IDAG updates

Claudia Tebaldi

(IDAG entered the third and last year of the current funding cycle; not clear about a renewal given DOE budget challenges; next meeting still to be scheduled, tentatively Spring 2013, DC)
CMIP5

- **Single forcings experiments valuable** and widely used, even by WG2!

- Possible improvements:
  - **End in 2005 problematic**; extending these runs to cover observational record hard, esp. aerosols assumptions unrealistic.
  - Better addressing **single forcings** : more widely performed across groups; ideally separating solar and volcanic (having both natural forcings lumped together hinders analysis).
  - There would be benefit in **exploring forcing uncertainty for the last 40 years or so** (e.g., since the satellite record). No need to replicate past historical all the way, but branching out 1970-2010 exploring forcing uncertainty would be very valuable.
  - **Short-lived forcings** (SLFs) experiments could be folded into the exploration of the last 40 years’ forcing uncertainty. Can we detect their signal in the last few years? This would be really interesting for informing the analysis of future projections with SLF cut down.
  - Also, **extensions over the next 20/30 years** would make sense (take RCP8.5, take out the short lived forcings at some rate, run until 2040). Note: not in decadal prediction mode, but as uninitialized traditional projections.
  - **Future single forcing experiments** are interesting, and would be great if run by more models (single member ensemble would be enough).
  - Decadal experiments: **Hindcasts should be spaced 1 year**, not 5.
  - **Ozone: prognostic experiments look really inconsistent** across models; Tropospheric ozone uncertainty -- the signal is very different across models -- regionally variable -- might be bigger than black carbon aerosols; comparable to methane. Need better look into these experiments/better coordination, but probably this is being done through atmospheric chemistry coordinated experiments already?
ACE meeting
(Oxford, September 12-14)

• **Physically/Climate Model based attribution**, not empirical/statistically based, is favored by the community.

• **Framing the question is really important**: Are we addressing frequencies? Intensities? The communication aspect of these results remain a very crucial issue. This activity is a key component of climate services, educating public about the role of natural vs forced variability, providing adaptation information. Interesting for insurance and legal concerns too.

• **BAMS supplement about explaining last year’s events in a climate context considered OK.** Its positive reception outside of the attribution community brought out the general interest in seeing papers about current events. **2012 issue is going forward.** (Companion to July issue with the State of the Climate; Mid-February first submission/End-of-May final version; better if it was to appear in September, given the IPCC deadline; the fact that one of the main approaches, which uses GCMs requires longer time). Would like pieces about extremes elsewhere than Europe and North America. Would like multiple papers on same event.
C20C experiments (beginning now!)

- C20C (WCRP CLIVAR project) coordinated series of experiments. So far 6 modeling groups have signed up, but officially includes about 30 modeling centers.
- Look at variability and trends in the probabilities of damaging weather events. But it has a strong component of coordinated attribution experiments.
- AMIP set up with
  - specified observed SSTs (1950-2011) and anthro+nat forcings;
  - anthropogenic removed from SSTs in three different ways;
  - IC ensemble of about 50 members;
  - output will be on ESG thanks to NERSC.
- Beginning now (nominally October). Expected to take ~12 months.