

### Class 00 - BUFR/CREX table entries

[illegible]

## Class 01 - Identification

TABLE REFERENCE F X Y	ELEMENT NAME	UNIT	SCALE	BUFR		DATA WIDTH (Bits)	UNIT	CREX		Status
				REFERENCE	VALUE			SCALE	DATA WIDTH (Characters)	
0 01 040	Processing centre id code	CCITT IA5	0	0		48	Character	0	6	Validation
0 01 079	Unique identifier for the profile	CCITT IA5	0	0		64	Character	0	8	Validation
0 01 097	Star catalog number	Numeric	0	0		13	Numeric	0	4	Validation
0 01 098	Type of product	Code table	0	0		12	Code table	0	4	Validation
0 01 103	IMO Number. Unique Lloyd's registry	Numeric	0	0		14	Numeric	0	5	Validation
0 01 113	Template version number defined by originating centre	Numeric	1	0		9	Numeric	1	3	Validation

## Class 02 - Instrumentation

TABLE REFERENCE F X Y	ELEMENT NAME	UNIT	SCALE	BUFR REFERENCE VALUE	DATA WIDTH (Bits)	UNIT	CREX SCALE	DATA WIDTH (Characters)	Status
0 02 007	Type of sensor for water level measuring instrument	Code table	0	0	4	Code table	0	2	Validation
0 02 098	Type of wave sensor	Code table	0	0	4	Code table	0	2	Validation
0 02 139	SIRAL instrument configuration	Code table	0	0	2	Code table	0	1	Validation
0 02 147	Method of transmission to collection centre	Code table	0	0	7	Code table	0	2	Validation
0 02 171	Instrument serial number for water temperature profile measurement	CCITT IA5	0	0	64	CCITT IA5	0	8	Validation

Class 04 - Location (time)

TABLE REFERENCE F X Y	ELEMENT NAME	UNIT	SCALE	BUFR	DATA WIDTH (Bits)	UNIT	CREX	DATA WIDTH (Characters)	Status
				REFERENCE VALUE			SCALE		
0 04 008	Seconds within a minute (high accuracy)	s	7	0	30				Validation

Class 07 - Location (vertical)

TABLE REFERENCE F X Y			ELEMENT NAME		UNIT	SCALE	BUFR REFERENCE VALUE	DATA WIDTH (Bits)	UNIT	CREX SCALE	DATA WIDTH (Characters)	Status
0	07	011	Pressure (high precision)		Pa	0	0	30	Pa	0	10	Validation

## Class 08 - Significance qualifiers

TABLE REFERENCE F X Y	ELEMENT NAME	UNIT	SCALE	BUFR REFERENCE VALUE	DATA WIDTH (Bits)	UNIT	SCALE	DATA WIDTH (Characters)	Status
0 08 015	Significance qualifier for sensor	Code table	0	0	3	Code table	0	1	Validation
0 08 027	Matrix geometry	Code table	0	0	6	Code table	0	2	Validation
0 08 032	Status of operation	Code table	0	0	4	Code table	0	2	Validation
0 08 044	CAS registry number	CCITT IA5	0	0	88	Character	0	11	Validation
0 08 045	Particulate matter characterization	Code table	0	0	8	Code table	0	3	Validation

Class 10 - Non-coordinate location (vertical)

TABLE REFERENCE F X Y	ELEMENT NAME	UNIT	SCALE	BUFR	DATA WIDTH (Bits)	UNIT	CREX	DATA WIDTH (Characters)	Status
				REFERENCE VALUE			SCALE		
0 10 079	Off nadir angle of the satellite from platform data	°	4	0	16	°	4	5	Validation

## Class 11 - Wind and turbulence

[illegible]



Class 12 - Temperature

TABLE REFERENCE F X Y	ELEMENT NAME	BUFR			DATA WIDTH (Bits)	UNIT	CREX		Status
		UNIT	SCALE	REFERENCE VALUE			SCALE	DATA WIDTH (Characters)	
0 12 060	AWS enclosure internal temperature	K	1	0	12	°C	1	3	Validation

## Class 13 - Hydrographic and hydrological elements

[illegible]

## Class 14 - Radiation and radiance

TABLE REFERENCE F X Y	ELEMENT NAME	UNIT	SCALE	BUFR	DATA WIDTH (Bits)	UNIT	CREX	DATA WIDTH (Characters)	Status
				REFERENCE VALUE			SCALE		
0 14 071	Global UV spectral irradiance (see Note x)	W m-2 nm-1	6	-1048576	21	W m-2 nm-1	6	7	Validation
0 14 073	Global erythema irradiation (see Note x+1)	J m-2	-3	-32	6	J m-2	-3	2	Validation

### Notes:

(x) Global UV spectral irradiance (0 14 071) is UV flux density for individual wavelengths specified. 0 14 071 shall be preceded by 0 02 071 (Spectrographic wavelength).

(x+1) Global erythema irradiation (0 14 073) is UV energy weighted by the CIE Action Spectrum integrated over period specified. 0 14 073 shall be preceded by a time period descriptor, 0 02 071 (Spectrographic wavelength) and 0 02 072 (Spectrographic width).

## Class 15 - Physical/chemical constituents

TABLE REFERENCE F X Y	ELEMENT NAME	UNIT	SCALE	BUFR REFERENCE VALUE	DATA WIDTH (Bits)	UNIT	SCALE	DATA WIDTH (Characters)	Status
0 15 007	Molecular mass	<i>u</i>	2	0	15	<i>u</i>	2	5	Validation
0 15 009	Integrated number density	<i>m-2</i>	0	0	10	<i>m-2</i>	0	4	Validation
0 15 010	Partial pressure	<i>Pa</i>	0	0	10	<i>Pa</i>	0	4	Validation
0 15 022	Integrated number density	<i>m-3</i>	0	0	10	<i>m-3</i>	0	4	Validation
0 15 023	Mass density	<i>kg m-3</i>	0	0	10	<i>kg m-3</i>	0	4	Validation
0 15 028	Photo dissociation rate	<i>s-1</i>	0	0	10	<i>s-1</i>	0	4	Validation
0 15 040	Particulate matter diameter	<i>m</i>	8	0	9	<i>m</i>	8	3	Validation
0 15 043	Number of averaging kernel layers	<i>Numeric</i>	0	0	10	<i>Numeric</i>	0	4	Validation
0 15 044	Averaging kernel value	<i>Numeric</i>	6	-5000000	24	<i>Numeric</i>	6	8	Validation
0 15 045	Sulfur dioxide	<i>DU</i>	0	0	10	<i>DU</i>	0	4	Validation
0 15 046	Volcano contamination index	<i>Numeric</i>	0	0	10	<i>Numeric</i>	0	4	Validation
0 15 049	Aerosol Angstrom wavelength exponent	<i>Numeric</i>	4	0	16	<i>Numeric</i>	0	5	Validation

## Class 20 - Observed phenomena

TABLE REFERENCE F X Y	ELEMENT NAME	UNIT	SCALE	BUFR		DATA WIDTH (Bits)	UNIT	CREX		Status
				REFERENCE VALUE				SCALE	DATA WIDTH (Characters)	
0 20 032	Rate of ice accretion	Code table	0	0		3	Code table	0	1	Operational
<i>0 20 079</i>	<i>Snow/Ice crystals indicator</i>	<i>Flag table</i>	<i>0</i>	<i>0</i>		<i>2</i>	<i>Flag table</i>	<i>0</i>	<i>1</i>	<i>Validation</i>
<i>0 20 080</i>	<i>Cloud amount percentage interval</i>	<i>Code table</i>	<i>0</i>	<i>0</i>		<i>3</i>	<i>Code table</i>	<i>0</i>	<i>1</i>	<i>Validation</i>
<i>0 20 137</i>	<i>Evolution of clouds</i>	<i>Code table</i>	<i>0</i>	<i>0</i>		<i>4</i>	<i>Code table</i>	<i>0</i>	<i>2</i>	<i>Validation</i>

*[Validation] (x) A true direction from which a phenomenon or clouds are moving value 0 shall indicate "at the station" whereas value 500 shall indicate "all directions".*

## Class 21 - Radar data

TABLE REFERENCE F X Y	ELEMENT NAME	UNIT	SCALE	BUFR	DATA WIDTH (Bits)	UNIT	CREX	DATA WIDTH (Characters)	Status
				REFERENCE VALUE			SCALE		
0 21 176	High frequency variability correction	m	3	0	16	m	3	5	Validation
0 21 177	Corrected OCOG backscatter coefficient	dB	2	0	16	dB	2	5	Validation
0 21 178	Std of 20 Hz OCOG backscatter coefficient	dB	2	0	16	dB	2	5	Validation
0 21 179	Number of 20 Hz valid points for OCOG backscatter coefficient	Numeric	0	0	16	Numeric	0	5	Validation
0 21 180	Number of 20 Hz valid points for ocean backscatter coefficient	Numeric	0	0	8	Numeric	0	3	Validation
0 21 181	20 Hz ocean backscatter coefficient	dB	2	0	16	dB	2	5	Validation
0 21 182	20 Hz Ku band peakiness	Numeric	3	0	16	Numeric	3	5	Validation

## Class 22 - Oceanographic elements

TABLE REFERENCE F X Y	ELEMENT NAME	UNIT	SCALE	BUFR	DATA WIDTH (Bits)	UNIT	CREX	DATA WIDTH (Characters)	Status
				REFERENCE VALUE			SCALE		
0 22 142	Square of significant wave height	m2	3	-33554432	26	m2	3	8	Validation
0 22 143	Std of 20 Hz SWH-squared	m2	3	-8388608	24	m2	3	8	Validation
0 22 144	Number of 20 Hz valid points for SWH squared	Numeric	0	0	9	Numeric	0	3	Validation
0 22 145	Std of 20 Hz ocean range	m	3	-33554432	31	m	3	10	Validation
0 22 146	OCOG range	m	3	0	31	m	3	10	Validation
0 22 147	Std of 20 Hz OCOG range	m	3	-8388608	31	m	3	10	Validation
0 22 148	Number of 20 Hz valid points for ocean range	Numeric	0	0	9	Numeric	0	3	Validation
0 22 149	20 Hz significant wave height squared	m2	3	-33554432	26	m2	3	8	Validation
0 22 177	Height of XBT/XCTD launcher	m	1	0	9	m	0	3	Validation
0 22 178	XBT/XCTD launcher type	Code table	0	0	8	Code table	0	3	Validation
0 22 179	Software version of profile recorder	CCITT IA5	0	0	256	Character	0	256	Validation
0 22 180	Auto launcher software version number	CCITT IA5	0	0	256	Character	0	256	Validation
0 22 181	Instrument manufacturer's serial number	CCITT IA5	0	0	32	Character	0	32	Validation
0 22 186	Direction from which waves are coming	degree true	0	0	9	degree true	0	3	Validation
0 22 187	Directional spread of wave	°	0	0	9	°	0	3	Validation

## Class 23 - Dispersal and transport

[illegible]



## Class 24 - Radiological elements

[illegible]

## Class 25 - Processing information

TABLE REFERENCE F X Y	ELEMENT NAME	UNIT	SCALE	BUFR		DATA WIDTH (Bits)	UNIT	CREX		Status
				REFERENCE VALUE	SCALE			DATA WIDTH (Characters)		
0 25 144	Matrix dimension (i axis)	Numeric	0	0		9	Numeric	0	3	Validation
0 25 145	Matrix dimension (j axis)	Numeric	0	0		9	Numeric	0	3	Validation
0 25 151	Star relative magnitude	Numeric	3	-20000		14	Numeric	3	5	Validation
0 25 152	Star brightness temperature	K	0	0		17	K	0	6	Validation
0 25 153	Limb	Code table	0	0		2	Code table	0	1	Validation
0 25 180	LRM mode per cent	%	2	0		16	%	2	5	Validation
0 25 181	L2 processing flag	Code table	0	0		2	Code table	0	1	Validation
0 25 182	L1 processing flag	Code table	0	0		2	Code table	0	1	Validation
0 25 183	L1 processing quality	%	2	0		14	%	2	5	Validation
0 25 184	L2 product status	Code table	0	0		2	Code table	0	1	Validation

Class 33 - Quality information

TABLE REFERENCE F X Y	ELEMENT NAME	UNIT	SCALE	BUFR		DATA WIDTH (Bits)	UNIT	CREX		Status
				REFERENCE	VALUE			SCALE	DATA WIDTH (Characters)	
0 33 009	Relative error	%	2	0		14	%	2	5	Validation
0 33 084	Pixel level quality flags	Flag table	0	0		16	Flag table	0	6	Validation
0 33 085	Aerosol optical thickness quality flags	Flag table	0	0		18	Flag table	0	6	Validation
0 33 086	Quality of pixel level retrieval	Code table	0	0		3	Code table	0	1	Validation
0 33 087	Extent of satellite within south Atlantic anomaly (based on climatological data)	Code table	0	0		4	Code table	0	1	Validation