

Status and Release Schedule of CCSM4

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CCSM Ocean Model Working Group Meeting

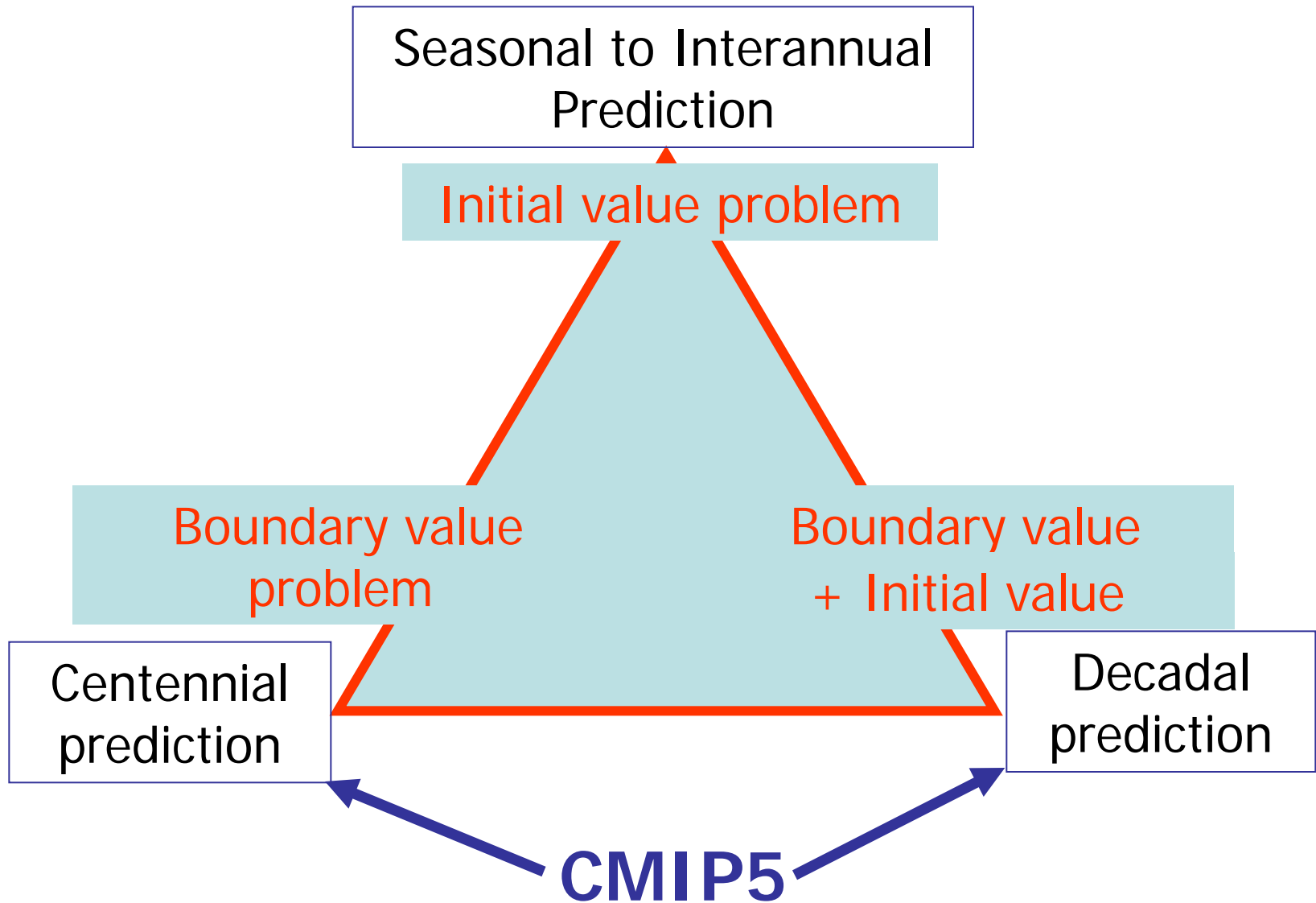
10-11 December 2009

Boulder, CO

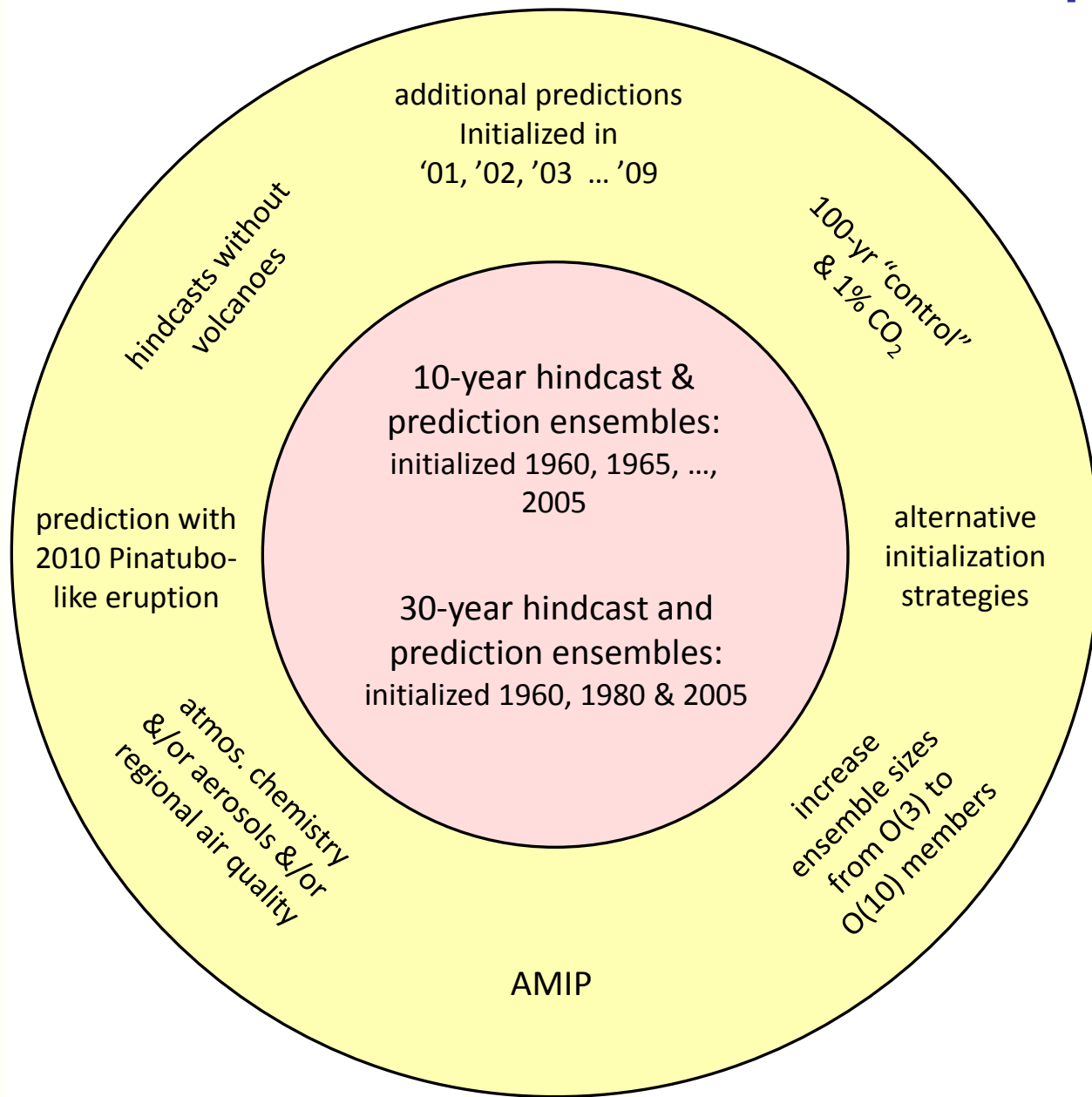
IPCC Fifth Assessment Report

- NCAR and partners will make a major contribution through simulations performed with the latest versions of the CCSM and WACCM
- CMIP5 Experimental Design (Taylor et al. 2009) will be followed:
 - o A set of coordinated climate model experiments designed to:
 - ✓ address outstanding scientific questions from AR4;
 - ✓ improve understanding of climate variability and change;
 - ✓ provide estimates of future climate change useful to those considering its possible consequences.
- CMIP5 is a 5-year experimental design, but a significant fraction of the experiments will be done in time to be included in AR5
 - o Simulations underway (next slides)
 - o December 2010: model simulations available to public
 - o August 2012: Papers must be accepted, in press or published
 - o September 2013: IPCC WG I plenary

Climate Prediction

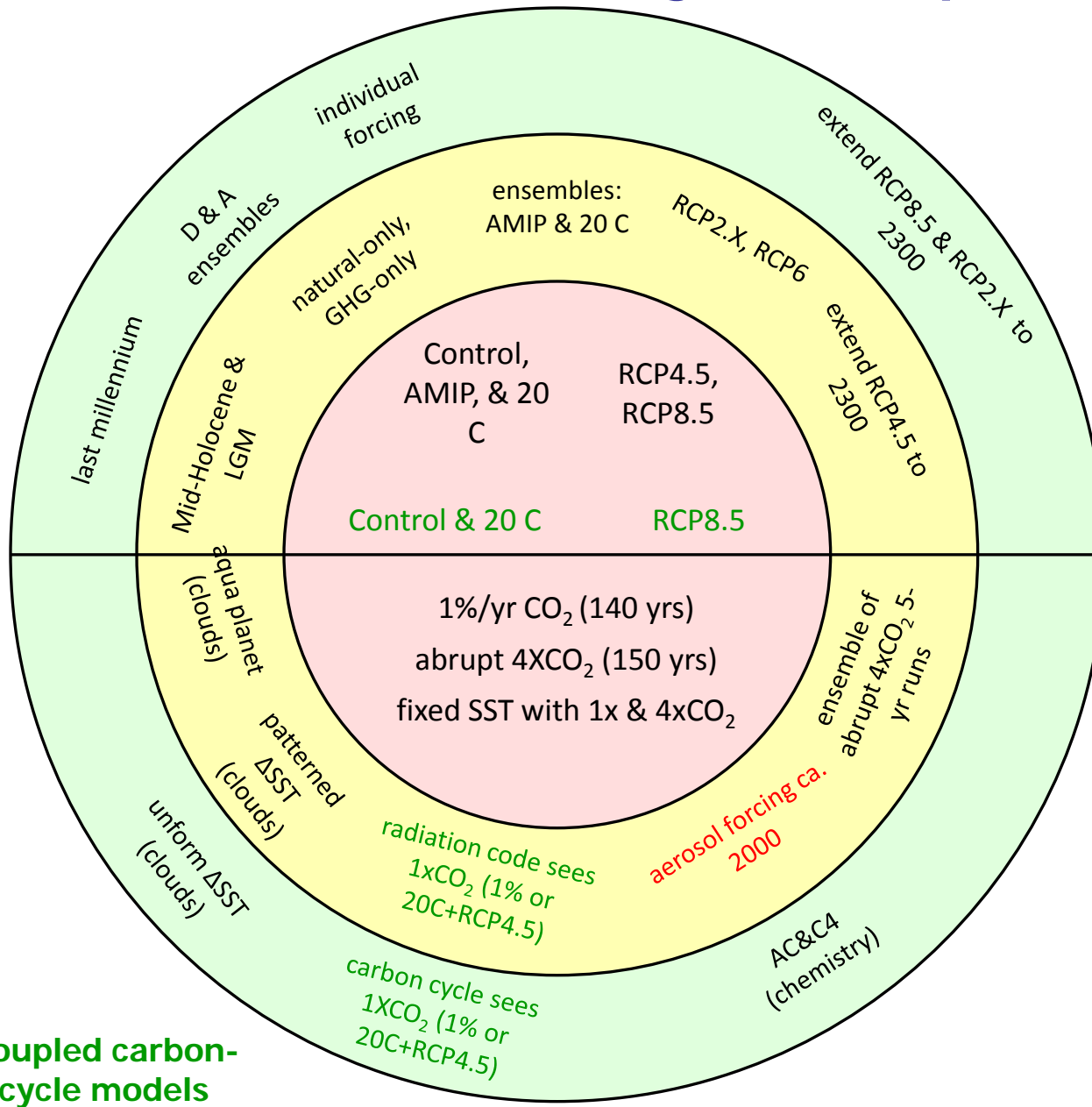


CMIP5 Decadal Prediction Experiments



- Ensemble initial conditions from ODA (DART facility)
- Ocean analysis for 1998-1999
- Improved depiction of Gulf Stream separation and reduced upper-ocean T bias compared to hindcasts
- First experiments to be for yr 2000 start
- Further strategy tbd by SSC (March 2010)

CMIP5 Long-term Experiments



- Core + some Tier to be done at NCAR (11M GAU & 15K yr)
- Others to be done on DOE machines
- Full set of CMIP5 forcings just now available
- Current simulations:
 - o 1850 1 & 2° cntrl
 - o 1% yr-1 CO₂
 - o 20 C (AR4 forcing)
- Soon:
 - o 1850 WACCM
 - o 1850 CESM cntrl

Coupled carbon-cycle models

Release Schedule

- January 15, 2010: CCSM4.0 alpha release – to “friendly” users and vendors with minimal documentation (except for general script's User's Guide)
 - ✓ Vendors and researchers who are granted access to the alpha release code should not redistribute this code to anyone outside of their company or research group.
 - ✓ Anyone writing a paper or giving a presentation based on research that is done between the time when access is granted to the alpha release code and the date of the public release must offer co-authorship to code contributors...
- April 1, 2010: CCMS4.0 release - full documentation, including User's Guide and Model Reference Documents
- June 1, 2010: CESM1.0 release (including ocean ecosystem, advanced physics version of CAM)

Special Journal Issues

- *J. Climate*
 - ✓ Tony Broccoli (Chief Editor) to oversee
 - ✓ List of expected submissions by 1 April, 2010 from each CCSM WG
 - ✓ All papers submitted by 1 January, 2011
- Interest is high for special issue to document SE advances
 - ✓ John Drake, Phil Jones and Mariana Vertenstein to develop