



To: Distribution List

From: Faculty Research Development Office (FRDO)  
Office of the Vice President for Research

Subject: Limited Competition: DOE, Atmospheric Systems Research (ASR), (DE-FOA-0003194)

Date: 10/27/2023

Dear UNM Researchers,

The goal of Atmospheric Systems Research is to quantify the interactions among aerosols, clouds, precipitation, and radiation to improve understanding of key cloud, aerosol, precipitation, and radiation processes that affect the Earth's radiative balance and hydrological cycle, especially processes that limit the predictive ability of regional and global models. ASR's four priority research areas are focused on reducing the large uncertainties in Earth system prediction that can be traced to: aerosol processes, warm boundary-layer processes, convective processes, and high latitude processes.

Projects must address one of the following four research topics:

**1. Aerosol processes at Atmospheric Radiation Measurement (ARM) sites:** Conduct observational, data analysis, and/or modeling studies using ARM observations to improve understanding of atmospheric aerosol processes that affect the Earth's energy balance and water cycle. Data from one or more current, upcoming, or past ARM fixed observatories, ARM mobile facility deployments, and/or related ARM-supported field campaigns must be integral to the proposed research. Other data, including PI laboratory data, may be used to augment ARM observations, however data from an ARM site should be primary. **Note:** applications focused on ice nucleation may be more responsive to Topic 4.

**2. Convective cloud processes:** Conduct observational, data analysis, and/or modeling studies using ARM observations to improve understanding of convective processes controlling the occurrence, frequency, lifecycle, precipitation, and microphysical and macrophysical properties of convective clouds. Data from one or more current, upcoming, or past ARM fixed sites, ARM mobile facility deployments, and/or related ARM-supported field campaigns must be integral to the proposed research. Other data, including PI laboratory data or data from coordinating campaigns, may be used to augment ARM observations, however ARM data should be primary. **Note:** applications focused primarily on processes occurring in the atmospheric boundary layer are unlikely to be responsive to this topic.

**3. Aerosol & cloud processes from ARM's Eastern Pacific Cloud Aerosol Precipitation Experiment (EPCAPE):** Conduct observational, data analysis, and/or modeling studies using observations from ARM's EPCAPE field campaign to improve understanding of climate-relevant cloud, aerosol, precipitation, and radiation processes and interactions. The focus of EPCAPE is to characterize the extent, radiative properties, aerosol interactions, and precipitation characteristics of stratocumulus clouds in the

Eastern Pacific across all four seasons at a coastal location. Data from EPCAPE and/or related ARM-supported campaigns must be integral to the proposed research.

**4. Mixed-phase cloud and ice cloud processes:** Conduct observational, data analysis, and/or modeling studies using ARM observations to improve understanding of processes controlling the occurrence, frequency, lifecycle, precipitation, and microphysical and macrophysical properties of clouds containing ice crystals, supercooled liquid droplets, and/or both ice crystals and supercooled liquid droplets. Data from one or more current, upcoming, or past ARM fixed sites, ARM mobile facility deployments, and/or related ARM-supported field campaigns must be integral to the proposed research. Other data, including PI laboratory data or data from coordinating campaigns, may be used to augment ARM observations, however ARM data should be primary.

Full details can be found in the program solicitation: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=350631>. The deadline for submitting full proposals to the agency is **February 13, 2024**.

This is a limited competition. **Each institution is limited to THREE pre-applications as lead.** If you are interested in applying to this program, please submit a statement of interest with a tentative project title and a brief description (200 words) by **NOON on November 10, 2023** via UNM's [InfoReady Review portal](#). **\*\*Because of the short turnaround time, this limited competition will be conducted on a first-come, first-served basis. This means that the first three SOIs we receive will be given the three UNM slots.\*\*** To see if applicants for a first-come, first-served opportunity have already been selected, visit the [Limited Competition website](#) and use the "Filter by Award Title" function to search for the opportunity if it isn't visible on the first page.

**Pre-applications are required and must be submitted by 3pm (MT) on November 30<sup>th</sup>, 2023.** They must include the following information at the top of the cover page:

Title of Pre-application  
Principal Investigator Name, Job Title  
University of New Mexico  
PI Phone Number, PI Email Address  
(for all senior/key personnel and unfunded collaborators, if applicable)  
Name, Job Title, Institution  
DE-FOA-0003194  
Research topic the proposed work addresses

The cover page should include a list of the names and institutional affiliations of all participating investigators, including collaborators and consultants. It will not count toward the pre-application's **2-page limit**. The cover page must be followed by a clear and concise description of the objectives and technical approach of the proposed research, how the proposed research addresses the ASR research topic, and how ARM-supported observations are integral to the proposed research.

**The pre-application may not exceed 2 pages** (1-inch margins, fonts no smaller than 11-point). Figures and references, if included, must fit within the 2-page limit. In addition, the pre-application must include a listing of senior/key personnel and a listing of individuals who should not serve as merit reviewers of a subsequent application. See Section VIII for detailed instructions on how to craft the required listings.

Should you have any questions please feel free to contact us at [limited@unm.edu](mailto:limited@unm.edu).

*If you are affiliated with HSC, please contact HSC Limited Competition at [HSC-LimitedComps@salud.unm.edu](mailto:HSC-LimitedComps@salud.unm.edu) for more information.*