

Shaima L. Nasiri

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Education

Ph.D. - Atmospheric and Oceanic Sciences Dec. 2004, University of Wisconsin, Madison

M.S. - Atmospheric and Oceanic Sciences June 1999, University of Wisconsin, Madison.

B.S. - Physics and Mathematics, June 1997, University of Denver, Magna Cum Laude

Research Experience

Assistant Professor, Jan. 2006 – present, Department of Atmospheric Sciences, Texas A&M University, College Station, TX.

Post-doctoral Researcher, Jan. 2005 – Dec. 2005, Univ. of Wisconsin, Madison, WI. Robert Knuteson, Advisor

Graduate Research Assistant (Ph.D), Sep. 2004 – Dec. 2004, Univ. of Wisconsin, Madison, WI. Steven A. Ackerman, Advisor

Assistant Researcher / Research Intern, Sep. 1999 – Sep. 2001, Univ. of Wisconsin, Madison, WI.

Graduate Research Assistant (M.S.), Sep. 1997 – June 1999, Univ. of Wisconsin, Madison, WI. W. Paul Menzel and Steven A. Ackerman, Advisors

NASA Summer Intern, Summer 1996, Goddard Space Flight Center, Greenbelt, MD.

Courses Taught

ATMO 201 - Introduction to Meteorology, Fall 2006

ATMO 612 - Atmospheric Physics II, Spring 2007

Graduate Students Advised

Christopher Dobbs, M.S., *current*

Graduate Student Committees

Kevin Garrett, ATMO, M. S., graduated 2007

Hyoun-Myoung Cho, ATMO, Ph.D., *current*

Qian Feng, ATMO, Ph.D., *current*

Wei Li, ATMO, Ph.D., *current*

Academic Service

2007-2008	Department qualifying exam committee
2007-2008	Department graduate committee
2007	Department physical meteorology courses review committee
2007	Department dynamics courses review committee
2006-2007	Departmental reinvestment space modification committee
2006-2007	Departmental Colloquium Committee
2006-2007	University CIRTTL Steering Committee
2006-present	Advisor to ATMO undergraduates

Awards

Suomi-Simpson Graduate Fellowship, 2002, UW-Madison and NASA-GSFC Earth Sciences Directorate

Field Project Participation: TAMDAR validation (2005), CRYSTAL-FACE (2002), IHOP (2002), TX 2001, AFWEX (2001), SAFARI 2000

Best Student Poster Award, 2001, 11th AMS Conference on Satellite Meteorology and Oceanography

Development

Workshop for Early Career Faculty in the Geosciences: Teaching, Research, and Managing your Career, Sponsored by NSF. College of William & Mary, June 7-11, 2006.

Professional Societies

American Meteorological Society

Optical Society of America

American Geophysical Union

Professional Service

Reviewer 2006 *J. Atmos. Ocean. Technol.*

Reviewer 2006-2007 *J. Appl. Meteor. Clim.*

Reviewer 2006 *J. Atmos. Sci.*

Reviewer 2005-2006 *Rem. Sens. Envir.*

Student Member, 2003 - 2006, AMS Satellite Meteorology and Oceanography Committee

Research Proposals

Current Funded

2006-2009 Co-I on *Research in support of GOES-R RISK Reduction Project*, Subcontract to the University of Wisconsin-Madison on NOAA prime (TAMU PI, Ping Yang).

Pending

2006-2009 PI on *Combining AIRS and MODIS data to study the frequency, distribution, and radiative impacts of potentially mixed phase clouds*, NASA-ROSES 2006-A.15, \$268K.

2006-2009 PI on *Land surface characterization using high spectral resolution and moderate spatial resolution observations from EOS, METOP, and NPP for assessment of climate products*, Subcontract to the University of Wisconsin-Madison on NASA-ROSES 2006-A.15 prime (UW-M PI, Robert Knutson), \$202K.

Refereed Publications

Baum, B. A., P. Yang, S. L. Nasiri, A. K. Heidinger, A. J. Heymsfield, and J. Li, 2007: Bulk scattering properties for the remote sensing of ice clouds. Part 3: High resolution spectral models from 100 to 3250 cm^{-1} . *J. Appl. Meteor. Clim.*, **46**, p. 423-434.

Kahn, B. H., E. Fishbein, S. L. Nasiri, A. Eldering, E. J. Fetzer, M. J. Garay, S.-Y. Lee, 2007: A radiative consistency check of AIRS and MODIS cloud retrievals. *J. Geophys. Res.*, **112**, D09201, doi:10.1029/2006D007486.

Yang, P., L. Zhang, G. Hong, S. L. Nasiri, B. A. Baum, H. L. Huang, M. D. King, and S. Platnick, 2007: Differences between Collection 4 and 5 MODIS ice cloud optical/microphysical products and their impact on radiative forcing simulations. *IEEE Trans. Geosci. Remote Sens.* **In Press**.

Nasiri, S. L. and B. A. Baum, 2004: Daytime multilayered cloud detection using multispectral imager data. *J. Atmos. Ocean. Technol.*, **21**, p. 1145-1155.

Nasiri, S. L., B. A. Baum, A. J. Heymsfield, P. Yang, M. R. Poellot, D. P. Kratz, and Y. Hu, 2002: The development of midlatitude cirrus models for MODIS using FIRE-I, FIRE-II, and ARM in-situ data. *J. Appl. Meteor.*, **41**, p. 197-217.

Key, J. R., P. Yang, B. A. Baum, and S. L. Nasiri, 2002: Parameterization of shortwave ice cloud optical properties for various particle habits. *J. Geophys. Res.*, **107** (D13).

Yang, P., B.-C. Gao, B. A. Baum, W. Wiscombe, Y. Hu, S. L. Nasiri, P. F. Soulen, A. J. Heymsfield, G. M. McFarquhar, and L. Miloshevich, 2001: Sensitivity of cirrus bidirectional reflectance to vertical inhomogeneity of ice crystal habits and size distributions. *J. Geophys. Res.*, **106**, p. 17267-17291.

Yang, P., B.-C. Gao, B. A. Baum, Y. X. Hu, W. Wiscombe, M. I. Mischenko, D. M. Winker, and S. L. Nasiri, 2001: Asymptotic solutions of optical properties of large particles with strong absorption. *Applied Optics*, **40**, p. 1532-1546.

Yang P., B. C. Gao, B. A. Baum, Y. Hu, W. Wiscombe, S.-C. Tsay, D. M. Winker, S. L. Nasiri, 2001: Radiative properties of cirrus clouds in the infrared (8-13 μm) spectral region. *J. Quant. Spectros. Rad. Trans.*, **70**, p. 473-504.

Other Publications

E. M. Prins, C. S. Velden, J. D. Hawkins, F. J. Turk, J. M. Daniels, G. J. Dittberner, K. Holmlund, R. E. Hood., A. G. Laing, S. L. Nasiri, J. J. Puschell, J. M. Shepherd, J. V. Zapotocny, 2006: 13th AMS Conference on Satellite Meteorology and Oceanography. *Bull. Amer. Meteor. Soc.* **87**, Num. 4, p. 633-637.

Conference Proceedings, Presentations, and Posters

Only presentations within the past 5 years are listed.

** Indicates student research.*

2007

- S. L. Nasiri, B. H. Kahn: Improvement of cloud thermodynamic phase assessment using infrared hyperspectral measurements. Presented at the Optical Society of America Hyperspectral Imaging and Sounding of Environment Topical Meeting, Santa Fe, New Mexico, Feb. 12-15, 2007.
- B. A. Baum, R. Holz, H.-L. Huang, Y.-K. Lee, P. Yang, S. L. Nasiri, M. D. King, S. Platnick: Inference and validation of cloud phase from MODIS, AIRS and CALIPSO data. Presented at the Optical Society of America Hyperspectral Imaging and Sounding of Environment Topical Meeting, Santa Fe, New Mexico, Feb. 12-15, 2007.
- *K. Garrett, P. Yang, S. L. Nasiri: A validation for retrieving cloud optical and microphysical properties in the IR region with MODIS and AIRS. Poster presented at the 3rd AMS Third Symposium on Future National Operational Environmental Satellites, San Antonio, TX, 15-18 Jan, 2007.

2006

- S. L. Nasiri, *K. Garrett, B. H. Kahn: Infrared cloud property retrievals and their sensitivity to temperature and moisture profiles. Presented at the FORMOSAT-3/COSMIC Workshop, Taipei, Taiwan, 28 Nov. - 1 Dec. 2006.
- S. L. Nasiri, B. H. Kahn: Cloud thermodynamic phase determination using infrared satellite measurements from MODIS and AIRS. Poster presented at the FORMOSAT-3/COSMIC Workshop, Taipei, Taiwan, 28 Nov. - 1 Dec. 2006.
- R. O. Knuteson, S. C. Moeller, D. C. Tobin, H. E. Revercomb, S. Nasiri: Retrieval of high latitude land surface properties from the high-spectral resolution infrared sounders: AIRS, IASI, and CrIS. Presented at SPIE Remote sensing for agriculture, ecosystems, and hydrology VIII, Stockholm, Sweden, 11-13 Sep., 2006.
- *C. R. Yost, P. Yang, S. L. Nasiri, B. A. Baum: Use of AIRS and MODIS to retrieve ice cloud optical thickness and effective diameter. Poster presented at the 12th AMS Conference on Atmospheric Radiation, Madison, WI, 10 - 14 July, 2006.
- S. L. Nasiri and B. H. Kahn: Infrared cloud phase determination from MODIS and AIRS. Presented at the 14th AMS Conference on Satellite Meteorology and Oceanography, Atlanta, GA. 30 Jan. - 2 Feb., 2006.
- *C. R. Yost, P. Yang, S. L. Nasiri, B. A. Baum: Possible thin cirrus cloud contamination of MODIS clear-sky pixels. Poster presented at the 14th AMS Conference on Satellite Meteorology and Oceanography, Atlanta, GA. 30 Jan. - 2 Feb., 2006.

2005

- J. Taylor, F. Best, N. Ciganovich, S. Dutcher, S. Ellington, R. Garcia, H. Howell, R. Knuteson, D. LaPorte, S. Nasiri, E. Olson, H. Revercomb, D. Tobin, K. Vinson, M. Werner: Performance of an infrared sounder on several airborne platforms: the scanning high resolution interferometer sounder (S-HIS). Presented at the SPIE Earth observing systems X, San Diego, CA, 31 July - 2 Aug., 2005.

2004

- S. L. Nasiri and G. McGarragh: The effects of multilayer clouds on MODIS cloud effective radius and optical thickness retrievals. Poster presented at the 13th Conference on Satellite Meteorology and Oceanography, Norfolk, Virginia. 20-23 Sep., 2004
- G. McGarragh, S. L. Nasiri, B. A. Baum: The effect of multilayered clouds on cloud pressure retrievals in near-global MODIS data. Poster presented at the 13th Conference on Satellite Meteorology and Oceanography, Norfolk, Virginia. 20-23 Sep., 2004
- S. T. Dutcher, R. K. Garcia, R. G. Dedecker, R. O. Knuteson, M. J. Smuga-Otto, D. J. Hackel, S. L. Nasiri, P. Antonelli: Hyperspectral data storage: Prototype implementation using the 2003 Pacific THORPEX dataset. Poster presented at the 20th International Conference on Interactive Information and Processing Systems (IIPS) for Meteorology, Oceanography, and Hydrology, Seattle, WA, 10-14 Jan., 2004.

2003

- S. L. Nasiri, S. A. Ackerman, and P. Antonelli: Cloud Property Retrievals: Case Studies from CRYSTAL-FACE. Presented at the CRYSTAL-FACE Science Team Meeting, Salt Lake City, Utah. 24-28 Feb., 2003.

Invited Presentations

2005, *Jet Propulsion Laboratory*, Atmospheric Chemistry, Dynamics, and Radiation Seminar Series

2005, *Texas A&M University*, Department of Atmospheric Sciences

2005, *University of Wisconsin*, Teacher Workshop on Satellite Meteorology