

# NAEFS/GEFS data distribution and images display

Summary from  
Yuejian Zhu

## NAEFS Products Distribution

System	Current available products
Configuration	1.0 deg 0-384 hours, every 6 hours 20 members (NCEP) and 20 members (CMC) ensemble control (NCEP and CMC)
Format	GRIB1 (and GRIB2, GIF images for web display)
CCS	NCEP: pgrba, pgrbb, pgrba_bc, pgrba_an, pgrba_wt, ensstat, ndgd CMC: pgrba, pgrba_bc, pgrba_an, pgrba_wt, ensstat NAEFS: ndgd, pgrba_an, pgrba_bc
ftpprd	<p style="text-align: center;"><a href="ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/gens/prod">ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/gens/prod</a> cd gefs.\${yyyymmdd} for NCEP ensemble</p> <ol style="list-style-type: none"> <li>1. pgrb2a (00, 06, 12 and 18UTC) (1.0 degree, all lead times, 1(c) + 20 (p))</li> <li>2. pgrb2alr (00, 06, 12 and 18UTC) (2.5 degree, all lead times, 1(c) + 20 (p))</li> <li>2. pgrb2b (00, 06, 12 and 18UTC) (1.0 degree, all lead times, 1(c) + 20 (p))</li> <li>4. pgrb2blr (00 and 12UTC) (2.5 degree, all lead times, 1(c) + 20 (p))</li> <li>5. ensstat (00UTC) (prcp_bc, pqpf and pqpf_bc files)</li> <li>6. wafs (00 and 12UTC)</li> <li>7. ndgd_gb2 (00, 06, 12, 18UTC) (CONUS-5km, all lead times and all probability forecasts)</li> </ol> <p style="text-align: center;"><a href="ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/gens/prod">ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/gens/prod</a> cd cmce.\${yyyymmdd} for CMC ensemble</p> <ol style="list-style-type: none"> <li>1. pgrba (00 and 12UTC) (1.0 degree, all lead times, 1 control + 20 members)</li> </ol> <p style="text-align: center;"><a href="ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/gens/prod">ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/gens/prod</a> cd naefs.\${yyyymmdd} for NAEFS products</p> <ol style="list-style-type: none"> <li>1. pgrb2a_an (00, 12UTC) (1.0 degree, all lead times, anomaly for ensemble mean)</li> <li>2. pgrb2a_bc (00,12UTC) (1.0 degree, all lead times, probabilistic forecasts)</li> <li>3. ndgd_gb2 (00,12UTC) (CONUS-5km, all lead times, probabilistic forecasts)</li> </ol>

TOC	<p style="text-align: center;"><a href="ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/cd MT.ensg_CY.\${cyc}/RD.\${yyyymmdd}">ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/ cd MT.ensg_CY.\${cyc}/RD.\${yyyymmdd}</a> for NCEP only</p> <ol style="list-style-type: none"> <li>1. PT.grid_DF.gr1_RE.high (00 and 12UTC) (Pgrba: 1.0 and 2.5 degree, 0-384 hrs, c + 10 (p))</li> <li>2. PT.grid_DF.gr1_RE.low (00 and 12UTC) (Pgrbb: 1.0 degree, 0-84 hrs, 2.5 d, 90-384 hrs, c + 10 (p))</li> <li>3. PT_grid_DF.bb</li> </ol>
NOMADS (non-operation)	<p style="text-align: center;"><a href="http://nomad5.ncep.noaa.gov/ncep_data/">http://nomad5.ncep.noaa.gov/ncep_data/</a> for ftp: combined pgrba and pgrbb at 1 degree resolution, for all ensemble members (c+14(p)) and all lead time (0-384 hours)</p> <p style="text-align: center;"><a href="http://nomad5.ncep.noaa.gov/pub/gens/archive/">http://nomad5.ncep.noaa.gov/pub/gens/archive/</a> for http: combined pgrba and pgrbb at 1 degree resolution</p>
Web	<p style="text-align: center;"><a href="http://www.nco.ncep.noaa.gov/pmb/nwpara/analysis/">http://www.nco.ncep.noaa.gov/pmb/nwpara/analysis/</a> NCEP analysis and forecast web image display link:</p> <ol style="list-style-type: none"> <li>1. NCEP/GEFS spaghetti charts for selected variables and domains</li> <li>2. Mean and spread for selected variables and domains</li> <li>3. Probability forecast for selected variables and domains</li> <li>4. Precipitation types probability forecast for selected variables and domains</li> </ol> <p style="text-align: center;"><a href="http://wwwt.emc.ncep.noaa.gov/gmb/ens/index.html">http://wwwt.emc.ncep.noaa.gov/gmb/ens/index.html</a></p> <ol style="list-style-type: none"> <li>1. PQPF (type, 6-hours, CONUS)</li> <li>2. PQPF (24-hours, regions and global, bias-corrected)</li> <li>3. RMOP (500hPa height, NA and Asia region)</li> <li>4. Ensemble mean, spread and spaghetti</li> <li>5. Cyclone tracking and strike probability</li> </ol>
Details	<p style="text-align: center;">See: <a href="http://www.emc.ncep.noaa.gov/gmb/ens/NAEFS.html">http://www.emc.ncep.noaa.gov/gmb/ens/NAEFS.html</a> Contact: <a href="mailto:Yuejian.Zhu@noaa.gov">Yuejian.Zhu@noaa.gov</a> or <a href="mailto:Zoltan.Toth@noaa.gov">Zoltan.Toth@noaa.gov</a></p>

Model Analyses and Forecasts - Mozilla Firefox

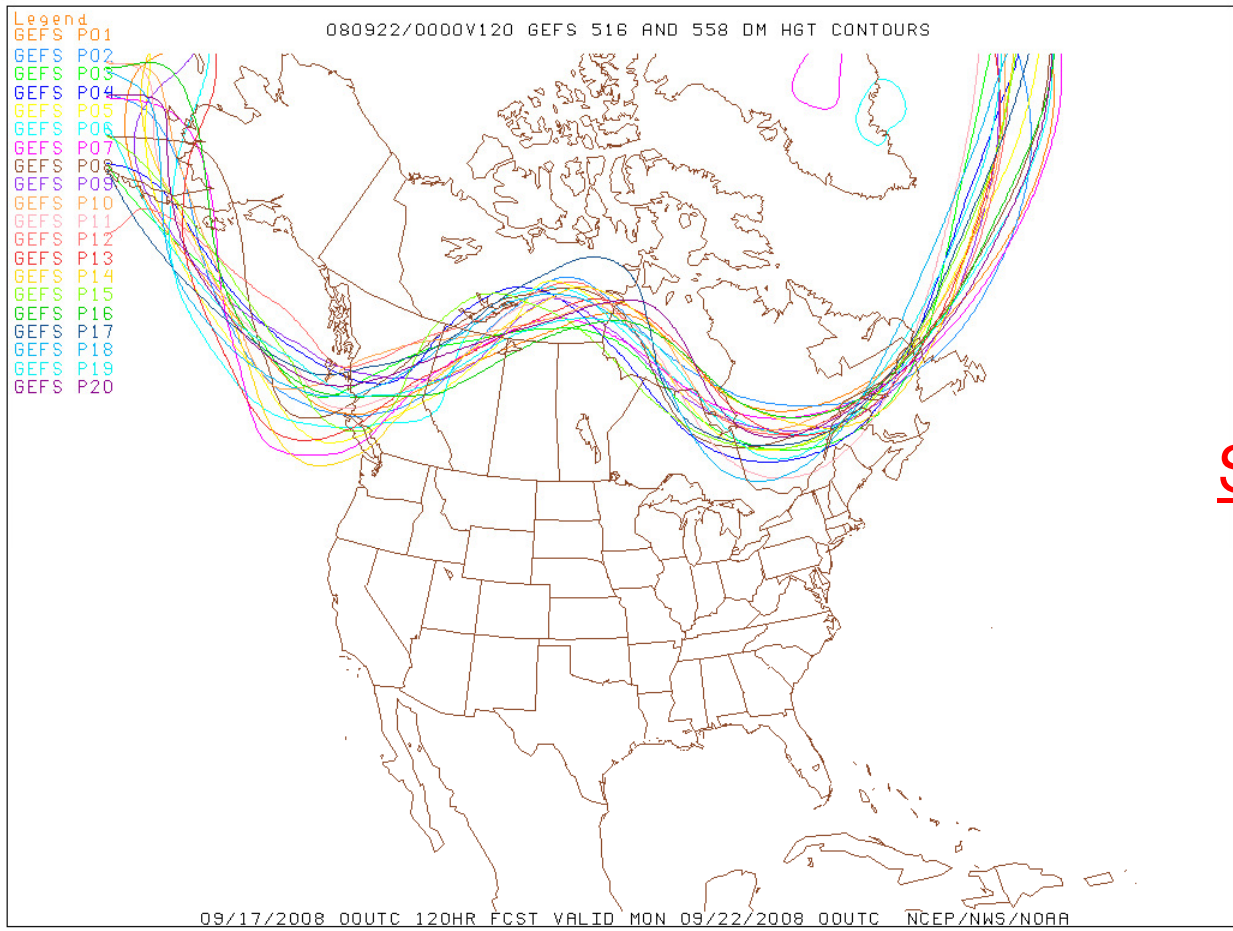
http://www.nco.ncep.noaa.gov/pmb/nwpara/analysis/

NEW: GEFS graphics now include mean and spread for temperature, height, and vorticity at 500mb, 700mb and 850mb, as well as dominant precipitation type. Simulated reflectivity graphics are available for the HIRESW NMM. Skew-T diagrams are available for the CONUS and North Pacific.

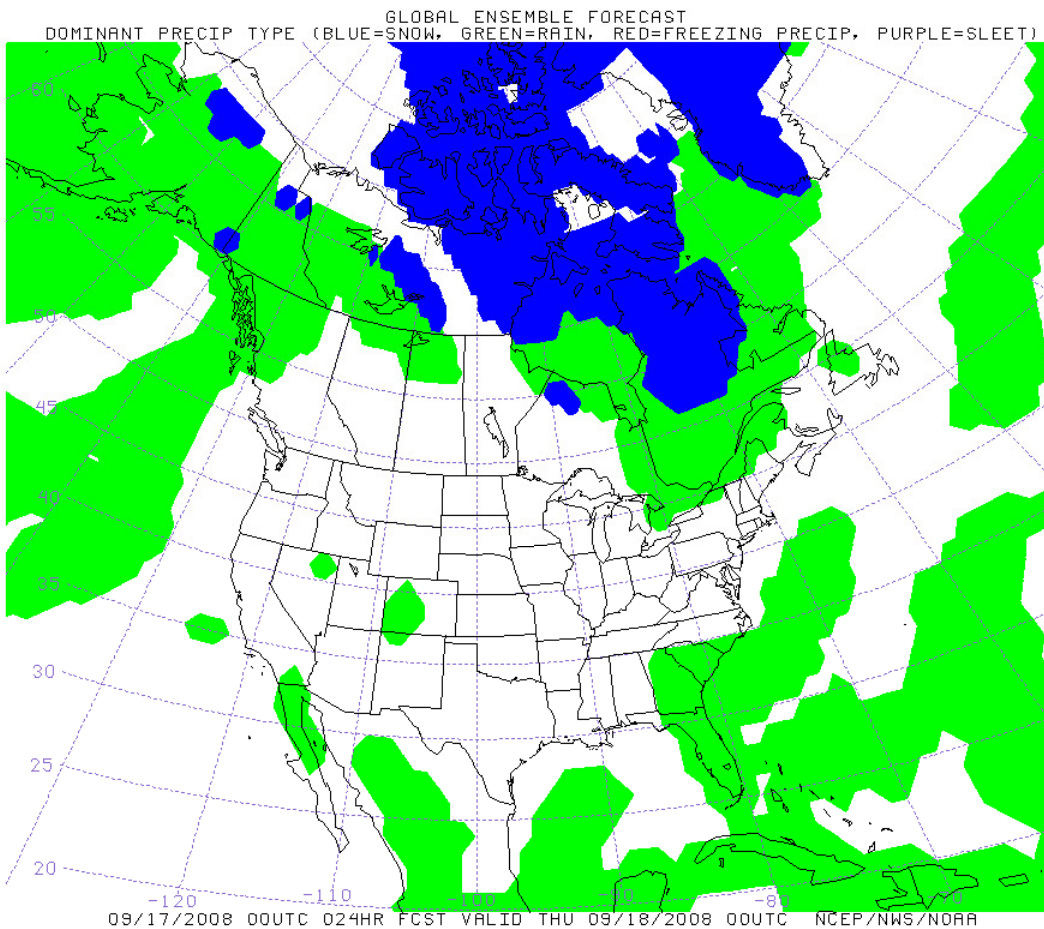
Select Region: [North America] [South America] [Africa] [Canada] [North Pacific] [Eastern Pacific] [Western North Atlantic] [Polar Ice Drift] [Atlantic-Pacific]

	00 UTC	06 UTC	12 UTC	18 UTC
<b>NAM</b>	coarse medium fine 3-hr Precip Charts 4-panel charts [an error occurred while processing this directive]	coarse medium fine 3-hr Precip Charts 4-panel charts [an error occurred while processing this directive]	coarse medium fine 3-hr Precip Charts 4-panel charts 12-Feb-08	coarse medium fine 3-hr Precip Charts 4-panel charts [an error occurred while processing this directive]
<b>GFS</b>	coarse medium fine 3-hr Precip Charts 4-panel charts 14-May-08	coarse medium fine 3-hr Precip Charts 4-panel charts 13-May-08	coarse medium fine 3-hr Precip Charts 4-panel charts 13-May-08	coarse medium fine 3-hr Precip Charts 4-panel charts 12-May-08
<b>GEFS</b>	Spaghetti Charts Means & Spreads 17-Sep-08	Spaghetti Charts Means & Spreads 17-Sep-08	Spaghetti Charts Means & Spreads 16-Sep-08	Spaghetti Charts Means & Spreads 16-Sep-08
<b>HRW</b>	Eastern US NMM ARW 28-Mar-08	Western US NMM ARW 07-Aug-08	Eastern US NMM ARW 06-Aug-08	Alaska NMM ARW 06-Aug-08
<b>NGM</b>	coarse medium fine 4-panel charts 18-Mar-08		coarse medium fine 4-panel charts 18-Mar-08	
<b>Hurricane Graphics</b>				
<b>GHM</b>	Full Domain [an error occurred while processing this directive]		Nested Domain [an error occurred while processing this directive]	
<b>HWRP</b>	Full Domain 18-Aug-07		Nested Domain 18-Aug-07	
	<b>03 UTC</b>	<b>09 UTC</b>	<b>15 UTC</b>	<b>21 UTC</b>
<b>SPRF</b>	Charts	Charts	Charts	Charts

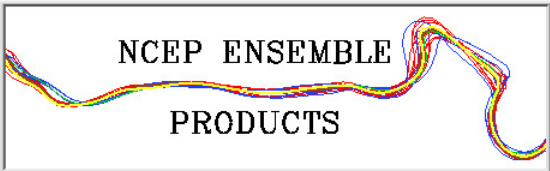
GEFS charts entry



## Spaghetti Diagram



Dominant  
precipitation types



This NCEP Ensemble Home Page is a collection of **experimental** analysis and forecast products produced by the GFS-based Ensemble forecast system.

Forecast Plots					
<a href="#">Probabilistic Precipitation Forecasts</a> <a href="#">DETAILS</a> <a href="#">24 Hr Precip Evaluation</a> <a href="#">6 Hr PQPF Types</a>	<a href="#">Relative Measures of Predictability</a> <a href="#">DETAILS</a>	<a href="#">Ensemble Mean and Spread Plots</a> <a href="#">DETAILS</a>	<a href="#">Ensemble Spaghetti</a> <a href="#">DETAILS</a> <a href="#">Parallel Spaghetti</a> <i>(latest ended 03/09/04)</i>	<a href="#">Cyclone Tracking</a> <a href="#">Strike Probabilities</a>	<a href="#">Wave Ensemble</a>

Related Projects					
<a href="#">NAEFS</a>	<a href="#">THORPEX</a>	<a href="#">Verification</a>	<a href="#">Targeted Observations</a>	<a href="#">Rawinsonde Experiments</a>	<a href="#">Parallel Ensemble</a>

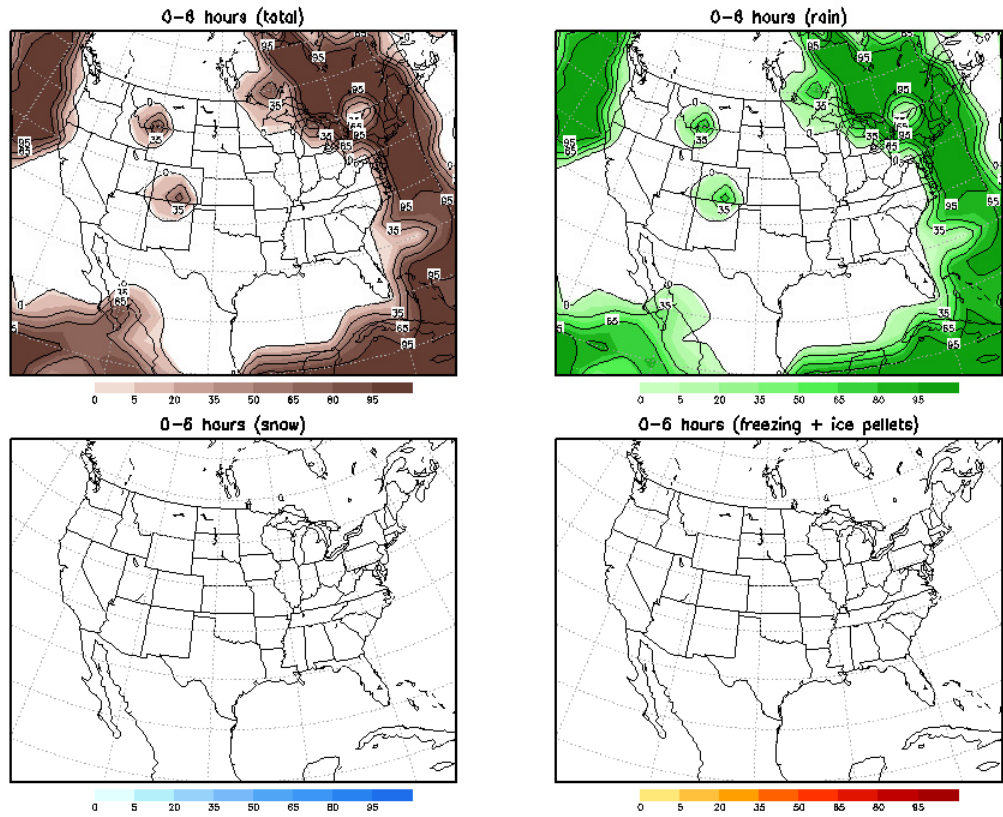
Reference Section					
<a href="#">Operational Configuration</a>	<a href="#">Background Information</a>	<a href="#">Implementation News</a>	<a href="#">References</a>	<a href="#">Training</a>	<a href="#">Meetings</a>

Data Sources	Related EMC Research Pages	
<a href="#">Gridded Data</a>	<a href="#">PQPF Data</a>	<a href="#">Yuejian Zhu</a> <i>GFS ENSEMBLE VERIFICATION</i>
		<a href="#">Bo Cui</a> <i>Ensemble Bias Correction</i>

[Go Back to GC WMB Home Page](#)  
[Go Back to EMC Home Page](#)  
[Go to the Climate Diagnostics Center's NCEP Ensemble Products Page](#)  
[Go to the NCEP Regional Ensemble \(SREF\) home page](#)  
[Go to the Canadian Meteorological Centre's forecast page](#)

Click to animate

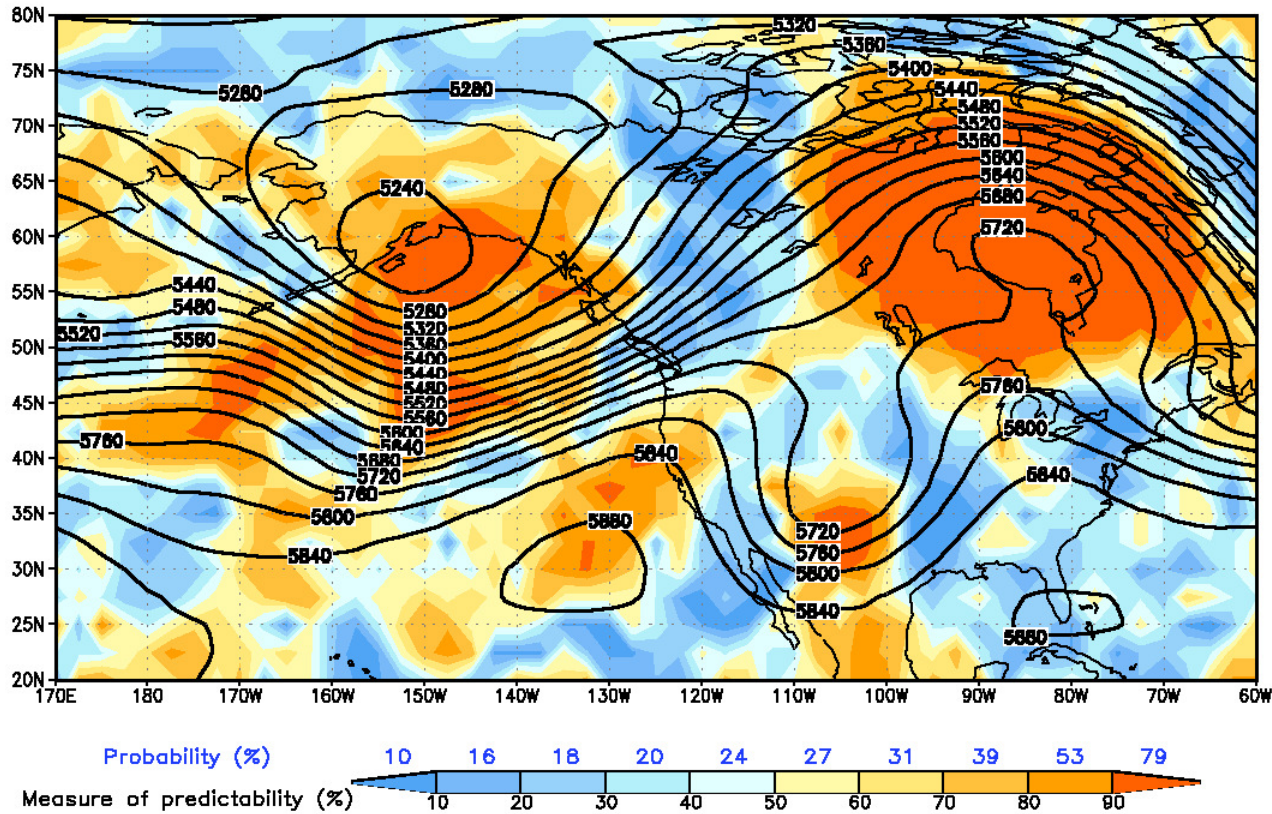
## Ensemble Based Probabilistic Quantitative Precipitation Type Forecast Ini:2008100200 Valid:2008100200-2008100206 Amount>=0.254mm/6hrs



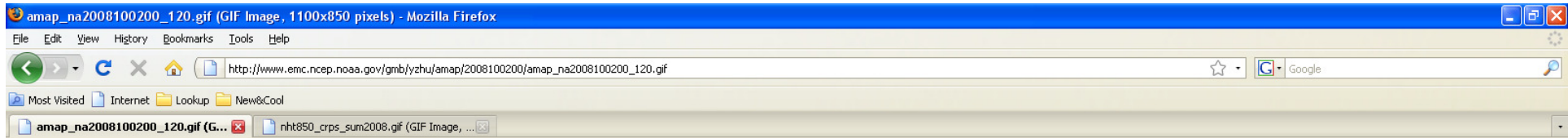
[f06](#) [f12](#) [f18](#) [f24](#) [f30](#) [f36](#) [f42](#) [f48](#) [f54](#) [f60](#) [f66](#) [f72](#) [f78](#) [f84](#) [f90](#) [f96](#) [f102](#) [f108](#) [f114](#) [f120](#) [f126](#) [f132](#) [f138](#) [f144](#) [f150](#) [f156](#) [f162](#) [f168](#) [f174](#) [f180](#) [f186](#) [f192](#) [f198](#) [f204](#) [f210](#) [f216](#) [f222](#) [f228](#) [f234](#) [f240](#) [f246](#) [f252](#) [f258](#) [f264](#) [f270](#) [f276](#) [f282](#) [f288](#) [f294](#) [f300](#) [f306](#) [f312](#)  
[f318](#) [f324](#) [f330](#) [f336](#) [f342](#) [f348](#) [f354](#) [f360](#)



Relative measure of predictability (colors)  
 for ensemble mean forecast (contours) of 500 hPa height  
 ini: 2008100200 valid: 2008100700 fcst: 120 hours



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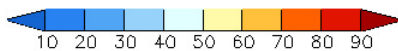
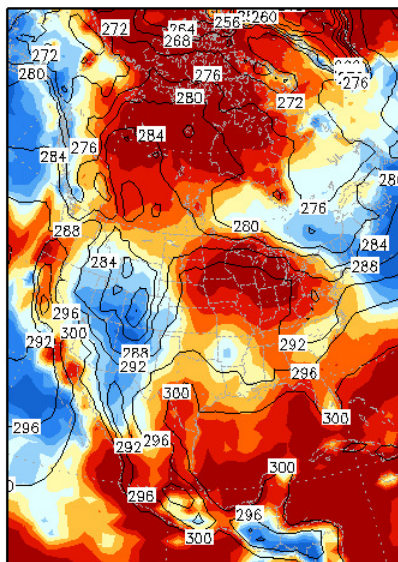
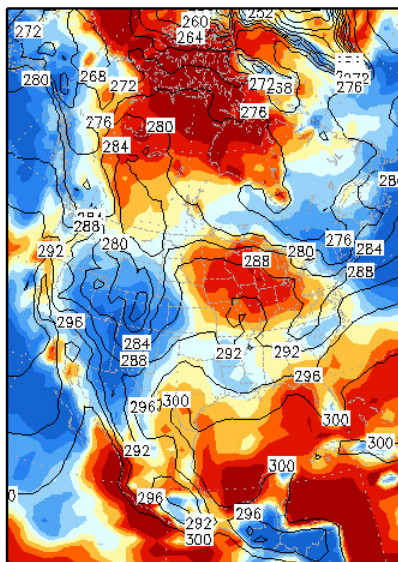
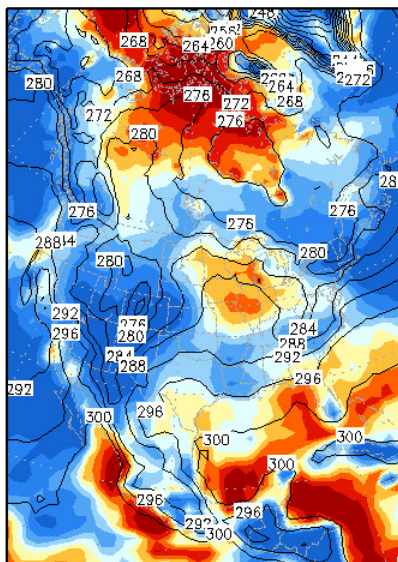
# Temperature at 2-meter, 120-hour forecast Ini. time:2008100200 Valid time:2008100700

Contour-forecast; Shaded-forecast anomalies

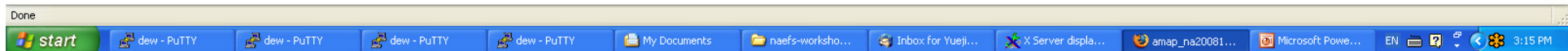
10% ens prob fcst

50% ens prob fcst

90% ens prob fcst



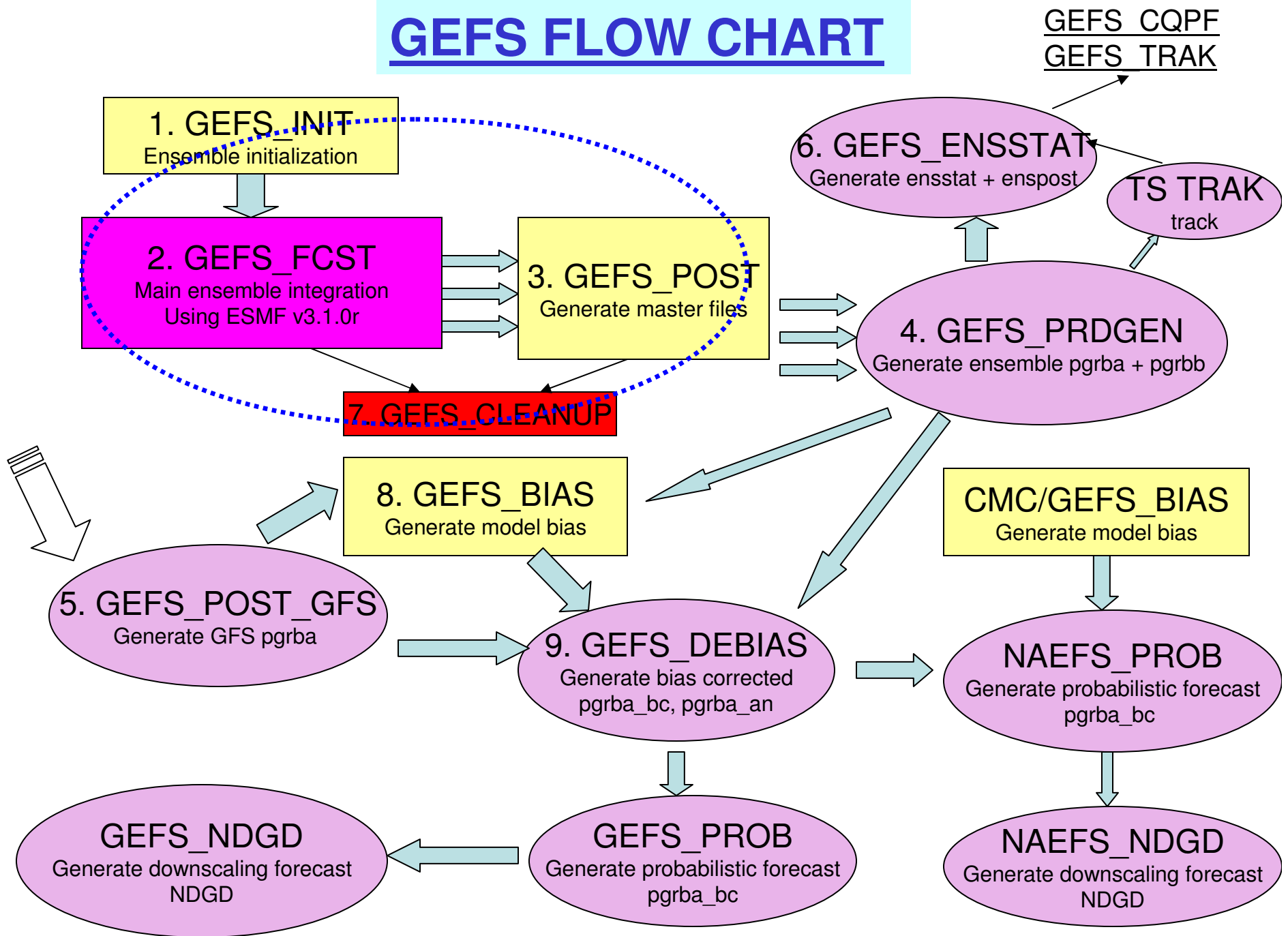
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# Model based bias-correction (for discussion)

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# GEFS FLOW CHART



# GEFS FLOW CHART

