|  |  |  |
| --- | --- | --- |
| WORLD METEOROLOGICAL ORGANIZATIONCOMMISSION FOR BASIC SYSTEMS-----------------------------FOURTH MEETING OF INTER-PROGRAMME EXPERT TEAM ONDATA REPRESENTATION MAINTENANCE AND MONITORINGGENEVA, SWITZERLAND, 30 MAY - 3 JUNE 2016 |  | IPET-DRMM-IV / Doc. 3.2 (2)(22. 3. 2016)-------------------------ITEM 3.2ENGLISH ONLY |

BUFR and CREX

**New entries for dropsonde data**

*Submitted by* *Jeff Ator (U.S.A)*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Summary and Purpose of Document**

This document proposes some new entries in BUFR Table B and Common Code Table C-2 for use with reporting dropsonde data.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**ACTION PROPOSED**

The meeting is requested to review the proposal and recommend the contents for fast-track approval in November 2016 (FT2016-2).

**DISCUSSIONS**

The U.S. University Corporation for Atmospheric Research (UCAR) proposes some new entries in Common Code Table C-2 as shown below. These entries have been coordinated with Vaisala; however, the team may wish to consider whether they make sense when considered alongside other existing entries in this table, given that there are already entries which reference Vaisala RS92 and RS41 equipment.

In addition, a new BUFR table B entry describing the size of the dropsonde parachute is also proposed below.

Finally, with respect to dropsonde reporting, the U.S. seeks clarification on a regulation in B/C26. Specifically, regulation B/C26.5 states that “Temperature, dewpoint and wind data at pressure levels obtained during the dropsonde descent shall be included in descending order with respect to pressure.” which seems clear enough. However, the net effect is that, in the resulting BUFR message, the levels end up being reported as though the profile was ascending (i.e. splash level first, corresponding to the highest pressure, and release point from the aircraft last, corresponding to the lowest pressure) and with the timestamp decreasing at each successive level. This seems counterintuitive, so the team is requested to confirm that this is indeed the intended outcome.

**PROPOSAL**

Add the following entries to Common Code Table C-2

|  |  |  |
| --- | --- | --- |
| **Code figure for rara** | **Code figure for BUFR** |  |
| 63 | 163 | NCAR research dropsonde NRD94 with GPS and Vaisala RS92-based sensor module (United States) |
| 64 | 164 | NCAR research dropsonde NRD41 with GPS and Vaisala RS41-based sensor module (United States) |
| 65 | 165 | Vaisala/NCAR dropsonde RD94 with GPS and Vaisala RS92-based sensor module (Finland/USA) |
| 66 | 166 | Vaisala/NCAR dropsonde RD41 with GPS and Vaisala RS41-based sensor module (Finland/USA) |

Add the following entry to BUFR Table B

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **FXY** | **Element Name** | **BUFR Unit** | **BUFR Scale** | **BUFR reference value** | **BUFR width (bits)** | **CREX Unit** | **CREX Scale** | **CREX width (characters)** |
| 0-02-087 | Parachute surface area | m2 | 4 | 0 | 15 | m2 | 4 | 5 |