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## Ensemble bust in the west

5 messages

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**Anthony Fracasso - NOAA Federal** <anthony.fracasso@noaa.gov>

Wed, Dec 26, 2012 at 10:03 AM

Reply-To: Anthony Fracasso - NOAA Federal &lt;anthony.fracasso@noaa.gov&gt;

To: MAP@listserv.albany.edu

All -

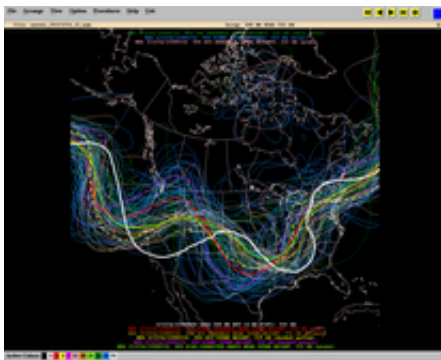
While those of us in the East have been focusing on the system at hand, I thought I would check the ensemble verification from the past week over the CONUS. In the image attached (552 dam verification from 00Z 12/20 ensembles), the models and ensembles had a less than stellar forecast in the East (all too slow) but note the performance in the West - timing difference much?? (White is the verification) I did a study on closed lows in the West last winter and noted only one big failure where not even one ensemble member (from the GEFS/ECMWF/Canadian suite) was close to verification. Though this isn't a closed system at 500mb it is certainly a (minor) weather producer in CA this morning. The blame could lie upstream in the Pacific where the forecast has been anything but stable for what seems like the past few weeks.

Tony

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ensver\_20121226\_552\_f156.gif  
121K

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**Bosart, Lance F** <lbosart@albany.edu>

Wed, Dec 26, 2012 at 1:09 PM

Reply-To: "Bosart, Lance F" &lt;lbosart@albany.edu&gt;

To: MAP@listserv.albany.edu

Hi Tony,

Nice example of a situation where the ensemble forecast was unable to cover the observed phase space. Although phase errors dominate the 500 hPa geopotential height ensemble error pattern (individual ensemble members are too slow), amplitude errors are also important because both the western and eastern CONUS 500 hPa troughs are not deep enough in the ensemble mean forecasts. I would agree with your supposition that the North Pacific would be the place to start looking for the source of the analysis uncertainty and subsequent error growth.

A d(prog)/dt loop of 500 hPa geopotential heights verifying 0600 UTC 26 Dec 2012 from Kyle Griffin's web site (<http://www.atmos.albany.edu/student/kgriffin/maps/>) suggests that the phase and amplitude of the western CONUS

trough was not reasonable well forecast until 72 h prior to 0600 UTC 26 Dec. Up until that forecast time there appeared to be significant forecast uncertainty with respect to the phase and amplitude of significant flow features over the North Pacific, northeastern Asia, and Alaska (1200 UTC 26 Dec loops were not available at the time of this posting).

Lance

On 26 Dec, 2012, at 15:03, Anthony Fracasso - NOAA Federal wrote:

All -

While those of us in the East have been focusing on the system at hand, I though I would check the ensemble verification from the past week over the CONUS. In the image attached (552 dam verification from 00Z 12/20 ensembles), the models and ensembles had a less than stellar forecast in the East (all too slow) but note the performance in the West - timing difference much?? (White is the verification) I did a study on closed lows in the West last winter and noted only one big failure where not even one ensemble member (from the GEFS/ECMWF/Canadian suite) was close to verification. Though this isn't a closed system at 500mb it is certainly a (minor) weather producer in CA this morning. The blame could lie upstream in the Pacific where the forecast has been anything but stable for what seems like the past few weeks.

Tony

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**Bill Bua - NOAA Affiliate** <bill.bua@noaa.gov>  
Reply-To: Bill Bua - NOAA Affiliate <bill.bua@noaa.gov>  
To: [MAP@listserv.albany.edu](mailto:MAP@listserv.albany.edu)

Wed, Dec 26, 2012 at 1:49 PM

I suspect the ensemble sensitivity would verify this if focused on this feature. Are you ready for some snow in ALB?

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Dr. William R. Bua  
UCAR/COMET/NCEP/EMC  
5830 University Research Court #2784  
College Park, MD 20740  
[301-683-3806](tel:301-683-3806)

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**Sheldon Kusselson** <sheldon.kusselson@noaa.gov>  
Reply-To: Sheldon Kusselson <sheldon.kusselson@noaa.gov>  
To: [MAP@listserv.albany.edu](mailto:MAP@listserv.albany.edu)

Wed, Dec 26, 2012 at 11:02 PM

Lance and Tony,

Just throwing out a guess and referring to the global Blended Total Precipitable Water (TPW) loop from Dec 18 to 27 at:

[http://www.osdpd.noaa.gov/bTPW/TPW\\_Animation.html?fromDate=20121218&fromHour=2&endDate=20121227&endHour=2&product=GLOBAL\\_TPW&interval=3hours](http://www.osdpd.noaa.gov/bTPW/TPW_Animation.html?fromDate=20121218&fromHour=2&endDate=20121227&endHour=2&product=GLOBAL_TPW&interval=3hours)

it looks like Pacific amplitude, at least in the low level moisture peaked about the 21st and then from the 21st to the

23rd dramatically went westerly (at least in the eastern Pacific), then again became more amplitude from the 25th on in the eastern Pacific. Wonder if all those changes going on could not be totally resolved even by the ensembles?

Sheldon Kusselson

NOAA/NESDIS

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**Kenyon, Jaymes S** <jkenyon@albany.edu>  
To: "jaymes.kenyon@gmail.com" <jaymes.kenyon@gmail.com>

Wed, Jan 16, 2013 at 2:11 PM

**From:** Weather discussion email list [[MAP@listserv.albany.edu](mailto:MAP@listserv.albany.edu)] on behalf of Sheldon Kusselson

[[sheldon.kusselson@NOAA.GOV](mailto:sheldon.kusselson@NOAA.GOV)]

**Sent:** Wednesday, December 26, 2012 23:02

**To:** [MAP@listserv.albany.edu](mailto:MAP@listserv.albany.edu)

**Subject:** Re: Ensemble bust in the west

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