

FESD virtual meeting.

Friday November 18th, 2016

Marshall, Solomon, Waugh, Polvani, Ferreira, Kostov.....

Group members skyped to discuss the possibility of a review paper being written which drew together themes running through our 'Ozone and Climate' project. Various views were expressed ranging from:

- (i) A review of southern hemisphere climate variability with a specific ozone focus along the line of our three themes:
 1. How does interactive chemistry modify coupling between the stratospheric vortex and the rest of the climate system?
 2. How are ocean circulation, ice cover, heat and carbon uptake and biogeochemistry impacted by the ozone hole?
 3. How does the ozone hole impact global climate and what are the observable indicators?
- (ii) A more general review of Southern Hemisphere climate variability that would place ozone perturbation in the context of other drivers of climate variability (internal, SAM, ENSO etc) as well as GHG forcing.
- (iii) A review is not required at this point in view of the fact that team members have already recently been involved in writing accounts that attempt a synthesis. In particular:
 - Signatures of the Antarctic ozone hole in Southern Hemisphere surface climate change. Thompson et al, (2011) Nature GeoSciences. DOI: 10.1038/NGEO1296
 - Climate system response to stratospheric ozone depletion and recovery. Previdia and Polvani (2014) QJRM. DOI:10.1002/qj.2330

After mulling over the possibilities, we thought that the group had made much progress on framing how the coupled system - and in particular ocean, SST and sea-ice - responds to the pronounced westerly wind trends observed over the past several decades. This might focus the writing of a perspective piece on this smaller but albeit central, issue.

John said that he would approach the editor of Nature GeoSciences to see if they might be interested.

[For a report of our summer 2016 meeting, see here:

<http://oceans.mit.edu/news/featured-stories/annual-meeting-of-the-ozone-and-climate-project>

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