**SPECIFICATIONS OF BYTE CONTENTS**

**Section 0 – Indicator Section**

Byte No. Contents

1–4 GRIB (coded according to the International Alphabet No. 5)

5 GRIB edition number (3)

6 GRIB Master tables version number (see Code table 0.0 and Note 1-3 in section 1)

7-14 Total length of GRIB message in bytes (including Section 0)

**Section 1 – Originator Section**

Byte No. Contents

1–4 Length of section in bytes

5 Number of section (1)

6–7 Identification of originating/generating centre (see Common Code table C–11)

8–9 Identification of originating/generating subcentre (allocated by originating/ generating centre)

10 Version number of GRIB Local tables used to augment Master tables (see Code table 1.1 and Note 1-3)

11 Identification of Project (see Code table 1.2)

13 Production status of processed data in this GRIB message (see Code table 1.2)

15-16 Local template number (see note 4 and 5)

17-20 Length of local template in bytes (see note 5)

21-nn Local template (see template 1.N, where N is the Local template number given in bytes 15-16)

Notes:

(1) Local tables shall define those parts of the Master table which are reserved for local use except for the case described below. In any case, the use of Local tables in messages intended for non-local or international exchange is strongly discouraged.

(2) If byte 6 in section 0 contains 255 then only Local tables are in use, the Local table version number (byte 10) must not be zero nor missing, and Local tables may include entries from the entire range of the tables.

(3) If byte 6 in section 0 is zero, byte 10 must contain a valid Master table version number and only those parts of the tables not reserved for local use may be used.

(4) Local templates are defined and maintained by the Originating Centre.

(5) Local template is optional. If local template is not present the local template number (bytes 15-16) shall be set to missing (all bits set to 1) and the length of local template (bytes 17-20) shall be set to zero.

**Section 2 – Repetitions and Index Section**

Byte No. Contents

1–4 Length of section in bytes

5 Number of section (2)

6-7 Total number of repetitions (or total number of fields) (see note 1)

8-9 Number of distinct sections 3 (see note 1)

9-10 Number of distinct sections 4 (see note 1)

11-12 Number of distinct sections 5 (see note 1)

13-14 Number of distinct sections 6 (see note 1)

15-16 Number of distinct sections 7 (see note 1)

17-18 Number of distinct sections 8 (see note 1)

19-20 Number of distinct sections 9 (see note 1)

21-22 Index template number

23-26 Length of index template in bytes.

27-nn Index template (See note 2) (see template 2.N, where N is the Index template number given in bytes 21-22)

Notes:

(1) A message with one field shall have the total number of repetitions and each of the number of distinct sections set to 1.

(2) Index template is optional. If index template is not present the index template number (bytes 21-22) shall be set to missing (all bits set to 1) and the length of index template (bytes 23-26) shall be set to zero.

**Section 3 – Time Domain Section**

Byte No. Contents

1–4 Length of section in bytes (7 or nn)

5 Number of section (3)

6-7 Section Unique Identifier (SUI)

8 Significance of reference date and time (see Code table 3.0)

9 Type of Calendar (code table 3.1)

10-13 Year (signed integer according to Reg. 92.1.5)

14 Month

15 Day Reference date and time

16 Hour

17 Minute

18 Second

19-20 Time template number (see code table 3.2)

21–nn Time template (see template 3.N, where N is the Time template number given in bytes 19-20)

Notes:

1. The type of calendar (byte 9) applies to the entire section including the time template.

**Section 4 – Horizontal Domain Section**

Byte No. Contents

1–4 Length of section in bytes (7 or nn)

5 Number of section (4)

6-7 Section Unique Identifier (SUI)

8–11 Number of points in the domain

12–13 Horizontal grid template number (see Code table 4.0)

14–nn Horizontal grid template (see template 4.N, where N is the Horizontal grid template number given in bytes 12-13)

**Section 5 –Vertical Domain Section**

Byte No. Contents

1–4 Length of section in bytes (7 or nn)

5 Number of section (5)

6-7 Section Unique Identifier (SUI)

8–9 Vertical Coordinate template number (see Code table 5.0)

10–nn Vertical Coordinate template (see template 5.N, where N is the Vertical Coordinate template number given in bytes 8-9)

**Section 6 – Generating Process Section**

Byte No. Contents

1–4 Length of section in bytes (7 or mm)

5 Number of section (6)

6-7 Section Unique Identifier (SUI)

9-10 Process definition template number (see Code table 6.0)

11-nn Process definition template (see template 6.N, where N is the Process definition template number given in bytes 9-10)

**Section 7 – Observable Property Section**

Byte No. Contents

1–4 Length of section in bytes (7 or nn)

5 Number of section (7)

6-7 Section Unique Identifier (SUI)

8-9 Observable property definition template number (see Code table 7.0)

10–nn Observable property definition template (see template 7.N, where N is the Observable property definition template number given in bytes 8-9)

**Section 8 – Data Representation Section**

Byte No. Contents

1–4 Length of section in bytes (7 or nn)

5 Number of section (8)

6-7 Section Unique Identifier (SUI)

8–11 Number of data points where one or more values are specified in Section 8 when a bit map is present, total number of data value when a bit map is absent.

12–13 Data representation template number (see Code table 8.0)

14–nn Data representation template (see template 8.N, where N is the Data representation template number given in bytes 12-13)

**Section 9 – Overlay Section**

Byte No. Contents

1–4 Length of section in bytes (7 or nn)

5 Number of section (9)

6-7 Section Unique Identifier (SUI)

8–9 Overlay template number (see Code table 9.0)

10–nn Overlay template (see template 9.N, where N is the Overlay template number given in bytes 8-9)

**Section 10 – Data Section**

Byte No. Contents

1–4 Length of section in bytes (nn)

5 Number of section (10)

6–nn Data in a format described by data template 10.X, where X is the data representation template number given in bytes 12–13 of Section 8.

**Section 11 – End Section**

Byte No. Contents

1–4 “7777” (coded according to the International Alphabet No. 5)

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