



Smithsonian Institution

Smithsonian National Air and Space Museum Archives

Sally K. Ride Papers - Climate Change Committees /Speeches [including a few by Ride]

Extracted on Apr-18-2024 01:24:19

The Smithsonian Institution thanks all digital volunteers that transcribed and reviewed this material. Your work enriches Smithsonian collections, making them available to anyone with an interest in using them.

The Smithsonian Institution (the "Smithsonian") provides the content on this website (transcription.si.edu), other Smithsonian websites, and third-party sites on which it maintains a presence ("SI Websites") in support of its mission for the "increase and diffusion of knowledge." The Smithsonian invites visitors to use its online content for personal, educational and other non-commercial purposes. By using this website, you accept and agree to abide by the [following terms](#).

- If sharing the material in personal and educational contexts, please cite the Smithsonian National Air and Space Museum Archives as source of the content and the project title as provided at the top of the document. Include the accession number or collection name; when possible, link to the Smithsonian National Air and Space Museum Archives website.
- If you wish to use this material in a for-profit publication, exhibition, or online project, please contact Smithsonian National Air and Space Museum Archives or transcribe@si.edu

For more information on this project and related material, contact the Smithsonian National Air and Space Museum Archives. [See this project](#) and other collections in the Smithsonian Transcription Center.

terminated by the scientific community.

For the Eos Data and Information System these include: (1) to be able to respond to the needs of the users; (2) to be capable of evolution, growth, and adaptation to new sources of data and new data-system technologies; (3) to provide a unified means for obtaining earth science data including Eos data, non-Eos data, and other existing data bases; (4) to allow prompt access to all levels of data and the missions producing the data by a disbursed community of earth scientists in their own laboratories; and (5) to provide a means to document and exchange the results of research and analyses conducted using the data provided by Eos.

A hierarchy of requirements was determined for the observing system itself. All of the observations are to be acquired contemporaneously and to extend wherever possible for 15 years. At least a decade of observations should be collected for those measurements that cannot be provided at the initial implementation of the Eos system. Finally, the instruments are to be calibrated on a reliable, reproducible basis over the lifetime of the system.

The basic information needed to fulfill the observational objectives of Eos includes: (1) the global distribution of energy input to and energy output from the earth; (2) the structure, state variables, composition, and dynamics of the atmosphere from the ground to the mesopause; (3) the physical structure, temperature, detailed elevation, chemical or mineral composition, and surface moisture content of the land surface; (4) the circulation, surface temperature, wind stress, sea state, and biological activity of the oceans; (5) the health, biological productivity, and species composition of land and inland-water ecosystems; (6) the extent, type, state, elevation, roughness, and dynamics of glaciers, ice sheets, snow, and sea ice and the liquid water equivalent of snow and extent of precipitation; and (8) the dynamic motions of the earth as a whole, including both rotational dynamics and the kinematic motions of the tectonic plates.

The Eos Science Steering Committee endorsed the need for multiple platforms to accommodate a full suite of measurement capabilities. At the same time, certain instruments must be colocated on the same platform or in some way provide for coordinated measurements. Several other basic system requirements were established by the Eos advisory groups: (1) instruments characterizing the atmosphere or phenomena affected by atmosphere or phenomena affected by atmospheric conditions, which can vary significantly on time scales of a minute or less, should fly together; (2) instruments measuring variables connected to terrestrial plant physiology should make their observations within the course of one hour so as to observe vegetation in the same metabolic state; (3) instruments measuring rapidly varying chemical constituents of the atmosphere should make their observations in the same volume of air, simultaneously, so that measured abundances can be interrelated; and (4) instruments that measure spacecraft height or position should fly together to provide cross-calibration of the instruments involved.

The various Eos groups have also specified a high priority requirement for location and data relay from various remote, automated in situ measurement systems. They have further specified that efforts should be concentrated on providing a comprehensive set of basic observations before focusing on multiple measurements of the same parameter.



Eos instruments are of five types: (1) NASA research facility instruments; (2) European Space Agency (ESA) research facility instruments; (3) Japanese research facility instruments; (4) operational facility instruments; and (5) principal investigator (PI) instruments. The facility instruments have now been determined, but are subject to possible revision. The PI instruments will be selected in the AO process that was announced in January.

Three types of proposals are solicited in the NASA AO. They are: (1) research facility instrument team leader and team member proposals, due 1 July; (2) instrument investigation proposals, due 15 July; and (3) interdisciplinary investigation proposals, due 15 June. The first allows individual scientists to serve as team leaders and/or team members on one of the NASA teams that will be appointed to provide scientific guidance for the development of the NASA research facility instruments and to analyze and interpret data they produce. The second type of proposal is for the provision of a scientific instrument for flight on the Eos polar platforms and/or on the manned component of Space Station, and the reduction, analysis, and interpretation of data from that instrument by a group of scientists. The third is for investigations involving analysis, interpretation, and significant use of data from any of the Eos research and/or operational instruments.

The AO contains a more detailed description of the mission, the instruments, and the proposal guidelines. Requests for the NASA and/or Japanese AO should be sent to:

Dr. Dixon M. Butler
Program Scientist
Earth Observing System
Code EPM-20 (Ref. AO No. OSSA-1 88)
NASA Headquarters
Washington, D.C. 20546, USA

The ESA AO may be requested from:

Mr. Philip Goldsmith
Director, Earth Observation and Microgravity Programmes
European Space Agency Headquarters
8-10 rue Mario Nikis
F-75738 Paris 15 Cedex
France

Investigators at U.S. institutions who wish to respond to the ESA and/or Japanese AOs and who require NASA support must respond to the NASA AO as well in order to receive the requisite NASA endorsement.

Sally K. Ride Papers - Climate Change Committees /Speeches [including a few by Ride]
Transcribed and Reviewed by Digital Volunteers
Extracted Apr-18-2024 01:24:19



Smithsonian Institution

Smithsonian National Air and Space Museum Archives

The mission of the Smithsonian is the increase and diffusion of knowledge - shaping the future by preserving our heritage, discovering new knowledge, and sharing our resources with the world. Founded in 1846, the Smithsonian is the world's largest museum and research complex, consisting of 19 museums and galleries, the National Zoological Park, and nine research facilities. Become an active part of our mission through the Transcription Center. Together, we are discovering secrets hidden deep inside our collections that illuminate our history and our world.

Join us!

The Transcription Center: <https://transcription.si.edu>

On Facebook: <https://www.facebook.com/SmithsonianTranscriptionCenter>

On Twitter: [@TranscribeSI](https://twitter.com/TranscribeSI)

Connect with the Smithsonian

Smithsonian Institution: www.si.edu

On Facebook: <https://www.facebook.com/Smithsonian>

On Twitter: [@smithsonian](https://twitter.com/smithsonian)