

3.32 Imager Environmental Parameters File (ENVDAT)

Created By : EDRP

Used By : GRID, User

Format : Binary, direct access

Description : This file contains imager environmental data for each scan scene at surface reference and 25-kilometer resolution.

3.32.1 Data Elements

3.32.1.1 Revolution header

Data Element	Description	Validity Check	Unit of Measure	Precision	Limit/Range	Accuracy	Data Type
File Info Word	File information for internal use	N/A	None	1	0 to 2147483647	N/A	Integer
Revolution number	Revolution number (full)	N/A	None	1	0 to 2147483647	1 orbit	Integer
Year	Year	N/A	Year	1	0 to 9999	1 year	Integer
Julian Day	Starting Julian day	N/A	Days	1	1 to 366	1 day	Integer
Hour	Starting hour	N/A	Hours	1	0 to 23	1 hour	Integer
Minute	Starting minute	N/A	Minutes	1	0 to 59	1 minute	Integer
Satellite ID	Satellite ID 1=F16, SSMIS Ser# 1 2=unassigned 3=unassigned	N/A	None	1	1 to 3	N/A	Integer
Number of scans	Number of scans in file	N/A	N/A	1	0 to 32767	N/A	Integer
Spare	Spare fields for future growth	N/A	N/A	N/A	N/A	N/A	Integer

3.32.1.2 Scan Header

Data Element	Description	Validity Check	Unit of Measure	Precision	Limit/Range	Accuracy	Data Type
Year	Scan Year	N/A	Year	1	0 to 9999	1 year	Integer
Julian Day	Scan Julian day	N/A	Days	1	1 to 366	1 day	Integer
Hour	Scan hour	N/A	Hours	1	0 to 23	1 hour	Integer
Minute	Scan minute	N/A	Minutes	1	0 to 59	1 minute	Integer
Environmental scan time	Milliseconds since midnight	N/A	Milliseconds	1	0 to 86400000	1 msec	Integer
Environmental scan count	Scan count number	N/A	None	1	2 to 32767	N/A	Integer
Number of scenes	Number of scenes in scan	N/A	None	1	0 to 90	N/A	Integer
Spare	Spare fields for future growth	N/A	N/A	N/A	N/A	N/A	Integer

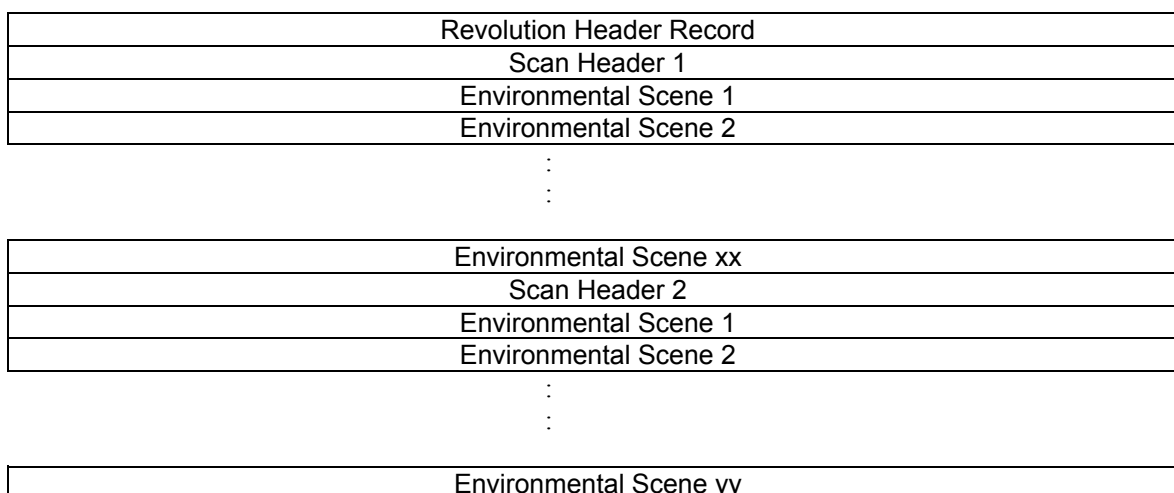
3.32.1.3 Scene Data

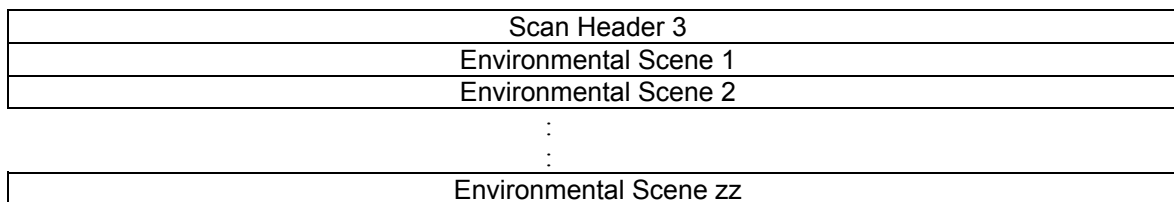
Data Element	Description	Validity Check	Unit of Measure	Precision	Limit/Range	Accuracy	Data Type
Latitude	Scene latitude (+ north)	N/A	degrees *100	1	-9000 to 9000	100th deg	Integer
Longitude	Scene longitude (+ east)	N/A	degrees *100	1	-18000 to 18000	100th deg	Integer
Rain flag 1	Rain flag for previous imager scene -1 = indeterminate 0 = no rain 1 = rain	N/A	None	1	-1 to 1	N/A	Integer
Rain flag 2	Rain flag for next imager scene -1 = indeterminate 0 = no rain 1 = rain	N/A	None	1	-1 to 1	N/A	Integer
Rain rate	Rain rate	N/A	mm/hour	1	-1 to 127	+ 5mm/hr	Integer
Scene count	Scene count	N/A	None	1	1 to 90	N/A	Integer
Surface tag	Surface tag -1 = Unknown 0 = Land 1 = Spare 2 = Near coast 3 = Ice 4 = Possible ice 5 = Ocean 6 = Coast 7 = Spare	N/A	None	1	-1 to 7	N/A	Integer
Land SFC type	Land surface type -1=Undetermined 0 to 6 = Spare 7 = Floods 8 = Dense vegetation 9 = Agricultural/Range Vegetation 10 = Dry arable soil 11 = Moist soil 12 = Semi-Desert 13 = Desert 16 = Composite vegetation and water 17 = Composite soil and water 18 = Dry snow 19 = Wet snow 20 = Refrozen snow 21 = Glacial ice	N/A	None	1	-1 to 21 See description.	N/A	Integer
Snow depth	Snow depth over land -1 = Undetermined	N/A	mm	1	-1 to 32767	1 mm	Integer
Soil moisture	API converted -1 = Undetermined	N/A	mm	1	-1 to 70	+ - 1 mm goal	Integer
Land surface temp	Surface temperature over land -99 = Undetermined	N/A	Celsius	1	-99, -95 to 67	1 degree	Integer
Ice edge, Snow edge	Sea ice edge or snow edge	N/A	None	1	0, 1, 9	N/A	Integer

	0 = No edge 1 = Ice edge 9 = Undetermined						
Ice concentration	Sea ice concentration -1 = Undetermined	N/A	Percent	1	-1 to 100	5%	Integer
Ice age	Sea ice age -1 = Undetermined 2 = First year 4 = Multiyear	N/A	Years	1	-1, 2, 4	1 year	Integer
Ocean surface wind speed flag	Wind speed accuracy -1 = Undetermined 0 = < 2 m/sec 1 = 2 - 5 m/sec 2 = 5 - 10 m/sec 3 = > 10 m/sec	N/A	None	1	-1 to 3	N/A	Integer
Ocean water vapor	Water vapor mass over ocean -1 = Undetermined	N/A	kg/m**2 *10	1	-1, 0 to 800	1/10th of kg/m**2	Integer
Ocean surface wind speed	Wind speed over ocean -1 = Undetermined	N/A	m/sec *10	1	-1, 0 to 500	0.1 m/sec	Integer
Ocean cloud water	Cloud water over ocean -1 = Undetermined	N/A	kg/m**2 *100	1	-1, 0 to 600	0.01 kg/m**2	Integer
Ocean cloud amount	Cloud amount over ocean -1 = Undetermined	N/A	Percent	1	-1 to 100	10%	Integer
Surface snow water content	Snow water content over land -1 = Undetermined	N/A	mm	1	-1 to 250	1 mm	Integer
Spare	Spare fields for future growth	N/A	N/A	N/A	N/A	N/A	Integer

3.32.2 File Format

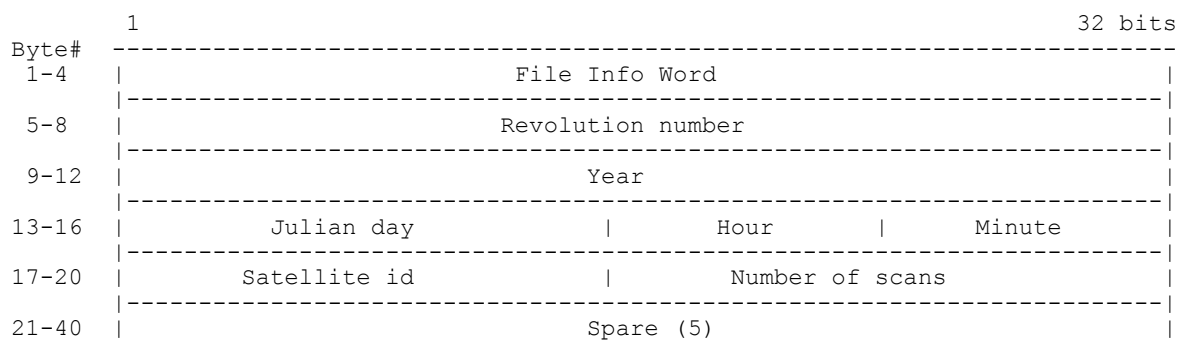
This file contains 3 distinct types of records: 1) Revolution header, 2) Scan Header, and 3) Environmental Scene. The records are physically structured in the file in the following manner:



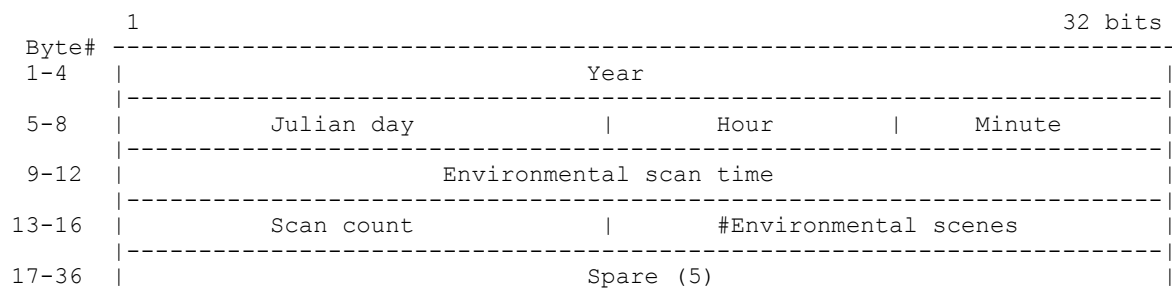


The Revolution Header specifies the number of Scan Headers in the file. Each Scan Header specifies the number of Environmental Scene records for that scan.

3.32.2.1 Revolution Header



3.32.2.2 Scan Header



3.32.2.3 Scene Data

