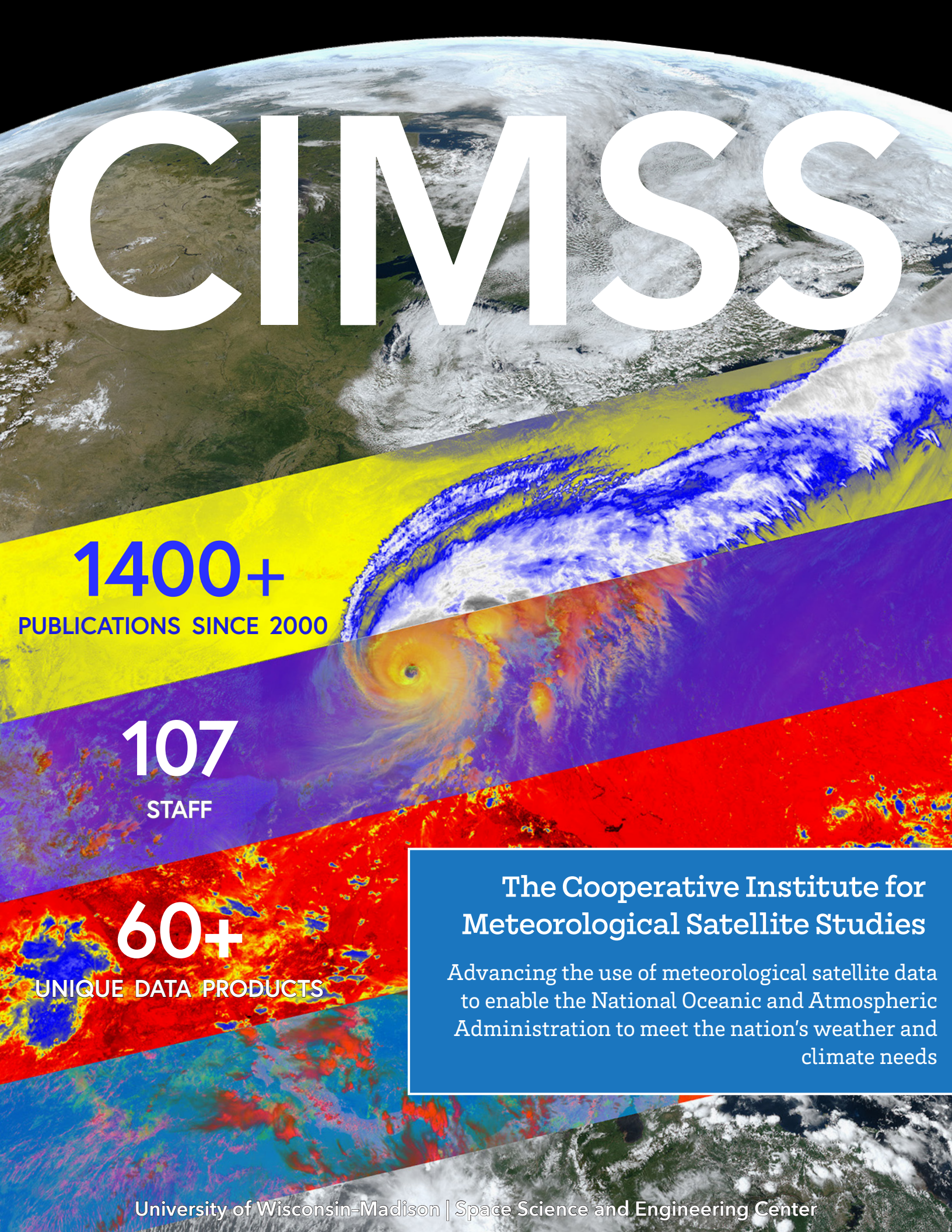
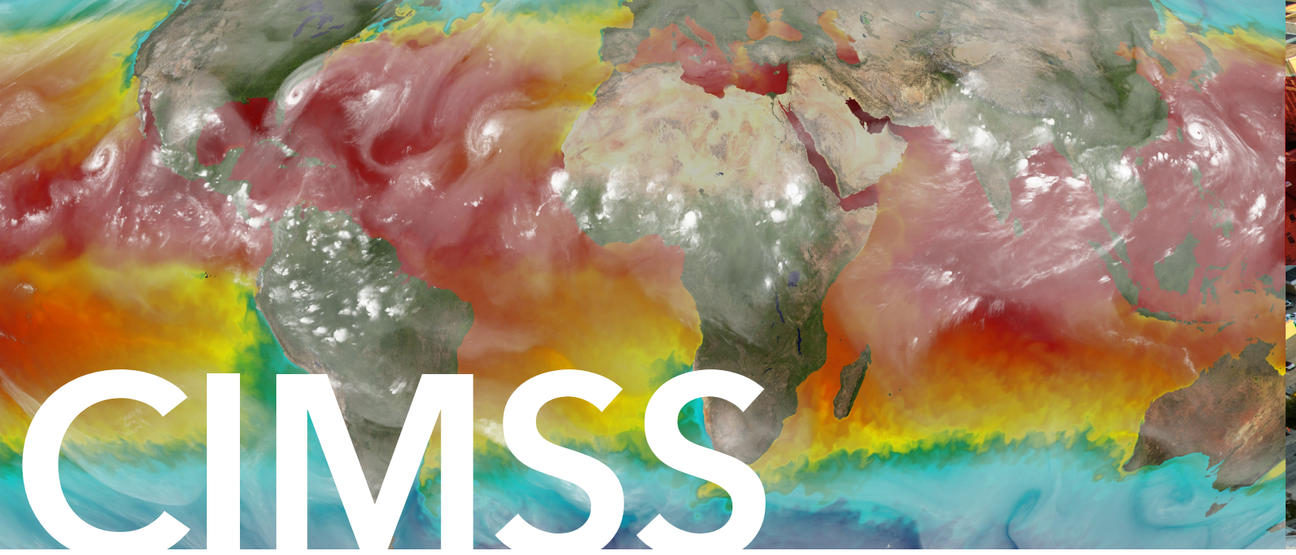


The Cooperative Institute for Meteorological Satellite Studies

Advancing the use of meteorological satellite data to enable the National Oceanic and Atmospheric Administration to meet the nation's weather and climate needs

University of Wisconsin-Madison | Space Science and Engineering Center



CIMSS

To build a more informed society, prepared for and resilient to weather and climate changes through the effective use of meteorological satellite observations.

UW-Madison

Cooperative Institute for Meteorological Satellite Studies

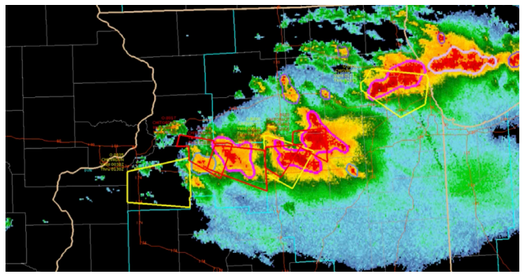
CIMSS was established in 1980 with a Memorandum of Understanding between the National Oceanic and Atmospheric Administration and the University of Wisconsin–Madison. The new institute, one of six funded by NOAA at the time, would find its organizational home within the Space Science and Engineering Center (SSEC) under the leadership of Verner Suomi, founder of both centers.

The collaborative relationship between NOAA and CIMSS provides numerous benefits to the atmospheric science community and to the nation by advancing the use of satellite, aircraft, and ground-based remote sensing measurements in research and applications. It also furnishes a framework for developing a robust education and outreach program to train students, professionals, and other stakeholders in the use of environmental satellite data.

Satellite Meteorology Research and Applications

Supporting weather analysis and forecasting by developing, evaluating, and analyzing new and innovative satellite products and guiding their transition into NOAA operations.

ProbSevere



The Probability of Severe (ProbSevere) model, developed by CIMSS and NOAA, automatically extracts information related to thunderstorm development to produce timely, short-term, statistical forecasts of storm intensity. Using numerical weather prediction guidance, geostationary satellite, ground-based radar, and lightning data ProbSevere determines the probability of severe weather up to 90 min in the future.

Satellite Sensors and Measurement Techniques

Characterizing sensor performance, providing long-term calibration, specifying instrument characteristics for future satellite imagers and sounders, deriving data products that support situational awareness and meteorological applications using cloud computing and machine learning approaches.

Calibration and validation with S-HIS

CIMSS and SSEC researchers led calibration and validation campaigns utilizing high-altitude aircraft and the Scanning-High Resolution Interferometer Sounder (S-HIS) during in-orbit testing of GOES-16.

Environmental Models and Data Assimilation

Increasing the utilization of satellite data in nowcasting, operational weather analysis and prediction, and atmospheric chemistry models through advanced assimilation techniques.

Outreach and Education

Engaging the workforce of the future in understanding and using environmental satellite observations for the benefit of an informed society.

CIMSS Weather Camp

The CIMSS Weather Camp brings high school students from around the US to learn about satellite meteorology, atmospheric science, and careers in related fields.

Students

Explore what CIMSS has to offer when you pursue graduate studies at the University of Wisconsin-Madison

Work with top experts in remote sensing, using new and innovative ways to view our world. Team with scientists from NOAA to improve our ability to model the atmosphere.

Examine a wide range of topics, including:

- **Arctic sea ice**
- **Aviation hazards**
- **Wildfires**
- **Air pollution**
- **Droughts**
- **Data assimilation**

After graduation, our students have gone on to careers in academia, government, the private sector, and NGOs.

Contact

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CIMSS

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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE