WORLD METEOROLOGICAL ORGANIZATION

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WMO INSTRUMENT INTERCOMPARISONS

(Submitted by the Secretariat)

Summary and purpose of document

This document provides status information on WMO instrument intercomparisons already held or planned in the intersessional period.

Action proposed

CIMO-MG to revise the plan of WMO instrument intercomparisons set-up by CIMO-XIII

WMO INSTRUMENT INTERCOMPARISONS

1. CIMO-XIII sets-up a plan for WMO instrument intercomparisons (Annex). Unfortunately, the Fourteenth Congress, and more recently the fifty-sixth session of the Executive Council, were not able to approve financial resources for instrument intercomparisons. Therefore the implementation of most needed intercomparisons in 2004 and 2005 were done through a financial support from WMO Members and the private instrument industry supplemented by the small amount of money WMO reallocated from savings within other relevant Programmes.

2. The WMO Intercomparison of Rainfall Intensity (RI) Gauges started in 15 September 2004 in three laboratories of the Royal Netherlands Meteorological Institute, Météo-France and the Italian Met Service (University of Genoa). 19 pairs of instruments (including the two from the Region IV) from 18 manufacturers take part in the intercomparison, which first phase has been successfully concluded by 15 February 2005. The intercomparison will last until mid 2005.

3. The WMO Intercomparison of High Quality Radiosonde Systems, held in Vacoas, Mauritius, 1-27 February 2005, was vital for the worldwide and regional homogeneity of upper-air measurements. Six operational radiosonde systems (Vaisala, Sippican, Modem, MEISEI Electric Co., Graw Radiosondes and Meteolabor) participated in the intercomparison, which consisted of 62 successful comparison flights. In addition Sippican MKII, 3 thermistor radiosondes were flown to provide a daytime “working reference” for temperature and the Snow-white chilled mirror hygrometer as a “working reference” for dewpoint/relative humidity. The objectives were met; the project team is analyzing the results and preparing a report. The preliminary report will be presented during TECO-2005.

4. Preparations started for holding the Tenth International Pyrheliometer Comparison (IPC-X) conjointly organized with the Regional Pyrheliometer Comparisons (RPCs) in the World Radiation Centre in Davos, Switzerland, 26 September to 14 October 2005. 38 participants from 13 RRCs, 20 NRCs and three other institutions have registered so far; 22 of them are requesting financial support. However, there are little funds to support participation of NRCs in IPC-X. If support to NRCs is not provided then, WMO should consider organizing the subsequent RPCs in the period from six months to four years following the completion of the IPC-X.

5. Consultations are going on with the Italian Meteorological Service to hold the WMO Field Intercomparison of RI Gauges. The meeting with Mr G. Cassu, the director of RESMA (testing site in Vigna di Valle) is scheduled for 20 April 2005 to assess the suitability of the test site and to discuss the support needed from the host country.

6. No action was taken to initiate the rest of the intercomparisons planned by CIMO-XIII.

PROVISIONAL PROGRAMME OF WMO INTERNATIONAL COMPARISONS AND EVALUATIONS OF METEOROLOGICAL INSTRUMENTS (2002-2006)

No.	Title of proposed WMO intercomparisons	Year(s)	Site(s)
1.	Tenth International Pyrheliometer Comparison (IPC-X)	2005	WRC, Switzerland
2.	Regional Pyrheliometer Comparisons (RPCs)	2004 - 2006	Either in conjunction with IPC-X or at RRCs concerned
3.	International Rainfall Intensity Measurement Intercomparison	2003	In various climatic regions
4.	Thermometer Screen/Shielding Intercomparison(s)	2003 - 2005	In various climatic regions
5.	International Hygrometer Intercomparison	2003 - 2005	In various climatic regions
6.	International/National Radiosonde Intercomparisons	Ongoing	
7.	Intercomparison of remote and in situ upper-air sounding systems	2003- 2005	