The Cooperative Institute for Research in the Atmosphere (CIRA) at Colorado State University (CSU) is pursuing research activities related to the development, maintenance and assessment of the Community Radiative Transfer Model (CRTM) in partnership with the NOAA Center for Satellite Applications and Research (STAR) and U.S. Joint Center for Satellite Data Assimilation (JCSDA), to improve and accelerate the uses of research and operational satellite data in remote sensing and numerical weather prediction (NWP) models. The CRTM plays a key role in supporting the GOES-R and JPSS programs, as well as many NOAA partner satellite missions, for instrument design, retrieval algorithm development, and satellite data impact studies in NWP. To keep supporting a variety of U.S. satellite missions and data assimilation activities, the individual in this position will lead/support collaborative projects with other algorithm and data assimilation groups, as well as other institutions, to improve CRTM scientific and technical capabilities. Major tasks will include CRTM code management, software optimization, testing and release; sensor coefficient generation; new transmittance model development; user support, issue tracking, and issue resolution; and improving CRTM performance for visible, infrared, and microwave sensors. The individual in this position will report to the NESDIS Environmental Applications Team (NEAT) Manager and actively collaborate with NOAA and other researchers, in particular with NOAA/NESDIS/STAR and JCSDA research groups in College Park, Maryland (office will be in College Park, MD).

Decision Making:
As an independent Research Scientist, the individual in this position will actively pursue assigned research, recognize viable and sound approaches to address the problems or requirements at hand, and coordinate/execute research plans to a successful conclusion. He/She will, often with little guidance, define the scope of the work, control his/her research and decide how to conduct it, and his/her success in doing so will determine, to a large degree, the fate of his/her managed projects. Specifically, the individual in this position will define the scope of the work and will be accountable for the successful execution and delivery of the work proposed, including all science and deliverables mentioned in the statements of work. Key decisions will include scientifically sound approaches to addressing the research problems at hand.

Essential Job Duties:

Applied Research 50%
- maintain, upgrade and enhance the CRTM operational code;
- maintain CRTM software repository and generate release packages to operational centers and community;
- transfer CRTM coefficients to NetCDF4 and modify CRTM interface codes;
- maintain and optimize CRTM code, including unit testing, regression testing and synchronization of CRTM project and new releases.

Independent Research 25%
- maintain and enhance CRTM sensor coefficient generation package and update for new functions;
- generate CRTM coefficients to support US satellite missions as well as other international and commercial satellites.

Collaborative Research 25%
- support global and regional satellite radiance assimilation activities (primarily for NCEP) in all-sky and all-surface conditions;
- support STAR Level-1 (SDR) and Level-2 (EDR) algorithm teams, including enhancements to CRTM and resolving technical and scientific issues;
- work on improvements to UV, visible, IR, and microwave radiative transfer as directed;
- support radiometric instrument design and testing by NOAA, NASA, and other research institutes;
- collaborate with other NOAA/NESDIS and JCSDA scientists working on similar research projects;
- travel to scientific conferences to present research results.
Required Qualifications:

Note: Please address required job qualifications in your cover letter.

- Ph.D. in a quantitative field of research (e.g., Atmospheric Science/Meteorology/Remote Sensing);
- ability to pass a National Agency Check with Inquiries (NACI, Tier 1 federal background check) because the position is located inside a federal building;
- 3 years of experience in radiative transfer modeling including some or all of the following areas: knowledge of spectroscopy in the UV, shortwave and longwave IR, and microwave regions (absorption/emission), radiative transfer from light scattering by atmospheric particles (including 3D), polarized radiative transfer, line by line radiative transfer modeling, and fast radiative transfer modeling;
- solid quantitative educational background in fundamental Physics, Mathematics or Statistics;
- proficiency with Fortran 90 and higher and Unix scripts programming as well as familiarity working with software development/tools such as Python and IDL;
- familiarity and experience with satellite observing systems;
- good oral and written communication skills and ability to work in a team environment;
- must be legally eligible to work in the United States by proposed start date because CIRA will not sponsor a visa for this position.

Preferred Qualification:

Note: Please highlight preferred job qualifications in your cover letter.

- experience with CRTM;
- proficiency with software configuration management tools including Git, Subversion.

Background Check:

Colorado State University (CSU) strives to provide a safe study, work, and living environment for its faculty, staff, volunteers and students. To support this environment and comply with applicable laws and regulations, CSU conducts background checks. The type of background check conducted varies by position and can include, but is not limited to, criminal (felony and misdemeanor) history, sex offender registry, motor vehicle history, financial history, and/or education verification. Background checks will be conducted when required by law or contract and when, in the discretion of the university, it is reasonable and prudent to do so.

Commitment to Diversity and Inclusion:

Reflecting departmental and institutional values, candidates are expected to have the ability to advance the Department's commitment to diversity and inclusion.

Application Deadline:

Applications will be accepted until the position is filled; however, to ensure full consideration, applications should be submitted by 11:59 PM MDT on August 11, 2019. References may be contacted immediately and without further notification to the candidate. Apply online by clicking “Apply to this Job” at the following website: http://jobs.colostate.edu/postings/68438. NOTE: In your cover letter, please address the required and preferred qualifications of this position.