

2026 Workshop: Multi-decadal Variation

Long title

Multi-decadal Variation

Conveners

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Description

There are many causes of long-term variation in the Earth's atmosphere. Drivers can influence the coupled atmosphere-ionosphere-geospace system over decades to centuries. In the upper atmosphere, for example, the sun is a major source of long-term natural variation. Knowledge of processes at different altitudes and coupling between atmosphere regions can enhance understanding of the complex whole atmosphere system. We welcome discussion of all types of long term variation. Additionally, we welcome participation from people studying the troposphere and other parts of the Earth System, as well as the middle and upper atmosphere. One of the goals is to discuss ways that we might further collaborate to advance knowledge of the whole atmosphere system. One focus of this year's workshop is a discussion of design considerations and requirements for multi-decadal observations and a future Geospace System Observatory. Additionally, we welcome discussion about strategies for education and outreach related to multi-decadal variation. We plan to hold this session using a hybrid format. For more information and to contribute a presentation, please contact one of the workshop organizers.

Justification

Long term variation impacts all regions of the Earth's system from the surface through the magnetosphere. Understanding underlying physical processes of multi-decadal variations can also help explain variability on shorter timescales. Integrating knowledge from scientists studying different regions and components of the Earth's system enhances our overall understanding of its complexity and response to multi-

decadal variation.

Related to CEDAR Science Thrusts:

Encourage and undertake a systems perspective of geospace

Fuse the knowledge base across disciplines in the geosciences

Workshop format

Short Presentations

Other

Keywords

Multi-decadal Variation, Long-Term Trends, Natural Variability

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