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| WORLD METEOROLOGICAL ORGANIZATION  COMMISSION FOR BASIC SYSTEMS  -----------------------------  FIRST MEETING OF  INTER-PROGRAMME EXPERT TEAM ON CODES MAINTENANCE  GENEVA, SWITZERLAND, 24 - 28 JULY 2017 |  | IPET-CM-I / Doc. 2.4 (1)  (30. 5. 2017)  -------------------------  ITEM 2.4  ENGLISH ONLY |

Additions to BUFR/CREX tables

**New BUFR entries for GPM precipitation data**

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**Summary and Purpose of Document**

This document proposes a new BUFR sequence and code/flag entries for use with GPM precipitation data.

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**ACTION PROPOSED**

The meeting is requested to review and approve the contents for inclusion within the November 2017 fast-track (FT2017-2) update to the WMO Manual on Codes.

**DISCUSSION**

The Global Precipitation Measurement (GPM) mission is an international network of satellites providing worldwide rain and snow observations every three hours. It was jointly initiated by the U.S. National Aeronautics and Space Administration (NASA) and the Japan Aerospace Exploration Agency (JAXA) but includes a consortium of other international space agencies as well. As part of this mission, NASA requests new BUFR table entries for use in precipitation products. These entries were submitted for review to the CGMS Task Team on Satellite Data in mid-April 2017.

**PROPOSAL**

**(1) Add new entry to Table D:**

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| --- | --- | --- |
|  |  | **Global Precipitation Measurement (GPM) precipitation data** |
| **3 40 015** | 0 01 007 | Satellite identifier |
|  | 0 02 019 | Satellite instruments |
|  | 3 01 011 | Year, Month, Day |
|  | 3 01 012 | Hour, Minute |
|  | 0 04 007 | Seconds within a minute (microsecond accuracy) |
|  | 2 01 133 | Increase bit width |
|  | 0 05 041 | Scan line number |
|  | 2 01 000 | Cancel increase bit width |
|  | 2 01 130 | Increase bit width |
|  | 0 05 043 | Field of view number |
|  | 2 01 000 | Cancel increase bit width |
|  | 2 07 001 | Increase scale, reference value and data width |
|  | 0 05 002 | Latitude (coarse accuracy) |
|  | 0 06 002 | Longitude (coarse accuracy) |
|  | 2 07 000 | Cancel increase scale, reference value and data width |
|  | 0 40 027 | Sun glint angle |
|  | 0 08 029 | Surface type |
|  | 0 21 120 | Probability of rain |
|  | 2 07 003 | Increase scale, reference value and data width |
|  | 1 02 003 | Repeat the following 2 descriptors 3 times |
|  | 0 02 186 | Capability to detect precipitation phenomena |
|  | 0 13 155 | Intensity of precipitation (high accuracy) |
|  | 2 07 000 | Cancel increase scale, reference value and data width |
|  | 0 33 003 | Quality information |

**(2) Add the following new code table entry to existing BUFR/CREX Table B descriptors:**

**0 08 029 (Surface type)**

7 Standing water

8 Snow

**(3) Release the existing BUFR/CREX Table B flag table bits:**

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

24 Convective precipitation

**(4) Add new international data sub-category to Data Category 12 in Common Code Table C-13:**

**12 Surface data (satellite)**

13 Precipitation