for all the details, see cmip-pcmdi.llnl.gov/cmip5/docs/Taylor_CMIP5_design.pdf (32-page document)
+ ./standard_output.pdf (127-page document)

CMIP5 Update and Issues for the WGCM

Permanent (~~Acting~~) Director of PCMDI (replacing Dave Bader, who replaced Larry Gates)

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Note: Pierre is joining the WGNE / WGCM Metrics Panel and will suggest BGC metrics — but only "a couple" to add to the existing 20 or so physical climate system metrics.

Presented to the
13th Session of the Working Group on Coupled Modelling

San Francisco, CA
28 September 2009

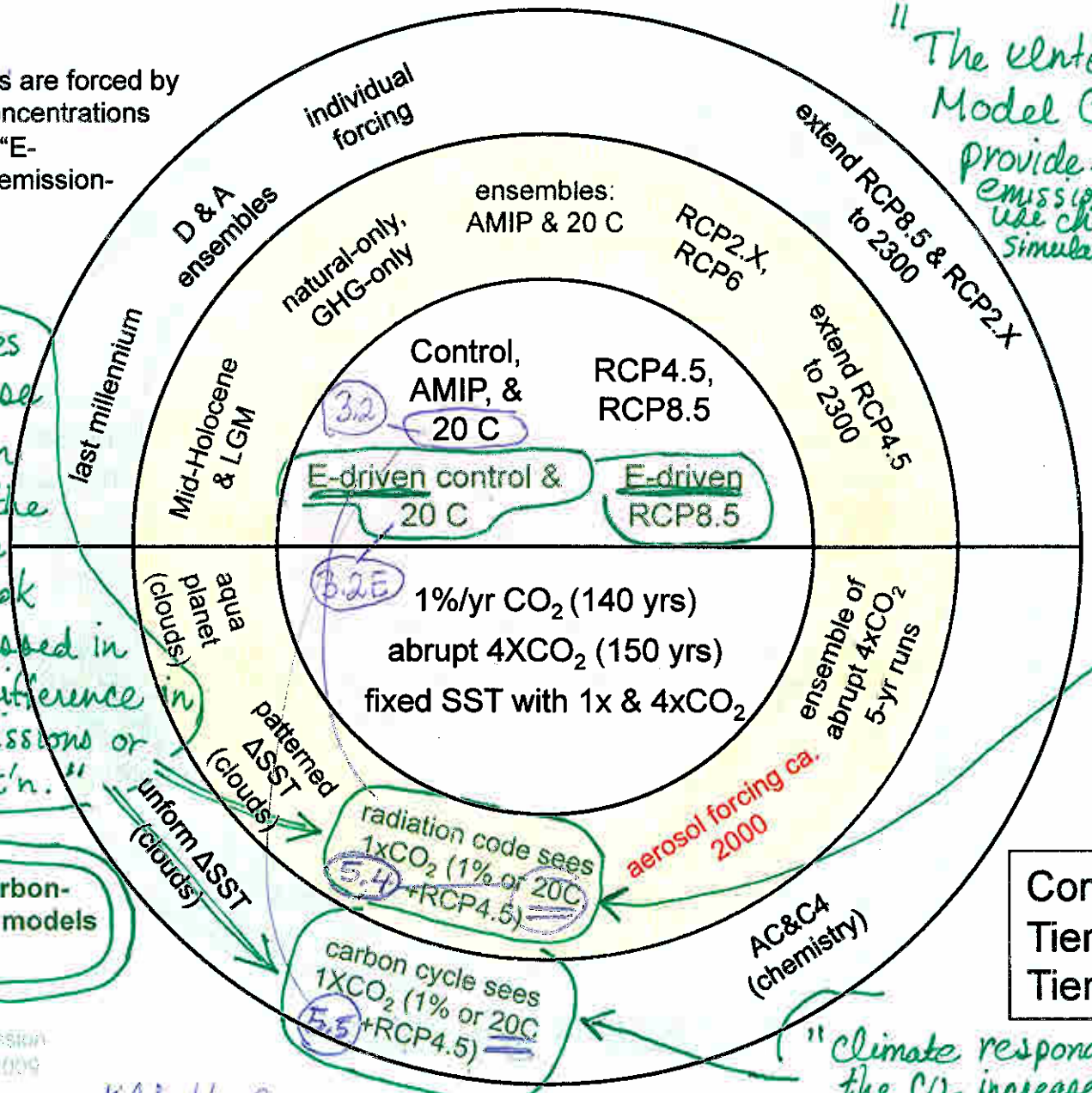
... with a few personal comments + updates from Curt Covey (~~Nov 2009~~ Feb 2010)

Curt's assignments for 2010:

1. Run CCSM BGC Working group's C-cycle diagnostics (Randerson et al. 2009) on CMIP5/IPCC AR5 output
2. Ditto for Gregory/Friedlingstein (and/or Taylor diagnostics)

[Quotes are from Taylor et al. 32-pg document.]

CMIP5 Long-term Experiments



"The Integrated Assessment Model Consortium will provide... the concentrations, emissions and t-evolving land use changes to be used in the simulations." RCP4.5 = "medium mitigat'n scenario"

RCP8.5 = "high emissions scenario"

Save sfc fluxes of CO_2 from these 2 expts. "From these fluxes, the strength of the C-climate fdbk can be expressed in terms of the difference in allowable emissions or airborne fract'n."

"So the C-cycle responds only to the changing CO_2" – which is prescribed input – and not to global warming.

Core:	≥1718 yrs
Tier 1:	≥1727 yrs
Tier 2:	≥2038 yrs

"Climate responds to CO_2 increases, but the CO_2 increase is hidden from the carbon cycle" – i.e. the flip side of the Tier 2 expt.

If the C-cycle is responding linearly then $\Delta C_{3.2} = \Delta C_{5.4} + \Delta C_{5.5}$.