|  |  |  |
| --- | --- | --- |
| WORLD METEOROLOGICAL ORGANIZATIONCOMMISSION FOR BASIC SYSTEMS-----------------------------THIRD MEETING OFINTER-PROGRAMME EXPERT TEAM ONCODES MAINTENANCEMARRAKECH, MOROCCO, 15 - 19 APRIL 2019 |  | IPET-CM-III / Doc. 2.2(7)(16/04/2019)-------------------------ITEM 2.2ENGLISH ONLY |

MANUAL ON CODES: TABLE-DRIVEN CODE FORMS

**New GRIB2 code Table 4.2 entries**

*Submitted by Eivind Støylen, Norwegian Meteorological Institute*

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

**Summary and Purpose of Document**

This document proposes new GRIB2 Code Table 4.2 parameters.

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

**ACTION PROPOSED**

The Team is requested to review the proposed new parameter and approve it for implementation.

**ANNEXES:**

 1. Proposed new entry for Code Table 4.2

**DISCUSSIONS**

The tables in this proposal contains parameters which will be of crucial importance for the Copernicus Arctic Regional Reanalysis project which will start its production very soon. These parameters have been widely used as GRIB1 parameters in the hirlam numerical weather prediction community, and we thus believe they will be of high relevance outside the aforemented reanalysis project.

**PROPOSAL**

The table below contains proposed addition to Table 4.2 of the GRIB2 section of the Manual on Codes.

***Annex:***

Proposed new entry for Code Table 4.2:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **Product Discipline** | **Parameter Category** | **Parameter number** | **Units** |
| Total solid precipitation rate 1) | 0 | 1 | To be decided | kg m-2 s-1 |
| Direct normal short-wave radiation flux 2) | 0 | 4 | “ | W m-2 |
| Latent heat net flux due to evaporation 3) | 0 | 0 | “ | W m-2 |
| Latent heat net flux due to sublimation 4) | 0 | 0 | “ | W m-2 |
| Fog 5) | 0 | 6 | “ | % |

*Comments:*

1. Total solid precipitation includes the sum of all types of solid water, e.g. graupel, snow and hail
2. Normal flux is on a surface lifted to be normal to sun rays
3. Evaporation is the conversion of liquid into vapor
4. Sublimation is the conversion of solid state into vapor
5. Fog is defined as cloud cover in the lowest model level