

Maria P. Cadeddu

Climate Research Section
Environmental Sciences Division
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Education:

Ph.D., Physics, Heriot-Watt University, Edinburgh, United Kingdom 2002
Laurea (with Honors), Physics, University of Cagliari, Cagliari, Italy 1994

Professional experience:

2007-present Atmospheric Scientist
Environmental Sciences Division
Argonne National Laboratory

Oversee operations of the U.S Dept. of Energy network of microwave radiometers for the Atmospheric Radiation Measurement (ARM) Program and deploy new field instrumentation. Improve and develop retrievals of atmospheric parameters such as precipitable water vapor, cloud liquid water, temperature and humidity profiles. I am actively involved in the use of ground-based measurements to improve the modeling of spectral parameters of microwave absorbers, in particular oxygen, water vapor and liquid water.

Summary of Previous Experience:

2005-2007 Argonne National Laboratory
Postdoctoral researcher

2002-2005 Joint Center for Earth Systems Technology (JCET/UMBC)
Postdoctoral research associate

1998-2002 Heriot-Watt University, (HWU), UK
UK Meteorological Office PhD scholarship

1997–1998 Motorola Corporation (IRIDIUM Program)
System engineer

Research Interests:

My research interests include application of ground-based microwave and millimeter-wave remote sensing to various aspects of atmospheric research. Improvement of gaseous absorption models through field observations and use of inversion theory to develop new retrieval techniques.

I am also involved in the optimization of the design and operations of microwave and millimeter-wave radiometers.

Professional Activities:

Member of the American Geophysical Union (AGU)
IEEE Member

Publications:

Author or Co-author of 22 peer-reviewed journal and proceeding publications and more than 20 technical reports and conference papers.