CCMC Global Attributes

Attribute Name	Description
README	General description describing the model or data file, it's contents, and/or general HOWTO usage instructions.
README_visualization	Guidelines for visualizing data contained in file.
model_name	Name of the registered model that produced the data
model_type	The type of model used to produce data i.e. Global Magnetosphere
generated_by	Personal identifying info (First Name Last Name)
grid_system_count	The number n denoting how many grid systems are used and/or described in the current file NOTE: If n > 1 the additional grid attributes will be defined in a model specific *_attributes.h file
grid_system_n_number_of_dimensions	The number m of how many dimensions are in grid n. So for every grid there will be a corresponding grid_system_n_number_of_dimensions attribute i.e. The first grid will have an attribute grid_system_1_number_of_dimensions
grid_system_n_dimension_m_size	Size of dimension m for grid n ie. grid_system_1_dimension_2_size
grid_system_n	Outline how a particular grid system is defined by showing coordinates used ie. [X, Y, Z] were X,Y,Z are position variables defined in current file.
output_type	Define the type of output is contained in file. i.e. Global Magnetosphere model with Ionosphere output
grid_n_type	Keywords identifying all grids used in current model output. Grid types will be registered in external coordinate transformation package. i.e. grid_1_type = GSM
start_time	Time in CDF Epoch3 format (YYYY-MM-DDThh:mm:ss.msecZ) signifying beginning of the simulation
end_time	Time in CDF Epoch3 format (YYYY-MM-DDThh:mm:ss.msecZ) signifying end of the simulation
run_type	Signifies either an event or modeled run
kameleon_version	Version info for the kameleon converter used to create current file
kameleon access/interpolation library coordinates – to be implemented	This attribute will specify what the kameleon access/interpolation library expects as position arguments for interpolation. For example, a models native grid is specified as r, θ, ρ measured in meters and radians, but the interpolation interface expects input positions as r, longitude, latitude in solar radii and degrees.
generation_date	Date of generation or run request date…
original_output_file_name	Name of the original model's data file that was converted to current CDF file
run_registration_number	CCMC Runs on Request registration number for runs submitted through online system
terms_of_usage	*CCMC Disclaimer text: For tracking purposes for our government sponsors, we ask that you notify the CCMC whenever you use CCMC results in a scientific publication or presentation.*
standard_grid_target	Defines a standard target grid and coordinate system for which the current models output can be interplated to using Kameleon Access/Interpolation Library or coupled coordinate transformation package.

CCMC Global Attributes are metadata elements that are applied to each CCMC standardized output file that has been converted using the Kameleon converter. In addition to the core set of global attributes described above, each individual model may contain "model specific" global attributes that are only applicable to that specific model. NOTE: Shaded Cells indicate CCMC specific metadata that is not expected from data provider.

CCMC Variable Attributes

Attribute	Description
valid_min	Smallest valid value for a particular variable. If actual value is less than this valid_min, the actual value is physically impossible and/or was generated in error
valid_max	Largest valid value for a particular variable. If actual value is greater than this valid_max, the actual value is physically impossible and/or was generated in error
units	The particular units of measurement for a variable
grid_system	The grid system in which a variable is on
mask	Mask value
desciption	A description of the variable
is_vector_component	Boolean value identifies if variable is a vector component or scalar variable
position_grid_system	grid system in which position values are defined if different from actual data grid
data_grid_system	grid system in which the data is defined
actual_min	The smallest actual value in the data for a particular variable
actual_max	The largest actual value in the data for a particular variable
kameleon access/interpolation library units – to be implemented and coupled with coordinate transformation and unit conversion packages.	This attribute will specify what the kameleon access/interpolation library can optionally return as units for particular positions or data variable.s For example, a position value may natively be stored in meters but can be returned as solar radii during interpolation.

CCMC Variable Attributes are metadata elements that are applied to each variable within a CCMC standardized output file that has been converted using the Kameleon converter. In addition to the core set of variable attributes described above, each individual variable may contain "model specific" variable attributes that are only applicable to that specific model/variable.

NOTE: Shaded Cells indicate CCMC specific metadata that is not expected from data provider or is automatically calculated by the Kameleon Converter.