1. Record Nr. UNINA9910437941603321

Titolo	Monitoring Atmospheric Water Vapour [[electronic resource]] : Ground-Based Remote Sensing and In-situ Methods / / edited by Niklaus Kämpfer
Pubbl/distr/stampa	New York, NY : , : Springer New York : , : Imprint : Springer, , 2013
ISBN	1-283-62266-1 9786613935113 1-4614-3909-4
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (324 p.)
Collana	ISSI Scientific Report Series ; ; 10
Disciplina	551.57
Soggetti	Remote sensing Climatology Space sciences Atmospheric sciences Remote Sensing/Photogrammetry Space Sciences (including Extraterrestrial Physics, Space Exploration and Astronautics) Atmospheric Sciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	In Situ Sensors -- Thin Film Capacitive Sensors -- Balloon-Borne Frostpoint-Hygrometry -- Application of Fluorescence Method -- Microwave Radiometry -- Fourier Transform Infrared Spectrometry -- Lidar -- Role of Networks and Long-Term -- Overview of Satellite Sensors -- Cominging Observation by Different Techniques -- Survey of Intercomparisons of Water Vapour Measurements.
Sommario/riassunto	Atmospheric water plays a key role in climate. Water vapour is the most abundant greenhouse gas and its condensed forms exert a profound influence on both incoming solar and outgoing infrared radiation. Unfortunately, accurate, height-resolved global-scale measurements of atmospheric humidity are difficult to obtain. The change in concentration of five orders of magnitude from the ground to the stratosphere means there is no standard instrument that will measure

everywhere. This has led to different measuring techniques, all with strengths and weaknesses. This book assesses all presently available techniques that are used in monitoring networks. Special weight is given to the different technical concepts, the accuracy of different sensor types, calibration issues and retrieval aspects.