MODIS				
TERRA_MODIS_Level3: MOD08_D3.004				

1.	**FILENAME:** MOD08_D3.A2002001.004.2003182161017.hdf (ftp link: here) (Filesize=68.6MB)				
	It is a grid file with 1 grid, namely: mod08 ; *The MODIS product at GES DISC is a subset of MODAP/LADDS.* The file should not be treated as the authentic MODIS file.				
	It has regular dimensions used for latitude and longitude called XDim (360) and YDim (180).				
	It has 65 dimension names.				
	Since this file has 65 Dimension names, there are about 588 DataFields. I could not document all of them here.				

GridName	DimensionList	Projection
mod08	XDim, YDim, …………………., Pressure_Level *(Total 65)*	GEO

The file is missing the 'missing_value' attribute. A value of -9999 is used for '_FillValue.'

GROUP1: mod08

DataFieldName	AttributeName	AttributeValue	AttributeType	AttributeArraySize
XDim	either of 'units,' 'unit' or 'long_name' not there			
YDim	either of 'units,' 'unit' or 'long_name' not there			
Pressure_Level	either of 'units,' 'unit' or 'long_name' not there			

DataFieldName	#Dimension (DimList)
XDim	1-D (XDim)
YDim	1-D (YDim)
Pressure_Level	1-D (Pressure_Level)
Atmospheric_Water_Vapor_High_Histo_Intervals	1-D (Atmospheric_Water_Vapor_High_Histo_Intervals)
Atmospheric_Water_Vapor_Low_Histo_Intervals	1-D (Atmospheric_Water_Vapor_Low_Histo_Intervals)
……	
Solar_Zenith_Mean	2-D (YDim, XDim)
Scattering_Angle_Histogram_Counts	3-D (Scattering_Angle_Histo_Intervals, YDim, XDim)
Corrected_Optical_Depth_Land_Mean	3-D (Corrected_Optical_Depth_Land_Micron_Levels, YDim, XDim)
Mass_Concentration_Land_Histogram_Counts	3-D (Mass_Concentration_Land_Histo_Intervals, YDim, XDim)
Mass_Concentration_Land_Confidence_Histogram	3-D (Quality_Assurance_Categories, YDim, XDim)
Angstrom_Exponent_Land_Histogram_Counts	3-D (Angstrom_Exponent_Land_Histo_Intervals, YDim, XDim)
Transmitted_Flux_Land_Mean	3-D (Transmitted_Flux_Land_Micron_Levels, YDim, XDim)
Reflected_Flux_Land_Mean	3-D (Reflected_Flux_Land_Micron_Levels, YDim, XDim)
Mean_Reflectance_Land_All_QA47_Mean	3-D (Mean_Reflectance_Land_All_Micron_Levels, YDim, XDim)
Path_Radiance_Land_QA47_Mean	3-D (Path_Radiance_Land_Micron_Levels, YDim, XDim)
Critical_Reflectance_Land_QA47_Mean	3-D (Critical_Reflectance_Land_Micron_Levels, YDim, XDim)
Optical_Depth_Ratio_Small_Land_Histogram_Counts	3-D (Optical_Depth_Ratio_Small_Land_Histo_Intervals, YDim, XDim)
Mass_Concentration_Ocean_Histogram_Counts	3-D (Mass_Concentration_Ocean_Histo_Intervals, YDim, XDim)
Effective_Optical_Depth_Average_Ocean_Mean	3-D (Effective_Optical_Depth_Average_Ocean_Micron_Levels

.....	, YDim, XDim)
Corrected_Optical_Depth_Land_Histogram_Counts	4-D (Corrected_Optical_Depth_Land_Micron_Levels, Corrected_Optical_Depth_Land_Histo_Intervals, YDim, XDim)
Corrected_Optical_Depth_Land_Confidence_Histogram	4-D (Corrected_Optical_Depth_Land_Micron_Levels, Quality_Assurance_Categories, YDim, XDim)
Transmitted_Flux_Land_Histogram_Counts	4-D (Transmitted_Flux_Land_Micron_Levels, Transmitted_Flux_Land_Histo_Intervals, YDim, XDim)
Transmitted_Flux_Land_Confidence_Histogram	4-D (Transmitted_Flux_Land_Micron_Levels, Quality_Assurance_Categories, YDim, XDim)
Reflected_Flux_Land_Histogram_Counts	4-D (Reflected_Flux_Land_Micron_Levels, Reflected_Flux_Land_Histo_Intervals, YDim, XDim)
Reflected_Flux_Land_Confidence_Histogram	4-D (Reflected_Flux_Land_Micron_Levels, Quality_Assurance_Categories, YDim, XDim)
Mean_Reflectance_Land_All_QA47_Histogram_Counts	4-D (Mean_Reflectance_Land_All_Micron_Levels, Mean_Reflectance_Land_All_Histo_Intervals, YDim, XDim)
Mean_Reflectance_Land_All_QA47_Confidence_Histogram	4-D (Mean_Reflectance_Land_All_Micron_Levels, Quality_Assurance_Categories, YDim, XDim)
Path_Radiance_Land_QA47_Histogram_Counts	4-D (Path_Radiance_Land_Micron_Levels, Path_Radiance_Land_Histo_Intervals, YDim, XDim)
Path_Radiance_Land_QA47_Confidence_Histogram	4-D (Path_Radiance_Land_Micron_Levels, Quality_Assurance_Categories, YDim, XDim)
Critical_Reflectance_Land_QA47_Histogram_Counts	4-D (Critical_Reflectance_Land_Micron_Levels, Critical_Reflectance_Land_Histo_Intervals, YDim, XDim)
Critical_Reflectance_Land_QA47_Confidence_Histogram	4-D (Critical_Reflectance_Land_Micron_Levels, Quality_Assurance_Categories, YDim, XDim)
Effective_Optical_Depth_Average_Ocean_Histogram_Counts	4-D (Effective_Optical_Depth_Average_Ocean_Micron_Levels, Effective_Optical_Depth_Average_Ocean_Histo_Intervals, YDim, XDim)
Effective_Optical_Depth_Average_Ocean_Confidence_Histogram	4-D (Effective_Optical_Depth_Average_Ocean_Micron_Levels, Quality_Assurance_Categories, YDim, XDim)
.....	

Other MOD08_D3…004 files have similar structure

TERRA_MODIS_Level3: MOD08_D3.005

2.	
	FILENAME: MOD08_D3.A2005001.005.2006203153909.ss000500113842.hdf (ftp link: here) (Filesize=80.1MB)
	It is a grid file with 1 grid, namely: mod08
	It has regular dimensions used for latitude and longitude called XDim (360) and YDim (180).
	It has 60 dimension names.
	Since this file has 60 Dimension names, there are about 553 DataFields. I could not document all of them here.

GridName	DimensionList	Projection
mod08	XDim, YDim, …………………., Pressure_Level *(Total 60)*	GEO

The file is missing the 'missing_value' attribute. A value of -9999 is used for '_FillValue.'

GROUP1: mod08

DataFieldName	AttributeName	AttributeValue	AttributeType	AttributeArraySize
Cloud_Fraction_Day_Mean	long_name	Cloud Fraction from Cloud Mask (count of lowest 2 clear sky confidence levels, cloudy & probably cloudy / total count) Day: Mean	8-bit character	129
	units	none	8-bit character	4

DataFieldName	#Dimension (DimList)
Cloud_Water_Path_Ice_Histo_Intervals	1-D (Cloud_Water_Path_Ice_Histo_Intervals)
Cloud_Effective_Radius_Ice_Joint_Histo_Intervals	1-D (Cloud_Effective_Radius_Ice_Joint_Histo_Intervals)
Cloud_Phase_Infrared_Histo_Intervals	1-D (Cloud_Phase_Infrared_Histo_Intervals)
……	
Cloud_Water_Path_1L_Ice_Minimum	2-D ()
Corrected_Optical_Depth_Land_QA_Standard_Deviation	3-D (Corrected_Optical_Depth_Land_Micron_Levels, YDim, XDim)
Optical_Depth_Ratio_Small_Ocean_Histogram_Counts	3-D (Optical_Depth_Ratio_Small_Ocean_Histo_Intervals, YDim, XDim)
Asymmetry_Factor_Average_Ocean_QA_Mean	3-D (Asymmetry_Factor_Average_Ocean_Micron_Levels, YDim, XDim)
Atmospheric_Water_Vapor_Histogram_Counts	3-D (Atmospheric_Water_Vapor_Histo_Intervals, YDim, XDim)
Mean_Reflectance_Land_All_QA66_QA_Mean	3-D (Mean_Reflectance_Land_All_Micron_Levels, YDim, XDim)
Mass_Concentration_Ocean_Histogram_Counts	3-D (Mass_Concentration_Ocean_Histo_Intervals, YDim, XDim)
Angstrom_Exponent_2_Ocean_Confidence_Histogram	3-D (Quality_Assurance_Categories ,YDim, XDim)
Cloud_Optical_Thickness_Ice_Histogram_Counts	3-D (Cloud_Optical_Thickness_Ice_Histo_Intervals, YDim, XDim)
Angstrom_Exponent_Land_Histogram_Counts	3-D (Angstrom_Exponent_Land_Histo_Intervals, YDim, XDim)
…..	
Cloud_Optical_Thickness_Liquid_Joint_Histogram_vs_Effect_Radius	4-D (Cloud_Effective_Radius_Liquid_Joint_Histo_Intervals, Cloud_Optical_Thickness_Liquid_Joint_Histo_Intervals, YDim, XDim)
Critical_Reflectance_Land_QA47_Confidence_Histogram	4-D (Critical_Reflectance_Land_Micron_Levels, Quality_Assurance_Categories, YDim, XDim)
Effective_Optical_Depth_Average_Ocean_Histogram_Counts	4-D (Effective_Optical_Depth_Average_Ocean_Micron_Levels , Effective_Optical_Depth_Average_Ocean_Histo_Intervals, YDim, XDim)
Cloud_Optical_Thickness_1L_Ice_Joint_Histogram_vs_Emissivity	4-D (Cloud_Effective_Emissivity_Histo_Intervals, Cloud_Optical_Thickness_Ice_Joint_Histo_Intervals, YDim, XDim)
……	

		Other MOD08_D3…005 files have similar structure

TERRA_MODIS_Level3: MOD08_M3.004

3.	FILENAME: MOD08_M3.A2002001.004.2003338024517.hdf (ftp link: here) (Filesize=755.0MB)
	It is a grid file with 1 grid, namely: mod08
	It has regular dimensions used for latitude and longitude called XDim (360) and YDim (180).
	It has 62 dimension names.
	Since this file has 62 Dimension names, there are about 760 DataFields. I could not document all of them here.

GridName	DimensionList	Projection
mod08	XDim, YDim, …………………., Pressure_Level **(Total 62)**	GEO

The file is missing the 'missing_value' attribute. A value of -9999 is used for '_FillValue.'

DataFieldName	AttributeName	AttributeValue	AttributeType	AttributeArraySize
Solar_Zenith_Mean_Min	long_name	Solar Zenith Angle (Cell to Sun): Minimum of Daily Mean	8-bit character	55
	units	Degrees	8-bit character	7

		Other MOD08_M3…004 files have similar structure

TERRA_MODIS_Level3: MOD08_M3.005

4.	FILENAME: MOD08_M3.A2005001.005.2006206122438.ss000500013854.hdf (ftp link: here) (Filesize=110.0MB)
	It is a grid file with 1 grid, namely: mod08
	It has regular dimensions used for latitude and longitude called XDim (360) and YDim (180).
	It has 46 dimension names.
	Since this file has 46 Dimension names, there are about 555 DataFields. I could not document all of them here.

GridName	DimensionList	Projection
mod08	XDim, YDim, …………………., Pressure_Level **(Total 46)**	GEO

DataFieldName	AttributeName	AttributeValue	AttributeType	AttributeArraySize
ML_Fraction_Liquid_FMean	long_name	Ratio of MultiLayer Liquid Water Clouds to All Liquid Water Clouds from Successful Optical Properties Retrievals: Mean of daily fraction	8-bit character	137
	units	none	8-bit character	4

		Other MOD08_M3.005 files have similar structure

TOMS

Earth_Probe_TOMS_Level3: TOMSEPL3

1.	FILENAME: TOMS-EP_L3-TOMSEPL3_2000m0101_v8.HDF (ftp link: here) (Filesize=181.0KB)
	It is a grid file with 1 grid, namely: 'TOMS Level 3' and two datasets, namely: XDim:TOMS Level 3 (dimension) (dimension size=288), YDim:TOMS Level 3 (dimension) (180)
	• The attributes of the datasets follow CF convention.

GridName	DimensionList	Projection
TOMS Level 3	XDim (288), YDim (180)	GEO

A value of 999 is commonly used for '_FillValue' and 'missing_value.'

Datasets

DataFieldName	AttributeName	AttributeValue	AttributeType	AttributeArraySize
XDim: TOMS Level 3 (dimension)	long_name	Longitude	8-bit character	9
	units	degrees_east	8-bit character	12
YDim: TOMS Level 3 (dimension)	long_name	Latitude	8-bit character	8
	units	degrees_north	8-bit character	13

GROUP1: TOMS Level 3

DataFieldName	AttributeName	AttributeValue	AttributeType	AttributeArraySize
Ozone	long_name	Column Amount Ozone	8-bit character	19
	units	DU	8-bit character	2

DataFieldName	#Dimension (DimList)
Ozone	2-D (YDim, XDim)

Other TOMSEPL3 files have similar structure

Meteor_3_TOMS_Level3: TOMSM3L3

2. FILENAME: TOMS-METEOR-3_L3-TOMSM3L3_1991m0822_v8.HDF (ftp link: here) (Filesize=95.7KB)

It is a grid file with 1 grid, namely: 'TOMS Level 3' and two datasets, namely: XDim:TOMS Level 3 (dimension) (dimension size=288), YDim:TOMS Level 3 (dimension) (180)

• The attributes of the datasets follow CF convention.

GridName	DimensionList	Projection
TOMS Level 3	XDim (288), YDim (180)	GEO

A value of 999 is commonly used for '_FillValue' and 'missing_value.'

Datasets

DataFieldName	AttributeName	AttributeValue	AttributeType	AttributeArraySize
XDim: TOMS Level 3 (dimension)	long_name	Longitude	8-bit character	9
	units	degrees_east	8-bit character	12
YDim: TOMS Level 3 (dimension)	long_name	Latitude	8-bit character	8
	units	degrees_north	8-bit character	13

GROUP1: TOMS Level 3

DataFieldName	AttributeName	AttributeValue	AttributeType	AttributeArraySize
Ozone	long_name	Column Amount Ozone	8-bit character	19
	units	DU	8-bit character	2

DataFieldName	#Dimension (DimList)
Ozone	2-D (YDim, XDim)

		Other TOMS-METEOR-3_L3 files have similar structure

Nimbus_7_TOMS_Level3: TOMSN7L3

3.		FILENAME: TOMS-NIMBUS-7_L3-TOMSN7L3_1988m0101_v8.HDF (ftp link: here) (Filesize=172.0KB)
		It is a grid file with 1 grid, namely: 'TOMS Level 3' and two datasets, namely: XDim:TOMS Level 3 (dimension) (dimension size=288), YDim:TOMS Level 3 (dimension) (180)
		• The attributes of the datasets follow CF convention.

GridName	DimensionList	Projection
TOMS Level 3	XDim (288), YDim (180)	GEO

A value of 999 is commonly used for '_FillValue' and 'missing_value.'

Datasets

DataFieldName	AttributeName	AttributeValue	AttributeType	AttributeArraySize
XDim: TOMS Level 3 (dimension)	long_name	Longitude	8-bit character	9
	units	degrees_east	8-bit character	12
YDim: TOMS Level 3 (dimension)	long_name	Latitude	8-bit character	8
	units	degrees_north	8-bit character	13

GROUP1: TOMS Level 3

DataFieldName	AttributeName	AttributeValue	AttributeType	AttributeArraySize
Ozone	long_name	Column Amount Ozone	8-bit character	19
	units	DU	8-bit character	2

DataFieldName	#Dimension (DimList)
Ozone	2-D (YDim, XDim)

	Other TOMS-NIMBUS-7_L3 files have similar structure