

WORLD METEOROLOGICAL ORGANIZATION
WMO TECHNICAL CONFERENCE ON METEOROLOGICAL AND
ENVIRONMENTAL INSTRUMENTS AND METHODS OF OBSERVATION
Towards fit-for-purpose environmental measurements
Amsterdam, The Netherlands, 8 - 11 October 2018

SUBMITTED ABSTRACT

0.	Paper Number	32
	Session Name	1. Characterization and standardization of environmental measurements - traceability assurance
1.	Title of the paper	Calibration: Standards and Traceability of instruments in IMD

2.	Institution	INDIA METEOROLOGICAL DEPARTMENT			
	Authors	Dr/Mr/Ms	Family name	First name	Country
a	Lead author	Mr	KUMAR	RAKESH	India
b	Co-author	Mr	DANISH	M	India
c	Co-author	Mr	SHENDE	U K	India
d	Co-author	Mr	RANALKAR	M R	India

4.	Abstract of the paper
	<p>Calibration: Standards and Traceability of instruments in IMD Rakesh Kumar, M Dansih, U K Shende, Manish R. Ranalkar, India Meteorological Department, Pune rakeshkumar.90@imd.gov.in, sarakesh29@gmail.com</p> <p>Abstract Accuracy of measurement of meteorological parameters is key factor for weather forecasting and climate change analysis. It has always been a requirement of accurate data with good spatial and temporal resolution for improving accuracy of dynamic model. India meteorological Department (IMD) is a nodal agency responsible for providing weather forecasts, hydrological, aviation, agricultural and various other services. For this IMD is maintaining a network of around 300 surface observatories, 700 automatic weather stations, 1350 Automatic rain gauge, around 130 agro-meteorological observatories and 75 airports meteorological instruments. In this paper, we present test and calibration facilities available at IMD. IMD have surface laboratory equipped with primary standards. All primary standards are traceable to CSIR-National Physical Laboratory (NPL). Primary standards in respect of radiation instruments are traceable to World radiation Centre, Davos. Apart from Primary standards, department have recently introduced travelling or secondary standards. These travelling standards are calibrated and tested against primary standards every year. Travelling standards are available with regional centres of IMD. Regional centres do routine testing of instruments installed at various surface observatories, automatic weather stations, agro-met observatories etc. IMD also provides certification to other institutes in respect of meteorological instruments and have conducted training in testing and calibration for members of RA-II region under supervision of WMO. By maintaining in house primary and travelling standards, IMD is able to maintain accuracy of instruments used in various observatories. Keywords: CSIR-NPL, NATIONAL STANDARD, PRIMARY STANDARD, TRAVELLING STANDARD</p>