ICON FUV Science Level 1 Data

This document describes the data product for ICON FUV Level 1 FUV-A Limb Image File, which is in NetCDF4 format.

ICON space remote sensing FUV instrument

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
`Epoch`	2240
`Rows`	256
`Columns`	256

Variables

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

data

Variable Name	Description	Units	Dimensions
ICON_L1_FUVA_Limb_Raw	FUV SW channel raw limb image Raw limb image	counts	Epoch, Rows, Columns
ICON_L1_FUVA_Limb_IMG	FUV SW channel calibrated limb image Calibrated limb image	rayleigh	Epoch, Rows, Columns
ICON_L1_FUVA_Limb_Error	FUV SW channel calibrated limb image error Calibrated limb image error	rayleigh	Epoch, Rows, Columns

support_data

Variable Name	Description	Units	Dimensions
Epoch	Epoch Center time of the exposure, milliseconds after 1970-01-01/00:00:00 UT	milliseconds	Epoch
ICON_L1_FUVA_SWI_Start_Times	Start time Start time of the exposure, UT	seconds	Epoch
ICON_L1_FUVA_SWI_Stop_Times	Stop time Stop time of the exposure, UT	seconds	Epoch
ICON_L1_FUVA_SWI_Center_Times	Center time Center time of the exposure, UT	seconds	Epoch
ICON_L1_FUVA_SWI_Integration_Time	Time Integration time for image integration in seconds	seconds	Epoch
ICON_L1_FUVA_SWI_Chain_ID	Number Chain ID for image integration in seconds	number	Epoch

Variable Name	Description	Units	Dimensions
ICON_L1_FUVA_SWI_Quality_Flag	Quality indicator (also quickly shows times when images are available) QUALITY_FLAG is an indicator of data quality = 0 = No errors or quality conditions 1 = an error occurred writing an ICP comment 2 = image time was outside of selected processing window 4 = some level zero minor frames had fill values 6 = some level zero minor frames had sync errors 8 = the image single frame integration period could not be determined due to bad telemetry 10 = the S/C was in motion or had not settled down from a motion 12 = the pointing calculations have not been validated or may be unreliable 14 = the time flags for this image may be unreliable 16 = there was an error decode star mode data 18 = some major frames were missing but an image could be partially reconstructed 20 = calibration data is missing or otherwise invalid 22 = a background image could not be found 24 = less than nominal 100 frames were integrated 100 = the requested output image could not be found 127 = unspecified error condition	qf	Epoch
ICON_L1_FUV_Mode	Data collection mode Data collection mode of FUV instrument 1 = Dayside science 2 = Nightside science 3 = Calibration 4 = Nadir 5 = Conjugate 6 = Stars 7 = Other	mode	Epoch
ICON_L1_FUVA_SWI_HV_PHOS	HV of SW channel phosphor HV of phosphor screen	Volt	Epoch
ICON_L1_FUVA_SWI_HV_MCP	HV of SW channel MCP HV of MCP	Volt	Epoch
ICON_L1_FUV_Turret	FUV turret angle FUV turret angle in degrees with respect to nominal center position	degree	Epoch
ICON_L1_FUVA_CCD_TEMP	FUVA CCD temperature FUVA CCD temperature	degree C	Epoch
ICON_L1_FUVA_Board_TEMP	FUVA board temperature FUVA digital board temperature	degree C	Epoch
ICON_L1_FUVA_HV_TEMP	FUVA HVPS temperature FUVA HVPS temperature	degree C	Epoch
ICON_L1_FUV_IMG_TEMP	FUV imager enclosure temperature FUV imager enclosure temperature	degree C	Epoch
ICON_L1_FUV_OPT_TEMP	FUV optics temperature FUV optics temperature	degree C	Epoch
ICON_L1_FUV_Turret_TEMP	FUV turret temperature FUV turret temperature	degree C	Epoch
ICON_L1_FUV_Scan_TEMP	FUV scan mirror temperature FUV turret temperature	degree C	Epoch

metadata

Variable Name	Description	Units	Dimensions
Rows	Row Number Vertical row numbers for images	number	Rows
Columns	Column Number Horizontal column numbers for images	number	Columns
ICON_L1_FUVA_Azimuth	Azimuth of FUVA channel FUVA channel pointing azimuth	degree	Epoch
ICON_L1_FUVA_Elevation	Elevation of FUVA channel FUVA channel pointing elevation	degree	Epoch
ICON_L1_FUVA_Roll	Roll of FUVA channel FUVA channel pointing roll	degree	Epoch

This document was automatically generated on 2018-05-23 15:45 using the file:
ICON_L1_FUV_SLI_2017-05-29_v02r000.NC
Software version: ICON SDC > ICON FUV L1 Processor v1.0