

Shortname: OMNO2G  
Longname: OMI/Aura NO2 Total & Tropospheric Column Daily L2 Global  
0.25deg Lat/Lon Grid  
PFS Version: 1.3.4  
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PGE Version: 1.3.4  
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Description: >

This document specifies the format of the Ozone Monitoring Instrument (OMI)

OMNO2 product, which is the daily Level 2G (L2G) gridded data product that

corresponds to the OMNO2 product. The latter is the U.S. nitrogen dioxide

(NO2) total and tropospheric column orbital Level 2 (L2) swath data product

(Reference 1).

The L2G product contains 24 UTC hours of L2 product subsetted onto a longitude-latitude grid.

An OMI L2G day is defined to be the 24 hours that lie between UTC times of

0 hours, 0 minutes, 0 seconds and 23 hours, 59 minutes, 59.999999 seconds.

The L2G product contains the data for all L2 "scenes" that

- 1) have observation times that lie within the L2G day in question,
- 2) have centers that lie within the L2G grid cell in question, and
- 3) are "good".

A "good" OMNO2 L2 scene is defined as one that has

- i) a solar zenith angle that is less than or equal to 88.0 degrees, and
- ii) a column amount NO2 that is not equal to the missing value.

The adopted L2G grid is a 0.25-degree by 0.25-degree grid in longitude and

latitude. The dimensions of this grid are 1440 by 720. The origin of the

grid is at lower left. That is, the grid cell at coordinates (1, 1) is centered at (longitude = -179.875 , latitude = -89.875), and the grid cell at coordinates (1440, 720) is centered at (longitude = 179.875 , latitude = 89.875).

The adopted L2G grid is consistent with the document entitled "Definition

of OMI Grids for Level 3 and Level 4 Data Products" by J.P. Veefkind et al. (Reference 2).

The L2G product currently excludes L2 data collected in spatial and spectral zoom modes.

Each "good" L2 scene is mapped onto only one L2G grid cell.

The number of L2 scenes that are mapped onto a given L2G grid cell can range from 0 to 12, and the corresponding data are stored in an additional dimension of the grid.

The L2 data are not averaged or weighted in any way in the L2G product.

The product is stored as one HDF-EOS 5 grid file, and has a size of 100 MB.

The format of the L2G product files is consistent with the document entitled "HDF-EOS Aura File Format Guidelines" by C. Craig et al. (Reference 3).

#### Global Metadata:

- Metadata Name: EndUTC  
Mandatory: T  
Data Type: HE5T\_NATIVE\_CHAR  
Number of Values: 1  
Data Source: PGE  
Description: >

UTC at the end of the L2G granule in "YYYY-MM-DDT23:59:59.999999Z" format.

- Metadata Name: FirstLineInOrbit  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1,16  
Minimum Value: 1  
Maximum Value: 1700  
Data Source: PGE  
Description: >

The first line number in each L2 orbit that contributes to the L2G granule.

- Metadata Name: GranuleDay  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1  
Minimum Value: 1  
Maximum Value: 31  
Data Source: PGE

Description: The day of the month at the start of the L2G granule.

- Metadata Name: GranuleDayOfYear  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1  
Minimum Value: 1  
Maximum Value: 366  
Data Source: PGE  
Description: The day of the year at the start of the L2G granule.

- Metadata Name: GranuleMonth  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1  
Minimum Value: 1  
Maximum Value: 12  
Data Source: PGE  
Description: The month of the year at the start of the L2G granule.

- Metadata Name: GranuleYear  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1  
Minimum Value: 2000  
Maximum Value: 2099  
Data Source: PGE  
Description: The (four-digit) year at the start of the L2G granule.

- Metadata Name: HDFEOSVersion  
Mandatory: T  
Data Type: HE5T\_NATIVE\_CHAR  
Number of Values: 1  
Data Source: HE  
Description: >  
The version of HDF-EOS 5 used in production. Example is "HDFEOS\_5.1.8".

- Metadata Name: InstrumentName  
Mandatory: T  
Data Type: HE5T\_NATIVE\_CHAR  
Number of Values: 1  
Valid: OMI  
Data Source: PGE  
Description: Actual is "OMI" (see Section 6.1 of Reference 3).

- Metadata Name: LastLineInOrbit  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1,16

Minimum Value: 1  
Maximum Value: 1700  
Data Source: PGE  
Description: >

The last line number in each L2 orbit that contributes to the L2G granule.

- Metadata Name: NumberOfLinesMissingGeolocation  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1,16  
Minimum Value: 1  
Maximum Value: 1700  
Data Source: PGE  
Description: >

The number of lines in each L2 orbit that are missing geolocation (a.k.a. number of "bad" lines in each L2 file).

- Metadata Name: OrbitNumber  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1,16  
Minimum Value: 1  
Maximum Value: 999999  
Data Source: L2  
Description: The OMI orbit number for each L2 input granule.

- Metadata Name: OrbitPeriod  
Mandatory: T  
Data Type: HE5T\_NATIVE\_DOUBLE  
Number of Values: 1,16  
Minimum Value: 5000.0  
Maximum Value: 7000.0  
Data Source: PGE  
Description: The Aura orbital period for each L2 input granule.

- Metadata Name: Period  
Mandatory: T  
Data Type: HE5T\_NATIVE\_CHAR  
Number of Values: 1  
Valid: Daily,Weekly,Monthly  
Data Source: PGE  
Description: The duration of the L2G granule. Actual is "Daily".

- Metadata Name: PGEVersion  
Mandatory: T  
Data Type: HE5T\_NATIVE\_CHAR  
Number of Values: 1  
Data Source: PCF  
Description: Example is "1.0.27.1" (see Appendix K of Reference 4).

- Metadata Name: ProcessLevel  
Mandatory: T  
Data Type: HE5T\_NATIVE\_CHAR  
Number of Values: 1  
Valid: 2G  
Data Source: PGE  
Description: Actual is "2G".
  
- Metadata Name: QAPercentMissingData  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1,16  
Minimum Value: 0  
Maximum Value: 100  
Data Source: L2  
Description: >  
The percent of Level 1B calibrated radiance data that is missing from each L2 input granule.
  
- Metadata Name: QAPercentOutOfBoundsData  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1,16  
Minimum Value: 0  
Maximum Value: 100  
Data Source: L2  
Description: >  
The percent of data that are out of bounds in each L2 input granule.
  
- Metadata Name: StartUTC  
Mandatory: T  
Data Type: HE5T\_NATIVE\_CHAR  
Number of Values: 1  
Data Source: PGE  
Description: >  
UTC at the start of the L2G granule in "YYYY-MM-DDT00:00:00.000000Z" format.
  
- Metadata Name: TAI93At0zOfGranule  
Mandatory: T  
Data Type: HE5T\_NATIVE\_DOUBLE  
Number of Values: 1  
Minimum Value: 0.0  
Maximum Value: 1.0e+30  
Data Source: PGE  
Description: >  
The TAI93 time at 0z of the L2G granule (see Section 6.1 of Reference 3).

Grid Metadata:

- Metadata Name: GCTPProjectionCode  
Mandatory: T

Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1  
Minimum Value: 0  
Maximum Value: 99  
Data Source: PGE  
Description: >

The GCTP projection code of the L2G grid. Actual is 0, which corresponds to the geographic projection.

- Metadata Name: GridName  
Mandatory: T  
Data Type: HE5T\_NATIVE\_CHAR  
Number of Values: 1  
Valid: ColumnAmountNO2  
Data Source: PGE  
Description: Actual is "ColumnAmountNO2".

- Metadata Name: GridOrigin  
Mandatory: T  
Data Type: HE5T\_NATIVE\_CHAR  
Number of Values: 1  
Valid: Center  
Data Source: PGE  
Description: >  
The location of longitude and latitude quoted for each L2G grid cell. Actual is, on average, "Center" (see Section 6.2 of Reference 3).

- Metadata Name: GridSpacing  
Mandatory: T  
Data Type: HE5T\_NATIVE\_CHAR  
Number of Values: 1  
Data Source: PGE  
Description: >  
Spacing of L2G grid (in degrees). Actual is "(0.25,0.25)".

- Metadata Name: GridSpacingUnit  
Mandatory: T  
Data Type: HE5T\_NATIVE\_CHAR  
Number of Values: 1  
Valid: deg  
Data Source: PGE  
Description: >  
Unit for GridSpacing. Actual is "deg".

- Metadata Name: GridSpan  
Mandatory: T  
Data Type: HE5T\_NATIVE\_CHAR  
Number of Values: 1  
Data Source: PGE  
Description: >  
Span of L2G grid (in degrees). Actual is "(-180,180,-90,90)".

- Metadata Name: GridSpanUnit

Mandatory: T  
Data Type: HE5T\_NATIVE\_CHAR  
Number of Values: 1  
Valid: deg  
Data Source: PGE  
Description: >  
Unit for GridSpan. Actual is "deg".

- Metadata Name: MaximumNumberOfCandidatesPerGridCell  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1  
Minimum Value: 0  
Maximum Value: 15  
Data Source: PGE  
Description: >  
The maximum number of L2 scenes per cell in the L2G grid (this can be  
as large as 12).

- Metadata Name: MinimumNumberOfCandidatesPerGridCell  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1  
Minimum Value: 0  
Maximum Value: 15  
Data Source: PGE  
Description: >  
The minimum number of L2 scenes per cell in the L2G grid (this is  
typically 0, because empty L2G grid cells are quite common).

- Metadata Name: NumberOfEmptyGridCells  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1  
Minimum Value: 0  
Maximum Value: 1036800  
Data Source: PGE  
Description: >  
The number of cells in the L2G grid that do not contain any L2  
scenes.

- Metadata Name: NumberOfDuplicateScenesAcceptedIntoGrid  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1  
Minimum Value: 0  
Maximum Value: 1500000  
Data Source: PGE  
Description: >  
The number of L2 scenes accepted into L2G grid cells that already  
contain one or more L2 scenes.

- Metadata Name: NumberOfGridCells  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1  
Minimum Value: 1  
Maximum Value: 1036800  
Data Source: PGE  
Description: The total number of cells in the L2G grid.
  
- Metadata Name: NumberOfLatitudesInGrid  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1  
Minimum Value: 1  
Maximum Value: 720  
Data Source: PGE  
Description: The number of latitude bins in the L2G grid.
  
- Metadata Name: NumberOfLongitudesInGrid  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1  
Minimum Value: 1  
Maximum Value: 1440  
Data Source: PGE  
Description: The number of longitude bins in the L2G grid.
  
- Metadata Name: NumberOfMultiplyPopulatedGridCells  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1  
Minimum Value: 0  
Maximum Value: 1036800  
Data Source: PGE  
Description: >  
The number of cells in the L2G grid that contain two or more L2 scenes.
  
- Metadata Name: NumberOfPopulatedGridCells  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1  
Minimum Value: 0  
Maximum Value: 1036800  
Data Source: PGE  
Description: >  
The number of cells in the L2G grid that contain one or more L2 scenes.
  
- Metadata Name: NumberOfScenesAcceptedIntoGrid  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1



Minimum Value: 0  
Maximum Value: 1500000  
Data Source: PGE  
Description: The number of L2 scenes accepted into the L2G grid.

- Metadata Name: NumberOfScenesConsideredForGrid  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1  
Minimum Value: 0  
Maximum Value: 1500000  
Data Source: PGE  
Description: The number of L2 scenes considered for the L2G grid.

- Metadata Name: NumberOfScenesRejectedFromGrid  
Mandatory: T  
Data Type: HE5T\_NATIVE\_INT  
Number of Values: 1  
Minimum Value: 0  
Maximum Value: 1500000  
Data Source: PGE  
Description: The number of L2 scenes rejected from the L2G grid.

- Metadata Name: Projection  
Mandatory: T  
Data Type: HE5T\_NATIVE\_CHAR  
Number of Values: 1  
Valid: Geographic  
Data Source: PGE  
Description: >  
The map projection of the L2G grid. Actual is "Geographic" (see Section 6.2 of Reference 3).

#### Grid Dimensions:

- Dimension Name: nCandidate  
Data Type: HE5T\_NATIVE\_INT  
Dimension Type: FIXED  
Number of Values: 1  
Minimum Value: 1  
Maximum Value: 15  
Data Source: PGE  
Description: >  
The L2-candidate-scenes dimension of the L2G grid. The size of this dimension is currently set at 15.

- Dimension Name: XDim  
Data Type: HE5T\_NATIVE\_INT  
Dimension Type: FIXED  
Number of Values: 1  
Minimum Value: 1  
Maximum Value: 1440  
Data Source: PGE

Description: >

The longitudes dimension of the L2G grid. There are currently 1440 0.25-degree-wide bins between longitudes -180.0 and 180.0 degrees.

- Dimension Name: YDim  
Data Type: HE5T\_NATIVE\_INT  
Dimension Type: FIXED  
Number of Values: 1  
Minimum Value: 1  
Maximum Value: 720  
Data Source: PGE  
Description: >

The latitudes dimension of the L2G grid. There are currently 720 0.25-degree-wide bins between latitudes -90.0 and 90.0 degrees.

Geolocation Fields:

- Field Name: GroundPixelQualityFlags  
Data Type: HE5T\_NATIVE\_UINT16  
Dimensions: nCandidate, YDim, XDim  
Minimum Value: 0  
Maximum Value: 65534  
Missing Value: 65535  
Offset: 0.0  
Scale Factor: 1.0  
Units: NoUnits  
Data Source: L2  
Title: Ground Pixel Quality Flags  
Unique Field Definition: OMI-Specific  
Description: >

The ground pixel quality flags for each L2 candidate scene in each L2G grid cell:

Bits 0 to 3 together contain the land/water flags:

0 - shallow ocean  
1 - land  
2 - shallow inland water  
3 - ocean coastline/lake shoreline  
4 - ephemeral (intermittent) water  
5 - deep inland water  
6 - continental shelf ocean  
7 - deep ocean  
8-14 - not used  
15 - error flag for land/water

Bits 4 to 6 are flags that are set to 0 for FALSE, or 1 for TRUE:

Bit 4 - sun glint possibility flag  
Bit 5 - solar eclipse possibility flag  
Bit 6 - geolocation error flag

Bit 7 is reserved for future use (currently set to 0).

Bits 8 to 14 together contain the snow/ice flags (based on NISE):

- 0 - snow-free land
- 1-100 - sea ice concentration (percent)
- 101 - permanent ice (Greenland, Antarctica)
- 102 - not used
- 103 - dry snow
- 104 - ocean (NISE-255)
- 105-123 - reserved for future use
- 124 - mixed pixels at coastline (NISE-252)
- 125 - suspect ice value (NISE-253)
- 126 - corners undefined (NISE-254)
- 127 - error

Bit 15 - NISE nearest neighbor filling flag.  
 (See Section 6.2 of Reference 5 for more details.)

- Field Name: Latitude
- Data Type: HE5T\_NATIVE\_FLOAT
- Dimensions: nCandidate, YDim, XDim
- Minimum Value: -90.0
- Maximum Value: 90.0
- Missing Value: -1.2676506e+30
- Offset: 0.0
- Scale Factor: 1.0
- Units: deg
- Data Source: L2
- Title: Latitude of the center of the groundpixel
- Unique Field Definition: Aura-Shared
- Description: >  
 The geodetic latitude (in degrees) on the ground at the center of each L2 candidate scene in each L2G grid cell.

- Field Name: LineNumber
- Data Type: HE5T\_NATIVE\_INT
- Dimensions: nCandidate, YDim, XDim
- Minimum Value: 1
- Maximum Value: 1700
- Missing Value: -2000000000
- Offset: 0.0
- Scale Factor: 1.0
- Units: NoUnits
- Data Source: L2
- Title: Line Number of Candidate Scene
- Unique Field Definition: OMI-Specific
- Description: >  
 The line number for each L2 candidate scene in each L2G grid cell.

- Field Name: Longitude
- Data Type: HE5T\_NATIVE\_FLOAT
- Dimensions: nCandidate, YDim, XDim
- Minimum Value: -180.0
- Maximum Value: 180.0
- Missing Value: -1.2676506e+30
- Offset: 0.0

Scale Factor: 1.0  
Units: deg  
Data Source: L2  
Title: Longitude of the center of the groundpixel  
Unique Field Definition: Aura-Shared  
Description: >  
The geodetic longitude (in degrees) on the ground at the center of each L2 candidate scene in each L2G grid cell.

- Field Name: NumberOfCandidateScenes  
Data Type: HE5T\_NATIVE\_INT  
Dimensions: YDim,XDim  
Minimum Value: 0  
Maximum Value: 15  
Missing Value: 0  
Offset: 0.0  
Scale Factor: 1.0  
Units: NoUnits  
Data Source: PGE  
Title: Number of Candidate Scenes  
Unique Field Definition: OMI-Specific  
Description: >  
The number of L2 candidate scenes in each L2G grid cell.

- Field Name: OrbitNumber  
Data Type: HE5T\_NATIVE\_INT  
Dimensions: nCandidate,YDim,XDim  
Minimum Value: 1  
Maximum Value: 999999  
Missing Value: -2000000000  
Offset: 0.0  
Scale Factor: 1.0  
Units: NoUnits  
Data Source: L2  
Title: Orbit Number of Candidate Scene  
Unique Field Definition: OMI-Specific  
Description: >  
The orbit number for each L2 candidate scene in each L2G grid cell.

- Field Name: PathLength  
Data Type: HE5T\_NATIVE\_FLOAT  
Dimensions: nCandidate,YDim,XDim  
Minimum Value: 2.0  
Maximum Value: 100.0  
Missing Value: 1.2676506e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: NoUnits  
Data Source: PGE  
Title: Path Length  
Unique Field Definition: OMI-Specific  
Description: >

The path length [= sec(solar zenith angle) + sec(viewing zenith angle)] for each L2 candidate scene in each L2G grid cell.

- Field Name: SceneNumber  
Data Type: HE5T\_NATIVE\_INT  
Dimensions: nCandidate,YDim,XDim  
Minimum Value: 1  
Maximum Value: 60  
Missing Value: -2000000000  
Offset: 0.0  
Scale Factor: 1.0  
Units: NoUnits  
Data Source: L2  
Title: Scene Number of Candidate Scene  
Unique Field Definition: OMI-Specific  
Description: >

The cross-track ground-pixel number for each L2 candidate scene in each L2G grid cell.

- Field Name: SolarAzimuthAngle  
Data Type: HE5T\_NATIVE\_FLOAT  
Dimensions: nCandidate,YDim,XDim  
Minimum Value: -180.0  
Maximum Value: 180.0  
Missing Value: -1.2676506e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: deg  
Data Source: L2  
Title: >

Solar azimuth angle at WGS84 ellipsoid for center co-ordinate of the ground

pixel, defined East-of-North

Unique Field Definition: OMI-TES-Shared

Description: >

The solar azimuth angle (in degrees) defined East-of-North on the ground at

the center of each L2 candidate scene in each L2G grid cell.

- Field Name: SolarZenithAngle  
Data Type: HE5T\_NATIVE\_FLOAT  
Dimensions: nCandidate,YDim,XDim  
Minimum Value: 0.0  
Maximum Value: 180.0  
Missing Value: -1.2676506e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: deg  
Data Source: L2  
Title: >

Solar zenith angle at WGS84 ellipsoid for center co-ordinate of the ground

pixel  
Unique Field Definition: Aura-Shared  
Description: >  
The solar zenith angle (in degrees) on the ground at the center of  
each L2  
candidate scene in each L2G grid cell.

- Field Name: SpacecraftAltitude  
Data Type: HE5T\_NATIVE\_FLOAT  
Dimensions: nCandidate, YDim, XDim  
Minimum Value: 0.0  
Maximum Value: 1.0e+06  
Missing Value: -1.2676506e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: m  
Data Source: L2  
Title: Altitude above WGS84 ellipsoid  
Unique Field Definition: HIRDLS-OMI-TES-Shared  
Description: >  
Spacecraft altitude (in m) for each L2 candidate scene in each L2G  
grid  
cell.

- Field Name: SpacecraftLatitude  
Data Type: HE5T\_NATIVE\_FLOAT  
Dimensions: nCandidate, YDim, XDim  
Minimum Value: -90.0  
Maximum Value: 90.0  
Missing Value: -1.2676506e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: deg  
Data Source: L2  
Title: Geodetic Latitude above WGS84 ellipsoid  
Unique Field Definition: HIRDLS-OMI-TES-Shared  
Description: >  
Spacecraft latitude (in degrees) for each L2 candidate scene in each  
L2G  
grid cell.

- Field Name: SpacecraftLongitude  
Data Type: HE5T\_NATIVE\_FLOAT  
Dimensions: nCandidate, YDim, XDim  
Minimum Value: -180.0  
Maximum Value: 180.0  
Missing Value: -1.2676506e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: deg  
Data Source: L2  
Title: Geodetic Longitude above WGS84 ellipsoid  
Unique Field Definition: HIRDLS-OMI-TES-Shared  
Description: >

Spacecraft longitude (in degrees) for each L2 candidate scene in each L2G grid cell.

- Field Name: Time  
Data Type: HE5T\_NATIVE\_DOUBLE  
Dimensions: nCandidate,YDim,XDim  
Minimum Value: -5.0e+09  
Maximum Value: 1.0e+10  
Missing Value: -1.2676506002282294e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: s  
Data Source: L2  
Title: Time at Start of Scan (s, TAI93)  
Unique Field Definition: Aura-Shared  
Description: >

The TAI93 time (in seconds) for each L2 candidate scene in each L2G grid cell.

- Field Name: ViewingAzimuthAngle  
Data Type: HE5T\_NATIVE\_FLOAT  
Dimensions: nCandidate,YDim,XDim  
Minimum Value: -180.0  
Maximum Value: 180.0  
Missing Value: -1.2676506e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: deg  
Data Source: L2  
Title: >

Viewing azimuth angle at WGS84 ellipsoid for center co-ordinate of the

ground pixel, defined East-of-North  
Unique Field Definition: OMI-Specific  
Description: >

The viewing azimuth angle (in degrees) defined East-of-North on the ground at the center of each L2 candidate scene in each L2G grid cell.

- Field Name: ViewingZenithAngle  
Data Type: HE5T\_NATIVE\_FLOAT  
Dimensions: nCandidate,YDim,XDim  
Minimum Value: 0.0  
Maximum Value: 180.0  
Missing Value: -1.2676506e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: deg  
Data Source: L2  
Title: >

Viewing zenith angle at WGS84 ellipsoid for center co-ordinate of the ground pixel

Unique Field Definition: OMI-Specific  
Description: >  
The viewing zenith angle (in degrees) on the ground at the center of each L2 candidate scene in each L2G grid cell.

Data Fields:

- Field Name: CloudFraction  
Data Type: HE5T\_NATIVE\_FLOAT  
Dimensions: nCandidate, YDim, XDim  
Minimum Value: 0.0  
Maximum Value: 1.0  
Missing Value: -1.2676506e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: NoUnits  
Data Source: L2  
Title: Effective cloud fraction  
Unique Field Definition: OMI-Specific  
Description: >  
The effective cloud fraction for each L2 candidate scene in each L2G grid cell.

- Field Name: CloudFractionStd  
Data Type: HE5T\_NATIVE\_FLOAT  
Dimensions: nCandidate, YDim, XDim  
Minimum Value: 0.0  
Maximum Value: 1.0  
Missing Value: -1.2676506e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: NoUnits  
Data Source: L2  
Title: Effective cloud fraction precision  
Unique Field Definition: OMI-Specific  
Description: >  
The precision of the effective cloud fraction for each L2 candidate scene in each L2G grid cell.

- Field Name: CloudPressure  
Data Type: HE5T\_NATIVE\_FLOAT  
Dimensions: nCandidate, YDim, XDim  
Minimum Value: 0.0  
Maximum Value: 1200.0  
Missing Value: -1.2676506e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: hPa  
Data Source: L2  
Title: Effective cloud pressure  
Unique Field Definition: OMI-Specific



Description: >  
The effective cloud pressure for each L2 candidate scene in each L2G grid cell.

- Field Name: CloudPressureStd  
Data Type: HE5T\_NATIVE\_FLOAT  
Dimensions: nCandidate, YDim, XDim  
Minimum Value: 0.0  
Maximum Value: 1200.0  
Missing Value: -1.2676506e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: hPa  
Data Source: L2  
Title: Effective cloud pressure precision  
Unique Field Definition: OMI-Specific  
Description: >

The effective cloud pressure precision for each L2 candidate scene in each L2G grid cell.

- Field Name: CloudRadianceFraction  
Data Type: HE5T\_NATIVE\_INT16  
Dimensions: nCandidate, YDim, XDim  
Minimum Value: 0  
Maximum Value: 1000  
Missing Value: -32767  
Offset: 0.0  
Scale Factor: 0.001  
Units: NoUnits  
Data Source: L2  
Title: Fraction of the radiance from the cloudy

part  
Unique Field Definition: OMI-Specific  
Description: >  
The fraction of the radiance from clouds (times 1000) for each L2 candidate scene in each L2G grid cell.

- Field Name: ColumnAmountNO2  
Data Type: HE5T\_NATIVE\_FLOAT  
Dimensions: nCandidate, YDim, XDim  
Minimum Value: 0.0  
Maximum Value: 1.0e+30  
Missing Value: -1.2676506e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: molec/cm^2  
Data Source: L2  
Title: NO2 vertical column density  
Unique Field Definition: OMI-Specific  
Description: >

The NO2 vertical column density (in molec/cm<sup>2</sup>) for each L2 candidate scene in each L2G grid cell.

- Field Name: ColumnAmountNO2Std  
Data Type: HE5T\_NATIVE\_FLOAT  
Dimensions: nCandidate, YDim, XDim  
Minimum Value: 0.0  
Maximum Value: 1.0e+30  
Missing Value: -1.2676506e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: molec/cm<sup>2</sup>  
Data Source: L2  
Title: Precision of the NO2 vertical column density  
Unique Field Definition: OMI-Specific  
Description: >

The precision of the NO2 vertical column density (in molec/cm<sup>2</sup>) for each L2 candidate scene in each L2G grid cell.

- Field Name: ColumnAmountNO2Strat  
Data Type: HE5T\_NATIVE\_FLOAT  
Dimensions: nCandidate, YDim, XDim  
Minimum Value: 0.0  
Maximum Value: 1.0e+30  
Missing Value: -1.2676506e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: molec/cm<sup>2</sup>  
Data Source: L2  
Title: NO2 stratospheric column density  
Unique Field Definition: OMI-Specific  
Description: >

The NO2 stratospheric column density (in molec/cm<sup>2</sup>) for each L2 candidate scene in each L2G grid cell.

- Field Name: ColumnAmountNO2StratStd  
Data Type: HE5T\_NATIVE\_FLOAT  
Dimensions: nCandidate, YDim, XDim  
Minimum Value: 0.0  
Maximum Value: 1.0e+30  
Missing Value: -1.2676506e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: molec/cm<sup>2</sup>  
Data Source: L2  
Title: NO2 stratospheric column density uncertainty  
Unique Field Definition: OMI-Specific  
Description: >

The precision of the NO2 stratospheric column density (in molec/cm<sup>2</sup>) for each L2 candidate scene in each L2G grid cell.

- Field Name: ColumnAmountNO2Trop  
 Data Type: HE5T\_NATIVE\_FLOAT  
 Dimensions: nCandidate, YDim, XDim  
 Minimum Value: 0.0  
 Maximum Value: 1.0e+30  
 Missing Value: -1.2676506e+30  
 Offset: 0.0  
 Scale Factor: 1.0  
 Units: molec/cm^2  
 Data Source: L2  
 Title: NO2 tropospheric column density  
 Unique Field Definition: OMI-Specific  
 Description: >  
 The NO2 tropospheric column density (in molec/cm^2) for each L2 candidate scene in each L2G grid cell.

- Field Name: ColumnAmountNO2TropStd  
 Data Type: HE5T\_NATIVE\_FLOAT  
 Dimensions: nCandidate, YDim, XDim  
 Minimum Value: 0.0  
 Maximum Value: 1.0e+30  
 Missing Value: -1.2676506e+30  
 Offset: 0.0  
 Scale Factor: 1.0  
 Units: molec/cm^2  
 Data Source: L2  
 Title: Precision of the NO2 tropospheric column density  
 Unique Field Definition: OMI-Specific  
 Description: >  
 The precision of the NO2 tropospheric column density (in molec/cm^2) for each L2 candidate scene in each L2G grid cell.

- Field Name: InstrumentConfigurationId  
 Data Type: HE5T\_NATIVE\_UINT8  
 Dimensions: nCandidate, YDim, XDim  
 Minimum Value: 0  
 Maximum Value: 254  
 Missing Value: 255  
 Units: NoUnits  
 Data Source: L2  
 Title: >  
 Unique ID for instrument settings for current measurement  
 Unique Field Definition: OMI-Specific  
 Description: >  
 The instrument configuration ID for each L2 candidate scene in each L2G grid cell.

- Field Name: MeasurementQualityFlags  
 Data Type: HE5T\_NATIVE\_UINT8

Dimensions: nCandidate,YDim,XDim  
 Minimum Value: 0  
 Maximum Value: 254  
 Missing Value: 255  
 Units: NoUnits  
 Data Source: L2  
 Title: Bit level quality flags at measurement level  
 Unique Field Definition: OMI-Specific  
 Description: >  
 The bit-level quality flags at measurement level for each L2 candidate scene in each L2G grid cell.

Bit 0 Measurement Missing Flag:  
 Set if all Ground Pixels give Earth Radiance Missing Flag.  
 Bit 1 Measurement Error Flag:  
 Set if any of the L1B MeasurementQualityFlags bit 0, 1 or 3 are set for the Radiance or for the used Solar product.  
 Bit 2 Measurement Warning Flag:  
 Set if any of the L1B MeasurementQualityFlags bit 2, 4, 5, 8, 9 are set for the Radiance or for the used Solar product.  
 Bit 3 Rebinned Measurement Flag:  
 Set if L1B radiance MeasurementQualityFlags bit 7 is set to 1.  
 Bit 4 SAA Flag:  
 Set if L1B MeasurementQualityFlags bit 10 is set to 1 for the Radiance or for the used Solar product.  
 Bit 5 Spacecraft Maneuver Flag:  
 Set if L1B MeasurementQualityFlags bit 11 is set to 1 for the Radiance for the used Solar product.  
 Bit 6 Instrument Settings Error Flag:  
 The Earth and Solar InstrumentConfigurationIDs are not compatible.  
 Bit 7 Cloud Data Not Synchronized Flag:  
 Set if radiance and cloud data are not synchronized.

- Field Name: SlantColumnAmountNO2  
 Data Type: HE5T\_NATIVE\_FLOAT  
 Dimensions: nCandidate,YDim,XDim  
 Minimum Value: 0.0  
 Maximum Value: 1.0e+30  
 Missing Value: -1.2676506e+30  
 Offset: 0.0  
 Scale Factor: 1.0  
 Units: molec/cm^2  
 Data Source: L2  
 Title: NO2 slant column density  
 Unique Field Definition: OMI-Specific  
 Description: >  
 The NO2 slant column density (in molec/cm^2) for each L2 candidate scene in

each L2G grid cell.

- Field Name: SlantColumnAmountNO2Std  
Data Type: HE5T\_NATIVE\_FLOAT  
Dimensions: nCandidate,YDim,XDim  
Minimum Value: 0.0  
Maximum Value: 1.0e+30  
Missing Value: -1.2676506e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: molec/cm^2  
Data Source: L2  
Title: Precision of the NO2 slant column density  
Unique Field Definition: OMI-Specific  
Description: >

The precision of the NO2 slant column density (in molec/cm^2) for each L2 candidate scene in each L2G grid cell.

- Field Name: SlantColumnAmountNO2Destriped  
Data Type: HE5T\_NATIVE\_FLOAT  
Dimensions: nCandidate,YDim,XDim  
Minimum Value: 0.0  
Maximum Value: 1.0e+30  
Missing Value: -1.2676506e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: molec/cm^2  
Data Source: L2  
Title: Destriped Slant Column Amount NO2  
Unique Field Definition: OMI-Specific  
Description: >

The destriped NO2 slant column density (in molec/cm^2) for each L2 candidate scene in each L2G grid cell.

- Field Name: TerrainPressure  
Data Type: HE5T\_NATIVE\_FLOAT  
Dimensions: nCandidate,YDim,XDim  
Minimum Value: 0.0  
Maximum Value: 1200.0  
Missing Value: -1.2676506e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: hPa  
Data Source: L2  
Title: Pressure of the center of the ground pixel  
Unique Field Definition: OMI-Specific  
Description: >

The terrain pressure (in hPa) for each L2 candidate scene in each L2G grid cell.

- Field Name: TerrainReflectivity

Data Type: HE5T\_NATIVE\_FLOAT  
Dimensions: nCandidate, YDim, XDim  
Minimum Value: 0.0  
Maximum Value: 1.0  
Missing Value: -1.2676506e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: NoUnits  
Data Source: L2  
Title: Reflectivity of the ground pixel  
Unique Field Definition: OMI-Specific  
Description: >

The terrain reflectivity for each L2 candidate scene in each L2G grid cell.

- Field Name: TropopausePressure  
Data Type: HE5T\_NATIVE\_FLOAT  
Dimensions: nCandidate, YDim, XDim  
Minimum Value: 0.0  
Maximum Value: 1200.0  
Missing Value: -1.2676506e+30  
Offset: 0.0  
Scale Factor: 1.0  
Units: hPa  
Data Source: L2  
Title: Tropopause pressure  
Description: >

The tropopause pressure (in hPa) associated with each L2 candidate scene in each L2G grid cell.

- Field Name: VcdQualityFlags  
Data Type: HE5T\_NATIVE\_INT16  
Dimensions: nCandidate, YDim, XDim  
Minimum Value: 0  
Maximum Value: 32767  
Missing Value: 0  
Offset: 0.0  
Scale Factor: 1.0  
Units: NoUnits  
Data Source: L2  
Title: Vertical Column Density Quality Flags  
Unique Field Definition: OMI-Specific  
Description: >

The vertical column density flags for each L2 candidate scene in each L2G grid cell.

Bit 0 - Summary Quality Flag (Uberflag)  
Bit 1 - Secondary Summary Quality Flag  
Bit 2 - Reserved  
Bit 3 - Algorithm Detected Pollution Flag  
Bit 4 - Descending Orbit Flag  
Bit 5 - Reserved  
Bit 6 - Reserved

Bit 7 - Reserved  
Bit 8 - Reserved  
Bit 9 - Reserved  
Bit 10 - Reserved  
Bit 11 - Reserved  
Bit 12 - Reserved  
Bit 13 - Reserved  
Bit 14 - Reserved  
Bit 15 - Reserved

- Field Name: XTrackQualityFlags  
Data Type: HE5T\_NATIVE\_UINT8  
Dimensions: nCandidate, YDim, XDim  
Minimum Value: 0  
Maximum Value: 254  
Missing Value: 255  
Offset: 0.0  
Scale Factor: 1.0  
Units: NoUnits  
Data Source: PGE  
Title: Across Track Quality Flags  
Unique Field Definition: OMI-Specific  
Description: >

The cross-track quality flags assigned to each pixel in OMI L1B data for each L2 candidate scene in each L2G grid cell. Flags indicate detection of the OMI row anomaly and if the effect has been corrected.

Bits 0 to 2 together indicate row anomaly status:  
0 - Not affected  
1 - Affected, Not corrected, do not use  
2 - Slightly affected, not corrected, use with caution  
3 - Affected, corrected, use with caution  
4 - Affected, corrected, use pixel  
5 - Not used  
6 - Not used  
7 - Error during anomaly detection processing  
Bit 3 - Reserved for future use.  
Bit 4 - Possibly affected by wavelength shift  
Bit 5 - Possibly affected by blockage  
Bit 6 - Possibly affected by stray sunlight  
Bit 7 - Possibly affected by stray earthshine

#### Core Metadata:

- Metadata Name: AssociatedInstrumentShortName  
Mandatory: T  
Data Type: VA20  
Number of Values: 1  
Valid: OMI  
Data Source: MCF  
Description: Actual is "OMI".

- Metadata Name: AssociatedPlatformShortName  
Mandatory: T  
Data Type: VA20  
Number of Values: 1  
Valid: Aura  
Data Source: MCF  
Description: Actual is "Aura".
  
- Metadata Name: AssociatedSensorShortName  
Mandatory: T  
Data Type: VA20  
Number of Values: 1  
Valid: CCD Ultra Violet, CCD Visible  
Data Source: MCF  
Description: Actual is "CCD Ultra Violet".
  
- Metadata Name: AutomaticQualityFlag  
Mandatory: T  
Data Type: VA20  
Number of Values: 1  
Valid: Passed, Suspect, Failed  
Data Source: PGE  
Description: Actual is "Failed".
  
- Metadata Name: AutomaticQualityFlagExplanation  
Mandatory: T  
Data Type: VA255  
Number of Values: 1  
Data Source: PGE  
Description: >  
Actual is "An automatic quality investigation has not yet been devised."
  
- Metadata Name: DayNightFlag  
Mandatory: T  
Data Type: VA5  
Number of Values: 1  
Valid: Day, Night, Both  
Data Source: MCF  
Description: Actual is "Day".
  
- Metadata Name: EastBoundingCoordinate  
Mandatory: T  
Data Type: LF  
Number of Values: 1  
Minimum Value: -180.0  
Maximum Value: 180.0  
Data Source: PGE  
Description: >  
The terrestrial longitude (in degrees) of the easternmost data in the L2G granule, which is typically 180.0 degrees.
  
- Metadata Name: EquatorCrossingDate



Mandatory: T  
Data Type: D  
Number of Values: 1,16  
Data Source: L2  
Description: >

The date of the ascending equator crossing for each L2 input granule.

- Metadata Name: EquatorCrossingLongitude

Mandatory: T  
Data Type: LF  
Number of Values: 1,16  
Minimum Value: -180.0  
Maximum Value: 180.0  
Data Source: L2  
Description: >

The terrestrial longitude (in degrees) of the ascending equator crossing for each L2 input granule.

- Metadata Name: EquatorCrossingTime

Mandatory: T  
Data Type: T  
Number of Values: 1,16  
Data Source: L2  
Description: >

The time of the ascending equator crossing for each L2 input granule.

- Metadata Name: InputPointer

Mandatory: T  
Data Type: VA255  
Number of Values: 1,16  
Data Source: PCF  
Description: >

A list of the L2 input granules. Example is

```
("OMI-Aura_L2-OMNO2_2005m1002t2317-o06476_v002-2005m1027t004659.he5",  
"OMI-Aura_L2-OMNO2_2005m1003t0056-o06477_v002-2005m1027t004607.he5",  
"OMI-Aura_L2-OMNO2_2005m1003t0235-o06478_v002-2005m1027t004220.he5",  
"OMI-Aura_L2-OMNO2_2005m1003t0414-o06479_v002-2005m1027t004222.he5",  
"OMI-Aura_L2-OMNO2_2005m1003t0552-o06480_v002-2005m1027t004219.he5",  
"OMI-Aura_L2-OMNO2_2005m1003t0731-o06481_v002-2005m1027t004211.he5",  
"OMI-Aura_L2-OMNO2_2005m1003t0910-o06482_v002-2005m1027t004207.he5",  
"OMI-Aura_L2-OMNO2_2005m1003t1049-o06483_v002-2005m1027t004203.he5",  
"OMI-Aura_L2-OMNO2_2005m1003t1228-o06484_v002-2005m1027t004159.he5",  
"OMI-Aura_L2-OMNO2_2005m1003t1407-o06485_v002-2005m1027t004205.he5",  
"OMI-Aura_L2-OMNO2_2005m1003t1546-o06486_v002-2005m1027t003732.he5",  
"OMI-Aura_L2-OMNO2_2005m1003t1725-o06487_v002-2005m1027t003727.he5",  
"OMI-Aura_L2-OMNO2_2005m1003t1903-o06488_v002-2005m1027t003728.he5",  
"OMI-Aura_L2-OMNO2_2005m1003t2042-o06489_v002-2005m1027t003725.he5",  
"OMI-Aura_L2-OMNO2_2005m1003t2221-o06490_v002-2005m1027t003721.he5")
```

- Metadata Name: LocalGranuleID

Mandatory: T  
Data Type: VA80  
Number of Values: 1

Data Source: PGE  
Description: >  
Example is "OMI-Aura\_L2G-OMNO2G\_2005m1003\_v002-2006m0517t223224.he5"  
(see Appendix E of Reference 4).

- Metadata Name: LocalityValue  
Mandatory: T  
Data Type: VA20  
Number of Values: 1  
Data Source: MCF  
Description: Actual is "Global".

- Metadata Name: LOCALVERSIONID  
Mandatory: T  
Data Type: VA60  
Number of Values: 1  
Data Source: PCF  
Description: >  
MD5 fingerprint of the HDF product file. Example valids are  
"RFC1321 MD5 = not yet calculated" and "RFC1321 MD5 = [0-9,a-f]{32}".

- Metadata Name: NorthBoundingCoordinate  
Mandatory: T  
Data Type: LF  
Number of Values: 1  
Minimum Value: -90.0  
Maximum Value: 90.0  
Data Source: PGE  
Description: >  
The terrestrial latitude (in degrees) of the northernmost data in the  
L2G  
granule, which typically lies in the range from 65.0 to 90.0 degrees.

- Metadata Name: OperationalQualityFlag  
Mandatory: T  
Data Type: VA20  
Number of Values: 1  
Valid: >  
Passed,Failed,Being Investigated,Not Investigated,Inferred Passed,  
Inferred Failed,Suspect  
Data Source: PGE  
Description: >  
Actual is "Passed".

- Metadata Name: OperationalQualityFlagExplanation  
Mandatory: T  
Data Type: VA255  
Number of Values: 1  
Data Source: PGE  
Description: >  
Actual is "This granule passed operational tests that were  
administered  
by the OMI SIPS. QA metadata was extracted and the file was  
successfully

read using standard HDF-EOS utilities."

- Metadata Name: OrbitNumber  
Mandatory: T  
Data Type: I  
Number of Values: 1,16  
Minimum Value: 1  
Maximum Value: 999999  
Data Source: L2  
Description: The OMI orbit number for each L2 input granule.
  
- Metadata Name: ParameterName  
Mandatory: T  
Data Type: VA40  
Number of Values: 1  
Valid: Nitrogen\_Dioxide\_Total\_and\_Trop\_Column  
Data Source: PGE  
Description: >  
The measured science parameter expressed in the L2G granule. Actual  
is "Nitrogen\_Dioxide\_Total\_and\_Trop\_Column".
  
- Metadata Name: PGEVERSION  
Mandatory: T  
Data Type: VA10  
Number of Values: 1  
Data Source: PCF  
Description: Example is "1.0.27.1" (see Appendix K of Reference  
4).
  
- Metadata Name: ProductionDateTime  
Mandatory: T  
Data Type: DT  
Number of Values: 1  
Data Source: TK  
Description: The date and time of the Level 2G processing.
  
- Metadata Name: QAPercentOutOfBoundsData  
Mandatory: T  
Data Type: I  
Number of Values: 1  
Minimum Value: 0  
Maximum Value: 100  
Data Source: PGE  
Description: >  
An average for the entire L2G granule of the percent of data that are  
out of bounds.
  
- Metadata Name: QAPercentMissingData  
Mandatory: T  
Data Type: I  
Number of Values: 1  
Minimum Value: 0

Maximum Value: 100  
Data Source: PGE  
Description: >

1B An average for the entire L2G granule of the percent of missing Level  
calibrated radiance data.

- Metadata Name: RangeBeginningDate  
Mandatory: T  
Data Type: D  
Number of Values: 1  
Data Source: PGE  
Description: The year, month and day when the L2G granule

begins.

- Metadata Name: RangeBeginningTime  
Mandatory: T  
Data Type: T  
Number of Values: 1  
Data Source: PGE  
Description: >

The hour, minute, second and fraction of a second when the L2G  
granule  
begins.

- Metadata Name: RangeEndingDate  
Mandatory: T  
Data Type: D  
Number of Values: 1  
Data Source: PGE  
Description: The year, month and day when the L2G granule ends.

- Metadata Name: RangeEndingTime  
Mandatory: T  
Data Type: T  
Number of Values: 1  
Data Source: PGE  
Description: >

The hour, minute, second and fraction of a second when the L2G  
granule ends.

- Metadata Name: REPROCESSINGACTUAL  
Mandatory: T  
Data Type: VA20  
Number of Values: 1  
Valid: >

processed 1 time,processed 2 times,processed 3 times,processed 4  
times

Data Source: PCF  
Description: >

An indication of what reprocessing has been performed on the L2G  
granule.

- Metadata Name: ReprocessingPlanned

Mandatory: T  
Data Type: VA40  
Number of Values: 1  
Valid: >  
no further update anticipated, further update is anticipated,  
further update anticipated using enhanced PGE  
Data Source: DP  
Description: Actual is "further update is anticipated".

- Metadata Name: ScienceQualityFlag  
Mandatory: T  
Data Type: VA20  
Number of Values: 1  
Valid: >  
Passed, Failed, Being Investigated, Not Investigated, Inferred Passed,  
Inferred Failed, Suspect  
Data Source: DP  
Description: Actual is "Not Investigated".

- Metadata Name: ScienceQualityFlagExplanation  
Mandatory: T  
Data Type: VA255  
Number of Values: 1  
Data Source: DP  
Description: >  
Actual is "An updated science quality flag and explanation is put in  
the product .met file when a granule has been evaluated. The flag value  
in this file, Not Investigated, is an automatic default that is put into  
every granule during production.".

- Metadata Name: ShortName  
Mandatory: T  
Data Type: VA8  
Number of Values: 1  
Valid: OMNO2G  
Data Source: MCF  
Description: Actual is "OMNO2G".

- Metadata Name: SizeMBECSDDataGranule  
Mandatory: F  
Data Type: LF  
Number of Values: 1  
Minimum Value: 0.0  
Maximum Value: 10000.0  
Data Source: DSS  
Description: >  
The volume of data (in MB) contained in the L2G granule (this  
Metadata will not appear in the L2G granule).

- Metadata Name: SouthBoundingCoordinate  
Mandatory: T

Data Type: LF  
Number of Values: 1  
Minimum Value: -90.0  
Maximum Value: 90.0  
Data Source: PGE  
Description: >

The terrestrial latitude (in degrees) of the southernmost data in the L2G granule, which typically lies in the range from -90.0 to -65.0 degrees.

- Metadata Name: VERSIONID  
Mandatory: T  
Data Type: SI  
Number of Values: 1  
Minimum Value: 0  
Maximum Value: 999  
Data Source: PCF  
Description: Example is 2.

- Metadata Name: WestBoundingCoordinate  
Mandatory: T  
Data Type: LF  
Number of Values: 1  
Minimum Value: -180.0  
Maximum Value: 180.0  
Data Source: PGE  
Description: >

The terrestrial longitude (in degrees) of the westernmost data in the L2G granule, which is typically -180.0 degrees.

#### Product Specific Attributes:

- Metadata Name: ExpeditedData  
Mandatory: T  
Data Type: VA10  
Number of Values: 1  
Valid: TRUE,FALSE  
Data Source: PGE  
Description: The indicator for expedited Level 0 data.

- Metadata Name: ExposureTimes  
Mandatory: T  
Data Type: F  
Number of Values: 1,256  
Minimum Value: 0.0  
Maximum Value: 2000.0  
Data Source: PGE  
Description: >  
An array containing the exposure times (in seconds) used for the measurements.

- Metadata Name: MasterClockPeriods

Mandatory: T  
Data Type: F  
Number of Values: 1,128  
Minimum Value: 0.0  
Maximum Value: 10.0  
Data Source: PGE  
Description: >

An array containing the master clock periods (in seconds) used for the measurements.

- Metadata Name: NrMeasurements  
Mandatory: T  
Data Type: I  
Number of Values: 1  
Minimum Value: 0  
Maximum Value: 30000  
Data Source: PGE  
Description: >

The number of measurements used to create the L2G granule.

- Metadata Name: NrSpatialZoom  
Mandatory: T  
Data Type: I  
Number of Values: 1  
Minimum Value: 0  
Maximum Value: 0  
Data Source: PGE  
Description: >

The number of measurements in spatial zoom mode. Actual is 0, because zoom measurements are excluded from the L2G granule.

- Metadata Name: NrSpectralZoom  
Mandatory: T  
Data Type: I  
Number of Values: 1  
Minimum Value: 0  
Maximum Value: 0  
Data Source: PGE  
Description: >

The number of measurements in spectral zoom mode. Actual is 0, because zoom measurements are excluded from the L2G granule.

- Metadata Name: NrZoom  
Mandatory: T  
Data Type: I  
Number of Values: 1  
Minimum Value: 0  
Maximum Value: 0  
Data Source: PGE  
Description: >

The number of measurements in zoom modes. Actual is 0, because zoom

measurements are excluded from the L2G granule.

- Metadata Name: SolarEclipse  
Mandatory: T  
Data Type: VA10  
Number of Values: 1  
Valid: TRUE, FALSE  
Data Source: PGE  
Description: >

The indicator that during part of the measurements a solar eclipse occurred.

- Metadata Name: SouthAtlanticAnomalyCrossing  
Mandatory: T  
Data Type: VA10  
Number of Values: 1  
Valid: TRUE, FALSE  
Data Source: PGE  
Description: >

The indicator that during part of the measurements the spacecraft was in the South Atlantic Anomaly.

- Metadata Name: SpacecraftManeuverFlag  
Mandatory: T  
Data Type: VA10  
Number of Values: 1  
Valid: TRUE, FALSE, UNKNOWN  
Data Source: PGE  
Description: >

The indicator that during part of the measurements the spacecraft was performing a maneuver.

Archived Metadata:

- Metadata Name: ESDDDescriptorRevision  
Mandatory: T  
Data Type: VA10  
Number of Values: 1  
Data Source: MCF  
Description: >

The version of the ESDD descriptor file as determined by ECS.

- Metadata Name: LongName  
Mandatory: T  
Data Type: VA80  
Number of Values: 1  
Valid: >

OMI/Aura NO2 Total & Tropospheric Column Daily L2 Global 0.25deg Lat/Lon Grid

Data Source: MCF  
Description: >

Actual is

"OMI/Aura NO2 Total & Tropospheric Column Daily L2 Global 0.25deg Lat/Lon Grid".



References: >

1. "OMNO2 README File"  
(2011 November 29)  
([http://disc.sci.gsfc.nasa.gov/Aura/data-holdings/OMI/omno2\\_v003.shtml](http://disc.sci.gsfc.nasa.gov/Aura/data-holdings/OMI/omno2_v003.shtml))
2. "Definition of OMI Grids for Level 3 and Level 4 Data Products"  
(OMI-Grids\_L3L4, SD-OMIE-KNMI-443, 2005 January 25)
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