



The importance of inter-comparison field experiments in WMO CIMO and its implication at the national level

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In the World Meteorological Organization (WMO) the Commission for Instrument and Method of Observation (CIMO) is the WMO Technical Commission focusing its work on accurate weather observation by promoting and facilitating international standardization and compatibility of meteorological observing systems used by Members within the WMO Global Observing System to improve quality of products and services of Members. CIMO supports development of new observing equipment, collaborates with meteorological instrument manufacturers, the scientific community and other developers to facilitate a production of reliable instruments that are adequately tested before use, and supports capacity building in developing and least developed countries to close the gap between them and the developed countries.

Over the last decades one of the essential contribution from CIMO has been a suite of international inter-comparison experiments both for surface in-situ and remote sensing observations: manufacturers are invited to support CIMO by providing their state of the art operational sensor and WMO CIMO experts independently review and advise on the performances demonstrated by the different method of observation made available for the inter-comparison. In turn the CIMO Guide is updated by taking into account the best performances demonstrated during the inter-comparison. A number of recent examples and/or starting contribution will be highlighted both for rain, temperature, and solid precipitation, as well as for radiosonde and weather radar observation. The importance of these studies directly impacts on the National Met services (examples from MeteoSwiss will be given for upper air observation), and also regularly address new challenges (eg. contribution in the COST WIRE programme on renewable energy).