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| WORLD METEOROLOGICAL ORGANIZATION  COMMISSION FOR BASIC SYSTEMS  -----------------------------  SECOND MEETING OF  INTER-PROGRAMME EXPERT TEAM ON CODES MAINTENANCE  OFFENBACH, GERMANY, 28 MAY - 1 JUNE 2018 |  | IPET-CM-II / Doc. 3.2  (16. 5. 2018)  -------------------------  ITEM 3.2  ENGLISH ONLY |

MANUAL ON CODES: REGULATIONS FOR REPORTING TRADITIONAL OBSERVATION DATA IN TABLE-DRIVEN CODE FORMS

Amendments to B/C Regulations for SYNOP

SYNOP data from Israel using 203YYY operator

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**Summary and Purpose of Document**

Use of the operator 203YYY ( change reference) preceding sequence 3-07-080 in SYNOP data with the aim to report observations from stations located below -400 m (limit due to reference value) from sea level.

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**ACTION PROPOSED**

The team is asked to validate the use of 203YYY operator preceding SYNOP data and consider the introduction of a note in B/C1 to allow this practice.

**DISCUSSIONS**

Israel Meteorological Service (IMS) is sending surface hourly data prepending WIGOS Station Identifier to sequence 3-07-080. IMS is also using operator 203YYY (change reference values) in order to encode a value of -415 metres in the elements 0-07-030 (Height of station ground above mean sea level) and 0-07-031 (Height of barometer above mean sea level). The value of -415 m is required to encode observations from En Gedi (WSI 0-376-0-564). The reference value for both elements 0-07-030 and 0-07-031 is -4000 which with the scale of 1 is allowing only a minimum value of -400 which is preventing the normal encoding of the value -415. The operator is applied in BUFR message as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| TABLE  REFERENCE | TABLE  REFERENCES | ELEMENT NAME | DESCRIPTION |
| F X Y |
| **2 03 014** |  | Change of reference | Subsequent element descriptors define new reference values for corresponding Table B entries. Each new  reference value is represented by 14 bits in the Data section. |
| **0 07 030** |  | Height of station ground above mean sea level | Element descriptor for which the reference is replaced by the corresponding value in the 14 bits element in data section |
| **0 07 031** |  | Height of barometer above mean sea level | Element descriptor for which the reference is replaced by the corresponding value in the 14 bits element in data section |
| **2 03 255** |  | End of change of reference | End of the list of descriptor elements for which the change of reference applies |
| **3 01 150** |  | (WIGOS identifier) |  |
|  | 0 01 125 | WIGOS identifier series |  |
|  | 0 01 126 | WIGOS issuer of identifier |  |
|  | 0 01 127 | WIGOS issue number |  |
|  | 0 01 128 | WIGOS local identifier (character) |  |
| **3 07 080** |  | (Sequence for representation of synoptic reports from a fixed land station suitable for SYNOP data |  |
|  | 3 01 090 | Surface station identification; time, horizontal and vertical coordinates |  |
|  | 3 02 031 | Pressure information |  |
|  | 3 02 035 | Basic synoptic “instantaneous” data |  |
|  | 3 02 036 | Clouds with bases below station level |  |
|  | 3 02 047 | Direction of cloud drift |  |
|  | 0 08 002 | Vertical significance (surface observations) |  |
|  | 3 02 048 | Direction and elevation of cloud |  |
|  | 3 02 037 | State of ground, snow depth, ground minimum temperature |  |
|  | 3 02 043 | Basic synoptic “period” data |  |
|  | 3 02 044 | Evaporation data |  |
|  | 1 01 002 | Replicate 1 descriptor 2 times |  |
|  | 3 02 045 | Radiation data (from 1 hour and 24-hour period) |  |
|  | 3 02 046 | Temperature change |  |

**PROPOSAL**

The following note to B/C1 is proposed to allow the use of operator 203YYY in the context described above:

(6) The operator 203YYY can be used before the SYNOP data sequences to change the reference of elements 0-07-030 and 0-07-031 to encode station heights less than -400 m.