2026 IEEE 18th Specialist Meeting on Microwave Radiometry and Remote Sensing for the Environment (MicroRad 2026)

L'Aquila, Italy
27-30 April 2026

IEEE Catalog Number: CFP2692D-POD
ISBN: 979-8-3315-8069-8

IEEE Advancing Technology for Humanity

Copyright © 2026, IEEE

All Rights Reserved

Copyright and Reprint Permissions:

Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

*** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

IEEE Catalog Number:	CFP2692D-POD
ISBN (Print-On-Demand):	979-8-3315-8069-8
ISBN (Online):	979-8-3315-8068-1

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA

Phone:	(845) 758-0400
Fax:	(845) 758-2633
E-mail:	curran@proceedings.com
Web:	www.proceedings.com



TABLE OF CONTENTS

EUMETSAT Performance Analysis of AWS to Prepare for EPS-Sterna 1
Tim J. Hewison, Christophe Accadia, Jörg Ackermann, Sabatino Di Michele, Vinia Mattioli, Imke Krizek Felix Bosco, Paolo Colucci, Alessio Canestri, Gizem Karsli Demirbas

Assessing Atmospheric Stability From Ground-Based Microwave Radiometer Observations for Wind Energy Applications in the Framework of MiRadOr Project: Preliminary Results 5
Saverio Teodosio Nilo, Domenico Cimini, Francesco Di Paola, Donatello Gallucci, Sabrina Gentile Edoardo Geraldi, Salvatore Larosa, Elisabetta Ricciardelli, Filomena Romano, Mariassunta Viggiano Stephanie Fiedler

Vicarious Calibration of a Cloud Radar Radiometric Channel Using Radiosoundings 10
Davide Rossi, Mario Montopoli, Saverio Di Fabio, Andrea Balotti, Raffaele Lidori, Vincenzo Rizi Marco Iarlori, Domenico Cimini

Rotating Universal Radiometer for Planetary Boundary Layer Observations 14
Madison Eble, Marian Klein, Angel Madrid

Radio Frequency Interference Resilient Passive Microwave Sensor 20
Angel Madrid, Madison Eble, Marian Klein

Overview of the VICIRS Study: A VIcarious Calibration Tool for MWI and ICI Using RadioSoundings 26
Elisabetta Ricciardelli, Christophe Accadia, Vasileios Barlakas, Fabien Carminati, Domenico Cimini Francesco De Angelis, Francesco Di Paola, Sabrina Gentile, Tim J. Hewison, Salvatore Larosa Fabio Madonna, Vinia Mattioli, Mario Montopoli, Filomena Romano, Mariassunta Viggiano

Vertical Profiles of Cloud Properties at the ENEA Lampedusa Station for Climate Observation Derived from Cloudnet Retrieval 32
Giandomenico Pace, Fabrizio Anello, Virginia Ciardini, Lorenzo De Silvestri, Tatiana Di Iorio Paolo Grigioni, Antonio Iaccarino, Daniela Meloni, Francesco Monteleone, Salvatore Piacentino Damiano Sferlazzo, Ilaria D'Elia

Design and Verification of Microwave Hyperspectral Atmospheric Sounder on the China's New Generation Meteorological Satellite 37
Jieying He, Chao Zhang, Yuxuan Feng, Xinbiao Wang, Jingyang Li, Yu Zhang

HiSRAMS Radiometric Calibration and Environmental Biases 41
Natalia Bliankinshtein, George Resendes-Awada, Kenny Bala, Shiqi Xu, Philip Gabriel, Yi Huang Cuong Nguyen, Olivier Auriacombe, Dirk Schuettemeyer

Estimation of Atmospheric Liquid Water by Combined Observations From Ground-Based Single-Channel Microwave Radiometry and GNSS 45
Gunnar Elgered, James L. Davis, Peter Forkman

Evaluating CryoRad Sea-Ice Performance Requirements with 0.4-2 GHz Brightness-Temperature Simulations: A Sensitivity Assessment Using ORAS6 51
Lars Kaleschke, Laurent Bertino, Jacqueline Boutin, Marco Brogioni, Philip Browne, Matthias Drusch Stefan Hendricks, Ken Jezek, Joel Johnson, Josephine Juul, Marion Leduc-Leballeur, Giovanni Macelloni Ghislain Picard, Rasmus T. Tonboe, Xiangshan Tian-Kunze, Jean-Luc Vergely, Paula Wedekind Yiwen Zhou

Atacama Pathfinder Experiment (APEX) Measurements of the 159-752 GHz Atmospheric Spectrum and Resulting Model Upgrades 55
Juan R. Pardo, Carlos de Breuck, Dirk Muders, Justo A. González, Juan P. Pérez-Beaupuits Catherine Prigent

A Matric-Potential-Based Dielectric Model for Moist Soils and Its Application to AMSR2 Retrievals 61
Kumiko Tsujimoto, Tetsu Ohta, Ichirow Kaihotsu

Evaluation of Ionospheric Faraday Rotation Effects for the Cryorad Earth Explorer Candidate Mission 67
Katia N. Urata, F. Ticconi, J. Johnson, J. C. Angevain, M. Martin-Neira, M. Suess, V. Dutto, F. Brauer M. Brogioni, G. Macelloni, J. Boutin, Y. Zhou

The Advanced Ultra-high Resolution Optical and RAdiofrequency (AURORA) Pathfinder 71
Antonia Gambacorta, Fabrizio Gambini, Mark Stephen, Matthew Fritts, Berhanu Bulcha, Narges Shahroudi Victor Torres, Priscilla Mohammed, Alexander Kotsakis, Stephen Nicholls, Patrick Stegmann

Infrared - Microwave Synergy to Support Characterisation of Polar Lows 77
Donatello Gallucci, Domenico Cimini, Salvatore Larosa, Gunnar Noer, Roger Randriamampianina Bertrand Theodore, Marc Crapeau, Dorothee Coppens, Filomena Romano

Advanced Spectral Retrievals for Automatic Monitoring of Data Quality and System Status of Ground-Based Radiometers 81
Harald Czekala, Tatiana Nomokonova

Machine Learning Approaches of WIVERN L2 Products of LWP and IWP and Consequences on Path Integrated Attenuation 86
Paolo Sanò, Mario Montopoli, Daniele Casella, Marco Coppola, Giulia Panegrossi, Alessandro Battaglia

Quantifying Radiosonde Spatial and Temporal Representativeness for Vicarious ICI/MWI Calibration Uncertainty 90
Domenico Cimini, Francesco De Angelis, Francesco Di Paola, Sabrina Gentile, Tim Hewison Salvatore Larosa, Fabio Madonna, Vinia Mattioli, Elisabetta Ricciardelli, Filomena Romano Mariassunta Viggiano

Establishing the Physical Consistency Between GMI- and DPR-Based Retrievals of Precipitation Systems 95
V. Chandrasekar, Chandrasekar Radhakrishnan, Steven C. Reising