

YOTC MJO Task Force – 4th Telecon

Meeting time: 21:00 GMT, 19th August 2010.

Participants

13 members of the Task Force
(Apologies from Jon G., Dave R., and Ann Shelly)

Vasu Misra also participated on behalf of VAMOS IASCLIP.

Proposed Agenda

1. Vasu Misra to communicate his group's desire to get intraseasonal TC forecasts.
2. Progress with BAMS mtg summary for Korea mtg.
3. Frederic's interest in analysing the Bin Wang ISO hindcast data
4. TIGGE MJO forecast web page
5. Communication with June-Yi Lee regarding northern summer EOFs
6. Ideas on doing a comprehensive comparison of model diabatic heating structures
7. Any other progress since Korea?

Additional items added:

8. Daehyun has some plots to show
9. Our next face-to-face meeting?

Documents sent for reference were:

1. E-mail correspondence with Vasu Misra.
2. Daehyun's recent plots (MJOTF_POD.pdf)

Meeting Minutes (by Matt)

1. Vasu Misra and IASCLIP

Vasu Misra is chair of the modeling group of the Intra-Americas Study of CLimate Processes (IASCLIP), and has asked for our guidance to add some intraseasonal forecast information to their "Forecast Forum" section (under Modeling) on their web page at: <http://www.eol.ucar.edu/projects/iasclip/>. He is particularly interested in intraseasonal TC forecasts for the east Pacific and Atlantic regions. Vasu provided us with a short summary of IASCLIP and these interests.

Our recommendation is that we think the best approach would be to take the real-time forecasts provided by the TIGGE models and develop probabilistic TC forecasts directly from this model data by counting the number of TC-like systems. This would be more straightforward than trying to use the model forecasts of the MJO to then imply an intraseasonal TC impact in this region, and also likely superior (based on the work of Vitart et al. 2010) than doing an MJO-based statistical forecast of TCs.

ACTION: Frederic and Matt to communicate with Vasu and provide more specific suggestions. Vasu has some person-power to do the work.

Some uncertainty remains over the suitability of the TIGGE data for this: (a) does it have the right variables for diagnosing the presence of a TC-like system? (b) TIGGE output only goes out to 14 days?

2. BAMS mtg summary for Korea mtg.

Ken, Harry, Duane and Matt have been working on this. We currently have a draft introduction and short summaries of session 4-6. Duane sent a letter of interest for this summary to the AMS, but has not heard back.

ACTION: Duane to follow-up with AMS regarding their willingness to publish our meeting summary.

ACTION: Duane and Harry to write short summaries of Sessions 1-3.

3. Frederic's interest in analysing the Bin Wang ISO hindcast data

Frederic has contacted June-Yi Lee regarding his interest in doing some analysis of the ISO hindcast data. However, he was discouraged due to possible overlap with the plans of Bin Wang and colleagues.

ACTION: Duane to check with Bin Wang whether there is enough of a difference to justify Frederic's work as well.

4. TIGGE MJO forecast web page

We recently became aware of the web page at http://tparc.mri-jma.go.jp/TIGGE/tigge_MJO.html which displays MJO forecasts for the TIGGE models in a very similar format to Jon's page at CPC (i.e. using the Wheeler-Hendon TMM EOFs). The only difference is that only the wind structures are used (i.e. no OLR). The creator of the page is Mio Matsueda who we have been in communication with to get links from his page to Jon's and vice versa. He has also added more description to his page at our request.

ACTION: Duane thinks he may try to visit Mio in Japan in October when attending the WGNE meeting in Tokyo.

5. Communication with June-Yi Lee regarding northern summer EOFs

June-Yi Lee has been travelling and has not yet provided further details of her EOFs and the paper describing them, but has promised to do so soon. Matt and Ken will continue their contact.

Ken also has plans to do a similar thing with his cyclo-stationary EOFs

6. Ideas on doing a comprehensive comparison of model diabatic heating structures

Duane expressed his desire to have a comprehensive comparison of the diabatic heating vertical structures associated with the MJO in models. This desire stems from his observational work with Xianan Jiang. Chidong has been doing similar work with a postdoc of his. It would be nice to know whether the models agree more with each other than the observations agree with themselves, or vice versa. Eric is exploring this also with CMMAP, and Rich with the NCAR models. Some uncertainty is in how to form composites with models that do not already have a well-defined MJO.

ACTION: Chidong, Duane, Eric, and Rich to communicate further, and identify people/postdocs who can do the work and the model resources (i.e. simulations with needed output) that can be used in the analysis.

7. Any other progress since Korea?

Eric says he hopes to do further work on the process-oriented diagnostics in coming months.

8. Daehyun's new plots

Daehyun had some plots to show. These were plots of various “process-oriented diagnostics” for observations and 6 different climate model simulations. The 6 model simulations were AM2 (with 2 different Tokioka parameters), SNU (2 different Tokioka), and CAM3.1 (2 different evaporation rates). These gave “good” and “bad” MJO simulations from each model.

Plots were then shown of the precipitation rate versus precipitable water (PW), and precipitation rate versus saturation fraction (SF). These are two of the preferred process-oriented diagnostics discussed in Korea. Clear and systematic differences could be seen between the good and bad MJO simulations. In particular, the good MJO simulations tended to have more precipitation for higher PW and higher SF. However, the “good” simulations appeared to be further from the “observed”.

Lots of discussion ensued.

ACTION: More thinking and work required!

9. Our next face-to-face meeting?

Harry wanted to know when we should have our next face-to-face meeting. While we have financial support to meet once a year, Duane didn't think that implied an entire workshop (like in Korea) but rather in some cases just a TF meeting, so the best option would be to try to do it in conjunction with another international meeting that was relevant and already had many of us interested in attending. Many suggestions were made.

ACTION: Matt to make a summary list of these different 2011 conferences/workshops and send to TF for further discussion and consideration.