR;

#endif

#ifndef _L3DPR_G1_DBNW_
#define _L3DPR_G1_DBNW_

typedef struct {
    int count[3][3][5][72][28];
    float mean[3][3][5][72][28];
    float stdev[3][3][5][72][28];
    int hist[30][3][3][5][72][28];
} L3DPR_G1_DBNW;

#endif

#ifndef _L3DPR_G1_DM_
#define _L3DPR_G1_DM_

typedef struct {
    int count[3][3][5][72][28];
    float mean[3][3][5][72][28];
    float stdev[3][3][5][72][28];
    int hist[30][3][3][5][72][28];
} L3DPR_G1_DM;

#endif

#ifndef _L3DPR_G1_ZFACTORMEASURED_
#define _L3DPR_G1_ZFACTORMEASURED_

typedef struct {
    int count[3][3][5][4][72][28];
    float mean[3][3][5][4][72][28];
    float stdev[3][3][5][4][72][28];
    int hist[30][3][3][5][4][72][28];
} L3DPR_G1_ZFACTORMEASURED;

#endif

#ifndef _L3DPR_G1_ZFACTORCORRECTEDNEARSURFACEDPR_
#define _L3DPR_G1_ZFACTORCORRECTEDNEARSURFACEDPR_

```



```

typedef struct {
    int count[3][3][4][72][28];
    float mean[3][3][4][72][28];
    float stdev[3][3][4][72][28];
    int hist[30][3][3][4][72][28];
} L3DPR_G1_ZFACTORCORRECTEDNEARSURFACEDPR;

#endif

#ifndef _L3DPR_G1_ZFACTORCORRECTEDESURFACEDPR_
#define _L3DPR_G1_ZFACTORCORRECTEDESURFACEDPR_

typedef struct {
    int count[3][3][4][72][28];
    float mean[3][3][4][72][28];
    float stdev[3][3][4][72][28];
    int hist[30][3][3][4][72][28];
} L3DPR_G1_ZFACTORCORRECTEDESURFACEDPR;

#endif

#ifndef _L3DPR_G1_ZFACTORCORRECTEDDPR_
#define _L3DPR_G1_ZFACTORCORRECTEDDPR_

typedef struct {
    int count[3][3][5][4][72][28];
    float mean[3][3][5][4][72][28];
    float stdev[3][3][5][4][72][28];
    int hist[30][3][3][5][4][72][28];
} L3DPR_G1_ZFACTORCORRECTEDDPR;

#endif

#ifndef _L3DPR_G1_ZFACTORCORRECTEDNEARSURFACE_
#define _L3DPR_G1_ZFACTORCORRECTEDNEARSURFACE_

typedef struct {
    int count[3][3][4][72][28];
    float mean[3][3][4][72][28];
    float stdev[3][3][4][72][28];
    int hist[30][3][3][4][72][28];
} L3DPR_G1_ZFACTORCORRECTEDNEARSURFACE;

```

```

#endif

#ifndef _L3DPR_G1_ZFACTORCORRECTEDESURFACE_
#define _L3DPR_G1_ZFACTORCORRECTEDESURFACE_

typedef struct {
    int count[3][3][4][72][28];
    float mean[3][3][4][72][28];
    float stdev[3][3][4][72][28];
    int hist[30][3][3][4][72][28];
} L3DPR_G1_ZFACTORCORRECTEDESURFACE;

#endif

#ifndef _L3DPR_G1_ZFACTORCORRECTED_
#define _L3DPR_G1_ZFACTORCORRECTED_

typedef struct {
    int count[3][3][5][4][72][28];
    float mean[3][3][5][4][72][28];
    float stdev[3][3][5][4][72][28];
    int hist[30][3][3][5][4][72][28];
} L3DPR_G1_ZFACTORCORRECTED;

#endif

#ifndef _L3DPR_G1_PRECIPRATEAVE24_
#define _L3DPR_G1_PRECIPRATEAVE24_

typedef struct {
    int count[3][3][5][72][28];
    float mean[3][3][5][72][28];
    float stdev[3][3][5][72][28];
    int hist[30][3][3][5][72][28];
} L3DPR_G1_PRECIPRATEAVE24;

#endif

#ifndef _L3DPR_G1_PRECIPICEINTEGRATED_
#define _L3DPR_G1_PRECIPICEINTEGRATED_

typedef struct {
    int count[3][3][5][72][28];

```

```

        float mean[3][3][5][72][28];
        float stdev[3][3][5][72][28];
        int hist[30][3][3][5][72][28];
    } L3DPR_G1_PRECIPICEINTEGRATED;

#endif

#ifndef _L3DPR_G1_PRECIPWATERINTEGRATED_
#define _L3DPR_G1_PRECIPWATERINTEGRATED_

typedef struct {
    int count[3][3][5][72][28];
    float mean[3][3][5][72][28];
    float stdev[3][3][5][72][28];
    int hist[30][3][3][5][72][28];
} L3DPR_G1_PRECIPWATERINTEGRATED;

#endif

#ifndef _L3DPR_G1_MIXEDPHRATENEARSURFACE_
#define _L3DPR_G1_MIXEDPHRATENEARSURFACE_

typedef struct {
    int count[3][3][5][72][28];
    float mean[3][3][5][72][28];
    float stdev[3][3][5][72][28];
    int hist[30][3][3][5][72][28];
} L3DPR_G1_MIXEDPHRATENEARSURFACE;

#endif

#ifndef _L3DPR_G1_SNOWRATENEARSURFACE_
#define _L3DPR_G1_SNOWRATENEARSURFACE_

typedef struct {
    int count[3][3][5][72][28];
    float mean[3][3][5][72][28];
    float stdev[3][3][5][72][28];
    int hist[30][3][3][5][72][28];
} L3DPR_G1_SNOWRATENEARSURFACE;

#endif

```

```

#ifndef _L3DPR_G1_RAINRATENEARSURFACE_
#define _L3DPR_G1_RAINRATENEARSURFACE_

typedef struct {
    int count[3][3][5][72][28];
    float mean[3][3][5][72][28];
    float stdev[3][3][5][72][28];
    int hist[30][3][3][5][72][28];
} L3DPR_G1_RAINRATENEARSURFACE;

#endif

#ifndef _L3DPR_G1_PRECIPRATENEARSURFACE_
#define _L3DPR_G1_PRECIPRATENEARSURFACE_

typedef struct {
    int count[3][3][5][72][28];
    float mean[3][3][5][72][28];
    float stdev[3][3][5][72][28];
    int hist[30][3][3][5][72][28];
} L3DPR_G1_PRECIPRATENEARSURFACE;

#endif

#ifndef _L3DPR_G1_PRECIPRATEESURFACE2_
#define _L3DPR_G1_PRECIPRATEESURFACE2_

typedef struct {
    int count[3][3][5][72][28];
    float mean[3][3][5][72][28];
    float stdev[3][3][5][72][28];
    int hist[30][3][3][5][72][28];
} L3DPR_G1_PRECIPRATEESURFACE2;

#endif

#ifndef _L3DPR_G1_PRECIPRATEESURFACE_
#define _L3DPR_G1_PRECIPRATEESURFACE_

typedef struct {
    int count[3][3][5][72][28];
    float mean[3][3][5][72][28];
    float stdev[3][3][5][72][28];
}

```

```

    int hist[30][3][3][5][72][28];
} L3DPR_G1_PRECIPRATEESURFACE;

#endif

#ifndef _L3DPR_G1_MIXEDPHRATE_
#define _L3DPR_G1_MIXEDPHRATE_

typedef struct {
    int count[3][3][5][5][72][28];
    float mean[3][3][5][5][72][28];
    float stdev[3][3][5][5][72][28];
    int hist[30][3][3][5][5][72][28];
} L3DPR_G1_MIXEDPHRATE;

#endif

#ifndef _L3DPR_G1_SNOWRATE_
#define _L3DPR_G1_SNOWRATE_

typedef struct {
    int count[3][3][5][5][72][28];
    float mean[3][3][5][5][72][28];
    float stdev[3][3][5][5][72][28];
    int hist[30][3][3][5][5][72][28];
} L3DPR_G1_SNOWRATE;

#endif

#ifndef _L3DPR_G1_RAINRATE_
#define _L3DPR_G1_RAINRATE_

typedef struct {
    int count[3][3][5][5][72][28];
    float mean[3][3][5][5][72][28];
    float stdev[3][3][5][5][72][28];
    int hist[30][3][3][5][5][72][28];
} L3DPR_G1_RAINRATE;

#endif

#ifndef _L3DPR_G1_PRECIPRATE_
#define _L3DPR_G1_PRECIPRATE_

```

```

typedef struct {
    int count[3][3][5][5][72][28];
    float mean[3][3][5][5][72][28];
    float stdev[3][3][5][5][72][28];
    int hist[30][3][3][5][5][72][28];
} L3DPR_G1_PRECIPRATE;

#endif

#ifndef _L3DPR_G1_
#define _L3DPR_G1_

typedef struct {
    L3DPR_G1_PRECIPRATE precipRate;
    L3DPR_G1_RAINRATE rainRate;
    L3DPR_G1_SNOWRATE snowRate;
    L3DPR_G1_MIXEDPHRATE mixedPhRate;
    L3DPR_G1_PRECIPRATEESURFACE precipRateESurface;
    L3DPR_G1_PRECIPRATEESURFACE2 precipRateESurface2;
    L3DPR_G1_PRECIPRATENEARSURFACE precipRateNearSurface;
    L3DPR_G1_RAINRATENEARSURFACE rainRateNearSurface;
    L3DPR_G1_SNOWRATENEARSURFACE snowRateNearSurface;
    L3DPR_G1_MIXEDPHRATENEARSURFACE mixedPhRateNearSurface;
    L3DPR_G1_PRECIPWATERINTEGRATED precipWaterIntegrated;
    L3DPR_G1_PRECIPICEINTEGRATED precipIceIntegrated;
    L3DPR_G1_PRECIPRATEAVE24 precipRateAve24;
    L3DPR_G1_ZFACTORCORRECTED zFactorCorrected;
    L3DPR_G1_ZFACTORCORRECTEDESURFACE zFactorCorrectedESurface;
    L3DPR_G1_ZFACTORCORRECTEDNEARSURFACE zFactorCorrectedNearSurface;
    L3DPR_G1_ZFACTORCORRECTEDDPR zFactorCorrectedDPR;
    L3DPR_G1_ZFACTORCORRECTEDESURFACEDPR zFactorCorrectedESurfaceDPR;
    L3DPR_G1_ZFACTORCORRECTEDNEARSURFACEDPR zFactorCorrectedNearSurfaceDPR;
    L3DPR_G1_ZFACTORMEASURED zFactorMeasured;
    L3DPR_G1_DM dm;
    L3DPR_G1_DBNW dBNw;
    L3DPR_G1_EPSILONDPR epsilonDPR;
    L3DPR_G1_EPSILON epsilon;
    L3DPR_G1_PIASRT piaSRT;
    L3DPR_G1_PIASRTDPR piaSRTdpr;
    L3DPR_G1_PIAFINAL piaFinal;
    L3DPR_G1_PIAFINALDPR piaFinalDPR;
    L3DPR_G1_PIAFINALSUBSET piaFinalSubset;

```

```

    L3DPR_G1_PIAFINALDPRSUBSET piaFinalDPRsubset;
    L3DPR_G1_HEIGHTBB heightBB;
    L3DPR_G1_HEIGHTBBNADIR heightBBnadir;
    L3DPR_G1_BBWIDTHNADIR BBwidthNadir;
    L3DPR_G1_HEIGHTSTORMTOP heightStormTop;
    L3DPR_G1_BBWIDTH BBwidth;
    L3DPR_G1_OBSERVATIONCOUNTS observationCounts;
    L3DPR_G1_PRECIPRATELOCALTIME precipRateLocalTime;
    float precipRateNearSurfaceUnconditional[5][72][28];
    float precipProbabilityNearSurface[5][72][28];
} L3DPR_G1;

#endif

#ifdef _L3DPR_GRIDS_
#define _L3DPR_GRIDS_

typedef struct {
    L3DPR_G1 G1;
    L3DPR_G2 G2;
} L3DPR_GRIDS;

#endif

#endif

```

Fortran Structure Header file:

```

STRUCTURE /L3DPR_G2_OBSERVATIONCOUNTS/
    INTEGER*4 total(536,1440,4)
    INTEGER*4 pia(536,1440,4,7)
    INTEGER*4 shallowRain(536,1440,4)
END STRUCTURE

STRUCTURE /L3DPR_G2_BBWIDTH/
    INTEGER*4 count(536,1440,5,3)
    REAL*4 mean(536,1440,5,3)
    REAL*4 stdev(536,1440,5,3)
END STRUCTURE

STRUCTURE /L3DPR_G2_HEIGHTSTORMTOP/
    INTEGER*4 count(536,1440,5,3)
    REAL*4 mean(536,1440,5,3)

```

```

    REAL*4 stdev(536,1440,5,3)
END STRUCTURE

STRUCTURE /L3DPR_G2_HEIGHTBB/
    INTEGER*4 count(536,1440,5,3)
    REAL*4 mean(536,1440,5,3)
    REAL*4 stdev(536,1440,5,3)
END STRUCTURE

STRUCTURE /L3DPR_G2_PIAFINALDPR/
    INTEGER*4 count(536,1440,4,7,3)
    REAL*4 mean(536,1440,4,7,3)
    REAL*4 stdev(536,1440,4,7,3)
END STRUCTURE

STRUCTURE /L3DPR_G2_PIAFINAL/
    INTEGER*4 count(536,1440,4,7,3)
    REAL*4 mean(536,1440,4,7,3)
    REAL*4 stdev(536,1440,4,7,3)
END STRUCTURE

STRUCTURE /L3DPR_G2_PIASRTDPR/
    INTEGER*4 count(536,1440,4,7,3)
    REAL*4 mean(536,1440,4,7,3)
    REAL*4 stdev(536,1440,4,7,3)
END STRUCTURE

STRUCTURE /L3DPR_G2_PIASRT/
    INTEGER*4 count(536,1440,4,7,3)
    REAL*4 mean(536,1440,4,7,3)
    REAL*4 stdev(536,1440,4,7,3)
END STRUCTURE

STRUCTURE /L3DPR_G2_EPSILON/
    INTEGER*4 count(536,1440,4,3)
    REAL*4 mean(536,1440,4,3)
    REAL*4 stdev(536,1440,4,3)
END STRUCTURE

STRUCTURE /L3DPR_G2_EPSILONDPR/
    INTEGER*4 count(536,1440,4,5,3)
    REAL*4 mean(536,1440,4,5,3)
    REAL*4 stdev(536,1440,4,5,3)

```


END STRUCTURE

```
STRUCTURE /L3DPR_G2_DBNW/  
  INTEGER*4 count(536,1440,5,3)  
  REAL*4 mean(536,1440,5,3)  
  REAL*4 stdev(536,1440,5,3)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G2_DM/  
  INTEGER*4 count(536,1440,5,3)  
  REAL*4 mean(536,1440,5,3)  
  REAL*4 stdev(536,1440,5,3)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G2_ZFACTORMEASURED/  
  INTEGER*4 count(536,1440,4,5,3)  
  REAL*4 mean(536,1440,4,5,3)  
  REAL*4 stdev(536,1440,4,5,3)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G2_ZFACTORCORRECTEDNEARSURFACEDPR/  
  INTEGER*4 count(536,1440,4,3)  
  REAL*4 mean(536,1440,4,3)  
  REAL*4 stdev(536,1440,4,3)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G2_ZFACTORCORRECTEDESURFACEDPR/  
  INTEGER*4 count(536,1440,4,3)  
  REAL*4 mean(536,1440,4,3)  
  REAL*4 stdev(536,1440,4,3)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G2_ZFACTORCORRECTEDDPR/  
  INTEGER*4 count(536,1440,4,5,3)  
  REAL*4 mean(536,1440,4,5,3)  
  REAL*4 stdev(536,1440,4,5,3)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G2_ZFACTORCORRECTEDNEARSURFACE/  
  INTEGER*4 count(536,1440,4,3)  
  REAL*4 mean(536,1440,4,3)  
  REAL*4 stdev(536,1440,4,3)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G2_ZFACTORCORRECTEDESURFACE/  
  INTEGER*4 count(536,1440,4,3)  
  REAL*4 mean(536,1440,4,3)  
  REAL*4 stdev(536,1440,4,3)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G2_ZFACTORCORRECTED/  
  INTEGER*4 count(536,1440,4,5,3)  
  REAL*4 mean(536,1440,4,5,3)  
  REAL*4 stdev(536,1440,4,5,3)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G2_PRECIPRATEAVE24/  
  INTEGER*4 count(536,1440,5,3)  
  REAL*4 mean(536,1440,5,3)  
  REAL*4 stdev(536,1440,5,3)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G2_PRECIPICEINTEGRATED/  
  INTEGER*4 count(536,1440,5,3)  
  REAL*4 mean(536,1440,5,3)  
  REAL*4 stdev(536,1440,5,3)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G2_PRECIPWATERINTEGRATED/  
  INTEGER*4 count(536,1440,5,3)  
  REAL*4 mean(536,1440,5,3)  
  REAL*4 stdev(536,1440,5,3)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G2_MIXEDPHRATENEARSURFACE/  
  INTEGER*4 count(536,1440,5,3)  
  REAL*4 mean(536,1440,5,3)  
  REAL*4 stdev(536,1440,5,3)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G2_SNOWRATENEARSURFACE/  
  INTEGER*4 count(536,1440,5,3)  
  REAL*4 mean(536,1440,5,3)  
  REAL*4 stdev(536,1440,5,3)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G2_RAINRATENEARSURFACE/  
  INTEGER*4 count(536,1440,5,3)  
  REAL*4 mean(536,1440,5,3)  
  REAL*4 stdev(536,1440,5,3)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G2_PRECIPRATENEARSURFACE/  
  INTEGER*4 count(536,1440,5,3)  
  REAL*4 mean(536,1440,5,3)  
  REAL*4 stdev(536,1440,5,3)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G2_PRECIPRATEESURFACE2/  
  INTEGER*4 count(536,1440,5,3)  
  REAL*4 mean(536,1440,5,3)  
  REAL*4 stdev(536,1440,5,3)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G2_PRECIPRATEESURFACE/  
  INTEGER*4 count(536,1440,5,3)  
  REAL*4 mean(536,1440,5,3)  
  REAL*4 stdev(536,1440,5,3)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G2_MIXEDPHRATE/  
  INTEGER*4 count(536,1440,5,5,3)  
  REAL*4 mean(536,1440,5,5,3)  
  REAL*4 stdev(536,1440,5,5,3)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G2_SNOWRATE/  
  INTEGER*4 count(536,1440,5,5,3)  
  REAL*4 mean(536,1440,5,5,3)  
  REAL*4 stdev(536,1440,5,5,3)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G2_RAINRATE/  
  INTEGER*4 count(536,1440,5,5,3)  
  REAL*4 mean(536,1440,5,5,3)  
  REAL*4 stdev(536,1440,5,5,3)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G2_PRECIPRATE/  
  INTEGER*4 count(536,1440,5,5,3)  
  REAL*4 mean(536,1440,5,5,3)  
  REAL*4 stdev(536,1440,5,5,3)  
END STRUCTURE
```

```

INTEGER*4 count(536,1440,5,5,3)
REAL*4 mean(536,1440,5,5,3)
REAL*4 stdev(536,1440,5,5,3)
END STRUCTURE

STRUCTURE /L3DPR_G2/
RECORD /L3DPR_G2_PRECIPRATE/ precipRate
RECORD /L3DPR_G2_RAINRATE/ rainRate
RECORD /L3DPR_G2_SNOWRATE/ snowRate
RECORD /L3DPR_G2_MIXEDPHRATE/ mixedPhRate
RECORD /L3DPR_G2_PRECIPRATEESURFACE/ precipRateESurface
RECORD /L3DPR_G2_PRECIPRATEESURFACE2/ precipRateESurface2
RECORD /L3DPR_G2_PRECIPRATENEARSSURFACE/ precipRateNearSurface
RECORD /L3DPR_G2_RAINRATENEARSSURFACE/ rainRateNearSurface
RECORD /L3DPR_G2_SNOWRATENEARSSURFACE/ snowRateNearSurface
RECORD /L3DPR_G2_MIXEDPHRATENEARSSURFACE/ mixedPhRateNearSurface
RECORD /L3DPR_G2_PRECIPWATERINTEGRATED/ precipWaterIntegrated
RECORD /L3DPR_G2_PRECIPICEINTEGRATED/ precipIceIntegrated
RECORD /L3DPR_G2_PRECIPRATEAVE24/ precipRateAve24
RECORD /L3DPR_G2_ZFACTORCORRECTED/ zFactorCorrected
RECORD /L3DPR_G2_ZFACTORCORRECTEDESURFACE/ zFactorCorrectedESurface
RECORD /L3DPR_G2_ZFACTORCORRECTEDNEARSURFACE/ zFactorCorrectedNearSurface
RECORD /L3DPR_G2_ZFACTORCORRECTEDDPR/ zFactorCorrectedDPR
RECORD /L3DPR_G2_ZFACTORCORRECTEDESURFACEDPR/ zFactorCorrectedESurfaceDPR
RECORD /L3DPR_G2_ZFACTORCORRECTEDNEARSURFACEDPR/ zFactorCorrectedNearSurfaceDPR
RECORD /L3DPR_G2_ZFACTORMEASURED/ zFactorMeasured
RECORD /L3DPR_G2_DM/ dm
RECORD /L3DPR_G2_DBNW/ dBNw
RECORD /L3DPR_G2_EPSILONDPR/ epsilonDPR
RECORD /L3DPR_G2_EPSILON/ epsilon
RECORD /L3DPR_G2_PIASRT/ piaSRT
RECORD /L3DPR_G2_PIASRTDPR/ piaSRTdpr
RECORD /L3DPR_G2_PIAFINAL/ piaFinal
RECORD /L3DPR_G2_PIAFINALDPR/ piaFinalDPR
RECORD /L3DPR_G2_HEIGHTBB/ heightBB
RECORD /L3DPR_G2_HEIGHTSTORMTOP/ heightStormTop
RECORD /L3DPR_G2_BBWIDTH/ BBwidth
RECORD /L3DPR_G2_OBSERVATIONCOUNTS/ observationCounts
REAL*4 precipRateNearSurfaceUnconditional(536,1440,5)
REAL*4 precipProbabilityNearSurface(536,1440,5)
END STRUCTURE

STRUCTURE /L3DPR_G1_PRECIPRATELOCALTIME/

```

```

    INTEGER*4 count(28,72,5,24,3)
    REAL*4 mean(28,72,5,24,3)
    REAL*4 stdev(28,72,5,24,3)
END STRUCTURE

STRUCTURE /L3DPR_G1_OBSERVATIONCOUNTS/
    INTEGER*4 total(28,72,4,3)
    INTEGER*4 localTime(28,72,4,24,3)
    INTEGER*4 pia(28,72,4,7,3)
    INTEGER*4 shallowRain(28,72,4,3)
END STRUCTURE

STRUCTURE /L3DPR_G1_BBWIDTH/
    INTEGER*4 count(28,72,5,3,3)
    REAL*4 mean(28,72,5,3,3)
    REAL*4 stdev(28,72,5,3,3)
    INTEGER*4 hist(28,72,5,3,3,30)
END STRUCTURE

STRUCTURE /L3DPR_G1_HEIGHTSTORMTOP/
    INTEGER*4 count(28,72,5,3,3)
    REAL*4 mean(28,72,5,3,3)
    REAL*4 stdev(28,72,5,3,3)
    INTEGER*4 hist(28,72,5,3,3,30)
END STRUCTURE

STRUCTURE /L3DPR_G1_BBWIDTHNADIR/
    INTEGER*4 count(28,72,5,3,3)
    REAL*4 mean(28,72,5,3,3)
    REAL*4 stdev(28,72,5,3,3)
    INTEGER*4 hist(28,72,5,3,3,30)
END STRUCTURE

STRUCTURE /L3DPR_G1_HEIGHTBBNADIR/
    INTEGER*4 count(28,72,5,3,3)
    REAL*4 mean(28,72,5,3,3)
    REAL*4 stdev(28,72,5,3,3)
    INTEGER*4 hist(28,72,5,3,3,30)
END STRUCTURE

STRUCTURE /L3DPR_G1_HEIGHTBB/
    INTEGER*4 count(28,72,5,3,3)
    REAL*4 mean(28,72,5,3,3)

```

```

    REAL*4 stdev(28,72,5,3,3)
    INTEGER*4 hist(28,72,5,3,3,30)
END STRUCTURE

STRUCTURE /L3DPR_G1_PIAFINALDPRSUBSET/
    INTEGER*4 count(28,72,4,7,3,3)
    REAL*4 mean(28,72,4,7,3,3)
    REAL*4 stdev(28,72,4,7,3,3)
    INTEGER*4 hist(28,72,4,7,3,3,30)
END STRUCTURE

STRUCTURE /L3DPR_G1_PIAFINALSUBSET/
    INTEGER*4 count(28,72,4,7,3,3)
    REAL*4 mean(28,72,4,7,3,3)
    REAL*4 stdev(28,72,4,7,3,3)
    INTEGER*4 hist(28,72,4,7,3,3,30)
END STRUCTURE

STRUCTURE /L3DPR_G1_PIAFINALDPR/
    INTEGER*4 count(28,72,4,7,3,3)
    REAL*4 mean(28,72,4,7,3,3)
    REAL*4 stdev(28,72,4,7,3,3)
    INTEGER*4 hist(28,72,4,7,3,3,30)
END STRUCTURE

STRUCTURE /L3DPR_G1_PIAFINAL/
    INTEGER*4 count(28,72,4,7,3,3)
    REAL*4 mean(28,72,4,7,3,3)
    REAL*4 stdev(28,72,4,7,3,3)
    INTEGER*4 hist(28,72,4,7,3,3,30)
END STRUCTURE

STRUCTURE /L3DPR_G1_PIASRTDPR/
    INTEGER*4 count(28,72,4,7,3,3)
    REAL*4 mean(28,72,4,7,3,3)
    REAL*4 stdev(28,72,4,7,3,3)
    INTEGER*4 hist(28,72,4,7,3,3,30)
END STRUCTURE

STRUCTURE /L3DPR_G1_PIASRT/
    INTEGER*4 count(28,72,4,7,3,3)
    REAL*4 mean(28,72,4,7,3,3)
    REAL*4 stdev(28,72,4,7,3,3)

```

```
    INTEGER*4 hist(28,72,4,7,3,3,30)
END STRUCTURE
```

```
STRUCTURE /L3DPR_G1_EPSILON/
    INTEGER*4 count(28,72,4,3,3)
    REAL*4 mean(28,72,4,3,3)
    REAL*4 stdev(28,72,4,3,3)
    INTEGER*4 hist(28,72,4,3,3,30)
END STRUCTURE
```

```
STRUCTURE /L3DPR_G1_EPSILONDPR/
    INTEGER*4 count(28,72,4,5,3,3)
    REAL*4 mean(28,72,4,5,3,3)
    REAL*4 stdev(28,72,4,5,3,3)
    INTEGER*4 hist(28,72,4,5,3,3,30)
END STRUCTURE
```

```
STRUCTURE /L3DPR_G1_DBNW/
    INTEGER*4 count(28,72,5,3,3)
    REAL*4 mean(28,72,5,3,3)
    REAL*4 stdev(28,72,5,3,3)
    INTEGER*4 hist(28,72,5,3,3,30)
END STRUCTURE
```

```
STRUCTURE /L3DPR_G1_DM/
    INTEGER*4 count(28,72,5,3,3)
    REAL*4 mean(28,72,5,3,3)
    REAL*4 stdev(28,72,5,3,3)
    INTEGER*4 hist(28,72,5,3,3,30)
END STRUCTURE
```

```
STRUCTURE /L3DPR_G1_ZFACTORMEASURED/
    INTEGER*4 count(28,72,4,5,3,3)
    REAL*4 mean(28,72,4,5,3,3)
    REAL*4 stdev(28,72,4,5,3,3)
    INTEGER*4 hist(28,72,4,5,3,3,30)
END STRUCTURE
```

```
STRUCTURE /L3DPR_G1_ZFACTORCORRECTEDNEARSURFACEDPR/
    INTEGER*4 count(28,72,4,3,3)
    REAL*4 mean(28,72,4,3,3)
    REAL*4 stdev(28,72,4,3,3)
    INTEGER*4 hist(28,72,4,3,3,30)
```

END STRUCTURE

STRUCTURE /L3DPR_G1_ZFACTORCORRECTEDESURFACEDPR/

INTEGER*4 count(28,72,4,3,3)
REAL*4 mean(28,72,4,3,3)
REAL*4 stdev(28,72,4,3,3)
INTEGER*4 hist(28,72,4,3,3,30)

END STRUCTURE

STRUCTURE /L3DPR_G1_ZFACTORCORRECTEDDPR/

INTEGER*4 count(28,72,4,5,3,3)
REAL*4 mean(28,72,4,5,3,3)
REAL*4 stdev(28,72,4,5,3,3)
INTEGER*4 hist(28,72,4,5,3,3,30)

END STRUCTURE

STRUCTURE /L3DPR_G1_ZFACTORCORRECTEDNEARSURFACE/

INTEGER*4 count(28,72,4,3,3)
REAL*4 mean(28,72,4,3,3)
REAL*4 stdev(28,72,4,3,3)
INTEGER*4 hist(28,72,4,3,3,30)

END STRUCTURE

STRUCTURE /L3DPR_G1_ZFACTORCORRECTEDESURFACE/

INTEGER*4 count(28,72,4,3,3)
REAL*4 mean(28,72,4,3,3)
REAL*4 stdev(28,72,4,3,3)
INTEGER*4 hist(28,72,4,3,3,30)

END STRUCTURE

STRUCTURE /L3DPR_G1_ZFACTORCORRECTED/

INTEGER*4 count(28,72,4,5,3,3)
REAL*4 mean(28,72,4,5,3,3)
REAL*4 stdev(28,72,4,5,3,3)
INTEGER*4 hist(28,72,4,5,3,3,30)

END STRUCTURE

STRUCTURE /L3DPR_G1_PRECIPRATEAVE24/

INTEGER*4 count(28,72,5,3,3)
REAL*4 mean(28,72,5,3,3)
REAL*4 stdev(28,72,5,3,3)
INTEGER*4 hist(28,72,5,3,3,30)

END STRUCTURE


```
STRUCTURE /L3DPR_G1_PRECIPICEINTEGRATED/  
  INTEGER*4 count(28,72,5,3,3)  
  REAL*4 mean(28,72,5,3,3)  
  REAL*4 stdev(28,72,5,3,3)  
  INTEGER*4 hist(28,72,5,3,3,30)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G1_PRECIPWATERINTEGRATED/  
  INTEGER*4 count(28,72,5,3,3)  
  REAL*4 mean(28,72,5,3,3)  
  REAL*4 stdev(28,72,5,3,3)  
  INTEGER*4 hist(28,72,5,3,3,30)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G1_MIXEDPHRATENEARSURFACE/  
  INTEGER*4 count(28,72,5,3,3)  
  REAL*4 mean(28,72,5,3,3)  
  REAL*4 stdev(28,72,5,3,3)  
  INTEGER*4 hist(28,72,5,3,3,30)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G1_SNOWRATENEARSURFACE/  
  INTEGER*4 count(28,72,5,3,3)  
  REAL*4 mean(28,72,5,3,3)  
  REAL*4 stdev(28,72,5,3,3)  
  INTEGER*4 hist(28,72,5,3,3,30)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G1_RAINRATENEARSURFACE/  
  INTEGER*4 count(28,72,5,3,3)  
  REAL*4 mean(28,72,5,3,3)  
  REAL*4 stdev(28,72,5,3,3)  
  INTEGER*4 hist(28,72,5,3,3,30)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G1_PRECIPRATENEARSURFACE/  
  INTEGER*4 count(28,72,5,3,3)  
  REAL*4 mean(28,72,5,3,3)  
  REAL*4 stdev(28,72,5,3,3)  
  INTEGER*4 hist(28,72,5,3,3,30)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G1_PRECIPRATEESURFACE2/  
  INTEGER*4 count(28,72,5,3,3)  
  REAL*4 mean(28,72,5,3,3)  
  REAL*4 stdev(28,72,5,3,3)  
  INTEGER*4 hist(28,72,5,3,3,30)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G1_PRECIPRATEESURFACE/  
  INTEGER*4 count(28,72,5,3,3)  
  REAL*4 mean(28,72,5,3,3)  
  REAL*4 stdev(28,72,5,3,3)  
  INTEGER*4 hist(28,72,5,3,3,30)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G1_MIXEDPHRATE/  
  INTEGER*4 count(28,72,5,5,3,3)  
  REAL*4 mean(28,72,5,5,3,3)  
  REAL*4 stdev(28,72,5,5,3,3)  
  INTEGER*4 hist(28,72,5,5,3,3,30)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G1_SNOWRATE/  
  INTEGER*4 count(28,72,5,5,3,3)  
  REAL*4 mean(28,72,5,5,3,3)  
  REAL*4 stdev(28,72,5,5,3,3)  
  INTEGER*4 hist(28,72,5,5,3,3,30)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G1_RAINRATE/  
  INTEGER*4 count(28,72,5,5,3,3)  
  REAL*4 mean(28,72,5,5,3,3)  
  REAL*4 stdev(28,72,5,5,3,3)  
  INTEGER*4 hist(28,72,5,5,3,3,30)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G1_PRECIPRATE/  
  INTEGER*4 count(28,72,5,5,3,3)  
  REAL*4 mean(28,72,5,5,3,3)  
  REAL*4 stdev(28,72,5,5,3,3)  
  INTEGER*4 hist(28,72,5,5,3,3,30)  
END STRUCTURE
```

```
STRUCTURE /L3DPR_G1/
```

```

RECORD /L3DPR_G1_PRECIPRATE/ precipRate
RECORD /L3DPR_G1_RAINRATE/ rainRate
RECORD /L3DPR_G1_SNOWRATE/ snowRate
RECORD /L3DPR_G1_MIXEDPHRATE/ mixedPhRate
RECORD /L3DPR_G1_PRECIPRATEESURFACE/ precipRateESurface
RECORD /L3DPR_G1_PRECIPRATEESURFACE2/ precipRateESurface2
RECORD /L3DPR_G1_PRECIPRATENEARSSURFACE/ precipRateNearSurface
RECORD /L3DPR_G1_RAINRATENEARSSURFACE/ rainRateNearSurface
RECORD /L3DPR_G1_SNOWRATENEARSSURFACE/ snowRateNearSurface
RECORD /L3DPR_G1_MIXEDPHRATENEARSSURFACE/ mixedPhRateNearSurface
RECORD /L3DPR_G1_PRECIPWATERINTEGRATED/ precipWaterIntegrated
RECORD /L3DPR_G1_PRECIPICEINTEGRATED/ precipIceIntegrated
RECORD /L3DPR_G1_PRECIPRATEAVE24/ precipRateAve24
RECORD /L3DPR_G1_ZFACTORCORRECTED/ zFactorCorrected
RECORD /L3DPR_G1_ZFACTORCORRECTEDESURFACE/ zFactorCorrectedESurface
RECORD /L3DPR_G1_ZFACTORCORRECTEDNEARSSURFACE/ zFactorCorrectedNearSurface
RECORD /L3DPR_G1_ZFACTORCORRECTEDDPR/ zFactorCorrectedDPR
RECORD /L3DPR_G1_ZFACTORCORRECTEDESURFACEDPR/ zFactorCorrectedESurfaceDPR
RECORD /L3DPR_G1_ZFACTORCORRECTEDNEARSSURFACEDPR/ zFactorCorrectedNearSurfaceDPR
RECORD /L3DPR_G1_ZFACTORMEASURED/ zFactorMeasured
RECORD /L3DPR_G1_DM/ dm
RECORD /L3DPR_G1_DBNW/ dBNw
RECORD /L3DPR_G1_EPSILONDPR/ epsilonDPR
RECORD /L3DPR_G1_EPSILON/ epsilon
RECORD /L3DPR_G1_PIASRT/ piaSRT
RECORD /L3DPR_G1_PIASRTDPR/ piaSRTdpr
RECORD /L3DPR_G1_PIAFINAL/ piaFinal
RECORD /L3DPR_G1_PIAFINALDPR/ piaFinalDPR
RECORD /L3DPR_G1_PIAFINALSUBSET/ piaFinalSubset
RECORD /L3DPR_G1_PIAFINALDPRSUBSET/ piaFinalDPRsubset
RECORD /L3DPR_G1_HEIGHTBB/ heightBB
RECORD /L3DPR_G1_HEIGHTBBNADIR/ heightBBnadir
RECORD /L3DPR_G1_BBWIDTHNADIR/ BBwidthNadir
RECORD /L3DPR_G1_HEIGHTSTORMTOP/ heightStormTop
RECORD /L3DPR_G1_BBWIDTH/ BBwidth
RECORD /L3DPR_G1_OBSERVATIONCOUNTS/ observationCounts
RECORD /L3DPR_G1_PRECIPRATELOCALTIME/ precipRateLocalTime
REAL*4 precipRateNearSurfaceUnconditional(28,72,5)
REAL*4 precipProbabilityNearSurface(28,72,5)
END STRUCTURE

STRUCTURE /L3DPR_GRIDS/
RECORD /L3DPR_G1/ G1

```

RECORD /L3DPR_G2/ G2
END STRUCTURE