Advertisement for *Empire State Vertical Sensing Evaluation Regional Testbed Experiment (VERTEX)* Project Post-Doc Position
14 October 2022

NEW POSTDOCTORAL SCIENTIST POSITION

The New York State Mesonet (NYSM; http://www.nysmesonet.org), located at the State University of New York at Albany (UAlbany), is seeking a Postdoctoral scientist with an interest in data assimilation and impact studies of NYSM profiler data. This is a two-year appointment with possible extension for a 3rd year depending on funding availability and performance. Visa sponsorship is not available for this position.

Applicants are asked to submit electronically: (i) a curriculum vitae, (ii) a publication list, (iii) the names of three individuals who can provide a letter of reference, and (iv) a statement of professional interests to Professor Chris Thorncroft (cthorncroft@albany.edu). The position will remain open until filled. Preference will be given to applications that are received before 1 December 2022.

JOB SUMMARY: The New York State Mesonet (NYSM) operates the only state-wide profiler network in the US with 17 sites (http://nysmesonet.org/networks/profiler#stid=prof_alba). Each profiler site is comprised of a scanning Doppler LiDAR (DL) and a microwave radiometer (MWR). The post-doctoral scientist will work closely with ASRC and NYSM scientists to assimilate NYSM profiler data into Numerical Weather Prediction (NWP) models and assess the value of profiling technologies for improving operational weather forecasting and its applications with emphasis on high-impact weather events. Research will focus on the best practices for assimilation of thermodynamic and wind profiles using different data assimilation (DA) techniques including (but not limited to) convection-allowing Weather Research and Forecast DA, Ensemble Kalman filtering DA and/or hybrid DA. Work will include: (1) development of best methods to combine and assimilate DL and MWR profiles, (2) evaluation of assimilating profiler data on short-term, high-impact weather forecasting skill using archived NYSM data from the last 5 years for various high-impact weather events, and (3) exploration of future assimilation of real-time NYSM profiler data into operational NWP models.

<u>**REQUIREMENTS**</u>
- A Ph.D. Degree in Atmospheric Science, Meteorology, Environmental Science, or a related field from a college or university accredited by the U.S. Department of Education or an international recognized accrediting organization (equivalent combination of education/related experience accepted) within the last three years
- Demonstrated skill in the analysis and use of atmospheric observations
- Experience with data assimilation and numerical weather prediction models
- Advanced programming and scripting skills
- Knowledge of instrumentation (particularly remote sensing), measurements and data quality control procedures
- Ability to work independently, work together as a team, and to work with minimal supervision
- Strong written and oral communication skills