ASDA Files & Parameters

## GOES12/13.SMOKEE\_GRD Gridded Files

The smoke data files are stored as GRIB data format. The data size is 801 x 534 with a grid size of 0.15°. The lower left corner is located at 175°W and equator. Each smoke GRIB file has two records, smoke AOD, and smoke particle concentration, the latter is obtained by applying a scaling factor to observed smoke AOD. For information on the GRIB data format see NCEP Office Note 388 GRIB, available online at <http://www.nco.ncep.noaa.gov/pmb/docs/on388>.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name/description** | **Range** | **Domain** | **Scale factor** | **Offset** | **Units** |
| **smoke AOD** | Biomass-burning Aerosol Optical Depth | 0~1.57 | cloud = -1  unknown aerosols  (no ABBA fire) = -2  unknown aerosols = -3  no data = -9 | 1 | 0 | unitless |
| **smoke particle concentration** | Biomass-burning aerosol particle column concentrations | 0-3.84e-8 | cloud = -1  unknown aerosols  (no ABBA fire) = -2  unknown aerosols = -3  no data = -9 | 1 | 0 | kg/m3 |

## GOES12/13.SMOKEE.SMOKEE\_JPG Files

The table below is for the JPEG image files of Smoke Aerosol Optical Depth over the CONUS sector.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name/description** | **Range** | **Domain** | **Scale Factor** | **Offset** | **Units** |
| **Smoke AOD** | Retrieved Smoke Aerosol Optical Depth | 0~1.2 | -- | N/A | N/A | unitless |

## GOES11/15.SMOKEW\_GRD Gridded Files

The smoke data files are stored as GRIB data format. The data size is 801 x 534 with a grid size of 0.15°. The lower left corner is located at 175°W and equator. Each smoke GRIB file has two records, smoke AOD, and smoke particle column concentration, the latter is obtained by applying a scaling factor to observed smoke AOD. For information on the GRIB data format see NCEP Office Note 388 GRIB, available online at <http://www.nco.ncep.noaa.gov/pmb/docs/on388>.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name/description** | **Range** | **Domain** | **Scale factor** | **Offset** | **Units** |
| **smoke AOD** | Biomass-burning Aerosol Optical Depth | 0~1.57 | cloud = -1  unknown aerosols  (no ABBA fire) = -2  unknown aerosols = -3  no data = -9 | 1 | 0 | unitless |
| **smoke particle concentration** | Biomass-burning aerosol particle column concentrations | 0-3.84e-8 | cloud = -1  unknown aerosols  (no ABBA fire) = -2  unknown aerosols = -3  no data = -9 | 1 | 0 | kg/m3 |

## GOES11/15.SMOKEW\_JPG Files

The table below is for the JPEG image files of Smoke Aerosol Optical Depth over the CONUS sector.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name/description** | **Range** | **Domain** | **Scale Factor** | **Offset** | **Units** |
| **Smoke AOD** | Retrieved Smoke Aerosol Optical Depth | 0~1.2 | -- | N/A | N/A | unitless |

## GOES12.SMOKEE\_COMB2 Binary Files – not recommended to use

The Smoke binary data are in a little endian byte order. A data file contains six parameters. The table below gives either a range or domain of expected values for each parameter contained in the ASDA binary data files.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name/description** | **Range** | **Domain** | **Scale Factor** | **Offset** | **Units** |
| **nlon** | Column number | 801 | -- | 1 | 0 | unitless |
| **nlat** | Row number | 534 | -- | 1 | 0 | unitless |
| **lon** | longitude array | -175~-55 |  | 1 | 0 | degree |
| **lat** | latitude array | 0~80 |  | 1 | 0 | degree |
| **comb\_AOD** | Biomass-burning Aerosol Optical Depth | 0~1.57 | cloud = -1  unknown aerosols  (no ABBA fire) = -2  unknown aerosols = -3  no data = -9999 |  |  | unitless |
| **comb\_conc** | biomass-burning aerosol column concentration |  | cloud = -1  unknown aerosols  (no ABBA fire) = -2  unknown aerosols = -3  no data = -9999 |  |  | kg/m3 |

## GOES11.SMOKEW\_COMB2 Binary Files ---Not available

The Smoke binary data are in a little endian byte order. A data file contains six parameters. The table below gives either a range or domain of expected values for each parameter contained in the ASDA binary data files.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name/description** | **Range** | **Domain** | **Scale Factor** | **Offset** | **Units** |
| **nlon** | Column number | 801 | -- | 1 | 0 | unitless |
| **nlat** | Row number | 534 | -- | 1 | 0 | unitless |
| **lon** | longitude array | -175~-55 |  | 1 | 0 | degree |
| **lat** | latitude array | 0~80 |  | 1 | 0 | degree |
| **comb\_AOD** | Biomass-burning Aerosol Optical Depth | 0~1.57 | cloud = -1  unknown aerosols  (no ABBA fire) = -2  unknown aerosols = -3  no data = -9999 |  |  | unitless |
| **comb\_conc** | biomass-burning aerosol column concentration |  | cloud = -1  unknown aerosols  (no ABBA fire) = -2  unknown aerosols = -3  no data = -9999 |  |  | kg/m3 |