

CubeSat Infrared Atmospheric Sounder (CIRAS)

Mr. Thomas S. Pagano, Jet Propulsion Laboratory

December 7, 2016

Von Karman Auditorium, Jet Propulsion Laboratory,
Pasadena, California



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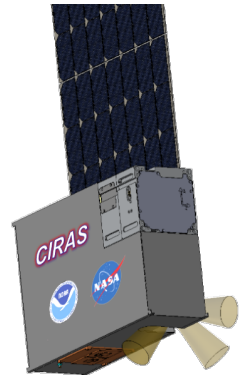
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AGENDA

- 5:30 pm – Refreshments
- 6:00 pm – Welcome and announcements
- 6:15 pm – Lecture by Mr. Thomas S. Pagano
- 7:00 pm – Discussion and Continued Refreshments
- 7:30 pm – Adjourn

The IEEE Photonics and GRSS chapters present a special lecture event by Mr. Thomas S. Pagano

The CubeSat Infrared Atmospheric Sounder (CIRAS) will measure upwelling infrared radiation of the Earth in the MWIR region of the spectrum from space on a CubeSat. The observed radiances can be assimilated into weather forecast models and be used to retrieve lower tropospheric temperature and water vapor for climate studies. Multiple units can be flown to improve temporal coverage or in formation to provide new data products including 3D motion vector winds. The spacecraft will be a commercially available CubeSat and the integrated system will be a complete 6U CubeSat capable of measuring temperature and water vapor profiles with good lower tropospheric sensitivity. The CIRAS is the first step towards the development of science instruments requiring infrared measurements while reducing the cost of the payload, spacecraft and launch. Examples of science results and imagery obtained from NASA satellites as they relate to weather forecasting, and research in climate and atmospheric composition will be presented.



Mr. Thomas S. Pagano is the Principal Investigator for CIRAS and the Project Manager for the AIRS/AMSU/HSB Suite of instruments on the EOS Aqua Spacecraft. He was the lead engineer responsible for the calibration of the AIRS instrument in orbit. Prior to joining JPL in 1997, he was the Chief Systems Engineer on the MODIS instrument development program at Raytheon SBRS since 1985. He has a BS in Physics from UC Santa Barbara, and an MS in Physics from Montana State University. He holds 2 US patents and is author of numerous papers on space remote sensing systems.



Refreshments will be served!

Directions and Parking: JPL is easily accessible from both the Harbor/Pasadena Freeway (110) and the Foothill Freeway (210). Please see http://www.jpl.nasa.gov/about_JPL/maps.php for detailed directions.

After presentation of official, government issued photo identification, you will be directed to the visitor's parking lot from which the von Karman auditorium can be reached by a short walk.



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