AMSR3

Level 1B Product Format Manual

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Rev. A: December 18, 2025
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Japan Aerospace Exploration Agency

CHANGE RECORDS

Rev.	Page	Change Description	Release Date
NC		Initial Release	Nov. 28, 2025
A	6 12 24 40 41 62 63 76 76 86 86 95 151-152	Added TbCal in the Structure of L1B product diagram. Revised description in the 'Explanation/Range' section of AutomaticQAFlagExplanation. Revised description in the 'Explanation/Range' section of ProcessingQADescription. Added the TbCal. Corrected the size value of Total Size. Added the TbCal diagram. Added the TbCal Details diagram. 3.5.2 Added the definition of scan number to the diagram. 3.5.3 Revised the description. Revised the example description for AttitudeDataQA in AutomaticQAFlagExplanation. Corrected the unit for ‘Consiriona to judge normality’ in AutomaticQAFlagExplanation items: AntennaRotationQA, HotCalibrationSourceQA, AttitudeDataQA, EphemerisDataQA, QualityofGeometricInformationQA, and BrightnessTemperatureQA. Revised the description in ProcessingQADescription. Added the TbCal information.	Dec. 18,2025
B	73 73, 74	3.5.1 Table 3-5 Naming convention of AMSR3 Level 1 products string ‘X’(Processing type) Remove the description of the ‘Standard Product’. Revise the item ‘Processing level and observation point code’ to ‘Processing Level’ in the file name convention.	June 15, 2026
B-1	8 16 17 17	'source' Update the examples in the 'Explanation/Range' Update 'DataSize' with the actual example values 'GringPointLatitude' Update the examples in the 'Explanation/Range' Update 'DataSize' with the actual example values 'GringPointLongitude' Update the examples in the 'Explanation/Range' Update 'DataSize' with the actual example values 'InputFileName' Update the examples in the 'Explanation/Range' Update 'DataSize' with the actual example values	Aug. 28, 2026

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1. Introduction

1.1 Purpose

This document specifies the file format of AMSR3 Level 1B (L1B) product.

1.2 Overview

AMSR3 L1B product stores observed data values together with radiometric information (brightness temperature), geometric information, sea-land flags etc. and the ancillary data.

2. Reference document

N/A

3. Explanation of Product

3.1 Overview of Level 1 product

AMSR3 Level 1 product consists of Level 1A, Level 1B, Level 1R, L1H and L1C. It carries out processing shown in Table 3-1 and stores each product.

Table 3-1 Overview of AMSR3 L1 Products

No	Level	Overview of Product
1	L1A	Level 1A: Product per scene that stores antenna temperature count values converted from level 0 data by radiometric and geometric correction processes, antenna temperature conversion coefficients, etc.
2	L1B	Level 1B: Product per scene that stores the brightness temperature calculated from the L1A antenna temperature using a conversion coefficient.
3	L1R	Level 1R: Product per scene that stores the brightness temperature whose center position and size of the footprint of each frequency band are matched by spatial matching processing of level 1B brightness temperature.
4	L1H	Level 1H: Product per scene that stores the brightness temperature of level 1B with spatial matching process to match the footprint center position in each frequency band and to improve the spatial resolution in the low frequency band.
5	L1C	Level 1C: Product per scene that stores the brightness temperature that matches the center position of the footprint in each frequency band through spatial matching of level 1B brightness temperature.

AMSR3 L1B product stores observed values of microwave radiation from the earth's surface and atmosphere converted into brightness temperature and geometric information of observation positions NetCDF4 format.

3. 2 Composition of Product

AMSR3 Level 1B product file consists of header part and data part. Table 3-2 shows composition of file.

Table 3-2 Composition of AMSR3 Level 1B product file

Composition		Data model	Contents
Header part	Product metadata	Attribute	Product specific information（Main technical information of AMSR3, conversion table of engineering value） is stored.
Data part		Dataset	Following data is stored ・Scan Time ・Brightness temperature of observed data ・Calibration source data ・Quality information ・Supplemental information (position, elevation, observation angle of incidence, direction of sun, additional information etc.) Furthermore, following data is also stored. ・Orbit, attitude of satellite ・Information of equipment (temperature count value of SPC and SPS etc.)

3. 3 Structure of data

Structure of AMSR3 Level 1B product is shown in Figure 3-1. This product consists of product metadata shown in Table 3-3 and data part shown in Table 3-4.

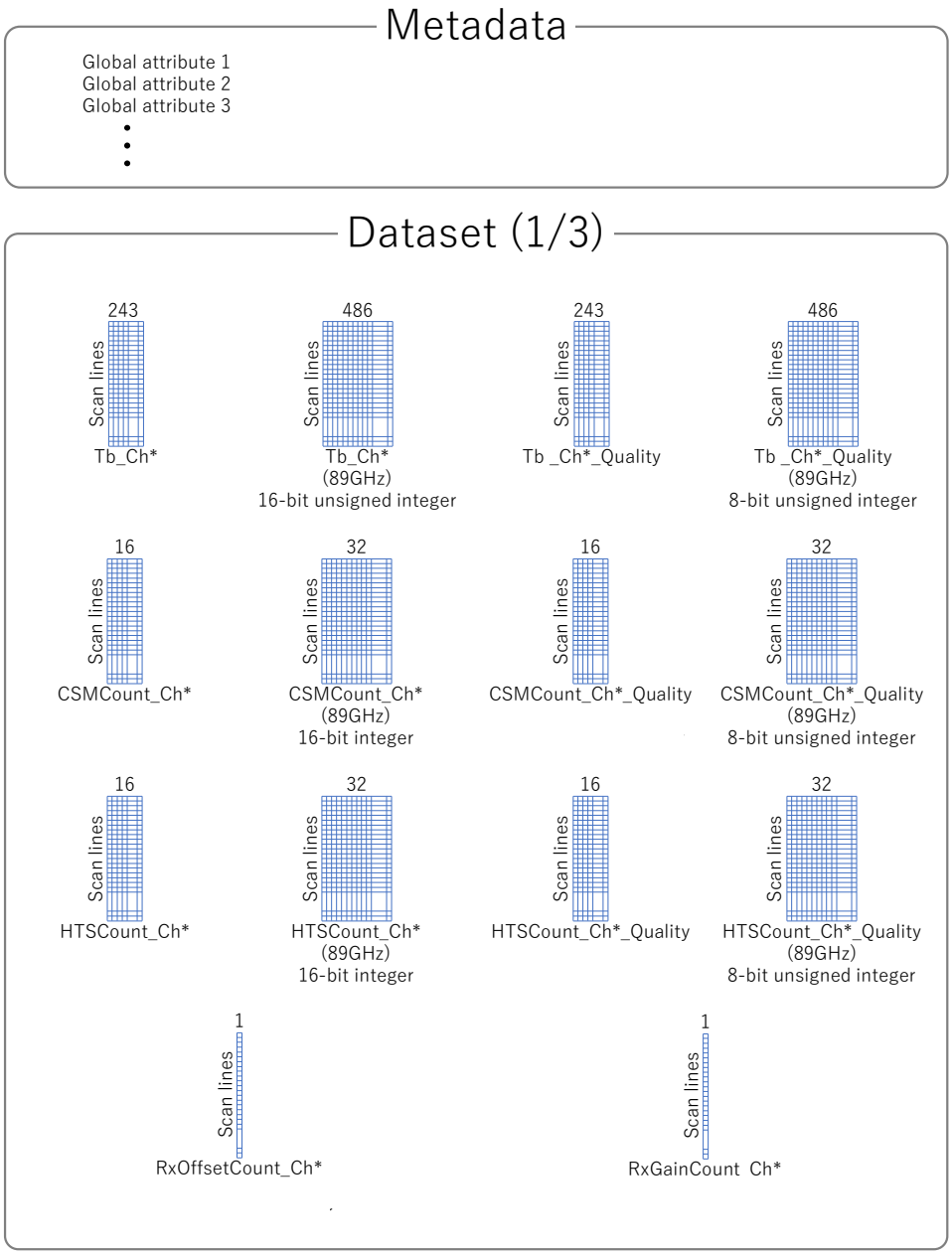


Figure 3-1 Structure of L1B product (1/3)

<u>Note</u>

*1: Detail of Global Attribute is shown in section 4.1.

*2: Detail of each dataset is shown in section 4.2.

3: The 'Ch' in the dataset name is a code for the channel (frequency band x polarisation). Level 1B processing uses 21 types of code. Detail of code is shown in Table 4-1.

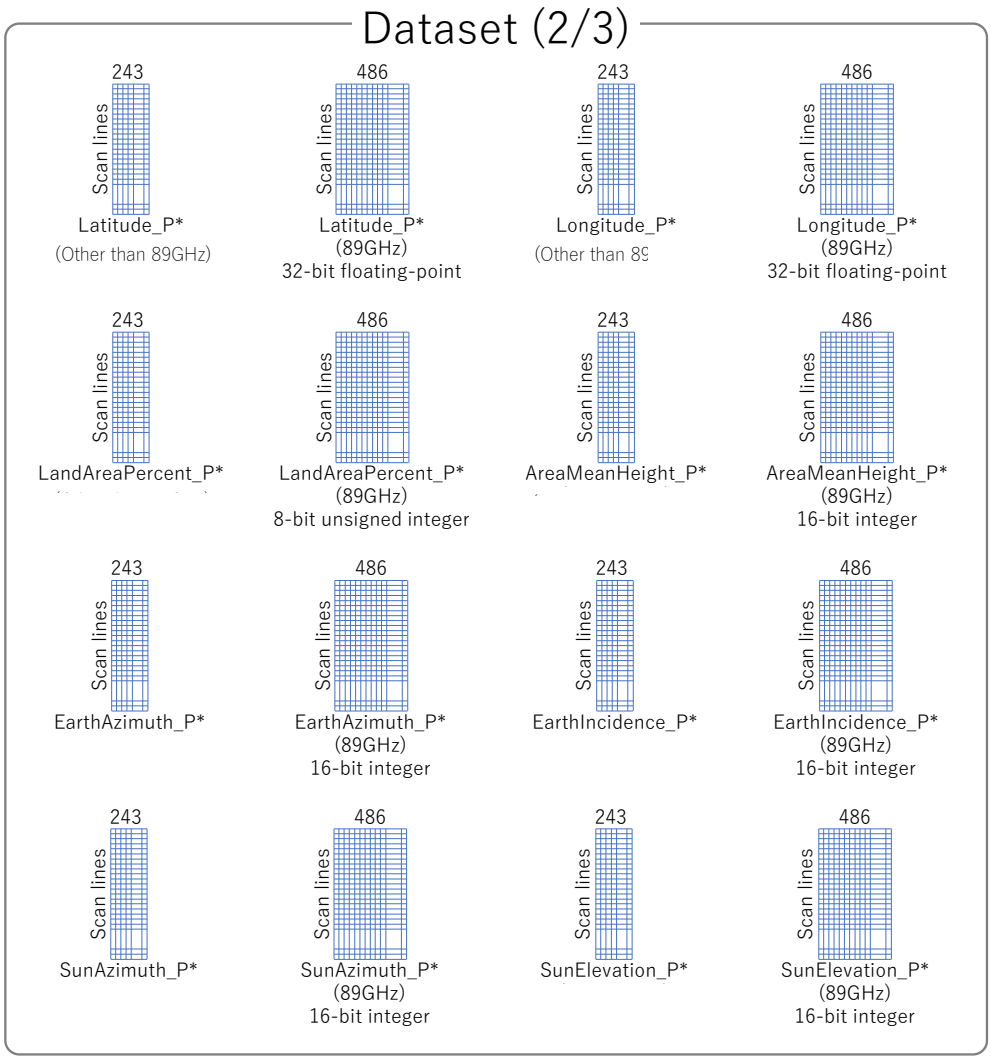


Figure 3-1 Structure of L1B product (2/3)

<u>Note</u>

4: "P" in dataset name is the code indicates the center position of footprint. The center position of footprint depends on the frequency and has 12 types. Detail of code is shown in table 4-1.

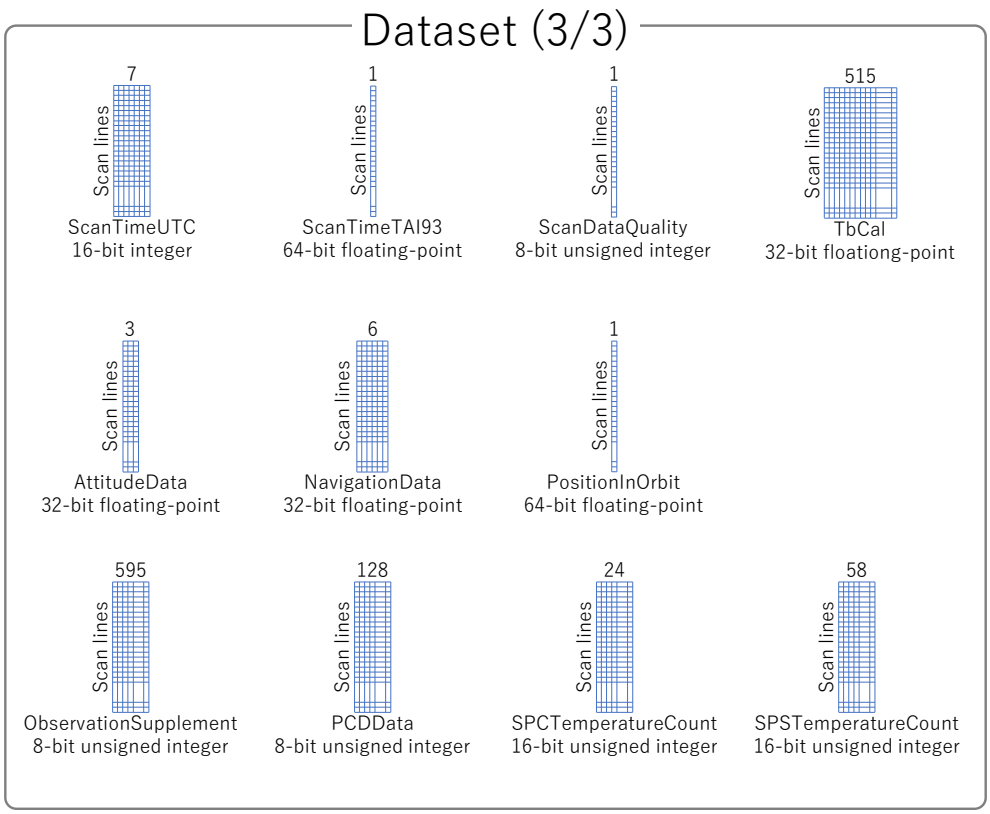


Figure 3-1 Structure of L1B product (3/3)

Table 3-3 Stored items of product metadata

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
1	Conventions	17	Rule (Version of CF Convention, ACDD)	CF-1.7, ACDD-1.3	string
2	title	48	Product name	GOSAT-GW/AMSR3 L1B, Brightness Temperature (TBB)	string
3	institution	41	Institution name	Japan Aerospace Exploration Agency (JAXA)	string
4	project	21	Project name	JAXA GOSAT-GW Project	string
5	summary	612	Summary of file	Advanced Microwave Scanning Radiometer 3 (AMSR3) onboard Global Observing Satellite for Greenhouse gases and Water cycle (GOSAT-GW) was developed by Japan Aerospace Exploration Agency (JAXA) to succeed to the AMSR2 sensor mounted on GCOM-W. AMSR3 takes measurements at multiple frequencies and multiple polarizations of weak electromagnetic	string

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
				waves in the microwave band radiated from the Earth's surface and the atmosphere. It is designed to estimate a variety of geophysical parameters, particularly those connected to water. This file stores the brightness temperature of Level 1B and the geometric information.	
6	license	46	License of data	https://gportal.jaxa.jp/gpr/index/eula?lang=en	string
7	creator_name	41	Data creating institution	Japan Aerospace Exploration Agency (JAXA)	string
8	creator_type	12	Type of data creating entity	institution	string
9	creator_email	28	E-mail address of data creating entity	z-gportal-support@ml.jaxa.jp	string
10	creator_url	47	Web site address of data creating entity	https://gportal.jaxa.jp/gpr/index/index?lang=en	string
11	keywords	50	Keyword	SPECTRAL/ENGINEERING,MICROWAVE,BRIGHTNESS TEMPERATURE	string
12	standard_names_vocabulary	46	Glossary that cited standard_name	CF Standard Name Table (v49, 12 February 2018)	string
13	id	41	Product ID	Refer to section 3.5.1.	string
14	naming_authority	7	Authority name	jp.jaxa	string
15	source	44	File name of L0 file	Input L0 data name ex.) GGWAM3_202607010158-021_S0-------00A26182.01	string
16	processing_level	8	Processing level	Level1B	string
17	comment	0	Comment not included in other	blank	string

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
			attribute		
18	date_created	25	Date and time creating data	“YYYY-MM-DDThh:mm:ss.uuuZ” YYYY：western year MM：01 - 12(Month) DD：01 - 31(Day) hh：00 - 23(hour) mm：00 - 59(minute) ss：00 - 59(second) uuu：000 - 999(milli-second)	string
19	time_coverage_start	25	Start observation date and time	“YYYY-MM-DDThh:mm:ss.uuuZ” YYYY：western year MM：01 - 12(Month) DD：01 - 31(Day) hh：00 - 23(hour) mm：00 - 59(minute) ss：00 - 59(second) uuu：000 - 999(milli-second)	string
20	time_coverage_end	25	End observation date and time	“YYYY-MM-DDThh:mm:ss.uuuZ” YYYY：western year MM：01 - 12(Month) DD：01 - 31(Day) hh：00 - 23(hour) mm：00 - 59(minute)	string

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
				ss：00 - 59(second) uuu：000 - 999(milli-second)	
21	geospatial_lat_min	4	Southernmost latitude in observation range	-9999.0	32-bit floating point
22	geospatial_lat_max	4	Northernmost latitude in observation range	-9999.0	32-bit floating point
23	geospatial_lon_min	4	Westernmost longitude in observation range	-9999.0	32-bit floating point
24	geospatial_lon_max	4	Easternmost longitude in observation range	-9999.0	32-bit floating point
25	geospatial_vertical_min	4	Maximum altitude in observation range （Set blank for AMSR3 L1）	-9999.0	32-bit floating point
26	geospatial_vertical_max	4	Minimum altitude in observation range （Set blank for AMSR3 L1）	-9999.0	32-bit floating point
27	geospatial_vertical_positive	0	Interpretation of vertical values, identification of altitude/depth	blank	string
28	geospatial_bounds	132	Describe 70 range of two-dimensional spaces expressed in OGC Well-Known Text (WKT) Geometry format.	ex.) POLYGON ((152.28 83.71,91.82 73.23,-10.34 34.10, -24.72 -25.31,-39.30 -84.97,-105.73 -73.60, -40.70 -23.13,-27.99 36.52, 152.28 83.71))	string

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
			Set the same value as GringPoint.		
29	geospatial_bounds_crs	10	Coordinate Reference System (CRS) of point coordinates in geospatial_bounds attribute	EPSG:4326	string
30	geospatial_vertical_bounds_crs	0	Coordinate Reference System (CRS) of the altitude direction of point coordinates in the geospatial_bounds attribute	blank	string
31	language	3	Language used	en	string
32	topicCategory	12	Field Code of ISO19115	004,008,010	string
33	Role	3	Role Code of ISO19115	003	string
34	history	0	Change record of file	blank	string
35	characterSet	3	Character Code of ISO19115 (set utf8)	004	string
36	acknowledgement	0	Supplemental information about the project	blank	string
37	publisher_name	21	Publisher Name	JAXA GOSAT-GW Project	string
38	publisher_email	28	E-mail address of publisher	z-gportal-support@ml.jaxa.jp	string
39	publisher_url	47	URL of publisher's web site	https://gportal.jaxa.jp/gpr/index/index?lang=en	string
40	DOI	38	Digital Object Identifier assigned to the product	10.57746/EO.01hmsz76dxys1kvdw1vqjyr4x8	string
41	DOIauthority	15	URL of IDF (International DOI Foundation), which operates DOI	http://doi.org/	string

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
42	AlgorithmDeveloper	41	Algorithm developer	Japan Aerospace Exploration Agency (JAXA)	string
43	AlgorithmVersion	3	Algorithm version	“XXX” 000 - 999	string
44	AncillaryDataInformation	0	Ancillary data information	String “XXXXXX” Blank(Set by Level 2 or upper level)	string
45	AutomaticQAFlag	4	Check by program	“XXXX” Good/Fair/NG	string
46	AutomaticQAFlagExplanation	413	Program check description	ex.) MissingScanQA:Less than 21 is available->OK,MissingPacketQA:Less than 321 is available->OK,AntennaRotationQA:Less than 21 is available->OK,HotCalibrationSourceQA:Less than 21 is available->OK,AttitudeDataQA:Less than 1 is available->OK,EphemerisDataQA:Less than 21 is available->OK,QualityofGeometricInformationQA:Less than 1 is available->OK,BrightnessTemperatureQA:Less than 21 is available->OK	string
47	CalibrationMethod	96	Calibration method name	RxTemperatureReferenced,SpillOver,CSMInterpolation, Absolute89GPositioning,NonlinearityCorrection	string
48	CoefficientAvv	183	Conversion coefficient of Brightness temperature Avv	6.925GHz-1.019,7.3GHz-1.032,10.25GHz-1.031,10.65GHz-1.017,18.7GHz-1.015,23.8GHz-1.021,36.42GHz-1.018,89.0GHzA-1.024,89.0GHzB-1.023,165.5GHz-1.015,183.3+/-3GHz-1.011,183.3+/-	string

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
				7GHz-1.011	
49	CoefficientAhv	195	Conversion coefficient of Brightness temperature Ahv	6.925GHz--0.001,7.3GHz--0.007,10.25GHz--0.003,10.65GHz--0.000,18.7GHz--0.000,23.8GHz--0.002,36.42GHz--0.001,89.0GHzA--0.002,89.0GHzB--0.001,165.5GHz--0.001,183.3+/-3GHz--0.001,183.3+/-7GHz--0.001	string
50	CoefficientAov	195	Conversion coefficient of Brightness temperature Aov	6.925GHz--0.052,7.3GHz--0.085,10.25GHz--0.083,10.65GHz--0.047,18.7GHz--0.040,23.8GHz--0.057,36.42GHz--0.048,89.0GHzA--0.064,89.0GHzB--0.063,165.5GHz--0.041,183.3+/-3GHz--0.030,183.3+/-7GHz--0.030	string
51	CoefficientAhh	183	Conversion coefficient of Brightness temperature Ahh	6.925GHz-1.019,7.3GHz-1.031,10.25GHz-1.031,10.65GHz-1.018,18.7GHz-1.015,23.8GHz-1.021,36.42GHz-1.018,89.0GHzA-1.024,89.0GHzB-1.023,165.5GHz-0.000,183.3+/-3GHz-0.000,183.3+/-7GHz-0.000	string
52	CoefficientAvh	192	Conversion coefficient of Brightness temperature Avh	6.925GHz--0.001,7.3GHz--0.007,10.25GHz--0.003,10.65GHz--0.000,18.7GHz--0.000,23.8GHz--0.002,36.42GHz--0.001,89.0GHzA--0.002,89.0GHzB--0.001,165.5GHz-0.000,183.3+/-3GHz-0.000,183.3+/-7GHz-0.000	string
53	CoefficientAoh	192	Conversion coefficient of Brightness temperature Aoh	6.925GHz--0.052,7.3GHz--0.084,10.25GHz--0.084,10.65GHz--0.048,18.7GHz--0.040,23.8GHz--	string

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
				0.057,36.42GHz--0.048,89.0GHzA--0.065,89.0GHzB--0.063,165.5GHz-0.000,183.3+/-3GHz-0.000,183.3+/-7GHz-0.000	
54	ContactOrganizationEmail	17	E-mail address for contact	z-gportal-support@ml.jaxa.jp	string
55	ContactOrganizationName	22	Organization name for contact	Japan Aerospace Exploration Agency (JAXA)	string
56	CSMTemperature	341	Brightness temperature of CSM (Cold Sky Mirror: Cold calibration source by deep space)	6.925GHzV-2.700,6.925GHzH-2.700,7.3GHzV-2.700,7.3GHzH-2.700,10.25GHzV-2.700,10.25GHzH-2.700,10.65GHzV-2.700,10.65GHzH-2.700,18.7GHzV-2.800,18.7GHzH-2.800,23.8GHzV-2.800,23.8GHzH-2.800,36.42GHzV-2.800,36.42GHzH-2.800,89.0GHz-AV-3.300,89.0GHz-AH-3.300,89.0GHz-BV-3.300,89.0GHz-BH-3.300,165.5GHzV-3.300,183.31+/-3GHzV-3.300,183.31+/-7GHzV-3.300	string
57	DataCode	84	Data Code	TBB;TBB;TBB;TBB;TBB;TBB;TBB;TBB;TBB;TBB;TBB;TBB;TBB;TBB;TBB;TBB;TBB;TBB;TBB;TBB;	string
58	DataDatasetName	202	Dataset name of ground observation data	Tb_Ch06V;Tb_Ch06H;Tb_Ch07V;Tb_Ch07H;Tb_Ch10uV;Tb_Ch10uH;Tb_Ch10V;Tb_Ch10H;Tb_Ch18V;Tb_Ch18H;Tb_Ch23V;Tb_Ch23H;Tb_Ch36V;Tb_Ch36H;Tb_Ch89AV;Tb_Ch89AH;Tb_Ch89BV;Tb_Ch89BH;Tb_Ch165V;Tb_Ch183r3V;Tb_Ch183r7V;	string
59	DataDynamicRange	9	Dynamic range of ground observation data	2.7K-340K	string

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
60	DataLongName	726	Official name of ground observation data	Brightness Temperature 6.925GHz V;Brightness Temperature 6.925GHz H;Brightness Temperature 7.3GHz V;Brightness Temperature 7.3GHz H;Brightness Temperature 10.25GHz V;Brightness Temperature 10.25GHz H;Brightness Temperature 10.65GHz V;Brightness Temperature 10.65GHz H;Brightness Temperature 18.7GHz V;Brightness Temperature 18.7GHz H;Brightness Temperature 23.8GHz V;Brightness Temperature 23.8GHz H;Brightness Temperature 36.42GHz V;Brightness Temperature 36.42GHz H;Brightness Temperature 89.0GHz-A V;Brightness Temperature 89.0GHz-A H;Brightness Temperature 89.0GHz-B V;Brightness Temperature 89.0GHz-B H;Brightness Temperature 165.5GHz V;Brightness Temperature 183.31GHz+/-3GHz V;Brightness Temperature 183.31GHz+/-7GHz V;	string
61	DataNumber	4	Number of ground observation data	21	32-bit integer
62	DataType	315	Data type of ground observation data	16-bit Unsigned Integer;16-bit Unsigned Integer;16-bit Unsigned Integer;16-bit Unsigned Integer;16-bit Unsigned Integer;16-bit Unsigned Integer;16-bit Unsigned Integer;16-bit Unsigned Integer;16-bit Unsigned Integer;16-bit Unsigned Integer;16-bit	String

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
				Unsigned Integer;16-bit Unsigned Integer;16-bit Unsigned Integer;16-bit Unsigned Integer;16-bit Unsigned Integer;16-bit Unsigned Integer;16-bit Unsigned Integer;16-bit Unsigned Integer;16-bit Unsigned Integer;16-bit Unsigned Integer;	
63	EarthEllipsoidName	6	Earth ellipsoid model	WGS84	string
64	EarthFlatteningRatio	7	Earth oblateness	0.00335	string
65	EarthSemiMajorAxis	8	Earth equatorial radius	6378.1km	string
66	FileFormatType	9	File format type	netCDF-4/HDF5 File Format	string
67	FileFormatVersionHDF	11	HDF format version	HDF5-1.14.4	string
68	FileFormatVersionNC	11	NetCDF format version	netCDF-4.9.2	string
69	FileSizeByte	4	Product size	「XXXXX」 0～2147483647	32-bit integerstring
70	GranuleID	64	Granule ID	“XXXXXXXXXXX” Granule ID	string
71	GringPointLatitude	459 （variable）	Latitude of data valid range	ex)-30.11,-34.90,-39.58,-44.74,-49.97,-55.22,-60.05,-88.57,-105.61,-115.76,-124.95,-130.70,-134.90,-141.36,-143.85,-146.18,-148.53,-150.20,-152.20,-155.15,-155.79,-156.58,-157.56,-158.81,-160.36,-162.74,-179.08,152.04,128.80,119.63,117.79,119.48,123.04,127.55,132.79,138.32,142.87,146.86,150.85,154.52,157.	string

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
				91,160.82,175.97,-175.03,-169.04,-162.90,-158.58,-155.19,-149.57,-147.28,-145.06,-142.71,-140.84,-137.89,-121.00,-100.65,-22.80,15.84,25.91,30.05,32.60,19.89,-7.95,-34.55,-46.82,-49.85,-48.61,-45.34,-40.86,-35.76,-30.11	
72	GringPointLongitude	522 （variable）	Longitude of data valid range	ex)-30.11,-34.90,-39.58,-44.74,-49.97,-55.22,-60.05,-88.57,-105.61,-115.76,-124.95,-130.70,-134.90,-141.36,-143.85,-146.18,-148.53,-150.20,-152.20,-155.15,-155.79,-156.58,-157.56,-158.81,-160.36,-162.74,-179.08,152.04,128.80,119.63,117.79,119.48,123.04,127.55,132.79,138.32,142.87,146.86,150.85,154.52,157.91,160.82,175.97,-175.03,-169.04,-162.90,-158.58,-155.19,-149.57,-147.28,-145.06,-142.71,-140.84,-137.89,-121.00,-100.65,-22.80,15.84,25.91,30.05,32.60,19.89,-7.95,-34.55,-46.82,-49.85,-48.61,-45.34,-40.86,-35.76,-30.11	string
73	InputFileName	44	Input file name	ex.) GGWAM3_202607010158-021_S0-------00A26182.01	string
74	MeteorologicalDataType	1	Weather data used	Blank(Set by Level 2 or upper level)	string
75	NumberOfAntennaRotationAnomalyScans	4	Number of abnormal antenna rotation speed scans	ex.) 0	32-bit integer
76	NumberOfAttitudeAnomalyS	4	Number of abnormal attitude	ex.)	32-bit integer

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
	cans		angle and attitude angular velocity scans	0	
77	NumberOfGeometricErrorPixels	4	Number of geometric information errors	ex.) 0	32-bit integer
78	NumberOfHTSAnomalyScans	4	Number of HTS anomaly scans	ex.) 0	32-bit integer
79	NumberOfInputFiles	4	Number of input Level 0 data files	ex.) 1	32-bit integer
80	NumberOfMissingPackets	4	Number of missing packets	ex.) 0	32-bit integer
81	NumberOfMissingScans	4	Number of missing scans	ex.) 0	32-bit integer
82	NumberOfOrbitAnomalyScans	4	Number of abnormal orbit and velocity scans	ex.) 0	32-bit integer
83	NumberOfTbLimitErrorPixels	4	Number of brightness temperature limit errors	ex.) 0	32-bit integer
84	NumberOfPackets	4	Number of Level 0 packets	ex.) 0	32-bit integer
85	NumberOfParityError	4	Number of parity errors	ex.) 0	32-bit integer
86	NumberOfPixelsPerScan	4	Number of observations per scan (except for 89GHz)	Number of observations per scan (excluding 89GHz)	32-bit integer
87	NumberOfPixelsPerScan89	4	Number of observations per scan	Number of observations per scan (89GHz)	32-bit integer

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
			(89GHz)		
88	NumberOfScans	4	Number of scans	“XXXXX” 0 - 99999	32-bit integer
89	NumberOfScansOverlap	4	Number of overlap scans（1 side）	“XX” [Standard Processing] 30 [Near real-time processing] 0	32-bit integer
90	ObservationEndDateTime	25	Date and time to end observation（UTC）	“YYYY-MM-DDThh:mm:ss.uuuZ” YYYY：western year MM：01 - 12(Month) DD：01 - 31(Day) hh：00 - 23(hour) mm：00 - 59(minute) ss：00 - 59(second) uuu：000 - 999(milli-second)	string
91	ObservationEquatorCrossing DateTime	25	Date and time of crossing equator（UTC）	“YYYY-MM-DDThh:mm:ss.uuuZ” YYYY：western year MM：01 - 12(Month) DD：01 - 31(Day) hh：00 - 23(hour) mm：00 - 59(minute) ss：00 - 59(second)	string

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
				uuu：000 - 999(milli-second) [Standard Processing] Date and time of crossing [Near real-time processing (Global)] The date and time of the first pass in the data if there is more than one. [Near real-time processing (Around Japan)] If it exists, enter it, otherwise leave it blank.	
92	ObservationEquatorCrossing Longitude	8	Equator crossing longitude	“XXXX.XX” [Standard Processing] Set between -180.00 and 180.00 [Near real-time processing (Global)] The longitude of the first pass in the data if there is more than one. [Near real-time processing (Around Japan)] If it exists, enter it, otherwise leave it blank.	32-bit floating-point
93	ObservationStartDateTime	25	Date and time to start observation（UTC）	“YYYY-MM-DDThh:mm:ss.uuuZ” YYYY：western year	string

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
				MM：01 - 12(Month) DD：01 - 31(Day) hh：00 - 23(hour) mm：00 - 59(minute) ss：00 - 59(second) uuu：000 - 999(milli-second)	
94	OrbitArgumentPerigee	10	Satellite perigee argument	99.5384deg	string
95	OrbitDataFileName	128	Orbit data file name used	“XXXXX”(String) Blank if not used	string
96	OrbitDataType	7	Orbit data type	ONBOARD	string
97	OrbitDirection	10	Orbit direction	“XXXXXXXXX” [Standard processing / Near real-time processing (Around Japan)] Ascending/Descending [Near real-time processing (Global)] Ascending/Descending *Set the first orbit direction in the data.	string
98	OrbitEccentricity	7	Satellite orbit eccentricity	Frozen	string
99	OrbitInclination	9	Orbital inclination angle	98.08deg	string
100	OrbitNumberEnd	4	Orbit end number	“XXXXX” 0 - 99999	32-bit integer
101	OrbitNumberStart	4	Orbit start number	“XXXXX” 0 - 99999	32-bit integer

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
102	OrbitPeriod	7	Satellite period	98.2min	string
103	OrbitSemiMajorAxis	10	Satellite orbit semi-major axis	7035.552km	string
104	ParameterVersion	3	Version of parameter	“XXX” 000 - 999	string
105	PathNumber	4	Path number	“XXX” 0 - 999 Pass number at the start of processing	32-bit integer
106	PGEName	33	Data processing software name	GOSAT-GW Mission Operation System	string
107	PlatformShortName	8	Platform abbreviation	GOSAT-GW	string
108	Platinum2ConversionTableW0	13	Engineering value conversion coefficient of platinum sensor No.2 W0	-233.2059300	string
109	Platinum2ConversionTableW1	10	Engineering value conversion coefficient of platinum sensor No.2 W1	1.8933693	string
110	Platinum2ConversionTableW2	10	Engineering value conversion coefficient of platinum sensor No.2 W2	0.0000000	string
111	Platinum2ConversionTableW3	10	Engineering value conversion coefficient of platinum sensor No.2 W3	0.0000000	string
112	Platinum2ConversionTableW4	10	Engineering value conversion coefficient of platinum sensor No.2 W4	0.0000000	string

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
113	Platinum3ConversionTableW0	209	Engineering value conversion coefficient of platinum sensor No.3 W0	212.2451409999999896,211.8607250000000022,211.8868699999999876,211.9885840000000030,212.1240620000000092,212.0721440000000086,211.8331000000000017,212.0347899999999868,211.9497959999999921,211.8606110000000058	string
114	Platinum3ConversionTableW1	189	Engineering value conversion coefficient of platinum sensor No.3 W1	0.0299744530000000,0.0299409650000000,0.0299879420000000,0.0299582980000000,0.0299837050000000,0.0299428820000000,0.0299282190000000,0.0299338700000000,0.0299062050000000,0.0299171530000000	string
115	Platinum3ConversionTableW2	189	Engineering value conversion coefficient of platinum sensor No.3 W2	0.0000001737960000,0.0000001383280000,0.0000001049820000,0.0000001533010000,0.0000001609600000,0.0000001741460000,0.0000001529000000,0.0000001577630000,0.0000001777280000,0.0000001436030000	string
116	Platinum3ConversionTableW3	195	Engineering value conversion coefficient of platinum sensor No.3 W3	-0.0000000000064581,0.0000000000041650,0.0000000000162750,-0.0000000000000413,-0.0000000000060407,-0.0000000000078062,-0.0000000000024197,0.0000000000001316,-0.0000000000085257,0.0000000000056308	string
117	Platinum3ConversionTableW4	194	Engineering value conversion coefficient of platinum sensor No.3 W4	0.0000000000000007,-0.0000000000000004,-0.0000000000000018,-0.0000000000000000,0.0000000000000010,0.0000000000000009,0.000000	string

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
				0000000004,-0.0000000000000001,0.0000000000000010,-0.0000000000000008	
118	Platinum4ConversionTableW0	13	Engineering value conversion coefficient of platinum sensor No.4 W0	-233.205930	string
119	Platinum4ConversionTableW1	10	Engineering value conversion coefficient of platinum sensor No.4 W1	1.8933693	string
120	Platinum4ConversionTableW2	10	Engineering value conversion coefficient of platinum sensor No.4 W2	0.0000000	string
121	Platinum4ConversionTableW3	10	Engineering value conversion coefficient of platinum sensor No.4 W3	0.0000000	string
122	Platinum4ConversionTableW4	10	Engineering value conversion coefficient of platinum sensor No.4 W4	0.0000000	string
123	ProcessingCenter	22	Data Processing Center	JAXA GOSAT-GW Project	string
124	ProcessingQAAttribute	130	Describe any abnormalities in quality-related items (NumberOf***) in GlobalAttribute	AntennaRotationAnomaly,AttitudeAnomaly,GeometricError,HTSAnomaly,MissingPackets,MissingScans,OrbitAnomaly,TbLimitError,ParityError	string
125	ProcessingQADescription	12	Records of errors occurred during	“XXXXXXXXXXXXXXX”(string)	string

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
			processing	Blank if normal operation.	
126	ProductCreationDateTime	24	Product created date and time	“YYYY-MM-DDThh:mm:ss.uuuZ” YYYY：western year MM：01 - 12(Month) DD：01 - 31(Day) hh：00 - 23(hour) mm：00 - 59(minute) ss：00 - 59(second) uuu：000 - 999(milli-second)	
127	ProductName	8	Product abbreviation	AMSR3 L1B TBB	string
128	ProductProcessingType	21	Product processing type	“XXXXXXXXXXX” [Standard Processing] Standard Product (Global) [Near real-time processing (Global)] Near Realtime Product (Global): Near real-time processing (Global) Near Realtime Product (Local): Near real-time processing (Around Japan) / Level 1 product created with Level 1 processing software for direct receiving stations	string
129	ProductSupplement	0	Supplemental information of	(blank)	string

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
			product		
130	ProductVersion	3	Product version	“VVv” (3 characters) VV: Major version (00-99) (2 characters) v: Minor version（A-Z） 1 character)	string
131	QALocationOfPacketDiscontinuity	15	Discontinuity of Packet Sequence Counter	“XXXXXXXXXXXXXXX” Continuation/Discontinuation	string
132	QAPercentMissingData	4	Data missing ratio (%)	0.0 - 100	32-bit floating-point
133	SatelliteAltitude	8	Satellite altitude	665.96km	string
134	SatelliteOrbit	29	Satellite orbit	Sun-synchronous_sub-recurrent	string
135	SatelliteRevisitTime	5	Revisit time	3days	string
136	SensorAlignment	35	Sensor alignment	Rx=-0.02539,Ry=0.038090,Rz=0.357420	string
137	SensorAntRotationVelocity	4	Rotation velocity of Sensor Antenna	40.0rpm	string
138	SensorBandWidth	199	Band width of AMSR3	6.925GHz:350MHz,7.3GHz:350MHz,10.25GHz:500MHz,10.65GHz:100MHz,18.7GHz:200MHz,23.8GHz:400MHz,36.42GHz:840MHz,89.0GHz-A:3000MHz,89.0GHz-B:3000MHz,165.5GHz:4000MHz,183.31+/-3GHz:2000x2MHz,183.31+/-7GHz:2000x2MHz	string
139	SensorBeamWidth	256	Beam width of AMSR3	6.925GHz:1.8deg,7.3GHz:1.8deg,10.25GHz:1.2deg,10.65GHz:1.2deg,18.7GHz:0.65deg,23.8GHz:0.75deg,36.42GHz:0.35deg,89.0GHz-A:0.15deg,89.0GHz-B:0.15deg,165.5GHz:0.30deg,183.31+/-	string

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
				3GHz:0.28deg,183.31+/-7GHz:0.28deg	
140	SensorChannel	236	Observed channel of AMSR3	6.925GHz:V,6.925GHz:H,7.3GHz:V,7.3GHz:H,10.25GHz:V,10.25GHz:H,10.65GHz:V,10.65GHz:H,18.7GHz:V,18.7GHz:H,23.8GHz:V,23.8GHz:H,36.42GHz:V,36.42GHz:H,89.0GHz-A:V,89.0GHz-A:H,89.0GHz-B:V,89.0GHz-B:H,165.5GHz:V,183.31+/-3GHz:V,183.31+/-7GHz:V	string
141	SensorFOV	225	spatial resolution(Az x El)	6.925GHz:33kmx57km,7.3GHz:33kmx57km,10.25GHz:22kmx38km,10.65GHz:22kmx38km,18.7GHz:12kmx21km,23.8GHz:14kmx24km,36.42GHz:6kmx11km,89.0GHz-A:3kmx5km,89.0GHz-B:3kmx5km,165.5GHz:5kmx10km,183.31+/-3GHz:5kmx9km,183.31+/-7GHz:5kmx9km	string
142	SensorOffNadir	35	Off-nadir angle	47.0deg : 89GHz-B, 47.5deg : others	string
143	SensorScanningPeriod	6	Scanning Period	1.5sec	string
144	SensorShortName	5	Sensor abbreviation	AMSR3	string
145	SensorSwathWidth	6	Swath width	1535km	string
146	Thermistor1ConversionTable W0	35	Engineering value conversion coefficient for Thermistor 1 W0	91.699564000000,-31787.062999999998	string
147	Thermistor1ConversionTable W1	32	Engineering value conversion coefficient for Thermistor 1 W1	-1.671018700000,620.584310000000	string
148	Thermistor1ConversionTable W2	30	Engineering value conversion coefficient for Thermistor 1 W2	0.017325889000,-4.531243700000	string
149	Thermistor1ConversionTable	30	Engineering value conversion	-0.000098347441,0.014669473000	string

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
	W3		coefficient for Thermistor 1 W3		
150	Thermistor1ConversionTable W4	30	Engineering value conversion coefficient for Thermistor 1 W4	0.000000204092,-0.000017782910	string
151	Thermistor1CountRange	11	Applied range of conversion coefficient for Thermistor 1	0,185,255	string
152	Thermistor2ConversionTable W0	36	Engineering value conversion coefficient for Thermistor 2 W0	57.2940800000000,-3580.3478000000000	string
153	Thermistor2ConversionTable W1	32	Engineering value conversion coefficient for Thermistor 2 W1	-0.0436646040000,4.7476534000000	string
154	Thermistor2ConversionTable W2	32	Engineering value conversion coefficient for Thermistor 2 W2	0.0000173910510,-0.0023425068000	string
155	Thermistor2ConversionTable W3	32	Engineering value conversion coefficient for Thermistor 2 W3	-0.0000000049972,0.0000005105244	string
156	Thermistor2ConversionTable W4	32	Engineering value conversion coefficient for Thermistor 2 W4	0.0000000000005,-0.0000000000417	string
157	Thermistor2CountRange	9	Applied range of conversion coefficient for Thermistor 2	0,3079,4095	string
158	Thermistor3ConversionTable W0	35	Engineering value conversion coefficient for Thermistor 3 W0	91.699564000000,-31787.062999999998	string
159	Thermistor3ConversionTable W1	30	Engineering value conversion coefficient for Thermistor 3 W1	-1.671018700000,620.584310000000	string
160	Thermistor3ConversionTable W2	30	Engineering value conversion coefficient for Thermistor 3 W2	0.017325889000,-4.531243700000	string

No.	MetaDataName	DataSize	Contents	Explanation/Range	Data type
161	Thermistor3ConversionTable W3	30	Engineering value conversion coefficient for Thermistor 3 W3	-0.000098347441,0.014669473000	string
162	Thermistor3ConversionTable W4	30	Engineering value conversion coefficient for Thermistor 3 W4	0.000000204092,-0.000017782910	string
163	Thermistor3CountRange	9	Applied range of conversion coefficient for Thermistor 3	0,185,255	string

Table 3-4 Composition and size of the data set in the data section

No.	Dataset Name	Data Type	Scale factor	Unit	Dimension size	Size(byte) *1
1	Tb_Ch06V	16-bit unsigned integer	0.01	K	scan_num x 243	1,001,160
2	Tb_Ch06H	16-bit unsigned integer	0.01	K	scan_num x 243	1,001,160
3	Tb_Ch07V	16-bit unsigned integer	0.01	K	scan_num x 243	1,001,160
4	Tb_Ch07H	16-bit unsigned integer	0.01	K	scan_num x 243	1,001,160
5	Tb_Ch10uV	16-bit unsigned integer	0.01	K	scan_num x 243	1,001,160
6	Tb_Ch10uH	16-bit unsigned integer	0.01	K	scan_num x 243	1,001,160
7	Tb_Ch10V	16-bit unsigned integer	0.01	K	scan_num x 243	1,001,160
8	Tb_Ch10H	16-bit unsigned integer	0.01	K	scan_num x 243	1,001,160
9	Tb_Ch18V	16-bit unsigned integer	0.01	K	scan_num x 243	1,001,160
10	Tb_Ch18H	16-bit unsigned integer	0.01	K	scan_num x 243	1,001,160
11	Tb_Ch23V	16-bit unsigned integer	0.01	K	scan_num x 243	1,001,160
12	Tb_Ch23H	16-bit unsigned integer	0.01	K	scan_num x 243	1,001,160
13	Tb_Ch36V	16-bit unsigned integer	0.01	K	scan_num x 243	1,001,160
14	Tb_Ch36H	16-bit unsigned integer	0.01	K	scan_num x 243	1,001,160
15	Tb_Ch89AV	16-bit unsigned integer	0.01	K	scan_num x 486	2,002,320
16	Tb_Ch89AH	16-bit unsigned integer	0.01	K	scan_num x 486	2,002,320
17	Tb_Ch89BV	16-bit unsigned integer	0.01	K	scan_num x 486	2,002,320
18	Tb_Ch89BH	16-bit unsigned integer	0.01	K	scan_num x 486	2,002,320
19	Tb_Ch165V	16-bit unsigned integer	0.01	K	scan_num x 243	1,001,160
20	Tb_Ch183r3V	16-bit unsigned integer	0.01	K	scan_num x 243	1,001,160
21	Tb_Ch183r7V	16-bit unsigned integer	0.01	K	scan_num x 243	1,001,160
22	CSMCount_Ch06V	16-bit integer	1	Count	scan_num x 16	65,920

No.	Dataset Name	Data Type	Scale factor	Unit	Dimension size	Size(byte) *1
23	CSMCount_Ch06H	16-bit integer	1	Count	scan_num x 16	65,920
24	CSMCount_Ch07V	16-bit integer	1	Count	scan_num x 16	65,920
25	CSMCount_Ch07H	16-bit integer	1	Count	scan_num x 16	65,920
26	CSMCount_Ch10uV	16-bit integer	1	Count	scan_num x 16	65,920
27	CSMCount_Ch10uH	16-bit integer	1	Count	scan_num x 16	65,920
28	CSMCount_Ch10V	16-bit integer	1	Count	scan_num x 16	65,920
29	CSMCount_Ch10H	16-bit integer	1	Count	scan_num x 16	65,920
30	CSMCount_Ch18V	16-bit integer	1	Count	scan_num x 16	65,920
31	CSMCount_Ch18H	16-bit integer	1	Count	scan_num x 16	65,920
32	CSMCount_Ch23V	16-bit integer	1	Count	scan_num x 16	65,920
33	CSMCount_Ch23H	16-bit integer	1	Count	scan_num x 16	65,920
34	CSMCount_Ch36V	16-bit integer	1	Count	scan_num x 16	65,920
35	CSMCount_Ch36H	16-bit integer	1	Count	scan_num x 16	65,920
36	CSMCount_Ch89AV	16-bit integer	1	Count	scan_num x 32	131,840
37	CSMCount_Ch89AH	16-bit integer	1	Count	scan_num x 32	131,840
38	CSMCount_Ch89BV	16-bit integer	1	Count	scan_num x 32	131,840
39	CSMCount_Ch89BH	16-bit integer	1	Count	scan_num x 32	131,840
40	CSMCount_Ch165V	16-bit integer	1	Count	scan_num x 16	65,920
41	CSMCount_Ch183r3V	16-bit integer	1	Count	scan_num x 16	65,920
42	CSMCount_Ch183r7V	16-bit integer	1	Count	scan_num x 16	65,920
43	HTSCount_Ch06V	16-bit integer	1	Count	scan_num x 16	65,920
44	HTSCount_Ch06H	16-bit integer	1	Count	scan_num x 16	65,920
45	HTSCount_Ch07V	16-bit integer	1	Count	scan_num x 16	65,920

No.	Dataset Name	Data Type	Scale factor	Unit	Dimension size	Size(byte) *1
46	HTSCount_Ch07H	16-bit integer	1	Count	scan_num x 16	65,920
47	HTSCount_Ch10uV	16-bit integer	1	Count	scan_num x 16	65,920
48	HTSCount_Ch10uH	16-bit integer	1	Count	scan_num x 16	65,920
49	HTSCount_Ch10V	16-bit integer	1	Count	scan_num x 16	65,920
50	HTSCount_Ch10H	16-bit integer	1	Count	scan_num x 16	65,920
51	HTSCount_Ch18V	16-bit integer	1	Count	scan_num x 16	65,920
52	HTSCount_Ch18H	16-bit integer	1	Count	scan_num x 16	65,920
53	HTSCount_Ch23V	16-bit integer	1	Count	scan_num x 16	65,920
54	HTSCount_Ch23H	16-bit integer	1	Count	scan_num x 16	65,920
55	HTSCount_Ch36V	16-bit integer	1	Count	scan_num x 16	65,920
56	HTSCount_Ch36H	16-bit integer	1	Count	scan_num x 16	65,920
57	HTSCount_Ch89AV	16-bit integer	1	Count	scan_num x 32	131,840
58	HTSCount_Ch89AH	16-bit integer	1	Count	scan_num x 32	131,840
59	HTSCount_Ch89BV	16-bit integer	1	Count	scan_num x 32	131,840
60	HTSCount_Ch89BH	16-bit integer	1	Count	scan_num x 32	131,840
61	HTSCount_Ch165V	16-bit integer	1	Count	scan_num x 16	65,920
62	HTSCount_Ch183r3V	16-bit integer	1	Count	scan_num x 16	65,920
63	HTSCount_Ch183r7V	16-bit integer	1	Count	scan_num x 16	65,920
64	CSMCountData_Ch06V_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
65	CSMCountData_Ch06H_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
66	CSMCountData_Ch07V_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
67	CSMCountData_Ch07H_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
68	CSMCountData_Ch10uV_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960

No.	Dataset Name	Data Type	Scale factor	Unit	Dimension size	Size(byte) *1
69	CSMCountData_Ch10uH_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
70	CSMCountData_Ch10uV_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
71	CSMCountData_Ch10H_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
72	CSMCountData_Ch18V_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
73	CSMCountData_Ch18H_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
74	CSMCountData_Ch23V_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
75	CSMCountData_Ch23H_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
76	CSMCountData_Ch36V_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
77	CSMCountData_Ch36H_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
78	CSMCountData_Ch89AV_Quality	8-bit unsigned integer	1	-	scan_num x 32	65,920
79	CSMCountData_Ch89AH_Quality	8-bit unsigned integer	1	-	scan_num x 32	65,920
80	CSMCountData_Ch89BV_Quality	8-bit unsigned integer	1	-	scan_num x 32	65,920
81	CSMCountData_Ch89BH_Quality	8-bit unsigned integer	1	-	scan_num x 32	65,920
82	CSMCountData_Ch165V_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
83	CSMCountData_Ch183r3V_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
84	CSMCountData_Ch183r7V_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
85	HTSCountData_Ch06V_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
86	HTSCountData_Ch06H_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
87	HTSCountData_Ch07V_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
88	HTSCountData_Ch07H_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
89	HTSCountData_Ch10uV_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
90	HTSCountData_Ch10uH_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
91	HTSCountData_Ch10uV_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960

No.	Dataset Name	Data Type	Scale factor	Unit	Dimension size	Size(byte) *1
92	HTSCountData_Ch10H_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
93	HTSCountData_Ch18V_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
94	HTSCountData_Ch18H_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
95	HTSCountData_Ch23V_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
96	HTSCountData_Ch23H_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
97	HTSCountData_Ch36V_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
98	HTSCountData_Ch36H_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
99	HTSCountData_Ch89AV_Quality	8-bit unsigned integer	1	-	scan_num x 32	65,920
100	HTSCountData_Ch89AH_Quality	8-bit unsigned integer	1	-	scan_num x 32	65,920
101	HTSCountData_Ch89BV_Quality	8-bit unsigned integer	1	-	scan_num x 32	65,920
102	HTSCountData_Ch89BH_Quality	8-bit unsigned integer	1	-	scan_num x 32	65,920
103	HTSCountData_Ch165V_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
104	HTSCountData_Ch183r3V_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
105	HTSCountData_Ch183r7V_Quality	8-bit unsigned integer	1	-	scan_num x 16	32,960
106	Tb_Ch06V_Quality	8-bit unsigned integer	1	-	scan_num x 243	500,580
107	Tb_Ch06H_Quality	8-bit unsigned integer	1	-	scan_num x 243	500,580
108	Tb_Ch07V_Quality	8-bit unsigned integer	1	-	scan_num x 243	500,580
109	Tb_Ch07H_Quality	8-bit unsigned integer	1	-	scan_num x 243	500,580
110	Tb_Ch10uV_Quality	8-bit unsigned integer	1	-	scan_num x 243	500,580
111	Tb_Ch10uH_Quality	8-bit unsigned integer	1	-	scan_num x 243	500,580
112	Tb_Ch10uV_Quality	8-bit unsigned integer	1	-	scan_num x 243	500,580
113	Tb_Ch10H_Quality	8-bit unsigned integer	1	-	scan_num x 243	500,580
114	Tb_Ch18V_Quality	8-bit unsigned integer	1	-	scan_num x 243	500,580

No.	Dataset Name	Data Type	Scale factor	Unit	Dimension size	Size(byte) *1
115	Tb_Ch18H_Quality	8-bit unsigned integer	1	-	scan_num x 243	500,580
116	Tb_Ch23V_Quality	8-bit unsigned integer	1	-	scan_num x 243	500,580
117	Tb_Ch23H_Quality	8-bit unsigned integer	1	-	scan_num x 243	500,580
118	Tb_Ch36V_Quality	8-bit unsigned integer	1	-	scan_num x 243	500,580
119	Tb_Ch36H_Quality	8-bit unsigned integer	1	-	scan_num x 243	500,580
120	Tb_Ch89AV_Quality	8-bit unsigned integer	1	-	scan_num x 486	1,001,160
121	Tb_Ch89AH_Quality	8-bit unsigned integer	1	-	scan_num x 486	1,001,160
122	Tb_Ch89BV_Quality	8-bit unsigned integer	1	-	scan_num x 486	1,001,160
123	Tb_Ch89BH_Quality	8-bit unsigned integer	1	-	scan_num x 486	1,001,160
124	Tb_Ch165V_Quality	8-bit unsigned integer	1	-	scan_num x 243	500,580
125	Tb_Ch183r3V_Quality	8-bit unsigned integer	1	-	scan_num x 243	500,580
126	Tb_Ch183r7V_Quality	8-bit unsigned integer	1	-	scan_num x 243	500,580
127	RxOffsetCount_Ch06V	8-bit unsigned integer	1	Count	scan_num	4,120
128	RxOffsetCount_Ch06H	8-bit unsigned integer	1	Count	scan_num	4,120
129	RxOffsetCount_Ch07V	8-bit unsigned integer	1	Count	scan_num	4,120
130	RxOffsetCount_Ch07H	8-bit unsigned integer	1	Count	scan_num	4,120
131	RxOffsetCount_Ch10uV	8-bit unsigned integer	1	Count	scan_num	4,120
132	RxOffsetCount_Ch10uH	8-bit unsigned integer	1	Count	scan_num	4,120
133	RxOffsetCount_Ch10V	8-bit unsigned integer	1	Count	scan_num	4,120
134	RxOffsetCount_Ch10H	8-bit unsigned integer	1	Count	scan_num	4,120
135	RxOffsetCount_Ch18V	8-bit unsigned integer	1	Count	scan_num	4,120
136	RxOffsetCount_Ch18H	8-bit unsigned integer	1	Count	scan_num	4,120
137	RxOffsetCount_Ch23V	8-bit unsigned integer	1	Count	scan_num	4,120

No.	Dataset Name	Data Type	Scale factor	Unit	Dimension size	Size(byte) *1
138	RxOffsetCount_Ch23H	8-bit unsigned integer	1	Count	scan_num	4,120
139	RxOffsetCount_Ch36V	8-bit unsigned integer	1	Count	scan_num	4,120
140	RxOffsetCount_Ch36H	8-bit unsigned integer	1	Count	scan_num	4,120
141	RxOffsetCount_Ch89AV	8-bit unsigned integer	1	Count	scan_num	4,120
142	RxOffsetCount_Ch89AH	8-bit unsigned integer	1	Count	scan_num	4,120
143	RxOffsetCount_Ch89BV	8-bit unsigned integer	1	Count	scan_num	4,120
144	RxOffsetCount_Ch89BH	8-bit unsigned integer	1	Count	scan_num	4,120
145	RxOffsetCount_Ch165V	8-bit unsigned integer	1	Count	scan_num	4,120
146	RxOffsetCount_Ch183r3V	8-bit unsigned integer	1	Count	scan_num	4,120
147	RxOffsetCount_Ch183r7V	8-bit unsigned integer	1	Count	scan_num	4,120
148	RxGainCount_Ch06V	8-bit unsigned integer	1	Count	scan_num	4,120
149	RxGainCount_Ch06H	8-bit unsigned integer	1	Count	scan_num	4,120
150	RxGainCount_Ch07V	8-bit unsigned integer	1	Count	scan_num	4,120
151	RxGainCount_Ch07H	8-bit unsigned integer	1	Count	scan_num	4,120
152	RxGainCount_Ch10uV	8-bit unsigned integer	1	Count	scan_num	4,120
153	RxGainCount_Ch10uH	8-bit unsigned integer	1	Count	scan_num	4,120
154	RxGainCount_Ch10V	8-bit unsigned integer	1	Count	scan_num	4,120
155	RxGainCount_Ch10H	8-bit unsigned integer	1	Count	scan_num	4,120
156	RxGainCount_Ch18V	8-bit unsigned integer	1	Count	scan_num	4,120
157	RxGainCount_Ch18H	8-bit unsigned integer	1	Count	scan_num	4,120
158	RxGainCount_Ch23V	8-bit unsigned integer	1	Count	scan_num	4,120
159	RxGainCount_Ch23H	8-bit unsigned integer	1	Count	scan_num	4,120
160	RxGainCount_Ch36V	8-bit unsigned integer	1	Count	scan_num	4,120

No.	Dataset Name	Data Type	Scale factor	Unit	Dimension size	Size(byte) *1
161	RxGainCount_Ch36H	8-bit unsigned integer	1	Count	scan_num	4,120
162	RxGainCount_Ch89AV	8-bit unsigned integer	1	Count	scan_num	4,120
163	RxGainCount_Ch89AH	8-bit unsigned integer	1	Count	scan_num	4,120
164	RxGainCount_Ch89BV	8-bit unsigned integer	1	Count	scan_num	4,120
165	RxGainCount_Ch89BH	8-bit unsigned integer	1	Count	scan_num	4,120
166	RxGainCount_Ch165V	8-bit unsigned integer	1	Count	scan_num	4,120
167	RxGainCount_Ch183r3V	8-bit unsigned integer	1	Count	scan_num	4,120
168	RxGainCount_Ch183r7V	8-bit unsigned integer	1	Count	scan_num	4,120
169	Latitude_P06	32-bit floating point	1	deg	scan_num x 243	2,002,320
170	Latitude_P07	32-bit floating point	1	deg	scan_num x 243	2,002,320
171	Latitude_P10u	32-bit floating point	1	deg	scan_num x 243	2,002,320
172	Latitude_P10	32-bit floating point	1	deg	scan_num x 243	2,002,320
173	Latitude_P18	32-bit floating point	1	deg	scan_num x 243	2,002,320
174	Latitude_P23	32-bit floating point	1	deg	scan_num x 243	2,002,320
175	Latitude_P36	32-bit floating point	1	deg	scan_num x 243	2,002,320
176	Latitude_P89A	32-bit floating point	1	deg	scan_num x 486	4,004,640
177	Latitude_P89B	32-bit floating point	1	deg	scan_num x 486	4,004,640
178	Latitude_P165	32-bit floating point	1	deg	scan_num x 243	2,002,320
179	Latitude_P183r3	32-bit floating point	1	deg	scan_num x 243	2,002,320
180	Latitude_P183r7	32-bit floating point	1	deg	scan_num x 243	2,002,320
181	Longitude_P06	32-bit floating point	1	deg	scan_num x 243	2,002,320
182	Longitude_P07	32-bit floating point	1	deg	scan_num x 243	2,002,320
183	Longitude_P10u	32-bit floating point	1	deg	scan_num x 243	2,002,320

No.	Dataset Name	Data Type	Scale factor	Unit	Dimension size	Size(byte) *1
184	Longitude_P10	32-bit floating point	1	deg	scan_num x 243	2,002,320
185	Longitude_P18	32-bit floating point	1	deg	scan_num x 243	2,002,320
186	Longitude_P23	32-bit floating point	1	deg	scan_num x 243	2,002,320
187	Longitude_P36	32-bit floating point	1	deg	scan_num x 243	2,002,320
188	Longitude_P89A	32-bit floating point	1	deg	scan_num x 486	4,004,640
189	Longitude_P89B	32-bit floating point	1	deg	scan_num x 486	4,004,640
190	Longitude_P165	32-bit floating point	1	deg	scan_num x 243	2,002,320
191	Longitude_P183r3	32-bit floating point	1	deg	scan_num x 243	2,002,320
192	Longitude_P183r7	32-bit floating point	1	deg	scan_num x 243	2,002,320
193	LandAreaPercent_P06	8-bit unsigned integer	1	%	scan_num x 243	500,580
194	LandAreaPercent_P07	8-bit unsigned integer	1	%	scan_num x 243	500,580
195	LandAreaPercent_P10u	8-bit unsigned integer	1	%	scan_num x 243	500,580
196	LandAreaPercent_P10	8-bit unsigned integer	1	%	scan_num x 243	500,580
197	LandAreaPercent_P18	8-bit unsigned integer	1	%	scan_num x 243	500,580
198	LandAreaPercent_P23	8-bit unsigned integer	1	%	scan_num x 243	500,580
199	LandAreaPercent_P36	8-bit unsigned integer	1	%	scan_num x 243	500,580
200	LandAreaPercent_P89A	8-bit unsigned integer	1	%	scan_num x 486	1,001,160
201	LandAreaPercent_P89B	8-bit unsigned integer	1	%	scan_num x 486	1,001,160
202	LandAreaPercent_P165	8-bit unsigned integer	1	%	scan_num x 243	500,580
203	LandAreaPercent_P183r3	8-bit unsigned integer	1	%	scan_num x 243	500,580
204	LandAreaPercent_P183r7	8-bit unsigned integer	1	%	scan_num x 243	500,580
205	AreaMeanHeight_P06	16-bit integer	1	m	scan_num x 243	1,001,160
206	AreaMeanHeight_P07	16-bit integer	1	m	scan_num x 243	1,001,160

No.	Dataset Name	Data Type	Scale factor	Unit	Dimension size	Size(byte) *1
207	AreaMeanHeight_P10u	16-bit integer	1	m	scan_num x 243	1,001,160
208	AreaMeanHeight_P10	16-bit integer	1	m	scan_num x 243	1,001,160
209	AreaMeanHeight_P18	16-bit integer	1	m	scan_num x 243	1,001,160
210	AreaMeanHeight_P23	16-bit integer	1	m	scan_num x 243	1,001,160
211	AreaMeanHeight_P36	16-bit integer	1	m	scan_num x 243	1,001,160
212	AreaMeanHeight_P89A	16-bit integer	1	m	scan_num x 486	2,002,320
213	AreaMeanHeight_P89B	16-bit integer	1	m	scan_num x 486	2,002,320
214	AreaMeanHeight_P165	16-bit integer	1	m	scan_num x 243	1,001,160
215	AreaMeanHeight_P183r3	16-bit integer	1	m	scan_num x 243	1,001,160
216	AreaMeanHeight_P183r7	16-bit integer	1	m	scan_num x 243	1,001,160
217	EarthAzimuth_P06	16-bit integer	0.01	deg	scan_num x 243	1,001,160
218	EarthAzimuth_P07	16-bit integer	0.01	deg	scan_num x 243	1,001,160
219	EarthAzimuth_P10u	16-bit integer	0.01	deg	scan_num x 243	1,001,160
220	EarthAzimuth_P10	16-bit integer	0.01	deg	scan_num x 243	1,001,160
221	EarthAzimuth_P18	16-bit integer	0.01	deg	scan_num x 243	1,001,160
222	EarthAzimuth_P23	16-bit integer	0.01	deg	scan_num x 243	1,001,160
223	EarthAzimuth_P36	16-bit integer	0.01	deg	scan_num x 243	1,001,160
224	EarthAzimuth_P89A	16-bit integer	0.01	deg	scan_num x 486	2,002,320
225	EarthAzimuth_P89B	16-bit integer	0.01	deg	scan_num x 486	2,002,320
226	EarthAzimuth_P165	16-bit integer	0.01	deg	scan_num x 243	1,001,160
227	EarthAzimuth_P183r3	16-bit integer	0.01	deg	scan_num x 243	1,001,160
228	EarthAzimuth_P183r7	16-bit integer	0.01	deg	scan_num x 243	1,001,160
229	EarthIncidence_P06	16-bit integer	0.01	deg	scan_num x 243	1,001,160

No.	Dataset Name	Data Type	Scale factor	Unit	Dimension size	Size(byte) *1
230	EarthIncidence_P07	16-bit integer	0.01	deg	scan_num x 243	1,001,160
231	EarthIncidence_P10u	16-bit integer	0.01	deg	scan_num x 243	1,001,160
232	EarthIncidence_P10	16-bit integer	0.01	deg	scan_num x 243	1,001,160
233	EarthIncidence_P18	16-bit integer	0.01	deg	scan_num x 243	1,001,160
234	EarthIncidence_P23	16-bit integer	0.01	deg	scan_num x 243	1,001,160
235	EarthIncidence_P36	16-bit integer	0.01	deg	scan_num x 243	1,001,160
236	EarthIncidence_P89A	16-bit integer	0.01	deg	scan_num x 486	2,002,320
237	EarthIncidence_P89B	16-bit integer	0.01	deg	scan_num x 486	2,002,320
238	EarthIncidence_P165	16-bit integer	0.01	deg	scan_num x 243	1,001,160
239	EarthIncidence_P183r3	16-bit integer	0.01	deg	scan_num x 243	1,001,160
240	EarthIncidence_P183r7	16-bit integer	0.01	deg	scan_num x 243	1,001,160
241	SunAzimuth_P06	16-bit integer	0.01	deg	scan_num x 243	1,001,160
242	SunAzimuth_P07	16-bit integer	0.01	deg	scan_num x 243	1,001,160
243	SunAzimuth_P10u	16-bit integer	0.01	deg	scan_num x 243	1,001,160
244	SunAzimuth_P10	16-bit integer	0.01	deg	scan_num x 243	1,001,160
245	SunAzimuth_P18	16-bit integer	0.01	deg	scan_num x 243	1,001,160
246	SunAzimuth_P23	16-bit integer	0.01	deg	scan_num x 243	1,001,160
247	SunAzimuth_P36	16-bit integer	0.01	deg	scan_num x 243	1,001,160
248	SunAzimuth_P89A	16-bit integer	0.01	deg	scan_num x 486	2,002,320
249	SunAzimuth_P89B	16-bit integer	0.01	deg	scan_num x 486	2,002,320
250	SunAzimuth_P165	16-bit integer	0.01	deg	scan_num x 243	1,001,160
251	SunAzimuth_P183r3	16-bit integer	0.01	deg	scan_num x 243	1,001,160
252	SunAzimuth_P183r7	16-bit integer	0.01	deg	scan_num x 243	1,001,160

No.	Dataset Name	Data Type	Scale factor	Unit	Dimension size	Size(byte) *1
253	SunElevation_P06	16-bit integer	0.01	deg	scan_num x 243	1,001,160
254	SunElevation_P07	16-bit integer	0.01	deg	scan_num x 243	1,001,160
255	SunElevation_P10u	16-bit integer	0.01	deg	scan_num x 243	1,001,160
256	SunElevation_P10	16-bit integer	0.01	deg	scan_num x 243	1,001,160
257	SunElevation_P18	16-bit integer	0.01	deg	scan_num x 243	1,001,160
258	SunElevation_P23	16-bit integer	0.01	deg	scan_num x 243	1,001,160
259	SunElevation_P36	16-bit integer	0.01	deg	scan_num x 243	1,001,160
260	SunElevation_P89A	16-bit integer	0.01	deg	scan_num x 486	2,002,320
261	SunElevation_P89B	16-bit integer	0.01	deg	scan_num x 486	2,002,320
262	SunElevation_P165	16-bit integer	0.01	deg	scan_num x 243	1,001,160
263	SunElevation_P183r3	16-bit integer	0.01	deg	scan_num x 243	1,001,160
264	SunElevation_P183r7	16-bit integer	0.01	deg	scan_num x 243	1,001,160
265	ScanTimeUTC	16-bit integer	1	{Year, Month, Day, Hour, Minute, Second, Millisecond}	scan_num x 7	28,840
266	ScanTimeTAI93	64-bit floating point	1	sec	scan_num	16,480
267	ScanDataQuality	8-bit unsigned integer	1	-	scan_num	2,060
268	TbCal	32-bit floating-point	1	-	scan_num x 515	4,243,600
269	AttitudeData	32-bit floating point	1	deg	scan_num x 3	24,720
270	NavigationData	32-bit floating point	1	m,m/s	scan_num x 6	49,440
271	PositionInOrbit	64-bit floating point	1	-	scan_num	16,480

No.	Dataset Name	Data Type	Scale factor	Unit	Dimension size	Size(byte) *1
272	ObservationSupplement	8-bit unsigned integer	1	-	scan_num x 595	1,225,700
273	PCDData	8-bit unsigned integer	1	-	scan_num x 128	263,680
274	SPCTemperatureCount	16-bit unsigned integer	1	Count	scan_num x 24	98,880
275	SPSTemperatureCount	16-bit unsigned integer	1	Count	scan_num x 58	238,960
					(Total Size)*2	173.53Mbyte

*1 Size is calculated assuming 2060 scans per scene (scan_num=2060)

*2 The actual product size of AMSR3 is different because it is compressed using the NetCDF4 compression option.

3. 4 Structure of each data

The structure of each dataset is shown in Figure 3-2 to Figure 3-29.

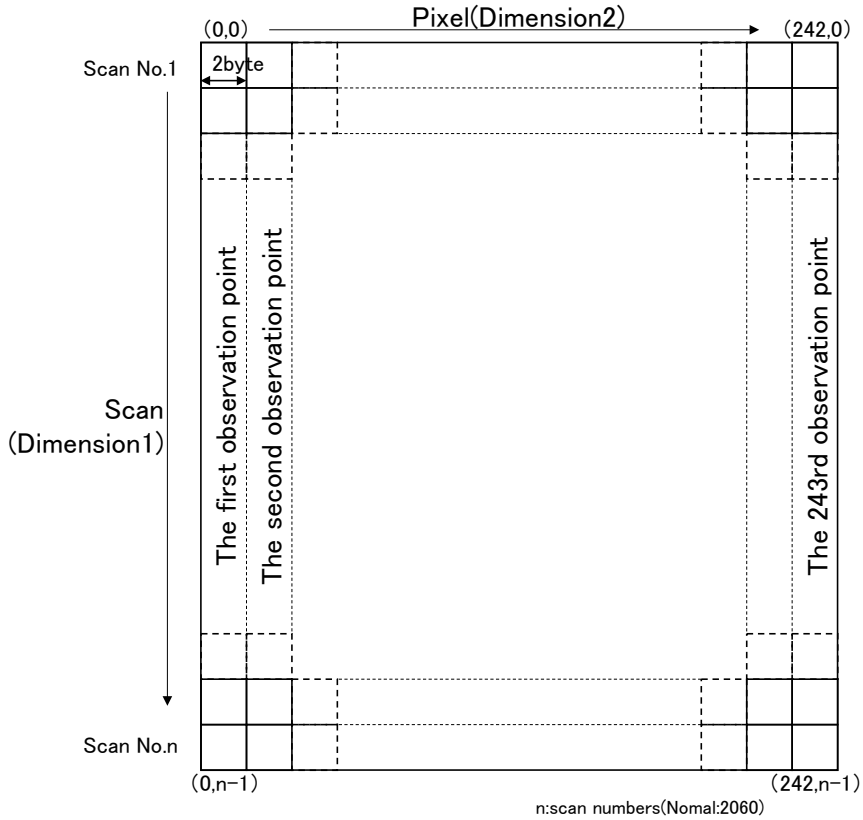


Figure 3-2 Structure of Tb (except for 89GHz)

(Dataset Name : Tb_Ch06V, Tb_Ch06H, Tb_Ch07V, Tb_Ch07H, Tb_Ch10uV, Tb_Ch10uH, Tb_Ch10V, Tb_Ch10H, Tb_Ch18V, Tb_Ch18H, Tb_Ch23V, Tb_Ch23H, Tb_Ch36V, Tb_Ch36H, Tb_Ch165V, Tb_Ch183r3V, Tb_Ch183r7V)

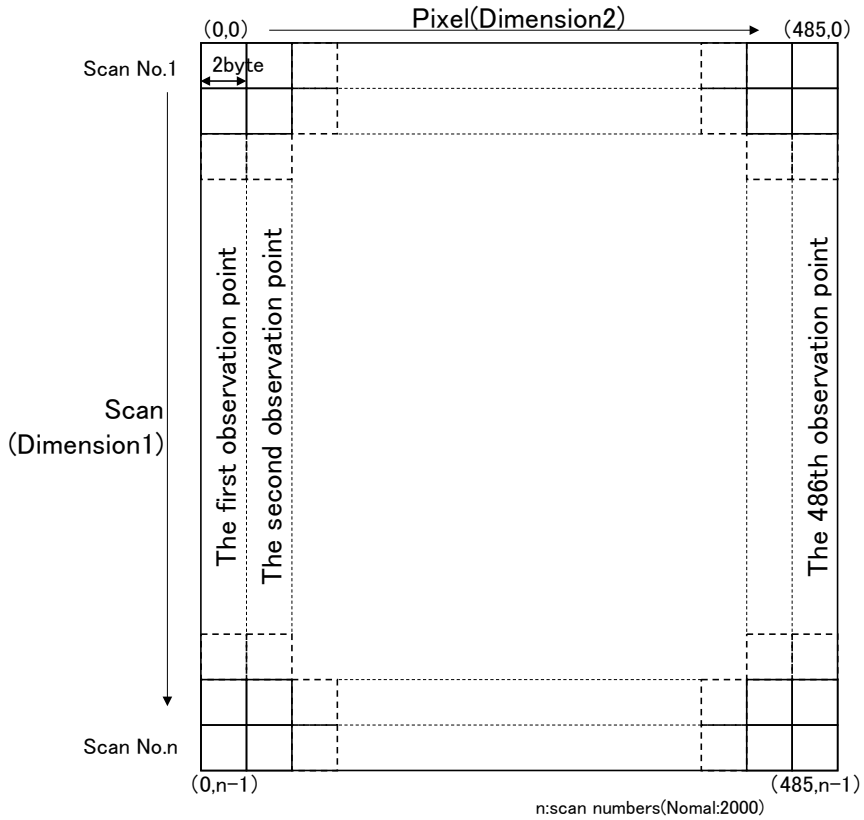


Figure 3-3 Structure of Tb (89GHz)

(Dataset Name : Tb_Ch89AV, Tb_Ch89AH, Tb_Ch89BV, Tb_Ch89BH)

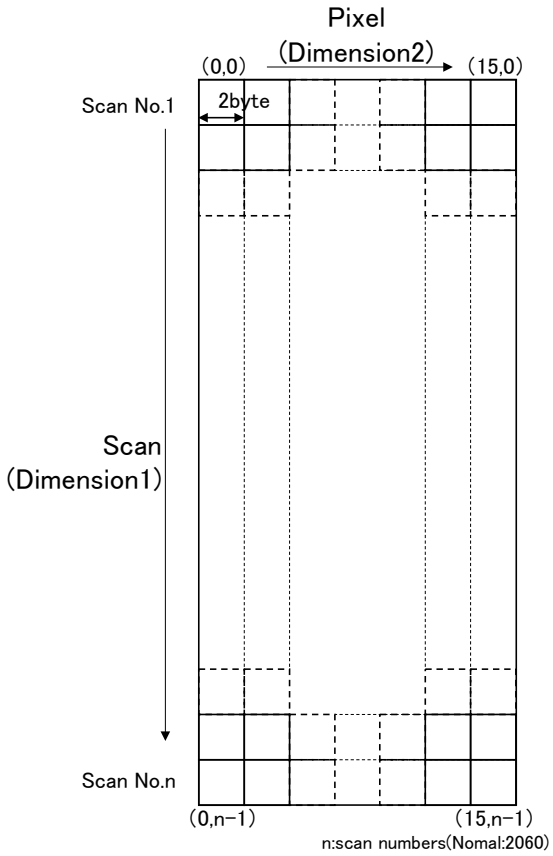


Figure 3-4 CSMCount (except for 89GHz), HTSCount (except for 89GHz))

（Dataset Name : CSMCount_Ch06V, CSMCount_Ch06H, CSMCount_Ch07V, CSMCount_Ch07H, CSMCount_Ch10uV, CSMCount_Ch10uH, CSMCount_Ch10V, CSMCount_Ch10H, CSMCount_Ch18V, CSMCount_Ch18H, CSMCount_Ch23V, CSMCount_Ch23H, CSMCount_Ch36V, CSMCount_Ch36H, CSMCount_Ch165V, CSMCount_Ch183r3V, CSMCount_Ch183r7V, HTSCount_Ch06V, HTSCount_Ch06H, HTSCount_Ch07V, HTSCount_Ch07H, HTSCount_Ch10uV, HTSCount_Ch10uH, HTSCount_Ch10V, HTSCount_Ch10H, HTSCount_Ch18V, HTSCount_Ch18H, HTSCount_Ch23V, HTSCount_Ch23H, HTSCount_Ch36V, HTSCount_Ch36H, HTSCount_Ch165V, HTSCount_Ch183r3V, HTSCount_Ch183r7V）

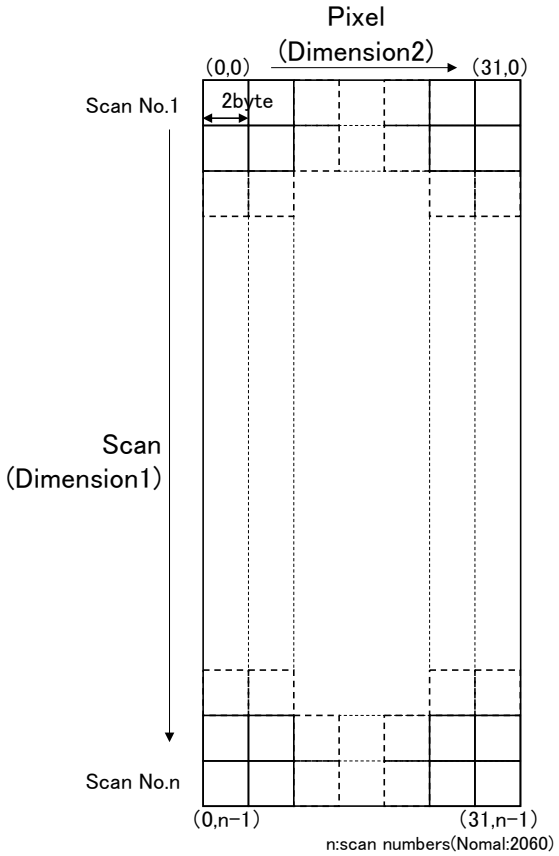


Figure 3-5 CSMCount(89GHz), HTSCount(89GHz)

(Dataset Name : CSMCount_Ch89AV, CSMCount_Ch89AH, CSMCount_Ch89BV, CSMCount_Ch89BH, HTSCount_Ch89AV, HTSCount_Ch89AH, HTSCount_Ch89BV, HTSCount_Ch89BH)

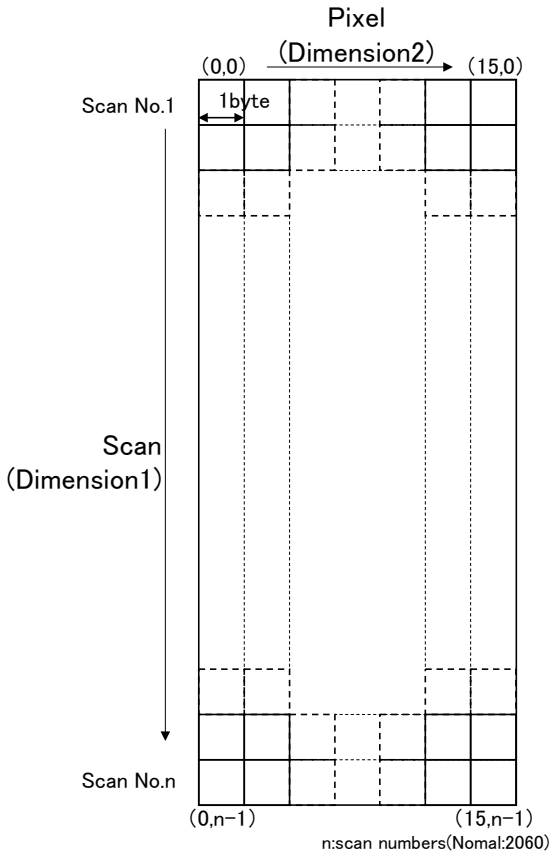


Figure 3-6 CSMCountDataQuality (except for 89GHz), HTSCountDataQuality (except for 89GHz)

(Dataset Name : CSMCountData_Ch06V_Quality、CSMCountData_Ch06H_Quality、CSMCountData_Ch07V_Quality、CSMCountData_Ch07H_Quality、CSMCountData_Ch10uV_Quality、CSMCountData_Ch10uH_Quality、CSMCountData_Ch10uV_Quality、CSMCountData_Ch10H_Quality、CSMCountData_Ch18V_Quality、CSMCountData_Ch18H_Quality、CSMCountData_Ch23V_Quality、CSMCountData_Ch23H_Quality、CSMCountData_Ch36V_Quality、CSMCountData_Ch36H_Quality、CSMCountData_Ch165V_Quality、CSMCountData_Ch183r3V_Quality、CSMCountData_Ch183r7V_Quality、HTSCountData_Ch06V_Quality、HTSCountData_Ch06H_Quality、HTSCountData_Ch07V_Quality、HTSCountData_Ch07H_Quality、HTSCountData_Ch10uV_Quality、HTSCountData_Ch10uH_Quality、HTSCountData_Ch10uV_Quality、HTSCountData_Ch10H_Quality、HTSCountData_Ch18V_Quality、HTSCountData_Ch18H_Quality、HTSCountData_Ch23V_Quality、HTSCountData_Ch23H_Quality、HTSCountData_Ch36V_Quality、HTSCountData_Ch36H_Quality、HTSCountData_Ch165V_Quality、HTSCountData_Ch183r3V_Quality、HTSCountData_Ch183r7V_Quality)

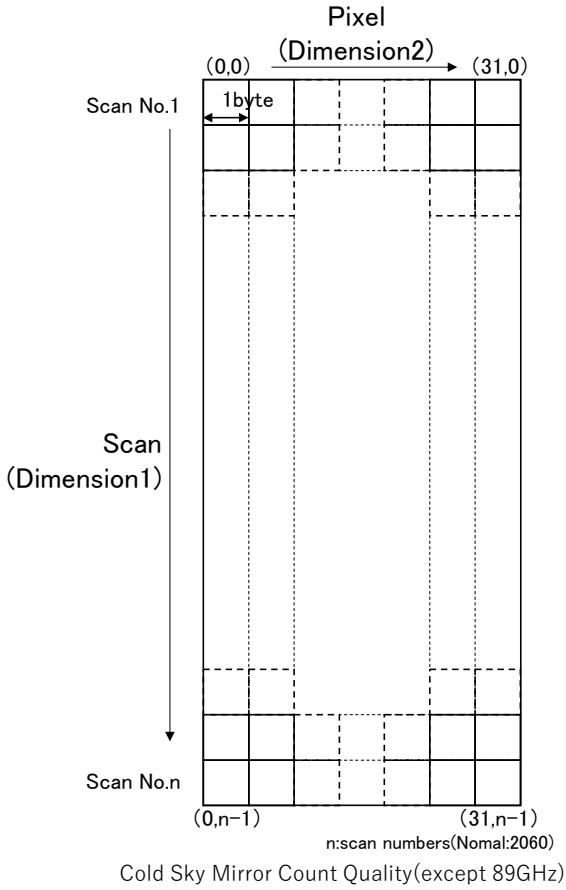


Figure 3-7 CSMCountDataQuality(89GHz), HTSCountDataQuality(89GHz)

(Dataset Name : CSMCountData_Ch89AV_Quality、CSMCountData_Ch89AH_Quality、CSMCountData_Ch89BV_Quality、CSMCountData_Ch89BH_Quality、HTSCountData_Ch89AV_Quality、HTSCountData_Ch89AH_Quality、HTSCountData_Ch89BV_Quality、HTSCountData_Ch89BH_Quality)

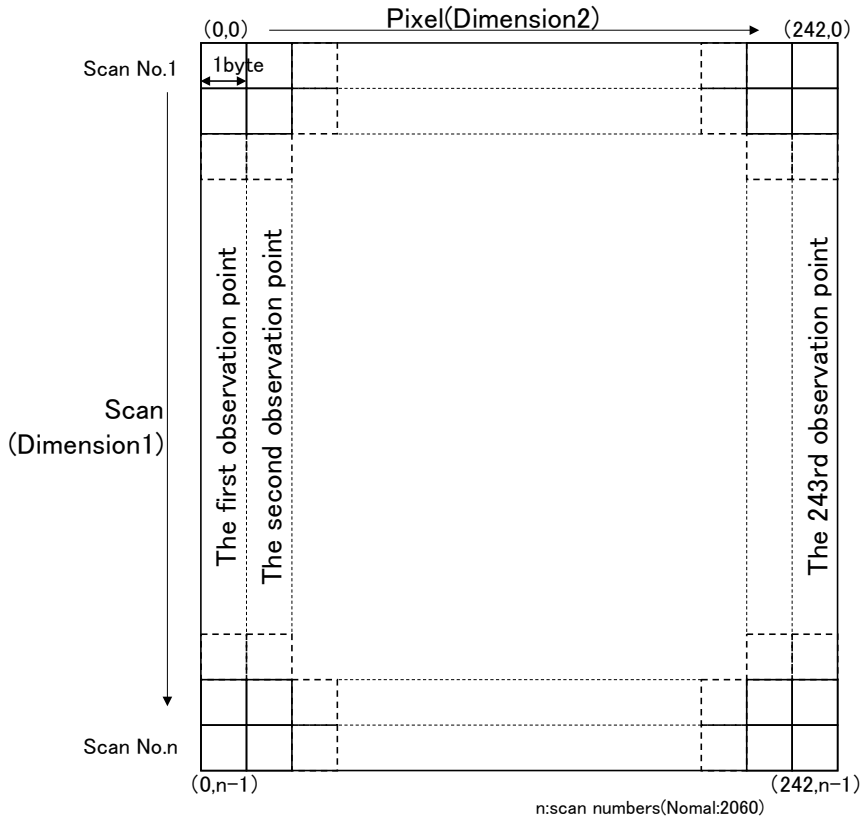


Figure 3-8 L1DataQuality (except for 89GHz),

(Dataset Name : Tb_Ch06V_Quality、Tb_Ch06H_Quality、Tb_Ch07V_Quality、Tb_Ch07H_Quality、Tb_Ch10uV_Quality、Tb_Ch10uH_Quality、Tb_Ch10uV_Quality、Tb_Ch10H_Quality、Tb_Ch18V_Quality、Tb_Ch18H_Quality、Tb_Ch23V_Quality、Tb_Ch23H_Quality、Tb_Ch36V_Quality、Tb_Ch36H_Quality、Tb_Ch165V_Quality、Tb_Ch183r3V_Quality、Tb_Ch183r7V_Quality)

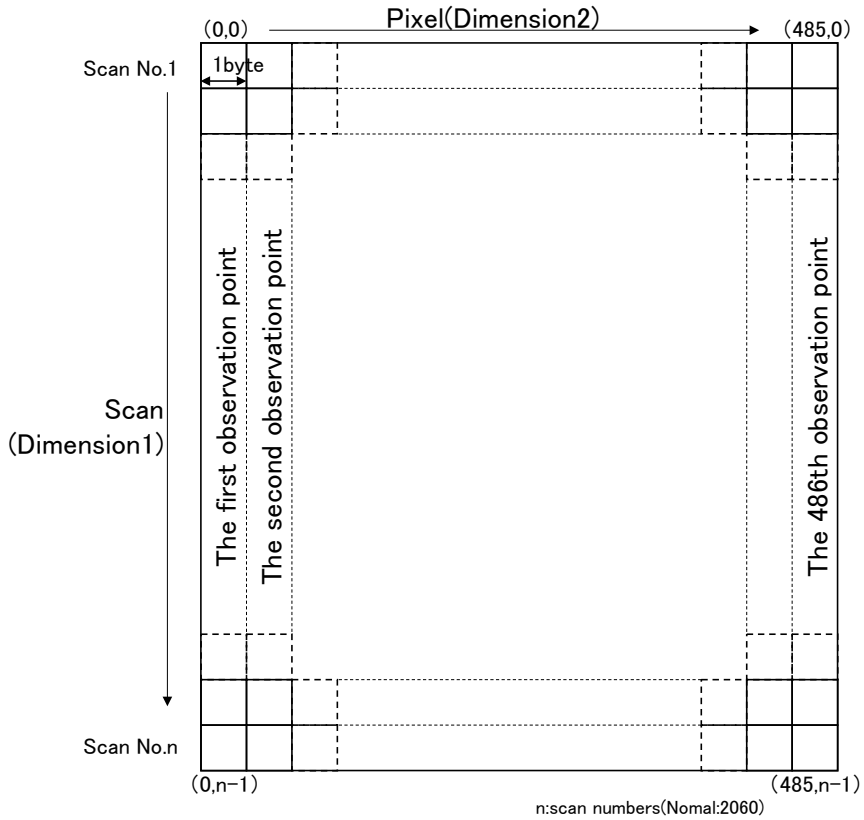


Figure 3-9 L1DataQuality (89GHz)

(Dataset Name : Tb_Ch89AV_Quality、Tb_Ch89AH_Quality、Tb_Ch89BV_Quality、Tb_Ch89BH_Quality)

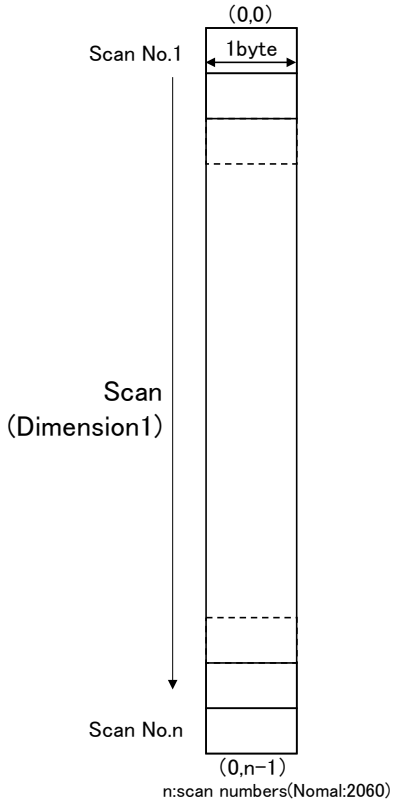


Figure 3-10 RxOffsetCount, RxGainCount

(Dataset Name : RxOffsetCount_Ch06V, RxOffsetCount_Ch06H, RxOffsetCount_Ch07V, RxOffsetCount_Ch07H, RxOffsetCount_Ch10uV, RxOffsetCount_Ch10uH, RxOffsetCount_Ch10V, RxOffsetCount_Ch10H, RxOffsetCount_Ch18V, RxOffsetCount_Ch18H, RxOffsetCount_Ch23V, RxOffsetCount_Ch23H, RxOffsetCount_Ch36V, RxOffsetCount_Ch36H, RxOffsetCount_Ch89AV, RxOffsetCount_Ch89AH, RxOffsetCount_Ch89BV, RxOffsetCount_Ch89BH, RxOffsetCount_Ch165V, RxOffsetCount_Ch183r3V, RxOffsetCount_Ch183r7V, RxGainCount_Ch06V, RxGainCount_Ch06H, RxGainCount_Ch07V, RxGainCount_Ch07H, RxGainCount_Ch10uV, RxGainCount_Ch10uH, RxGainCount_Ch10V, RxGainCount_Ch10H, RxGainCount_Ch18V, RxGainCount_Ch18H, RxGainCount_Ch23V, RxGainCount_Ch23H, RxGainCount_Ch36V, RxGainCount_Ch36H, RxGainCount_Ch89AV, RxGainCount_Ch89AH, RxGainCount_Ch89BV, RxGainCount_Ch89BH, RxGainCount_Ch165V, RxGainCount_Ch183r3V, RxGainCount_Ch183r7V)

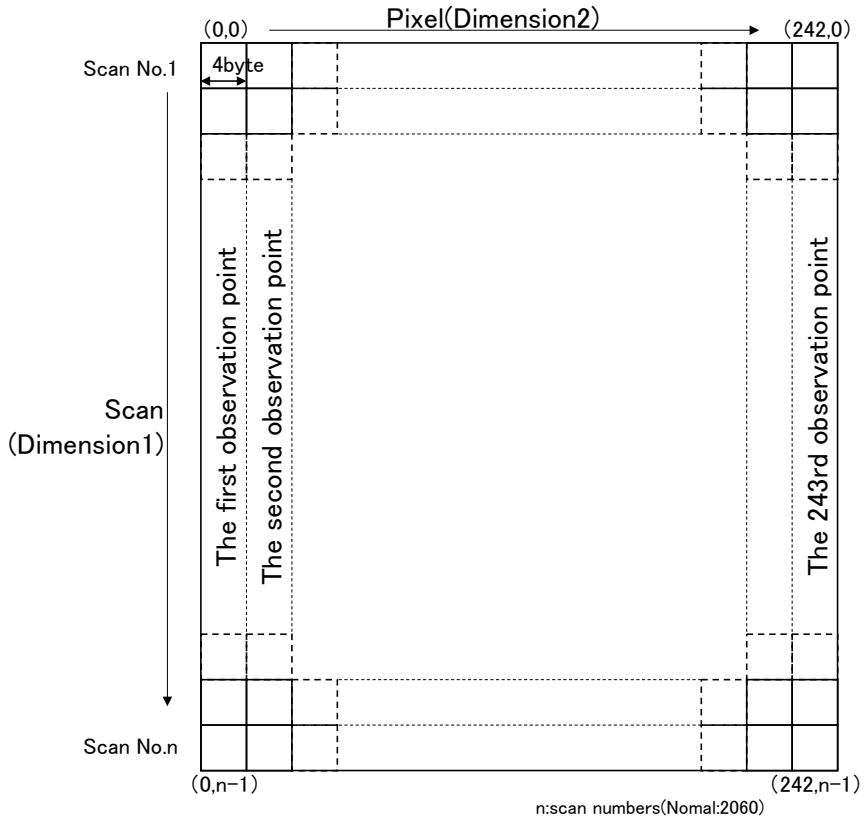


Figure 3-11 Latitude (except for 89GHz), Longitude (except for 89GHz)

(Dataset Name : Latitude_P06、Latitude_P07、Latitude_P10u、Latitude_P10、Latitude_P18、Latitude_P23、Latitude_P36、Latitude_P165、Latitude_P183r3、Latitude_P183r7、Longitude_P06、Longitude_P07、Longitude_P10u、Longitude_P10、Longitude_P18、Longitude_P23、Longitude_P36、Longitude_P165、Longitude_P183r3、Longitude_P183r7)

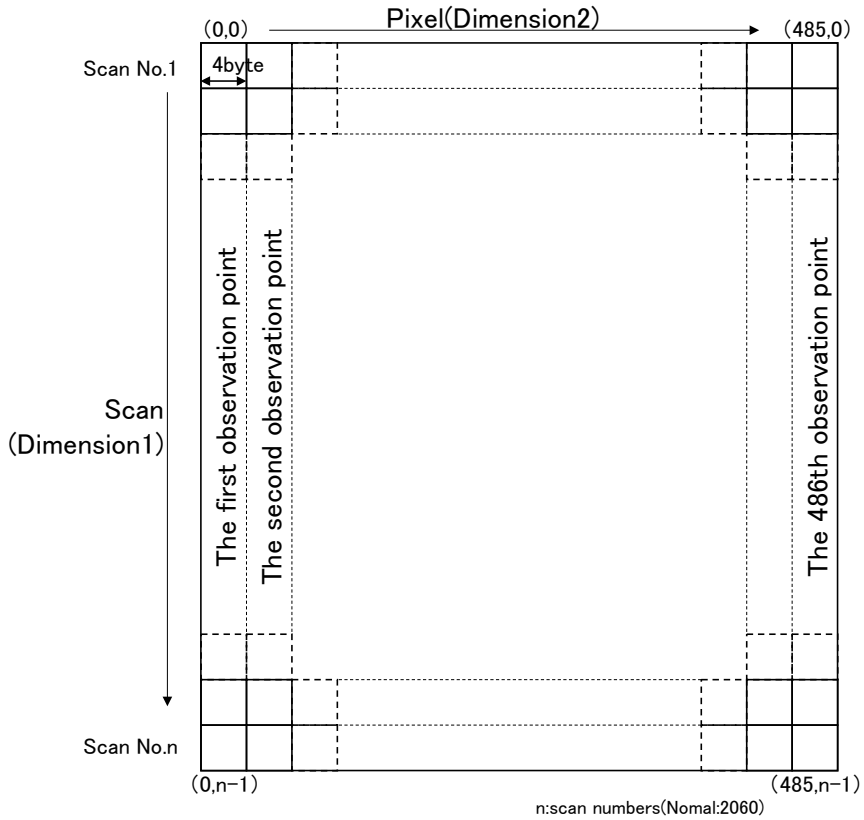


Figure 3-12 Latitude(89GHz), Longitude(89GHz)

(Dataset Name :Latitude_P89A、Latitude_P89B、Longitude_P89A、Longitude_P89B)

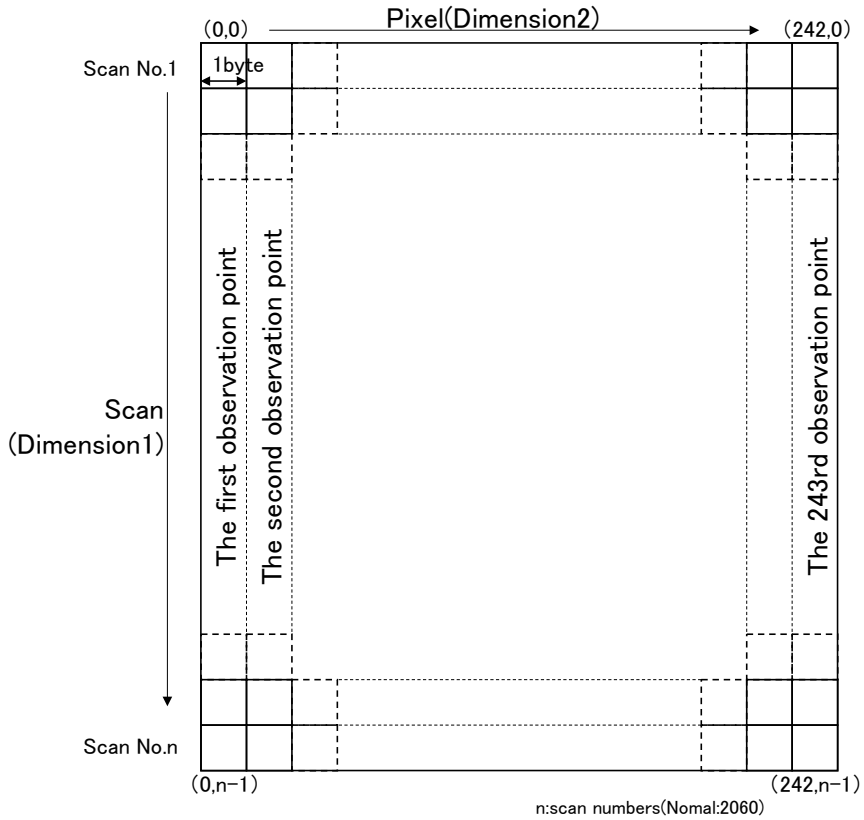


Figure 3-13 LandAreaPercent (except for 89GHz)

(Dataset Name : LandAreaPercent_P06, LandAreaPercent_P07, LandAreaPercent_P10u, LandAreaPercent_P10, LandAreaPercent_P18, LandAreaPercent_P23, LandAreaPercent_P36, LandAreaPercent_P165, LandAreaPercent_P183r3, LandAreaPercent_P183r7)

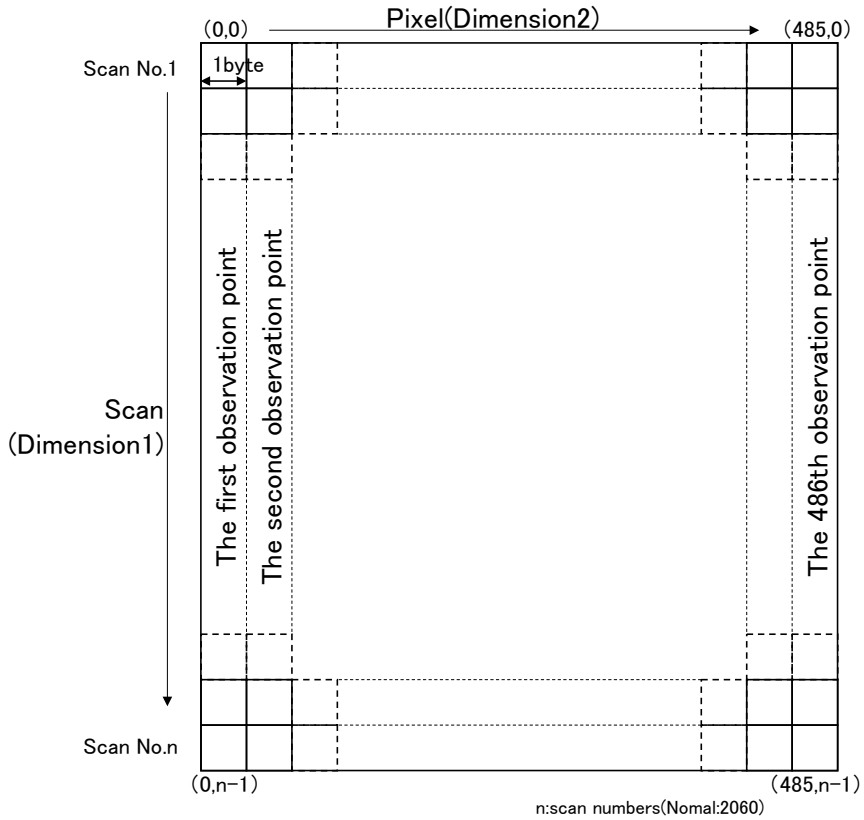


Figure 3-14 LandAreaPercent (89GHz)

(Dataset Name : LandAreaPercent_P89A, LandAreaPercent_P89B)

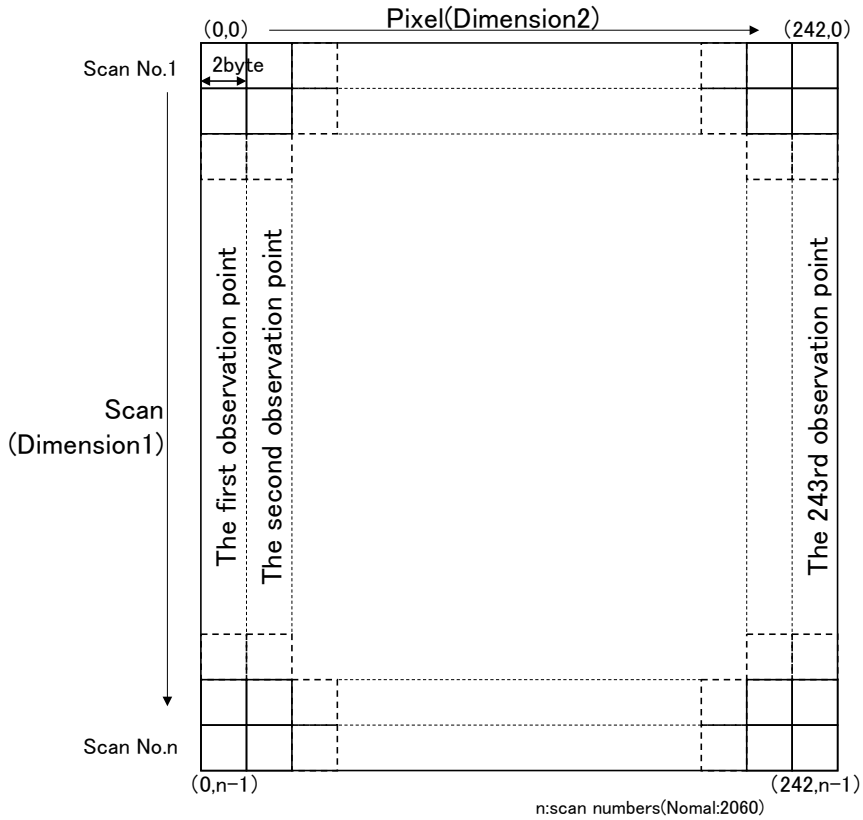


Figure 3-15 AreaMeanHeight (except for 89GHz)

(Dataset Name : AreaMeanHeight_P06, AreaMeanHeight_P07, AreaMeanHeight_P10u, AreaMeanHeight_P10, AreaMeanHeight_P18, AreaMeanHeight_P23, AreaMeanHeight_P36, AreaMeanHeight_P165, AreaMeanHeight_P183r3, AreaMeanHeight_P183r7)

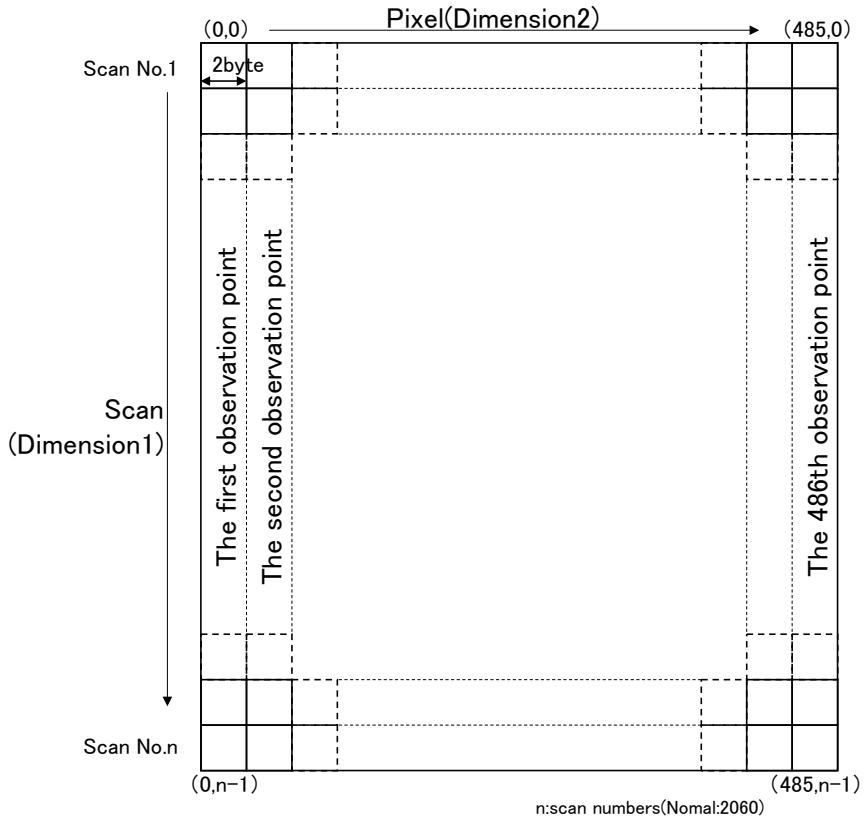


Figure 3-16 AreaMeanHeight（89GHz）

(Dataset Name : AreaMeanHeight_P89A, AreaMeanHeight_P89B)

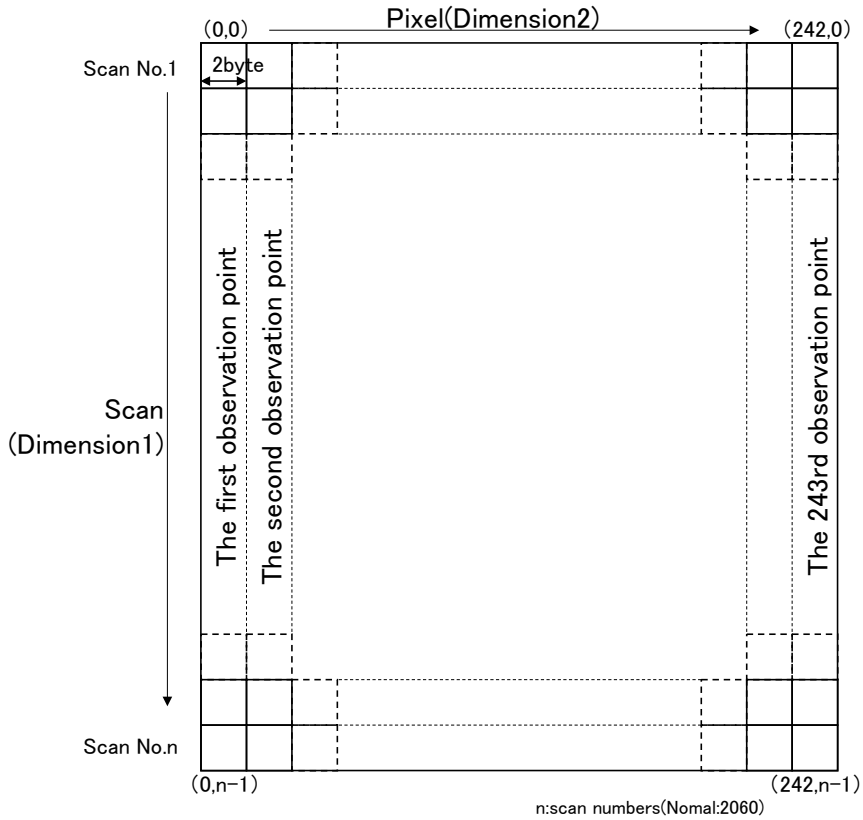


Figure 3-17 EarthAzimuth (except for 89GHz), EarthIncidence (except for 89GHz), SunAzimuth (except for 89GHz), SunElevation (except for 89GHz)

(Dataset Name : EarthAzimuth_P06, EarthAzimuth_P07, EarthAzimuth_P10u, EarthAzimuth_P10, EarthAzimuth_P18, EarthAzimuth_P23, EarthAzimuth_P36, EarthAzimuth_P165, EarthAzimuth_P183r3, EarthAzimuth_P183r7, EarthIncidence_P06, EarthIncidence_P07, EarthIncidence_P10u, EarthIncidence_P10, EarthIncidence_P18, EarthIncidence_P23, EarthIncidence_P36, EarthIncidence_P165, EarthIncidence_P183r3, EarthIncidence_P183r7, SunAzimuth_P06, SunAzimuth_P07, SunAzimuth_P10u, SunAzimuth_P10, SunAzimuth_P18, SunAzimuth_P23, SunAzimuth_P36, SunAzimuth_P165, SunAzimuth_P183r3, SunAzimuth_P183r7, SunElevation_P06, SunElevation_P07, SunElevation_P10u, SunElevation_P10, SunElevation_P18, SunElevation_P23, SunElevation_P36, SunElevation_P165, SunElevation_P183r3, SunElevation_P183r7)

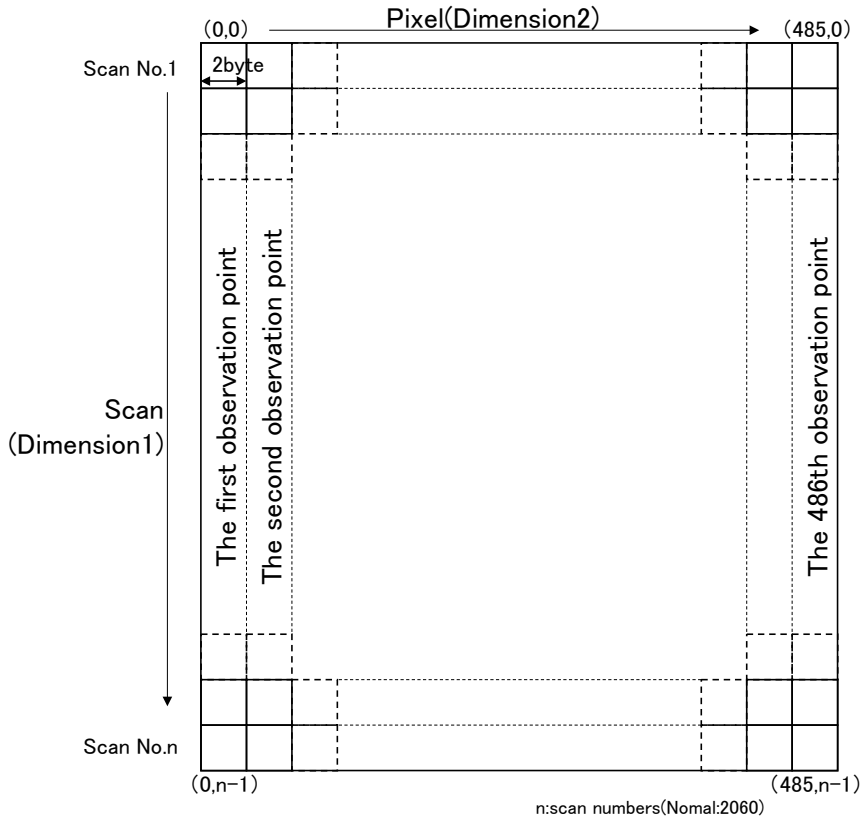


Figure 3-18 EarthAzimuth(89GHz), EarthIncidence(89GHz), SunAzimuth(89GHz), SunElevation(89GHz)

(Dataset Name : EarthAzimuth_P89A, EarthAzimuth_P89B, EarthIncidence_P89A, EarthIncidence_P89B, SunAzimuth_P89A, SunAzimuth_P89B, SunElevation_P89A, SunElevation_P89B)

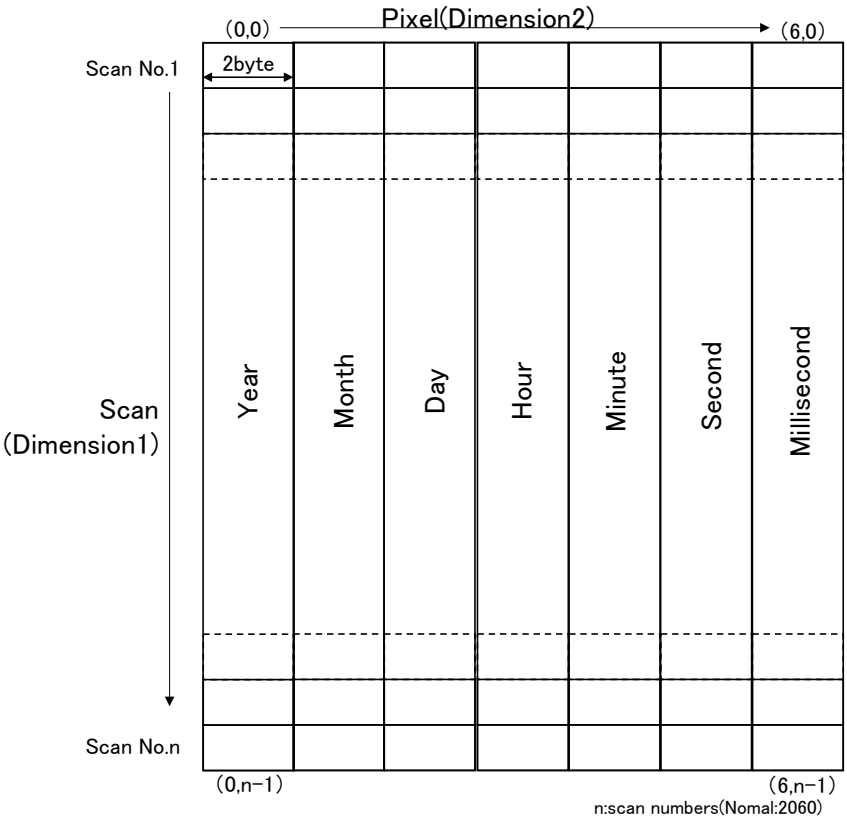


Figure 3-19 ScanTimeUTC

(Dataset Name : ScanTimeUTC)

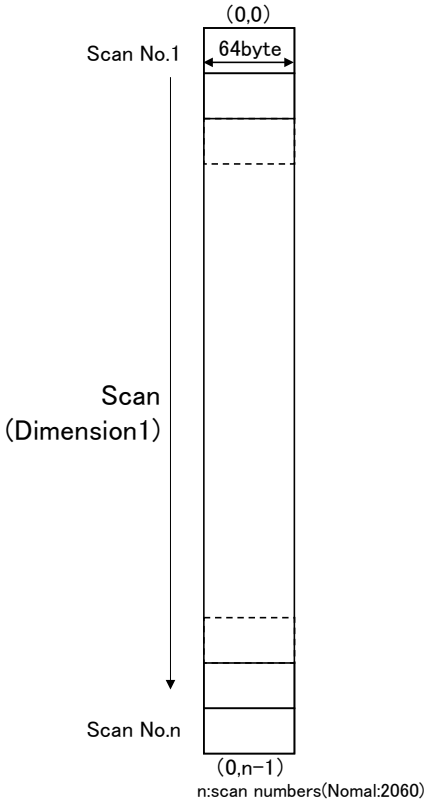


Figure 3-20 ScanTimeTAI93

(Dataset Name : ScanTimeTAI93)

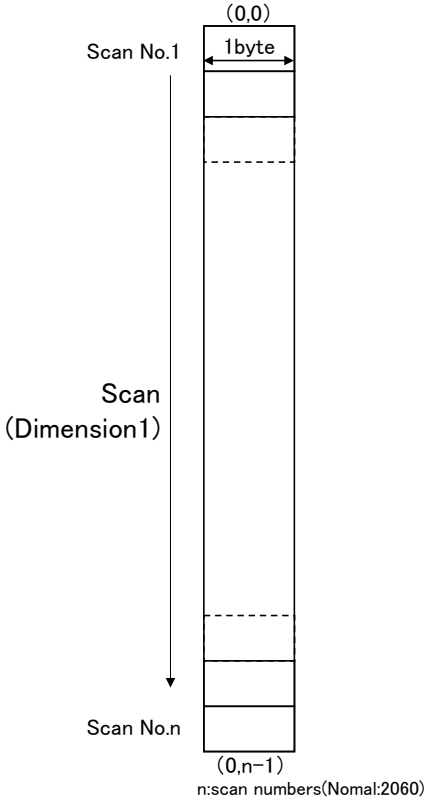


Figure 3-21 ScanDataQuality

(Dataset Name : ScanDataQuality)

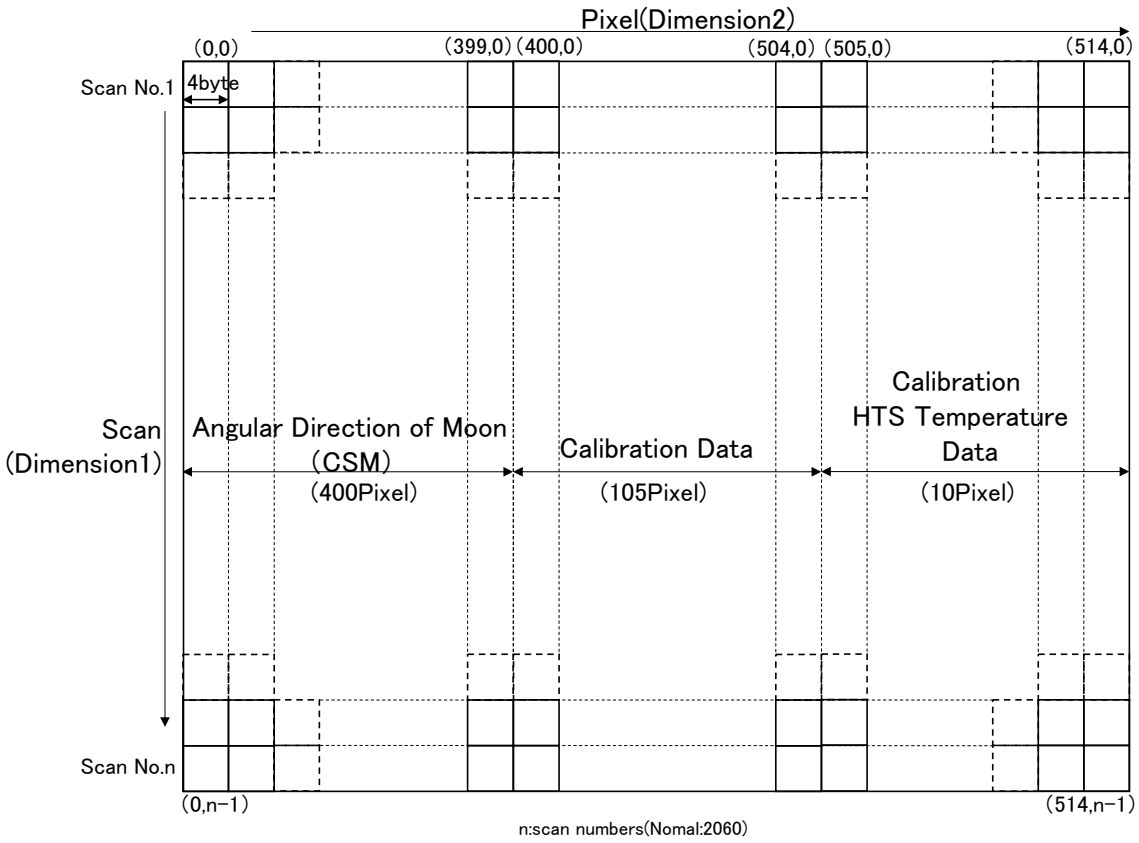


Figure 3-22 TbCal

(Dataset Name : TbCal)

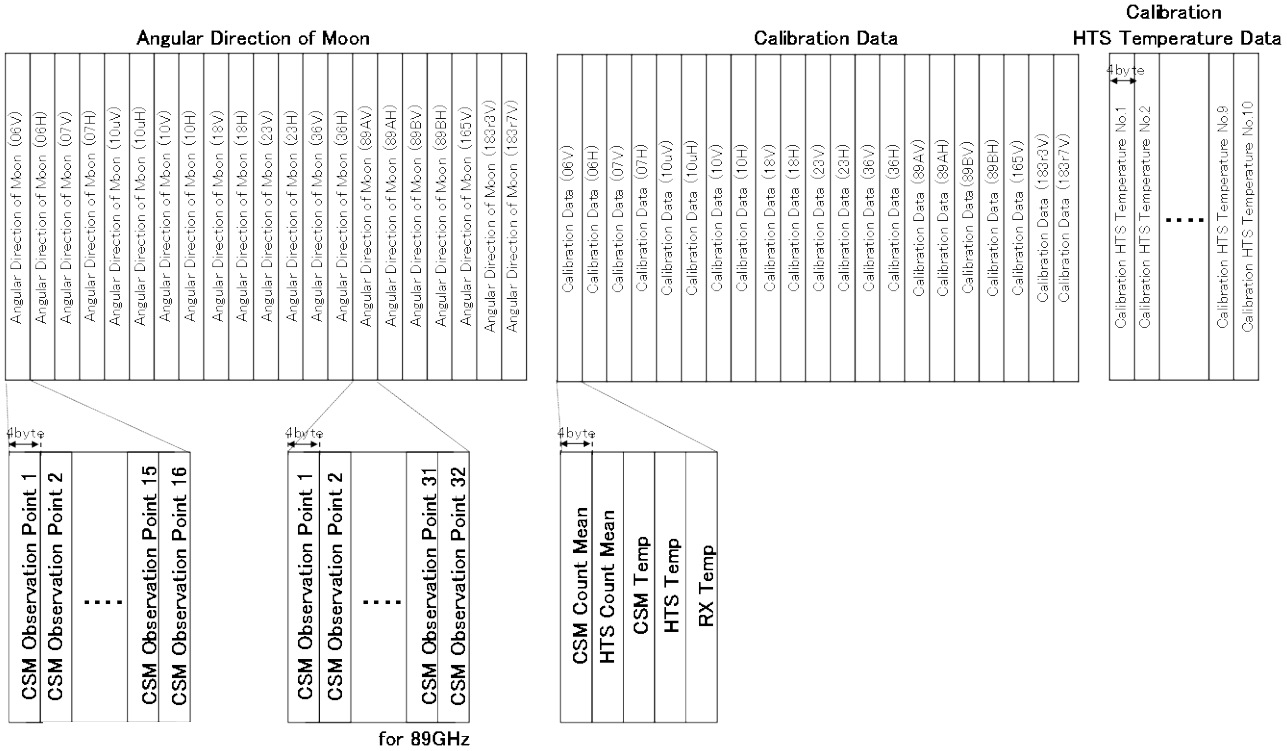


Figure 3-23 TbCal Details

(Dataset Name : TbCal)

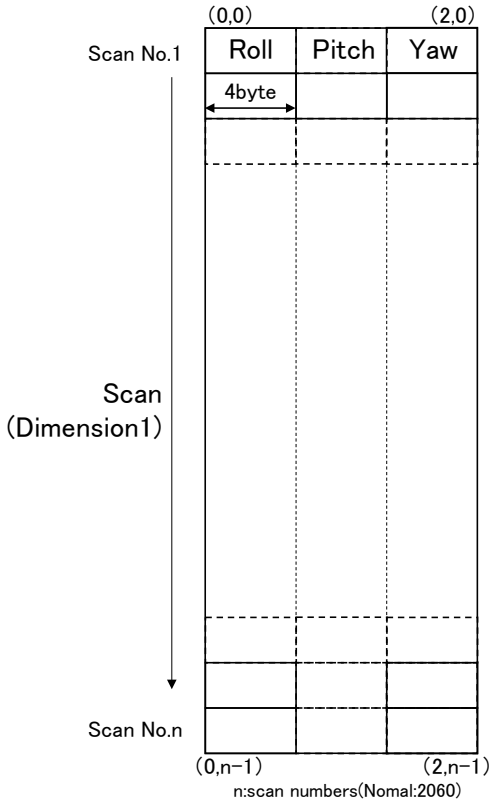


Figure 3-24 AttitudeData

(Dataset Name : AttitudeData)

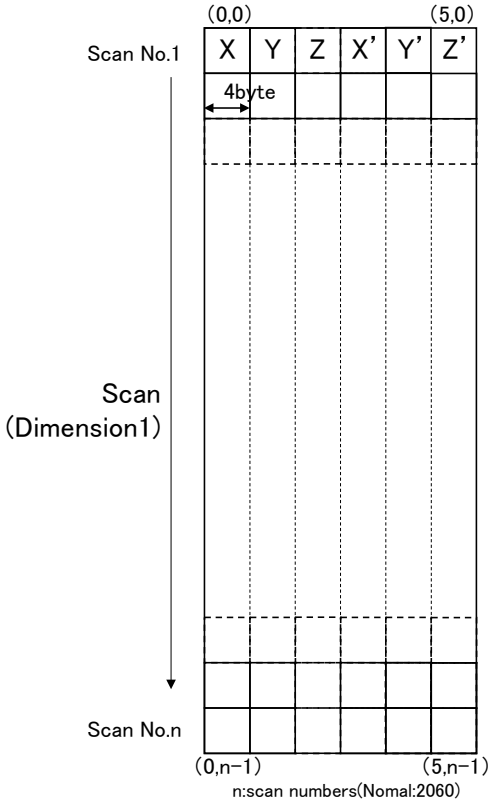


Figure 3-25 NavigationData

(Dataset Name : NavigationData)

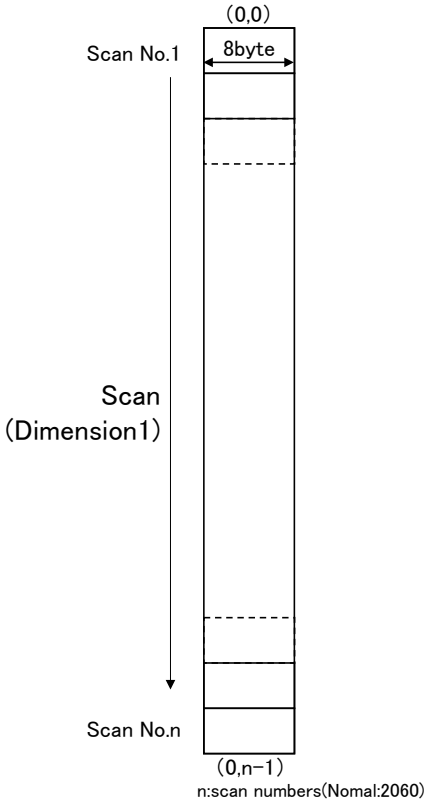


Figure 3-26 PositionInOrbit

(Dataset Name : PositionInOrbit)

Scan (Dimension1) → Scan No.1 … Scan No.n

Pixel (Dimension2)

1-2	Tacho Pulse Count1	(0,0)			…			(0,n-1)
3-4	Tacho Pulse Count2				…			
5-6	Tacho Pulse Count3				…			
7-8	Tacho Pulse Count4				…			
9-10	Tacho Pulse Count5				…			
11	SPC ON/OFF1				…			
12	SPC ON/OFF2				…			
13	SPC Mode1				…			
14	SPC Mode2				…			
15-16	SPC Error Flag1				…			
17-18	SPC Error Flag2				…			
19-20	SPC Error Flag3				…			
21-22	SPC Error Flag4				…			
23-24	Spare				…			
25-30	Anormaly Detection Circuit Monitor				…			
31-70	SPC Temperature Control				…			
71-76	Reference Voltage				…			
77-106	Spare				…			
107-110	ADA Angular Momentum Obervation				…			
111-180	Disturbance Control Parameter/Status				…			
181-282	Spare				…			
283-284	SPS ON/OFF1				…			
285-286	SPS ON/OFF2				…			
287-289	SPS ON/OFF3				…			
290-291	SPS Operation Mode				…			
292-293	AGC/MGC Monitor(H)				…			
294-295	AGC/MGC Monitor(V)				…			
296-297	SPS End Flag Monitor				…			
298-299	Spare				…			
300-301	SPS Error Flag1				…			
302-303	SPS Error Flag2				…			
304-305	SPS Error Flag3				…			
306-307	SPS Error Flag4				…			
308-309	SPS Command Recive Numbers				…			
310-311	Sequence Timer(Start)				…			
312-313	Sequence Timer(CSM)				…			
314-315	Sequence Timer(Reciver Calibration)				…			
316-317	Sequence Timer(Observation Data)				…			
318-319	Sequence Timer(FIFO input)				…			
320-321	Sequence Timer(Temperature Measurement)				…			
322-323	Sequence Timer(HTS)				…			
324-325	Sequence Timer(END)				…			
326-329	Spare				…			
330-387	SPS Temperature Control				…			
388-389	Observation Error Status(Observation Data H)				…			
390-391	Observation Error Status(Observation Data V)				…			
392-393	Observation Error Status(CSMData H)				…			
394-395	Observation Error Status(CSM Data V)				…			
396-397	Observation Error Status(HTS Data H)				…			
398-399	Observation Error Status(HTS Data V)				…			
400-401	AGC Serach Mode Flag(H)				…			
402-403	AGC Serach Mode Flag(V)				…			
404-405	Test Pattern Output Status				…			
406-419	SPS Error Detection Status/OBM Status				…			
420-595	Spare	(594,0)			…			(594,n-1)

n:scan numbers(Nomal:2060)

Figure 3-27 ObservationSupplement

(Dataset Name : ObservationSupplement)

1-6	Primary Header	(0,0)			…		(0,n-1)
7-8	Status Flag				…		
9-16	Navigation Time				…		
17-24	Navigation Position x				…		
25-32	Navigation Position y				…		
33-40	Navigation Position z				…		
41-48	Navigation Velocity x				…		
49-56	Navigation Velocity y				…		
57-64	Navigation Velocity z				…		
65-72	Attitude Time				…		Pixel(Dimension2)
73-80	Attitude Angle q1				…		
81-88	Attitude Angle q2				…		
89-96	Attitude Angle q3				…		
97-104	Attitude Angle q4				…		
105-108	Attitude Angle Velocity x				…		
109-112	Attitude Angle Velocity y				…		
113-116	Attitude Angle Velocity z				…		
117-120	IRU R				…		
121-124	IRU P				…		
125-128	IRU Y	(127,0)			…		(127,n-1)

n:scan numbers(Nomal:2060)

Figure 3-28 PCDData

(Dataset Name : PCDData)

1 HTS1 Heater Control Temperature (0,0)			…			(0,n−1)
2 HTS2 Heater Control Temperature			…			
3 HTS3 Heater Control Temperature			…			
4 HTS4 Heater Control Temperature			…			
5 HTS5 Heater Control Temperature			…			
6 HTS1 Temperature			…			
7 HTS2 Temperature			…			
8 HTS3 Temperature			…			
9 HTS4 Temperature			…			
10 HTS5 Temperature			…			
11 HTS6 Temperature			…			
12 HTS7 Temperature			…			Pixel(Dimension2)
13 HTS8 Temperature			…			
14 HTS9 Temperature			…			
15 HTS10 Temperature			…			
16 SPC Self Temperature			…			
17 SPC Another Temperature			…			
18 ADA STATOR Temperature A			…			
19 ADA STATOR Temperature B			…			
20 MWA-1 Bearing Temperature			…			
21 MWA-2 Bearing Temperature			…			
22 MWA-3 Bearing Temperature			…			
23 MWA-4 Bearing Temperature			…			
24 CSM Temperature (23,0)			…			(23,n−1)

n:scan numbers(Nomal:2060)

Figure 3-29 SPCTemperatureCount

(Dataset Name : SPCTemperatureCount)

1 TCP Control Temperature1-A (0,0)			…			(0,n-1)
2 TCP Control Temperature2-A			…			
3 TCP Control Temperature3-A			…			
4 TCP Control Temperature4-A			…			
5 TCP Control Temperature1-B			…			
6 TCP Control Temperature2-B			…			
7 TCP Control Temperature3-B			…			
8 TCP Control Temperature4-B			…			
9 TCS Temperature			…			
10 SPS Temperature			…			
11 PDUS Temperature			…			
12 SU-STR1 Temperature			…			
13 SU-STR2 Temperature			…			
14 SU-STR3 Temperature			…			
15 SU-STR4 Temperature			…			
16 TCP Temperature			…			
17 RX LNA(7G) Temperature			…			
18 RX LNA(10G) Temperature			…			
19 RX LNA(89G AH) Temperature			…			
20 RX LNA(89G BH) Temperature			…			
21 RX LNA(89G AV) Temperature			…			
22 RX LNA(89G BV) Temperature			…			
23 RX DCDC1 Temperature			…			
24 RX DCDC2 Temperature			…			
25 ROTOR A Temperature			…			
26 ROTOR B Temperature			…			
27 Damper1 Temperature			…			
28 Damper2 Temperature			…			
29 FEED1 Temperature			…			
30 FEED2 Temperature (29,0)			…			(29,n-1)

Pixel
(Dimension2)

n:scan numbers(Nomal:2060)

Scan (Dimension1)

Scan No.1 → Scan No.n

1 TCP Control Temperature1-A	(0,0)			…		(0,n-1)
2 TCP Control Temperature2-A				…		
3 TCP Control Temperature3-A				…		
4 TCP Control Temperature4-A				…		
5 TCP Control Temperature1-B				…		
6 TCP Control Temperature2-B				…		
7 TCP Control Temperature3-B				…		
8 TCP Control Temperature4-B				…		
9 TCS Temperature				…		
10 SPS Temperature				…		
11 PDUS Temperature				…		
12 SU-STR1 Temperature				…		
13 SU-STR2 Temperature				…		
14 SU-STR3 Temperature				…		
15 SU-STR4 Temperature				…		
16 TCP Temperature				…		
17 RX LNA(7G) Temperature				…		
18 RX LNA(10G) Temperature				…		
19 RX LNA(89G AH) Temperature				…		
20 RX LNA(89G BH) Temperature				…		
21 RX LNA(89G AV) Temperature				…		
22 RX LNA(89G BV) Temperature				…		
23 RX DCDC1 Temperature				…		
24 RX DCDC2 Temperature				…		
25 ROTOR A Temperature				…		
26 ROTOR B Temperature				…		
27 Damper1 Temperature				…		
28 Damper2 Temperature				…		
29 FEED1 Temperature				…		
30 FEED2 Temperature	(29,0)			…		(29,n-1)

Pixel(Dimension2) ↓

Figure 3-30 SPSTemperatureCount (1/2)

(Dataset Name : SPSTemperatureCount)

31 Main Reflector Temperature (30,0)			…			(30,n-1)
32 OBM1 Temperature			…			
33 OBM2 Temperature			…			
34 OBM3 Temperature			…			
35 OBM4 Temperature			…			
36 RX(6.9GV) Temperature			…			
37 RX(6.9GH) Temperature			…			
38 RX(7.3GV) Temperature			…			
39 RX(7.3GH) Temperature			…			
40 RX(10.25GV) Temperature			…			
41 RX(10.25GH) Temperature			…			
42 RX(10.65GV) Temperature			…			
43 RX(10.65GH) Temperature			…			
44 RX(18GV) Temperature			…			
45 RX(18GH) Temperature			…			
46 RX(23GV) Temperature			…			
47 RX(23GH) Temperature			…			
48 RX(36GV) Temperature			…			
49 RX(36GH) Temperature			…			
50 RX(89GAV) Temperature			…			
51 RX(89GAH) Temperature			…			
52 RX(89GBV) Temperature			…			
53 RX(89GBH) Temperature			…			
54 RX(165.5GV) Temperature			…			
55 RX(183±3GV) Temperature			…			
56 RX(183±7GV) Temperature			…			
57 G-AS Temperature			…			
58 G-AS Control Temperature (57,0)			…			(57,n-1)

n:scan numbers(Nomal:2060)

Figure 3-30 SPSTemperatureCount (2/2)

(Dataset Name : SPSTemperatureCount)

3. 5 Others

3. 5. 1 File name

File names for AMSR3 Level 1 products are set according to the following rules.

Position of character	0									1										2										3										4				
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
File name	G	G	W	A	M	3	_	Y	Y	Y	Y	M	M	D	D	H	H	m	m	X	P	P	P	_	x	L	L	K	K	K	A	A	d	V	V	v	y	y	d	d	d	.	n	c

Table 3-5 Naming convention of AMSR3 Level 1 products

String	Bit position	Explanation
GGW	1-3	Satellite name (Fixed as “GGW”)
AM3	4-6	Sensor type (Fixed as “AM3”)
YYYYMMDDhhmm	8-19	Observation start day and time (Year : Western year, Time : UT)
X	20	Orbit A: Ascending orbit D: Descending orbit B: Both of A and D(Near real-time processing Global)
PPP	21-23	Path number (001 - 0XX, starting path number)
x	25	Processing type S: Standard Processing (Global) N: Near real-time Processing (Global) L: Near real-time Processing (Local)
LL	26-27	Processing level (Refer to Table 3-6)
KKK	28-30	Product code (Refer to Table 3-6)
AA	31-32	Area and Receiving station code (Refer to Table 3-8)
d	33	Developer code L1:Z (fixed)
VV	34-35	Product version Major Number (00 - 99) Product version Major Number is updated when major changes are made, such as recalibrating the brightness temperature, changing input data, or revising the algorithm. When updating Major Number, reprocess past products.
v	36	Product version Minor Number (A-Z) The product version minor number is updated when minor changes occur within the scope of

String	Bit position	Explanation
		maintaining compatibility with current existing products. When updating a minor version, in principle, past products are not reprocessed.
yyddd	37-41	Day Created yy = lower 2 digits of Western year ddd = total day of the year
nc	43-44	Extension (fixed) Set the extension of NetCDF

Table 3-6 Processing level

Code(LL)	Explanation
1A	Level 1A: Product per scene that stores antenna temperature count values converted from level 0 data by radiometric and geometric correction processes, antenna temperature conversion coefficients, etc.
1B	Level 1B: Product per scene that stores the brightness temperature calculated from the L1A antenna temperature using a conversion coefficient.
1R	Level 1R: Product per scene that stores the brightness temperature whose center position and size of the footprint of each frequency band are matched by spatial matching processing of level 1B brightness temperature.
1H	Level 1H: Product per scene that stores brightness temperatures with improved consistency of footprint center positions in each frequency band and spatial resolution performance in low frequency bands by spatial matching processing of Level 1B brightness temperatures.
1C	Level 1C: Product per scene that stores the brightness temperature with the center position of the footprint matched in each frequency band by spatial matching processing of level 1B brightness temperature.

Table 3-7 Product code

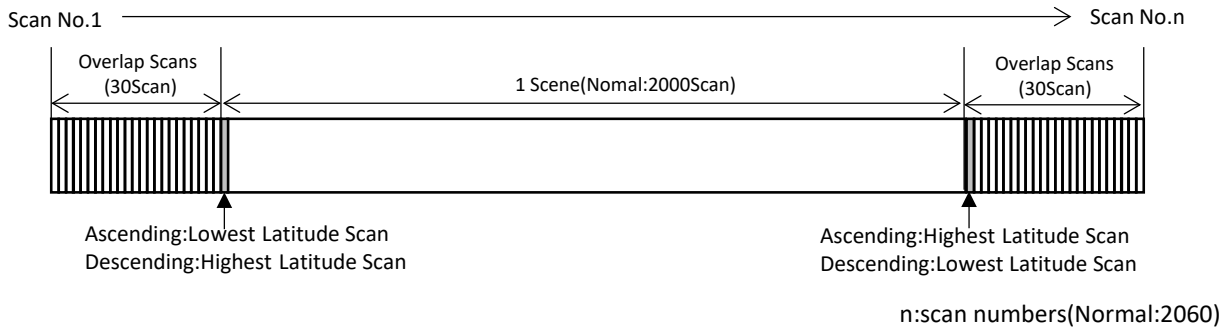
Code(KKK)	Explanation
DNA	Level 1A: Count value(L1A)
TBB	Level 1B: Brightness temperature (L1B)
TBR	Level 1R: Resampling brightness temperature (L1R)
TBH	Level 1H: High resolution brightness temperature (L1H)
TBC	Level 1C: Center position corrected brightness temperature (L1C)

Table 3-8 Area code

Code(AA)	Explanation
GA	Standard processing, near real-time processing Global Area (global)
J0	Near real-time processing, all over Japan (received at Katsuura and Okinawa (Masuda) stations)
J1	Near real-time processing, East Japan (received only at Katsuura station)
J2	Near real-time processing, Western Japan (received only at Okinawa (Masuda) station)
00	Default (no receiving station code)

3. 5. 2 Data range of product

The data range stored in the AMSR3 level 1 product is the same for levels 1A, 1B and 1R. It is the range added an overlap of 30 scans before and after the pole-to-pole range defined as the scene.The positions of the poles indicating both ends of the half-circle are defined by the maximum and minimum latitude and longitude of the observation point at the observation center of the 89GHzA scan.



3. 5. 3 Coordinate system

In the AMSR3 product, items related to location are ground observation location (latitude, longitude) and satellite orbit information. The ground observation location is based on the Greenwich coordinate system (Earth-fixed coordinate system), and stored with east longitudes of 0° to 180°, west longitudes of 0° to -180°, north latitudes of 0° to 90°, and south latitudes of 0° to -90°. WGS84 is adopted as the earth model used for geometric correction for position calculation.

3. 5. 4 Scale factor and offset

Related to Tb, EarthAzimuth, EarthIncidence, SunAzimuth, and SunElevation use scale factor (scale_factor) and offset (add_offset). For the value of the scale factor, refer to the attributes scale_factor and add_offset of each dataset.

The scale factor for each dataset is the value obtained by multiplying the stored value of each dataset by the setting value of scale_factor and adding add_offset.

(actual value) = (stored value) x scale_factor + add_offset

4. Explanation of data

This chapter explains each data item of AMSR3 Level 1B product. Some item is common with AMSR3 Level 1A product, and Level 1R product.

4.1 Product metadata

This section explains metadata items of AMSR3 Level 1B product. They are common with AMSR3 Level 1A product and Level 1R product.

(1) Conventions

The version of CF Convention and ACDD AMSR3 product format conforms is stored.

CF Convention is the Climate and Forecast Convention, which is a standardized metadata rules for data structures and product attributes in the fields of weather, climate, and oceans. ACDD is ISO-19115, an international standard for geographic information, and Attribute Conventions for Data Discovery, a standard for cataloging and searching data.

(2) title

Product name is stored.

For L1B: GOSAT-GW/AMSR3 L1B, Brightness Temperature (TBB)

(3) institution

The name of institution creating product, ”Japan Aerospace Exploration Agency (JAXA)” is stored.

(4) project

The name of project creating product, ” JAXA GOSAT-GW Project” is stored

(5) summary

Summary of file is stored.

(6) license

The URL ” https://gportal.jaxa.jp/gpr/index/eula?lang=en” that shows the data rights and terms of use is stored.

(7) creator_name

The name of institution creating product, ”Japan Aerospace Exploration Agency (JAXA)” is stored.

(8) creator_type

The type of entity that created the product, “institution” is stored.

(9) creator_email

E-mail address of entity that created the product, “z-gportal-support@ml.jaxa.jp” is stored.

(10) creator_url

Web site URL of entity that created the product, “z-gportal-support@ml.jaxa.jp”is stored.

(11) keywords

Keywords representing the contents of the file, “SPECTRAL/ENGINEERING, MICROWAVE, BRIGHTNESS TEMPERATURE ” is stored.

(12) standard_names_vocabulary

Name and version of the glossary that cited standard_name, ” CF Standard Name Table (v49, 12 February 2018)” is stored.

(13) id

Granule ID is stored. The granule ID is a string obtained by removing the extension from the file name described in Section 3.5.1.

(14) naming_authority

The name of the organization that provides the product, with the reversed DNS name “jp.jaxa” is stored.

(15) source

The file name of L0 file used to create product is stored.

(16) processing_level

The product abbreviation is stored. The following unique values is set according to each processing level.

For L1B : Level1B

(17) comment

For L1B : Blank

(18) date_created

The product creating date and time (UTC) is set in the following format.

“YYYY-MM-DDThh:mm:ss.uuuZ”

YYYY	:	Western year
MM	:	01 - 12(Month)
DD	:	01 - 31(Day)
hh	:	00 - 23(hour)
mm	:	00 - 59(minute)
ss	:	00 - 59(second)(*May be 60 if a leap second occurs.)
uuu	:	000 - 999(milli-second)

(19) time_coverage_start

Start observation date and time (UTC) of product is set in the following format.

“YYYY-MM-DDThh:mm:ss.uuuZ”

YYYY	:	Western year
MM	:	01 - 12(Month)
DD	:	01 - 31(Day)
hh	:	00 - 23(hour)
mm	:	00 - 59(minute)
ss	:	00 - 59(second)(*May be 60 if a leap second occurs.)
uuu	:	000 - 999(milli-second)

(20) time_coverage_end

End observation date and time (UTC) of product is set in the following format.

“YYYY-MM-DDThh:mm:ss.uuuZ”

YYYY	:	Western year
MM	:	01 - 12(Month)
DD	:	01 - 31(Day)
hh	:	00 - 23(hour)
mm	:	00 - 59(minute)
ss	:	00 - 59(second)(*May be 60 if a leap second occurs.)
uuu	:	000 - 999(milli-second)

(21) geospatial_lat_min

The southernmost latitude in the product observation range is set. For level 1 products, the abnormal value "-9999.0" is stored.

Item	Min. value	Max. value	Abnormal value	Note
geospatial_lat_min	-	-	-9999.0	floating-point

(22) geospatial_lat_max

The northernmost latitude in the product observation range is set. For level 1 products, the abnormal value "-9999.0" is stored.

Item	Min. value	Max. value	Abnormal value	Note
geospatial_lat_max	-	-	-9999.0	floating-point

(23) geospatial_lon_min

The westernmost longitude in the product observation range is set. For level 1 products, the abnormal value "-9999.0" is stored.

Item	Min. value	Max. value	Abnormal value	Note
geospatial_lon_min	-	-	-9999.0	floating-point

(24) geospatial_lon_max

The easternmost longitude in the product observation range is set. For level 1 products, the abnormal value "-9999.0" is stored.

Item	Min. value	Max. value	Abnormal value	Note
geospatial_lon_max	-	-	-9999.0	floating-point

(25) geospatial_vertical_min

The minimum altitude in the product observation range is set. For level 1 products, the abnormal value "-9999.0" is stored.

Item	Min. value	Max. value	Abnormal value	Note
geospatial_vertical_min	-	-	-9999.0	floating-point

(26) geospatial_vertical_max

The maximum altitude in the product observation range is set. For level 1 products, the abnormal value "-9999.0" is stored.

Item	Min. value	Max. value	Abnormal value	Note
geospatial_vertical_max	-	-	-9999.0	floating-point

(27) geospatial_vertical_positive

The interpretation of the vertical value is stored. This field is blank for level 1 product.

(28) geospatial_bounds

The range of two-dimensional space expressed in OGC's Well-Known Text (WKT) Geometry format is stored.

The polygon that defines the position information of the observation data area is stored as the latitude and longitude of 70 points counterclockwise from the first scan start point.

The latitude and longitude correspond to the ground surface scanning center position of 89GHz-A scanning. They are stored in the following format using the relationship between the product data position and polygon shown in Figure 4-1.

“POLYGON ((Longitude of P0 Latitude of P0, Longitude of P1 Latitude of P1, Longitude of P2 Latitude of P2,...Longitude of P7 Latitude of P70))”

Note that if the latitude and longitude to be stored are missing values, or if the latitude and longitude of the same point are consecutively subject to storage, the latitude and longitude are not stored.

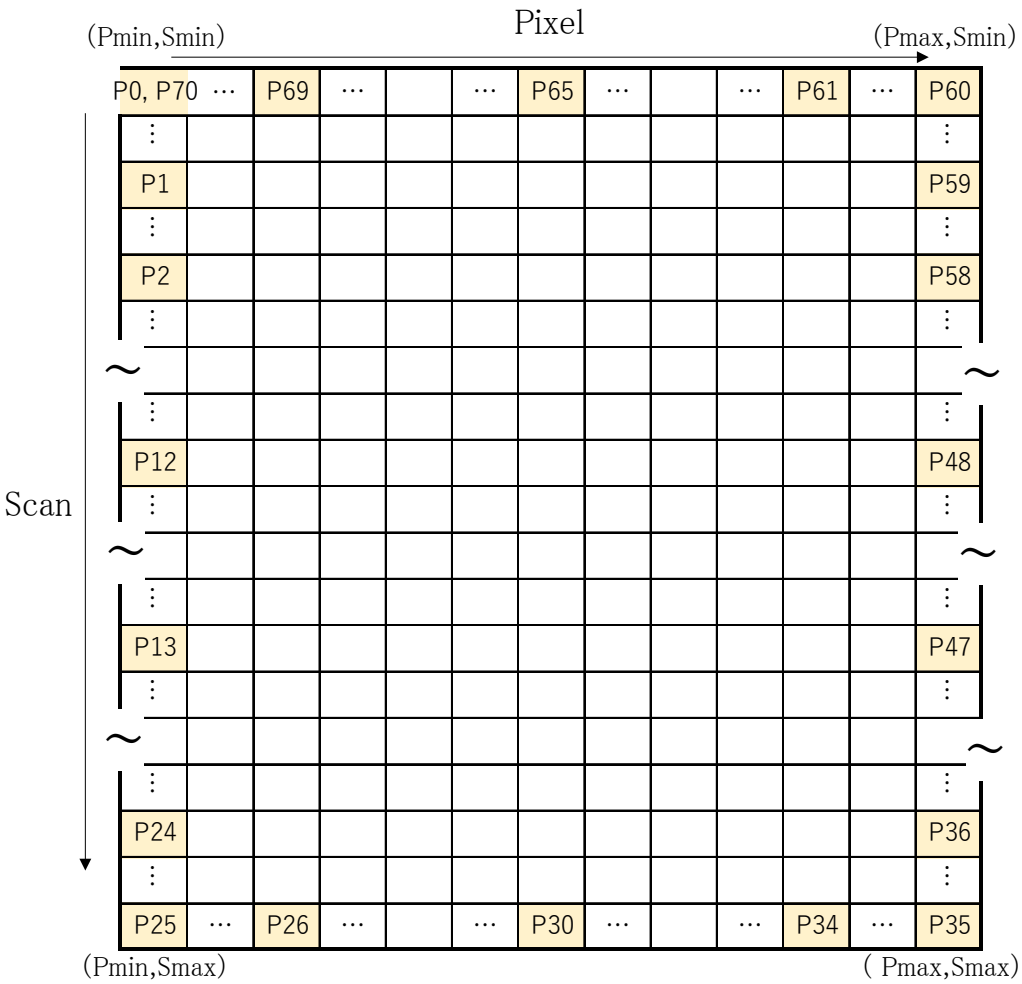


Figure 4-1 Relation between Gring Point and data position in product

Pmin：Observation start pixel position that does not include overlap scans and missing

Pmax：Observation end pixel position that does not include overlap scans and missing

Smin : Observation start scan position that does not include overlap scans and missing

Smax : Observation end scan position that does not include overlap scans and missing

Position	Position in Pixel direction	Position in Scan direction
P0	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.0000 + Smin
P1	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.0075 + Smin
P2	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.0150 + Smin
P3	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.0225 + Smin
P4	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.0300 + Smin
P5	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.0375 + Smin
P6	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.0450 + Smin
P7	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.0950 + Smin
P8	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.1450 + Smin
P9	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.1950 + Smin
P10	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.2700 + Smin
P11	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.3450 + Smin
P12	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.4200 + Smin
P13	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.5800 + Smin
P14	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.6550 + Smin
P15	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.7300 + Smin
P16	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.8050 + Smin
P17	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.8550 + Smin
P18	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.9050 + Smin
P19	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.9550 + Smin
P20	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.9625 + Smin
P21	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.9700 + Smin
P22	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.9775 + Smin
P23	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.9850 + Smin
P24	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.9925 + Smin
P25	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 1.0000 + Smin
P26	(Pmax-Pmin) × 0.1000 + Pmin	(Smax-Smin) × 1.0000 + Smin
P27	(Pmax-Pmin) × 0.2000 + Pmin	(Smax-Smin) × 1.0000 + Smin
P28	(Pmax-Pmin) × 0.3000 + Pmin	(Smax-Smin) × 1.0000 + Smin
P29	(Pmax-Pmin) × 0.4000 + Pmin	(Smax-Smin) × 1.0000 + Smin
P30	(Pmax-Pmin) × 0.5000 + Pmin	(Smax-Smin) × 1.0000 + Smin
P31	(Pmax-Pmin) × 0.6000 + Pmin	(Smax-Smin) × 1.0000 + Smin
P32	(Pmax-Pmin) × 0.7000 + Pmin	(Smax-Smin) × 1.0000 + Smin

Position	Position in Pixel direction	Position in Scan direction
P33	(Pmax-Pmin) × 0.8000 + Pmin	(Smax-Smin) × 1.0000 + Smin
P34	(Pmax-Pmin) × 0.9000 + Pmin	(Smax-Smin) × 1.0000 + Smin
P35	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 1.0000 + Smin
P36	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.9925 + Smin
P37	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.9850 + Smin
P38	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.9775 + Smin
P39	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.9700 + Smin
P40	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.9625 + Smin
P41	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.9550 + Smin
P42	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.9050 + Smin
P43	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.8550 + Smin
P44	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.8050 + Smin
P45	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.7300 + Smin
P46	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.6550 + Smin
P47	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.5800 + Smin
P48	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.4200 + Smin
P49	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.3450 + Smin
P50	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.2700 + Smin
P51	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.1950 + Smin
P52	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.1450 + Smin
P53	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.0950 + Smin
P54	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.0450 + Smin
P55	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.0375 + Smin
P56	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.0300 + Smin
P57	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.0225 + Smin
P58	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.0150 + Smin
P59	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.0075 + Smin
P60	(Pmax-Pmin) × 1.0000 + Pmin	(Smax-Smin) × 0.0000 + Smin
P61	(Pmax-Pmin) × 0.9000 + Pmin	(Smax-Smin) × 0.0000 + Smin
P62	(Pmax-Pmin) × 0.8000 + Pmin	(Smax-Smin) × 0.0000 + Smin
P63	(Pmax-Pmin) × 0.7000 + Pmin	(Smax-Smin) × 0.0000 + Smin
P64	(Pmax-Pmin) × 0.6000 + Pmin	(Smax-Smin) × 0.0000 + Smin
P65	(Pmax-Pmin) × 0.5000 + Pmin	(Smax-Smin) × 0.0000 + Smin
P66	(Pmax-Pmin) × 0.4000 + Pmin	(Smax-Smin) × 0.0000 + Smin
P67	(Pmax-Pmin) × 0.3000 + Pmin	(Smax-Smin) × 0.0000 + Smin
P68	(Pmax-Pmin) × 0.2000 + Pmin	(Smax-Smin) × 0.0000 + Smin

Position	Position in Pixel direction	Position in Scan direction
P69	(Pmax-Pmin) × 0.1000 + Pmin	(Smax-Smin) × 0.0000 + Smin
P70	(Pmax-Pmin) × 0.0000 + Pmin	(Smax-Smin) × 0.0000 + Smin

(29) geospatial_bounds_crs

"EPSG:4326" is stored, which is the Coordinate Reference System (CRS) of the point coordinate in the geospatial_bounds attribute.

(30) geospatial_vertical_bounds_crs

The Coordinate Reference System (CRS) in the altitude/depth direction of the point coordinate in the geospatial_bounds attribute is stored. For level 1 products, this field is blank.

(31) Language

Used language "en" is stored.

(32) topicCategory

From the field code of ISO19115, "004" indicating weather, "008" indicating earth science information, and "010" indicating global basic map image, are stored separated by commas.

(33) Role

From the role code of ISO19115, "003" indicating information owner is stored.

(34) history

Change record of file is stored.

(35) characterSet

From the character code table of ISO19115, "004" indicating UTF8 is stored.

(36) acknowledgement

Supplemental information about the project is stored.

(37) publisher_name

As the responsible organization (publisher) for data disclosure, " JAXA GOSAT-GW Project " is stored.

(38) publisher_email

E-mail address of the responsible organization (publisher) for data disclosure is stored.

(39) publisher_url

Web site URL of the responsible organization (publisher) for data disclosure is stored.

(40) DOI

The Digital Object Identifier given to the product is stored.

(41) DOIauthority

"http://doi.org/", which is the URL of IDF (International DOI Foundation), which operates DOI is stored.

(42) AlgorithmDeveloper

Algorithm developer is stored. For Level 1 product, “Japan Aerospace Exploration Agency (JAXA)” is stored.

(43) AlgorithmVersion

The algorithm version is stored in 3 digits.

Item	Min. value	Max. value	Abnormal value	Note
AlgorithmVersion	000	999	N/A	Number in 3 digits

(44) AncillaryDataInformation

Used ancillary data information is stored. This item is blank in Level 1 product as it is not used.

(45) AutomaticQAFlag

Automatic inspection results of data processing during product creation are stored. Automatic inspection in data processing is judged based on the criteria shown in AutomaticQAFlagExplanation, and the following fixed values are set as the results.

“Good” : In the case all check items are OK

“Fair” : In the case some check item is NG

“NG” : In the case all check items are NG

(46) AutomaticQAFlagExplanation

The automatic inspection contents and their threshold values that are carried out within the AMSR3 Level 1 process, are stored separated by commas.

The automatic test results are marked as OK if they are normal, and NG if they are abnormal.

Item	Inspection details	Conditions to judge normality	Example of description
MissingScanQA	Number of missing scans	Less than 21 scans	MissingScanQA:Less than 21 is available->OK
MissingPacketQA	Number of missing packets	Less than 321 packets	MissingPacketQA:Less than 321 is available->OK
AntennaRotationQA	Abnormal antenna rotation velocity	Less than 21 %	AntennaRotationQA:Less than 21 is available->OK
HotCalibrationSourceQA	Abnormal high temperature calibration source temperature	Less than 21 %	HotCalibrationSourceQA:Less than 21 is available->OK
AttitudeDataQA	Abnormal attitude data	Less than 1 %	AttitudeDataQA:Less than 1 is available->OK
EphemerisDataQA	Abnormal orbit data	Less than 21 %	EphemerisDataQA:Less than 21 is available->OK
QualityofGeometricInformationQA	Abnormal geometric information calculation	Less than 1 %	QualityofGeometricInformationQA:Less than 1 is available->OK,
BrightnessTemperatureQA	Abnormal brightness temperature	Less than 21 %	BrightnessTemperatureQA:Less than 21 is available->OK

(47) CalibrationMethod

The correction methods implemented in AMSR3 Level 1 processing is stored separated by commas.

Item	Correction detail
CSMSpillOver	Leakage of ground radiation to CSM
CSMInterpolation	Moon reflection and radio wave interference on CSM

(48) CoefficientAvv,CoefficientAhv,CoefficientAov,CoefficientAhh,CoefficientAvh,CoefficientAoh

The brightness temperature conversion coefficient is stored, which is used when calculating the brightness temperature.

(49) ContactOrganizationEmail

E-mail address for contact, “z-gportal-support@ml.jaxa.jp” is stored.

(50) ContactOrganizationName

Organization name for contact, “Japan Aerospace Exploration Agency (JAXA)” is stored.

(51) CSMTemperature

Temperature of deep space, brightness temperature of low temperature calibration source is stored.

(52) DataCode

Data code of the ground observation data is stored by separating each frequency and polarization with commas.

(53) DataDatasetName

Dataset name of the ground observation data is stored by separating each frequency and polarization with commas.

(54) DataDynamicRange

The brightness temperature dynamic range of ground observation data “2.7K-340K” is stored.

(55) DataLongName

Official name of the ground observation data is stored by separating each frequency and polarization with commas.

(56) DataNumber

The number of ground observation data is stored.

(57) DataType

Data type of the ground observation data is stored by separating each frequency and polarization with commas.

(58) EarthEllipsoidName,EarthFlatteningRatio,EarthSemiMajorAxis

The definition of the earth ellipsoid used in AMSR3 Level 1 processing software is stored.

Item	Explanation	Stored value	Note
EarthEllipsoidName	Earth ellipsoid model	WGS84	
EarthFlatteningRatio	Earth oblateness	0.00335	
EarthSemiMajorAxis	Earth equatorial radius	6378.1km	

(59) FileFormatType, FileFormatVersionNC, FileFormatVersionHDF

The definition of the file format used in AMSR3 Level 1 processing software is stored.

Item	Explanation	Stored value	Note
FileFormatType	File format type	netCDF-4/HDF5 File Format	
FileFormatVersionNC	NetCDF format version	netCDF-4.9.2	
FileFormatVersionHDF	HDF format version	HDF5-1.14.4	

(60) FileSizeByte

Product size (unit: MBytes) is stored. Note that the product size is calculated before all product meta is set, so there may be a difference from the actual size.

Item	Min. value	Max. value	Abnormal value	Note
FileSizeByte	0	2147483647	N/A	byte

(61) GranuleID

Granule ID is stored. Granule ID is a string obtained by removing the extension (.nc) from the file name described in Section 3.5.1.

(62) GringPointLatitude,GringPointLongitude

The latitude and longitude of the valid data range are stored. The latitude and longitude of the same observation point as geospatial_bounds is described, separated by commas.

(63) InputFileName

Input file name is stored. In case that there are multiple input files, they are stored, separated by commas.

(64) MeteorologicalDataType

The weather data used is stored. This item is blank in Level 1 product as it is not used.

(65) NumberOfAntennaRotationAnomalyScans

The number of abnormal antenna rotation speed scans is stored (Not include overlapping ranges).

Item	Min. value	Max. value	Abnormal value	Note
NumberOfAntennaRotationAnomalyScans	0	2147483647	-2147483648	

(66) NumberOfAttitudeAnomalyScans

Number of abnormal attitude angle and attitude angular velocity scans is stored (Not include overlapping ranges).

Item	Min. value	Max. value	Abnormal value	Note
NumberOfAttitudeAnomalyScans	0	2147483647	-2147483648	

(67) NumberOfGeometricErrorPixels

The total number of observation points with calculation errors (abnormal values in latitude and longitude information) in the latitude and longitude calculated for each frequency is stored (Not include overlapping ranges).

Item	Min. value	Max. value	Abnormal value	Note
NumberOfGeometricErrorPixels	0	2147483647	-2147483648	

(68) NumberOfHTSAnomalyScans

The number of scans for abnormal temperature of high temperature calibration source (HTS) is stored (Not include overlapping ranges).

Item	Min. value	Max. value	Abnormal value	Note
NumberOfHTSAnomalyScans	0	2147483647	-2147483648	

(69) NumberOfInputFiles

The number of Level 0 data files is stored. It matches the number of file names stored in InputFIleName.

Item	Min. value	Max. value	Abnormal value	Note
NumberOfInputFiles	0	9	N/A	Value in 1 digit

(70) NumberOfMissingPackets

The number of missing packets in the product is stored (Not include overlapping ranges).

Item	Min. value	Max. value	Abnormal value	Note
NumberOfMissingPackets	0	2147483647	-2147483648	

(71) NumberOfMissingScans

The number of missing scans in the product is stored (Not include overlapping ranges).

One scan of AMSR3 consists of 16 packets, but if even one packet is missing, it is counted as a missing scan.

Item	Min. value	Max. value	Abnormal value	Note
NumberOfMissingScans	0	2147483647	-2147483648	

(72) NumberOfOrbitAnomalyScans

The number of scans with abnormal orbit position/velocity is stored (Not include overlapping ranges).

Item	Min. value	Max. value	Abnormal value	Note
NumberOfOrbitAnomalyScans	0	2147483647	-2147483648	

(73) NumberOfTbLimitErrorPixels

The number of brightness temperature limit check errors is stored, which is counted by frequency and polarization and by observation point (Not include overlapping ranges).

Item	Min. value	Max. value	Abnormal value	Note
NumberOfTbLimitErrorPixels	0	2147483647	-2147483648	

(74) NumberOfPackets

The total number of packets is stored (Not include overlapping ranges).

Item	Min. value	Max. value	Abnormal value	Note
NumberOfPackets	0	2147483647	-2147483648	

(75) NumberOfParityError

The total number of parity errors is stored (Not include overlapping ranges).

Item	Min. value	Max. value	Abnormal value	Note
NumberOfParityError	0	2147483647	-2147483648	

(76) NumberOfPixelsPerScan

The number of observation points per scan is stored at frequencies other than 89GHz.

For Level 1B : ”243”

(77) NumberOfPixelsPerScan89

The number of observation points per scan is stored at 89GHz.

For Level 1B : ”486”

(78) NumberOfScans

The number of scans in observation data is stored (Not include overlapping ranges).

Item	Min. value	Max. value	Abnormal value	Note
NumberOfScans	1	99999	-2147483648	5 digit number (maximum)

(79) NumberOfScansOverlap

The number of 1 side overlap scans, “30” is stored.

(80) ObservationEndDateTime

Date and time to end observation（UTC） stored in Product is set in the following format.

“YYYY-MM-DDThh:mm:ss.uuuZ”

YYYY：Western year

MM : 01 - 12(Month)

DD : 01 - 31(Day)

hh : 00 - 23(hour)

mm : 00 - 59(minute)

ss : 00 - 59(second)(*May be 60 if a leap second occurs.)

uuu : 000 - 999(milli-second)

(81) ObservationEquatorCrossingDateTime

Date and time of satellite crossing equator is stored in the following format.

“YYYY-MM-DDThh:mm:ss.uuuZ”

YYYY：Western year

MM : 01 - 12(Month)

DD : 01 - 31(Day)

hh : 00 - 23(hour)

mm : 00 - 59(minute)

ss : 00 - 59(second)(*May be 60 if a leap second occurs.)

uuu : 000 - 999(milli-second)

(82) ObservationEquatorCrossingLongitude

The longitude at which the satellite passed the equator is stored. However, for near-real-time products (Global) that pass through the equator more than once, the longitude of the first pass is stored. Even if there is missing in the equator crossing timing, the interpolated value is stored.

If it does not pass through the equator, this item is blank.

Item	Min. value	Max. value	Abnormal value	Note
ObservationEquatorCrossingLongitude	-180.00	180.00	-9999.0	

(83) ObservationStartDateTime

Date and time to start observation（UTC） stored in Product is set in the following format.

“YYYY-MM-DDThh:mm:ss.uuuZ”

YYYY：Western year

MM : 01 - 12(Month)

DD : 01 - 31(Day)

hh : 00 - 23(hour)

mm : 00 - 59(minute)

ss : 00 - 59(second)(*May be 60 if a leap second occurs.)

uuu : 000 - 999(milli-second)

(84) OrbitArgumentPerigee,OrbitDataType,OrbitEccentricity,OrbitInclination,OrbitPeriod,OrbitSemiMajorAxis

Orbit parameters of satellite (GOSAT-GW) is stored

Item	Explanation	Stored value	Note
OrbitArgumentPerigee	Satellite perigee argument	99.5384deg	
OrbitDataType	Orbit data type	ONBOARD	
OrbitEccenticity	Satellite orbit eccentricity	Frozen	
OrbitInclination	Orbital inclination angle	98.08deg	
OrbitPeriod	Satellite period	98.2min	
OrbitSemiMajorAxis	Satellite orbit semi-major axis	7035.552km	

(85) OrbitDataFileName

The orbit data file name used for processing is stored. If no orbit data file is used, blank is stored. If multiple inputs are inputted, the file names are stored separated by commas.

at

(86) OrbitNumberStart,OrbitNumberEnd

The orbit number of the satellite at the first and last scan positions of the product is stored. The orbit number will be the serial number from GOSAT-GW launch.

Item	Min. value	Max. value	Abnormal value	Note
OrbitNumberStart	0	2147483647	-2147483648	Orbit start number
OrbitNumberEnd	0	2147483647	-2147483648	Orbit end number

(87) OrbitDirection

The orbital direction corresponding to the observation range of the product is stored. If the vertical direction is not constant in the near real-time product (Global), the orbit direction at the start is stored.

"Ascending"

"Descending"

(88) ParameterVersion

The version of parameter is stored.

Item	Min. value	Max. value	Abnormal value	Note
ParameterVersion	000	999	N/A	3 digit number

(89) PathNumber

The pass number at the start of the scene is stored. In the case of near real-time processing, the pass number at the start is stored

Item	Min. value	Max. value	Abnormal value	Note
PathNumber	1	44	-2147483648	

(90) PGEName

The name of data processing software, "GOSAT-GW Mission Operation System" is stored.

(91) PlatformShortName

Satellite name "GOSAT-GW" is stored.

(92) Platinum2ConversionTableW0,Platinum2ConversionTableW1,Platinum2ConversionTableW2,Platinum2ConversionTableW3, Platinum2ConversionTableW4

The coefficients for conversion to engineering value of platinum sensor #2 is stored.

Conversion formula to engineering value is as follows.

$$\mathrm{y} = \mathrm{W4} \times x^4 + \mathrm{W3} \times x^3 + \mathrm{W2} \times x^2 + \mathrm{W1} \times x \quad + \mathrm{W0}$$

y : Value after conversion to engineering value

x : Input count value

(93) Platinum3ConversionTableW0,Platinum3ConversionTableW1,Platinum3ConversionTableW2,Platinum3ConversionTableW3,Platinum3ConversionTableW4

The applicable range and coefficients for conversion to engineering value of platinum sensor #3 are stored.

Item	Stored value	Note
W0	$W0_1, W0_2, W0_3 \cdots, W0_{10}$	
W1	$W1_1, W1_2, W1_3 \cdots, W1_{10}$	
W2	$W2_1, W2_2, W2_3 \cdots, W2_{10}$	
W3	$W3_1, W3_2, W3_3 \cdots, W3_{10}$	
W4	$W4_1, W4_2, W4_3 \cdots, W4_{10}$	

Conversion formula to engineering value is as follows.

$$\mathrm{y} = \mathrm{W4}_a \times x^4 + \mathrm{W3}_a \times x^3 + \mathrm{W2}_a \times x^2 + \mathrm{W1}_a \times x \quad + W0_a$$

Then,

For platinum sensor#3-1, a=1

For platinum sensor#3-2, a=2

For platinum sensor#3-3, a=3

$\cdots$

For platinum sensor#3-10, a=10

y : Value after conversion to engineering value

x : Input count value

(94) Platinum4ConversionTableW0,Platinum4ConversionTableW1,Platinum4ConversionTableW2,Platinum4ConversionTableW3, Platinum4ConversionTableW4

The coefficients for conversion to engineering value of platinum sensor #4 is stored.

Conversion formula to engineering value is the same as platinum sensor #2.

(95) ProcessingCenter

As data Processing center, “JAXA GOSAT-GW Project” is stored.

(96) ProcessingQAAttribute

As quality information for data processed by data processing software, the names of items is stored separated by commas, that are judged to be abnormal in quality-related items (NumberOf***) in GlobalAttribute. Blank is stored if no abnormality has occurred.

Name of Item	Abnormality judgment criteria
AntennaRotationAnomaly	NumberOfAntennaRotationAnomalyScans>0
AttitudeAnomaly	NumberOfAttitudeAnomalyScans>0
GeometricError	NumberOfGeometricErrorPixels>0
HTSAnomaly	NumberOfHTSAnomalyScans>0
MissingPackets	NumberOfMissingPackets>0
MissingScans	NumberOfMissingScans>0
OrbitAnomaly	NumberOfOrbitAnomalyScans>0
TbLimitError	NumberOfTbLimitErrorPixels>0
ParityError	NumberOfParityError>0

(97) ProcessingQADescription

The error message generated by data-processing software is stored.

When normal operation, it is blank.

(98) ProductCreationDateTime

The product generation date and time (UTC) is stored in the following format.

“YYYY-MM-DDThh:mm:ss.uuuZ”

YYYY : Western year

MM : 01 - 12(Month)

DD : 01 - 31(Day)

hh : 00 - 23(hour)

mm : 00 - 59(minute)

ss : 00 - 59(second)(*May be 60 if a leap second occurs.)

uuu : 000 - 999(milli-second)

(99) ProductName

The product abbreviation is stored. The following are stored fixedly according to each processing level.

For Level 1B : AMSR3 L1B TBB

(100) ProductProcessingType

The processing type is stored. One of the following unique values is set.

"Standard Product (Global)" : Standard Processing

"Near Realtime Product (Global)" : Near real-time processing (Global)

"Near Realtime Product (Local)" : Near real-time processing (Around Japan) / Level 1 product created with Level 1 processing software for direct receiving stations.

(101) ProductSupplement

Supplemental information of product is stored.

(102) ProductVersion

Product version is stored.

Item	Min. value	Max. value	Abnormal value	Note
ProductVersion(Major Number)	00	99	N/A	2 digit number
ProductVersion(Minor Number)	A	Z	N/A	1 character

(103) QALocationOfPacketDiscontinuity

Whether the Packet Sequence Counter is continuous or discontinuous is stored.

For continuous : Continuation

For discontinuous : Discontinuity

(104) QAPercentMissingData

Proportion [%] of missing data among all observed data in the product is stored.

Item	Min. value	Max. value	Abnormal value	Note
QAPercentMissingData	0.0	100.0	-9999.0	

(105) SatelliteAltitude,SatelliteOrbit, SatelliteRevisitTime

The specifications of the satellite (GOSAT-GW) are stored.

Item	Contents	Stored value	Note
SatelliteAltitude	Satellite altitude	665.96km	Fixed Value
SatelliteOrbit	Satellite orbit	Sun-synchronous_sub-recurrent	Fixed Value
SatelliteRevisitTime	Satellite revisit time	3 days	Fixed Value

(106) SensorAlignment

The alignment values between the satellite (GOSAT-GW) coordinate system and the AMSR3 coordinate system are stored.

(107) SensorAntRotationVelocity

The measured value of the antenna rotation speed is stored. The letters obtained by adding rpm to the average value of the antenna rotation speed of the total number of product scans, not including overlap are stored.

Item	Min. value	Max. value	Abnormal value	Note
SensorAntRotaionVelocity	0.0rpm	99999.0rpm	-9999.0rpm	

(108) SensorBandWidth,SensorBeamWidth,SensorChannel, SensorFOV,SensorOffNadir, SensorScanningPeriod, SensorShortName,SensorSwathWidth

The specifications of the sensor (AMSR3) are stored.

Item	Contents	Stored value	Note
SensorBandWidth	Band width of AMSR3	6.925GHz:350MHz,7.3GHz:350MHz,10.25GHz:500MHz,10.65GHz:100MHz,18.7GHz:200MHz,23.8GHz:400MHz,36.42GHz:840MHz,89.0GHz-A:3000MHz,89.0GHz-B:3000MHz,165.5GHz:4000MHz,183.31+/-3GHz:2000x2MHz,183.31+/-7GHz:2000x2MHz	
SensorBeamWidth	Beam width of AMSR3	6.925GHz:1.8deg,7.3GHz:1.8deg,10.25GHz:1.2deg,10.65GHz:1.2deg,18.7GHz:0.65deg,23.8GHz:0.75deg,36.42GHz:0.35deg,89.0GHz-A:0.15deg,89.0GHz-B:0.15deg,165.5GHz:0.30deg,183.31+/-3GHz:0.28deg,183.31+/-7GHz:0.28deg	
SensorChannel	Observed channel of AMSR3	6.925GHz:V,6.925GHz:H,7.3GHz:V,7.3GHz:H,10.25GHz:V,10.25GHz:H,10.65GHz:V,10.65GHz:H,18.7GHz:V,18.7GHz:H,23.8GHz:V,23.8GHz:H,36.42GHz:V,36.42GHz:H,89.0GHz-A:V,89.0GHz-A:H,89.0GHz-B:V,89.0GHz-B:H,165.5GHz:V,183.31+/-3GHz:V,183.31+/-7GHz:V	
SensorFOV	Spatial resolution	6.925GHz:33kmx57km,7.3GHz:33kmx57km,10.25GHz:22kmx38km,10.65GHz:22kmx38km,18.7GHz:12kmx21km,23.8GHz:14kmx24km,36.42GHz:6kmx11km,89.0GHz-A:3kmx5km,89.0GHz-B:3kmx5km,165.5GHz:5kmx10km,183.31+/-3GHz:5kmx9km,183.31+/-7GHz:5kmx9km	
SensorOffNadir	Off-nadir	47.0deg : 89GHz-B, 47.5deg : others	

Item	Contents	Stored value	Note
	angle		
SensorScanning Period	Scanning Period	1.5sec	
SensorShortName	Sensor abbreviation	AMSR3	
SensorSwathWidth	Swath width	1535km	

(109) Thermistor1CountRange,Thermistor1ConversionTableW0,Thermistor1ConversionTableW1,Thermistor1ConversionTableW2,Thermistor1ConversionTableW3,Thermistor1ConversionTableW4

The applicable range and coefficients for conversion to engineering value of Thermistor #1 are stored.

Item	Stored value	Note
CountRange	$x_0, x_1, x_2 \cdots, x_a$ (a: any constant)	Range of input count values separated by commas
W4	$W4_0, W4_1, W4_2 \cdots, W4_{a-1}$	
W3	$W3_0, W3_1, W3_2 \cdots, W3_{a-1}$	
W2	$W2_0, W2_1, W2_2 \cdots, W2_{a-1}$	
W1	$W1_0, W1_1, W1_2 \cdots, W1_{a-1}$	
W0	$W0_0, W0_1, W0_2 \cdots, W0_{a-1}$	

Conversion formula to engineering value is as follows.

$$\mathrm{y} = \mathrm{W4}_a \times x^4 + \mathrm{W3}_a \times x^3 + \mathrm{W2}_a \times x^2 + \mathrm{W1}_a \times x \quad + W0_a$$

Then,

For $x_0 < x \leqq x_1$, a=0

For $x_1 < x \leqq x_2$, a=1

For $x_2 < x \leqq x_3$, a=2

$\cdots$

For $x_{a-1} < x \leqq x_a$, a=$a-1$

y : alue after conversion to engineering value

x : Input count value

(110) Thermistor2CountRange,Thermistor2ConversionTableW0,Thermistor2ConversionTableW1,Thermistor2ConversionTableW2,Thermistor2ConversionTableW3,Thermistor2ConversionTableW4

The applicable range and coefficients for conversion to engineering value of Thermistor #2 are

stored. Conversion formula to engineering value is the same as Thermistor #1.

(111) Thermistor3CountRange,Thermistor3ConversionTableW0,Thermistor3ConversionTableW1,Thermistor3ConversionTableW2,Thermistor3ConversionTableW3,Thermistor3ConversionTableW4
The applicable range and coefficients for conversion to engineering value of Thermistor #3 are stored. Conversion formula to engineering value is the same as Thermistor #1.

4. 2 Data part

Each information of AMSR3 data is stored in a two-dimensional dataset.

4. 2. 1 Dataset

Data set abbreviations in Level 1B products are named based on the conventions in Table 4-1. Explanations of dataset names are given below.Explanations of dataset names are given below.

Table 4-1 Dataset name conventions (abbreviation conventions)

Abbreviations	Explanation	Note
Tb	Brightness Temprature	
Ch06V	Channel (6.925GHz Vertical polarization)	
Ch06H	Channel (6.925GHz Horizontal polarization)	
Ch07V	Channel (7.3GHz Vertical polarization)	
Ch07H	Channel (7.3GHz Horizontal polarization)	
Ch10uV	Channel (10.25GHz Vertical polarization)	
Ch10uH	Channel (10.25GHz Horizontal polarization)	
Ch10V	Channel (10.65GHz Vertical polarization)	
Ch10H	Channel (10.65GHz Horizontal polarization)	
Ch18V	Channel (18.7GHz Vertical polarization)	
Ch18H	Channel (18.7GHz Horizontal polarization)	
Ch23V	Channel (23.8GHz Vertical polarization)	
Ch23H	Channel (23.8GHz Horizontal polarization)	
Ch36V	Channel (36.42GHz Vertical polarization)	
Ch36H	Channel (36.42GHz Horizontal polarization)	
Ch89AV	Channel (89.0GHz Ascan Vertical polarization)	
Ch89AH	Channel (89.0GHz Ascan Horizontal polarization)	
Ch89BV	Channel (89.0GHz-B scan Vertical polarization)	
Ch89BH	Channel (89.0GHz-B scan Horizontal polarization)	
Ch165V	Channel (165.5GHz Vertical polarization)	
Ch183r3V	Channel (183.3+/-3GHz Vertical polarization)	
Ch183r7V	Channel (183.3+/-7GHz Vertical polarization)	
P06	Center point of foot print (6.925GHz)	
P07	Center point of foot print (7.3GHz)	
P10u	Center point of foot print (10.25GHz)	
P10	Center point of foot print (10.65GHz)	
P18	Center point of foot print (18.7GHz)	
P23	Center point of foot print (23.8GHz)	

Abbreviations	Explanation	Note
P36	Center point of foot print (36.42GHz)	
P89A	Center point of foot print (89.0GHz Ascan)	
P89B	Center point of foot print (89.0GHz-B scan)	
P165	Center point of foot print (165.5GHz)	
P183r3	Center point of foot print (183.3+/-3GHz)	
P183r7	Center point of foot print (183.3+/-7GHz)	

(1) Tb

The brightness temperature of ground observation data is stored. The number of observation data for one scan is 243 points except for 89GHz, and 486 points for 89GHz. The datasets that store ground-observed brightness temperatures are as follows.

No.	Dataset Name	Explanation
1	Tb_Ch06V	6.925GHz Vertical polarization ground observation brightness temperature value
2	Tb_Ch06H	6.925GHz Horizontal polarization ground observation brightness temperature value
3	Tb_Ch07V	7.3GHz Vertical polarization ground observation brightness temperature value
4	Tb_Ch07H	7.3GHz Horizontal polarization ground observation brightness temperature value
5	Tb_Ch10uV	10.25GHz Vertical polarization ground observation brightness temperature value
6	Tb_Ch10uH	10.25GHz Horizontal polarization ground observation brightness temperature value
7	Tb_Ch10V	10.25GHz Horizontal polarization ground observation brightness temperature value
8	Tb_Ch10H	10.65GHz Horizontal polarization ground observation brightness temperature value
9	Tb_Ch18V	18.7GHz Vertical polarization ground observation brightness temperature value
10	Tb_Ch18H	18.7GHz Horizontal polarization ground observation brightness temperature value
11	Tb_Ch23V	23.8GHz Vertical polarization ground observation brightness temperature value
12	Tb_Ch23H	23.8GHz Horizontal polarization ground observation brightness

No.	Dataset Name	Explanation
		temperature value
13	Tb_Ch36V	36.42GHz Vertical polarization ground observation brightness temperature value
14	Tb_Ch36H	36.42GHz Horizontal polarization ground observation brightness temperature value
15	Tb_Ch89AV	89.0GHz-A scan Vertical polarization ground observation brightness temperature value
16	Tb_Ch89AH	89.0GHz-A scan Horizontal polarization ground observation brightness temperature value
17	Tb_Ch89BV	89.0GHz-B scan Vertical polarization ground observation brightness temperature value
18	Tb_Ch89BH	89.0GHz-B scan Horizontal polarization ground observation brightness temperature value
19	Tb_Ch165V	165.5GHz Vertical polarization ground observation brightness temperature value
20	Tb_Ch183r3V	183.3+/-3GHz Vertical polarization ground observation brightness temperature value
21	Tb_Ch183r7V	183.3+/-7GHz Vertical polarization ground observation brightness temperature value

The maximum value, minimum value, and abnormal value in the dataset are set as follows.

Item	Min. value	Max. value	Abnormal value	Unit
Tb	0	50000	65534 (missing data value)	K
			65535 (parity abnormal value)	

Also, the following information is stored in the dataset attributes.

Item	Data type	Setting value	Explanation
Product_code	string	TBB	product code
long_name	string	-	The full name is stored.
		Brightness Temperature 6.925GHz V	For Tb_Ch06V
		Brightness Temperature 6.925GHz H	For Tb_Ch06H
		Brightness Temperature 7.3GHz V	For Tb_Ch07V
		Brightness Temperature 7.3GHz H	or Tb_Ch07H
		Brightness Temperature 10.25GHz V	For Tb_Ch10uV
		Brightness Temperature 10.25GHz H	For Tb_Ch10uH For Tb_Ch10uH

Item	Data type	Setting value	Explanation
		Brightness Temperature 10.65GHz V	For Tb_Ch10V
		Brightness Temperature 10.65GHz H	For Tb_Ch10H
		Brightness Temperature 18.7GHz V	For Tb_Ch18V
		Brightness Temperature 18.7GHz H	For Tb_Ch18H
		Brightness Temperature 23.8GHz V	For Tb_Ch23V
		Brightness Temperature 23.8GHz H	For Tb_Ch23H
		Brightness Temperature 36.42GHz V	For Tb_Ch36V
		Brightness Temperature 36.42GHz H	For Tb_Ch36H
		Brightness Temperature 89.0GHz-A V	For Tb_Ch89AV
		Brightness Temperature 89.0GHz-A H	For Tb_Ch89AH
		Brightness Temperature 89.0GHz-B V	For Tb_Ch89BV
		Brightness Temperature 89.0GHz-B H	For Tb_Ch89BH
		Brightness Temperature 165.5GHz V	For Tb_Ch165V
		Brightness Temperature 183.31GHz+/-3GHz V	For Tb_Ch183r3V
		Brightness Temperature 183.31GHz+/-7GHz V	For Tb_Ch183r7V
standard_name	string	brightness_temperature	The name that identifies the physical quantity is stored. This is compliant with CF Standard Name Table (v49, 12 February 2018)
units	string	K	Unit is stored.
valid_min	16-bit Unsigned Integer	0	Minimum value is stored.
valid_max	16-bit Unsigned Integer	50000	Maximum value is stored.
_FillValue	16-bit Unsigned Integer	65535	Error value is stored.
scale_factor	32-bit floating-point	0.01	Scale factor

Item	Data type	Setting value	Explanation
add_offset	32-bit floating-point	0	Offset
coordinates	string	-	Corresponding latitude and longitude information etc.
		Latitude_P06 Longitude_P06 ScanTimeTAI93	For Tb_Ch06V
		Latitude_P06 Longitude_P06 ScanTimeTAI93	For Tb_Ch06H
		Latitude_P07 Longitude_P07 ScanTimeTAI93	For Tb_Ch07V
		Latitude_P07 Longitude_P07 ScanTimeTAI93	For Tb_Ch07H
		Latitude_P10u Longitude_P10u ScanTimeTAI93	For Tb_Ch10uV
		Latitude_P10u Longitude_P10u ScanTimeTAI93	For Tb_Ch10uH
		Latitude_P10 Longitude_P10 ScanTimeTAI93	For Tb_Ch10V
		Latitude_P10 Longitude_P10 ScanTimeTAI93	For Tb_Ch10H
		Latitude_P18 Longitude_P18 ScanTimeTAI93	For Tb_Ch18V
		Latitude_P18 Longitude_P18 ScanTimeTAI93	For Tb_Ch18H
		Latitude_P23 Longitude_P23 ScanTimeTAI93	For Tb_Ch23V
		Latitude_P23 Longitude_P23 ScanTimeTAI93	For Tb_Ch23H
		Latitude_P36 Longitude_P36 ScanTimeTAI93	For Tb_Ch36V
		Latitude_P36 Longitude_P36 ScanTimeTAI93	For Tb_Ch36H
		Latitude_P89A Longitude_P89A ScanTimeTAI93	For Tb_Ch89AV
		Latitude_P89A Longitude_P89A	For Tb_Ch89AH

Item	Data type	Setting value	Explanation
		ScanTimeTAI93	
		Latitude_P89B Longitude_P89B ScanTimeTAI93	For Tb_Ch89BV
		Latitude_P89B Longitude_P89B ScanTimeTAI93	For Tb_Ch89BH
		Latitude_P165 Longitude_P165 ScanTimeTAI93	For Tb_Ch165V
		Latitude_P183r3 Longitude_P183r3 ScanTimeTAI93	For Tb_Ch183r3V
		Latitude_P183r7 Longitude_P183r7 ScanTimeTAI93	For Tb_Ch183r7V
cell_methods	string	point	Specification of cell

(2) Tb_Quality

Quality information is stored such as RFI in ground observation brightness temperature for each frequency and polarization. The datasets that store the quality information of ground observation brightness temperature are as follows.

No.	Dataset Name	Explanation
1	Tb_Ch06V_Quality	6.925GHz Vertical polarization, quality information of ground observation brightness temperature
2	Tb_Ch06H_Quality	6.925GHz Horizontal polarization, quality information of ground observation brightness temperature
3	Tb_Ch07V_Quality	7.3GHz Vertical polarization, quality information of ground observation brightness temperature
4	Tb_Ch07H_Quality	7.3GHz Horizontal polarization, quality information of ground observation brightness temperature
5	Tb_Ch10uV_Quality	10.25GHz Vertical polarization, quality information of ground observation brightness temperature
6	Tb_Ch10uH_Quality	10.25GHz Horizontal polarization, quality information of ground observation brightness temperature
7	Tb_Ch10uV_Quality	10.65GHz Vertical polarization, quality information of ground observation brightness temperature
8	Tb_Ch10H_Quality	10.65GHz Horizontal polarization, quality information of ground observation brightness temperature
9	Tb_Ch18V_Quality	18.7GHz Vertical polarization, quality information of ground

No.	Dataset Name	Explanation
		observation brightness temperature
10	Tb_Ch18H_Quality	18.7GHz Horizontal polarization, quality information of ground observation brightness temperature
11	Tb_Ch23V_Quality	23.8GHz Vertical polarization, quality information of ground observation brightness temperature
12	Tb_Ch23H_Quality	23.8GHz Horizontal polarization, quality information of ground observation brightness temperature
13	Tb_Ch36V_Quality	36.42GHz Vertical polarization, quality information of ground observation brightness temperature
14	Tb_Ch36H_Quality	36.42GHz Horizontal polarization, quality information of ground observation brightness temperature
15	Tb_Ch89AV_Quality	89.0GHz-A scan Vertical polarization, quality information of ground observation brightness temperature
16	Tb_Ch89AH_Quality	89.0GHz-A scan Horizontal polarization, quality information of ground observation brightness temperature
17	Tb_Ch89BV_Quality	89.0GHz-B scan Vertical polarization, quality information of ground observation brightness temperature
18	Tb_Ch89BH_Quality	89.0GHz-B scan Horizontal polarization, quality information of ground observation brightness temperature
19	Tb_Ch165V_Quality	165.5GHz Vertical polarization, quality information of ground observation brightness temperature
20	Tb_Ch183r3V_Quality	183.3+/-3GHz Vertical polarization, quality information of ground observation brightness temperature
21	Tb_Ch183r7V_Quality	183.3+/-7GHz Vertical polarization, quality information of ground observation brightness temperature

The following information is stored for each bit as the quality information.

<table>
<tr><th rowspan="2">No</th><th rowspan="2">Channel</th><th colspan="8">MSB LSB</th></tr>
<tr><th>7</th><th>6</th><th>5</th><th>4</th><th>3</th><th>2</th><th>1</th><th>0</th></tr>
<tr><td>1</td><td>Ch06V</td><td rowspan="21">Count value decreasing flag
1:Occurred
0:Not occurred</td><td rowspan="21">Fixed as 0
(Not used)</td><td rowspan="21">Fixed as 0
(Not used)</td><td rowspan="21">Fixed as 0
(Not used)</td><td rowspan="21">Brightness temperature calculation results (abnormal)
(brightness temperature is greater than the threshold or brightness temperature calculation error)
1:Abnormal
0:Normal</td><td rowspan="21">Geometric information calculation results
(Latitude and longitude are abnormal values)
1:Abnormal
0:Normal</td><td colspan="2" rowspan="10">Radio wave interference flag
10: occurred
01: possibility
00: Not occurred</td></tr>
<tr><td>2</td><td>Ch06H</td></tr>
<tr><td>3</td><td>Ch07V</td></tr>
<tr><td>4</td><td>Ch07H</td></tr>
<tr><td>5</td><td>Ch10uV</td></tr>
<tr><td>6</td><td>Ch10uH</td></tr>
<tr><td>7</td><td>Ch10V</td></tr>
<tr><td>8</td><td>Ch10H</td></tr>
<tr><td>9</td><td>Ch18V</td></tr>
<tr><td>10</td><td>Ch18H</td><td rowspan="11">Fixed as 0
(Not used)</td><td rowspan="11">Fixed as 0
(Not used)</td></tr>
<tr><td>11</td><td>Ch23V</td></tr>
<tr><td>12</td><td>Ch23H</td></tr>
<tr><td>13</td><td>Ch36V</td></tr>
<tr><td>14</td><td>Ch36H</td></tr>
<tr><td>15</td><td>Ch89AV</td></tr>
<tr><td>16</td><td>Ch89AH</td></tr>
<tr><td>17</td><td>Ch89BV</td></tr>
<tr><td>18</td><td>Ch89BH</td></tr>
<tr><td>19</td><td>Ch165V</td></tr>
<tr><td>20</td><td>Ch183r3V</td></tr>
<tr><td>21</td><td>Ch183r7V</td></tr>
</table>

And, the following information is stored in the dataset attributes.

Item	Data type	Setting Value	Explanation
long_name	string	-	Official name is stored.
		Brightness Temperature 6.925GHz V (Quality)	For Tb_Ch06V_Quality
		Brightness Temperature 6.925GHz H (Quality)	For Tb_Ch06H_Quality
		Brightness Temperature 7.3GHz V (Quality)	For Tb_Ch07V_Quality
		Brightness Temperature 7.3GHz H (Quality)	For Tb_Ch07H_Quality
		Brightness Temperature 10.25GHz V (Quality)	For Tb_Ch10uV_Quality
		Brightness Temperature 10.25GHz H (Quality)	For Tb_Ch10uH_Quality
		Brightness Temperature 10.65GHz V (Quality)	For Tb_Ch10V_Quality
		Brightness Temperature 10.65GHz H (Quality)	For Tb_Ch10H_Quality
		Brightness Temperature 18.7GHz V (Quality)	For Tb_Ch18V_Quality
		Brightness Temperature 18.7GHz H (Quality)	For Tb_Ch18H_Quality
		Brightness Temperature 23.8GHz V (Quality)	For Tb_Ch23V_Quality
		Brightness Temperature 23.8GHz H (Quality)	For Tb_Ch23H_Quality
		Brightness Temperature 36.42GHz V (Quality)	For Tb_Ch36V_Quality
		Brightness Temperature 36.42GHz H (Quality)	For Tb_Ch36H_Quality
		Brightness Temperature 89.0GHz-A V (Quality)	For Tb_Ch89AV_Quality
		Brightness Temperature 89.0GHz-A H (Quality)	For Tb_Ch89AH_Quality
		Brightness Temperature 89.0GHz-B V (Quality)	For Tb_Ch89BV_Quality
		Brightness Temperature 89.0GHz-B H (Quality)	For Tb_Ch89BH_Quality

Item	Data type	Setting Value	Explanation
		Brightness Temperature 165.5GHz V (Quality)	For Tb_Ch165V_Quality
		Brightness Temperature 183.31GHz+/-3GHz V (Quality)	For Tb_Ch183r3V_Quality
		Brightness Temperature 183.31GHz+/-7GHz V (Quality)	For Tb_Ch183r7V_Quality
standard_name	string	brightness_temperature status_flag	The name that identifies the physical quantity is stored.
_FillValue	8-bit unsigned integer	255	Error Value is stored.
coordinates	string	-	Information such as the corresponding latitude and longitude is stored.
		Latitude_P06 Longitude_P06 ScanTimeTAI93	For Tb_Ch06V_Quality
		Latitude_P06 Longitude_P06 ScanTimeTAI93	For Tb_Ch06H_Quality
		Latitude_P07 Longitude_P07 ScanTimeTAI93	For Tb_Ch07V_Quality
		Latitude_P07 Longitude_P07 ScanTimeTAI93	For Tb_Ch07H_Quality
		Latitude_P10u Longitude_P10u ScanTimeTAI93	For Tb_Ch10uV_Quality
		Latitude_P10u Longitude_P10u ScanTimeTAI93	For Tb_Ch10uH_Quality
		Latitude_P10 Longitude_P10 ScanTimeTAI93	For Tb_Ch10V_Quality
		Latitude_P10 Longitude_P10 ScanTimeTAI93	For Tb_Ch10H_Quality
		Latitude_P18 Longitude_P18 ScanTimeTAI93	For Tb_Ch18V_Quality
		Latitude_P18 Longitude_P18 ScanTimeTAI93	For Tb_Ch18H_Quality
		Latitude_P23 Longitude_P23 ScanTimeTAI93	For Tb_Ch23V_Quality

Item	Data type	Setting Value	Explanation
		Latitude_P23 Longitude_P23 ScanTimeTAI93	For Tb_Ch23H_Quality
		Latitude_P36 Longitude_P36 ScanTimeTAI93	For Tb_Ch36V_Quality
		Latitude_P36 Longitude_P36 ScanTimeTAI93	or Tb_Ch36H_Quality
		Latitude_P89A Longitude_P89A ScanTimeTAI93	For Tb_Ch89AV_Quality
		Latitude_P89A Longitude_P89A ScanTimeTAI93	For Tb_Ch89AH_Quality
		Latitude_P89B Longitude_P89B ScanTimeTAI93	For Tb_Ch89BV_Quality
		Latitude_P89B Longitude_P89B ScanTimeTAI93	For Tb_Ch89BH_Quality
		Latitude_P165 Longitude_P165 ScanTimeTAI93	For Tb_Ch165V_Quality
		Latitude_P183r3 Longitude_P183r3 ScanTimeTAI93	For Tb_Ch183r3V_Quality
		Latitude_P183r7 Longitude_P183r7 ScanTimeTAI93	For Tb_Ch183r7V_Quality
flag_value	array of 32-bit integer	0, 1, 2, 4, 8, 128	Setting value of flag is stored.
flag_masks	array of 32-bit integer	3, 3, 3, 4, 8, 128	Bitfield representation of the flag is stored..
flag_meanings	string	RFI_clear RFI_possible RFI_contaminated geometric_information_error brightness_temperature_information_error observation_count_drop_off	Meaning of flag is stored.
cell_methods	string	point	Specification of cell

(3) CSMCount

The observed value of the low temperature calibration source (CSM) is stored as a count value. The number of observation data per scan is 16 points other than 89GHz, and 32 points for 89GHz. The data set that stores the count value of the low temperature calibration source is the following dataset.

No.	Dataset Name	Explanation
1	CSMCount_Ch06V	Count value of the low temperature calibration source, 6.925GHz Vertical polarization
2	CSMCount_Ch06H	Count value of the low temperature calibration source, 6.925GHz Horizontal polarization
3	CSMCount _Ch07V	Count value of the low temperature calibration source, 7.3GHz Vertical polarization
4	CSMCount_Ch07H	Count value of the low temperature calibration source, 7.3GHz Horizontal polarization
5	CSMCount_Ch10uV	Count value of the low temperature calibration source, 10.25GHz Vertical polarization
6	CSMCount_Ch10uH	Count value of the low temperature calibration source, 10.25GHz Horizontal polarization
7	CSMCount_Ch10V	Count value of the low temperature calibration source, 10.65GHz Vertical polarization
8	CSMCount_Ch10H	Count value of the low temperature calibration source, 10.65GHz Horizontal polarization
9	CSMCount_Ch18V	Count value of the low temperature calibration source, 18.7GHz Vertical polarization
10	CSMCount_Ch18H	Count value of the low temperature calibration source, 18.7GHz Horizontal polarization
11	CSMCount_Ch23V	Count value of the low temperature calibration source, 23.8GHz Vertical polarization
12	CSMCount_Ch23H	Count value of the low temperature calibration source, 23.8GHz Horizontal polarization
13	CSMCount_Ch36V	Count value of the low temperature calibration source, 36.42GHz Vertical polarization
14	CSMCount_Ch36H	Count value of the low temperature calibration source, 36.42GHz Horizontal polarization
15	CSMCount_Ch89AV	Count value of the low temperature calibration source, 89.0GHz-A scan Vertical polarization
16	CSMCount_Ch89AH	Count value of the low temperature calibration source, 89.0GHz-A scan Horizontal polarization

17	CSMCount_Ch89BV	Count value of the low temperature calibration source, 89.0GHz-B scan Vertical polarization
18	CSMCount_Ch89BH	Count value of the low temperature calibration source, 89.0GHz-B scan Horizontal polarization
19	CSMCount_Ch165V	Count value of the low temperature calibration source, 165.5GHz Vertical polarization
20	CSMCount_Ch183r3V	Count value of the low temperature calibration source, 183.3+/-3GHz Vertical polarization
21	CSMCount_Ch183r7V	Count value of the low temperature calibration source, 183.3+/-7GHz Vertical polarization

The maximum value, minimum value, and abnormal value in the dataset are set as follows.

Item	Min. value	Max. value	Abnormal value	Note
CSMCount	-2048	2047	-32767 (missing data value)	Count
			-32768 (abnormal parity value)	

And the following information is stored in the dataset attributes.

Item	Data type	Setting value	Explanation
long_name	string	-	Official name is stored.
		CSM Observation Count 6.925GHz V	For CSMCount_Ch06V
		CSM Observation Count 6.925GHz H	For CSMCount_Ch06H
		CSM Observation Count 7.3GHz V	For CSMCount_Ch07V
		CSM Observation Count 7.3GHz H	For CSMCount_Ch07H
		CSM Observation Count 10.25GHz V	For CSMCount_Ch10uV
		CSM Observation Count 10.25GHz H	For CSMCount_Ch10uH
		CSM Observation Count 10.65GHz V	For CSMCount_Ch10V
		CSM Observation Count 10.65GHz H	For CSMCount_Ch10H
		CSM Observation Count 18.7GHz V	For CSMCount_Ch18V
		CSM Observation Count 18.7GHz H	For CSMCount_Ch18H
		CSM Observation Count 23.8GHz V	For CSMCount_Ch23V
		CSM Observation Count 23.8GHz H	For CSMCount_Ch23H

Item	Data type	Setting value	Explanation
		CSM Observation Count 36.42GHz V	For CSMCount_Ch36V
		CSM Observation Count 36.42GHz H	For CSMCount_Ch36H
		CSM Observation Count 89.0GHz-A V	For CSMCount_Ch89AV
		CSM Observation Count 89.0GHz-A H	For CSMCount_Ch89AH
		CSM Observation Count 89.0GHz-B V	For CSMCount_Ch89BV
		CSM Observation Count 89.0GHz-B H	For CSMCount_Ch89BH
		CSM Observation Count 165.5GHz V	For CSMCount_Ch165V
		CSM Observation Count 183.31GHz+/-3GHz V	For CSMCount_Ch183r3V
		CSM Observation Count 183.31GHz+/-7GHz V	For CSMCount_Ch183r7V
standard_name	string	(blank)	The name that identifies the physical quantity is stored.
units	string	count	Unit is stored.
valid_min	16-bit integer	-2048	Minimum value is stored.
valid_max	16-bit integer	2047	Maximum value is stored.
_FillValue	16-bit integer	-32768	Error Value is stored.
scale_factor	32-bit floating-point	0	Scale factor
add_offset	32-bit floating-point	1	Offset
coordinates	string	ScanTimeTAI93	Corresponding coordinate system
cell_methods	string	point	Specification of cell

(4) CSMCount_Quality

Quality information is stored such as RFI in count values of the low temperature calibration source. The number of data per scan is 16 points other than 89GHz, and 32 points for 89GHz. The data set that stores quality information for the count value of the low temperature calibration source is the following dataset.

No.	Dataset Name	Explanation
1	CSMCount_Ch06V_Quality	Quality information for the count value of the low temperature calibration source, 6.925GHz Vertical polarization
2	CSMCount_Ch06H_Quality	Quality information for the count value of the low temperature calibration source, 6.925GHz Horizontal polarization
3	CSMCount_Ch07V_Quality	Quality information for the count value of the low temperature calibration source, 7.3GHz Vertical polarization
4	CSMCount_Ch07H_Quality	Quality information for the count value of the low temperature calibration source, 7.3GHz Horizontal polarization
5	CSMCount_Ch10uV_Quality	Quality information for the count value of the low temperature calibration source, 10.25GHz Vertical polarization
6	CSMCount_Ch10uH_Quality	Quality information for the count value of the low temperature calibration source, 10.25GHz Horizontal polarization
7	CSMCount_Ch10uV_Quality	Quality information for the count value of the low temperature calibration source, 10.65GHz Vertical polarization
8	CSMCount_Ch10H_Quality	Quality information for the count value of the low temperature calibration source, 10.65GHz Horizontal polarization
9	CSMCount_Ch18V_Quality	Quality information for the count value of the low temperature calibration source, 18.7GHz Vertical polarization
10	CSMCount_Ch18H_Quality	Quality information for the count value of the low temperature calibration source, 18.7GHz Horizontal polarization
11	CSMCount_Ch23V_Quality	Quality information for the count value of the low temperature calibration source, 23.8GHz Vertical polarization
12	CSMCount_Ch23H_Quality	Quality information for the count value of the low temperature calibration source, 23.8GHz Horizontal polarization
13	CSMCount_Ch36V_Quality	Quality information for the count value of the low temperature calibration source, 36.42GHz Vertical polarization
14	CSMCount_Ch36H_Quality	Quality information for the count value of the low temperature calibration source, 36.42GHz Horizontal polarization
15	CSMCount_Ch89AV_Quality	Quality information for the count value of the low temperature calibration source, 89.0GHz-A scan Vertical polarization
16	CSMCount_Ch89AH_Quality	Quality information for the count value of the low temperature calibration

No.	Dataset Name	Explanation
		source, 89.0GHz-A scan Horizontal polarization
17	CSMCount_Ch89BV_Quality	Quality information for the count value of the low temperature calibration source, 89.0GHz-B scan Vertical polarization
18	CSMCount_Ch89BH_Quality	Quality information for the count value of the low temperature calibration source, 89.0GHz-B scan Horizontal polarization
19	CSMCount_Ch165V_Quality	Quality information for the count value of the low temperature calibration source, 165.5GHz Vertical polarization
20	CSMCount_Ch183r3V_Quality	Quality information for the count value of the low temperature calibration source, 183.3+/-3GHz Vertical polarization
21	CSMCount_Ch183r7V_Quality	Quality information for the count value of the low temperature calibration source, 183.3+/-7GHz Vertical polarization

The following information is stored for each bit as the quality information.

No	Channel	MSB							LSB
		7	6	5	4	3	2	1	0
1	Ch06V	Count value decreasing flag 1:Occurred 0:Not occurred	Moon reflection effect correction flag 1: With correction 0: Without correction	Count value correction flag (scan azimuth direction) 3rd time 1: With correction 0: Without correction	Count value correction flag (scan azimuth direction) 2nd time 1: With correction 0: Without correction	Count value correction flag (scan azimuth direction) 1st time 1: With correction 0: Without correction	Count value correction flag (satellite heading direction) 3rd time 1: With correction 0: Without correction	Count value correction flag (satellite heading direction) 2nd time 1: With correction 0: Without correction	Count value correction flag (satellite heading direction) 1st time 1: With correction 0: Without correction
2	Ch06H								
3	Ch07V								
4	Ch07H								
5	Ch10uV								
6	Ch10uH								
7	Ch10V								
8	Ch10H								
9	Ch18V								
10	Ch18H								
11	Ch23V								
12	Ch23H								
13	Ch36V								
14	Ch36H								
15	Ch89AV								
16	Ch89AH								
17	Ch89BV								
18	Ch89BH								
19	Ch165V								
20	Ch183r3V								
21	Ch183r7V								

And, the following information is stored in the dataset attributes.

Item	Data type	Setting Value	Explanation
long_name	string	-	Official name is stored.
		CSM Observation Count 6.925GHz V (Quality)	For CSMCount_Ch06V_Quality
		CSM Observation Count 6.925GHz H (Quality)	For CSMCount_Ch06H_Quality
		CSM Observation Count 7.3GHz V (Quality)	For CSMCount_Ch07V_Quality
		CSM Observation Count 7.3GHz H (Quality)	For CSMCount_Ch07H_Quality
		CSM Observation Count 10.25GHz V (Quality)	For CSMCount_Ch10uV_Quality
		CSM Observation Count 10.25GHz H (Quality)	For CSMCount_Ch10uH_Quality
		CSM Observation Count 10.65GHz V (Quality)	For CSMCount_Ch10V_Quality
		CSM Observation Count 10.65GHz H (Quality)	For CSMCount_Ch10H_Quality
		CSM Observation Count 18.7GHz V (Quality)	For CSMCount_Ch18V_Quality
		CSM Observation Count 18.7GHz H (Quality)	For CSMCount_Ch18H_Quality
		CSM Observation Count 23.8GHz V (Quality)	For CSMCount_Ch23V_Quality
		CSM Observation Count 23.8GHz H (Quality)	For CSMCount_Ch23H_Quality
		CSM Observation Count 36.42GHz V (Quality)	For CSMCount_Ch36V_Quality
		CSM Observation Count 36.42GHz H (Quality)	For CSMCount_Ch36H_Quality
		CSM Observation Count 89.0GHz-A V (Quality)	For CSMCount_Ch89AV_Quality
		CSM Observation Count 89.0GHz-A H (Quality)	For CSMCount_Ch89AH_Quality
		CSM Observation Count 89.0GHz-B V (Quality)	For CSMCount_Ch89BV_Quality
		CSM Observation Count 89.0GHz-B H (Quality)	For CSMCount_Ch89BH_Quality
		CSM Observation Count 165.5GHz V (Quality)	For CSMCount_Ch165V_Quality

Item	Data type	Setting Value	Explanation
		CSM Observation Count 183.31GHz+/-3GHz V (Quality)	For CSMCount_Ch183r3V_Quality
		CSM Observation Count 183.31GHz+/-7GHz V (Quality)	For CSMCount_Ch183r7V_Quality
standard_name	string	status_flag	The name that identifies the physical quantity is stored.
_FillValue	8-bit unsigned integer	255	Error Value is stored.
coordinates	string	ScanTimeTAI93	Information such as the corresponding latitude and longitude is stored.
flag_masks	array of 32-bit integer	1,2,4,8,16,32,64,128	Setting value of flag is stored.
flag_meanings	string	Interpolation1_to_correct_intereference_in_the_radio_frequency_for_the_satellite_flight_direction Interpolation2_to_correct_intereference_in_the_radio_frequency_for_the_satellite_flight_direction Interpolation3_to_correct_intereference_in_the_radio_frequency_for_the_satellite_flight_direction Interpolation1_to_correct_intereference_in_the_radio_frequency_for_the_scanning_azimuth_direction Interpolation2_to_correct_intereference_in_the_radio_frequency_for_the_scanning_azimuth_direction Interpolation3_to_correct_intereference_in_the_radio_frequency_for_the_scanning_azimuth_direction correction_in_the_radio_frequency_for_the_moonlight_effect CSM_observation_count_drop_off	Meaning of flag is stored.
cell_methods	string	point	Specification of cell

(5) HTSCount

The observed value of the high temperature calibration source (HTS) is stored as a count value. The number of observation data per scan is 16 points other than 89GHz, and 32 points for 89GH. The data set that stores the count value of the high temperature calibration source is the following dataset.

No.	Dataset Name	Explanation
1	HTSCount_Ch06V	Count value of the high temperature calibration source, 6.925GHz Vertical polarization
2	HTSCount_Ch06H	Count value of the high temperature calibration source, 6.925GHz Horizontal polarization
3	HTSCount_Ch07V	Count value of the high temperature calibration source, 7.3GHz Vertical polarization
4	HTSCount_Ch07H	Count value of the high temperature calibration source, 7.3GHz Horizontal polarization
5	HTSCount_Ch10uV	Count value of the high temperature calibration source, 10.25GHz Vertical polarization
6	HTSCount_Ch10uH	Count value of the high temperature calibration source, 10.25GHz Horizontal polarization
7	HTSCount_Ch10V	Count value of the high temperature calibration source, 10.65GHz Vertical polarization
8	HTSCount_Ch10H	Count value of the high temperature calibration source, 10.65GHz Horizontal polarization
9	HTSCount_Ch18V	Count value of the high temperature calibration source, 18.7GHz Vertical polarization
10	HTSCount_Ch18H	Count value of the high temperature calibration source, 18.7GHz Horizontal polarization
11	HTSCount_Ch23V	Count value of the high temperature calibration source, 23.8GHz Vertical polarization
12	HTSCount_Ch23H	Count value of the high temperature calibration source, 23.8GHz Horizontal polarization
13	HTSCount_Ch36V	Count value of the high temperature calibration source, 36.42GHz Vertical polarization
14	HTSCount_Ch36H	Count value of the high temperature calibration source, 36.42GHz Horizontal polarization
15	HTSCount_Ch89AV	Count value of the high temperature calibration source, 89.0GHz-A scan Vertical polarization

No.	Dataset Name	Explanation
16	HTSCount_Ch89AH	Count value of the high temperature calibration source, 89.0GHz-A scan Horizontal polarization
17	HTSCount_Ch89BV	Count value of the high temperature calibration source, 89.0GHz-B scan Vertical polarization
18	HTSCount_Ch89BH	Count value of the high temperature calibration source, 89.0GHz-B scan Horizontal polarization
19	HTSCount_Ch165V	Count value of the high temperature calibration source, 165.5GHz Vertical polarization
20	HTSCount_Ch183r3V	Count value of the high temperature calibration source, 183.3+/-3GHz Vertical polarization
21	HTSCount_Ch183r7V	Count value of the high temperature calibration source, 183.3+/-7GHz Vertical polarization

The maximum value, minimum value, and abnormal value in the dataset are set as follows.

Item	Min. value	Max. value	Abnormal value	Note
HTSCount	-2048	2047	-32767 (missing data value)	Count
			-32768 (abnormal parity value)	

And, the following information is stored in the dataset attributes.

Item	Data type	Setting Value	Explanation
long_name	string	-	Official name is stored.
		HTS Observation Count 6.925GHz V	HTSCount_Ch06V
		HTS Observation Count 6.925GHz H	HTSCount_Ch06H
		HTS Observation Count 7.3GHz V	HTSCount_Ch07V
		HTS Observation Count 7.3GHz H	HTSCount_Ch07H
		HTS Observation Count 10.25GHz V	HTSCount_Ch10uV
		HTS Observation Count 10.25GHz H	HTSCount_Ch10uH
		HTS Observation Count 10.65GHz V	HTSCount_Ch10V
		HTS Observation Count 10.65GHz H	HTSCount_Ch10H
		HTS Observation Count 18.7GHz V	HTSCount_Ch18V
		HTS Observation Count 18.7GHz H	HTSCount_Ch18H
		HTS Observation Count 23.8GHz V	HTSCount_Ch23V
		HTS Observation Count 23.8GHz H	HTSCount_Ch23H

Item	Data type	Setting Value	Explanation
		HTS Observation Count 36.42GHz V	HTSCount_Ch36V
		HTS Observation Count 36.42GHz H	HTSCount_Ch36H
		HTS Observation Count 89.0GHz-A V	HTSCount_Ch89AV
		HTS Observation Count 89.0GHz-A H	HTSCount_Ch89AH
		HTS Observation Count 89.0GHz-B V	HTSCount_Ch89BV
		HTS Observation Count 89.0GHz-B H	HTSCount_Ch89BH
		HTS Observation Count 165.5GHz V	HTSCount_Ch165V
		HTS Observation Count 183.31GHz+/-3GHz V	HTSCount_Ch183r3V
		HTS Observation Count 183.31GHz+/-7GHz V	HTSCount_Ch183r7V
standard_name	string	(blank)	The name that identifies the physical quantity is stored.
units	string	count	Unit is stored.
valid_min	16-bit integer	-2048	Minimum value is stored.
valid_max	16-bit integer	2047	Maximum value is stored.
_FillValue	16-bit integer	-32768	Error Value is stored.
scale_factor	32-bit floating-point	0	Scale factor
add_offset	32-bit floating-point	1	Offset
coordinates	string	ScanTimeTAI93	Corresponding coordinate system
cell_methods	string	point	Specification of cell

(6) HTSCount_Quality

Quality information is stored such as RFI in count values of the high temperature calibration source. The number of data per scan is 16 points other than 89GHz, and 32 points for 89GHz. The data set that stores quality information for the count value of the high temperature calibration source is the following dataset.

No.	Dataset Name	Explanation
1	HTSCount_Ch06V_Quality	Quality information for the count value of the high temperature calibration source, 6.925GHz Vertical polarization
2	HTSCount_Ch06H_Quality	Quality information for the count value of the high temperature calibration source, 6.925GHz Horizontal polarization
3	HTSCount_Ch07V_Quality	Quality information for the count value of the high temperature calibration source, 7.3GHz Vertical polarization
4	HTSCount_Ch07H_Quality	Quality information for the count value of the high temperature calibration source, 7.3GHz Horizontal polarization
5	HTSCount_Ch10uV_Quality	Quality information for the count value of the high temperature calibration source, 10.25GHz Vertical polarization
6	HTSCount_Ch10uH_Quality	Quality information for the count value of the high temperature calibration source, 10.25GHz Horizontal polarization
7	HTSCount_Ch10uV_Quality	Quality information for the count value of the high temperature calibration source, 10.65GHz Vertical polarization
8	HTSCount_Ch10H_Quality	Quality information for the count value of the high temperature calibration source, 10.65GHz Horizontal polarization
9	HTSCount_Ch18V_Quality	Quality information for the count value of the high temperature calibration source, 18.7GHz Vertical polarization
10	HTSCount_Ch18H_Quality	Quality information for the count value of the high temperature calibration source, 18.7GHz Horizontal polarization
11	HTSCount_Ch23V_Quality	Quality information for the count value of the high temperature calibration source, 23.8GHz Vertical polarization
12	HTSCount_Ch23H_Quality	Quality information for the count value of the high temperature calibration source, 23.8GHz Horizontal polarization
13	HTSCount_Ch36V_Quality	Quality information for the count value of the high temperature calibration source, 36.42GHz Vertical polarization
14	HTSCount_Ch36H_Quality	Quality information for the count value of the high temperature calibration source, 36.42GHz Horizontal polarization
15	HTSCount_Ch89AV_Quality	Quality information for the count value of the high temperature calibration source, 89.0GHz-A scan Vertical polarization
16	HTSCount_Ch89AH_Quality	Quality information for the count value of the high temperature calibration source, 89.0GHz-A scan Horizontal polarization

No.	Dataset Name	Explanation
17	HTSCount_Ch89BV_Quality	Quality information for the count value of the high temperature calibration source, 89.0GHz-B scan Vertical polarization
18	HTSCount_Ch89BH_Quality	Quality information for the count value of the high temperature calibration source, 89.0GHz-B scan Horizontal polarization
19	HTSCount_Ch165V_Quality	Quality information for the count value of the high temperature calibration source, 165.5GHz Vertical polarization
20	HTSCount_Ch183r3V_Quality	Quality information for the count value of the high temperature calibration source, 183.3+/-3GHz Vertical polarization
21	HTSCount_Ch183r7V_Quality	Quality information for the count value of the high temperature calibration source, 183.3+/-7GHz Vertical polarization

The following information is stored for each bit as the quality information.

No	Channel	MSB							LSB
		7	6	5	4	3	2	1	0
1	Ch06V	Count value decreasing flag 1:Occurred 0:Not occurred	Fixed as 0 (Not used)	Count value correction flag (scan azimuth direction) 3rd time 1: With correction 0: Without correction	Count value correction flag (scan azimuth direction) 2nd time 1: With correction 0: Without correction	Count value correction flag (scan azimuth direction) 1st time 1: With correction 0: Without correction	Count value correction flag (satellite heading direction) 3rd time 1: With correction 0: Without correction	Count value correction flag (satellite heading direction) 2nd time 1: With correction 0: Without correction	Count value correction flag (satellite heading direction) 1st time 1: With correction 0: Without correction
2	Ch06H								
3	Ch07V								
4	Ch07H								
5	Ch10uV								
6	Ch10uH								
7	Ch10V								
8	Ch10H								
9	Ch18V								
10	Ch18H								
11	Ch23V								
12	Ch23H								
13	Ch36V								
14	Ch36H								
15	Ch89AV								
16	Ch89AH								
17	Ch89BV								
18	Ch89BH								
19	Ch165V								
20	Ch183r3V								
21	Ch183r7V								

And, the following information is stored in the dataset attributes.

Item	Data type	Setting Value	Explanation
long_name	string	-	Official name is stored.
		HTS Observation Count 6.925GHz V (Quality)	HTSCount_Ch06V_Quality
		HTS Observation Count 6.925GHz H (Quality)	HTSCount_Ch06H_Quality
		HTS Observation Count 7.3GHz V (Quality)	HTSCount_Ch07V_Quality
		HTS Observation Count 7.3GHz H (Quality)	HTSCount_Ch07H_Quality
		HTS Observation Count 10.25GHz V (Quality)	HTSCount_Ch10uV_Quality
		HTS Observation Count 10.25GHz H (Quality)	HTSCount_Ch10uH_Quality
		HTS Observation Count 10.65GHz V (Quality)	HTSCount_Ch10V_Quality
		HTS Observation Count 10.65GHz H (Quality)	HTSCount_Ch10H_Quality
		HTS Observation Count 18.7GHz V (Quality)	HTSCount_Ch18V_Quality
		HTS Observation Count 18.7GHz H (Quality)	HTSCount_Ch18H_Quality
		HTS Observation Count 23.8GHz V (Quality)	HTSCount_Ch23V_Quality
		HTS Observation Count 23.8GHz H (Quality)	HTSCount_Ch23H_Quality
		HTS Observation Count 36.42GHz V (Quality)	HTSCount_Ch36V_Quality
		HTS Observation Count 36.42GHz H (Quality)	HTSCount_Ch36H_Quality
		HTS Observation Count 89.0GHz-A V (Quality)	HTSCount_Ch89AV_Quality
		HTS Observation Count 89.0GHz-A H (Quality)	HTSCount_Ch89AH_Quality
		HTS Observation Count 89.0GHz-B V (Quality)	HTSCount_Ch89BV_Quality
		HTS Observation Count 89.0GHz-B H (Quality)	HTSCount_Ch89BH_Quality
		HTS Observation Count 165.5GHz V (Quality)	HTSCount_Ch165V_Quality
		HTS Observation Count 183.31GHz+/-3GHz V (Quality)	HTSCount_Ch183r3V_Quality
		HTS Observation Count 183.31GHz+/-7GHz V (Quality)	HTSCount_Ch183r7V_Quality
standard_name	string	status_flag	The name that identifies the physical quantity is stored.
_FillValue	8-bit unsigned integer	255	Error Value is stored.
coordinates	string	ScanTimeTAI93	Information such as the corresponding latitude and longitude is stored.
flag_masks	array of 32-bit integer	1,2,4,8,16,32,64,128	Setting value of flag is stored.

Item	Data type	Setting Value	Explanation
flag_meanings	string	Interpolation1_to_correct_intereference_in_the_radio_frequency_for_the_satellight_flight_direction Interpolation2_to_correct_intereference_in_the_radio_frequency_for_the_satellight_flight_direction Interpolation3_to_correct_intereference_in_the_radio_frequency_for_the_satellight_flight_direction Interpolation1_to_correct_intereference_in_the_radio_frequency_for_the_scanning_azimuth_direction Interpolation2_to_correct_intereference_in_the_radio_frequency_for_the_scanning_azimuth_direction Interpolation3_to_correct_intereference_in_the_radio_frequency_for_the_scanning_azimuth_direction HTS_observation_count_drop_off	Meaning of flag is stored.
cell_methods	string	Point	Specification of cell

(7) RxOffsetCount

The offset value of each frequency receiver (Rx) measured for each scan is stored. The dataset that stores the Rx offset count value is as follows.

No.	Dataset Name	Explanation
1	RxOffsetCount_Ch06V	Offset count value for 6.925GHz Vertical polarization receiver (Rx)
2	RxOffsetCount_Ch06H	Offset count value for 6.925GHz Horizontal polarization receiver (Rx)
3	RxOffsetCount _Ch07V	Offset count value for 7.3GHz Vertical polarization receiver (Rx)
4	RxOffsetCount_Ch07H	Offset count value for 7.3GHz Horizontal polarization receiver (Rx)
5	RxOffsetCount_Ch10uV	Offset count value for 10.25GHz Vertical polarization receiver (Rx)
6	RxOffsetCount_Ch10uH	Offset count value for 10.25GHz Horizontal polarization receiver (Rx)
7	RxOffsetCount_Ch10V	Offset count value for 10.65GHz Vertical polarization receiver (Rx)
8	RxOffsetCount_Ch10H	Offset count value for 10.65GHz Horizontal polarization receiver (Rx)
9	RxOffsetCount_Ch18V	Offset count value for 18.7GHz Vertical polarization receiver (Rx)
10	RxOffsetCount_Ch18H	Offset count value for 18.7GHz Horizontal polarization receiver (Rx)
11	RxOffsetCount_Ch23V	Offset count value for 23.8GHz Vertical polarization receiver (Rx)
12	RxOffsetCount_Ch23H	Offset count value for 23.8GHz Horizontal polarization receiver (Rx)
13	RxOffsetCount_Ch36V	Offset count value for 36.42GHz Vertical polarization receiver (Rx)

No.	Dataset Name	Explanation
14	RxOffsetCount_Ch36H	Offset count value for 36.42GHz Horizontal polarization receiver (Rx)
15	RxOffsetCount_Ch89AV	Offset count value for 89.0GHz-A scan Vertical polarization receiver (Rx)
16	RxOffsetCount_Ch89AH	Offset count value for 89.0GHz-A scan Horizontal polarization receiver (Rx)
17	RxOffsetCount_Ch89BV	Offset count value for 89.0GHz-B scan Vertical polarization receiver (Rx)
18	RxOffsetCount_Ch89BH	Offset count value for 89.0GHz-B scan Horizontal polarization receiver (Rx)
19	RxOffsetCount_Ch165V	Offset count value for 165.5GHz Vertical polarization receiver (Rx)
20	RxOffsetCount_Ch183r3V	Offset count value for 183.3+/-3GHz Vertical polarization receiver (Rx)
21	RxOffsetCount_Ch183r7V	Offset count value for 183.3+/-7GHz Vertical polarization receiver (Rx)

The maximum value, minimum value, and abnormal value in the dataset are set as follows.

Item	Min. value	Max. value	Abnormal value	Note
RxOffsetCount	0	255	255	Count

*If both RxOffsetCount and RxGainCount are 255, it is determined to be abnormal.

And the following information is stored in the dataset attributes.

Item	Data type	Setting Value	Explanation
long_name	string	-	Official name is stored.
		RX Offset Count 6.925GHz V	For RxOffsetCount_Ch06V
		RX Offset Count 6.925GHz H	For RxOffsetCount_Ch06H
		RX Offset Count 7.3GHz V	For RxOffsetCount_Ch07V
		RX Offset Count 7.3GHz H	For RxOffsetCount_Ch07H
		RX Offset Count 10.25GHz V	For RxOffsetCount_Ch10uV
		RX Offset Count 10.25GHz H	For RxOffsetCount_Ch10uH
		RX Offset Count 10.65GHz V	For RxOffsetCount_Ch10V
		RX Offset Count 10.65GHz H	For RxOffsetCount_Ch10H
		RX Offset Count 18.7GHz V	For RxOffsetCount_Ch18V
		RX Offset Count 18.7GHz H	For RxOffsetCount_Ch18H
		RX Offset Count 23.8GHz V	For RxOffsetCount_Ch23V
		RX Offset Count 23.8GHz H	For RxOffsetCount_Ch23H
		RX Offset Count 36.42GHz V	For RxOffsetCount_Ch36V
		RX Offset Count 36.42GHz H	For RxOffsetCount_Ch36H

Item	Data type	Setting Value	Explanation
		RX Offset Count 89.0GHz-A V	For RxOffsetCount_Ch89AV
		RX Offset Count 89.0GHz-A H	For RxOffsetCount_Ch89AH
		RX Offset Count 89.0GHz-B V	For RxOffsetCount_Ch89BV
		RX Offset Count 89.0GHz-B H	For RxOffsetCount_Ch89BH
		RX Offset Count 165.5GHz V	For RxOffsetCount_Ch165V
		RX Offset Count 183.31GHz+/-3GHz V	For RxOffsetCount_Ch183r3V
		RX Offset Count 183.31GHz+/-7GHz V	For RxOffsetCount_Ch183r7V
standard_name	string	(blank)	The name that identifies the physical quantity is stored.
units	string	count	Unit is stored.
_FillValue	8-bit unsigned integer	255	Error Value is stored.
scale_factor	32-bit floating-point	1	Scale factor
add_offset	32-bit floating-point	0	Offset
coordinates	string	ScanTimeTAI93	Corresponding coordinate system
cell_methods	string	point	Specification of cell

(8) RxGainCount

The gain value of each frequency receiver (Rx) measured for each scan is stored. The dataset that stores the Rx gain count value is as follows.

No.	Dataset Name	Explanation
1	RxGainCount_Ch06V	Gain count value for 6.925GHz Vertical polarization receiver (Rx)
2	RxGainCount_Ch06H	Gain count value for 6.925GHz Horizontal polarization receiver (Rx)
3	RxGainCount _Ch07V	Gain count value for 7.3GHz Vertical polarization receiver (Rx)
4	RxGainCount_Ch07H	Gain count value for 7.3GHz Horizontal polarization receiver (Rx)
5	RxGainCount_Ch10uV	Gain count value for 10.25GHz Vertical polarization receiver (Rx)
6	RxGainCount_Ch10uH	Gain count value for 10.25GHz Horizontal polarization receiver (Rx)
7	RxGainCount_Ch10V	Gain count value for 10.65GHz Vertical polarization receiver (Rx)
8	RxGainCount_Ch10H	Gain count value for 10.65GHz Horizontal polarization receiver (Rx)
9	RxGainCount_Ch18V	Gain count value for 18.7GHz Vertical polarization receiver (Rx)
10	RxGainCount_Ch18H	Gain count value for 18.7GHz Horizontal polarization receiver (Rx)
11	RxGainCount_Ch23V	Gain count value for 23.8GHz Vertical polarization receiver (Rx)
12	RxGainCount_Ch23H	Gain count value for 23.8GHz Horizontal polarization receiver (Rx)
13	RxGainCount_Ch36V	Gain count value for 36.42GHz Vertical polarization receiver (Rx)
14	RxGainCount_Ch36H	Gain count value for 36.42GHz Horizontal polarization receiver (Rx)
15	RxGainCount_Ch89AV	Gain count value for 89.0GHz-A scan Vertical polarization receiver (Rx)
16	RxGainCount_Ch89AH	Gain count value for 89.0GHz-A scan Horizontal polarization receiver (Rx)
17	RxGainCount_Ch89BV	Gain count value for 89.0GHz-B scan Vertical polarization receiver (Rx)
18	RxGainCount_Ch89BH	Gain count value for 89.0GHz-B scan Horizontal polarization receiver (Rx)
19	RxGainCount_Ch165V	Gain count value for 165.5GHz Vertical polarization receiver (Rx)
20	RxGainCount_Ch183r3V	Gain count value for 183.3+/-3GHz Vertical polarization receiver (Rx)
21	RxGainCount_Ch183r7V	Gain count value for 183.3+/-7GHz Vertical polarization receiver (Rx)

The maximum value, minimum value, and abnormal value in the dataset are set as follows.

Item	Min. value	Max. value	Abnormal value	Note
RxGainCount	0	255	255	Count

* If both RxOffsetCount and RxGainCount are 255, it is determined to be abnormal.

And the following information is stored in the dataset attributes.

Item	Data type	Setting Value	Explanation
long_name	string	-	Official name is stored.
		RX Gain Count 6.925GHz V	For RxGainCount_Ch06V
		RX Gain Count 6.925GHz H	For RxGainCount_Ch06H
		RX Gain Count 7.3GHz V	For RxGainCount_Ch07V

Item	Data type	Setting Value	Explanation
		RX Gain Count 7.3GHz H	For RxGainCount_Ch07H
		RX Gain Count 10.25GHz V	For RxGainCount_Ch10uV
		RX Gain Count 10.25GHz H	For RxGainCount_Ch10uH
		RX Gain Count 10.65GHz V	For RxGainCount_Ch10V
		RX Gain Count 10.65GHz H	For RxGainCount_Ch10H
		RX Gain Count 18.7GHz V	For RxGainCount_Ch18V
		RX Gain Count 18.7GHz H	For RxGainCount_Ch18H
		RX Gain Count 23.8GHz V	For RxGainCount_Ch23V
		RX Gain Count 23.8GHz H	For RxGainCount_Ch23H
		RX Gain Count 36.42GHz V	For RxGainCount_Ch36V
		RX Gain Count 36.42GHz H	For RxGainCount_Ch36H
		RX Gain Count 89.0GHz-A V	For RxGainCount_Ch89AV
		RX Gain Count 89.0GHz-A H	For RxGainCount_Ch89AH
		RX Gain Count 89.0GHz-B V	For RxGainCount_Ch89BV
		RX Gain Count 89.0GHz-B H	For RxGainCount_Ch89BH
		RX Gain Count 165.5GHz V	For RxGainCount_Ch165V
		RX Gain Count 183.31GHz+/-3GHz V	For RxGainCount_Ch183r3V
		RX Gain Count 183.31GHz+/-7GHz V	For RxGainCount_Ch183r7V
standard_name	string	(blank)	The name that identifies the physical quantity is stored.
units	string	count	Unit is stored.
_FillValue	8-bit unsigned integer	255	Error Value is stored.
scale_factor	32-bit floating-point	1	Scale factor
add_offset	32-bit floating-point	0	Offset
coordinates	string	ScanTimeTAI93	Corresponding coordinate system
cell_methods	string	point	Specification of cell

(9) Latitude

The latitude of ground observation data with elevation correction is stored. The number of observation data per scan is 243 points other than 89GHz, and 486 points for 89GHz. The dataset that stores the latitude with elevation correction is the following dataset.

No.	Dataset Name	Explanation
1	Latitude_P06	Latitude after elevation correction for 6.925GHz
2	Latitude_P07	Latitude after elevation correction for 7.3GHz
3	Latitude_P10u	Latitude after elevation correction for 10.25GHz
4	Latitude_P10	Latitude after elevation correction for 10.65GHz
5	Latitude_P18	Latitude after elevation correction for 18.7GHz
6	Latitude_P23	Latitude after elevation correction for 23.8GHz
7	Latitude_P36	Latitude after elevation correction for 36.42GHz
8	Latitude_P89A	Latitude after elevation correction for 89.0GHz-A scan
9	Latitude_P89B	Latitude after elevation correction for 89.0GHz-B scan
10	Latitude_P165	Latitude after elevation correction for 165.5GHz
11	Latitude_P183r3	Latitude after elevation correction for 183.3+/-3GHz
12	Latitude_P183r7	Latitude after elevation correction for 183.3+/-7GHz

The maximum value, minimum value, and abnormal value in the dataset are set as follows.

Item	Min. value	Max. value	Abnormal value	Note
Latitude	-90.0	90.0	-9999.0	deg

And the following information is stored in the dataset attributes.

Item	Data type	Setting Value	Explanation
long_name	string	latitude	Official name is stored.
standard_name	string	latitude	The name that identifies the physical quantity is stored.
units	string	degrees_north	Unit is stored.
_FillValue	32-bit floating-point	-9999.0	Offset
scale_factor	32-bit floating-point	1	Scale factor
add_offset	32-bit floating-point	0	Offset
cell_methods	string	point	Specification of cell

(10) Longitude

The longitude of ground observation data with elevation correction is stored. The number of observation data per scan is 243 points other than 89GHz, and 486 points for 89GHz. The data set that stores the longitude with elevation correction is the following dataset.

No.	Dataset Name	Explanation
1	Longitude_P06	Longitude after elevation correction for 6.925GHz
2	Longitude_P07	Longitude after elevation correction for 7.3GHz
3	Longitude_P10u	Longitude after elevation correction for 10.25GHz
4	Longitude_P10	Longitude after elevation correction for 10.65GHz
5	Longitude_P18	Longitude after elevation correction for 18.7GHz
6	Longitude_P23	Longitude after elevation correction for 23.8GHz
7	Longitude_P36	Longitude after elevation correction for 36.42GHz
8	Longitude_P89A	Longitude after elevation correction for 89.0GHz-A scan
9	Longitude_P89B	Longitude after elevation correction for 89.0GHz-B scan
10	Longitude_P165	Longitude after elevation correction for 165.5GHz
11	Longitude_P183r3	Longitude after elevation correction for 183.3+/-3GHz
12	Longitude_P183r7	Longitude after elevation correction for 183.3+/-7GHz

The maximum value, minimum value, and abnormal value in the dataset are set as follows.

Item	Min. value	Max. value	Abnormal value	Unit
Longitude	-180.0	180.0	-9999.0	deg

And the following information is stored in the dataset attributes.

Item	Data type	Setting Value	Explanation
long_name	string	longitude	Official name is stored.
standard_name	string	longitude	The name that identifies the physical quantity is stored.
units	string	degrees_east	Unit is stored.
_FillValue	32-bit floating-point	-9999.0	Offset
scale_factor	32-bit floating-point	1	Scale factor
add_offset	32-bit floating-point	0	Offset
cell_methods	string	point	Specification of cell

(11) LandAreaPercent

The land area percentage (%) of ground observation data is stored. Value calculated using elevation-corrected latitude and longitude is stored as the ground surface observation position. The number of observation data per scan is 243 points except for 89GHz, and 486 points for 89GHz. The dataset that stores the percentage of land area is as follows.

No.	Dataset Name	Explanation
1	LandAreaPercent_P06	Land area percentage for 6.925GHz
2	LandAreaPercent_P07	Land area percentage for 7.3GHz
3	LandAreaPercent_P10u	Land area percentage for 10.25GHz
4	LandAreaPercent_P10	Land area percentage for 10.65GHz
5	LandAreaPercent_P18	Land area percentage for 18.7GHz
6	LandAreaPercent_P23	Land area percentage for 23.8GHz
7	LandAreaPercent_P36	Land area percentage for 36.42GHz
8	LandAreaPercent_P89A	Land area percentage for 89.0GHz-A scan
9	LandAreaPercent_P89B	Land area percentage for 89.0GHz-B scan
10	LandAreaPercent_P165	Land area percentage for 165.5GHz
11	LandAreaPercent_P183r3	Land area percentage for 183.3+/-3GHz
12	LandAreaPercent_P183r7	Land area percentage for 183.3+/-7GHz

The maximum value, minimum value, and abnormal value in the dataset are set as follows.

Item	Min. value	Max. value	Abnormal value	Unit
LandAreaPercent	0	100	255	%

And the following information is stored in the dataset attributes.

Item	Data type	Setting Value	Explanation
long_name	string	-	Official name is stored.
		Land Area Percent (P06)	For LandAreaPercent_P06
		Land Area Percent (P07)	For LandAreaPercent_P07
		Land Area Percent (P10u)	For LandAreaPercent_P10u
		Land Area Percent (P10)	For LandAreaPercent_P10
		Land Area Percent (P18)	For LandAreaPercent_P18
		Land Area Percent (P23)	For LandAreaPercent_P23
		Land Area Percent (P36)	For LandAreaPercent_P36
		Land Area Percent (P89A)	For LandAreaPercent_P89A
		Land Area Percent (P89B)	For LandAreaPercent_P89B

Item	Data type	Setting Value	Explanation
		Land Area Percent (P165)	For LandAreaPercent_P165
		Land Area Percent (P183r3)	For LandAreaPercent_P183r3
		Land Area Percent (P183r7)	For LandAreaPercent_P183r7
standard_name	string	land_area_fraction	Standard name is stored.
units	string	%	Unit is stored.
_FillValue	8-bit unsigned integer	255	Error Value is stored.
scale_factor	32-bit floating-point	1	Scale factor
add_offset	32-bit floating-point	0	Offset
coordinates	string	-	Corresponding coordinate system
		Latitude_P06 Longitude_P06 ScanTimeTAI93	For LandAreaPercent_P06
		Latitude_P07 Longitude_P07 ScanTimeTAI93	For LandAreaPercent_P07
		Latitude_P10u Longitude_P10u ScanTimeTAI93	For LandAreaPercent_P10u
		Latitude_P10 Longitude_P10 ScanTimeTAI93	For LandAreaPercent_P10
		Latitude_P18 Longitude_P18 ScanTimeTAI93	For LandAreaPercent_P18
		Latitude_P23 Longitude_P23 ScanTimeTAI93	For LandAreaPercent_P23
		Latitude_P36 Longitude_P36 ScanTimeTAI93	For LandAreaPercent_P36
		Latitude_P89A Longitude_P89A ScanTimeTAI93	For LandAreaPercent_P89A
		Latitude_P89B Longitude_P89B ScanTimeTAI93	For LandAreaPercent_P89B
		Latitude_P165 Longitude_P165 ScanTimeTAI93	For LandAreaPercent_P165
		Latitude_P183r3 Longitude_P183r3 ScanTimeTAI93	For LandAreaPercent_P183r3

Item	Data type	Setting Value	Explanation
		Latitude_P183r7 Longitude_P183r7 ScanTimeTAI93	For LandAreaPercent_P183r7
cell_methods	string	point	Specification of cell

(12) AreaMeanHeight

Elevation information corresponding to ground observation data is stored. The number of observation data per scan is 243 points except for 89GHz, and 486 points for 89GHz. The datasets that store elevation information are as follows.

No.	Dataset Name	Explanation
1	AreaMeanHeight_P06	Elevation information for 6.925GHz
2	AreaMeanHeight_P07	Elevation information for 7.3GHz
3	AreaMeanHeight_P10u	Elevation information for 10.25GHz
4	AreaMeanHeight_P10	Elevation information for 10.65GHz
5	AreaMeanHeight_P18	Elevation information for 18.7GHz
6	AreaMeanHeight_P23	Elevation information for 23.8GHz
7	AreaMeanHeight_P36	Elevation information for 36.42GHz
8	AreaMeanHeight_P89A	Elevation information for 89.0GHz-A scan
9	AreaMeanHeight_P89B	Elevation information for 89.0GHz-B scan
10	AreaMeanHeight_P165	Elevation information for 165.5GHz
11	AreaMeanHeight_P183r3	Elevation information for 183.3+/-3GHz
12	AreaMeanHeight_P183r7	Elevation information for 183.3+/-7GHz

The maximum value, minimum value, and abnormal value in the dataset are set as follows.

Item	Min. value	Max. value	Abnormal value	Unit
Area Mean Height	0	9000	-32768	m

And the following information is stored in the dataset attributes.

Item	Data type	Setting Value	Explanation
long_name	string	-	Official name is stored.
		Area Mean Height (P06)	For AreaMeanHeight_P06
		Area Mean Height (P07)	For AreaMeanHeight_P07
		Area Mean Height (P10u)	For AreaMeanHeight_P10u
		Area Mean Height (P10)	For AreaMeanHeight_P10
		Area Mean Height (P18)	For AreaMeanHeight_P18
		Area Mean Height (P23)	For AreaMeanHeight_P23
		Area Mean Height (P36)	For AreaMeanHeight_P36

Item	Data type	Setting Value	Explanation
		Area Mean Height (P89A)	For AreaMeanHeight_P89A
		Area Mean Height (P89B)	For AreaMeanHeight_P89B
		Area Mean Height (P165)	For AreaMeanHeight_P165
		Area Mean Height(P183r3)	For AreaMeanHeight_P183r3
		Area Mean Height (P183r7)	For AreaMeanHeight_P183r7
standard_name	string	height	Standard name is stored.
units	string	m	Unit is stored.
_FillValue	16-bit integer	-32768	Error Value is stored.
scale_factor	32-bit floating-point	1	Scale factor is stored.
add_offset	32-bit floating-point	0	Offset is stored.
coordinates	string	-	corresponding latitude and longitude information
		Latitude_P06 Longitude_P06 ScanTimeTAI93	For AreaMeanHeight_P06
		Latitude_P07 Longitude_P07 ScanTimeTAI93	For AreaMeanHeight_P07
		Latitude_P10u Longitude_P10u ScanTimeTAI93	For AreaMeanHeight_P10u
		Latitude_P10 Longitude_P10 ScanTimeTAI93	For AreaMeanHeight_P10
		Latitude_P18 Longitude_P18 ScanTimeTAI93	For AreaMeanHeight_P18
		Latitude_P23 Longitude_P23 ScanTimeTAI93	For AreaMeanHeight_P23
		Latitude_P36 Longitude_P36 ScanTimeTAI93	For AreaMeanHeight_P36
		Latitude_P89A Longitude_P89A ScanTimeTAI93	For AreaMeanHeight_P89A
		Latitude_P89B Longitude_P89B ScanTimeTAI93	For AreaMeanHeight_P89B
		Latitude_P165 Longitude_P165 ScanTimeTAI93	For AreaMeanHeight_P165
		Latitude_P183r3 Longitude_P183r3 ScanTimeTAI93	For AreaMeanHeight_P183r3

Item	Data type	Setting Value	Explanation
		Latitude_P183r7 Longitude_P183r7 ScanTimeTAI93	For AreaMeanHeight_P183r7
cell_methods	string	point	Specification of cell is stored.
positive	string	up	Positive number specification is stored.

(13) EarthAzimuth

The earth azimuth at the ground surface position of ground observation data is stored. The number of observation data per scan is 243 points except for 89GHz, and 486 points for 89GHz. The earth azimuth indicates the angle between the north vector on the observation ground surface and the projected line-of-sight vector defined in Figure 4-2. The data set that stores the earth azimuth angle is as follows.

No.	Dataset Name	Explanation
1	EarthAzimuth_P06	The earth azimuth at the ground surface position of ground observation data for 6.925GHz
2	EarthAzimuth_P07	The earth azimuth at the ground surface position of ground observation data for 7.3GHz
3	EarthAzimuth_P10u	The earth azimuth at the ground surface position of ground observation data for 10.25GHz
4	EarthAzimuth_P10	The earth azimuth at the ground surface position of ground observation data for 10.65GHz
5	EarthAzimuth_P18	The earth azimuth at the ground surface position of ground observation data for 18.7GHz
6	EarthAzimuth_P23	The earth azimuth at the ground surface position of ground observation data for 23.8GHz
7	EarthAzimuth_P36	The earth azimuth at the ground surface position of ground observation data for 36.42GHz
8	EarthAzimuth_P89A	The earth azimuth at the ground surface position of ground observation data for 89.0GHz-A scan
9	EarthAzimuth_P89B	The earth azimuth at the ground surface position of ground observation data for 89.0GHz-B scan
10	EarthAzimuth_P165	The earth azimuth at the ground surface position of ground observation data for 165.5GHz
11	EarthAzimuth_P183r3	The earth azimuth at the ground surface position of ground observation data for 183.3+/-3GHz
12	EarthAzimuth_P183r7	The earth azimuth at the ground surface position of ground observation data for 183.3+/-7GHz

The maximum value, minimum value, and abnormal value in the dataset are set as follows.

Item	Min. value	Max. value	Abnormal value	Unit
EarthAzimuth	-18000	18000	-32768	deg

And the following information is stored in the dataset attributes.

Item	Data type	Setting Value	Explanation
long_name	string	-	Official name is stored.
		Earth Azimuth Angle (P06)	For EarthAzimuth_P06
		Earth Azimuth Angle (P07)	For EarthAzimuth_P07
		Earth Azimuth Angle (P10u)	For EarthAzimuth_P10u
		Earth Azimuth Angle (P10)	For EarthAzimuth_P10
		Earth Azimuth Angle (P18)	For EarthAzimuth_P18
		Earth Azimuth Angle (P23)	For EarthAzimuth_P23
		Earth Azimuth Angle (P36)	For EarthAzimuth_P36
		Earth Azimuth Angle (P89A)	For EarthAzimuth_P89A
		Earth Azimuth Angle (P89B)	For EarthAzimuth_P89B
		Earth Azimuth Angle (P165)	For EarthAzimuth_P165
		Earth Azimuth Angle (P183r3)	For EarthAzimuth_P183r3
		Earth Azimuth Angle (P183r7)	For EarthAzimuth_P183r7
standard_name	string	sensor_azimuth_angle	The name of standard is stored.
units	string	degrees	Unit is stored.
_FillValue	16-bit integer	-32768	Error value is stored.
scale_factor	32-bit floating-point	0.01	Scale factor
add_offset	32-bit floating-point	0	Offset
coordinates	string	-	Corresponding latitude and longitude information
		Latitude_P06 Longitude_P06 ScanTimeTAI93	For EarthAzimuth_P06
		Latitude_P07 Longitude_P07 ScanTimeTAI93	For EarthAzimuth_P07
		Latitude_P10u Longitude_P10u ScanTimeTAI93	For EarthAzimuth_P10u
		Latitude_P10 Longitude_P10 ScanTimeTAI93	For EarthAzimuth_P10

Item	Data type	Setting Value	Explanation
		Latitude_P18 Longitude_P18 ScanTimeTAI93	For EarthAzimuth_P18
		Latitude_P23 Longitude_P23 ScanTimeTAI93	For EarthAzimuth_P23
		Latitude_P36 Longitude_P36 ScanTimeTAI93	For EarthAzimuth_P36
		Latitude_P89A Longitude_P89A ScanTimeTAI93	For EarthAzimuth_P89A
		Latitude_P89B Longitude_P89B ScanTimeTAI93	For EarthAzimuth_P89B
		Latitude_P165 Longitude_P165 ScanTimeTAI93	For EarthAzimuth_P165
		Latitude_P183r3 Longitude_P183r3 ScanTimeTAI93	For EarthAzimuth_P183r3
		Latitude_P183r7 Longitude_P183r7 ScanTimeTAI93	For EarthAzimuth_P183r7
cell_methods	string	point	

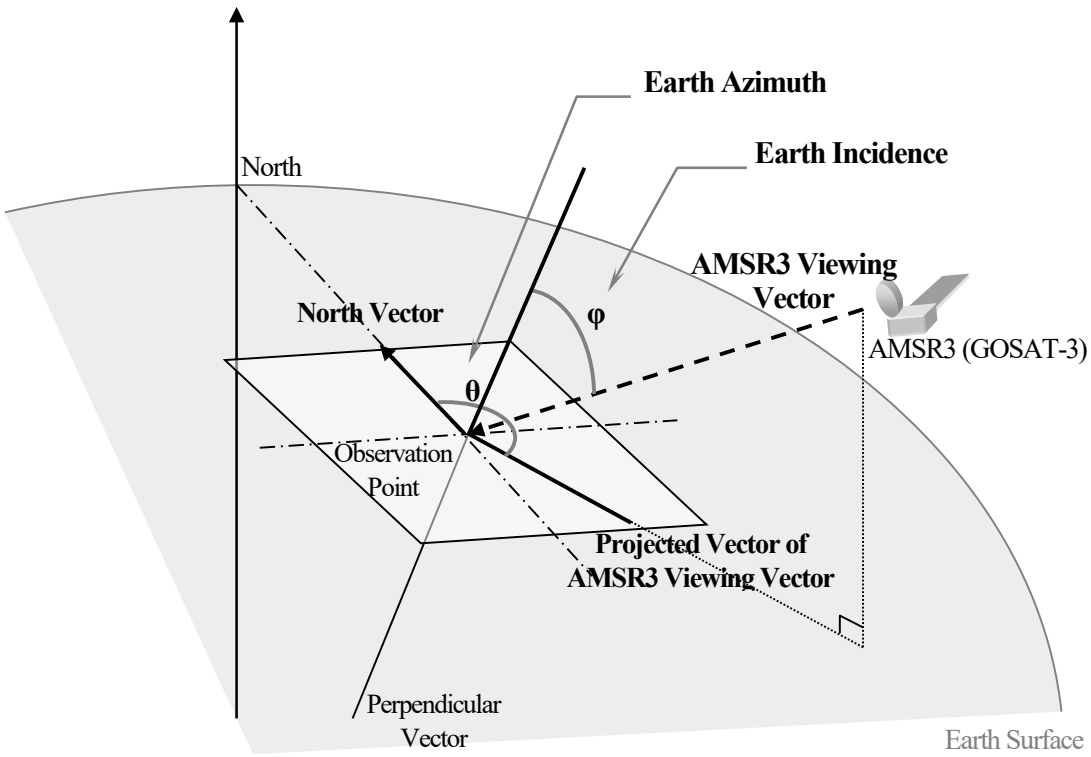


Figure 4-2 Definition of Earth Azimuth, Earth Incidence

(14) EarthIncidence

The earth incidence angle at the ground surface position of ground observation data is stored. The number of observation data per scan is 243 points except for 89GHz, and 486 points for 89GHz. The earth incidence angle indicates the angle between the vertical vector of the ground surface observation point and the line-of-sight vector of AMSR3 defined in Figure 4-2. The data set that stores the earth incidence angle is as follows.

No.	Dataset Name	Explanation
1	EarthIncidence_P06	The earth incidence angle at the ground surface position of ground observation data for 6.925GHz
2	EarthIncidence_P07	The earth incidence angle at the ground surface position of ground observation data for 7.3GHz
3	EarthIncidence_P10u	The earth incidence angle at the ground surface position of ground observation data for 10.25GHz
4	EarthIncidence_P10	The earth incidence angle at the ground surface position of ground observation data for 10.65GHz
5	EarthIncidence_P18	The earth incidence angle at the ground surface position of ground observation data for 18.7GHz
6	EarthIncidence_P23	The earth incidence angle at the ground surface position of ground observation data for 23.8GHz
7	EarthIncidence_P36	The earth incidence angle at the ground surface position of ground observation data for 36.42GHz
8	EarthIncidence_P89A	The earth incidence angle at the ground surface position of ground observation data for 89.0GHz-A scan
9	EarthIncidence_P89B	The earth incidence angle at the ground surface position of ground observation data for 89.0GHz-B scan
10	EarthIncidence_P165	The earth incidence angle at the ground surface position of ground observation data for 165.5GHz
11	EarthIncidence_P183r3	The earth incidence angle at the ground surface position of ground observation data for 183.3+/-3GHz
12	EarthIncidence_P183r7	The earth incidence angle at the ground surface position of ground observation data for 183.3+/-7GHz

The maximum value, minimum value, and abnormal value in the dataset are set as follows.

Item	Min. value	Max. value	Abnormal value	Unit
EarthIncidence	-18000	18000	-32768	deg

And the following information is stored in the dataset attributes.

Item	Data type	Setting Value	Explanation
long_name	string	-	Official name is stored.
		Earth Incidence Angle (P06)	For EarthIncidence_P06
		Earth Incidence Angle (P07)	For EarthIncidence_P07
		Earth Incidence Angle (P10u)	For EarthIncidence_P10u
		Earth Incidence Angle (P10)	For EarthIncidence_P10
		Earth Incidence Angle (P18)	For EarthIncidence_P18
		Earth Incidence Angle (P23)	For EarthIncidence_P23
		Earth Incidence Angle (P36)	For EarthIncidence_P36
		Earth Incidence Angle (P89A)	For EarthIncidence_P89A
		Earth Incidence Angle (P89B)	For EarthIncidence_P89B
		Earth Incidence Angle (P165)	For EarthIncidence_P165
		Earth Incidence Angle (P183r3)	For EarthIncidence_P183r3
		Earth Incidence Angle (P183r7)	For EarthIncidence_P183r7
standard_name	string	sensor_zenith_angle	Standard name is stored.
units	string	degrees	Unit is stored.
_FillValue	16-bit integer	-32768	Error Value is stored.
scale_factor	32-bit floating-point	0.01	Scale factor is stored.
add_offset	32-bit floating-point	0	Offset is added.
coordinates	string	-	corresponding latitude and longitude information
		Latitude_P06 Longitude_P06 ScanTimeTAI93	For EarthIncidence_P06
		Latitude_P07 Longitude_P07 ScanTimeTAI93	For EarthIncidence_P07
		Latitude_P10u Longitude_P10u ScanTimeTAI93	For EarthIncidence_P10u
		Latitude_P10 Longitude_P10 ScanTimeTAI93	For EarthIncidence_P10
		Latitude_P18 Longitude_P18 ScanTimeTAI93	For EarthIncidence_P18
		Latitude_P23 Longitude_P23 ScanTimeTAI93	For EarthIncidence_P23
		Latitude_P36 Longitude_P36 ScanTimeTAI93	For EarthIncidence_P36

Item	Data type	Setting Value	Explanation
		Latitude_P89A Longitude_P89A ScanTimeTAI93	For EarthIncidence_P89A
		Latitude_P89B Longitude_P89B ScanTimeTAI93	For EarthIncidence_P89B
		Latitude_P165 Longitude_P165 ScanTimeTAI93	For EarthIncidence_P165
		Latitude_P183r3 Longitude_P183r3 ScanTimeTAI93	For EarthIncidence_P183r3
		Latitude_P183r7 Longitude_P183r7 ScanTimeTAI93	For EarthIncidence_P183r7
cell_methods	string	point	Specification of cell

(15) SunAzimuth

The sun azimuth angle at the ground surface position of ground observation data is stored. The number of observation data per scan is 243 points except for 89GHz, and 486 points for 89GHz. The sun azimuth angle stores the angle defined in Figure 4-3. The data set that stores the sun azimuth angle is as follows.

No.	Dataset Name	Explanation
1	SunAzimuth_P06	The sun azimuth angle at the ground surface position of ground observation data for 6.925GHz
2	SunAzimuth_P07	The sun azimuth angle at the ground surface position of ground observation data for 7.3GHz
3	SunAzimuth_P10u	The sun azimuth angle at the ground surface position of ground observation data for 10.25GHz
4	SunAzimuth_P10	The sun azimuth angle at the ground surface position of ground observation data for 10.65GHz
5	SunAzimuth_P18	The sun azimuth angle at the ground surface position of ground observation data for 18.7GHz
6	SunAzimuth_P23	The sun azimuth angle at the ground surface position of ground observation data for 23.8GHz
7	SunAzimuth_P36	The sun azimuth angle at the ground surface position of ground observation data for 36.42GHz
8	SunAzimuth_P89A	The sun azimuth angle at the ground surface position of ground observation data for 89.0GHz-A scan
9	SunAzimuth_P89B	The sun azimuth angle at the ground surface position of ground observation data for 89.0GHz-B scan
10	SunAzimuth_P165	The sun azimuth angle at the ground surface position of ground observation data for 165.5GHz
11	SunAzimuth_P183r3	The sun azimuth angle at the ground surface position of ground observation data for 183.3+/-3GHz
12	SunAzimuth_P183r7	The sun azimuth angle at the ground surface position of ground observation data for 183.3+/-7GHz

The maximum value, minimum value, and abnormal value in the dataset are set as follows.

Item	Min. value	Max. value	Abnormal value	Unit
SunAzimuth	-18000	18000	-32768	deg

And the following information is stored in the dataset attributes.

Item	Data type	Setting Value	Explanation
long_name	string	-	Official name is stored.

Item	Data type	Setting Value	Explanation
		Sun Azimuth Angle (P06)	For SunAzimuth_P06
		Sun Azimuth Angle (P07)	For SunAzimuth_P07
		Sun Azimuth Angle (P10u)	For SunAzimuth_P10u
		Sun Azimuth Angle (P10)	For SunAzimuth_P10
		Sun Azimuth Angle (P18)	For SunAzimuth_P18
		Sun Azimuth Angle (P23)	For SunAzimuth_P23
		Sun Azimuth Angle (P36)	For SunAzimuth_P36
		Sun Azimuth Angle (P89A)	For SunAzimuth_P89A
		Sun Azimuth Angle (P89B)	For SunAzimuth_P89B
		Sun Azimuth Angle (P165)	For SunAzimuth_P165
		Sun Azimuth Angle (P183r3)	For SunAzimuth_P183r3
		Sun Azimuth Angle (P183r7)	For SunAzimuth_P183r7
standard_name	string	solar_azimuth_angle	Standard name is stored.
units	string	degrees	Unit is stored.
_FillValue	16-bit integer	-32768	Error Value is stored.
scale_factor	32-bit floating-point	0.01	Scale factor is stored.
add_offset	32-bit floating-point	0	Offset is added.
coordinates	string	-	Corresponding latitude and longitude
		Latitude_P06 Longitude_P06 ScanTimeTAI93	For SunAzimuth_P06
		Latitude_P07 Longitude_P07 ScanTimeTAI93	For SunAzimuth_P07
		Latitude_P10u Longitude_P10u ScanTimeTAI93	For SunAzimuth_P10u
		Latitude_P10 Longitude_P10 ScanTimeTAI93	For SunAzimuth_P10
		Latitude_P18 Longitude_P18 ScanTimeTAI93	For SunAzimuth_P18
		Latitude_P23 Longitude_P23 ScanTimeTAI93	For SunAzimuth_P23
		Latitude_P36 Longitude_P36 ScanTimeTAI93	For SunAzimuth_P36
		Latitude_P89A Longitude_P89A	For SunAzimuth_P89A

Item	Data type	Setting Value	Explanation
		ScanTimeTAI93	
		Latitude_P89B Longitude_P89B ScanTimeTAI93	For SunAzimuth_P89B
		Latitude_P165 Longitude_P165 ScanTimeTAI93	For SunAzimuth_P165
		Latitude_P183r3 Longitude_P183r3 ScanTimeTAI93	For SunAzimuth_P183r3
		Latitude_P183r7 Longitude_P183r7 ScanTimeTAI93	For SunAzimuth_P183r7
cell_methods	string	point	Specification of cell

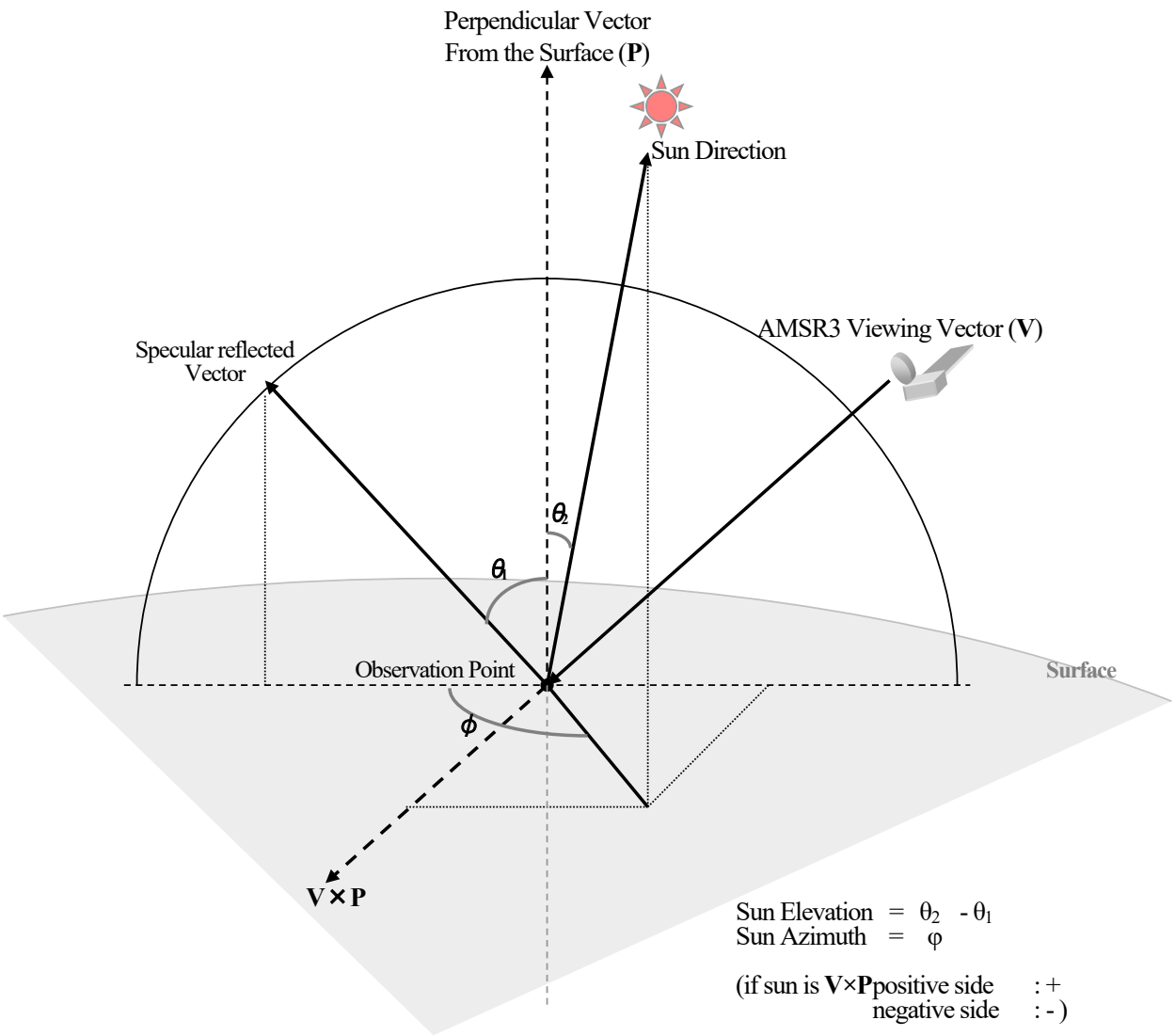


Figure 4-3 Definition of Sun Elevation, Sun Azimuth

(16) SunElevation

The sun elevation angle at the ground surface position of ground observation data is stored. The number of observation data per scan is 243 points except for 89GHz, and 486 points for 89GHz. The sun elevation angle stores the angle defined in Figure 4-3. The data set that stores the sun elevation angle is as follows.

No.	Dataset Name	Explanation
1	SunElevation_P06	The sun elevation angle at the ground surface position of ground observation data for 6.925GHz
2	SunElevation_P07	The sun elevation angle at the ground surface position of ground observation data for 7.3GHz
3	SunElevation_P10u	The sun elevation angle at the ground surface position of ground observation data for 10.25GHz
4	SunElevation_P10	The sun elevation angle at the ground surface position of ground observation data for 10.65GHz
5	SunElevation_P18	The sun elevation angle at the ground surface position of ground observation data for 18.7GHz
6	SunElevation_P23	The sun elevation angle at the ground surface position of ground observation data for 23.8GHz
7	SunElevation_P36	The sun elevation angle at the ground surface position of ground observation data for 36.42GHz
8	SunElevation_P89A	The sun elevation angle at the ground surface position of ground observation data for 89.0GHz-A scan
9	SunElevation_P89B	The sun elevation angle at the ground surface position of ground observation data for 89.0GHz-B scan
10	SunElevation_P165	The sun elevation angle at the ground surface position of ground observation data for 165.5GHz
11	SunElevation_P183r3	The sun elevation angle at the ground surface position of ground observation data for 183.3+/-3GHz
12	SunElevation_P183r7	The sun elevation angle at the ground surface position of ground observation data for 183.3+/-7GHz

The maximum value, minimum value, and abnormal value in the dataset are set as follows.

Item	Min. value	Max. value	Abnormal value	Unit
SunElevation	-18000	18000	-32768	deg

And the following information is stored in the dataset attributes.

Item	Data type	Setting Value	Explanation
long_name	string	-	Official name is stored.
		Sun Elevation Angle (P06)	For SunElevation_P06
		Sun Elevation Angle (P07)	For SunElevation_P07
		Sun Elevation Angle (P10u)	For SunElevation_P10u
		Sun Elevation Angle (P10)	For SunElevation_P10
		Sun Elevation Angle (P18)	For SunElevation_P18
		Sun Elevation Angle (P23)	For SunElevation_P23
		Sun Elevation Angle (P36)	For SunElevation_P36
		Sun Elevation Angle (P89A)	For SunElevation_P89A
		Sun Elevation Angle (P89B)	For SunElevation_P89B
		Sun Elevation Angle (P165)	For SunElevation_P165
		Sun Elevation Angle (P183r3)	For SunElevation_P183r3
		Sun Elevation Angle (P183r7)	For SunElevation_P183r7
standard_name	string	Blank	
units	String	degrees	Unit is stored.
_FillValue	16-bit integer	-32768	Error value is stored.
scale_factor	32-bit floating-point	0.01	Scale factor
add_offset	32-bit floating-point	0	Offset
coordinates	string	-	corresponding latitude and longitude information
		Latitude_P06 Longitude_P06 ScanTimeTAI93	For SunElevation_P06
		Latitude_P07 Longitude_P07 ScanTimeTAI93	For SunElevation_P07
		Latitude_P10u Longitude_P10u ScanTimeTAI93	For SunElevation_P10u
		Latitude_P10 Longitude_P10 ScanTimeTAI93	For SunElevation_P10
		Latitude_P18 Longitude_P18 ScanTimeTAI93	For SunElevation_P18
		Latitude_P23 Longitude_P23 ScanTimeTAI93	For SunElevation_P23
		Latitude_P36 Longitude_P36 ScanTimeTAI93	For SunElevation_P36
		Latitude_P89A Longitude_P89A ScanTimeTAI93	For SunElevation_P89A

Item	Data type	Setting Value	Explanation
		Latitude_P89B Longitude_P89B ScanTimeTAI93	For SunElevation_P89B
		Latitude_P165 Longitude_P165 ScanTimeTAI93	For SunElevation_P165
		Latitude_P183r3 Longitude_P183r3 ScanTimeTAI93	For SunElevation_P183r3
		Latitude_P183r7 Longitude_P183r7 ScanTimeTAI93	For SunElevation_P183r7
cell_methods	string	point	Specification of cell

(17) ScanTimeUTC

The time of the observation start position of 89GHz-A scan in each scan is stored. The maximum value, minimum value, and abnormal value in the dataset are set as follows.

Item	Min. value	Max. value	Abnormal value	Unit
Year	0	9999	32767	Year
Month	1	12	32767	Month
Day	1	31	32767	Day
Hour	0	23	32767	Hour
Minute	0	59	32767	Minute
Second	0	59	32767	Second
Millisecond	0	999	32767	Millisecond

And the following information is stored in the dataset attributes.

Item	Data type	Setting Value	Explanation
long_name	string	Scan Time (UTC)	Official name is stored.
standard_name	string	(blank)	Standard name is stored.
units	string	{Year,Month,Day,Hour,Minute, Second,Millisecond}	Unit is stored.
_FillValue	16-bit integer	-32768	Error Value is stored.
scale_factor	32-bit floating-point	1	Scale factor is stored.
add_offset	32-bit floating-point	0	Offset is added.
coordinates	string	ScanTimeTAI93	Corresponding latitude and longitude
cell_methods	string	point	Specification of cell

(18) ScanTimeTAI93

The total seconds of the observation start position of 89GHz-A scan in each scan is stored. The maximum value, minimum value, and abnormal value in the dataset are set as follows.

Item	Min. value	Max. value	Abnormal value	Unit
sec	0.0	-	-9999.0	Second

And the following information is stored in the dataset attributes.

Item	Data Type	Setting value	Explanation
long_name	string	time	Official name is stored.
standard_name	string	time	Standard name is stored.
units	string	seconds since 1993-01-01T00:00:00Z	Unit is stored.
_FillValue	64-bit floating-point	-9999.0	Error Value is stored.
scale_factor	64-bit floating-point	1	Scale factor is stored.
add_offset	64-bit floating-point	0	Offset is added.
calendar	string	gregorian	The calendar definition is stored.
cell_methods	string	point	Specification of cell

(19) ScanDataQuality

Quality information for each scan is stored.

The following information is stored for each bit as the quality information.

MSB							LSB
7	6	5	4	3	2	1	0
Antenna rotation velocity 1: Abnormal 0:Normal	Temperature of high temperature calibration source 1: Abnormal 0:Normal	Attitude angle and attitude angular velocity 1: Abnormal 0:Normal	Orbit position and velocity 1: Abnormal 0:Normal	Missing scan (missing packet / missing data) 1: Abnormal 0:Normal	Fixed as 0 (not used)	Fixed as 0 (not used)	Fixed as 0 (not used)

And the following information is stored in the dataset attributes.

Item	Data type	Setting Value	Explanation
long_name	string	Scan Data Quality Flag	Official name is stored.
standard_name	string	status_flag	Standard name is stored.
_FillValue	8-bit unsigned integer	255	Error Value is stored.
coordinates	string	ScanTimeTAI93	corresponding latitude and longitude information
flag_masks	array of 32-bit integer	8,16,32,64,128	Setting value of flag is stored.
flag_meanings	string	missing_packet_or_data navigation_error attitude_error HTS_temperature_error antenna_rotation_error	Meaning of flag is stored.
cell_methods	string	point	Specification of cell

(20) TbCal

Quality information and supplementary information for observation data and calculation results per scan are stored.

The angle between the moon and CSM for each frequency and polarization is stored as Angular Direction of Moon according to the CSM observation timing. This indicates that if the angle between the moon and the CSM falls below a certain level, the moon may be reflected in the CSM.

The corrected average count value of low temperature calibration source, the corrected average count value of high temperature calibration source, low temperature calibration source temperature, high temperature calibration source temperature, and the Rx temperature used when converting ground observation count values to brightness temperature are stored as Calibration Data for each frequency and polarization.

Calibration HTS Temperature Data stores the corrected temperature values because the temperature measured by the HTS Temperature sensor is not accurate. The correction uses SPC temperature information (SPCTemperatureCount, Figure 3-29, No.16 or No.17). The brightness temperature is calculated using the Calibrated HTS Temperature Data.

The SPC temperature to be used is determined as follows:

- If the 7th bit of SPC ON/OFF2 (ObservationSupplement, Figure 3-27, No.12) is set to 1, use the SPC temperature from SPCTemperatureCount No.16.
- If the 8th bit is set to 1, use the SPC temperature from SPCTemperatureCount No.17.

Detail format is described Figure 3-22 and Figure 3-23.

And the following information is stored in the dataset attributes.

Item	Data type	Setting value	Explanation
long_name	string	Tb Cal	Official name is stored.
standard_name	string	(blank)	The name of standard is stored.
units	string	(blank)	Unit is stored.
_FillValue	32-bit floating-point	-9999.0	Error value is stored.
scale_factor	32-bit floating-point	1	Scale factor
add_offset	32-bit floating-point	0	Offset
coordinates	string	ScanTimeTAI93	Corresponding latitude and longitude
cell_methods	string	point	Specification of cell

(21) AttitudeData

Attitude errors (Roll, Pitch, Yaw) are stored as attitude information corresponding to the observation start time (Scan_Time) of each scan. The coordinate system for the attitude error is a right-handed system where Roll is in the satellite's heading direction and Yaw is in the center of the earth direction.

And the following information is stored in the dataset attributes.

Item	Data Type	Setting value	Explanation
long_name	string	Attitude Data	Official name is stored.
standard_name	string	(blank)	Standard name is stored.
units	string	degrees	Unit is stored.
_FillValue	32-bit floating-point	-9999.0	Error Value is stored.
scale_factor	32-bit floating-point	1	Scale factor is stored.
add_offset	32-bit floating-point	0	Offset is stored.
coordinates	string	ScanTimeTAI93	Corresponding latitude and longitude
cell_methods	string	point	Specification of cell

(22) NavigationData

Satellite orbit information in the WGS84 earth-fixed coordinate system is stored. The orbit information is the position and velocity of the satellite corresponding to the observation start time (Scan_Time) of each scan.

And the following information is stored in the dataset attributes.

Item	Data Type	Setting value	Explanation
long_name	string	Navigation Data	Official name is stored.
standard_name	string	(blank)	Standard name is stored.
units	string	m,m/s	Unit is stored.
_FillValue	32-bit floating-point	-9999.0	Error Value is stored.
scale_factor	32-bit floating-point	1	Scale factor
add_offset	32-bit floating-point	0	Offset
coordinates	string	ScanTimeTAI93	Corresponding latitude and longitude
cell_methods	string	point	Specification of cell

(23) PositionInOrbit

The position on the satellite orbit is stored. The position of a satellite is a value expressed by the orbit number and the position from the ascending node (satellite position) from 0 to 1.

Position_in_Orbit = orbit number + satellite position

The maximum value, minimum value, and abnormal value in the dataset are set as follows.

Item	Min. value	Max. value	Abnormal value	Unit
PositionInOrbit	0	999999.9999	-9999.0	N/A

And the following information is stored in the dataset attributes.

Item	Data Type	Setting value	Explanation
long_name	string	Position in Orbit	Official name is stored.
standard_name	string	(blank)	Standard name is stored.
units	string	(blank)	Unit is stored.
_FillValue	64-bit floating-point	-9999.0	Error Value is stored.
scale_factor	64-bit floating-point	1	Scale factor is stored.
add_offset	64-bit floating-point	0	Offset is added.
coordinates	string	ScanTimeTAI93	Corresponding latitude and longitude
cell_methods	string	point	Specification of cell

(24) ObservationSupplement

Supplemental observation information is stored such as H/W status corresponding to the observation of each scan. If the value is missing, 1 is stored in all bits.

And the following information is stored in the dataset attributes.

Item	Data type	Setting value	Explanation
long_name	string	Position in Orbit	Official name is stored.
standard_name	string	(blank)	The name of standard is stored.
units	string	(blank)	Unit is stored.
_FillValue	8-bit unsigned integer	255	Error value is stored.
scale_factor	8-bit unsigned integer	1	Scale factor
add_offset	8-bit unsigned integer	0	Offset
coordinates	string	ScanTimeTAI93	Corresponding latitude and longitude
cell_methods	string	point	Specification of cell

(25) PCDData

PCD data is stored as raw data. If the value is missing, 1 is stored in all bits.

And the following information is stored in the dataset attributes.

Item	Data type	Setting value	Explanation
long_name	string	PCD Data	Official name is stored.
standard_name	string	(blank)	Standard name is stored.
units	string	(blank)	Unit is stored.
_FillValue	8-bit unsigned integer	255	Error Value is stored.
scale_factor	8-bit unsigned integer	1	Scale factor
add_offset	8-bit unsigned integer	0	Offset
coordinates	string	ScanTimeTAI93	Corresponding latitude and longitude
cell_methods	string	point	Specification of cell

(26) SPCTemperatureCount

Raw data of SPC (Signal Processor Control unit)'s temperature measured for each scan is stored as the 10-bit and 12-bit values.

If the value is missing, 1 is stored in all bits.

And the following information is stored in the dataset attributes.

Item	Data type	Setting value	Explanation
long_name	string	SPC Temperature Count	Official name is stored.
standard_name	string	(blank)	Standard name is stored.
units	string	Count	Unit is stored.
_FillValue	16-bit unsigned integer	65535	Error Value is stored.
scale_factor	8-bit unsigned integer	1	Scale factor
add_offset	8-bit unsigned integer	0	Offset
coordinates	string	ScanTimeTAI93	Corresponding latitude and longitude
cell_methods	string	point	Specification of cell

(27) SPSTemperatureCount

Raw data of SPS (Signal Processor Sensor unit)'s temperature measured for each scan is stored as the 10-bit and 12-bit values.

If the value is missing, 1 is stored in all bits.

And the following information is stored in the dataset attributes.

Item	Data type	Setting value	Explanation
long_name	string	SPS Temperature Count	Official name is stored.
standard_name	string	(blank)	Standard name is stored.
units	string	Count	Unit is stored.
_FillValue	16-bit unsigned integer	65535	Error Value is stored.
scale_factor	8-bit unsigned integer	1	Scale factor
add_offset	8-bit unsigned integer	0	Offset
coordinates	string	ScanTimeTAI93	Corresponding latitude and longitude
cell_methods	string	point	Specification of cell