

ACE SYMPOSIUM FIRST CIRCULAR

The Antarctic Climate Evolution (ACE) Scientific Research Project of the Scientific Committee on Antarctic Research (SCAR) is pleased to announce the first Antarctic Climate Evolution Symposium, to be held in Parque de las Ciencias (Science Museum), Granada Spain, 7-11 September, 2009.

ACE is an international research initiative to study the climate and glacial history of Antarctica through palaeoclimate and ice-sheet modelling investigations, purposefully integrated with geological evidence for past changes. More information on ACE and its scientific rationale can be found at www.ace.scar.org.

The overarching theme of the Symposium is the integration of numerical models and paleoenvironmental data for improved understanding of processes related to the past, present, and future dynamics and interactions of the Antarctic atmosphere, ocean, cryosphere, and biosphere. All timescales within the Cenozoic will be considered and the emphasis will be on processes rather than particular timeslices. All scientists with research interests that fall within the breadth of ACE-relevant science are strongly encouraged to attend.

The general format of the Symposium will be non-overlapping oral sessions in the morning, followed by corresponding thematic poster sessions, ad hoc breakouts, and working group meetings in the afternoon. Wednesday, September 9th, will be left open for optional organized field excursions and working group meetings. In order to encourage as much lively interaction and discussion as possible, the time allocated for oral sessions will be limited. Most contributed abstracts at this meeting will be posters.

In addition to an open call for contributed abstracts, a number of key thematic topics have been identified through community input. While the final thematic content of the meeting will be determined by the abstracts received, the themes listed below should provide some guidance for prospective attendees. The meeting will open with a brief session of invited presentations on the current state of the modern Antarctic climate-cryosphere system.



FIRST ANTARCTIC CLIMATE EVOLUTION SYMPOSIUM

www.acegranada2009.com

The meeting website can be found at:
<http://www.acegranada2009.com/>

Questions or concerns should be directed to
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7- 11 September, 2009. Granada, Spain.
Parque de las Ciencias (Science Museum).

ACE SYMPOSIUM THEMES

I. Recent Advances in Cenozoic Proxies and Ice/Climate Modeling

1. **Cenozoic climate/oceans/ice volume** (including super-greenhouses, Eocene-Oligocene transition, and Neogene variability)
 - a. The geochemical perspective
 - b. Sea level
 - c. Deconvolving ice volume, temperature and sea level
2. **Recent advances in modeling** the present and past Antarctic climate/cryosphere/ocean system
 - a. Climate
 - b. Ice
3. **Plio-Pleistocene (and earlier) responses to external forcing and internal feedbacks**

II. Integrating Geological, Geophysical and Geochemical Datasets

1. **Subglacial lakes and sediment- linkages with long-term ice sheet behavior**
2. **Integrating disparate datasets:**
 - a. Open marine (e.g., ocean drilling and seismic) versus marginal (e.g., ANDRILL, CRP, etc)
 - b. Marine versus terrestrial
 - c. Ice versus sediment cores
3. **Modern and Paleotopographic/bathymetric reconstructions for Antarctic paleoenvironmental modeling**, including new work on geophysical surveys, plate and neotectonics, and on/offshore data integration and synthesis
 - a. Offshore geophysical surveys
 - b. On land geophysical surveys/radio echo sounding
 - c. Landscape evolution studies
 - d. Mountain building, erosion, volcanics, geothermal heat flow
 - e. Paleotopography/Paleobathymetry

III. Arctic-Tropics-Antarctic Linkages and Southern Ocean/ Antarctic Evolution

1. **Meridional (tropics-Antarctica) and bipolar climate-cryosphere linkages**

2. **Southern Ocean gateways, circulation, biogeochemistry and ocean-ice sheet-sea ice interactions: past and future**
 - a. Physical oceanography, past and present
 - b. Biogeochemistry/proxies
 - c. Southern Ocean gateways
3. **Terrestrial response-feedbacks to/on Cenozoic climate evolution**
4. **Cenozoic cooling, glacial onset, and global carbon cycle-feedbacks**

IV. Cenozoic-Recent Variability, Implications for Future Predictions and the IPCC

1. **Antarctic deglaciations: mechanisms, timing, and character (data and models)**
 - a. Cenozoic variability and East Antarctic Ice Sheet hysteresis
 - b. Mechanisms of marine ice sheet retreat
 - c. The last deglaciation (LGM-present) from an integrated data (ice cores, terrestrial, marine) and modeling perspective
2. **Sub-orbital climate-ice sheet-sea ice variability: implications for understanding past records and future predictions**
3. **Role of ACE in future predictions and the IPCC (AR5)**

This promises to be a lively meeting with several hundred participants. The outcome of the Symposium is likely to have a lasting impact on the future of Antarctic science. Granada and its surroundings provide an incredible backdrop of Mediterranean and mountain scenery, warm hospitality, fine food, history and culture.

On behalf of the ACE Symposium organizers, we hope you will save these dates for this important meeting and we look forward to seeing in Granada.

Rob DeConto and Carlota Escutia
Co-Chairs ACE Scientific Steering Committee

TARGET DATES AND DEADLINES

Registration

- Early Registration ends: **July 15, 2009**
- Student Travel Grant Applications: **June 1, 2009**

Abstract and proposal submission

- Abstracts: **June 1, 2009**
- Sessions/Workshop proposal: **June 1, 2009**

COMMITTEES

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