Kenneth R. Knapp
Research Fellow
CIRA
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Professional Experience

1999 to present — Research Fellow, CIRA, Camp Springs, MD
Developing aerosol retrieval algorithms over land for the AVHRR and GOES satellites

2000-2001 — Co-Investigator, Global Aerosol Climatology Project, Camp Springs, MD
Developed an aerosol retrieval to provide a retrospective analysis of climatology of aerosol from AVHRR for 1981-2000.

1994-2000 — Graduate Research Assistant, Colorado State University, Fort Collins, CO
Developed an algorithm for the retrieval of aerosol from geostationary orbit.

1998-1998 — Teaching Assistant, Colorado State University, Fort Collins, CO
Assisted in the teaching of lecture coursework and taught the lab portion of AT351: Introduction to Weather and Climate

1997-1998 — Co-Investigator, for NASDA ADEOS-II/GLI, Fort Collins, CO
Participated with NASDA for aerosol research from the Japanese GLI instrument

Education

2000 – Doctor of Philosophy in Atmospheric Science
Colorado State University, Fort Collins, CO
Dissertation title: *Aerosol retrieval over land using background composites of geostationary satellite data*

1996 - Master of Science in Atmospheric Science
Colorado State University, Fort Collins, CO
Thesis title: *Radiative effects of boundary layer aerosols: delectability of hazes by GOES-8 and estimation of their direct effect*

1994 – Bachelor of Science in Meteorology and Mathematics
Lyndon State College, Lyndonville, VT

Awards

2000 Best Student Poster, AMS Satellite Meteorology and Oceanography Conference, Long Beach, CA
2000 Best Poster in Remote Sensing Session, International Radiation Symposium, St. Petersburg, Russia

Peer Reviewed Publications

Boucher, O., S.E. Schwartz, T.P. Ackerman, T.L. Anderson, B. Bergstrom, B. Bonnel, P. Chylek, A. Dahlback, Y. Fouqart, Q. Fu, N. Halthore, J.M. Haywood, T. Iversen, S. Kato, S. Kinne, A. Kirkevag, **K.R. Knapp**, A. Lacis, I. Laszlo, M.I. Mishchenko, S. Nemesure, V. Ramaswamy, D.L. Roberts, P. Russell, M.E. Schlesinger, G.L. Stephens, R. Wagener, M. Wang, J. Wong, and F. Yang, Intercomparison of models representing direct shortwave radiative forcing by sulfate aerosols, *Journal of Geophysical Research*, *103* (D14), 16979-16998, 1998.

Jacobowitz, H., L.L. Stowe, G. Ohring, **K.R. Knapp**, N.R. Nalli, and A. Heidinger, The Advanced Very High Resolution Radiometer Pathfinder Atmosphere (PATMOS) Climate data set: A resource for Climate Change Research, *Bulletin of the American Meteorological Society*, *accepted*, 2002.

Knapp, K.R., Quantification of aerosol signal in GOES-8 visible imagery over the U.S., *Journal of Geophysical Research*, *accepted*, 2002.

Knapp, K.R., and L.L. Stowe, Evaluating the potential for retrieving aerosol optical depth over land from AVHRR Pathfinder Atmosphere data, *Journal of Atmospheric Science*, *59* (3), 279-293, 2002.

Knapp, K.R., and T.H. Vonder Haar, Calibration of the Eighth Geostationary Observational Environmental Satellite (GOES-8) Imager Visible Sensor, *Journal of Atmospheric and Oceanic Technology*, *17*, 1639-1644, 1999.

Knapp, K.R., T.H. Vonder Haar, and Y.J. Kaufman, Aerosol optical depth retrieval from GOES-8: Uncertainty study and retrieval validation over South America, *Journal of Geophysical Research*, *107* (D7), 10.1029/2001JD000505, 2002.

Stowe, L.L., H. Jacobowitz, G. Ohring, **K.R. Knapp**, and N.R. Nalli, The Advanced Very High Resolution Radiometer Pathfinder Atmosphere (PATMOS) Data set: Initial Analyses and Evaluations, *Journal of Climate*, *15*, 1243-1260, 2002.

Conference Posters and Presentations

Knapp, K.R., Aerosol remote sensing over the battlefield using geostationary visible sensors, in *Battlespace Atmospheric and Cloud Impacts on Military Operations Conference 2000*, Fort Collins, CO, 2000.

Knapp, K.R., Aerosol optical depth over land from the AVHRR pathfinder atmosphere data set, in *11th AMS Conference on Satellite Meteorology and Oceanography*, Madison, WI, 2001.

Knapp, K.R., Aerosol optical depth over land retrieved from the AVHRR pathfinder atmosphere data set, in *11th AMS Conference on Atmospheric Radiation*, Ogden, Utah, 2002.

Knapp, K.R., Retrieval of surface BRDF parameters and albedo from the AVHRR pathfinder atmosphere data set, in *11th AMS Conference on Atmospheric Radiation*, Ogden, Utah, 2002.

Knapp, K.R., and L.L. Stowe, An approach to deriving an aerosol optical thickness climatology over land with AVHRR data, in *Fall Meeting of the AGU*, San Francisco, CA, 1999.

Knapp, K.R., and L.L. Stowe, Aerosol optical depth signal over land in the AVHRR Pathfinder Atmosphere Data set, in *AGU Spring Meeting*, Washington, DC, 2000.

Knapp, K.R., and L.L. Stowe, Deriving an aerosol optical depth climatology over land with AVHRR data, in *International Radiation Symposium*, pp. 905-908, A. Deepak Publishing, St. Petersburg, Russia, 2000.

Knapp, K.R., and L.L. Stowe, Satellite remote sensing of aerosol over land from geostationary and polar orbiting satellites, in *AAAR 19th Annual Meeting*, St. Louis, MO, 2000.

Knapp, K.R., and L.L. Stowe, Inference of aerosol optical depth over land through the retrieval of surface BRDF parameters from the AVHRR Pathfinder Atmosphere data set, in *AMS Annual Meeting*, Albuquerque, NM, 2001.

Knapp, K.R., and T.H. Vonder Haar, Multi-sensor aerosol detection: Combining aerosol information from the GOES-8 and 9/Imagers and TIROS/AVHRR, in *Battlespace Atmospheric and Cloud Impacts on Military Operations 1998*, Hanscom Air Force Base, MA, 1998.

Knapp, K.R., and T.H. Vonder Haar, Aerosol optical depth retrievals over land using the GOES-8/Imager visible channel, in *10th AMS Conference on Satellite Meteorology and Oceanography*, Long Beach, CA, 2000.

Knapp, K.R., T.H. Vonder Haar, and K. Fuller, Detection of visibility from satellite, in *Battlespace Atmospherics Conference*, San Diego, CA, 1996.

Knapp, K.R., T.H. Vonder Haar, and Y. Kaufman, Aerosol optical property retrievals: The effect of surface reflectance uncertainty, in *10th AMS Conference on Atmospheric Radiation*, Madison, WI, 1999.

Memberships

American Meteorological Society
American Geophysical Union