

CODE TABLES AND FLAG TABLES ASSOCIATED WITH BUFR/CREX TABLE B

Notes: (see)

0 01 003

WMO Region number/geographical area

Code figure		Status
0	Antarctica	Operational
1	Region I	Operational
2	Region II	Operational
3	Region III	Operational
4	Region IV	Operational
5	Region V	Operational
6	Region VI	Operational
7	Missing value	Operational

0 01 007

Satellite identifier

(See common Code table C-5 Part C/c.)

Status
Operational

0 01 024

Wind Speed source

Code figure		Status
0	No wind speed data available	Operational
1	AMSRE data	Operational
2	TMI data	Operational
3	NWP: ECMWF	Operational
4	NWP: UK Met Office	Operational
5	NWP: NCEP	Operational
6	Reference climatology	Operational
7	ERS Scatterometer	Operational
8-30	Reserved for future use	Operational
31	Missing value	Operational

0 01 028

Aerosol optical Depth (AOD) source

Code figure		Status
0	No AOD data available	Operational
1	NESDIS	Operational
2	NAVOCEANO	Operational
3	NAAPS	Operational
4	MERIS	Operational
5	AATSR	Operational
6-30	Reserved for future use	Operational
31	Missing value	Operational

0 01 029

SSI Source

Code figure		Status
0	No SSI data available	Operational
1	MSG SEVIRI	Operational

Code figure		Status
2	GOES East	Operational
3	GOES West	Operational
4	ECMWF	Operational
5	NCEP	Operational
6	UK Met Office	Operational
7-30	Reserved for future use	Operational
31	Missing value	Operational

0 01 031

Identification of originating/generating centre (see Note 10)

(See common Code table C-1 in Part C/c.)

Status
Operational

0 01 033

Identification of originating/generating centre

(See common Code table C-1 in Part C/c.)

Status
Operational

0 01 034

Identification of originating/generating sub-centre

(To be defined by centres themselves - See common Code table C-12 in Part C/c.)

Status
Operational

0 01 036

Agency in charge of operating the observing platform

Code figure		Status
0-036000	Reserved	Operational
036001	Australia, Bureau of Meteorology (BOM)	Operational
036002	Australia, Joint Australian Facility for Ocean Observing Systems (JAFOOS)	Operational
036003	Australia, the Commonwealth Scientific and Industrial Research Organisation (CSIRO)	Operational
036004-124000	Reserved	Operational
124001	Canada, Marine Environmental Data Service (MEDS)	Operational
124002	Canada, Institute of Ocean Sciences (IOS)	Operational
124003-156000	Reserved	Operational
156001	China, The State Oceanic Administration	Operational
156002	China, Second Institute of Oceanography State Oceanic Administration	Operational
156003	China, Institute of Ocean Technology	Operational
156004-250000	Reserved	Operational
250001	France, Institut de Recherche pour le Développement (IRD)	Operational
250002	France, Institut Français de Recherche pour l'Exploitation de la mer (IFREMER)	Operational
250003-276000	Reserved	Operational
276001	Germany, Bundesamt fuer Seeschifffahrt und Hydrographie (BSH)	Operational
276002	Germany, Institut fuer Meereskunde, Kiel	Operational
276003-356000	Reserved	Operational
356001	India, National Institute of Oceanography (NIO)	Operational
356002	India, National Institute for Ocean Technology (NIOT)	Operational
356003	India, National Centre for Ocean Information Service	Operational

Code figure		Status
356004-392000	Reserved	Operational
392001	Japan, Japan Meteorological Agency (JMA)	Operational
392002	Japan, Frontier Observational Research System for Global Change	Operational
392003	Japan, Japan Marine Science and Technology Centre (JAMSTEC)	Operational
392004-410000	Reserved	Operational
410001	Republic of Korea, Seoul National University	Operational
410002	Republic of Korea, Korea Ocean Research and Development Institute (KORDI)	Operational
410003	Republic of Korea, Meteorological Research Institute	Operational
410004-540000	Reserved	Operational
540001	New Caledonia, Institut de Recherche pour le Développement (IRD)	Operational
540002-554000	Reserved	Operational
554001	New Zealand, National Institute of Water and Atmospheric Research (NIWA)	Operational
554002-64300	Reserved	Operational
643001	Russia, State Oceanographic Institute of	Operational
643002	Russia, Federal Service for Hydrometeorology and Environmental Monitoring	Operational
643003-724000	Reserved	Operational
724001	Spain, Instituto Español de Oceanografía	Operational
724002-826000	Reserved	Operational
826001	United Kingdom, Hydrographic Office	Operational
826002	United Kingdom, Southampton Oceanography Centre (SOC)	Operational
826003-840000	Reserved	Operational
840001	USA, NOAA Atlantic Oceanographic and Meteorological Laboratories (AOML)	Operational
840002	USA, NOAA Pacific Marine Environmental Laboratories (PMEL)	Operational
840003	USA, Scripps Institution of Oceanography (SIO)	Operational
840004	USA, Woods Hole Oceanographic Institution (WHOI)	Operational
840005	USA, University of Washington	Operational
840006	USA, Naval Oceanographic Office	Operational
840007-1048574	Reserved	Operational
1048575	Missing value	Operational

0 01 038

Source of Sea Ice Fraction

Code figure		Status
0	No sea ice set	Operational
1	NSIDC SSM/I Cavalieri et al (1992)	Operational
2	AMSR-E	Operational
3	ECMWF	Operational
4	CMS (France) cloud mask used by Medspiration	Operational
5	EUMETSAT OSI-SAF	Operational
6-30	Reserved for future use	Operational
31	Missing value	Operational

0 01 052

Platform transmitter ID

Code figure		Status
0	Primary	Pre-operational
1	Secondary	Pre-operational

Code figure		Status
2	Reserved	Pre-operational
3	Missing value	Pre-operational

0 01 090

Technique for making up initial perturbations

Code figure		Status
0	Lagged-Average Forecasting (LAF)	Operational
1	Breeding	Operational
2	Singular vectors	Operational
3	Multiple analysis cycles	Operational
4-191	Reserved	Operational
192-254	Reserved for local use	Operational
255	Missing value	Operational

0 01 092

Type of ensemble forecast

Code figure		Status
0	Unperturbed high-resolution control forecast	Operational
1	Unperturbed low-resolution control forecast	Operational
2	Negatively perturbed forecast	Operational
3	Positively perturbed forecast	Operational
4-191	Reserved	Operational
192-254	Reserved for local use	Operational
255	Missing value	Operational

0 01 101

State identifier

Code figure		Status
0-99	Reserved	Operational
100	Algeria	Operational
101	Angola	Operational
102	Benin	Operational
103	Botswana	Operational
104	Burkina Faso	Operational
105	Burundi	Operational
106	Cameroon	Operational
107	Cape Verde	Operational
108	Central African Republic	Operational
109	Chad	Operational
110	Comoros	Operational
111	Congo	Operational
112	Cote d'Ivoire	Operational
113	Democratic Republic of the Congo	Operational
114	Djibouti	Operational
115	Egypt	Operational
116	Eritrea	Operational
117	Ethiopia	Operational
118	France (RA I)	Operational
119	Gabon	Operational
120	Gambia	Operational
121	Ghana	Operational
122	Guinea	Operational

Code figure		Status
123	Guinea-Bissau	Operational
124	Kenya	Operational
125	Lesotho	Operational
126	Liberia	Operational
127	Libyan Arab Jamahiriya	Operational
128	Madagascar	Operational
129	Malawi	Operational
130	Mali	Operational
131	Mauritania	Operational
132	Mauritius	Operational
133	Morocco	Operational
134	Mozambique	Operational
135	Namibia	Operational
136	Niger	Operational
137	Nigeria	Operational
138	Portugal (RA I)	Operational
139	Rwanda	Operational
140	Sao Tom and Prince	Operational
141	Senegal	Operational
142	Seychelles	Operational
143	Sierra Leone	Operational
144	Somalia	Operational
145	South Africa	Operational
146	Spain	Operational
147	Sudan	Operational
148	Swaziland	Operational
149	Togo	Operational
150	Tunisia	Operational
151	Uganda	Operational
152	United Kingdom of Great Britain and Northern Ireland (RA I)	Operational
153	United Republic of Tanzania	Operational
154	Zambia	Operational
155	Zimbabwe	Operational
156-199	Reserved for Region I (Africa)	Operational
200	Afghanistan	Operational
201	Bahrain	Operational
202	Bangladesh	Operational
203	Bhutan	Operational
204	Cambodia	Operational
205	China	Operational
206	Democratic People's Republic of Korea	Operational
207	Hong Kong, China	Operational
208	India	Operational
209	Iran, Islamic Republic of	Operational
210	Iraq	Operational
211	Japan	Operational
212	Kazakhstan	Operational
213	Kuwait	Operational
214	Kyrgyz Republic	Operational
215	Lao People's Democratic Republic	Operational
216	Macao, China	Operational
217	Maldives	Operational
218	Mongolia	Operational
219	Myanmar	Operational

Code figure		Status
220	Nepal	Operational
221	Oman	Operational
222	Pakistan	Operational
223	Qatar	Operational
224	Republic of Korea	Operational
225	Republic of Yemen	Operational
226	Russian Federation (RA II)	Operational
227	Saudi Arabia	Operational
228	Sri Lanka	Operational
229	Tajikistan	Operational
230	Thailand	Operational
231	Turkmenistan	Operational
232	United Arab Emirates	Operational
233	Uzbekistan	Operational
234	Viet Nam, Socialist Republic of	Operational
235-299	Reserved for Region II (Asia)	Operational
300	Argentina	Operational
301	Bolivia	Operational
302	Brazil	Operational
303	Chile	Operational
304	Colombia	Operational
305	Ecuador	Operational
306	France	Operational
307	Guyana	Operational
308	Paraguay	Operational
309	Peru	Operational
310	Suriname	Operational
311	Uruguay	Operational
312	Venezuela	Operational
313-399	Reserved for Region III (South America)	Operational
400	Antigua and Barbuda	Operational
401	Bahamas	Operational
402	Barbados	Operational
403	Belize	Operational
404	British Caribbean Territories	Operational
405	Canada	Operational
406	Colombia	Operational
407	Costa Rica	Operational
408	Cuba	Operational
409	Dominica	Operational
410	Dominican Republic	Operational
411	El Salvador	Operational
412	France (RA IV)	Operational
413	Guatemala	Operational
414	Haiti	Operational
415	Honduras	Operational
416	Jamaica	Operational
417	Mexico	Operational
418	Netherlands Antilles and Aruba	Operational
419	Nicaragua	Operational
420	Panama	Operational
421	Saint Lucia	Operational
422	Trinidad and Tobago	Operational
423	United Kingdom of Great Britain and Northern Ireland (RA IV)	Operational

Code figure		Status
424	United States of America (RA IV)	Operational
425	Venezuela	Operational
426-499	Reserved for Region IV (North America, Central America and the Caribbean)	Operational
500	Australia	Operational
501	Brunei Darussalam	Operational
502	Cook Islands	Operational
503	Fiji	Operational
504	French Polynesia	Operational
505	Indonesia	Operational
506	Kiribati	Operational
507	Malaysia	Operational
508	Micronesia, Federated States of	Operational
509	New Caledonia	Operational
510	New Zealand	Operational
511	Niue	Operational
512	Papua New Guinea	Operational
513	Philippines	Operational
514	Samoa	Operational
515	Singapore	Operational
516	Solomon Islands	Operational
517	Tonga	Operational
518	United Kingdom of Great Britain and Northern Ireland (RA V)	Operational
519	United States of America (RA V)	Operational
520	Vanuatu	Operational
521-599	Reserved for Region V (South-West Pacific)	Operational
600	Albania	Operational
601	Armenia	Operational
602	Austria	Operational
603	Azerbaijan	Operational
604	Belarus	Operational
605	Belgium	Operational
606	Bosnia and Herzegovina	Operational
607	Bulgaria	Operational
608	Croatia	Operational
609	Cyprus	Operational
610	Czech Republic	Operational
611	Denmark	Operational
612	Estonia	Operational
613	Finland	Operational
614	France (RA VI)	Operational
615	Georgia	Operational
616	Germany	Operational
617	Greece	Operational
618	Hungary	Operational
619	Iceland	Operational
620	Ireland	Operational
621	Israel	Operational
622	Italy	Operational
623	Jordan	Operational
624	Kazakhstan	Operational
625	Latvia	Operational
626	Lebanon	Operational
627	Lithuania	Operational

Code figure		Status
628	Luxembourg	Operational
629	Malta	Operational
630	Monaco	Operational
631	Montenegro	Operational
632	Netherlands	Operational
633	Norway	Operational
634	Poland	Operational
635	Portugal (RA VI)	Operational
636	Republic of Moldova	Operational
637	Romania	Operational
638	Russian Federation (RA VI)	Operational
639	Serbia	Operational
640	Slovakia	Operational
641	Slovenia	Operational
642	Spain	Operational
643	Sweden	Operational
644	Switzerland	Operational
645	Syrian Arab Republic	Operational
646	The Former Yugoslav Republic of Macedonia	Operational
647	Turkey	Operational
648	Ukraine	Operational
649	United Kingdom of Great Britain and Northern Ireland (RA VI)	Operational
650-699	Reserved for Region VI (Europe)	Operational
700-999	Reserved	Operational
1000-1022	Not used	Operational
1023	Missing value	Operational

0 02 001

Type of station

Code figure		Status
0	Automatic	Operational
1	Manned	Operational
2	Hybrid: both manned and automatic	Operational
3	Missing value	Operational

0 02 002

Type of instrumentation for wind measurement

Bit No.	Type of Instrumentation and original units for wind measurement (measured in m s^{-1} unless otherwise indicated)	Status
1	Certified Instruments	Operational
2	Originally measured in knots	Operational
3	Originally measured in km h^{-1}	Operational
All 4	Missing value	Operational

0 02 003

Type of measuring equipment used

Code figure		Status
0	Pressure Instrument associated with wind measuring equipment	Operational
1	Optical theodolite	Operational
2	Radio theodolite	Operational
3	Radar	Operational

Code figure		Status
4	VLF-Omega	Operational
5	Loran C	Operational
6	Wind profiler	Operational
7	Satellite navigation	Operational
8	Radio-acoustic Sounding System (RASS)	Operational
9	Sodar	Operational
10-13	Reserved	Operational
14	Pressure instrument associated with wind measuring equipment but pressure element failed during ascent	Operational
15	Missing value	Operational

0 02 004

Type of instrumentation for evaporation measurement or type of crop for which evapotranspiration is reported

Code figure	Instrumentation or crop type	Type of data	Status
0	USA open pan evaporimeter (without cover)	Evaporation	Operational
1	USA open pan evaporimeter (mesh covered)		Operational
2	GGI 3000 evaporimeter (sunken)		Operational
3	20 m2 tank		Operational
4	Others		Operational
5	Rice	Evapotranspiration	Operational
6	Wheat		Operational
7	Maize		Operational
8	Sorghum		Operational
9	Other crops		Operational
10-14	Reserved		Operational
15	Missing value		Operational

0 02 011

Radiosonde type

(See common Code table C-2 in Part C/c.)

Status
Operational

0 02 012

Radiosonde computational method

(To be developed)

Status
Operational

0 02 013

Solar and infrared radiation correction

Code figure		Status
0	No correction	Operational
1	CIMO solar corrected and CIMO infrared corrected	Operational
2	CIMO solar corrected and infrared corrected	Operational
3	CIMO solar corrected only	Operational
4	Solar and infrared corrected automatically by radiosonde system	Operational
5	Solar corrected automatically by radiosonde system	Operational
6	Solar and infrared corrected as specified by country	Operational
7	Solar corrected as specified by country	Operational
8-14	Reserved	Operational
15	Missing value	Operational

Tracking technique/status of system used

Status
Operational

Radiosonde completeness

Code figure		Status
0	Reserved	Operational
1	Pressure only radiosonde	Operational
2	Pressure only radiosonde plus transponder	Operational
3	Pressure only radiosonde plus radar reflector	Operational
4	No-pressure radiosonde plus transponder	Operational
5	No-pressure radiosonde plus radar reflector	Operational
6-14	Reserved	Operational
15	Missing value	Operational

Radiosonde configuration

Bit No.		Status
1	Train regulator	Operational
2	Light unit	Operational
3	Parachute	Operational
4	Rooftop release	Operational
All 5	Missing value	Operational

Satellite instruments

Status
Operational

Satellite classification

Code figure		Status
0	Nimbus	Operational
1	VTPR	Operational
2	Tiros 1 (Tiros, NOAA-6 to NOAA-13)	Operational
3	Tiros 2 (NOAA-14 onwards)	Operational
10	EOS	Operational
31	DMSP	Operational
61	EUMETSAT Polar System (EPS)	Operational
91	ERS	Operational
121	ADEOS	Operational
241	GOES	Operational
261	JASON	Operational
271	GMS	Operational
272	MTSAT	Operational
301	INSAT	Operational
331	METEOSAT Operational Programme (MOP)	Operational
332	METEOSAT Transitional Programme (MTP)	Operational
333	METEOSAT Second Generation Programme (MSG)	Operational
351	GOMS	Operational

Code figure		Status
380	FY-1	Operational
381	FY-2	Operational
382-400	Reserved	Operational
401	GPS	Operational
402	GLONASS	Operational
403	GALILEO	Operational
404-510	Reserved	Operational
511	Missing value	Operational

0 02 021

Satellite instrument data used in processing

Bit No.		Status
1	High resolution Infrared sounder (HIRS)	Operational
2	Microwave sounding unit (MSU)	Operational
3	Stratospheric sounding unit (SSU)	Operational
4	AMI (Advanced microwave instrument) Wind mode	Operational
5	AMI (Advanced microwave instrument) Wave mode	Operational
6	AMI (Advanced microwave instrument) Image mode	Operational
7	RADAR altimeter	Operational
8	ATSR (along track scanning radiometer)	Operational
All 9	Missing value	Operational

0 02 022

Satellite data-processing technique used

Bit No.		Status
1	Processing technique not defined	Operational
2	Automated statistical regression	Operational
3	Clear path	Operational
4	Partly cloudy path	Operational
5	Cloudy path	Operational
6-7	Reserved	Operational
All 8	Missing value	Operational

0 02 023

Satellite derived wind computation method

Code figure		Status
0	Reserved	Operational
1	Wind derived from cloud motion observed in the infrared channel	Operational
2	Wind derived from cloud motion observed in the visible channel	Operational
3	Wind derived from motion observed in the water vapour channel	Operational
4	Wind derived from motion observed in a combination of spectral channels	Operational
5	Wind derived from motion observed in the water vapour channel in clear air	Operational
6	Wind derived from motion observed in the ozone	Operational
7	Wind derived from motion observed in water vapour channel (cloud or clear air not specified)	Operational
8-12	Reserved	Operational
13	Root-mean-square	Operational
14	Reserved	Operational
15	Missing value	Operational

0 02 024***Integrated mean humidity computational method***

Code figure		Status
0	Reserved	Operational
1	Table with full range of humidity variation in layer	Operational
2	Regression technique on 2 humidity values in layer	Operational
3-14	Reserved	Operational
15	Missing value	Operational

0 02 025***Satellite channel(s) used in computation***

Bit No.	Instrument (channels)	Status
1	Reserved	Operational
	Group 1 - Layer precipitable water for the layers: surface to 700 hPa, 700 to 500 hPa, and 500 to 300	Operational
2	HIRS	Operational
3	MSU	Operational
4-5	Reserved	Operational
	Group 2 - Tropopause temperature and pressure	Operational
6	HIRS	Operational
7	MSU	Operational
8-9	Reserved	Operational
	Group 3 - Total ozone	Operational
10	HIRS (1, 2, 3, 8, 9, 16, 17)	Operational
11	HIRS (1, 2, 3, 9, 17)	Operational
12	MSU	Operational
13-14	Reserved	Operational
	Group 4 - Mean temperature for the layers: surface to 850 hPa, 850 to 700 hPa, 700 to 500 hPa, 500 to 400 hPa, 400 to 300 hPa, 300 to 200 hPa, and 200 to 100 hPa	Operational
15	HIRS	Operational
16	HIRS*	Operational
17	MSU	Operational
18	SKINTK (ocean only)	Operational
19-20	Reserved	Operational
	Group 5 - Channel combinations used to obtain mean temperatures for the layers 100 to 70 hPa, 70 to 50 hPa, 50 to 30 hPa, 30 to 10 hPa, 10 to 5 hPa, 5 to 2 hPa, 2 to 1 hPa, 1 to 0.4 hPa	Operational
21	HIRS*	Operational
22	SSU	Operational
23	MSU (3, 4)	Operational
24	Reserved	Operational
All 25	Missing value	Operational

Notes: (see)

0 02 030***Method of current measurement***

Code figure		Status
0	Reserved	Operational
1 *	ADCP (Acoustic Doppler Current Profiler)	Operational
2	GEK (Geomagnetic ElectroKinetograph)	Operational
3	Ship's set and drift determined by fixes 3-6 hours	Operational
4	Ship's set and drift determined by fixes more than 6 hours but less than 12 hours apart	Operational

Code figure		Status
5	Drift of buoy	Operational
6	ADCP (Acoustic Doppler Current Profiler)	Operational
7	Missing value	Operational

Notes: (see)

0 02 031

Duration and time of current measurement

Code figure			Status
0	Reserved		Operational
1	Instantaneous	} between H 1 and H	Operational
2	Averaged over 3 minutes or less		Operational
3	Averaged over more than 3 minutes, but 6 at the most		Operational
4	Averaged over more than 6 minutes, but 12 at the		Operational
5	Instantaneous	} between H 2 and H 1	Operational
6	Averaged over 3 minutes or less		Operational
7	Averaged over more than 3 minutes, but 6 at the most		Operational
8	Averaged over more than 6 minutes, but 12 at the		Operational
9	Vector or Doppler current profiling method not used		Operational
10	Reserved		Operational
11	1 hour or less		Operational
12	More than 1 hour but 2 at the most		Operational
13	More than 2 hours but 4 at the most		Operational
14	More than 4 hours but 8 at the most		Operational
15	More than 8 hours but 12 at the most		Operational
16	More than 12 hours but 18 at the most		Operational
17	More than 18 hours but 24 at the most		Operational
18	Reserved		Operational
19	Drift method not used		Operational
20-30	Reserved		Operational
31	Missing value		Operational

Notes: (see)

0 02 032

Indicator for digitization

Code figure		Status
0	Values at selected depths (data points fixed by the instrument or selected by any other method)	Operational
1	Values at selected depths (data points taken from traces at significant depths)	Operational
2	Reserved	Operational
3	Missing value	Operational

0 02 033

Method of salinity/depth measurement

Code figure		Status
0	No salinity measured	Operational
1	In situ sensor, accuracy better than 0.02 ‰	Operational
2	In situ sensor, accuracy less than 0.02 ‰	Operational
3	Sample analysis	Operational
4-6	Reserved	Operational
7	Missing value	Operational

0 02 034
Drogue type

Code figure		Status
0	Unspecified drogue	Operational
1	Holey sock	Operational
2	TRISTAR	Operational
3	Window shade	Operational
4	Parachute	Operational
5	Non-Lagrangian sea anchor	Operational
6-30	Reserved (to be developed)	Operational
31	Missing value	Operational

0 02 036
Buoy type

Code figure		Status
0	Drifting buoy	Operational
1	Fixed buoy	Operational
2	Sub-surface float (moving)	Operational
3	Missing value	Operational

0 02 037
Method of tidal observation

Code figure		Status
0	Reserved	Operational
1	Manual reading from vertical tide staff	Operational
2	Manual reading from single automatic recorder at station	Operational
3	Manual reading from multiple automatic recorders at station	Operational
4	Automatic reading from single automatic recorder at station without level reference check	Operational
5	Automatic reading from a single automatic recorder at station with level reference check, or from multiple automatic recorders	Operational
6	Reserved	Operational
7	Missing value	Operational

0 02 038
Method of water temperature and/or salinity measurement

Code figure		Status
0	Ship intake	Operational
1	Bucket	Operational
2	Hull contact sensor	Operational
3	Reversing Thermometer	Operational
4	STD/CTD sensor	Operational
5	Mechanical BT	Operational
6	Expendable BT	Operational
7	Digital BT	Operational
8	Thermistor chain	Operational
9	Infra-red scanner	Operational
10	Micro-wave scanner	Operational
11	Infrared radiometer	Operational
12	In line thermosalinograph	Operational
13	Towed body	Operational
14	Other	Operational

Code figure		Status
15	Missing value	Operational

0 02 039

Method of wet-bulb temperature measurement

Code figure		Status
0	Measured wet-bulb temperature	Operational
1	Iced bulb measured wet-bulb temperature	Operational
2	Computed wet-bulb temperature	Operational
3	Iced bulb computed wet-bulb temperature	Operational
4-6	Reserved	Operational
7	Missing value	Operational

0 02 040

Method of removing velocity and motion of platform from current

Code figure			Status
0	Ships motion removed by averaging	} Ship's velocity removed by bottom tracking	Operational
1	Ships motion removed by motion compensation		Operational
2	Ships motion not removed		Operational
3	Ships motion removed by averaging	} Ship's velocity removed by navigation	Operational
4	Ships motion removed by motion compensation		Operational
5	Ships motion not removed		Operational
6	Doppler current profiling method not used		Operational
7-14	Reserved		Operational
15	Missing value		Operational

0 02 041

Method for estimating reports related to synoptic features

Code figure		Status
0	Information based on manual analysis	Operational
1	Information based on computer analysis	Operational
2	Information based on data assimilation	Operational
3	Information based on computer analysis or data assimilation manually modified	Operational
4-9	Reserved	Operational
10	Information based on the numerical weather prediction	Operational
11-62	Reserved for future use	Operational
63	Missing value	Operational

0 02 042

Indicator for sea-surface current speed

Code figure		Status
0	Value originally reported in m/s	Operational
1	Value originally reported in knots	Operational
2	No sea current data available	Operational
3	Missing value	Operational

0 02 044

Indicator for method of calculating spectral wave data

Code figure		Status
0	Reserved for future use	Operational

Code figure		Status
1	Longuet-Higgins (1964)	Operational
2	Longuet-Higgins (F3 method)	Operational
3	Maximum likelihood method	Operational
4	Maximum entropy method	Operational
5-14	Reserved	Operational
15	Missing value	Operational

0 02 045

Indicator for type of platform

Code figure		Status
0	Sea station	Operational
1	Automatic data buoy	Operational
2	Aircraft	Operational
3	Satellite	Operational
4-14	Reserved	Operational
15	Missing value	Operational

0 02 046

Wave measurement instrumentation

Code figure		Status
0	Reserved for future use	Operational
1	Heave sensor	Operational
2	Slope sensor	Operational
3-14	Reserved	Operational
15	Missing value	Operational

0 02 047

Deep-ocean tsunameter type

Code figure		Status
0	Reserved	Pre-operational
1	DART II (PMEL)	Pre-operational
2	DART ETD	Pre-operational
3	SAIC Tsunami Buoy (STB)	Pre-operational
4	GFZ - Potsdam	Pre-operational
5	INCOIS (India)	Pre-operational
6	InaBuoy (Indonesia)	Pre-operational
7-14	Reserved	Pre-operational
15	Missing value	Pre-operational

0 02 048

Satellite sensor indicator

Code figure		Status
0	HIRS	Operational
1	MSU	Operational
2	SSU	Operational
3	AMSU-A	Operational
4	AMSU-B	Operational
5	AVHRR	Operational
6	SSMI	Operational
7	NSCAT	Operational
8	SEAWINDS	Operational
9	POSEIDON altimeter	Operational

Code figure		Status
10	JMR (JASON Microwave Radiometer)	Operational
11	MHS	Operational
12	ASCAT	Operational
13-14	Reserved	Operational
15	Missing value	Operational

0 02 049

Geostationary satellite data-processing technique used

Bit No.		Status
1	Processing technique not defined	Operational
2	Simultaneous physical retrieval	Operational
3	Clear sounding	Operational
4	Cloudy sounding	Operational
5-7	Reserved for future use	Operational
All 8	Missing value	Operational

Notes: (see)

0 02 050

Geostationary sounder satellite channels used

Bit No.	Channel	Central wavelength (micrometers)	Status
1	1	14.71	Operational
2	2	14.37	Operational
3	3	14.06	Operational
4	4	13.64	Operational
5	5	13.37	Operational
6	6	12.66	Operational
7	7	12.02	Operational
8	8	11.03	Operational
9	9	9.71	Operational
10	10	7.43	Operational
11	11	7.02	Operational
12	12	6.51	Operational
13	13	4.57	Operational
14	14	4.52	Operational
15	15	4.45	Operational
16	16	4.13	Operational
17	17	3.98	Operational
18	18	3.74	Operational
19	19	0.969	Operational
All 20	Missing value		Operational

Notes: (see)

0 02 051

Indicator to specify observing method for extreme temperatures

Code figure		Status
0	Reserved	Operational
1	Maximum/minimum temperatures	Operational
2	Automated instruments	Operational
3	Thermograph	Operational
4-14	Reserved	Operational
15	Missing value	Operational

0 02 052***Geostationary imager satellite channels used***

Bit No.	Channel	Central wavelength (micrometers)	Status
1	1	0.55 - 0.75	Operational
2	2	3.9	Operational
3	3	6.7	Operational
4	4	10.7	Operational
5	5	12.0	Operational
All 6	Missing value		Operational

Notes: (see)

0 02 053***GOES-I/M brightness temperature characteristics***

Code figure		Status
0	Observed brightness temperature	Operational
1	Brightness temperature with bias correction applied	Operational
2	Brightness temperature calculated from first guess	Operational
3	Brightness temperature calculated from sounding	Operational
4-14	Reserved	Operational
15	Missing value	Operational

0 02 054***GOES-I/M soundings parameter characteristics***

Code figure		Status
0	Parameter derived using observed sounder brightness temperatures	Operational
1	Parameter derived using observed imager brightness temperatures	Operational
2	Parameter derived using first guess information	Operational
3	Parameter derived using NMC analysis information	Operational
4	Parameter derived using radiosonde information	Operational
5-14	Reserved	Operational
15	Missing value	Operational

0 02 055***Geostationary soundings statistical parameters***

Code figure		Status
0	Statistics generated comparing retrieval versus radiosonde	Operational
1	Statistics generated comparing retrieval versus first guess	Operational
2	Statistics generated comparing radiosonde versus first guess	Operational
3	Statistics generated comparing observed versus	Operational
4	Statistics generated comparing observed versus first guess	Operational
5	Statistics generated comparing radiosonde versus imager	Operational
6	Statistics generated comparing radiosonde versus sounder	Operational
7	Statistics generated for radiosonde	Operational
8	Statistics generated for first guess	Operational
9-14	Reserved	Operational
15	Missing value	Operational

0 02 056***Geostationary soundings accuracy statistics***

Code figure		Status
0	Sums of differences	Operational
1	Sums of squared differences	Operational
2	Sample size	Operational
3	Minimum difference	Operational
4	Maximum difference	Operational
5-14	Reserved	Operational
15	Missing value	Operational

0 02 057***Origin of first guess information for GOES-I/M soundings***

Code figure		Status
0	Nested Grid Model (NGM)	Operational
1	Aviation Model (AVN)	Operational
2	Medium Range Forecast (MRF) Model	Operational
3	Global Data Assimilation System (GDAS) Forecast Model	Operational
4	Prior soundings (within 3 hours of current time)	Operational
5	Climatology	Operational
6-14	Reserved	Operational
15	Missing value	Operational

0 02 058***Valid times of first guess information for GOES-I/M soundings***

Code figure		Status
0	12 hour and 18 hour	Operational
1	18 hour and 24 hour	Operational
2	6 hour and 12 hour	Operational
3	Greater than 24 hours	Operational
4-14	Reserved	Operational
15	Missing value	Operational

0 02 059***Origin of analysis information for GOES-I/M soundings***

Code figure		Status
0	NCEP Nested Grid Model (NGM) Analysis	Operational
1	NCEP Aviation Model (AVN) Analysis	Operational
2	NCEP Medium Range Forecast (MRF) Model Analysis	Operational
3	NCEP Global Data Assimilation System (GDAS) Forecast Model Analysis	Operational
4-14	Reserved	Operational
15	Missing value	Operational

0 02 060***Origin of surface information for GOES-I/M soundings***

Code figure		Status
0	Current surface hourly reports	Operational
1	Current ship reports	Operational
2	Current buoy reports	Operational
3	One hour old surface hourly reports	Operational

Code figure		Status
4	One hour old ship reports	Operational
5	One hour old buoy reports	Operational
6-14	Reserved	Operational
15	Missing value	Operational

0 02 061

Aircraft navigational system

Code figure		Status
0	Inertial navigation system	Operational
1	OMEGA	Operational
2-6	Reserved	Operational
7	Missing value	Operational

0 02 062

Type of aircraft data relay system

Code figure		Status
0	ASDAR	Operational
1	ASDAR (ACARS also available but not operative)	Operational
2	ASDAR (ACARS also available and operative)	Operational
3	ACARS	Operational
4	ACARS (ASDAR also available but not operative)	Operational
5	ACARS (ASDAR also available and operative)	Operational
6-14	Reserved	Operational
15	Missing value	Operational

0 02 064

Aircraft roll angle quality

Code figure	Meaning	Status
0	Good	Operational
1	Bad	Operational
2	Reserved	Operational
3	Missing value	Operational

Notes: (see)

0 02 066

Radiosonde ground receiving system

Code figure		Status
0	TRS 2000	Operational
1	IMS 1500C	Operational
2-61	Reserved	Operational
62	Other	Operational
63	Missing value	Operational

0 02 070

Original specification of latitude/longitude

Code figure		Status
0	Actual location in seconds	Operational
1	Actual location in minutes	Operational
2	Actual location in degrees	Operational
3	Actual location in decidegrees	Operational
4	Actual location in centidegrees	Operational

Code figure		Status
5	Referenced to checkpoint in seconds	Operational
6	Referenced to checkpoint in minutes	Operational
7	Referenced to checkpoint in degrees	Operational
8	Referenced to checkpoint in decidegrees	Operational
9	Referenced to checkpoint in centidegrees	Operational
10	Actual Location in tenths of a minute	Operational
11	Referenced to checkpoint in tenths of a minute	Operational
12-14	Reserved	Operational
15	Missing value	Operational

0 02 080
Balloon manufacturer

Code figure		Status
0	Kaysam	Operational
1	Totex	Operational
2	KKS	Operational
3-61	Reserved	Operational
62	Other	Operational
63	Missing value	Operational

0 02 081
Type of balloon

Code figure		Status
0	GP26	Operational
1	GP28	Operational
2	GP30	Operational
3	HM26	Operational
4	HM28	Operational
5	HM30	Operational
6	SV16	Operational
7-29	Reserved	Operational
30	Other	Operational
31	Missing value	Operational

0 02 083
Type of balloon shelter

Code figure		Status
0	High bay	Operational
1	Low bay	Operational
2	Balloon Inflation Launch System (BILS)	Operational
3	Roof-top BILS	Operational
4-13	Reserved	Operational
14	Other	Operational
15	Missing value	Operational

0 02 084
Type of gas used in balloon

Code figure		Status
0	Hydrogen	Operational
1	Helium	Operational
2	Natural Gas	Operational
3-13	Reserved	Operational

Code figure		Status
14	Other	Operational
15	Missing value	Operational

0 02 095
Type of pressure sensor

Code figure		Status
0	Capacitance aneroid	Operational
1	Derived from GPS	Operational
2	Resistive strain gauge	Operational
3-29	Reserved	Operational
30	Other	Operational
31	Missing value	Operational

0 02 096
Type of temperature sensor

Code figure		Status
0	Rod thermistor	Operational
1	Bead thermistor	Operational
2	Capacitance bead	Operational
3-29	Reserved	Operational
30	Other	Operational
31	Missing value	Operational

0 02 097
Type of humidity sensor

Code figure		Status
0	VIZ Mark II Carbon Hygristor	Operational
1	VIZ B2 Hygristor	Operational
2	Vaisala A-Humicap	Operational
3	Vaisala H-Humicap	Operational
4	Capacitance sensor	Operational
5	Vaisala RS90	Operational
6	Sippican Mark IIA Carbon Hygristor	Operational
7-29	Reserved	Operational
30	Other	Operational
31	Missing value	Operational

0 02 099
Polarisation

Code figure		Status
0	HH polarisation	Operational
1	VV polarisation	Operational
2	HV polarisation real valued component	Operational
3	HV polarisation imaginary valued component	Operational
4-6	Reserved	Operational
7	Missing value	Operational

0 02 101
Type of antenna

Code figure		Status
0	Centre front fed paraboloid	Operational

Code figure		Status
1	Offset front fed paraboloid	Operational
2	Centre Cassegrain paraboloid	Operational
3	Offset Cassegrain paraboloid	Operational
4	Planar array	Operational
5	Coaxial collinear array	Operational
6	Yagi elements array	Operational
7	Microstrip	Operational
8-13	Reserved	Operational
14	Other	Operational
15	Missing value	Operational

0 02 103

Radome

Bit No.		Status
1	Radar antenna is protected by a radome	Operational
All 2	Missing value	Operational

0 02 104

Antenna polarisation

Code figure		Status
0	Horizontal polarization	Operational
1	Vertical polarization	Operational
2	Right circular polarization	Operational
3	Left circular polarization	Operational
4	Horizontal and vertical polarization	Operational
5	Right and left circular polarization	Operational
6	Quasi-horizontal polarization	Validation
7	Quasi-vertical polarization	Validation
8-14	Reserved	Validation
15	Missing value	Operational

0 02 115

Type of surface observing equipment

Code figure		Status
0	PDB	Operational
1	RSOIS	Operational
2	ASOS	Operational
3	Psychrometer	Operational
4	F420	Operational
5-29	Reserved	Operational
30	Other	Operational
31	Missing value	Operational

0 02 119

RA-2 instrument operations

Code figure		Status
0	Intermediate Frequency Calibration Mode (IF CAL)	Operational
1	Built-In Test Equipment Digital (BITE DGT)	Operational
2	Built-In test Equipment Radio Frequency (BITE RF)	Operational
3	Preset tracking (PSET TRK)	Operational
4	Preset LOOP OUT	Operational
5	ACQUISITION	Operational

Code figure		Status
6	TRACKING	Operational
7	Missing value	Operational

0 02 131
Sensitivity time control (STC)

Bit No.		Status
1	STC operational	Operational
All 2	Missing values	Operational

0 02 143
Ozone instrument type

Code figure		Status
0	Reserved	Operational
1	Brewer spectrophotometer	Operational
2	Caver Teichert	Operational
3	Dobson	Operational
4	Dobson (Japan)	Operational
5	Ehmet	Operational
6	Fecker telescope	Operational
7	Hoelper	Operational
8	Jodmeter	Operational
9	Filter Ozonometer M 83	Operational
10	Mast	Operational
11	Oxford	Operational
12	Paetzold	Operational
13	Regener	Operational
14	Reserved for future use	Operational
15	Vassy filter Ozonometer	Operational
16	Carbon iodide	Operational
17	Surface ozone bubler	Operational
18	Filter Ozonometer M 124	Operational
19	ECC sonde	Operational
20-126	Reserved	Operational
127	Missing value	Operational

0 02 144
Light source type for Brewer spectrophotometer

Code figure		Status
0	Direct Sun	Operational
1	Direct Sun, attenuator #1	Operational
2	Direct Sun, attenuator #2	Operational
3	Focussed Moon	Operational
4	Focussed Sun	Operational
5	Focussed Sun corrected with adjacent sky measurements	Operational
6	Zenith Sky	Operational
7-14	Reserved	Operational
15	Missing value	Operational

Notes: (see)

0 02 145
Wave length setting for Dobson instruments

Code figure		Status
0	Wavelengths AD ordinary setting	Operational
1	Wavelengths BD ordinary setting	Operational
2	Wavelengths CD ordinary setting	Operational
3	Wavelengths CC' ordinary setting	Operational
4	Wavelengths AD focussed image	Operational
5	Wavelengths BD focussed image	Operational
6	Wavelengths CD focussed image	Operational
7	Wavelengths CC' focussed image	Operational
8-14	Reserved	Operational
15	Missing value	Operational

0 02 146

Source conditions for Dobson instruments

Code figure		Status
0	on direct sun	Operational
1	on direct moon	Operational
2	on blue zenith sky	Operational
3	on zenith cloud (uniform stratified layer of small	Operational
4	on zenith cloud(uniform or moderately variable layer of medium opacity)	Operational
5	on zenith cloud (uniform or moderately variable layer of large opacity)	Operational
6	on zenith cloud (highly variable opacity, with or without precipitation)	Operational
7	on zenith cloud (fog)	Operational
8	On zenith haze	Operational
9	On direct sun through thin cloud, fog or haze	Operational
10-14	reserved	Operational
15	Missing value	Operational

0 02 148

Data collection and/or location system

Code figure		Status
0	Reserved	Operational
1	Argos	Operational
2	GPS	Operational
3	GOES DCP	Operational
4	METEOSAT DCP	Operational
5	ORBCOMM	Pre-operational
6	INMARSAT	Pre-operational
7	Iridium	Pre-operational
8	Iridium and GPS	Pre-operational
9	Argos-3	Pre-operational
10	Argos-4	Pre-operational
11-30	Reserved	Pre-operational
31	Missing value	Operational

0 02 149

Type of data buoy

Code figure		Status
0	Unspecified drifting buoy	Operational
1	Standard Lagrangian drifter (Global Drifter Programme)	Operational
2	Standard FGGE type drifting buoy (non-Lagrangian meteorological drifting buoy)	Operational

Code figure		Status
3	Wind measuring FGGE type drifting buoy (non-Lagrangian meteorological drifting buoy)	Operational
4	Ice float	Operational
5	SVPG Standard Lagrangian drifter with GPS	Pre-operational
6	SVP-HR Drifter with high resolution temperature or thermistor string	Pre-operational
7	Reserved	Pre-operational
8	Unspecified sub-surface float	Operational
9	SOFAR	Operational
10	ALACE	Operational
11	MARVOR	Operational
12	RAFOS	Operational
13	PROVOR	Pre-operational
14	SOLO	Pre-operational
15	APEX	Pre-operational
16	Unspecified moored buoy	Operational
17	Nomad	Operational
18	3-metre discus	Operational
19	10-12-metre discus	Operational
20	ODAS 30 series	Operational
21	ATLAS (e.g. TAO area)	Operational
22	TRITON buoy	Operational
23	FLEX Mooring (e.g. TIP Area)	Pre-operational
24	Omnidirectional waverider	Operational
25	Directional waverider	Operational
26	Sub-surface ARGO float	Operational
27	PALACE	Pre-operational
28	NEMO	Pre-operational
29	NINJA	Pre-operational
30	Ice Buoy/Float (POPS or ITP)	Pre-operational
31-33	Reserved	Pre-operational
34	Mooring Oceanographic	Pre-operational
35	Mooring Meteorological	Pre-operational
36	Mooring Multidisciplinary (OceanSITES)	Pre-operational
37	Mooring Tide Gauge or Tsunami buoy	Pre-operational
38-62	Reserved	Pre-operational
63	Missing value	Operational

0 02 150

TOVS/ATOVs/AVHRR instrumentation channel number

Code figure		Status
0	Reserved	Operational
1	HIRS 1	Operational
2	HIRS 2	Operational
3	HIRS 3	Operational
4	HIRS 4	Operational
5	HIRS 5	Operational
6	HIRS 6	Operational
7	HIRS 7	Operational
8	HIRS 8	Operational
9	HIRS 9	Operational
10	HIRS 10	Operational
11	HIRS 11	Operational
12	HIRS 12	Operational
13	HIRS 13	Operational

Code figure		Status
14	HIRS 14	Operational
15	HIRS 15	Operational
16	HIRS 16	Operational
17	HIRS 17	Operational
18	HIRS 18	Operational
19	HIRS 19	Operational
20	HIRS 20	Operational
21	MSU 1	Operational
22	MSU 2	Operational
23	MSU 3	Operational
24	MSU 4	Operational
25	SSU 1	Operational
26	SSU 2	Operational
27	SSU 3	Operational
28	AMSU A 1	Operational
29	AMSU A 2	Operational
30	AMSU A 3	Operational
31	AMSU A 4	Operational
32	AMSU A 5	Operational
33	AMSU A 6	Operational
34	AMSU A 7	Operational
35	AMSU A 8	Operational
36	AMSU A 9	Operational
37	AMSU A 10	Operational
38	AMSU A 11	Operational
39	AMSU A 12	Operational
40	AMSU A 13	Operational
41	AMSU A 14	Operational
42	AMSU A 15	Operational
43	AMSU B 1 / MHS 1	Operational
44	AMSU B 2 / MHS 2	Operational
45	AMSU B 3 / MHS 3	Operational
46	AMSU B 4 / MHS 4	Operational
47	AMSU B 5 / MHS 5	Operational
48	AVHRR 1	Operational
49	AVHRR 2	Operational
50	AVHRR 3a	Operational
51	AVHRR 3b	Operational
52	AVHRR 4	Operational
53	AVHRR 5	Operational
54-62	Reserved	Operational
63	Missing value	Operational

0 02 151

Radiometer identifier

Code figure		Status
0	HIRS	Operational
1	MSU	Operational
2	SSU	Operational
3	AMSU A1 1	Operational
4	AMSU A1 2	Operational
5	AMSU A2	Operational
6	AMSU B	Operational
7	AVHRR	Operational

Code figure		Status
8	Reserved	Operational
9	MHS	Operational
10-2046	Reserved	Operational
2047	Missing value	Operational

0 02 152

Satellite instrument used in data processing (see Note 6)

Bit No.		Status
1	High-resolution infrared sounder (HIRS)	Operational
2	Microwave sounding unit (MSU)	Operational
3	Stratospheric sounding unit (SSU)	Operational
4	AMI wind mode	Operational
5	AMI wave mode	Operational
6	AMI image mode	Operational
7	RADAR altimeter	Operational
8	ATSR	Operational
9	Geostationary Imager	Operational
10	Geostationary Sounder	Operational
11	Geostationary Earth radiation (GERB)	Operational
12	Multi-channel scanning radiometer	Operational
13	Polar orbiting imager	Pre-operational
14-30	Reserved	Pre-operational
All 31	Missing value	Operational

0 02 158

RA-2 instrument

Bit No.		Status
1	Mismatch in RED VEC HPA	Operational
2	Mismatch in RED VEC RFSS	Operational
3	PTR calibration band 320 MHz (Ku)	Operational
4	PTR calibration band 80 MHz (Ku)	Operational
5	PTR calibration band 20 MHz (Ku)	Operational
6	PTR calibration band 160 MHz (S)	Operational
7	Ku flight calibration parameters available	Operational
8	S flight calibration parameters available	Operational
All 9	Missing value	Operational

Notes: (see)

0 02 159

MWR instrument

Bit No.		Status
1	Temperature inconsistency	Operational
2	Data is missing	Operational
3	Redundancy channel	Operational
4	Power bus protection	Operational
5	Overvoltage/Overload protection	Operational
6	Reserved	Operational
7	Reserved	Operational
All 8	Missing value	Operational

Notes: (see)

0 02 160
Wave length of the radar

Code figure		Status
0	Reserved	Operational
1	10 to less than 20 mm	Operational
2	Reserved	Operational
3	20 to less than 40 mm	Operational
4	Reserved	Operational
5	40 to less than 60 mm	Operational
6	Reserved	Operational
7	60 to less than 90 mm	Operational
8	90 to less than 110 mm	Operational
9	110 mm and greater	Operational
10-14	Not used	Operational
15	Missing value	Operational

0 02 163
Height assignment method

Code figure		Status
0	Auto editor	Operational
1	IRW height assignment	Operational
2	WV height assignment	Operational
3	H2O intercept height assignment	Operational
4	CO2 slicing height assignment	Operational
5	Low pixel max gradient	Operational
6	Higher pixel max gradient	Operational
7	Primary height assignment	Operational
8	Layer thickness assignment	Operational
9	Cumulative contribution function -10 percent height	Operational
10	Cumulative contribution function -50 percent height	Operational
11	Cumulative contribution function -90 percent height	Operational
12	Cumulative contribution function - height of maximum gradient	Operational
13	IR / two WV channel ratioing method	Operational
14	Composite height assignment	Operational
15	Missing value	Operational

0 02 164
Tracer correlation method

Code figure		Status
0	LP - Norms least square minimum	Operational
1	EN - Euclidean norm with radiance correlation	Operational
2	CC - Cross correlation	Operational
3-6	Reserved	Operational
7	Missing value	Operational

0 02 165
Radiance type flags

Bit No.		Status
1	Clear path	Pre-operational
2	Partly cloudy path	Pre-operational
3	Cloudy path	Pre-operational
4	Apodized	Pre-operational

Bit No.		Status
5	Unapodized	Pre-operational
6	Reconstructed	Pre-operational
7	Cloud cleared	Pre-operational
8-14	Reserved	Pre-operational
All 15	Missing value	Pre-operational

0 02 166
Radiance type

Code figure		Status
0	Type not defined	Operational
1	Automated statistical regression	Operational
2	Clear path	Operational
3	Partly cloudy path	Operational
4	Cloudy path	Operational
5-14	Reserved	Operational
15	Missing value	Operational

0 02 167
Radiance computational method

Code figure		Status
0	Method not defined	Operational
1	1b raw radiance	Operational
2	Processed radiance	Operational
3-14	Reserved	Operational
15	Missing value	Operational

0 02 169
Anemometer type

Code figure		Status
0	Cup rotor	Operational
1	Propeller rotor	Operational
2	Wind Observation Through Ambient Noise (WOTAN)	Operational
3	Sonic	Operational
4-14	Reserved	Operational
15	Missing value	Operational

0 02 172
Product type for retrieved atmospheric gases

Code figure		Status
0	Reserved	Operational
1	Retrieval from a nadir sounding	Operational
2	Retrieval from a limb sounding	Operational
3-254	Reserved	Operational
255	Missing value	Operational

0 02 175
Method of precipitation measurement

Code figure		Status
0	Manual measurement	Operational
1	Tipping bucket method	Operational
2	Weighing method	Operational

Code figure		Status
3	Optical method	Operational
4	Pressure method	Operational
5	Float method	Operational
6	Drop counter method	Operational
7-13	Reserved	Operational
14	Others	Operational
15	Missing value	Operational

0 02 176

Method of state of ground measurement

Code figure		Status
0	Manual observation	Operational
1	Video camera method	Operational
2	Infra-red method	Operational
3	Laser method	Operational
4-13	Reserved	Operational
14	Others	Operational
15	Missing value	Operational

0 02 177

Method of snow depth measurement

Code figure		Status
0	Manual observation	Operational
1	Ultrasonic method	Operational
2	Video camera method	Operational
3-13	Reserved	Operational
14	Others	Operational
15	Missing value	Operational

0 02 178

Method of liquid content measurement of precipitation

Code figure		Status
0	Manual observation	Operational
1	Optical method	Operational
2	Capacitive method	Operational
3-13	Reserved	Operational
14	Others	Operational
15	Missing value	Operational

0 02 179

Type of sky condition algorithm

Code figure		Status
0	Manual observation	Operational
1	VAISALA algorithm	Operational
2	ASOS (FAA) algorithm	Operational
3	AWOS (Canada) algorithm	Operational
4-13	Reserved	Operational
14	Others	Operational
15	Missing value	Operational

0 02 180***Main present weather detecting system***

Code figure		Status
0	Manual observation	Operational
1	Optical scatter system combined with precipitation occurrence sensing system	Operational
2	Forward and/or back-scatter system of visible light	Operational
3	Forward and/or back-scatter system of infrared light	Operational
4	Infrared light emitting diode (IRED) system	Operational
5	Doppler radar system	Operational
6-13	Reserved	Operational
14	Others	Operational
15	Missing value	Operational

0 02 181***Supplementary present weather sensor***

Bit No.		Status
1	Rain detector	Operational
2	Freezing rain sensor	Operational
3	Ice detection sensor	Operational
4	Hail and ice pellet sensor	Operational
5-19	Reserved	Operational
20	Others	Operational
All 21	Missing value	Operational

0 02 182***Visibility measurement system***

Code figure		Status
0	Manual measurement	Operational
1	Transmissometer system (base \geq 25 m)	Operational
2	Transmissometer system (base < 25 m)	Operational
3	Forward scatter system	Operational
4	Back scatter system	Operational
5-13	Reserved	Operational
14	Others	Operational
15	Missing value	Operational

0 02 183***Cloud detection system***

Code figure		Status
0	Manual observation	Operational
1	Ceilometer system	Operational
2	Infrared camera system	Operational
3	Microwave visual camera system	Operational
4	Sky imager system	Operational
5	Video time lapsed camera system	Operational
6	Micro pulse lidar (MPL) system	Operational
7-13	Reserved	Operational
14	Others	Operational
15	Missing value	Operational

0 02 184***Type of lightning detection sensor***

Code figure		Status
0	Manual observation	Operational
1	Lightning imaging sensor	Operational
2	Electrical storm identification sensor	Operational
3	Magnetic finder sensor	Operational
4	Lightning strike sensor	Operational
5	Flash counter	Operational
6	ATDnet VLF waveform correlated sensor	Validation
7-13	Reserved	Validation
14	Others	Operational
15	Missing value	Operational

0 02 185***Method of evaporation measurement***

Code figure		Status
0	Manual measurement	Operational
1	Balanced floating method	Operational
2	Pressure method	Operational
3	Ultrasonic method	Operational
4	Hydraulic method	Operational
5-13	Reserved	Operational
14	Others	Operational
15	Missing value	Operational

0 02 186***Capability to detect precipitation phenomena***

Bit No.		Status
1	Precipitation-unknown type	Operational
2	Liquid precipitation not freezing	Operational
3	Liquid freezing precipitation	Operational
4	Drizzle	Operational
5	Rain	Operational
6	Solid precipitation	Operational
7	Snow	Operational
8	Snow grains	Operational
9	Snow pellets	Operational
10	Ice pellets	Operational
11	Ice crystals	Operational
12	Diamond dust	Operational
13	Small hail	Operational
14	Hail	Operational
15	Glaze	Operational
16	Rime	Operational
17	Soft rime	Operational
18	Hard rime	Operational
19	Clear ice	Operational
20	Wet snow	Operational
21	Hoar frost	Operational
22	Dew	Operational
23	White dew	Operational
24-29	Reserved	Operational

Bit No.		Status
All 30	Missing value	Operational

0 02 187

Capability to detect other weather phenomena

Bit No.		Status
1	Dust/sand whirl	Operational
2	Squalls	Operational
3	Sand storm	Operational
4	Dust storm	Operational
5	Lightning - cloud to surface	Operational
6	Lightning - cloud to cloud	Operational
7	Lightning - distant	Operational
8	Thunderstorm	Operational
9	Funnel Cloud not touching surface	Operational
10	Funnel cloud touching surface	Operational
11	Spray	Operational
12-17	Reserved	Operational
All 18	Missing value	Operational

0 02 188

Capability to detect obscuration

Bit No.		Status
1	Fog	Operational
2	Ice fog	Operational
3	Steam fog	Operational
4-6	Reserved	Operational
7	Mist	Operational
8	Haze	Operational
9	Smoke	Operational
10	Volcanic ash	Operational
11	Dust	Operational
12	Sand	Operational
13	Snow	Operational
14-20	Reserved	Operational
All 21	Missing value	Operational

0 02 189

Capability to discriminate lightning strikes

Bit No.		Status
1	Manual observation	Operational
2	All lightning strikes without discrimination	Operational
3	Lightning strikes cloud to ground only	Operational
4	All lightning strikes with discrimination between cloud to ground and cloud to cloud	Operational
5-11	Reserved	Operational
All 12	Missing value	Operational

0 04 059

Times of observation used to compute the reported mean values

Bit No.		Status
1	00 UTC	Operational
2	06 UTC	Operational

Bit No.		Status
3	12 UTC	Operational
4	18 UTC	Operational
5	Other hours	Operational
All 6	Missing value	Operational

0 04 080

Averaging period for following value

Code figure		Status
0	Spot values	Operational
1	Less than 15 minutes	Operational
2	From 15 to 45 minutes	Operational
3	More than 45 minutes	Operational
4-8	Reserved	Operational
9	Data not available	Operational
10-14	Not used	Operational
15	Missing value	Operational

0 08 001

Vertical sounding significance

Bit No.		Status
1	Surface	Operational
2	Standard level	Operational
3	Tropopause level	Operational
4	Maximum wind level	Operational
5	Significant level, temperature and/or relative humidity	Operational
6	Significant level, wind	Operational
All 7	Missing value	Operational

0 08 002

Vertical significance (surface observations)

Code figure		Status
0	Observing rules for base of lowest cloud and cloud types of FM 12SYNOP and FM 13 SHIP apply	Operational
1	First non - Cb significant layer	Operational
2	Second non - Cb significant layer	Operational
3	Third non - Cb significant layer	Operational
4	Cumulonimbus layer	Operational
5	Ceiling	Operational
6	Clouds not detected below the following height(s)	Operational
7	Low cloud	Operational
8	Middle cloud	Operational
9	High cloud	Operational
10	Cloud layer with base below the station level and top above the station level	Operational
11	Cloud layer with base and top below the station level	Operational
12-19	Reserved	Operational
20	No clouds detected by the cloud detection system	Operational
21	First instrument detected cloud layer	Operational
22	Second instrument detected cloud layer	Operational
23	Third instrument detected cloud layer	Operational
24	Fourth instrument detected cloud layer	Operational
25-61	Reserved	Operational
62	Value not applicable	Operational

Code figure		Status
63	Missing value	Operational

0 08 003

Vertical significance (satellite observations)

Code figure		Status
0	Surface	Operational
1	Base of Satellite sounding	Operational
2	Cloud top	Operational
3	Tropopause	Operational
4	Precipitable water	Operational
5	Sounding Radiances	Operational
6	Mean Temperatures	Operational
7	Ozone	Operational
8	Low cloud	Operational
9	Med Cloud	Operational
10	High cloud	Operational
11-62	Reserved	Operational
63	Missing value	Operational

0 08 004

Phase of aircraft flight

Code figure		Status
0-1	Reserved	Operational
2	Unsteady (UNS)	Operational
3	Level flight, routine observation (LVR)	Operational
4	Level flight, highest wind encountered (LVW)	Operational
5	Ascending (ASC)	Operational
6	Descending (DES)	Operational
7	Missing value	Operational

0 08 005

Meteorological attribute significance

Code figure		Status
0	Reserved	Operational
1	Storm center	Operational
2	Outer limit or edge of storm	Operational
3	Location of maximum wind	Operational
4	Location of the storm in the perturbed analysis	Operational
5	Location of the storm in the analysis	Operational
6-14	Reserved	Operational
15	Missing value	Operational

0 08 006

Ozone vertical sounding significance

Bit No.		Status
1	Surface	Operational
2	Standard level	Operational
3	Tropopause level	Operational
4	Prominent maximum level	Operational
5	Prominent minimum level	Operational
6	Minimum pressure level	Operational
7	Reserved	Operational

Bit No.		Status
8	Level of undetermined significance	Operational
All 9	Missing value	Operational

0 08 007
Dimensional significance

Code figure		Status
0	Point	Operational
1	Line	Operational
2	Area	Operational
3	Volume	Operational
4-14	Reserved	Operational
15	Missing value	Operational

Notes: (see)

0 08 008
Radiation vertical sounding significance

Bit No.		Status
1	Surface	Operational
2	Standard level	Operational
3	Tropopause level	Operational
4	Level of beta radiation maximum	Operational
5	Level of gamma radiation maximum	Operational
6	Minimum pressure level	Operational
7	Reserved	Operational
8	Level of undetermined significance	Operational
All 9	Missing value	Operational

0 08 009
Detailed phase of flight

Code figure		Status
0	Level flight, routine observation, unsteady	Operational
1	Level flight, highest wind encountered, unsteady	Operational
2	Unsteady (UNS)	Operational
3	Level flight, routine observation (LVR)	Operational
4	Level flight, highest wind encountered (LVW)	Operational
5	Ascending (ASC)	Operational
6	Descending (DES)	Operational
7	Ascending, observation intervals selected by time increments	Operational
8	Ascending, observation intervals selected by time increments, unsteady	Operational
9	Ascending, observation intervals selected by pressure increments	Operational
10	Ascending, observation intervals selected by pressure increments, unsteady	Operational
11	Descending, observation intervals selected by time increments	Operational
12	Descending, observation intervals selected by time increments, unsteady	Operational
13	Descending, observation intervals selected by pressure increments	Operational
14	Descending, observation intervals selected by pressure increments, unsteady	Operational
15	Missing value	Operational

0 08 010***Surface qualifier (temperature data)***

Code figure		Status
0	Reserved	Operational
1	Bare soil	Operational
2	Bare rock	Operational
3	Land grass cover	Operational
4	Water (lake, sea)	Operational
5	Flood water underneath	Operational
6	Snow	Operational
7	Ice	Operational
8	Runway or road	Operational
9	Ship or platform deck in steel	Operational
10	Ship or platform deck in wood	Operational
11	Ship or platform deck partly covered with rubber mat	Operational
12-30	Reserved	Operational
31	Missing value	Operational

0 08 011***Meteorological feature***

Code figure		Status
0	Quasi stationary front at the surface	Operational
1	Quasi stationary front above the surface	Operational
2	Warm front at the surface	Operational
3	Warm front above the surface	Operational
4	Cold front at the surface	Operational
5	Cold front above the surface	Operational
6	Occlusion	Operational
7	Instability line	Operational
8	Intertropical front	Operational
9	Convergence line	Operational
10	Jet stream	Operational
11	Cloud clear	Operational
12	Cloud	Operational
13	Turbulence	Operational
14	Storm	Operational
15	Airframe icing	Operational
16	Phenomenon	Operational
17	Volcano	Operational
18	Atmospherics	Operational
19	Reserved	Operational
20	Special clouds	Operational
21	Thunderstorm	Operational
22	Tropical cyclone	Operational
23	Mountain Wave	Operational
24	Duststorm	Operational
25	Sandstorm	Operational
26-62	Reserved	Operational
63	Missing value	Operational

0 08 012***Land/sea qualifier***

Code figure		Status
0	Land	Operational
1	Sea	Operational
2	Coastal	Operational
3	Missing value	Operational

0 08 013
Day/night qualifier

Code figure		Status
0	Night	Operational
1	Day	Operational
2	Twilight	Validation
3	Missing value	Operational

0 08 014
Qualifier for runway visual range

Code figure		Status
0	10 minute mean value normal value	Operational
1	10 minute mean value above the upper limit for assessments of RVR (P)	Operational
2	10 minute mean value below the lower limit for assessments of RVR (M)	Operational
3	one minute minimum value normal value	Operational
4	one minute minimum value above the upper limit for assessments of RVR (P)	Operational
5	one minute minimum value below the lower limit for assessments of RVR (M)	Operational
6	one minute maximum value normal value	Operational
7	one minute maximum value above the upper limit for assessments of RVR (P)	Operational
8	one minute maximum value below the lower limit for assessments of RVR (M)	Operational
9-14	Reserved	Operational
15	Missing value	Operational

0 08 016
Change qualifier of a trend-type forecast or an aerodrome forecast

Code figure		Status
0	NOSIG	Operational
1	BECMG	Operational
2	TEMPO	Operational
3	FM	Operational
4-6	Reserved	Operational
7	Missing value	Operational

0 08 017
Qualifier of the time when the forecast change is expected

Code figure		Status
0	FM	Operational
1	TL	Operational
2	AT	Operational
3	Missing value	Operational

0 08 018
SEAWINDS land/ice surface type

Bit No.		Status
1	Land is present	Operational
2	Surface ice map indicates ice is present	Operational
3-10	Reserved	Operational
11	Ice map data not available	Operational
12	Attenuation map data not available	Operational
13-16	Reserved	Operational
All 17	Missing value	Operational

0 08 019
Qualifier for following centre identifier

Code figure		Status
0	Reserved	Operational
1	ATS (Air Traffic Service) unit serving FIR (Flight Information Region)	Operational
2	FIR (Flight Information Region)	Operational
3	UIR (Upper Information Region)	Operational
4	CTA (Control Area)	Operational
5	VAAC (Volcanic Ash Advisory Centre)	Operational
6	MWO (Meteorological Watch Office) issuing SIGMET	Operational
7-14	Reserved	Operational
15	Missing value	Operational

0 08 021
Time significance

Code figure		Status
0	Reserved	Operational
1	Time series	Operational
2	Time averaged	Operational
3	Accumulated	Operational
4	Forecast	Operational
5	Forecast time series	Operational
6	Forecast time averaged	Operational
7	Forecast accumulated	Operational
8	Ensemble mean	Operational
9	Ensemble mean time series	Operational
10	Ensemble mean time averaged	Operational
11	Ensemble mean accumulated	Operational
12	Ensemble mean forecast	Operational
13	Ensemble mean forecast time series	Operational
14	Ensemble mean forecast time averaged	Operational
15	Ensemble mean forecast accumulated	Operational
16	Analysis	Operational
17	Start of phenomenon	Operational
18	Radiosonde launch time	Operational
19	Start of orbit	Operational
20	End of orbit	Operational
21	Time of ascending node	Operational
22	Time of occurrence of wind shift	Operational
23	Monitoring period	Operational
24	Agreed time limit for report reception	Operational
25	Nominal reporting time	Operational

Code figure		Status
26	Time of last known position	Operational
27	First guess	Operational
28	Start of scan	Operational
29	End of scan	Operational
30	Reserved	Operational
31	Missing value	Operational

Notes: (see)

0 08 023 *First-order statistics*

Code figure		Status
0-1	Reserved	Operational
2	Maximum value	Operational
3	Minimum value	Operational
4	Mean value	Operational
5	Median value	Operational
6	Modal value	Operational
7	Mean absolute error	Operational
8	Reserved	Operational
9	Best estimate of standard deviation (N-1)	Operational
10	Standard deviation (N)	Operational
11	Harmonic mean	Operational
12	Root-mean-square vector error	Operational
13	Root-mean-square	Operational
14-31	Reserved	Operational
32	Vector mean	Operational
33-62	Reserved for local use	Operational
63	Missing value	Operational

Notes: (see)

0 08 024 *Difference statistics*

Code figure		Status
0-1	Reserved	Operational
2	Observed minus maximum	Operational
3	Observed minus minimum	Operational
4	Observed minus mean	Operational
5	Observed minus median	Operational
6	Observed minus mode	Operational
7-10	Reserved	Operational
11	Observed minus climatology (anomaly)	Operational
12	Observed minus analyzed value	Operational
13	Observed minus initialized analyzed value	Operational
14	Observed minus forecast value	Operational
15-20	Reserved	Operational
21	Observed minus interpolated value	Operational
22	Observed minus hydrostatically calculated value	Operational
23-31	Reserved	Operational
32-62	Reserved for local use	Operational
63	Missing value	Operational

Notes: (see)

0 08 025***Time difference qualifier (see Note 5)***

Code figure		Status
0	Universal Time Coordinated (UTC) minus Local Standard Time (LST)	Operational
1	Local Standard Time	Operational
2	Universal Time Coordinated (UTC) minus Satellite	Operational
3-4	Reserved	Operational
5	Time difference from edge of processing segment	Operational
6-14	Reserved	Operational
15	Missing value	Operational

0 08 026***Matrix significance***

Code figure		Status
0	Averaging kernel matrix	Operational
1	Correlation matrix (C)	Operational
2	Lower triangular correlation matrix square root (L from C=LLT)	Operational
3	Inverse of lower triangular correlation matrix square root (L-1)	Operational
4-42	Reserved	Operational
43-62	Reserved for local use	Operational
63	Missing or undefined significance	Operational

0 08 029***Remotely-sensed surface type***

Code figure		Status
0	Open ocean or semi-enclosed sea	Operational
1	Enclosed sea or lake	Operational
2	Continental ice	Operational
3	Land	Operational
4	Low inland (below sea level)	Operational
5	Mix of land and water	Operational
6	Mix of land and low inland	Operational
7-10	Reserved	Validation
11	river	Validation
12	lake	Validation
13	sea	Validation
14	glacier	Validation
15-254	Reserved	Validation
255	Missing value	Operational

0 08 033***Method of derivation of percentage confidence (see Note 6)***

Code figure		Status
0	Reserved	Operational
1	Percentage confidence calculated using cloud fraction	Operational
2	Percentage confidence calculated using standard deviation of temperature	Operational
3	Percentage confidence calculated using probability of cloud contamination	Operational
4	Percentage confidence calculated using normality of distribution	Operational
5-126	Reserved	Operational

Code figure		Status
127	Missing value	Operational

0 08 035

Type of monitoring exercise

Code figure		Status
0	Global	Operational
1	Regional	Operational
2	National	Operational
3	Special	Operational
4	Bilateral	Operational
5	Reserved	Operational
6	Reserved	Operational
7	Missing value	Operational

0 08 036

Type of centre or station performing monitoring

Code figure		Status
0	WMO Secretariat	Operational
1	WMO	Operational
2	RSMC	Operational
3	NMC	Operational
4	RTH	Operational
5	Observing site	Operational
6	Other	Operational
7	Missing value	Operational

0 08 039

Time significance (Aviation forecast)

Code figure		Status
0	Issue time of forecast	Operational
1	Time of commencement of period of the forecast	Operational
2	Time of ending of period of the forecast	Operational
3	Forecast time of maximum temperature	Operational
4	Forecast time of minimum temperature	Operational
5	Time of beginning of the forecast change	Operational
6	Time of ending of the forecast change	Operational
7-62	Reserved	Operational
63	Missing value	Operational

0 08 040

Flight Level significance

Code figure		Status
0	High resolution data sample	Operational
1	Within 20 hPa of surface	Operational
2	Pressure less than 10 hPa (i.e., 9, 8, 7, etc.) when no other reason applies	Operational
3	Base pressure level for stability index	Operational
4	Begin doubtful temperature, height data	Operational
5	Begin missing data (all elements)	Operational
6	Begin missing RH data	Operational
7	Begin missing temperature data	Operational

Code figure		Status
8	Highest level reached before balloon descent because of icing or turbulence	Operational
9	End doubtful temperature, height data	Operational
10	End missing data (all elements)	Operational
11	End missing RH data	Operational
12	End missing temperature data	Operational
13	Zero degrees C crossing(s) for RADAT	Operational
14	Standard pressure level	Operational
15	Operator added level	Operational
16	Operator deleted level	Operational
17	Balloon re ascended beyond previous highest ascent level	Operational
18	Significant RH level	Operational
19	RH level selection terminated	Operational
20	Surface level	Operational
21	Significant temperature level	Operational
22	Mandatory temperature level	Operational
23	Flight termination level	Operational
24	Tropopause(s)	Operational
25	Aircraft report	Operational
26	Interpolated (generated) level	Operational
27	Mandatory wind level	Operational
28	Significant wind level	Operational
29	Maximum wind level	Operational
30	Incremental wind level (fixed regional)	Operational
31	Incremental height level (generated)	Operational
32	Wind termination level	Operational
33	Pressure 100 to 110 hPa, when no other reason applies	Operational
34	Freezing level base	Operational
35	Freezing level top	Operational
36	Flight level base	Operational
37	Flight level top	Operational
38-39	Reserved	Operational
40	Significant thermodynamic level (inversion)	Operational
41	Significant RH level (per NCDC criteria)	Operational
42	Significant temperature level (per NCDC)	Operational
43	Begin missing wind data	Operational
44	End missing wind data	Operational
45-59	Reserved	Operational
60	Level of 80-knot isotach above jet	Operational
61	Level of 80-knot isotach below jet	Operational
62	Other	Operational
63	Missing value	Operational

0 08 041

Data significance

Code figure		Status
0	Parent site	Operational
1	Observation site	Operational
2	Balloon manufacture date	Operational
3	Balloon launch point	Operational
4	Surface observation	Operational
5	Surface observation displacement from launch point	Operational
6	Flight level observation	Operational
7	Flight level termination point	Operational

Code figure		Status
8	IFR Ceiling and Visibility	Operational
9	Mountain obscuration	Operational
10	Strong surface wind	Operational
11	Freezing level	Operational
12	Multiple freezing level	Operational
13	Instrument manufacture date	Validation
14-30	Reserved	Validation
31	Missing value	Operational

0 08 042

Extended vertical sounding significance

Bit No.		Status
1	Surface	Operational
2	Standard level	Operational
3	Tropopause level	Operational
4	Maximum wind level	Operational
5	Significant temperature level	Operational
6	Significant humidity level	Operational
7	Significant wind level	Operational
8	Beginning of missing temperature data	Operational
9	End of missing temperature data	Operational
10	Beginning of missing humidity data	Operational
11	End of missing humidity data	Operational
12	Beginning of missing wind data	Operational
13	End of missing wind data	Operational
14	Top of wind sounding	Operational
15	Level determined by regional decision	Operational
16	Reserved	Operational
17	Pressure level originally indicated by height as the vertical coordinate	Operational
All 18	Missing value	Operational

0 08 043

Atmospheric chemical or physical constituent type

Code figure	Name	Formula	CAS Number (if applicable)	Status
0	Ozone	O ₃	10028-15-6	Operational
1	Water vapour	H ₂ O	7732-18-5	Operational
2	Methane	CH ₄	74-82-8	Operational
3	Carbon dioxide	CO ₂	124-38-9	Operational
4	Carbon monoxide	CO	630-08-0	Operational
5	Nitrogen dioxide	NO ₂	10102-44-0	Operational
6	Nitrous oxide	N ₂ O	10024-97-2	Operational
7	Formaldehyde	HCHO	50-00-0	Operational
8	Sulfur dioxide	SO ₂	7446-09-5	Operational
9-24	Reserved			Operational
25	Particulate Matter < 1.0 microns			Operational
26	Particulate Matter < 2.5 microns			Operational
27	Particulate Matter < 10 microns			Operational
28	Aerosols (generic)			Operational
29	Smoke (generic)			Operational
30	Crustal Material (generic dust)			Operational
31	Volcanic Ash			Operational
32-200	Reserved			Operational

Code figure	Name	Formula	CAS Number (if applicable)	Status
201-254	Reserved for local use			Operational
255	Missing value			Operational

Notes: (see)

0 08 050

Qualifier for number of missing values in calculation of statistic

Code figure		Status
0	Reserved	Operational
1	Pressure	Operational
2	Temperature	Operational
3	Extreme temperature	Operational
4	Vapour pressure	Operational
5	Precipitation	Operational
6	Sunshine duration	Operational
7	Maximum temperature	Operational
8	Minimum temperature	Operational
9	Wind	Operational
10-14	Reserved	Operational
15	Missing value	Operational

0 08 051

Qualifier for number of missing values in calculation of statistic

Code figure		Status
1	Pressure	Operational
2	Temperature	Operational
3	Extreme temperature	Operational
4	Vapour pressure	Operational
5	Precipitation	Operational
6	Sunshine duration	Operational
7	Missing value	Operational

0 08 052

Condition for which number of days of occurrence follows

Code figure		Status
0	Mean wind speed over a 10-minute period observed or recorded equal to or more than 10 m/s or 20 knots	Operational
1	Mean wind speed over a 10-minute period observed or recorded equal to or more than 20 m/s or 40 knots	Operational
2	Mean wind speed over a 10-minute period observed or recorded equal to or more than 30 m/s or 60 knots	Operational
3	Maximum temperature less than 273.15 K	Operational
4	Maximum temperature equal to or more than 298.15 K	Operational
5	Maximum temperature equal to or more than 303.15 K	Operational
6	Maximum temperature equal to or more than 308.15 K	Operational
7	Maximum temperature equal to or more than 313.15 K	Operational
8	Minimum temperature less than 273.15 K	Operational
9	Maximum temperature equal to or more than 273.15 K	Operational
10	Precipitation equal to or more than 1.0 kgm-2	Operational
11	Precipitation equal to or more than 5.0 kgm-2	Operational
12	Precipitation equal to or more than 10.0 kgm-2	Operational
13	Precipitation equal to or more than 50.0 kgm-2	Operational
14	Precipitation equal to or more than 100.0 kgm-2	Operational
15	Precipitation equal to or more than 150.0 kgm-2	Operational

Code figure		Status
16	Snow depth more than 0.00 m	Operational
17	Snow depth more than 0.01 m	Operational
18	Snow depth more than 0.10 m	Operational
19	Snow depth more than 0.50 m	Operational
20	Horizontal visibility less than 50 m	Operational
21	Horizontal visibility less than 100 m	Operational
22	Horizontal visibility less than 1000 m	Operational
23	Hail	Operational
24	Thunderstorm	Operational
25-30	Reserved	Operational
31	Missing value	Operational

0 08 053

Day of occurrence qualifier

Code figure		Status
0	Value occurred on only one day in the month	Operational
1	Value occurred on more than one day in the month	Operational
2	Reserved	Operational
3	Missing value	Operational

0 08 054

Qualifier for wind speed or wind gusts

Code figure		Status
0	Wind speed or gust is as reported	Operational
1	Wind speed is greater than that reported (P in METAR/TAF/SPECI)	Operational
2-6	Reserved	Operational
7	Missing value	Operational

0 08 060

Sample scanning mode significance

Code figure		Status
0	Reserved	Operational
1	Range	Operational
2	Azimuth	Operational
3	Horizontal	Operational
4	Vertical	Operational
5	North/South	Operational
6	East/West	Operational
7-14	Reserved	Operational
15	Missing value	Operational

0 08 065

Sun-glint indicator

Code figure		Status
0	No sun-glint	Operational
1	Sun-glint	Operational
2	Reserved	Operational
3	Missing value	Operational

0 08 066
Semi-transparency indicator

Code figure		Status
0	Opaque	Operational
1	Semi-transparent	Operational
2	Reserved	Operational
3	Missing value	Operational

0 08 070
TOVS/ATOVS product qualifier

Code figure		Status
0	Reserved	Operational
1	Reserved	Operational
2	Earth located instrument counts, calibration coefficients and housekeeping (level 1b)	Operational
3	Earth located calibrated radiances (level 1c)	Operational
4	Mapped to a common footprint, earth located calibrated radiances (level 1d)	Operational
5-14	Reserved	Operational
15	Missing value	Operational

0 08 072
Pixel(s) type

Code figure		Status
0	Mixed	Operational
1	Clear	Operational
2	Cloudy	Operational
3-6	Reserved	Operational
7	Missing value	Operational

0 08 074
Altimeter echo type

Code figure		Status
0	Open ocean or semi-enclosed sea	Operational
1	Non-ocean like	Operational
2	Reserved	Operational
3	Missing value	Operational

0 08 075
Ascending/descending orbit qualifier

Code figure		Status
0	Ascending orbit	Operational
1	Descending orbit	Operational
2	Reserved	Operational
3	Missing value	Operational

0 08 076
Type of band

Code figure		Status
0	Ku	Operational
1	C	Operational
2	Long-wave infrared	Pre-operational

Code figure		Status
3	Medium-wave infrared	Pre-operational
4	Short-wave infrared	Pre-operational
5-62	Reserved	Pre-operational
63	Missing value	Operational

0 08 077

Radiometer sensed surface type

Code figure		Status
0	Land	Operational
1	Sea	Operational
2	Coastal	Operational
3	Open ocean or semi-enclosed sea	Operational
4	Enclosed sea or lake	Operational
5	Continental ice	Operational
6-126	Reserved	Operational
127	Missing value	Operational

0 08 079

Product status

Code figure		Status
0	Normal issue	Operational
1	Correction to a previously issued product (COR)	Operational
2	Amendment to a previously issued product (AMD)	Operational
3	Correction to a previously issued amended product (COR AMD)	Operational
4	Cancellation of a previously issued product (CNL)	Operational
5	No product available (NIL)	Operational
6	Special report (SPECI)	Operational
7	Corrected special report (SPECI COR)	Operational
8-14	Reserved	Operational
15	Missing or not applicable	Operational

0 08 080

Qualifier for GTSP quality flag

Code figure		Status
0	Total water pressure profile	Operational
1	Total water temperature profile	Operational
2	Total water salinity profile	Operational
3	Total water conductivity profile	Operational
4	Total water depth	Validation
5-9	Reserved	Validation
10	Water pressure at a level	Operational
11	Water temperature at a level	Operational
12	Salinity at a level	Operational
13	Water depth at a level	Validation
14-19	Reserved	Validation
20	Position	Operational
21-62	Reserved	Operational
63	Missing value	Operational

0 08 081

Type of equipment

Code figure		Status
0	Sensor	Operational
1	Transmitter	Operational
2	Receiver	Operational
3	Observing platform	Operational
4-62	Reserved	Operational
63	Missing value	Operational

0 08 082

Modification of sensor height to another value

Code figure		Status
0	Sensor height is not modified	Operational
1	Sensor height is modified to standard level	Operational
2-6	Reserved	Operational
7	Missing value	Operational

Notes: (see)

0 08 083

Nominal value indicator

Bit No.		Status
1	Adjusted with respect to representative height of sensor above local ground (or Deck of marine platform)	Operational
2	Adjusted with respect to representative height of sensor above water surface	Operational
3	Adjusted with respect to standard surface roughness	Operational
4	Adjusted with respect to wind speed	Operational
5	Adjusted with respect to temperature	Operational
6	Adjusted with respect to pressure	Operational
7	Adjusted with respect to humidity	Operational
8	Adjusted with respect to evaporation	Operational
9	Adjusted with respect to wetting losses	Operational
10-14	Reserved	Operational
All 15	Missing value	Operational

0 08 085

Beam identifier

Code figure		Status
0	Fore beam	Operational
1	Mid beam	Operational
2	Aft beam	Operational
3-6	Reserved	Operational
7	Missing value	Operational

0 10 063

Characteristic of pressure tendency

Code figure			Status
0	Increasing, then decreasing; atmospheric pressure the same or higher than 3 hours ago	} Atmospheric pressure now higher than 3 hours ago	Operational
1	Increasing, then steady; or increasing, then increasing more slowly		Operational
2	Increasing (steadily or unsteadily)		Operational
3	Decreasing or steady, then increasing; or increasing, then increasing more rapidly		Operational
4	Steady; atmospheric pressure the same as 3 hours		Operational

Code figure		Status
5	Decreasing, then increasing; atmospheric pressure the same or lower than 3 hours ago	Operational
6	Decreasing, then steady; or decreasing, then decreasing more slowly	Operational
7	Decreasing (steadily or unsteadily)	Operational
8	Steady or increasing, then decreasing; or decreasing, then decreasing more rapidly	Operational
9-14	Reserved	Operational
15	Missing value	Operational

Notes: (see)

0 10 064
SIGMET cruising level

Code figure		Status
0	Subsonic	Operational
1	Transonic	Operational
2	Supersonic	Operational
3-6	Reserved	Operational
7	Missing value	Operational

0 11 030
Extended degree of turbulence

Code figure		Status
0	Nil - In cloud	Operational
1	Light - In cloud	Operational
2	Moderate - In cloud	Operational
3	Severe - In cloud	Operational
4	Nil - clear air	Operational
5	Light - clear air	Operational
6	Moderate - clear air	Operational
7	Severe - clear air	Operational
8	Nil - Cloud/clear air not specified	Operational
9	Light - Cloud/clear air not specified	Operational
10	Moderate - Cloud/clear air not specified	Operational
11	Severe - Cloud/clear air not specified	Operational
12	Extreme, In clear air	Operational
13	Extreme, In cloud	Operational
14	Extreme, cloud/clear air not specified	Operational
15	Light, isolated moderate	Operational
16	Light, occasional moderate	Operational
17	Light, frequently moderate	Operational
18	Moderate, isolated severe	Operational
19	Moderate, occasional severe	Operational
20	Moderate, frequently severe	Operational
21	Severe, isolated extreme	Operational
22	Severe, occasional extreme	Operational
23	Severe, frequently extreme	Operational
24-62	Reserved	Operational
63	Missing value	Operational

0 11 031
Degree of turbulence

Code figure		Status
0	Nil	Operational
1	Light	Operational
2	Moderate	Operational
3	Severe	Operational

Code figure		Status	
4	Nil	In clear air	Operational
5	Light		Operational
6	Moderate		Operational
7	Severe		Operational
8	Nil	Cloud/clear air not specified	Operational
9	Light		Operational
10	Moderate		Operational
11	Severe		Operational
12	Extreme, In clear air		Operational
13	Extreme, In cloud		Operational
14	Extreme, cloud/clear air not specified		Operational
15	Missing value		Operational

0 11 037
Turbulence index

Code figure	Average Value of Eddy Dissipation Rate (ave) ($\text{m}^{2/3} \text{s}^{-1}$)	Peak value of eddy dissipation rate (peak) ($\text{m}^{2/3} \text{s}^{-1}$)	Status
0	ave <0.1	peak <0.1	Operational
1	ave <0.1	0.1 <= peak <0.2	Operational
2	0.1 <= ave <0.2	0.1 <= peak <0.2	Operational
3	ave <0.1	0.2 <= peak <0.3	Operational
4	0.1 <= ave <0.2	0.2 <= peak <0.3	Operational
5	0.2 <= ave <0.3	0.2 <= peak <0.3	Operational
6	ave <0.1	0.3 <= peak <0.4	Operational
7	0.1 <= ave <0.2	0.3 <= peak <0.4	Operational
8	0.2 <= ave <0.3	0.3 <= peak <0.4	Operational
9	0.3 <= ave <0.4	0.3 <= peak <0.4	Operational
10	ave <0.1	0.4 <= peak <0.5	Operational
11	0.1 <= ave <0.2	0.4 <= peak <0.5	Operational
12	0.2 <= ave <0.3	0.4 <= peak <0.5	Operational
13	0.3 <= ave <0.4	0.4 <= peak <0.5	Operational
14	0.4 <= ave <0.5	0.4 <= peak <0.5	Operational
15	ave <0.1	0.5 <= peak <0.8	Operational
16	0.1 <= ave <0.2	0.5 <= peak <0.8	Operational
17	0.2 <= ave <0.3	0.5 <= peak <0.8	Operational
18	0.3 <= ave <0.4	0.5 <= peak <0.8	Operational
19	0.4 <= ave <0.5	0.5 <= peak <0.8	Operational
20	0.5 <= ave <0.8	0.5 <= peak <0.8	Operational
21	ave <0.1	0.8 <= peak	Operational
22	0.1 <= ave <0.2	0.8 <= peak	Operational
23	0.2 <= ave <0.3	0.8 <= peak	Operational
24	0.3 <= ave <0.4	0.8 <= peak	Operational
25	0.4 <= ave <0.5	0.8 <= peak	Operational
26	0.5 <= ave <0.8	0.8 <= peak	Operational
27	0.8 <= ave	0.8 <= peak	Operational
28	Nil	Nil	Operational
29-62	Reserved	Reserved	Operational
63	Missing value	Missing value	Operational

0 11 038***Time of occurrence of peak eddy dissipation rate***

Code figure	Minutes prior to observation time (min)	Status
0	min < 1	Operational
1	1 <= min < 2	Operational
2	2 <= min < 3	Operational
3	3 <= min < 4	Operational
4	4 <= min < 5	Operational
5	5 <= min < 6	Operational
6	6 <= min < 7	Operational
7	7 <= min < 8	Operational
8	8 <= min < 9	Operational
9	9 <= min < 10	Operational
10	10 <= min < 11	Operational
11	11 <= min < 12	Operational
12	12 <= min < 13	Operational
13	13 <= min < 14	Operational
14	14 <= min < 15	Operational
15	No timing information available	Operational
16-30	Reserved	Operational
31	Missing value	Operational

0 11 039***Extended time of occurrence of peak eddy dissipation rate***

Code figure	Minutes prior to observation time (min)	Status
0	min < 1	Operational
1	1 <= min < 2	Operational
2	2 <= min < 3	Operational
3	3 <= min < 4	Operational
4	4 <= min < 5	Operational
5	5 <= min < 6	Operational
6	6 <= min < 7	Operational
7	7 <= min < 8	Operational
8	8 <= min < 9	Operational
9	9 <= min < 10	Operational
10	10 <= min < 11	Operational
11	11 <= min < 12	Operational
12	12 <= min < 13	Operational
13	13 <= min < 14	Operational
14	14 <= min < 15	Operational
15-59	As above to 59 <=min < 60	Operational
60	No timing information available	Operational
61-62	Reserved	Operational
63	Missing value	Operational

0 13 038***Superadiabatic indicator***

Code figure		Status
0	Not superadiabatic	Operational
1	Superadiabatic	Operational
2	Reserved	Operational
3	Missing value	Operational

0 13 039
Terrain type (ice/snow)

Code figure		Status
0	Sea ice	Operational
1	Snow on land	Operational
2-6	Reserved	Operational
7	Missing value	Operational

0 13 040
Surface flag

Code figure		Status
0	Land	Operational
1	Reserved	Operational
2	Near coast	Operational
3	Ice	Operational
4	Possible ice	Operational
5	Ocean	Operational
6	Coast	Operational
7-14	Reserved	Operational
15	Missing value	Operational

0 13 041
Pasquill-Gifford stability category

Code figure		Status
1	A	Operational
2	A - B	Operational
3	B	Operational
4	B - C	Operational
5	C	Operational
6	D	Operational
7	E	Operational
8	F	Operational
9	G	Operational
10-14	Reserved	Operational
15	Missing value	Operational

0 13 051
Frequency group, precipitation

Code figure		Status
0	Smaller than any value in the 30 year period	Operational
1	In the first quintile	Operational
2	In the second quintile	Operational
3	In the third quintile	Operational
4	In the fourth quintile	Operational
5	In the fifth quintile	Operational
6	Greater than any value in the 30 year period	Operational
7-14	Reserved	Operational
15	Missing value	Operational

0 13 056
Character and intensity of precipitation

Code figure		Status
0	No precipitation	Operational
1	Light intermittent	Operational
2	Moderate intermittent	Operational
3	Heavy intermittent	Operational
4	Very heavy intermittent	Operational
5	Light continuous	Operational
6	Moderate continuous	Operational
7	Heavy continuous	Operational
8	Very heavy continuous	Operational
9	Variable - alternatively light and heavy	Operational
10-14	Reserved	Operational
15	Missing value	Operational

0 13 057

Time of beginning or end of precipitation

Code figure		Status
0	No precipitation	Operational
1	Within the last hour	Operational
2	1 to 2 hours ago	Operational
3	2 to 3 hours ago	Operational
4	3 to 4 hours ago	Operational
5	4 to 5 hours ago	Operational
6	5 to 6 hours ago	Operational
7	6 to 8 hours ago	Operational
8	8 to 10 hours ago	Operational
9	More than 10 hours ago	Operational
10-14	Reserved	Operational
15	Missing value	Operational

0 15 025

Type of pollutant

Code figure		Status
0	Ozone	Operational
1-10	Reserved	Operational
11	Fine particulate matter (diameter < 2.5 microns)	Operational
12	Fine particulate matter (diameter < 10 microns)	Operational
13-14	Reserved	Operational
15	Missing value	Operational

0 19 001

Type of synoptic feature

Code figure		Status
0	Depression or low (extratropical)	Operational
1	Tropical depression	Operational
2	Tropical storm	Operational
3	Severe tropical storm	Operational
4	Typhoon	Operational
5-9	Reserved	Operational
10	Dust/sandstorm	Operational
11-62	Reserved	Operational
63	Missing value	Operational

Notes: (see)

0 19 008

Vertical extent of circulation

Code figure		Status
0	Reserved	Operational
1	Shallow (top of circulation below 700 hPa level)	Operational
2	Medium (top between 700 hPa and 400 hPa level)	Operational
3	Deep (top above 400 hPa level)	Operational
4-6	Reserved	Operational
7	Missing value	Operational

0 19 010

Method for tracking the centre of synoptic feature

Code figure		Status
1	Minimum value of sea level pressure	Operational
2	Maximum value of 850 hPa relative vorticity	Operational
3-14	Reserved	Operational
15	Missing value	Operational

0 19 100

Time interval to calculate the movement of the tropical cyclone

Code figure		Status
0-2	Not used	Operational
3	During the preceding 15 minutes	Operational
4	During the preceding 30 minutes	Operational
5	During the preceding 1 hour	Operational
6	During the preceding 2 hours	Operational
7	During the preceding 3 hours	Operational
8	During the preceding 6 hours	Operational
9	During a period of more than 6 hours	Operational
10	Undetermined	Operational
11-14	Not used	Operational
15	Missing value	Operational

0 19 101

Accuracy of the position of the centre of the tropical cyclone

Code figure		Status
0	Reserved	Operational
1	Eye visible on radar scope, accuracy good (within 10 km)	Operational
2	Eye visible on radar scope, accuracy fair (within 30 km)	Operational
3	Eye visible on radar scope, accuracy poor (within 50 km)	Operational
4	Position of the centre within the area covered by the radar scope, determination by means of the spiral-band overlay, accuracy good (within 10 km)	Operational
5	Position of the centre within the area covered by the radar scope, determination by means of the spiral-band overlay, accuracy fair (within 30 km)	Operational
6	Position of the centre within the area covered by the radar scope, determination by means of the spiral-band overlay, accuracy poor (within 50 km)	Operational
7	Position of the centre outside the area covered by the radar scope, extrapolation by means of the spiral-band overlay	Operational
8-9	Reserved	Operational
10	Accuracy undetermined	Operational
11-14	Not used	Operational
15	Missing value	Operational

0 19 102***Shape and definition of the eye of the tropical cyclone***

Code figure		Status
0	Circular	Operational
1	Elliptical - the minor axis is at least 3/4 the length of the major axis	Operational
2	Elliptical - the minor axis is less than 3/4 the length well defined of the major axis	Operational
3	Apparent double eye	Operational
4	Other shape	Operational
5	Ill defined	Operational
6	Undetermined	Operational
7	Missing	Operational

0 19 103***Diameter of major axis of the eye of the tropical cyclone***

Code figure		Status
0	Less than 5 km	Operational
1	5 to less than 10 km	Operational
2	10 to less than 15 km	Operational
3	15 to less than 20 km	Operational
4	20 to less than 25 km	Operational
5	25 to less than 30 km	Operational
6	30 to less than 35 km	Operational
7	35 to less than 40 km	Operational
8	40 to less than 50 km	Operational
9	50 km and greater	Operational
10	Undetermined	Operational
11-14	Not used	Operational
15	Missing value	Operational

0 19 104***Change in character of the eye during the 30 minutes***

Code figure		Status
0	Eye has first become visible during the past 30 minutes	Operational
1	No significant change in the characteristics or size of the eye	Operational
2	Eye has become smaller with no other significant change in characteristics	Operational
3	Eye has become larger with no other significant change in characteristics	Operational
4	Eye has become less distinct with no significant change in size	Operational
5	Eye has become less distinct and decreased in size	Operational
6	Eye has become less distinct and increased in size	Operational
7	Eye has become more distinct with no significant change in size	Operational
8	Eye has become more distinct and decreased in size	Operational
9	Eye has become more distinct and increased in size	Operational
10	Change in character and size of eye cannot be determined	Operational
11-14	Not used	Operational
15	Missing value	Operational

0 19 105***Distance between the end of spiral band and the centre***

Code figure		Status
0	0 to less than 100 km	Operational
1	100 to less than 200 km	Operational
2	200 to less than 300 km	Operational
3	300 to less than 400 km	Operational
4	400 to less than 500 km	Operational
5	500 to less than 600 km	Operational
6	600 to less than 800 km	Operational
7	800 km or more	Operational
8-9	Reserved	Operational
10	Doubtful or undetermined	Operational
11-14	Not used	Operational
15	Missing value	Operational

0 19 107***Time interval over which the movement of the tropical cyclone has been calculated***

Code figure		Status
0	Less than 1 hour	Operational
1	1 to less than 2 hours	Operational
2	2 to less than 3 hours	Operational
3	3 to less than 6 hours	Operational
4	6 to less than 9 hours	Operational
5	9 to less than 12 hours	Operational
6	12 to less than 15 hours	Operational
7	15 to less than 18 hours	Operational
8	18 to less than 21 hours	Operational
9	21 to less than 30 hours	Operational
10-14	Not used	Operational
15	Missing value	Operational

0 19 108***Accuracy of geographical position of the tropical cyclone***

Code figure		Status
0	Cyclone centre within 10 km of the transmitted	Operational
1	Cyclone centre within 20 km of the transmitted	Operational
2	Cyclone centre within 50 km of the transmitted	Operational
3	Cyclone centre within 100 km of the transmitted	Operational
4	Cyclone centre within 200 km of the transmitted	Operational
5	Cyclone centre within 300 km of the transmitted	Operational
6	Cyclone centre undetermined	Operational
7	Missing value	Operational

0 19 109***Mean diameter of the overcast cloud of the tropical cyclone***

Code figure		Status
0	Less than 1° of latitude	Operational
1	1° to less than 2° of latitude	Operational
2	2° to less than 3° of latitude	Operational
3	3° to less than 4° of latitude	Operational

Code figure		Status
4	4° to less than 5° of latitude	Operational
5	5° to less than 6° of latitude	Operational
6	6° to less than 7° of latitude	Operational
7	7° to less than 8° of latitude	Operational
8	8° to less than 9° of latitude	Operational
9	9° of latitude or more	Operational
10	Undetermined	Operational
11-14	Not used	Operational
15	Missing value	Operational

0 19 110

Apparent 24-hour change in intensity of the tropical cyclone

Code figure		Status
0	Much weakening	Operational
1	Weakening	Operational
2	No change	Operational
3	Intensification	Operational
4	Strong Intensification	Operational
5-8	Reserved	Operational
9	Not observed previously	Operational
10	Undetermined	Operational
11-14	Not used	Operational
15	Missing value	Operational

0 19 113

Cloud pattern type of the DT-number

Code figure	Type	Status
1	Curved Band	Operational
2	Shear	Operational
3	Eye	Operational
4	Banding Eye	Operational
5	Central Dense Overcast (CDO)	Operational
6	Embedded Center	Operational
7	Center Cold Cover (CCC)	Operational
8-14	Reserved	Operational
15	Missing value	Operational

0 19 117

Cloud picture type of the PT-number

Code figure	Type	Status
1	A (Curved Band)	Operational
2	B (CDO)	Operational
3	C (Shear)	Operational
4-6	Reserved	Operational
7	Missing value	Operational

0 19 119

Type of the final T-number

Code figure	Type	Status
1	DT-number	Operational
2	PT-number	Operational
3	MET-number	Operational

Code figure	Type	Status
4-6	Reserved	Operational
7	Missing value	Operational

0 20 003

Present weather (see Note 1)

Code figure			Status
00-49	No precipitation at the station at the time of observation		Operational
00-19	No precipitation, fog, ice fog (except for 11 and 12), duststorm, sandstorm, drifting or blowing snow at the station* at the time of observation or, except for 09 and 17, during the preceding hour		Operational
00-03	No meteors except for photometeors		Operational
00	Cloud development not observed or not observable	Characteristic change of the state of sky during the past hour	Operational
01	Clouds generally dissolving or becoming less developed		Operational
02	State of sky on the whole unchanged		Operational
03	Clouds generally forming or developing		Operational
04-09	Haze, dust, sand or smoke		Operational
04	Visibility reduced by smoke, e.g. veldt or forest fires, Industrial smoke or volcanic ashes		Operational
05	Haze		Operational
06	Widespread dust in suspension in the air, not raised by wind at or near the station at the time of observation		Operational
07	Dust or sand raised by wind at or near the station at the time of observation, but no well developed dust whirl(s) or sand whirl(s), and no duststorm or sandstorm seen; or, In the case of sea stations and coastal stations, blowing spray at the station		Operational
08	Well developed dust whirl(s) or sand whirl(s) seen at or near the station during the preceding hour or at the same time of observation, but no duststorm or sandstorm		Operational
09	Duststorm or sandstorm within sight at the time of observation, or at the station during the preceding hour		Operational
10	Mist	Shallow fog or Ice fog at the station, whether on land or sea, not deeper than about 2 metres on land or 10 metres at sea	Operational
11	Patches		Operational
12	More or less continuous		Operational
13	Lightning visible, no thunder heard		Operational
14	Precipitation within sight, not reaching the ground or the surface of the sea		Operational
15	Precipitation within sight, reaching the ground or the surface of the sea, but distant, i.e. estimated to be more than 5 km from the station		Operational
16	Precipitation within sight, reaching the ground or the surface of the sea, near to, but not at the station		Operational
17	Thunderstorm, but no precipitation at the time of observation		Operational
18	Squalls	At or within sight of the station during the preceding hour or at the time of observation	Operational
19	Funnel cloud(s)**		Operational
20-29	Precipitation, fog, Ice fog or thunderstorm at the station during the preceding hour but not at the time of observation		Operational
20	Drizzle (not freezing) or snow grains	not falling as shower(s)	Operational
21	Rain (not freezing)		Operational
22	Snow		Operational
23	Rain and snow or ice pellets		Operational
24	Freezing drizzle or freezing rain		Operational
25	Shower(s) of rain		Operational
26	Shower(s) of snow, or of rain and snow		Operational

Code figure			Status
27	Shower(s) of hail*, or of rain and hail*		Operational
28	Fog or Ice fog		Operational
29	Thunderstorm (with or without precipitation)		Operational
30-39	Duststorm, sandstorm, drifting or blowing snow		Operational
30	Slight or moderate duststorm or sandstorm	has decreased during the preceding hour	Operational
31	Slight or moderate duststorm or sandstorm	no appreciable change during the preceding hour	Operational
32	Slight or moderate duststorm or sandstorm	has begun or has increased during the preceding hour	Operational
33	Severe duststorm or sandstorm	has decreased during the preceding hour	Operational
34	Severe duststorm or sandstorm	no appreciable change during the preceding hour	Operational
35	Severe duststorm or sandstorm	has begun or has increased during the preceding hour	Operational
36	Slight or moderate drifting snow	generally low (below eye level)	Operational
37	Heavy drifting snow		Operational
38	Slight or moderate blowing snow	generally high (above eye level)	Operational
39	Heavy blowing snow		Operational
40-49	Fog or ice fog at the time of observation		Operational
40	Fog or ice fog at a distance at the time of observation, but not at the station during the preceding hour, the fog or ice fog extending to a level above that of the observer		Operational
41	Fog or ice fog in patches		Operational
42	Fog or ice fog, sky visible	} has become thinner during the preceding hour	Operational
43	Fog or ice fog, sky invisible		Operational
44	Fog or ice fog, sky visible	} no appreciable change during the preceding hour	Operational
45	Fog or ice fog, sky invisible		Operational
46	Fog or ice fog, sky visible	} has begun or has become thicker during the preceding hour	Operational
47	Fog or ice fog, sky invisible		Operational
48	Fog, depositing rime, sky visible		Operational
49	Fog, depositing rime, sky invisible		Operational
50-99	Precipitation at the station at the time of observation		Operational
50-59	Drizzle		Operational
50	Drizzle, not freezing, intermittent	} slight at time of observation	Operational
51	Drizzle, not freezing, continuous		Operational
52	Drizzle, not freezing, intermittent	} moderate at time of observation	Operational
53	Drizzle, not freezing, continuous		Operational
54	Drizzle, not freezing, intermittent	} heavy (dense) at time of observation	Operational
55	Drizzle, not freezing, continuous		Operational
56	Drizzle, freezing, slight		Operational
57	Drizzle, freezing, moderate or heavy (dense)		Operational
58	Drizzle and rain, slight		Operational
59	Drizzle and rain, moderate or heavy		Operational
60-69	Rain		Operational
60	Rain, not freezing, intermittent	} slight at time of observation	Operational
61	Rain, not freezing, continuous		Operational
62	Rain, not freezing, intermittent	} moderate at time of observation	Operational
63	Rain, not freezing, continuous		Operational
64	Rain, not freezing, intermittent	} heavy at time of observation	Operational
65	Rain, not freezing, continuous		Operational
66	Rain, freezing, slight		Operational
67	Rain, freezing, moderate or heavy		Operational

Code figure			Status
68	Rain or drizzle and snow, light		Operational
69	Rain or drizzle and snow, moderate or heavy		Operational
70-79	Solid precipitation not in showers		Operational
70	Intermittent fall of snowflakes	} slight at time of observation	Operational
71	Continuous fall of snowflakes		Operational
72	Intermittent fall of snowflakes	} moderate at time of observation	Operational
73	Continuous fall of snowflakes		Operational
74	Intermittent fall of snowflakes	} heavy at time of observation	Operational
75	Continuous fall of snowflakes		Operational
76	Diamond dust (with or without fog)		Operational
77	Snow grains (with or without fog)		Operational
78	Isolated star like snow crystals (with or without fog)		Operational
79	Ice pellets		Operational
80-99	Showery precipitation, or precipitation with current or recent thunderstorm		Operational
80	Rain shower(s), slight		Operational
81	Rain shower(s), moderate or heavy		Operational
82	Rain shower(s), violent		Operational
83	Shower(s) of rain and snow mixed, slight		Operational
84	Shower(s) of rain and snow mixed, moderate or heavy		Operational
85	Snow shower(s), slight		Operational
86	Snow shower(s), moderate or heavy		Operational
87	Shower(s) of snow pellets or small hail, with or without rain or rain and snow mixed	slight	Operational
88	Shower(s) of snow pellets or small hail, with or without rain or rain and snow mixed	moderate or heavy	Operational
89	Shower(s) of hail*, with or without rain or rain and snow mixed, not associated with thunder	slight	Operational
90	Shower(s) of hail*, with or without rain or rain and snow mixed, not associated with thunder	moderate or heavy	Operational
91	Slight rain at time of observation	} Thunderstorm during the preceding hour but not at time of observation	Operational
92	Moderate or heavy rain at time of observation.		Operational
93	Slight snow, or rain and snow mixed or hail* at time of observation.		Operational
94	Moderate or heavy snow, or rain and snow mixed or hail* at time of observation.	} Thunderstorm at time of observation	Operational
95	Thunderstorm, slight or moderate, without hail*, but with rain and/or snow at time of observation		Operational
96	Thunderstorm, slight or moderate, with hail* at time of observation.		Operational
97	Thunderstorm, heavy, without hail*, but with rain and/or snow at time of observation.		Operational
98	Thunderstorm combined with duststorm or sandstorm at time of observation.		Operational
99	Thunderstorm, heavy, with hail* at time of observation		Operational
100	No significant weather observed		Operational
101	Clouds generally dissolving or becoming less developed during the past hour		Operational
102	State of sky on the whole unchanged during the past hour		Operational
103	Clouds generally forming or developing during the past hour		Operational
104	Haze or smoke, or dust in suspension in the air, visibility equal to, or greater than, 1km		Operational
105	Haze or smoke, or dust In suspension in the air, visibility less than 1 km		Operational
106-109	Reserved		Operational
110	Mist		Operational
111	Diamond dust		Operational

Code figure		Status
112	Distant lightning	Operational
113-117	Reserved	Operational
118	Squalls	Operational
119	Reserved	Operational
120	Fog	Operational
121	PRECIPITATION	Operational
122	Drizzle (not freezing) or snow grains	Operational
123	Rain (not freezing)	Operational
124	Snow	Operational
125	Freezing drizzle or freezing rain	Operational
126	Thunderstorm (with or without precipitation)	Operational
127	Blowing OR DRIFTING SNOW OR SAND	Operational
128	Blowing or drifting snow or sand, visibility equal to, or greater than, 1 km	Operational
129	Blowing or drifting snow or sand, visibility less than 1 km	Operational
130	FOG	Operational
131	Fog or ice fog In patches	Operational
132	Fog or ice fog, has become thinner during the past hour	Operational
133	Fog or ice fog, no appreciable change during the past hour	Operational
134	Fog or ice fog, has begun or become thicker during the past hour	Operational
135	Fog, depositing rime	Operational
136-139	Reserved	Operational
140	PRECIPITATION	Operational
141	Precipitation, slight or moderate	Operational
142	Precipitation, heavy	Operational
143	Liquid precipitation, slight or moderate	Operational
144	Liquid precipitation, heavy	Operational
145	Solid precipitation, slight or moderate	Operational
146	Solid precipitation, heavy	Operational
147	Freezing precipitation, slight or moderate	Operational
148	Freezing precipitation, heavy	Operational
149	Reserved	Operational
150	DRIZZLE	Operational
151	Drizzle, not freezing, slight	Operational
152	Drizzle, not freezing, moderate	Operational
153	Drizzle, not freezing, heavy	Operational
154	Drizzle, freezing, slight	Operational
155	Drizzle, freezing, moderate	Operational
156	Drizzle, freezing, heavy	Operational
157	Drizzle and rain, slight	Operational
158	Drizzle and rain, moderate or heavy	Operational
159	Reserved	Operational
160	RAIN	Operational
161	Rain, not freezing, slight	Operational
162	Rain, not freezing, moderate	Operational
163	Rain, not freezing, heavy	Operational
164	Rain, freezing, slight	Operational
165	Rain, freezing, moderate	Operational
166	Rain, freezing, heavy	Operational
167	Rain (or drizzle) and snow, slight	Operational
168	Rain (or drizzle) and snow, moderate or heavy	Operational
169	Reserved	Operational
170	SNOW	Operational
171	Snow, slight	Operational

Code figure		Status
172	Snow, moderate	Operational
173	Snow, heavy	Operational
174	Ice pellets, slight	Operational
175	Ice pellets, moderate	Operational
176	Ice pellets, heavy	Operational
177	Snow grains	Operational
178	Ice crystals	Operational
179	Reserved	Operational
180	SHOWER(S) or intermittent PRECIPITATION	Operational
181	Rain shower(s) or intermittent rain, slight	Operational
182	Rain shower(s) or intermittent rain, moderate	Operational
183	Rain shower(s) or intermittent rain, heavy	Operational
184	Rain shower(s) or intermittent rain, violent	Operational
185	Snow shower(s) or intermittent snow, slight	Operational
186	Snow shower(s) or intermittent snow, moderate	Operational
187	Snow shower(s) or intermittent snow, heavy	Operational
188	Reserved	Operational
189	Hail	Operational
190	THUNDERSTORM	Operational
191	Thunderstorm, slight or moderate, with no precipitation	Operational
192	Thunderstorm, slight or moderate, with rain showers and/or snow showers	Operational
193	Thunderstorm, slight or moderate, with hail	Operational
194	Thunderstorm, heavy, with no precipitation	Operational
195	Thunderstorm, heavy, With rain showers and/or snow showers	Operational
196	Thunderstorm, heavy, with hail	Operational
197-198	Reserved	Operational
199	Tornado	Operational
200-203	Not used	Operational
204	Volcanic ash suspended In the air aloft	Operational
205	Not used	Operational
206	Thick dust haze, visibility less than 1 km	Operational
207	Blowing spray at the station	Operational
208	Drifting dust (sand)	Operational
209	Wall of dust or sand in distance (like haboob)	Operational
210	Snow haze	Operational
211	Whiteout	Operational
212	Not used	Operational
213	Lightning, cloud to surface	Operational
214-216	Not used	Operational
217	Dry thunderstorm	Operational
218	Not used	Operational
219	Tornado cloud (destructive) at or within sight of the station during preceding hour or at the time of observation	Operational
220	Deposition of volcanic ash	Operational
221	Deposition of dust or sand	Operational
222	Deposition of dew	Operational
223	Deposition of wet snow	Operational
224	Deposition of soft rime	Operational
225	Deposition of hard rime	Operational
226	Deposition of hoarfrost	Operational
227	Deposition of glaze	Operational
228	Deposition of ice crust (ice slick)	Operational
229	Not used	Operational

Code figure		Status
230	Duststorm or sandstorm with temperature below 00C	Operational
231-238	Not used	Operational
239	Blowing snow, impossible to determine whether snow is falling or not	Operational
240	Not used	Operational
241	Fog on sea	Operational
242	Fog in valleys	Operational
243	Arctic or Antarctic sea smoke	Operational
244	Steam fog (sea, lake or river)	Operational
245	Steam log (land)	Operational
246	Fog over ice or snow cover	Operational
247	Dense fog, visibility 60-90 m	Operational
248	Dense fog, visibility 30-60 m	Operational
249	Dense fog, visibility less than 30 m	Operational
250	Drizzle, rate of fall - less than 0.10 mm h-1	Operational
251	Drizzle, rate of fall - 0.10 0.19 mm h-1	Operational
252	Drizzle, rate of fall - 0.20 0.39 mm h-1	Operational
253	Drizzle, rate of fall - 0.40 0.79 mm h-1	Operational
254	Drizzle, rate of fall - 0.80 1.59 mm h-1	Operational
255	Drizzle, rate of fall - 1.60 3.19 mm h-1	Operational
256	Drizzle, rate of fall - 3.20-6.39 mm h-1	Operational
257	Drizzle, rate of fall - 6.4 mm h-1 or more	Operational
258	Not used	Operational
259	Drizzle and snow	Operational
260	Rain, rate of fall - less than 1.0 mm h-1	Operational
261	Rain - 1. 1.9 mm h-1	Operational
262	Rain - 2.- 3.9 mm h-1	Operational
263	Rain - 4.- 7.9 mm h-1	Operational
264	Rain - 8.-15.9 mm h-1	Operational
265	Rain - 16.0-31.9 mm h-1	Operational
266	Rain - 32.0-63.9 mm h-1	Operational
267	Rain - 64.0 mm h-1 or more	Operational
268-269	Not used	Operational
270	Snow, rate of fall - less than 1.0 cm h-1	Operational
271	Snow - 1.0 1.9 cm h-1	Operational
272	Snow - 2.0-3.9 cm h-1	Operational
273	Snow - 4.0 7.9 cm h-1	Operational
274	Snow - 8.0-15.9 cm h-1	Operational
275	Snow - 16.0-31.9 cm h-1	Operational
276	Snow - 32.0-63.9 cm h-1	Operational
277	Snow - 64.0 cm h-1 or more	Operational
278	Snow or Ice crystal precipitation from a clear sky	Operational
279	Wet snow, freezing on contact	Operational
280	Precipitation of rain	Operational
281	Precipitation of rain, freezing	Operational
282	Precipitation of rain and snow mixed.	Operational
283	Precipitation of snow	Operational
284	Precipitation of snow pellets or small hail	Operational
285	Precipitation of snow pellets or small hail, with rain	Operational
286	Precipitation of snow pellets or small hail, with rain and snow mixed	Operational
287	Precipitation of snow pellets or small hail, with snow	Operational
288	Precipitation of hail	Operational
289	Precipitation of hail, with rain	Operational
290	Precipitation of hail, with rain and snow mixed	Operational

Code figure		Status
291	Precipitation of hail, with snow	Operational
292	Shower(s) or thunderstorm over sea	Operational
293	Shower(s) or thunderstorm over mountains	Operational
294-299	Not used	Operational
300-507	Reserved	Operational
508	No significant phenomenon to report, present and past weather omitted	Operational
509	No observation, data not available, present and past weather omitted	Operational
510	Present and past weather missing, but expected	Operational
511	Missing value	Operational

Notes: (see)

0 20 004 *Past weather (1)and (2)*

Code figure		Status
0	Cloud covering 1/2 or less of the sky throughout the appropriate period	Operational
1	Cloud covering more than 1/2 of the sky during part of the appropriate period and covering 1/2 or less during part of the period	Operational
2	Cloud covering more than 1/2 of the sky throughout the appropriate period	Operational
3	Sandstorm, duststorm or blowing snow	Operational
4	Fog or ice fog or thick haze	Operational
5	Drizzle	Operational
6	Rain	Operational
7	Snow, or rain and snow mixed	Operational
8	Shower(s)	Operational
9	Thunderstorm(s) with or without precipitation	Operational
10	No significant weather observed	Operational
11	Visibility REDUCED	Operational
12	Blowing phenomena, visibility reduced	Operational
13	FOG	Operational
14	PRECIPITATION	Operational
15	Drizzle	Operational
16	Rain	Operational
17	Snow or ice pellets	Operational
18	Showers or intermittent precipitation	Operational
19	Thunderstorm	Operational
20-30	Reserved	Operational
31	Missing value	Operational

Notes: (see)

0 20 006 *Flight Rules*

Code Figure		Status
0	Low Instrument Flight Rules - Ceiling < 500 feet and/or Visibility < 1 mile	Operational
1	Instrument Flight Rules - Ceiling < 1000 feet and/or Visibility < 3 miles	Operational
2	Marginal Visual Flight Rules - 1000 feet <= Ceiling < 3000 feet and/or 3 miles <= Visibility < 5 miles	Operational
3	Visual Flight Rules - Ceiling >= 3000 feet and/or Visibility >= 5 miles	Operational
4-6	Reserved	Operational
7	Missing value	Operational

0 20 008 *Cloud distribution for aviation*

Code figure			Status
0	Sky Clear		Operational
1	Few		Operational
2	Scattered		Operational
3	Broken		Operational
4	Overcast		Operational
5	Reserved		Operational
6	Scattered/Broken	(Many forecasts use scattered/broken or broken/overcast followed by cloud type(s))	Operational
7	Broken/Overcast	(Many forecasts use scattered/broken or broken/overcast followed by cloud type(s))	Operational
8	Isolated	(Used on aviation charts to describe the cloud type Cb)	Operational
9	Isolated embedded	(Used on aviation charts to describe the cloud type Cb)	Operational
10	Occasional	(Used on aviation charts to describe the cloud type Cb)	Operational
11	Occasional embedded	(Used on aviation charts to describe the cloud type Cb)	Operational
12	Frequent	(Used on aviation charts to describe the cloud type Cb)	Operational
13	Dense	(Used on aviation charts to describe cloud that would cause sudden changes in visibility (less than 1 000 m))	Operational
14	Layers		Operational
15	Obscured (OBSC)		Operational
16	Embedded (EMBD)		Operational
17	Frequent embedded		Operational
18-30	Reserved		Operational
31	Missing value		Operational

0 20 009

General weather indicator (TAF/METAR)

Code figure		Status
0	Reserved	Operational
1	NSC Nil Significant Cloud	Operational
2	CAVOK	Operational
3	SKC Sky Clear	Operational
4	NSW Nil Significant Weather	Operational
5-14	Reserved	Operational
15	Missing value	Operational

0 20 011

Cloud amount

Code figure			Status
0	0	0	Operational
1	1 okta or less, but not zero	1/10 or less, but not zero	Operational
2	2 oktas	2/10 - 3/10	Operational
3	3 oktas	4/10	Operational
4	4 oktas	5/10	Operational
5	5 oktas	6/10	Operational
6	6 oktas	7/10 - 8/10	Operational
7	7 oktas or more, but not 8 oktas	9/10 or more, but not 10/10	Operational
8	8 oktas	10/10	Operational
9	Sky obscured by fog and/or other meteorological phenomena		Operational
10	Sky partially obscured by fog and/or other meteorological phenomena		Operational
11	Scattered		Operational
12	Broken		Operational
13	Few		Operational
14	Reserved		Operational
15	Cloud cover is indiscernible for reasons other than fog or other meteorological phenomena, or observation is not made		Operational

Notes: (see)

0 20 012
Cloud type

Code figure		Status
0	Cirrus (Ci)	Operational
1	Cirrocumulus (Cc)	Operational
2	Cirrostratus (Cs)	Operational
3	Alto cumulus (Ac)	Operational
4	Altostratus (As)	Operational
5	Nimbostratus (Ns)	Operational
6	Stratocumulus (Sc)	Operational
7	Stratus(St)	Operational
8	Cumulus (Cu)	Operational
9	Cumulonimbus (Cb)	Operational
10	No C _H clouds	Operational
11	Cirrus fibratus, sometimes uncinus, not progressively invading the sky	Operational
12	Cirrus spissatus, in patches or entangled sheaves, which usually do not increase and sometimes seem to be the remains of the upper part of a Cumulonimbus; or Cirrus castellanus or floccus	Operational
13	Cirrus spissatus cumulonimbogenitus	Operational
14	Cirrus uncinus or fibratus, or both, progressively invading the sky; they generally thicken as a whole	Operational
15	Cirrus (often in bands) and Cirrostratus, or Cirrostratus alone, progressively invading the sky; they generally thicken as a whole, but the continuous veil does not reach 45 degrees above the horizon	Operational
16	Cirrus (often in bands) and Cirrostratus, or Cirrostratus alone, progressively Invading the sky; they generally thicken as a whole; the continuous veil extends more than 45 degrees above the horizon, without the sky being totally covered	Operational
17	Cirrostratus covering the whole sky	Operational
18	Cirrostratus not progressively invading the sky and not entirely covering It	Operational
19	Cirrocumulus alone, or Cirrocumulus predominant among the CH clouds	Operational
20	No C _M clouds	Operational
21	Altostratus translucidus	Operational
22	Altostratus opacus or Nimbostratus	Operational
23	Alto cumulus translucidus at a single level	Operational
24	Patches (often Lenticular) of Alto cumulus translucidus, continually changing and occurring at one or more levels	Operational
25	Alto cumulus translucidus in bands, or one or more layers of Alto cumulus translucidus or opacus, progressively Invading the sky; these Alto cumulus clouds generally thicken as a whole	Operational
26	Alto cumulus cumulogenitus (or cumulonimbogenitus)	Operational
27	Alto cumulus translucidus or opacus In two or more layers, or Alto cumulus opacus In a single layer, not progressively Invading the sky, or Alto cumulus with Altostratus or Nimbostratus	Operational
28	Alto cumulus castellanus or floccus	Operational
29	Alto cumulus of a chaotic sky, generally at several levels	Operational
30	No C _L clouds	Operational
31	Cumulus humilis or Cumulus fractus other than of bad weather,* or both	Operational
32	Cumulus mediocris or congestus, Towering cumulus (TCU), with or without Cumulus of species fractus or humilis or Stratocumulus, all having their bases at the same level	Operational
33	Cumulonimbus calvus, with or without Cumulus, Stratocumulus or Stratus	Operational
34	Stratocumulus cumulogenitus	Operational
35	Stratocumulus other than Stratocumulus	Operational
36	Stratus nebulosus or Stratus fractus other than of bad weather*, or both	Operational
37	Stratus fractus or Cumulus fractus of bad weather*, or both (pannus), usually below Altostratus or Nimbostratus	Operational
38	Cumulus and Stratocumulus other than Stratocumulus cumulogenitus, with bases at different levels	Operational
39	Cumulonimbus capillatus (often with an anvil), with or without Cumulonimbus calvus, Cumulus, Stratocumulus, Stratus or pannus	Operational
40	C _H	Operational
41	C _M	Operational
42	C _L	Operational
43-58	Reserved	Operational

Code figure		Status
59	Cloud not visible owing to darkness, fog, duststorm, sandstorm, or other analogous phenomena	Operational
60	C _H clouds Invisible owing to darkness, fog, blowing dust or sand, or other similar phenomena, or because of a continuous layer of lower clouds	Operational
61	C _M clouds Invisible owing to darkness, fog, blowing dust or sand, or other similar phenomena, or because of continuous layer of lower clouds	Operational
62	C _L clouds invisible owing to darkness, fog, blowing dust or sand, or other similar phenomena	Operational
63	Missing value	Operational

Notes: (see)

0 20 017 *Cloud top description*

Code figure			Status
0	Isolated cloud fragments of clouds	}	Operational
1	Continuous cloud		Operational
2	Broken cloud - small breaks		Operational
3	Broken cloud - large breaks		Operational
4	Continuous cloud	}	Operational
5	Broken cloud - small breaks		Operational
6	Broken cloud - large breaks		Operational
7	Continuous or almost continuous waves with towering clouds above the top of the layer		Operational
8	Groups of waves with towering clouds above the top of the layer		Operational
9	Two or more layers at different levels		Operational
10-14	Reserved		Operational
15	Missing value		Operational

0 20 018 *Tendency of runway visual range*

Code figure		Status
0	Increasing (U)	Operational
1	Decreasing (D)	Operational
2	No distinct change (N)	Operational
3	Missing value	Operational

0 20 021 *Type of precipitation*

Bit No.		Status
1	Precipitation-unknown type	Operational
2	Liquid precipitation not freezing	Operational
3	Liquid freezing precipitation	Operational
4	Drizzle	Operational
5	Rain	Operational
6	Solid precipitation	Operational
7	Snow	Operational
8	Snow grains	Operational
9	Snow pellets	Operational
10	Ice pellets	Operational
11	Ice crystals	Operational
12	Diamond dust	Operational
13	Small hail	Operational

Bit No.		Status
14	Hail	Operational
15	Glaze	Operational
16	Rime	Operational
17	Soft rime	Operational
18	Hard rime	Operational
19	Clear ice	Operational
20	Wet snow	Operational
21	Hoar frost	Operational
22	Dew	Operational
23	White dew	Operational
24-29	Reserved	Operational
All 30	Missing value	Operational

Notes: (see)

0 20 022

Character of precipitation

Code figure		Status
0	No precipitation	Operational
1	Continuous	Operational
2	Intermittent	Operational
3	Shower	Operational
4	Not reaching ground	Operational
5	Deposition	Operational
6-14	Reserved	Operational
15	Missing value	Operational

0 20 023

Other weather phenomena

Bit No.		Status
1	Dust/sand whirl	Operational
2	Squalls	Operational
3	Sand storm	Operational
4	Dust storm	Operational
5	Lightning - cloud to surface	Operational
6	Lightning - cloud to cloud	Operational
7	Lightning - distant	Operational
8	Thunderstorm	Operational
9	Funnel Cloud not touching surface	Operational
10	Funnel cloud touching surface	Operational
11	Spray	Operational
12	Water-spout	Operational
13	Wind shear	Operational
14-17	Reserved	Operational
All 18	Missing value	Operational

0 20 024

Intensity of phenomena

Code figure		Status
0	No phenomena	Operational
1	Light	Operational
2	Moderate	Operational
3	Heavy	Operational
4	Violent	Operational

Code figure		Status
5	Severe	Operational
6	Reserved	Operational
7	Missing value	Operational

0 20 025
Obscuration

Bit No.		Status
1	Fog	Operational
2	Ice fog	Operational
3	Steam fog	Operational
4-6	Reserved	Operational
7	Mist	Operational
8	Haze	Operational
9	Smoke	Operational
10	Volcanic ash	Operational
11	Dust	Operational
12	Sand	Operational
13	Snow	Operational
14	Cloud	Operational
15	Precipitation	Operational
16-20	Reserved	Operational
All 21	Missing value	Operational

0 20 026
Character of obscuration

Code figure		Status
0	No change	Operational
1	Shallow	Operational
2	Patches	Operational
3	Partial	Operational
4	Freezing	Operational
5	Low drifting	Operational
6	Blowing	Operational
7	Increasing	Operational
8	Decreasing	Operational
9	In suspension in the air	Operational
10	Wall	Operational
11	Dense	Operational
12	Whiteout	Operational
13-14	Reserved	Operational
15	Missing value	Operational

0 20 027
Phenomena occurrence

Bit No.		Status
1	At time of observation	Operational
2	In past hour	Operational
3	In time period for past weather W1W2	Operational
4	In time period specified	Operational
5	Reserved	Operational
6	Below station level	Operational
7	At the station	Operational

Bit No.		Status
8	In the vicinity	Operational
All 9	Missing value	Operational

Notes: (see)

0 20 028
Expected change in intensity

Code figure		Status
0	No change (NC)	Operational
1	Forecast to weaken (WKN)	Operational
2	Forecast to intensify (INTSF)	Operational
3-6	Reserved	Operational
7	Missing value	Operational

0 20 029
Rain flag

Code figure		Status
0	No rain	Operational
1	Rain	Operational
2	Reserved	Operational
3	Missing value	Operational

0 20 032
Rate of ice accretion

Code figure		Status
0	Ice not building up	Operational
1	Ice building up slowly	Operational
2	Ice building up rapidly	Operational
3	Ice melting or breaking up slowly	Operational
4	Ice melting or breaking up rapidly	Operational
5-6	Reserved	Operational
7	Missing value	Operational

0 20 033
Cause of ice accretion

Bit No.		Status
1	Icing from ocean spray	Operational
2	Icing from fog	Operational
3	Icing from rain	Operational
All 4	Missing value	Operational

0 20 034
Sea ice concentration

Code figure		Status
0	No sea ice in sight	Operational
1	Ship in open lead more than 1.0 nautical mile wide, or ship in fast ice with boundary beyond limit of visibility	Operational
2	Sea ice present in concentrations less than 3/10 (3/8), open water or very open pack ice	Operational
3	4/10 to 6/10 (3/8 to less than 6/8), open pack ice	
4	7/10 to 8/10 (6/8 to less 7/8), close pack ice	
<div style="display: flex; align-items: center; justify-content: center;"> <div style="font-size: 4em; margin-right: 10px;">}</div> <div style="text-align: center;">Sea ice concentration is uniform in the observation</div> <div style="font-size: 4em; margin-left: 10px;">}</div> </div>		Operational
<div style="display: flex; align-items: center; justify-content: center;"> <div style="font-size: 4em; margin-right: 10px;">}</div> <div style="text-align: center;">Ship in ice or within 0.5 nautical mile of ice edge</div> <div style="font-size: 4em; margin-left: 10px;">}</div> </div>		Operational

Code figure	Status			
5	9/10 or more, but not 10/10 (7/8 to less than 8/8), very close pack ice	Sea ice concentration is uniform in the observation	}	Operational
6	Strips and patches of pack ice with open water			Operational
7	Strips and patches of close or very close pack ice with areas of lesser concentration between			Operational
8	Fast ice with open water, very open or open pack ice to seaward of the ice boundary			Operational
9	Fast ice with close or very close pack ice to seaward of the boundary	Sea ice concentration is not uniform in the observation	}	Operational
10-13	Reserved			Operational
14	Unable to report, because of darkness, lack of visibility, or because ship is more than 0.5 nautical mile away from ice edge			Operational
15-30	Reserved			Operational
31	Missing value			Operational

0 20 035

Amount and type of ice

Code figure		Status
0	No ice of land origin	Operational
1	1-5 icebergs, no growlers or bergy bits	Operational
2	6-10 icebergs, no growlers or bergy bits	Operational
3	11-20 icebergs, no growlers or bergy bits	Operational
4	Up to and including 10 growlers and bergy bits - no icebergs	Operational
5	More than 10 growlers and bergy bits - no icebergs	Operational
6	1-5 icebergs, with growlers and bergy bits	Operational
7	6-10 icebergs, with growlers and bergy bits	Operational
8	11-20 icebergs, with growlers and bergy bits	Operational
9	More than 20 icebergs, with growlers and bergy bits - a major hazard to navigation	Operational
10-13	Reserved	Operational
14	Unable to report, because of darkness, lack of visibility or because only sea ice is visible	Operational
15	Missing value	Operational

0 20 036

Ice situation

Code figure		Status
0	Ship in open water with floating ice in sight	Operational
1	Ship in easily penetrable ice; conditions improving	Operational
2	Ship in easily penetrable ice; conditions not changing	Operational
3	Ship in easily penetrable ice; conditions worsening	Operational
4	Ship in ice difficult to penetrate; conditions improving	Operational
5	Ship in ice difficult to penetrate; conditions not changing	Operational
6	Ship in ice difficult to penetrate and conditions worsening. Ice forming and floe freezing together	Operational
7	Ship in ice difficult to penetrate and conditions worsening. Ice under slight pressure	Operational
8	Ship in ice difficult to penetrate and conditions worsening. Ice under moderate or severe pressure	Operational
9	Ship in ice difficult to penetrate and conditions worsening. Ship beset	Operational
10-29	Reserved	Operational
30	Unable to report, because of darkness or lack of	Operational
31	Missing value	Operational

0 20 037
Ice development

Code figure		Status
0	New ice only (frazil ice, grease ice, slush, shuga)	Operational
1	Nilas or ice rind, less than 10 cm thick	Operational
2	Young ice (grey ice, grey white ice), 10-30 cm thick	Operational
3	Predominantly new and/or young ice with some first year ice	Operational
4	Predominantly thin first year ice with some new and/or young ice	Operational
5	All thin first year ice (30 70 cm thick)	Operational
6	Predominantly medium first year ice (70 120 cm thick) and thick first year ice (>120 cm thick) with some thinner (younger) first year ice	Operational
7	All medium and thick first year ice	Operational
8	Predominantly medium and thick first year ice with some old ice (usually more than 2 metres thick)	Operational
9	Predominantly old ice	Operational
10-29	Reserved	Operational
30	Unable to report, because of darkness, lack of visibility or because only ice of land origin is visible or because ship is more than 0.5 nautical mile away	Operational
31	Missing value	Operational

0 20 040
Evolution of drift snow

Code figure		Status
0	Drift snow ended before the hour of observation	Operational
1	Intensity diminishing	Operational
2	No change	Operational
3	Intensity increasing	Operational
4	Continues, apart from interruption lasting less than 30 minutes	Operational
5	General drift snow has become drift snow near the ground	Operational
6	Drift snow near the ground has become general drift snow	Operational
7	Drift snow has started again after an interruption of more than 30 minutes	Operational
8 -14	Reserved	Operational
15	Missing value	Operational

0 20 041
Airframe icing

Code figure		Status
0	No icing	Operational
1	Light icing	Operational
2	Light icing In cloud	Operational
3	Light icing In precipitation	Operational
4	Moderate icing	Operational
5	Moderate icing in cloud	Operational
6	Moderate icing in precipitation	Operational
7	Severe icing	Operational
8	Severe icing in cloud	Operational
9	Severe icing in precipitation	Operational
10	Trace of icing	Operational
11	Trace of icing in cloud	Operational

Code figure		Status
12	Trace of icing in precipitation	Operational
13-14	Reserved	Operational
15	Missing value	Operational

0 20 042
Airframe icing present

Code figure		Status
0	No icing	Operational
1	Icing present	Operational
2	Reserved	Operational
3	Missing value	Operational

0 20 045
Supercooled large droplet (SLD) conditions

Code figure		Status
0	No SLD conditions present	Operational
1	SLD conditions present	Operational
2	Reserved	Operational
3	Missing value	Operational

0 20 048
Evolution of feature

Code figure		Status
0	Stability	Operational
1	Diminution	Operational
2	Intensification	Operational
3	Unknown	Operational
4-14	Reserved	Operational
15	Missing value	Operational

0 20 050
Cloud index

Code figure		Status
0	Reserved	Operational
1	1st low cloud	Operational
2	2nd low cloud	Operational
3	3rd low cloud	Operational
4	1st medium cloud	Operational
5	2nd medium cloud	Operational
6	3rd medium cloud	Operational
7	1st high cloud	Operational
8	2nd high cloud	Operational
9-254	Reserved	Operational
255	Missing value	Operational

0 20 055
State of sky in the tropics

Code figure		Status
0	Cumulus, if any, are quite small; generally less than 2/8 coverage, except on windward slopes of elevated terrain; average width of cloud is at least as great as its vertical thickness	Operational

Code figure		Status
1	Cumulus of intermediate size with cloud cover less than 5/8; average cloud width is more than its vertical thickness; towers are vertical with little or no evidence of precipitation, except along slopes of elevated terrain; a general absence of middle and upper clouds	Operational
2	Swelling Cumulus with rapidly growing tall turrets which decrease in size with height and whose tops tend to separate from the longer cloud body and evaporate within minutes of the separation	Operational
3	Swelling Cumulus with towers having a pronounced tilt in a downwind direction; vertical cloud thickness is more than one and a half times that of its average width	Operational
4	Swelling Cumulus with towers having a pronounced tilt in an upwind direction; vertical cloud thickness is more than one and a half times that of its average width	Operational
5	Tall Cumulus congestus with vertical thickness more than twice the average width; not organized in clusters or lines; one or more layers of clouds extend out from the cloud towers, although no continuous cloud layers exist (see Note)	Operational
6	Isolated Cumulonimbus or large clusters of Cumulus turrets separated by wide areas in which clouds are absent; cloud bases are generally dark with showers observed in most cells; some scattered middle and upper clouds may be present; individual Cumulus cells are one to two times higher than they are wide	Operational
7	Numerous Cumulus extending through the middle troposphere with broken to overcast sheets of middle clouds and/or Cirrostratus; Cumulus towers do not decrease generally in size with height; ragged dark cloud bases with some showers present	Operational
8	Continuous dense middle clouds and/or Cirrostratus cloud sheets with some large isolated Cumulonimbus or Cumulus congestus clouds penetrating these sheets; light rain occasionally observed from the Altostratus; Cumulonimbus bases ragged and dark with showers visible (see Note)	Operational
9	Continuous sheets of middle clouds and/or Cirrostratus with Cumulonimbus and Cumulus congestus in organized lines or cloud bands; rain is generally observed from Altostratus sheets and heavy showers from Cumulonimbus; wind has a squally character	Operational
10	State of sky unknown or not described by any of the above	Operational
11-14	Reserved	Operational
15	Missing value	Operational

Notes: (see)

0 20 056 *Cloud phase*

Code figure		Status
0	Unknown	Operational
1	Water	Operational
2	Ice	Operational
3	Mixed	Operational
4-6	Reserved	Operational
7	Missing value	Operational

0 20 062 *State of the ground (with or without snow)*

Code figure			Status
0	Surface of ground dry (without cracks and no appreciable amount of dust or loose sand)	} without snow or measurable ice cover	Operational
1	Surface of ground moist		Operational
2	Surface of ground wet (standing water in small or large pools on surface)		Operational
3	Flooded		Operational

Code figure			Status
4	Surface of ground frozen	without snow or measurable ice cover	Operational
5	Glaze on ground		Operational
6	Loose dry dust or sand not covering ground		Operational
7	Thin cover of loose dry dust or sand covering ground completely		Operational
8	Moderate or thick cover of loose dry dust or sand covering ground completely		Operational
9	Extremely dry with cracks	with snow or measurable ice cover	Operational
10	Ground predominantly covered by ice		Operational
11	Compact or wet snow (with or without ice) covering less than one half of the ground		Operational
12	Compact or wet snow (with or without ice) covering at least one half of the ground but ground not completely covered		Operational
13	Even layer of compact or wet snow covering ground completely		Operational
14	Uneven layer of compact or wet snow covering ground completely		Operational
15	Loose dry snow covering less than one half of the		Operational
16	Loose dry snow covering at least one half of the ground (but not completely)		Operational
17	Even layer of loose dry snow covering ground		Operational
18	Uneven layer of loose dry snow covering ground completely		Operational
19	Snow covering ground completely; deep drifts		Operational
20-30	Reserved		Operational
31	Missing value		Operational

Notes: (see)

0 20 063

Special phenomena

(To be developed)

Status
Operational

0 20 071

Accuracy of fix and rate of atmospheric

Code figure	Accuracy of fix (estimated error)	Repetition rate	Status
0	No assessment	No assessment	Operational
1	Less than 50 km	Less than 1 per second	Operational
2	Between 50 and 200 km	Less than 1 per second	Operational
3	More than 200 km	Less than 1 per second	Operational
4	Less than 50 km	1 or more per second	Operational
5	Between 50 and 200 km	1 or more per second	Operational
6	More than 200 km	1 or more per second	Operational
7	Less than 50 km	Rate so rapid number cannot be counted	Operational
8	Between 50 and 200 km	Rate so rapid number cannot be counted	Operational
9	More than 200 km	Rate so rapid number cannot be counted	Operational
10-14	Reserved		Operational
15	Missing value		Operational

0 20 085

General condition of runway

Code figure		Status
0	Cleared (CLR//)	Operational

Code figure		Status
1	All runways closed (SNOCLO)	Operational
2-14	Reserved	Operational
15	Missing value	Operational

0 20 086
Runway deposits

Code figure		Status
0	Clear and dry	Operational
1	Damp	Operational
2	Wet with water patches	Operational
3	Rime and frost covered (depth normally less than 1 mm)	Operational
4	Dry snow	Operational
5	Wet snow	Operational
6	Slush	Operational
7	Ice	Operational
8	Compacted or rolled snow	Operational
9	Frozen ruts or ridges	Operational
10-14	Reserved	Operational
15	Missing or not reported (e.g. due to runway clearance in progress)	Operational

0 20 087
Runway contamination

Code figure		Status
0	Reserved	Operational
1	Less than 10% of runway covered	Operational
2	11% to 25% of runway covered	Operational
3-4	Reserved	Operational
5	25% to 50% of runway covered	Operational
6-8	Reserved	Operational
9	51% to 100% of runway covered	Operational
10-14	Reserved	Operational
15	Missing or not reported (e.g. due to runway clearance in progress)	Operational

0 20 089
Runway friction coefficient

Code figure		Status
0	0.00	Operational
1	0.01	Operational
2-88	0.02...0.88	Operational
89	0.89	Operational
90	0.90	Operational
91	Braking action poor	Operational
92	Braking action medium to poor	Operational
93	Braking action medium	Operational
94	Braking action medium to good	Operational
95	Braking action good	Operational
96-98	Reserved	Operational
99	Unreliable	Operational
100-126	Reserved	Operational
127	Missing, not reported and/or runway not operational.	Operational

0 20 090
Special clouds

Code figure		Status
0	Reserved	Operational
1	Nacreous clouds	Operational
2	Noctilucent clouds	Operational
3	Clouds from waterfalls	Operational
4	Clouds from fires	Operational
5	Clouds from volcanic eruptions	Operational
6-14	Reserved	Operational
15	Missing value	Operational

0 20 101
Locust (acridian) name

Code figure		Status
0	Reserved	Operational
1	Schistocerca gregaria	Operational
2	Locusta migratoria	Operational
3	Nomadacris septemfasciata	Operational
4	Oedaleus senegalensis	Operational
5	Anracridium spp	Operational
6	Other locusts	Operational
7	Other grasshoppers	Operational
8	Other crickets	Operational
9	Spodoptera exempt	Operational
10-14	Reserved	Operational
15	Missing value	Operational

0 20 102
Locust (maturity) color

Code figure		Status
0	Green	Operational
1	Green or black	Operational
2	Black	Operational
3	Yellow and black	Operational
4	Straw/grey	Operational
5	Pink	Operational
6	Dark red/brown	Operational
7	Mixed red and yellow	Operational
8	Yellow	Operational
9	Other	Operational
10-14	Reserved	Operational
15	Missing value	Operational

0 20 103
Stage of development of locusts

Code figure		Status
0	Hoppers (nymphs, larvae), stage 1	Operational
1	Hoppers (nymphs, larvae), stage 2 or mixed 1, 2 instars (stages)	Operational
2	Hoppers (nymphs, larvae), stage 3 or mixed 2, 3	Operational
3	Hoppers (nymphs, larvae), stage 4 or mixed 3, 4	Operational
4	Hoppers (nymphs, larvae), stage 5 or mixed 4, 5	Operational

Code figure		Status
5	Hoppers (nymphs, larvae), stage mixed, all or many instars	Operational
6	Fledglings (wings too soft for sustained flight)	Operational
7	Immature adults	Operational
8	Mixed maturity adults	Operational
9	Mature adults	Operational
10-14	Reserved	Operational
15	Missing value	Operational

0 20 104

Organization state of swarm or band of locusts

Code figure		Status
0	Hoppers only, mainly in bands or clusters	Operational
1	Winged adults in the vicinity more than 10 kilometres from point of observation	Operational
2	Locusts in flight, a few seen at the station	Operational
3	Locusts at the station, most of them on the ground	Operational
4	Locusts, some on ground and others in flight at a height less than 10 metres	Operational
5	Locusts, some on ground and others in flight at a height greater than 10 metres	Operational
6	Locusts, most in flight at a height less than 10 metres	Operational
7	Locusts, most in flight at a height greater than 10 metres	Operational
8	Locusts, all over inflicting severe damage to vegetation, no extermination operation	Operational
9	Locusts, all over inflicting severe damage to vegetation, extermination operation in progress	Operational
10-14	Reserved	Operational
15	Missing value	Operational

0 20 105

Size of swarm or band of locusts and duration of passage of swarm

Code figure		Status
	When 0 20 104 (Organizational state of swarm or band of locusts) = 0	Operational
0	Reserved	Operational
1	Area covered by isolated bands < 10 m ²	Operational
2	Area covered by isolated bands 10 - 100 m ²	Operational
3	Area covered by isolated bands 100 - 1000 m ²	Operational
4	Area covered by isolated bands 1 000 - 10000 m ²	Operational
5	Area covered by isolated bands 1 - 10 ha	Operational
6	Area covered by isolated bands > 10 ha	Operational
7	Area covered by dispersed bands < 100 km ²	Operational
8	Area covered by dispersed bands 100 - 1000 km ²	Operational
9	Area covered by dispersed bands > 1000 km ²	Operational
10-14	Reserved	Operational
15	Missing value	Operational
	When 0 20 104 (Organizational state of swarm or band of locusts) = 1 to 9	Operational
0	Small swarm less than 1 km ² or adults in ground, tens or hundreds of individuals visible simultaneously, duration of passage less than 1 hour ago	Operational
1	Small swarm less than 1 km ² or adults in ground, tens or hundreds of individuals visible simultaneously, duration of passage 1 to 6 hours ago	Operational

Code figure		Status
2	Small swarm less than 1 km ² or adults in ground, tens or hundreds of individuals visible simultaneously, duration of passage over 6 hours ago	Operational
3	Medium swarm or scattered adults, several visible simultaneously, duration of passage less than 1 hour	Operational
4	Medium swarm or scattered adults, several visible simultaneously, duration of passage 1 to 6 hours ago	Operational
5	Medium swarm or scattered adults, several visible simultaneously, duration of passage over 6 hours ago	Operational
6	Large swarm or isolated adults, seen singly, duration of passage less than 1 hour ago	Operational
7	Large swarm or isolated adults, seen singly, duration of passage 1 to 6 hours ago	Operational
8	Large swarm or isolated adults, seen singly, duration of passage over 6 hours ago	Operational
9	More than one swarm of locusts	Operational
10	Size of swarm and/or duration of passage not determined owing to darkness or similar phenomena	Operational
11-14	Reserved	Operational
15	Missing value	Operational

0 20 106

Locust population density

Code figure		Status
0	Reserved	Operational
1	Thin density swarm (swarm visible only when near enough for individual locusts to be discerned)	Operational
2	Medium density swarm	Operational
3	Dense swarm (obscuring nearby features, e.g. trees)	Operational
4	Isolated hoppers seen singly	Operational
5	Scattered hoppers, several visible simultaneously	Operational
6-14	Reserved	Operational
15	Missing value	Operational

0 20 107

Direction of movements of locust swarm

Code figure		Status
0	Reserved	Operational
1	Generally in the direction NE	Operational
2	Generally in the direction E	Operational
3	Generally in the direction SE	Operational
4	Generally in the direction S	Operational
5	Generally in the direction SW	Operational
6	Generally in the direction W	Operational
7	Generally in the direction NW	Operational
8	Generally in the direction N	Operational
9	Specific direction indeterminable	Operational
10-14	Reserved	Operational
15	Missing value	Operational

0 20 108

Extent of vegetation

Code figure		Status
0	Bare ground	Operational
1	Dry, presence of few and isolated shrubs	Operational
2	Sparse vegetation (sprouting)	Operational

Code figure		Status
3	Dense vegetation (sprouting)	Operational
4	Sparse vegetation (growing)	Operational
5	Dense vegetation (growing)	Operational
6	Sparse vegetation in flower	Operational
7	Dense vegetation in flower	Operational
8-14	Reserved	Operational
15	Missing value	Operational

0 20 119

Lightning Discharge Polarity

Code figure		Status
0	Not Defined	Validation
1	Positive	Validation
2	Negative	Validation
3	Missing Data	Validation

0 20 124

Lightning Stroke or Flash

Code figure		Status
0	Not Defined	Validation
1	Lightning Stroke	Validation
2	Lightning Flash, by manual observation, or if equipment insensitive to stroke resolution	Validation
3	Missing Data	Validation

0 21 066

Wave scatterometer product confidence data

Bit No.		Status
1	Process equipment not working	Operational
2	Equipment failed	Operational
3	PRF code changed during image generation	Operational
4	Sampling window changed during image generation	Operational
5	Gain changed during image generation	Operational
6	Chirp replica exceeds specified values	Operational
7	Input data mean and standard deviation of in-phase and quadrature out of range	Operational
8	Doppler centroid confidence > MMCC value	Operational
9	Doppler centroid absolute value > PRF/2	Operational
10	Doppler ambiguity confidence < MMCC value	Operational
11	Output data mean and standard deviation =< MMCC value	Operational
All 12	Missing value	Operational

Notes: (see)

0 21 067

Wind product confidence data

Bit No.		Status
1	No forebeam calculation	Operational
2	No midbeam calculation	Operational
3	No aftbeam calculation	Operational
4	Forebeam arcing detected	Operational
5	Midbeam arcing detected	Operational
6	Aftbeam arcing detected	Operational

Bit No.		Status
7	Any beam noise content above or equal to threshold	Operational
8	Land (any land in cell footprint)	Operational
9	Autonomous ambiguity removal not used	Operational
10	Meteorological background not used	Operational
11	Minimum residual exceeded threshold	Operational
12	Frame checksum error detected	Operational
All 13	Missing value	Operational

0 21 068

Radar altimeter product confidence data

Bit No.		Status
1	Standard deviation of wind speed outside MMCC limit	Operational
2	Standard deviation of significant wave height outside MMCC limit	Operational
3	Standard deviation of altitude outside MMCC limit	Operational
4	Mean peakiness outside MMCC limit	Operational
5	Frame checksum error detected	Operational
6	Height-time loop time constant correction not performed	Operational
7	Not enough measurements (N<10)	Operational
All 8	Missing value	Operational

0 21 069

SST product confidence data

Bit No.		Status
1	12.0 μm channel present in source data	Operational
2	11.0 μm channel present in source data	Operational
3	3.7 μm channel present in source data	Operational
4	1.6 μm channel present in source data	Operational
5	Cloud identification used 1.6 μm histogram reflectance cloud test	Operational
6	1.6 μm histogram reflectance cloud test used dynamic threshold	Operational
7	Sun glint detected by 1.6 μm reflectance cloud test	Operational
8	3.7 μm channel used in sea surface temperature	Operational
9	Sea surface temperature derivation used day-time data (night time if zero)	Operational
All 10	Missing value	Operational

0 21 070

SST product confidence data (SADIST-2)

Bit No.		Status
1-9	Nadir only view SST retrieval used 3.7 micron channel (one bit per 10-arcmin cell)	Operational
1	Cell 1: nadir-only view SST used 3.7 micron channel	Operational
2	Cell 2: nadir-only view SST used 3.7 micron channel	Operational
3	Cell 3: nadir-only view SST used 3.7 micron channel	Operational
4	Cell 4: nadir-only view SST used 3.7 micron channel	Operational
5	Cell 5: nadir-only view SST used 3.7 micron channel	Operational
6	Cell 6: nadir-only view SST used 3.7 micron channel	Operational
7	Cell 7: nadir-only view SST used 3.7 micron channel	Operational
8	Cell 8: nadir-only view SST used 3.7 micron channel	Operational
9	Cell 9: nadir-only view SST used 3.7 micron channel	Operational

Bit No.		Status
10-18	Dual view SST retrieval used 3.7 micron channel (one bit per 10-arcmin cell)	Operational
10	Cell 1: dual view SST used 3.7 micron channel	Operational
11	Cell 2: dual view SST used 3.7 micron channel	Operational
12	Cell 3: dual view SST used 3.7 micron channel	Operational
13	Cell 4: dual view SST used 3.7 micron channel	Operational
14	Cell 5: dual view SST used 3.7 micron channel	Operational
15	Cell 6: dual view SST used 3.7 micron channel	Operational
16	Cell 7: dual view SST used 3.7 micron channel	Operational
17	Cell 8: dual view SST used 3.7 micron channel	Operational
18	Cell 9: dual view SST used 3.7 micron channel	Operational
19	Nadir view contains day-time data (night if zero)	Operational
20	Forward view contains day-time data (night if zero)	Operational
21	Record contains contributions from instrument scans acquired when ERS platform not in yaw-steering mode	Operational
22	Record contains contributions from instrument scans for which Product Confidence Data show quality is poor or unknown	Operational
All 23	Missing value	Operational

0 21 072

Satellite altimeter calibration status

Bit No.		Status
1	Height error correction applied instead of open loop calibration	Operational
2	Microwave sounder used for troposphere correction	Operational
3	AGC output correction applied instead of open loop calibration	Operational
All 4	Missing value	Operational

0 21 073

Satellite altimeter instrument mode

Bit No.		Status
1	Blank data record	Operational
2	Test	Operational
3	Calibration (closed loop)	Operational
4	BITE	Operational
5	Acquisition on ice	Operational
6	Acquisition on ocean	Operational
7	Tracking on ice	Operational
8	Tracking on ocean	Operational
All 9	Missing value	Operational

0 21 076

Representation of intensities

Code figure		Status
0	Linear	Operational
1	Logarithmic (base e)	Operational
2	Logarithmic (base 10)	Operational
3-6	Reserved	Operational
7	Missing value	Operational

0 21 109

SEAWINDS wind vector cell quality

Bit No.		Status
1	Not enough good sigma-0 available for wind retrieval	Operational
2	Poor azimuth diversity among sigma-0 for wind	Operational
3-7	Reserved	Operational
8	Some portion of wind vector cell is over land	Operational
9	Some portion of wind vector cell is over ice	Operational
10	Wind retrieval not performed for wind vector cell	Operational
11	Reported wind speed is greater than 30 m s ⁻¹	Operational
12	Reported wind speed is less than or equal to 3 m s ⁻¹	Operational
13-16	Reserved	Operational
All 17	Missing value	Operational

0 21 115

SEAWINDS sigma-0 quality

Bit No.		Status
1	Sigma-0 measurement is not usable	Operational
2	Signal to noise ratio is low	Operational
3	Sigma-0 is negative	Operational
4	Sigma-0 is outside of acceptable range	Operational
5	Scatterometer pulse quality is not acceptable	Operational
6	Sigma-0 cell location algorithm does not converge	Operational
7	Frequency shift lies beyond the range of the x factor	Operational
8	Spacecraft temperature is beyond calibration coefficient range	Operational
9	No applicable altitude records were found for this sigma-0	Operational
10	Interpolated ephemeris data are not acceptable for this sigma-0	Operational
11-16	Reserved	Operational
All 17	Missing value	Operational

0 21 116

SEAWINDS sigma-0 mode

Bit No.		Status
1	Calibration/measurement pulse flag (1)	Operational
2	Calibration/measurement pulse flag (2)	Operational
3	Outer antenna beam	Operational
4	Sigma-0 cell is aft of spacecraft	Operational
5	Current mode (1)	Operational
6	Current mode (2)	Operational
7	Effective gate width - slice resolution (1)	Operational
8	Effective gate width - slice resolution (2)	Operational
9	Effective gate width - slice resolution (3)	Operational
10	Low resolution mode - whole pulse data	Operational
11	Scatterometer electronic subsystem B	Operational
12	Alternate spin rate - 19.8 rpm	Operational
13	Receiver protection on	Operational
14	Slices per composite flag (1)	Operational
15	Slices per composite flag (2)	Operational
16	Slices per composite flag (3)	Operational
All 17	Missing value	Operational

0 21 119

Wind scatterometer geophysical model function

Code figure		Status
0	Reserved	Operational
1	SASS	Operational
2	SASS2	Operational
3	NSCAT0	Operational
4	NSCAT1	Operational
5	NSCAT2	Operational
6	QSCAT0	Operational
7	QSCAT1	Operational
8-30	Reserved	Operational
31	CMOD1	Operational
32	CMOD2	Operational
33	CMOD3	Operational
34	CMOD4	Operational
35	CMOD5	Operational
36-62	Reserved	Operational
63	Missing value	Operational

0 21 144

Altimeter rain flag

Bit No.		Status
1	Rain	Operational
All 2	Missing value	Operational

0 21 150

Beam collocation

Code figure		Status
0	Data from single ground station (no co-location)	Operational
1	Data from multiple ground station (co-located data)	Operational
2	Reserved	Operational
3	Missing value	Operational

0 21 155

Wind vector cell quality

Bit No.		Status
1	Not enough good sigma-0 available for wind retrieval	Operational
2	Poor azimuth diversity among sigma-0 for wind	Operational
3	Any beam noise content above threshold	Operational
4	Product monitoring not used	Operational
5	Product monitoring flag	Operational
6	KNMI quality control fails	Operational
7	Variational quality control fails	Operational
8	Some portion of wind vector cell is over land	Operational
9	Some portion of wind vector cell is over ice	Operational
10	Wind retrieval not performed for wind vector cell	Operational
11	Reported wind speed is greater than 30 m/s	Operational
12	Reported wind speed is less than or equal to 3 m/s	Operational
13	Rain flag for the wind vector cell is not usable	Operational
14	Rain flag algorithm detects rain	Operational
15	No meteorological background used	Operational
16	Data are redundant	Operational
17-23	Reserved	Operational
All 24	Missing value	Operational

0 21 158
ASCAT kp estimate quality

Code figure		Status
0	Acceptable	Operational
1	Not acceptable	Operational
2	Reserved	Operational
3	Missing value	Operational

0 21 159
ASCAT sigma-0 usability

Code figure		Status
0	Good	Operational
1	Usable	Operational
2	Bad	Operational
3	Missing value	Operational

0 21 169
Ice presence indicator

Code figure		Status
0	No ice present	Operational
1	Ice present	Operational
2	Reserved	Operational
3	Missing value	Operational

0 22 056
Direction of profile

Code figure		Status
0	Upwards profile	Operational
1	Downwards profile	Operational
2	Horizontal	Operational
3	Missing value	Operational

0 22 060
Lagrangian drifter drogue status

Code figure		Status
0	Drogue is detached	Operational
1	Drogue is attached	Operational
2	Drogue status unknown	Operational
3-6	Reserved	Operational
7	Missing value	Operational

0 22 061
State of the sea

Code figure		Height in metres	Status
0	Calm (glassy)	0	Operational
1	Calm (rippled)	0 - 0.1	Operational
2	Smooth (wavelets)	0.1 - 0.5	Operational
3	Slight	0.5 - 1.25	Operational
4	Moderate	1.25 - 2.5	Operational
5	Rough	2.5 - 4	Operational
6	Very rough	4 - 6	Operational

Code figure	Descriptive terms		Status
7	High	6 - 9	Operational
8	Very high	9 - 14	Operational
9	Phenomenal	Over 14	Operational
10-14	Reserved		Operational
15	Missing value		Operational

Notes: (see)

0 22 067

Instrument type for water temperature profile measurement

(See common Code Table C-3)

Status
Operational

0 22 068

Water temperature profile recorder types

(See common Code Table C-4)

Status
Operational

0 22 120

Tide station automated water level check

Code figure		Status
0	Good data	Operational
1	Maximum (high) water level limit exceeded	Operational
2	Minimum (low) water level limit exceeded	Operational
3	Rate of change limit for water level exceeded	Operational
4	Flat limit for water level exceeded	Operational
5	Observed minus predicted water level value limit exceeded	Operational
6	Observed value from primary water level sensor minus backup water level sensor	Operational
7	Value exceeded specified tolerance from expected	Operational
8	Water level QA parameter (sigmas and/or outliers) limits exceeded	Operational
9	Sea temperature outside of expected range	Operational
10	Multiple QC checks (above) failed	Operational
11	No automated water level checks performed	Operational
12-30	Reserved	Operational
31	Missing value	Operational

0 22 121

Tide station manual water level check

Code figure		Status
0	Operational	Operational
1	Possible clogging problem or otherwise degraded water level data	Operational
2	Possible datum shift	Operational
3	Unknown status of water level sensor	Operational
4	Suspected or known sea temperature sensor problem	Operational
5	Multiple possible problems (above)	Operational
6	Bad data DO NOT DISSEMINATE!	Operational
7	No manual water level checks performed	Operational
8-30	Reserved	Operational
31	Missing value	Operational

0 22 122***Tide station automated meteorological data check***

Code figure		Status
0	Good data from all sensors	Operational
1	Wind direction outside of allowable range	Operational
2	Wind speed outside of expected range	Operational
3	Barometric pressure outside of expected range	Operational
4	Air temperature outside of expected range	Operational
5	Multiple sensors failed QC checks	Operational
6	No automated meteorological data checks performed	Operational
7-30	Reserved	Operational
31	Missing value	Operational

0 22 123***Tide station manual meteorological data check***

Code figure		Status
0	Operational	Operational
1	Suspected or known problem with wind sensor	Operational
2	Suspected or known problem with barometric pressure sensor	Operational
3	Suspected or known problem with air temperature	Operational
4	Unknown status of all sensors	Operational
5	Suspected or known problems with multiple sensors	Operational
6	Bad data DO NOT DISSEMINATE!	Operational
7	No manual meteorological data checks performed	Operational
8-30	Reserved	Operational
31	Missing value	Operational

0 22 178***XBT/XCTD launcher Type***

Code figure		Status
0	Unknown	Validation
1	LM-2A Deck-mounted	Validation
2	LM-3A Hand-Held	Validation
3	LM-4A Thru-Hull	Validation
4-9	Reserved	Validation
10	AL-12 TSK Autolauncher (up to 12 Probes)	Validation
11-19	Reserved	Validation
20	SIO XBT Autolauncher (up to 6 probes)	Validation
21-29	Reserved	Validation
30	AOML XBT V6 Autolauncher (up to 6 Deep Blue probes)	Validation
31	AOML XBT V8.0 Autolauncher (up to 8 Deep Blue probes)	Validation
32	AOML XBT V8.1 Autolauncher (up to 8 Deep Blue&Fast Deep probes)	Validation
33-89	Reserved	Validation
90	CSIRO Devil Autolauncher	Validation
91-99	Reserved	Validation
100	MFSTEP Autolauncher (Mediterranean)	Validation
101-254	Reserved	Validation
255	Missing	Validation

0 23 001***Accident early notification - article applicable***

Code figure		Status
0	Reserved	Operational
1	Articles 1 and 2	Operational
2	Article 3	Operational
3	Article 5.2	Operational
4-6	Reserved	Operational
7	Missing value	Operational

0 23 002

Activity or facility involved in incident

Code figure		Status
0	Reserved	Operational
1	Nuclear reactor on ground	Operational
2	Nuclear reactor at sea	Operational
3	Nuclear reactor In space	Operational
4	Nuclear fuel facility	Operational
5	Radioactive waste management facility	Operational
6	Transport of nuclear fuel or radioactive waste	Operational
7	Storage of nuclear fuel or radioactive waste	Operational
8	Manufacture of radio isotopes	Operational
9	Use of radio isotopes	Operational
10	Storage of radio isotopes	Operational
11	Disposal of radio isotopes	Operational
12	Transport of radio isotopes	Operational
13	Use of radio isotopes for power generation	Operational
14-29	Reserved	Operational
30	Other	Operational
31	Missing value	Operational

0 23 003

Type of release

Code figure		Status
0	No release	Operational
1	Release to atmosphere	Operational
2	Release to water	Operational
3	Release to both atmosphere and water	Operational
4	Expected release to atmosphere	Operational
5	Expected release to water	Operational
6	Expected release to both atmosphere and water	Operational
7	Missing value	Operational

0 23 004

Countermeasures taken near border

Code figure		Status
0	No countermeasures	Operational
1	Evacuation	Operational
2	Sheltering	Operational
3	Prophylaxis	Operational
4	Water	Operational
5-6	Reserved	Operational
7	Missing value	Operational

0 23 005
Cause of incident

Code figure		Status
0	Incident State does not understand what happened	Operational
1	Incident State knows the cause of the incident	Operational
2	Reserved	Operational
3	Missing value	Operational

0 23 006
Incident situation

Code figure		Status
0	No improvement	Operational
1	Unstable	Operational
2	No deterioration	Operational
3	Improving	Operational
4	Stable	Operational
5	Deteriorating	Operational
6	Reserved	Operational
7	Missing value	Operational

0 23 007
Characteristics of release

Code figure		Status
0	No release	Operational
1	Release has stopped	Operational
2	Release	Operational
3	Release is continuing	Operational
4-6	Reserved	Operational
7	Missing value	Operational

0 23 008
State of current release

Code figure		Status
0	Gaseous	Operational
1	Particulate	Operational
2	Mixture of gaseous and particulate	Operational
3	Missing value	Operational

0 23 009
State of expected release

Code figure		Status
0	Gaseous	Operational
1	Particulate	Operational
2	Mixture of gaseous and particulate	Operational
3	Missing value	Operational

0 23 016
Possibility of significant chemical toxic health effect

Code figure		Status
0	No significant chemical toxic health effect	Operational
1	Significant chemical toxic health effect possible	Operational

Code figure		Status
2	Reserved	Operational
3	Missing value	Operational

0 23 018

Release behaviour over time

Code figure		Status
0	Release no longer occurring	Operational
1	Release still occurring	Operational
2	Release expected to increase in next 6 hours	Operational
3	Release expected to remain constant in next 6 hours	Operational
4	Release expected to decrease in next 6 hours	Operational
5-6	Reserved	Operational
7	Missing value	Operational

0 23 031

Possibility that plume will encounter precipitation in State in which incident occurred

Code figure		Status
0	Plume will not encounter rain in incident State	Operational
1	Plume will encounter rain in incident State	Operational
2	Reserved	Operational
3	Missing value	Operational

0 23 032

Plume will encounter change in wind direction and/or speed flag

Code figure		Status
0	No significant change expected within the next 6 hours	Operational
1	Anticipated significant change expected within the next 6 hours	Operational
2	Reserved	Operational
3	Missing value	Operational

0 24 003

Composition of release

Code figure		Status
0	Noble gases	Operational
1	Iodides	Operational
2	Caesiums	Operational
3	Transuranics	Operational
4-30	Reserved	Operational
31	Missing value	Operational

0 25 004

Echo processing

Code figure		Status
0	Incoherent	Operational
1	Coherent (Doppler)	Operational
2	Reserved	Operational
3	Missing value	Operational

0 25 005
Echo integration

Code figure		Status
0	Logarithm 2.5dB	Operational
1	Linear	Operational
2	Special	Operational
3	Missing value	Operational

0 25 006
Z to R conversion

Code figure		Status
0	ZH to R conversion	Operational
1	(ZH, ZDR) to (NO, DO) to R	Operational
2	(Z (F1), Z (F2)) to attenuation to R	Operational
3-5	Reserved	Operational
6	Other	Operational
7	Missing value	Operational

0 25 009
Calibration method (see Note 3)

Bit No.		Status
1	None	Operational
2	Calibration target or signal	Operational
3	Against rain gauges	Operational
4	Against other Instruments (distrometer attenuation)	Operational
All 5	Missing value	Operational

0 25 010
Clutter treatment

Code figure		Status
0	None	Operational
1	Map	Operational
2	Insertion of higher elevation data and map	Operational
3	Analysis of the fluctuating Logarithm signal (clutter detection)	Operational
4	Extraction of the fluctuating part of linear signal (clutter suppression)	Operational
5	Clutter suppression Doppler	Operational
6	Multi parameter analysis	Operational
7-14	Reserved	Operational
15	Missing value	Operational

0 25 011
Ground occultation correction (screening)

Code figure		Status
0	None	Operational
1	Map of correction factors	Operational
2	Interpolation (azimuth or elevation)	Operational
3	Missing value	Operational

0 25 012
Range attenuation correction

Code figure		Status
0	Hardware	Operational
1	Software	Operational
2	Hardware and software	Operational
3	Missing value	Operational

0 25 013
Bright-band correction

Bit No.		Status
1	Brightband correction	Operational
All 2	Missing value	Operational

0 25 015
Radome attenuation correction

Bit No.		Status
1	Radome Attenuation Correction	Operational
All 2	Missing value	Operational

0 25 017
Precipitation attenuation correction

Bit No.		Status
1	Precipitation attenuation correction	Operational
All 2	Missing value	Operational

0 25 020
Mean speed estimation

Code figure		Status
0	FFT (fast Fourier transform)	Operational
1	PP (pulse pair processing)	Operational
2	VPC (vector phase change)	Operational
3	Missing value	Operational

0 25 021
Wind computation enhancement

Bit No.		Status
1	Simple average	Operational
2	Consensus average	Operational
3	Median check	Operational
4	Vertical consistency check	Operational
5	Other	Operational
6-7	Reserved	Operational
All 8	Missing value	Operational

0 25 022
GHR SST Rejection Flag

Bit No.		Status
1	Unprocessed	Operational
2	Land suspected.	Operational
3	Wind speed too large	Operational
4	Ice detected.	Operational
5	Rain detected (Microwave retrievals only)	Operational

Bit No.		Status
6	Cloudy detected (Infra-red retrievals only)	Operational
7	Cosmetic value	Operational
8	SST out of range	Operational
All 9	Missing value	Operational

0 25 023

GHR SST Confidence Flag

Bit No.		Status
1	Default confidence value has been used	Operational
2	Default bias and standard deviation has been used	Operational
3	Sun glint suspected	Operational
4	Sea ice retrieval for microwave data	Operational
5	High wind speed retrieval	Operational
6	Inaccurate SST due to low SST (< 285K) (Only applies to the TMI instrument)	Operational
7	Relaxed rain contamination suspected	Operational
8	Potential side lobe contamination	Operational
All 9	Missing value	Operational

0 25 024

GHR SST data quality

Code figure		Status
0	Unprocessed infrared retrieval	Operational
1	Cloudy retrievals	Operational
2	Bad: Data that are probably contaminated by cloud	Operational
3	Suspect data	Operational
4	Acceptable data	Operational
5	Excellent data	Operational
6	Cool skin suspected	Operational
7-9	Reserved	Operational
10	Unprocessed microwave retrieval	Operational
11	Questionable microwave retrieval that may be contaminated	Operational
12	Acceptable microwave retrieval	Operational
13	High probability of diurnal variability	Operational
14	Reserved	Operational
15	Missing value	Operational

0 25 029

Calibration method (see Note 3)

Bit No.		Status
1	Reserved	Operational
2	Calibration target or signal	Operational
3	Against raingauges	Operational
4	Against other instruments (distrometer - attenuation)	Operational
5	Reserved	Operational
All 6	Missing value	Operational

0 25 030

Running mean sea-surface temperature usage

Code figure		Status
0	Running mean sea-surface temperature not used because usage criteria not met	Operational

Code figure		Status
1	Running mean sea-surface temperature not used because data not available	Operational
2	Running mean sea-surface temperature used as predictor	Operational
3	Missing value	Operational

0 25 032

Wind profiler mode information (see Note 2)

Code figure		Status
0	Reserved	Operational
1	Data from low mode	Operational
2	Data from high mode	Operational
3	Missing value	Operational

0 25 033

Wind profiler submode information

Code figure		Status
0	Wind Profiler operating in Submode A	Operational
1	Wind Profiler operating in Submode B	Operational
2	Reserved	Operational
3	Missing value	Operational

0 25 034

Wind profiler quality control test results

Bit No.	Meaning (1=true, 0=false)	Status
1	Test A performed and failed	Operational
2	Test B performed and failed	Operational
3	Test results inconclusive	Operational
All 4	Missing value	Operational

0 25 035

Decision Method for Polarity

Code figure		Status
0	Not Defined	Validation
1	Individual voltage deflection	Validation
2	Current based, above a threshold	Validation
3	Voltage based, above a threshold	Validation
4	Consensus of sensors, Current above a threshold	Validation
5	Consensus of sensors, Voltage above a threshold	Validation
6	Reserved	Validation
7	Missing Data	Validation

0 25 036

Atmospherics location method

Code figure		Status
0	Network of several direction-finders operating on the same individual atmospherics	Operational
1	Network of several arrival-time stations operating on the same individual atmospherics	Operational
2-5	Reserved	Operational
6	Single station range bearing technique	Operational
7-14	Reserved	Operational

Code figure		Status
15	Missing value	Operational

0 25 040
CO2 wind product derivation

Code figure		Status
0	Non-specific mode	Operational
1	First guess data	Operational
2	Cloud data	Operational
3	Average vector data	Operational
4	Primary data	Operational
5	Guess data	Operational
6	Vector data	Operational
7	Tracer data; this image	Operational
8	Tracer data to next image	Operational
9-14	Reserved	Operational
15	Missing value	Operational

0 25 041
Moving platform direction reporting method

Code figure		Status
0	Direction originally reported in true degrees	Operational
1	Direction originally reported using Code Table 0700, FM13	Operational
2	Reserved	Operational
3	Missing value	Operational

Notes: (see)

0 25 042
Moving platform speed reporting method

Code figure		Status
0	Speed originally reported in metres per second	Operational
1	Speed originally reported using Code Table 4451, FM13	Operational
2	Reserved	Operational
3	Missing value	Operational

Notes: (see)

0 25 045
HIRS channel combination

Bit No.		Status
1-20	Beginning with first bit position (high order bit), if bit position is set to 1, then channel is present, if bit position is set to 0, then channel is not present	Operational
All 21	Missing value	Operational

0 25 046
MSU channel combination

Bit No.		Status
1-4	Beginning with first bit position (high order bit), if bit position is set to 1, then channel is present, if bit position is set to 0, then channel is not present	Operational
All 5	Missing value	Operational

0 25 047
SSU channel combination

Bit No.		Status
1-3	Beginning with first bit position (high order bit); if bit position is set to 1, then channel is present; if bit position is set to 0, then channel is not present	Operational
All 4	Missing value	Operational

0 25 048
AMSU-A channel combination

Bit No.		Status
1-15	Beginning with first bit position (high order bit), if bit position is set to 1, then channel is present, if bit position is set to 0, then channel is not present	Operational
All 16	Missing value	Operational

0 25 049
AMSU-B channel combination

Bit No.		Status
1-5	Beginning with first bit position (high order bit), if bit position is set to 1, then channel is present, if bit position is set to 0, then channel is not present	Operational
All 6	Missing value	Operational

0 25 051
AVHRR channel combination

Bit No.		Status
1-6	Beginning with first bit position (high order bit), if bit position is set to 1, then channel is present, if bit position is set to 0, then channel is not present	Operational
All 7	Missing value	Operational

0 25 053
Observation quality

Bit No.		Status
1	Good	Operational
2	Redundant	Operational
3	Questionable	Operational
4	Bad	Operational
5	Experimental	Operational
6	Precipitating	Operational
7-11	Reserved	Operational
All 12	Missing value	Operational

0 25 063
Central Processor or system Identifier

Code figure		Status
0	Not Defined	Validation
1	Main Processor	Validation
2	Backup Processor	Validation
3-254	Reserved	Validation
255	Missing Data	Validation

0 25 069
Flight level pressure corrections

Bit No.		Status
1	Smoothed	Operational
2	Baseline adjusted	Operational
3	Normalized time interval	Operational
4	Outlier checked	Operational
5	Plausibility checked	Operational
6	Consistency checked	Operational
7	Interpolated	Operational
All 8	Missing value	Operational

0 25 086
Depth correction indicator

Code figure		Status
0	Depths are not corrected	Operational
1	Depths are corrected	Operational
2	Reserved	Operational
3	Missing value	Operational

0 25 090
Orbit state flag

Code figure		Status
0	Orbit computed during a manoeuvre	Operational
1	Adjusted mission operations orbit	Operational
2	Extrapolated mission operations orbit	Operational
3	Adjusted (preliminary/precise) orbit	Operational
4	(preliminary/precise) orbit is estimated during a manoeuvre period	Operational
5	(preliminary/precise) orbit is interpolated over a tracking data gap	Operational
6	(preliminary/precise) orbit is extrapolated for a duration less than 1 day	Operational
7	(preliminary/precise) orbit is extrapolated for a duration that ranges from 1 day to 2 days	Operational
8	(preliminary/precise) orbit is extrapolated for a duration larger than 2 days, or that the orbit is extrapolated just after a manoeuvre	Operational
9	DORIS† DIODE‡ navigator orbit	Operational
10-14	Reserved	Operational
15	Missing value	Operational

Notes: (see)

0 25 093
RASS computation correction

Bit No.		Status
1	No correction	Operational
2	Vertical velocity correction	Operational
3-6	Reserved	Operational
7	All corrections	Operational
All 8	Missing value	Operational

0 25 095
Altimeter state flag

Bit No.		Status
1	Altimeter operating (set to 0 if nominal, set to 1 if backup)	Operational
All 2	Missing value	Operational

0 25 096

Radiometer state flag

Bit No.		Status
1	Mode indicator (0 if Mode 2, 1 if Mode 1)	Operational
2	Mode 1 Calibration sequence indicator (0 if normal data taking either Mode 1 or 2, 1 if Mode 1 Calibration sequence)'Bits 3 and 4 indicate active 23.8 GHz channel	Operational
3	Channel 2 (0 if on, 1 if off)	Operational
4	Channel 3 (0 if on, 1 if off)	Operational
All 5	Missing value	Operational

0 25 097

Three-dimensional error estimate of the navigator orbit

Code figure		Status
0	Ranges between 0 and 30 cm	Operational
1	Ranges between 30 and 60 cm	Operational
2	Ranges between 60 and 90 cm	Operational
3	Ranges between 90 and 120 cm	Operational
4	Ranges between 120 and 150 cm	Operational
5	Ranges between 150 and 180 cm	Operational
6	Ranges between 180 and 210 cm	Operational
7	Ranges between 210 and 240 cm	Operational
8	Ranges between 240 and 270 cm	Operational
9	Ranges larger than 270 cm	Operational
10-14	Reserved	Operational
15	Missing value	Operational

0 25 098

Altimeter data quality flag

Bit No.	(0 is good, 1 is bad)	Status
1	Ku band range	Operational
2	C band range	Operational
3	Ku band SWH*	Operational
4	C band SWH*	Operational
5	Ku band backscatter coefficient	Operational
6	C band backscatter coefficient	Operational
7	Off nadir angle from Ku band waveform parameters	Operational
8	Off nadir angle from platform	Operational
All 9	Missing value	Operational

Notes: (see)

0 25 099

Altimeter correction quality flag

Bit No.	(0 is good, 1 is bad)	Status
1	Ku band range instrumental correction	Operational
2	C band range instrumental correction	Operational
3	Ku band SWH* instrumental correction	Operational
4	C band SWH* instrumental correction	Operational
5	Ku band backscatter coefficient instrumental	Operational

Bit No.	(0 is good, 1 is bad)	Status
6	C band backscatter coefficient instrumental correction	Operational
7-8	Reserved	Operational
All 9 bits	Missing value	Operational

Notes: (see)

0 25 110

Image processing summary

Bit No.		Status
1	Raw data analysis used for raw data correction. Correction done using default parameters	Operational
2	Raw data analysis used for raw data correction. Correction done using raw data analysis results	Operational
3	Antenna elevation pattern correction applied	Operational
4	Nominal chirp replica used	Operational
5	Reconstructed chirp used	Operational
6	Slant range to ground range conversion applied	Operational
7-9	Reserved	Operational
All 10	Missing value	Operational

0 25 120

RA2-L2-processing flag

Code figure		Status
0	Percentage of DSRs free of processing errors during Level 2 processing is greater than the acceptable threshold	Operational
1	Percentage of DSRs free of processing errors during Level 2 processing is less than the acceptable threshold	Operational
2	Reserved	Operational
3	Missing value	Operational

Notes: (see)

0 25 122

Hardware configuration for RF

Code figure		Status
0	Hardware configuration for RF is A	Operational
1	Hardware configuration for RF is B	Operational
2	Reserved	Operational
3	Missing value	Operational

Notes: (see)

0 25 123

Hardware configuration for HPA

Code figure		Status
0	Hardware configuration for HPA is A	Operational
1	Hardware configuration for HPA is B	Operational
2	Reserved	Operational
3	Missing value	Operational

Notes: (see)

0 25 124

MWR-L2-processing flag

Code figure		Status
0	Percentage of DSRs free of processing errors during Level 2 processing is greater than the acceptable threshold	Operational
1	Percentage of DSRs free of processing errors during Level 2 processing is less than the acceptable threshold	Operational
2	Reserved	Operational
3	Missing value	Operational

Notes: (see)

0 25 150

Method of tropical cyclone intensity analysis using satellite data

Code figure		Status
1	The Dvorak's VIS (VISual imagery) intensity analysis	Operational
2	The Dvorak's EIR (Enhanced InfraRed imagery) intensity analysis	Operational
3-14	Reserved	Operational
15	Missing value	Operational

0 25 174

SMOS information flag

Bit No.	Meaning	Status
1	Pixel is affected by RFI effects	Operational
2	Pixel is located in the hexagonal Alias direction centred on Sun alias	Operational
3	Pixel is close to the border delimiting the extended Alias free zone	Operational
4	Pixel is inside the extended Alias free zone	Operational
5	Pixel is inside the exclusive of Alias free zone	Operational
6	Pixel is located in a zone where a Moon Alias was reconstructed	Operational
7	Pixel is located in a zone where Sun reflection has been detected	Operational
8	Pixel is located in a zone where Sun Alias was reconstructed	Operational
9	Flat target transformation has been performed during image reconstruction of this pixel	Operational
10	Scene has been combined with an adjustment scene in opposite polarisation during image reconstruction to account for cross-polarisation leakage	Operational
11	Direct Moon correction has been performed during image reconstruction of this pixel	Operational
12	Reflected Sun correction has been performed during image reconstruction of this pixel	Operational
13	Direct Sun correction has been performed during image reconstruction of this image	Operational
All 14	Missing value	Operational

0 26 010

Hours included

Bit No.		Status
1	0100 included	Operational
2	0200 included	Operational
3	0300 included	Operational
4	0400 included	Operational
5	0500 included	Operational
6	0600 included	Operational
7	0700 included	Operational
8	0800 included	Operational

Bit No.		Status
9	0900 included	Operational
10	1000 included	Operational
11	1100 included	Operational
12	1200 included	Operational
13	1300 included	Operational
14	1400 included	Operational
15	1500 included	Operational
16	1600 included	Operational
17	1700 included	Operational
18	1800 included	Operational
19	1900 included	Operational
20	2000 included	Operational
21	2100 included	Operational
22	2200 included	Operational
23	2300 included	Operational
24	2400 included	Operational
25	Unknown mixture of hours	Operational
All 26	Missing value	Operational

0 29 001
Projection type

Code figure		Status
0	Gnomonic projection	Operational
1	Polar stereographic projection	Operational
2	Lambert's conformal conic projection	Operational
3	Mercator's projection	Operational
4	Scanning Cone (radar)*	Operational
5-6	Reserved	Operational
7	Missing value	Operational

Notes: (see)

0 29 002
Co-ordinate grid type

Code figure		Status
0	Cartesian	Operational
1	Polar	Operational
2	Other	Operational
3-6	Reserved	Operational
7	Missing value	Operational

0 30 031
Picture type

Code figure		Status
0	PPI	Operational
1	Composite	Operational
2	CAPPI	Operational
3	Vertical section	Operational
4	Alphanumeric data	Operational
5	Map of subject clutter	Operational
6	Map	Operational
7	Test picture	Operational
8	Comments	Operational
9	Map of ground occultation	Operational

Code figure		Status
10	Map of radar beam height	Operational
11-13	Reserved	Operational
14	Other	Operational
15	Missing value	Operational

0 30 032

Combination with other data

Bit No.		Status
1	Map	Operational
2	Satellite IR	Operational
3	Satellite VIS	Operational
4	Satellite WV	Operational
5	Satellite multispectral	Operational
6	Synoptic observations	Operational
7	Forecast parameters	Operational
8	Lightning data	Operational
9-14	Reserved	Operational
15	Other data	Operational
All 16	Missing value	Operational

0 31 021

Associated field significance

Code figure			Status
0	Reserved		Operational
1	1 bit indicator of quality	0 = good 1 = suspect or bad	Operational
2	2 bit indicator of quality	0 = good 1 = slightly suspect 2 = highly suspect 3 = bad	Operational
3-5	Reserved		Operational
6	4-bit indicator of quality control class according to GTSP	0 = Unqualified 1 = Correct value (all checks passed) 2 = Probably good but value inconsistent with statistics (differ from climatology) 3 = Probably bad (spike, gradient, ... if other tests passed) 4 = Bad value, impossible value (out of scale, vertical instability, constant profile) 5 = Value modified during quality control 6-7 = Not used (reserved) 8 = Interpolated value 9 = Missing value	Operational
7	Percentage confidence		Operational
8	0 - Not suspected, 1 - Suspected, 2 - Reserved, 3 - Information not required		Validation
9-20	Reserved		Validation
21	1 bit indicator of correction (see Note (2))	0 = original value 1 = substituted/corrected	Operational
22-62	Reserved for local use		Operational
63	Missing value		Operational

Notes: (see)

0 31 031

Data present indicator

Bit No.	Value	Status
1	0 Data present	Operational
	1 Data not present	

0 33 002
Quality information

Code figure		Status
0	Data not suspect	Operational
1	Data suspect	Operational
2	Reserved	Operational
3	Quality information not given	Operational

0 33 003
Quality information

Code figure		Status
0	Data not suspect	Operational
1	Data slightly suspect	Operational
2	Data highly suspect	Operational
3	Data considered unfit for use	Operational
4-6	Reserved	Operational
7	Quality information not given	Operational

0 33 005
Quality information (AWS data)

Bit No.		Status
1	No automated meteorological data checks performed	Operational
2	Pressure data suspect	Operational
3	Wind data suspect	Operational
4	Dry-bulb temperature data suspect	Operational
5	Wet-bulb temperature data suspect	Operational
6	Humidity data suspect	Operational
7	Ground temperature data suspect	Operational
8	Soil temperature (depth 1) data suspect	Operational
9	Soil temperature (depth 2) data suspect	Operational
10	Soil temperature (depth 3) data suspect	Operational
11	Soil temperature (depth 4) data suspect	Operational
12	Soil temperature (depth 5) data suspect	Operational
13	Cloud data suspect	Operational
14	Visibility data suspect	Operational
15	Present weather data suspect	Operational
16	Lightning data suspect	Operational
17	Ice deposit data suspect	Operational
18	Precipitation data suspect	Operational
19	State of ground data suspect	Operational
20	Snow data suspect	Operational
21	Water content data suspect	Operational
22	Evaporation/evapotranspiration data suspect	Operational
23	Sunshine data suspect	Operational
24-29	Reserved	Operational
All 30	Missing value	Operational

0 33 006***Internal measurement status information (AWS)***

Code figure		Status
0	Self-check OK	Operational
1	At least one Warning active, no Alarms	Operational
2	At least one Alarm active	Operational
3	Sensor failure	Operational
4-6	Reserved	Operational
7	Missing value	Operational

0 33 015***Data quality check indicator***

Code figure		Status
0	Passed all checks	Operational
1	Missing-data check	Operational
2	Descending/reascending balloon check	Operational
3	Data plausibility check (above limits)	Operational
4	Data plausibility check (below limits)	Operational
5	Superadiabatic lapse rate check	Operational
6	Limiting angles check	Operational
7	Ascension rate check	Operational
8	Excessive change from previous flight	Operational
9	Balloon overhead check	Operational
10	Wind speed check	Operational
11	Wind direction check	Operational
12	Dependency check	Operational
13	Data valid but modified	Operational
14	Data outlier check	Operational
15-62	Reserved	Operational
63	Missing value	Operational

0 33 020***Quality control indication of following value***

Code figure		Status
0	Good	Operational
1	Inconsistent	Operational
2	Doubtful	Operational
3	Wrong	Operational
4	Not checked	Operational
5	Has been changed	Operational
6	Estimated	Operational
7	Missing value	Operational

0 33 021***Quality of following value***

Code figure		Status
0	Within limits	Operational
1	Outside limits	Operational
2	Reserved	Operational
3	Missing value	Operational

0 33 022***Quality of buoy satellite transmission***

Code figure		Status
0	Good (several identical reports have been received)	Operational
1	Dubious (no identical reports have been received)	Operational
2	Reserved	Operational
3	Missing value	Operational

0 33 023***Quality of buoy location***

Code figure		Status
0	Reliable (location was made over two satellite passes)	Operational
1	Latest known (no location over the corresponding	Operational
2	Dubious (location made over one pass only; a second solution is possible in 5 per cent of the cases)	Operational
3	Missing value	Operational

0 33 024***Station elevation quality mark (for mobile stations)***

Code figure		Status
0	Reserved	Operational
1	Excellent - within 3 meters	Operational
2	Good - within 10 meters	Operational
3	Fair - within 20 meters	Operational
4	Poor - more than 20 meters	Operational
5	Excellent - within 10 feet	Operational
6	Good - within 30 feet	Operational
7	Fair - within 60 feet	Operational
8	Poor - more than 60 feet	Operational
9-14	Reserved	Operational
15	Missing value	Operational

0 33 025***ACARS interpolated values***

Code figure		Status
0	Time interpolated, latitude and longitude reported	Operational
1	Time reported, latitude and longitude interpolated	Operational
2	Time, latitude, and longitude interpolated	Operational
3	Time, latitude, and longitude reported	Operational
4-6	Reserved	Operational
7	Missing value	Operational

0 33 026***Moisture quality***

Code figure		Status
0	Normal operations measurement mode	Operational
1	Normal operations non-measurement mode	Operational
2	Small RH	Operational
3	Humidity element is wet	Operational
4	Humidity element contaminated	Operational
5	Heater fail	Operational
6	Heater fail and wet/contaminated humidity element	Operational
7	At least one of the input parameters used in the calculation of mixing ratio is invalid	Operational
8	Numeric error	Operational
9	Sensor not installed	Operational

Code figure		Status
10-62	Reserved	Operational
63	Missing value	Operational

0 33 027

Location quality class (range of radius of 66 % confidence)

Code figure		Status
0	Radius > 1500 m	Operational
1	500 m < Radius < 1500 m	Operational
2	250 m < Radius < 500 m	Operational
3	Radius < 250 m	Operational
4-6	Reserved	Operational
7	Missing value	Operational

0 33 028

Snapshot overall quality

Code figure		Status
1	Nominal	Operational
2	Degraded by SW error; any error reported by the algorithms	Operational
3	Degraded by instrument error	Operational
4	Degraded by corrupted /missing ADF	Operational
5-6	Reserved	Operational
7	Missing value	Operational

0 33 030

Scan line status flags for ATOVS

Bit No.		Status
1	Do not use scan for product generation	Operational
2	Time sequence error detected with this scan	Operational
3	Data gap precedes this scan	Operational
4	No calibration	Operational
5	No earth location	Operational
6	First good time following a clock update	Operational
7	Instrument status changed with this scan	Operational
8-23	Reserved	Operational
All 24	Missing value	Operational

Notes: (see)

0 33 031

Scan line quality flags for ATOVS

Bit No.		Status
1	Time field is bad but can probably be inferred from the previous good time	Operational
2	Time field is bad and can't be inferred from the previous good time	Operational
3	This record starts a sequence that is inconsistent with previous times (i.e. there is a time discontinuity). This may or may not be associated with a spacecraft clock update (see scan line status flags for ATOVS)	Operational
4	Start of a sequence that apparently repeats scan times that have been previously accepted	Operational
5	Scan line was not calibrated because of bad time	Operational
6	Scan line was calibrated using fewer than the preferred number of scan lines because of proximity to start or end of data or to a data gap	Operational
7	Scan line was not calibrated because of bad or insufficient PRT data	Operational
8	Scan line was calibrated but with marginal PRT data	Operational
9	Some uncalibrated channels on this scan	Operational

Bit No.		Status
10	Uncalibrated due to instrument mode	Operational
11	Questionable calibration because of antenna position error of space view	Operational
12	Questionable calibration because of antenna position error of black body	Operational
13	Not earth located because of bad time	Operational
14	Earth location questionable because of questionable time code (see time problem code bits)	Operational
15	Earth location questionable only marginal agreement with reasonableness check	Operational
16	Earth location questionable fails reasonableness check	Operational
17	Earth location questionable because of antenna position check	Operational
18	Scan line calibration cold black body	Operational
19	Scan line calibration warm black body	Operational
20	Scan line calibration space view	Operational
21	Earth view	Operational
22-23	Reserved	Operational
All 24	Missing value	Operational

Notes: (see)

0 33 032

Channel quality flags for ATOVS

Bit No.		Status
1	No good blackbody counts for scan line	Operational
2	No good space view counts for this line	Operational
3	No good PRTs for this line	Operational
4	Some bad blackbody view counts for this line	Operational
5	Some bad space view counts for this line	Operational
6	Some bad PRT temps on this line	Operational
7-23	Reserved (bits set to zero)	Operational
All 24	Missing value	Operational

Notes: (see)

0 33 033

Field of view quality flags for ATOVS

Bit No.		Status
1	Set if secondary calibration used	Operational
2-21	Bit n set to 1 if brightness temperature in channel n 1 is physically unreasonable or has not been calculated due to calibration problems	Operational
22	Set if all the channels are missing	Operational
23	Suspect	Operational
All 24	Missing value	Operational

Notes: (see)

0 33 035

Manual/automatic quality control

Code figure		Status
0	Automatic quality control passed and not manually checked	Operational
1	Automatic quality control passed and manually checked and passed	Operational
2	Automatic quality control passed and manually checked and deleted	Operational
3	Automatic quality control failed and manually not checked	Operational

Code figure		Status
4	Automatic quality control failed and manually checked and failed	Operational
5	Automatic quality control failed and manually checked and re-inserted	Operational
6	Automatic quality control flagged data as questionable and not manually checked	Operational
7	Automatic quality control flagged data as questionable and manually checked and failed	Operational
8	Manually checked and failed	Operational
9-14	Reserved	Operational
15	Missing value	Operational

0 33 037

Wind correlation error

Bit No.		Status
1	U departure from guess	Operational
2	V departure from guess	Operational
3	U & V departure from guess	Operational
4	U acceleration	Operational
5	V acceleration	Operational
6	U & V acceleration	Operational
7	Possible land feature	Operational
8	U acceleration and possible land feature	Operational
9	V acceleration and possible land feature	Operational
10	U & V acceleration and possible land feature	Operational
11	Bad wind guess	Operational
12	Correlation failure	Operational
13	Search box off edge of area	Operational
14	Target box off edge of area	Operational
15	Pixel brightness out of bounds (noisy line)	Operational
16	Target outside of lat/long box	Operational
17	Target outside of pressure min/max	Operational
18	Autoeditor flagged slow vector	Operational
19	Autoeditor flagged vectors	Operational
All 20	Missing value	Operational

0 33 038

Quality flags for ground-based GNSS data

Bit No.		Status
1	Total Zenith Delay quality is considered poor	Operational
2	GALILEO satellites used	Operational
3	GLONASS satellites used	Operational
4	GPS satellites used	Operational
5	Meteorological data applied	Operational
6	Atmospheric loading correction applied	Operational
7	Ocean tide loading applied	Operational
8	Climate quality data processing	Operational
9	Near-real time data processing	Operational
All 10	Missing value	Operational

0 33 039

Quality flags for radio occultation data

Bit No.		Status
1	Non-nominal quality	Operational

Bit No.		Status
2	Offline product	Operational
3	Ascending occultation flag	Operational
4	Excess Phase processing non-nominal	Operational
5	Bending Angle processing non-nominal	Operational
6	Refractivity processing non-nominal	Operational
7	Meteorological processing non-nominal	Operational
8-13	Reserved	Operational
14	Background profile non-nominal	Operational
15	Background (i.e. not retrieved) profile present	Operational
All 16	Missing value	Operational

0 33 041

Attribute of following value

Code figure		Status
0	The following value is the true value	Operational
1	The following value is higher than the true value (the measurement hit the lower limit of the instrument)	Operational
2	The following value is lower than the true value (the measurement hit the higher limit of the instrument)	Operational
3	Missing value	Operational

Notes: (see)

0 33 042

Type of limit represented by following value

Code figure		Status
0	Exclusive lower limit (>)	Operational
1	Inclusive lower limit (>=)	Operational
2	Exclusive upper limit (<)	Operational
3	Inclusive upper limit (<=)	Operational
4-6	Reserved	Operational
7	Missing value	Operational

0 33 043

AST confidence

Bit No.		Status
1	Sea MDS. Nadir only SST retrieval used 3.7 Micron channel. Land MDS reserved	Operational
2	Sea MDS. Dual view SST retrieval used 3.7 Micron channel. Land MDS reserved.	Operational
3	Nadir view contains day time data	Operational
4	Forward view contains day time data	Operational
5-7	Reserved	Operational
All 8	Missing value	Operational

0 33 044

ASAR quality information

Bit No.		Status
1	Input data mean outside nominal range flag	Operational
2	Input data standard deviation outside nominal range flag	Operational
3	Number of input data gaps > threshold value	Operational
4	Percentage of missing lines > threshold value	Operational
5	Doppler centroid uncertain. Confidence measure < specific value	Operational

Bit No.		Status
6	Doppler ambiguity estimate uncertain. Confidence measure < specific value	Operational
7	Output data mean outside nominal range flag	Operational
8	Output data standard deviation outside nominal range flag	Operational
9	Chirp reconstruction failed or is of low quality flag	Operational
10	Data set missing	Operational
11	Invalid downlink parameters	Operational
12	Azimuth cut-off iteration count. The azimuth cut-off fit did not converge within a minimum number of iterations	Operational
13	Azimuth cut-off fit did not converge within a minimum number of iterations	Operational
14	Phase information confidence measure. The imaginary spectral peak is less than a minimum threshold, or the zero lag shift is greater than a minimum threshold	Operational
All 15	Missing value	Operational

0 33 047

Measurement confidence data

Bit No.		Status
1	Error detected and attempts to recover made	Operational
2	Anomaly in on-board data handling (OBDH) value detected	Operational
3	Anomaly in Ultra Stable Oscillator Processing (USOP) value detected	Operational
4	Errors detected by on-board computer	Operational
5	Automatic gain control (AGC) out of range	Operational
6	Rx delay fault. Rx distance out of range	Operational
7	Wave form samples fault identifier. Error	Operational
8	S-band anomaly error detected	Operational
9-11	Reserved	Operational
12	Brightness temperature (channel 1) out of range	Operational
13	Brightness temperature (channel 2) out of range	Operational
14	Reserved	Operational
15	Ku Ocean retracking error	Operational
16	S Ocean retracking error	Operational
17	Ku Ice 1 retracking error	Operational
18	S Ice 1 retracking error	Operational
19	Ku Ice 2 retracking error	Operational
20	S Ice 2 retracking error	Operational
21	Ku Sea Ice retracking error	Operational
22	Arithmetic fault error	Operational
23	Meteo data state. No map	Operational
24	Meteo data state. 1 map	Operational
25	Meteo data state 2 maps degraded	Operational
26	Meteo data state 2 maps nominal	Operational
27	Orbit propagator status for propagation mode, several errors	Operational
28	Orbit propagator status for propagation mode, warning detected	Operational
29	Orbit propagator status for initialisation mode, several errors	Operational
30	Orbit propagator status for initialisation mode, warning detected	Operational
All 31	Missing value	Operational

0 33 048

Confidence measure of SAR inversion

Code figure		Status
0	Inversion successful	Operational
1	Inversion not successful	Operational
2	Reserved	Operational
3	Missing value	Operational

0 33 049

Confidence measure of wind retrieval

Code figure		Status
0	External wind direction used during inversion	Operational
1	External wind direction not used during inversion	Operational
2	Reserved	Operational
3	Missing value	Operational

0 33 050

Global GTSP quality flag

Code figure		Status
0	Unqualified	Operational
1	Correct value (all checks passed)	Operational
2	Probably good but value inconsistent with statistics (differ from climatology)	Operational
3	Probably bad (spike, gradient, ... if other tests passed)	Operational
4	Bad value, Impossible value (out of scale, vertical instability, constant profile)	Operational
5	Value modified during quality control	Operational
6-7	Reserved	Operational
8	Interpolated value	Operational
9	Good for operational use; Caution; check literature for other uses	Validation
10-14	Reserved	Validation
15	Missing value	Operational

0 33 052

S band ocean retracking quality

Bit No.		Status
1-20	First 20 least significant bits correspond to the 20 values (one per data block containing: 0=valid measurement, 1=invalid). Bit 1 applies to the 20th	Operational
All 21	Missing value	Operational

0 33 053

Ku band ocean retracking quality

Bit No.		Status
1-20	First 20 least significant bits correspond to the 20 values (one per data block containing: 0=valid measurement, 1=invalid). Bit 1 applies to the 20th	Operational
All 21	Missing value	Operational

0 33 060

GqisFlagQual - individual IASI-System quality flag

Code figure		Status
0	Good	Operational
1	Bad	Operational
2	Reserved	Operational

Code figure		Status
3	Missing value	Operational

0 33 070
Total ozone quality

Code figure		Status
0	Good retrieval	Operational
1	Bad aerosol information flag or NOAA-16 radiance anomaly	Operational
2	Solar zenith angle greater than 84 degrees	Operational
3	380nm residue greater than limit	Operational
4	Ozone inconsistency	Operational
5	Difference between profile ozone and step 3 total ozone exceeds threshold (set to 25 DU)	Operational
6	Step 1 ozone iteration did not converge	Operational
7	Any channel residue greater than 16 or bad radiance	Operational
8-14	Reserved	Operational
15	Missing value	Operational

0 33 071
Profile ozone quality

Code figure		Status
0	Good retrieval	Operational
1	Solar zenith angle greater than 84 degrees	Operational
2	Difference between step 3 and profile total ozone greater than limit (25 DU)	Operational
3	Average final residue for wavelengths used in retrieval greater than threshold	Operational
4	Final residue greater than 3 times a priori error	Operational
5	Difference between retrieved and a priori greater than 3 times a priori error	Operational
6	Non-convergent solution	Operational
7	Upper level profile anomaly or stray light anomaly	Operational
8	Initial residue greater than 18.0 N-value units	Operational
9-14	Reserved	Operational
15	Missing value	Operational

0 33 072
Ozone error

Code figure		Status
0	Good retrieval	Operational
1	Reflectivity out of range	Operational
2	Larger Pixels (Number of cross-track pixels less than 32) or backward scans error	Operational
3	Solar zenith angle greater than 88	Operational
4	Latitude/longitude out of range	Operational
5	Viewing zenith angle or solar zenith angle out of range	Operational
6	Step-one process failed in general	Operational
7	First guess ozone out of range	Operational
8	Too many iterations (exceed 8)	Operational
9	Step-one residue calculation failed	Operational
10	Step-two process failed in general	Operational
11	First guess ozone profile out of range	Operational
12	Step-two ozone value out of range	Operational
13	Step-two residue calculation failed	Operational

Code figure		Status
14	Step-three process failed in general	Operational
15	Polarization Correction Accuracy Alert	Operational
16	Radiance or irradiance less or equal to zero	Operational
17-30	Reserved	Operational
31	Missing value	Operational

0 33 075

Scan-level quality flags

Bit No.		Status
1	Gap in Raw Data Record (RDR) data detected (i.e., missing scan(s) preceding the current scan)	Pre-operational
2	Recorded time is not in sequence (i.e., the scan start time is out of sequence)	Pre-operational
3	Lambda monitored calculation cannot be updated (see Note 1)	Pre-operational
4	The measured temperatures of any instrument components (e.g., beam-splitter, scan mirror, scan baffle, etc.) are outside the allowable ranges (see Note 2)	Pre-operational
5	At least one of the monitored instrument temperatures has drifted more than a specified tolerance value	Pre-operational
6-12	Reserved	Pre-operational
All 13	Missing value	Pre-operational

Notes: (see)

0 33 076

Calibration quality flags

Bit No.		Status
1	Lunar intrusion on first deep space view (see Note)	Pre-operational
2	Lunar intrusion on second deep space view (see Note)	Pre-operational
3-8	Reserved	Pre-operational
All 9	Missing value	Pre-operational

Notes: (see)

0 33 077

Field-of-view quality flags

Bit No.		Status
1	Degraded SDR quality	Pre-operational
2	Invalid SDR quality (see Note 1)	Pre-operational
3	Invalid SDR geolocation information	Pre-operational
4	Degraded radiometric calibration	Pre-operational
5	Invalid radiometric calibration (see Note 2)	Pre-operational
6	Degraded spectral calibration	Pre-operational
7	Invalid spectral calibration (see Note 3)	Pre-operational
8	Fringe count error detected and corrected (see Note 4)	Pre-operational
9	Day/night indicator (see Note 5)	Pre-operational
10	Invalid RDR data (see Note 6)	Pre-operational
11	Significant fringe count error detected (see Note 7)	Pre-operational
12	Bit trim failed	Pre-operational
13-18	Reserved	Pre-operational
All 19	Missing value	Pre-operational

Notes: (see)

0 33 078

Geolocation quality

Code figure		Status
0	Nominal - altitude and Ephemeris data available	Pre-operational
1	Missing at most a small gap of altitude and Ephemeris data	Pre-operational
2	Missing more than a small gap of altitude and Ephemeris data, but no more than a granule boundary	Pre-operational
3	Missing more than a granule boundary of altitude and Ephemeris data	Pre-operational
4-14	Reserved	Pre-operational
15	Missing	Pre-operational

0 33 079

Granule level quality flags

Bit No.		Status
1-5	Reserved	Validation
6	The No. 1-No.7 health checks failed	Validation
7	The No. 8-No.15 health checks failed	Validation
8	The No. 16-No.23 health checks failed	Validation
9	The No. 24-No.31 health checks failed	Validation
10	The No. 32-No.39 health checks failed	Validation
11	The No. 40-No.47 health checks failed	Validation
12	The No. 48-No.55 health checks failed	Validation
13	The No. 56-No.63 health checks failed	Validation
14	The No. 64-No.70 health checks failed	Validation
15	Quadratic correction applied to the radiometric transfer function for non-linearity correction	Validation
All 16	Missing value	Validation

0 33 080

Scan level quality flags

Bit No.		Status
1-6	Reserved	Validation
7	Divide-by-zero condition or computation loop failed to converge in the K/Ka and V (KAV) Band PRT	Validation
8	Divide-by-zero condition or computation loop failed to converge in the WG Band PRT	Validation
9	Divide-by-zero condition or computation loop failed to converge in the K/Ka, V, W, G Band Receiver Shelf PRT K temperature computation	Validation
10	Out of range condition for the K/Ka and V Band PRT	Validation
11	Out of range condition for the WG Band PRT	Validation
12	KAV PRT temperature inconsistency	Validation
13	WG PRT temperature inconsistency	Validation
14	Time Sequence Error	Validation
15	Data Gap - Missing scan(s) preceding the current scan	Validation
16	KAV PRT Sufficiency - Insufficient KAV PRT data are available	Validation
17	WG PRT Sufficiency - Insufficient WG PRT data are available	Validation
18	Space View antenna position error	Validation
19	Blackbody antenna position error	Validation
All 20	Missing value	Validation

0 33 081

Channel data quality flags

Bit No.		Status
1-2	Reserved	Validation

Bit No.		Status
3	Moon in Space View	Validation
4	Gain Error - The lowest blackbody count is smaller than or equal to the highest space view count in a scan	Validation
5	Calibration With Fewer Than Preferred Samples	Validation
6	Space View Data Sufficiency Check - Insufficient space view samples are available	Validation
7	Blackbody View Data Sufficiency Check - Insufficient blackbody view samples are available	Validation
8	Out of range condition for the Space View	Validation
9	Out of range condition for the BlackBody View	Validation
10	Space view inconsistency	Validation
11	BlackBody view inconsistency	Validation
All 12	Missing value	Validation

0 35 000

FM and regional code number

Code figure		Status
000-099	International FM Codes	Operational
100-199	RA I Codes	Operational
200-299	RA II Codes	Operational
300-399	RA III Codes	Operational
400-499	RA IV Codes	Operational
500-599	RA V Codes	Operational
600-699	RA VI Codes	Operational
700-799	Antarctic Codes	Operational
800-999	Reserved	Operational
1000-1022	Not used	Operational
1023	Missing value	Operational

0 35 001

Time-frame for monitoring

Code figure		Status
0	Real time	Operational
1	Near-real time	Operational
2	Non-real time	Operational
3	Reserved	Operational
4	Reserved	Operational
5	Reserved	Operational
6	Reserved	Operational
7	Missing value	Operational

0 35 030

Discrepancies in the availability of expected data

Code figure		Status
0	No discrepancies	Operational
1	Non-compliance with standard and recommended practices and procedures including those of monitoring	Operational
2	Catalogues of meteorological bulletins not updated in a timely manner	Operational
3	Incorrect routeing directories	Operational
4	Lack of flexibility in the routeing arrangements	Operational
5	Deficiencies in the operation of GTS centres and	Operational
6	Loss of data or delays in relaying data on the GTS	Operational

Code figure		Status
7	Routing of data different from the routing provided in the plan	Operational
8	Various malpractices	Operational
9-14	Reserved	Operational
15	Missing value	Operational

0 35 031

Qualifier on monitoring results

Code figure		Status
1	Sufficient and all of acceptable quality	Operational
2	Sufficient but partly of acceptable quality	Operational
3	Insufficient but all of acceptable quality	Operational
4	Insufficient and of unacceptable quality	Operational
5	Some messages not complete	Operational
6	Suspect or wrongly coded groups could not be interpreted confidently	Operational
7	Gross coding errors	Operational
8	Transmission sequential order not observed	Operational
9	Report completely garbled and thus discarded	Operational
10	Deficiencies identified and rectified	Operational
11	Deficiencies identified but not rectified	Operational
12	Deficiencies not identified	Operational
13	Measuring errors	Operational
14	Mutual inconsistency	Operational
15	Temporal inconsistency	Operational
16	Forecast error	Operational
17	Bias	Operational
18	Improve system of quality control	Operational
19	Expand training programmes	Operational
20-98	Reserved	Operational
99-122	Not used	Operational
123	Missing value	Operational

0 35 032

Cause of missing data

Code figure		Status
1	Data groups missing due to radio fading	Operational
2	Data groups missing due to outage of centre	Operational
3	Data groups missing due to outage of circuit	Operational
4	Non-implementation or maintenance of required RBSN density	Operational
5	Shortage of qualified staff to man stations	Operational
6	Lack of consumables	Operational
7	Instrument failure	Operational
8	Non-adherence to telecommunication procedures	Operational
9	Some observing programmes ceased	Operational
10-14	Not used	Operational
15	Missing value	Operational

0 35 033

Observation and collection deficiencies

Code figure		Status
1	No deficiency	Operational

Code figure		Status
2	Observations not made regularly	Operational
3	Observations not made at right time	Operational
4	Observations made but not disseminated	Operational
5	Observations made and sent to incorrect users	Operational
6	Collection not received	Operational
7	Collection transmitted late	Operational
8	Collection not transmitted	Operational
9	Difficulties in HF propagation and selection of suitable frequency	Operational
10	Difficulties in maintenance of communication equipment at remote stations	Operational
11	No alternative arrangement for routeing meteorological observation	Operational
12-99	Reserved	Operational
100-122	Not used	Operational
123	Missing value	Operational

0 35 034

Statistical trends for availability of data (during the survey period(s))

Code figure		Status
1	Slight improvement	Operational
2	Significant improvement	Operational
3	Most significant improvement	Operational
4	Steady	Operational
5	Decreasing	Operational
6	Efforts required to improve night-time observations	Operational
7	Missing value	Operational

0 35 035

Reason for termination

Code figure		Status
0	Reserved	Operational
1	Balloon burst	Operational
2	Balloon forced down by icing	Operational
3	Leaking or floating balloon	Operational
4	Weak or fading signal	Operational
5	Battery failure	Operational
6	Ground equipment failure	Operational
7	Signal interference	Operational
8	Radiosonde failure	Operational
9	Excessive missing data frames	Operational
10	Reserved	Operational
11	Excessive missing temperature	Operational
12	Excessive missing pressure	Operational
13	User terminated	Operational
14-29	Reserved	Operational
30	Other	Operational
31	Missing value	Operational

0 40 005

Soil moisture correction flag

Bit No.		Status
1	Soil moisture between -20% and 0%	Operational

Bit No.		Status
2	Soil moisture between 100% and 120%	Operational
3	Correction of wet backscatter reference	Operational
4	Correction of dry backscatter reference	Operational
5	Correction of volume scattering in sand	Operational
6-7	Reserved	Operational
All 8	Missing value	Operational

Notes: (see)

0 40 006

Soil moisture processing flag

Bit No.		Status
1	Not soil	Operational
2	Sensitivity to soil moisture below limit	Operational
3	Azimuthal noise above limit	Operational
4	Backscatter Fore-Aft beam out of range	Operational
5	Slope Mid-Fore beam out of range	Operational
6	Slope Mid-Aft beam out of range	Operational
7	Soil moisture below -20%	Operational
8	Soil moisture above 120%	Operational
9-15	Reserved	Operational
All 16	Missing value	Operational

Notes: (see)

0 40 011

Interpolation flag

Bit No.		Status
1	Mean sea surface (MSS) interpolation flag	Operational
2	Ocean tide solution 1 interpolation flag (0=4 points over ocean, 1=less than 4 points)	Operational
3	Ocean tide solution 2 interpolation flag (0=4 points over ocean, 1=less than 4 points)	Operational
4	Meteorological data interpolation flag (0=4 points over ocean, 1=less than 4 points)	Operational
5-7	Reserved	Operational
All 8	Missing value	Operational

0 40 012

Radiometer data quality flag

Bit No.	(0 is good, 1 is bad)	Status
1	18.7 GHz brightness temperature	Operational
2	23.8 GHz brightness temperature	Operational
3	34 GHz brightness temperature	Operational
4-7	Reserved	Operational
All 8	Missing value	Operational

0 40 013

Radiometer brightness temperature interpretation flag

Code figure		Status
0	Interpolation with no gap between JMR* data	Operational
1	Interpolation with gaps between JMR* data	Operational
2	Extrapolation of JMR* data	Operational
3	Failure of extrapolation and interpolation	Operational
4-6	Reserved	Operational

Code figure		Status
7	Missing value	Operational
Notes: (see)		

0 40 023

Auxiliary altimeter state flags

Bit No.		Status
1	Band sequence (0 = 3Ku_1C_3Ku, 1 = 2Ku_1C_2Ku)	Validation
2	C band frequency (0 = 320 MHz, 1 = 100 MHz)	Validation
3	C band status (0 = On, 1 = Off)	Validation
4	Ku band status (0 = On, 1 = Off)	Validation
All 5 bits	Missing	Validation

0 40 024

Meteorological map availability

Code figure		Status
0	2 maps available (6 hours apart)	Validation
1	2 maps available (> 6 hours apart)	Validation
2	1 map available; data extrapolated	Validation
3	No maps used	Validation
4-6	Reserved	Validation
7	Missing value	Validation

0 40 025

Interpolation flag for mean diurnal tide

Code figure		Status
0	Good	Validation
1	Bad	Validation
2	Reserved	Validation
3	Missing value	Validation