CESM Update

OMWG Meeting

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CESM Project Updates/Announcements

CESM Tutorial

- 4th Annual CESM Tutorial on 12-16 August, 2013
- Application website coming soon; deadline 1 March, 2013
- Targeting about 80 participants – preference to early career scientists
- Thanks to Susan Bates for chairing the organizing committee
- Online tutorial materials available

http://www.cesm.ucar.edu/events/tutorials/081213/announcement.html

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CESM Project Updates/Announcements

Redesign of Model Output/Processing Workflow

- Need to streamline future processing/publishing for large intercomparison projects
- Need to reduce CESM data storage
- Maintaining the status quo not possible
- Effort led by John Dennis (CISL), Jim Edwards (CSEG), Mariana Vertenstein (CSEG)
- Survey to gather input (sent out yesterday)

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CCSM3 on Yellowstone

- A tag will be made available to enable users to run CCSM3 on Yellowstone
- This tag has only been verified for functionality
  - T31_gx3v5 has been tested for exact restart
  - Longer term archiver has been tested
- Scientific integrity (climate validation) of the "port" has not been performed; (up to user)

- This will be made available shortly

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Upcoming Model Releases

- CESM1.0.5 – Available shortly
  - Porting of CESM1.0.4 to Yellowstone
  - To be used for CCSM4 integrations
- CESM1.1.1 – Available shortly
  - Porting of CESM1.1 (w/bug fixes) to Yellowstone
  - CESM1.1 has new functionality/infrastructure needed for model developments
  - 1850 and 20C runs (CESM-CAM5) to assess climate
- CESM1.2 – Likely for May

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New (Evolving) Model Release Strategy

- Pre-set release dates
  - Should ease planning for developments and release resource needs
- Annual releases – in May
- Notable improvements in multiple categories
  - Scientifically validated (with control runs/ climate "assessment")
  - Functional improvements (undergone routine testing)
  - Development only additions
- Note that this is a new way of doing business
  - Likely to evolve over time; input welcome

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Model Support Policy

- Released in November
- Includes
  - bug fixes,
  - script changes, and/or code for time evolution of supported machines
- Major releases of CESM supported for 5 years after release date or for 2 years after the next major release, whichever period is longer.
- CCSM3 support expired; CCSM4/CESM1 to 2015 at least
- http://www.cesm.ucar.edu/models/cesmsupportpolicy-2012.html

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Community Integrations - Large Ensemble

- 30 members (perhaps more)
- 1900-2080 with RCP8.5 forcing scenario (with SPARC Ozone).
- CESM-CAM5-BGC (1-degree) with prescribed CO2.
- Spin-up runs underway
- Initial state will vary by a round-off level change
- Thanks to Clara Deser and Jen Kay for leading the planning effort

https://wiki.ucar.edu/display/ccsm/CESM+Large+Ensemble+Planning+Page

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Last Millennium Ensemble

- CESM-CAM5 at 2-degrees/gx1
- Simulations from 850-2005
- 10 members: Full Transient Forcings (Orbital, Volcanic eruptions, Land-use, Solar variability, GHG)
- 4 members each: Single Forcings (Volcanic, Solar, GHG)
- 1 member each: Single Forcing runs (Land-use, orbital)
- 1 run for uncertainty in amplitude of Solar Variability
- 2 members w/FV2-WACCM (Full Forcings)

Thanks to Toby Ault, Nan Rosenbloom, Esther Brady, Bette Otto-Bleisner

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Questions/Comments?

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