

CHARLEY A. KNODERER
Meteorologist II

Educational Background

M.S., Atmospheric Sciences, University of Wisconsin at Madison
B.S., Atmospheric Science, University of California at Davis

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Professional Experience

Mr. Knoderer joined STI as a Meteorologist in 2000. His work focuses on the preparation, installation, and maintenance of upper-air and surface meteorological instruments including radar wind profilers (RWP), radio acoustic sounding systems (RASS), and sodars. In addition, he instructs in the use of upper-air and surface meteorological instruments. Mr. Knoderer also helps design and support RWP software, forecasts air quality, and analyzes meteorological data. Mr. Knoderer has characterized pollutant transport and dispersion through analysis of model output and transport trajectories and through analysis of meteorological and air quality data, including RWP reflectivity data, RASS virtual temperature data, and air quality data collected by aircraft.

Mr. Knoderer has extensive experience quality-controlling RWP, sodar, and surface meteorological data. He installed and operated upper-air and surface meteorological instruments for the Central California Ozone Study (CCOS), California Regional PM₁₀/PM_{2.5} Air Quality Study (CRPAQS), 2005-06 Texas Air Quality Study II (TexAQS-II), the 2007 Wyoming Upper Green River Valley Ozone study, and the 2009-2010 Cleveland Multiple Air Pollutant Study (CMAPS). Mr. Knoderer installed, maintained, and quality-controlled data collected from two surface meteorological stations installed at the Geysers geothermal field in northern California for Western GeoPower, Inc., during 2008 and 2009. Mr. Knoderer managed the Northeast States for Coordinated Air Use Management (NESCAUM) RWP project in 2002, in which he performed quality assurance checks and set up real-time data acquisition, quality control, and data display systems. He conducted a performance audit of the RWP and surface meteorological site in Phoenix, Arizona, for the Arizona Department of Environmental Quality's Particulate Matter (PM) Network Support project in 2003. Mr. Knoderer is currently overseeing the maintenance and operation of five upper-air meteorological sites (five RWPs and three mini-sodars) for the South Coast Air Quality Management District (SCAQMD).

Mr. Knoderer designed and managed the LAPMom RWP software project as part of a Cooperative Research and Development Agreement (CRADA). He also assisted with the design and testing of LAPLoad, a software product that merges sodar data into a RWP database. Mr. Knoderer led the design and testing of upgrades to CRADA RWP software, including GraphXM, LAPMom, and LAPLoad. He also leads STI's customer support for RWP software.

Mr. Knoderer has a strong computer background with knowledge of FORTRAN, Java, and HTML programming languages; Campbell Scientific CR10x and 23x programming language; Microsoft Excel, Word, and PowerPoint; GEMPAK; GARP; and LDM. In addition, Mr. Knoderer has held the position of adjunct professor of meteorology at Santa Rosa Junior College since 2005.

Memberships

American Meteorological Society