

ICON CON Ephemeris

ERROR: Missing variables attribute EPOCH : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_utc_time : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_model_parameters : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_model_parameter_names : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_model_parameter_lower_limits : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_model_parameter_upper_limits : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_model_covariance_matrix : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_original_data : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_model_best_fit_intensities : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_model_altitudes : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_data_covariances : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_latitude : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_longitude : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_local_solar_time : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_f107a : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_f107 : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_ap : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_solar_zenith_angle : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_model_grid_altitude : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_model_grid_o : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_model_grid_n2 : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_model_grid_o2 : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_model_grid_temperature : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_model_grid_sigma_o : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_model_grid_sigma_n2 : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_model_grid_sigma_o2 : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_model_grid_sigma_temperature : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_model_grid_initial_o : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_model_grid_initial_n2 : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_model_grid_initial_o2 : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_model_grid_initial_temperature : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_qeuv : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_column_ON2 : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_initial_column_ON2 : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_iteration_steps : Var_Type
ERROR: Missing variables attribute icon_I2_FUV_daytime_ON2_retrieval_model_error_flag : Var_Type
ERROR: Missing global attribute "Text_Supplement"

This document describes the data product for ICON Ephemeris, which is in NetCDF4 format.

MISSING Text_Supplement

NetCDF files contain **variables** and the **dimensions** over which those variables are defined. First, the dimensions are defined, then all variables in the file are described.

Dimensions

The dimensions used by the variables in this file are given below, along with nominal sizes. Note that the size may vary from file to file. For example, the "Epoch" dimension, which describes the number of time samples contained in this file, will likely have a varying size.

Dimension Name	Nominal Size
Model2	6
EPOCH	4960
Flag	3
Model	6
Data	506
Retrieval	22

Variables

Variables in this file are listed below. First, the most important variables (the "data" variables) are described, followed by the "support_data" variables, and finally the "metadata" variables. The variables classified as "ignore_data" are not shown.

MISSING Var_Type

Variable Name	Description	Units	Dimensions
EPOCH	Milliseconds since 1970-01-01 00:00:00 UTC	milliseconds	EPOCH
icon_l2_fuv_daytime_0 n2_utc_time	Date and Time in UTC format UTC String for center of exposure times	string	EPOCH
icon_l2_FUV_daytime_0 N2_model_parameters	Array of Model Parameters, F107, Alt-indep. scalars for O, N2, O2, forward model radiance for 2 channels Array of Model Parameters, F107, Alt-indep. scalars for O, N2, O2, forward model radiance for 2 channel	Dimensionless	EPOCH, Model
icon_l2_FUV_daytime_0 N2_model_parameter_names	Names of model parameters in ICON_ANCILLARY_FUV_model_parameters Names of model parameters in ICON_ANCILLARY_FUV_model_parameters	String	EPOCH, Model
icon_l2_FUV_daytime_0 N2_model_parameter_lower_limits	Lower limits of model parameters in ICON_ANCILLARY_FUV_model_parameters Lower limits of model parameters in ICON_ANCILLARY_FUV_model_parameters	Dimensionless	EPOCH, Model
icon_l2_FUV_daytime_0 N2_model_parameter_upper_limits	upper limits of model parameters in ICON_ANCILLARY_FUV_model_parameters upper limits of model parameters in ICON_ANCILLARY_FUV_model_parameters	Dimensionless	EPOCH, Model
icon_l2_FUV_daytime_0 N2_model_covariance_matrix	model parameter covariance matrix in ICON_ANCILLARY_FUV_model_parameters model parameter covariance matrix in ICON_ANCILLARY_FUV_model_parameters	Dimensionless	EPOCH, Model2, Model
icon_l2_FUV_daytime_0 N2_original_data	Original data, 1356 and LBH Original data, 1356 and LBH, from L1 file	Raleigh	EPOCH, Data
icon_l2_FUV_daytime_0 N2_model_best_fit_intensities	Model best fit intensities, 1356 and LBH Model best fit intensities, 1356 and LBH	Raleigh	EPOCH, Data
icon_l2_FUV_daytime_0 N2_model_altitudes	Model altitudes, km Model altitudes, km	km	EPOCH, Data
icon_l2_FUV_daytime_0 N2_data_covariances	Data covariances Data covariances	Raleighs	EPOCH, Data

Variable Name	Description	Units	Dimensions
icon_l2_FUV_daytime_0 N2_retrieval_latitude	Retrieved Latitude Latitude of the retrieval, defined at 150 km tangent altitude	Degrees	EPOCH
icon_l2_FUV_daytime_0 N2_retrieval_longitude	Retrieved Longitude Longitude of the retrieval, defined at 150 km tangent altitude	Degrees	EPOCH
icon_l2_FUV_daytime_0 N2_retrieval_local_solar_time	Retrieved local time Local solar time of the retrieval, defined at 150 km tangent altitude	Hours	EPOCH
icon_l2_FUV_daytime_0 N2_retrieval_f107a	F107a used in retrieval F107a used in retrieval	SFU	EPOCH
icon_l2_FUV_daytime_0 N2_retrieval_f107	F107 used in retrieval F107 used in retrieval	SFU	EPOCH
icon_l2_FUV_daytime_0 N2_retrieval_ap	Ap used in retrieval Ap used in retrieval	Index	EPOCH
icon_l2_FUV_daytime_0 N2_retrieval_solar_zenith_angle	Retrieved SZA Solar zenith angle of the retrieval, defined at 150 km tangent altitude	Degrees	EPOCH
icon_l2_FUV_daytime_0 N2_retrieval_model_grid_altitude	Retrieved altitude grid Model grid used in retrieval, altitudes	Km	EPOCH, Retrieval
icon_l2_FUV_daytime_0 N2_retrieval_model_grid_o	Retrieved altitude grid atomic O Atomic oxygen density on the model grid	cm-3	EPOCH, Retrieval
icon_l2_FUV_daytime_0 N2_retrieval_model_grid_n2	Retrieved altitude grid molecular n2 Molecular nitrogen density on the model grid	cm-3	EPOCH, Retrieval
icon_l2_FUV_daytime_0 N2_retrieval_model_grid_o2	Retrieved altitude grid molecular o2 Molecular oxygen density on the model grid	cm-3	EPOCH, Retrieval
icon_l2_FUV_daytime_0 N2_retrieval_model_grid_temperature	Retrieved altitude grid temperature temperature density on the model grid	cm-3	EPOCH, Retrieval
icon_l2_FUV_daytime_0 N2_retrieval_model_grid_sigma_o	Retrieved altitude grid sigma atomic O 1 sigma Atomic oxygen density on the model grid	cm-3	EPOCH, Retrieval
icon_l2_FUV_daytime_0 N2_retrieval_model_grid_sigma_n2	Retrieved altitude grid sigma molecular n2 1 sigma molecular n2 density on the model grid	cm-3	EPOCH, Retrieval
icon_l2_FUV_daytime_0 N2_retrieval_model_grid_sigma_o2	Retrieved altitude grid sigma molecular o2 1 sigma molecular oxygen density on the model grid	cm-3	EPOCH, Retrieval
icon_l2_FUV_daytime_0 N2_retrieval_model_grid_sigma_temperature	Retrieved altitude grid sigma temperature 1 sigma temperature on the model grid	cm-3	EPOCH, Retrieval

Variable Name	Description	Units	Dimensions
icon_l2_FUV_daytime_0 N2_retrieval_model_grid_initial_o	altitude grid initial atomic O Initial guess Atomic oxygen density on the model grid	cm-3	EPOCH, Retrieval
icon_l2_FUV_daytime_0 N2_retrieval_model_grid_initial_n2	altitude grid initial molecular n2 initial guess molecular n2 density on the model grid	cm-3	EPOCH, Retrieval
icon_l2_FUV_daytime_0 N2_retrieval_model_grid_initial_o2	altitude grid initial molecular o2 initial guess molecular O density on the model grid	cm-3	EPOCH, Retrieval
icon_l2_FUV_daytime_0 N2_retrieval_model_grid_initial_temperature	altitude grid initial temperature initial guess temperature on the model grid	cm-3	EPOCH, Retrieval
icon_l2_FUV_daytime_0 N2_retrieval_qeuv	Retrived Qeuv Effective solar EUV energy flux, mmW/m2 - multiply by model 4 * model 7 to obtain solar flux required for dayglow fit	mW/m2	EPOCH
icon_l2_FUV_daytime_0 N2_retrieval_column_on2	Retrived column on2 O/N2 column ratio from the retrieval of O and N2 vs altitude	dimensionless	EPOCH
icon_l2_FUV_daytime_0 N2_retrieval_initial_column_on2	initial column on2 O/N2 column ratio from initial guess by MSIS of O and N2 vs altitude	dimensionless	EPOCH
icon_l2_FUV_daytime_0 N2_retrieval_iteration_steps	iteration_steps Number of iteration steps	integer	EPOCH
icon_l2_FUV_daytime_0 N2_retrieval_model_error_flag	model error flag flag = 0 - nominal, flag(0)= 1 - 20 steps reached without converging, flag(1)=1 model para hit upper or lower limit, flag(2)=1 peak alt is too close to boundary	Index	EPOCH, Flag

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 Software version: ICON SDC > Predictive Ephemeris Splitter v01r000