The FESD Ozone group met via the web on Friday Sept 15th for an hour.

JHU - Waugh, Seviour, Gnanadesikan
NCAR - Holland, Kinnison, Landrum
Columbia - Sheshadri, Banerjee. Apologies from Lorenzo Polvani who was giving a seminar at Rutgers.
MIT - Doddridge, Kane, Solomon, Marshall
Reading - Ferreira

The following topics were discussed:

1. Time of group meeting in New York (Columbia) in the fall, 2017.
Ryan Abernathey has agreed to help with logistics - thanks Ryan. The date of the week of December 4th was floated but was not ideal due to AGU, end of term issues. The second half of January 2018 was thought to be a possibility. John will pole group members.

2. As we enter the last year of the 5-year project, it was decided to ask NSF for a no-cost extension to allow the group to keep together for one more year, until the fall of 2019. Everyone thought this was a good idea since it would allow us to plan for an end-of-project public meeting and give us more time to progress on the science.

3. Group papers
Darryn reviewed where we are on the ozone CRF group paper. The idea is to draw together the step responses from our various models (JHU/GFDL, MIT, GISS and NCAR), together with Yavor's CRFs based on lagged regressions between SAM and SST from control runs (see further comments below). We discussed with the NCAR group the feasibility of doing some step ozone calculations with WACCM coupled to an ocean in the CESM framework. The CESM coupled model is still being prepared for CMIP6 and is not yet squared away. Thus we must wait a while. Ed has now provided JHU with the desired GISS output.

John admitted that he had not progressed with the SH wind trend review go Nature Geosciences, but promised to get going soon.

The meeting ended with a brief research roundup (below) and a commitment to carry on with these monthly meetings on the 3rd Friday of every month at 2pm.

Brief Research Roundup
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Kane Stone reported that his paper titled: "Observing the impact of Calbuco volcanic aerosols on South Polar ozone depletion in 2015" shows the lowest 150 hPa Antarctic ozonesonde ozone observations since the Pinatubo perturbed years of 1992–1993 in good agreement with a specified dynamics version of CESM1(WACCM). It is currently with the editor at JGR after the first round of reviews.

Ed Doddridge reported that his paper on the observed modulation of the seasonal cycle of SIE by SAM is now accepted in JGR. He is following up with the same through diagnosis of 1. subsurface T and S trends from Argo, 2. an eddying channel with ice, T and S and associated overturning cells after imposition of a step in the wind forcing and 3. The GISS E2.1 global coupled model with a step ozone-hole forcing. The three may be painting the same story.

Aditi Sheshadri summarized recent Columbia contributions. Gabriel Chiodo, Karen Smith, and Lorenzo Polvani are working on the effects of the ozone hole on the Antarctic surface energy budget. Mark England (Lorenzo's student) is working on a paper looking at how Antarctic sea ice loss could affect atmospheric circulation. Aditi and Alan Plumb and are finishing up a couple of further papers on propagating modes of the strat-trop system and on storm track variability.

Darryn Waugh et al are working on an analysis / paper comparing the convolution of O3 CRFs with the direct simulation with evolving O3, as mentioned above. This is one of the major stumbling blocks that people have with CRF runs. It would be good if we could show how well it works / doesn't work in the MIT model. Will Seviour and Darryn are talking about including the CRF convolution from each model that has done the O3 CRF in the combined paper, i.e. to do a similar exercise as in John Marshall's Roy Soc article for each model.