ECMWF model data derived products

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ECMWF Models

Integrated Forecast System (IFS)

- Operational analysis and forecasts: T799L91 (~ 25 km, 91 level)
- 4D-Var data assimilation: inner loops T95, then T255 outer loop T799 (tangent linear forecast model)

Ensemble Prediction System (EPS)

- Ensemble forecast: T399L62 (ca. 50 km, 62 level)
- 1 control forecast + 50 perturbed fcsts
- Perturbation with initial and evolved singular vectors (SVs), optimization time 48 h in extratropics; additional moist SVs optimizing over TCs (tangent linear model and adjoint)

- Twice daily (00 and 12 UTC)
- Forecast period: 10 days

How can I get access?

http://data-portal.ecmwf.int/data/d/yotc

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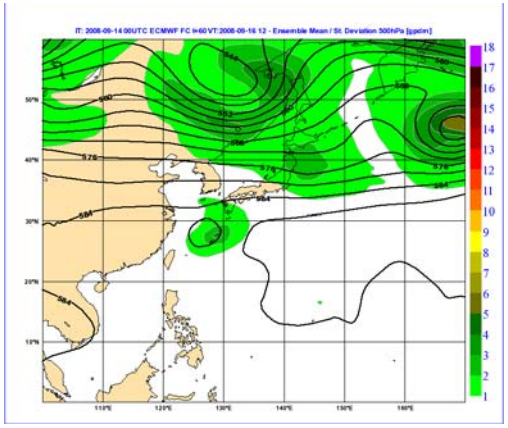
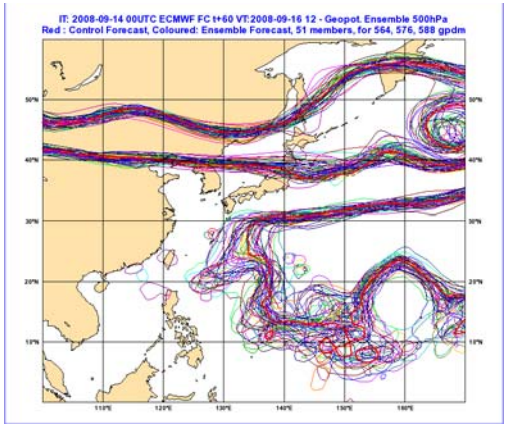
TIGGE homepage: http://tigge.ecmwf.int

Examples: Probability products (http://catalog.eol.ucar.edu/tparc/)

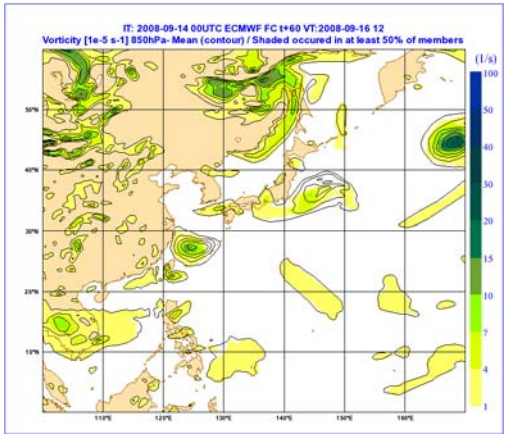
Ensemble mean, standard deviation
500 hPa geopotential

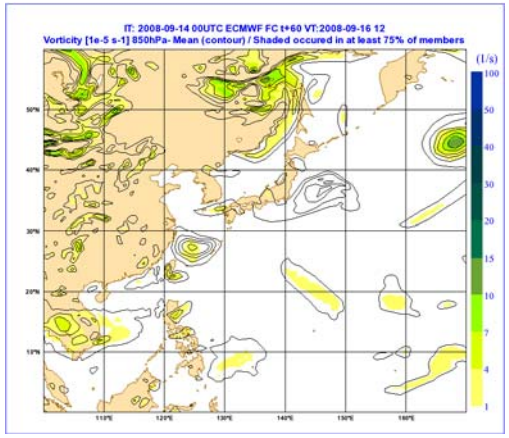


Spaghetti plots
500 hPa geopotential

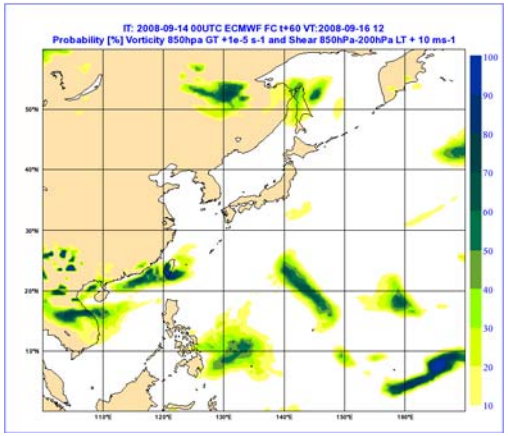


Percentiles



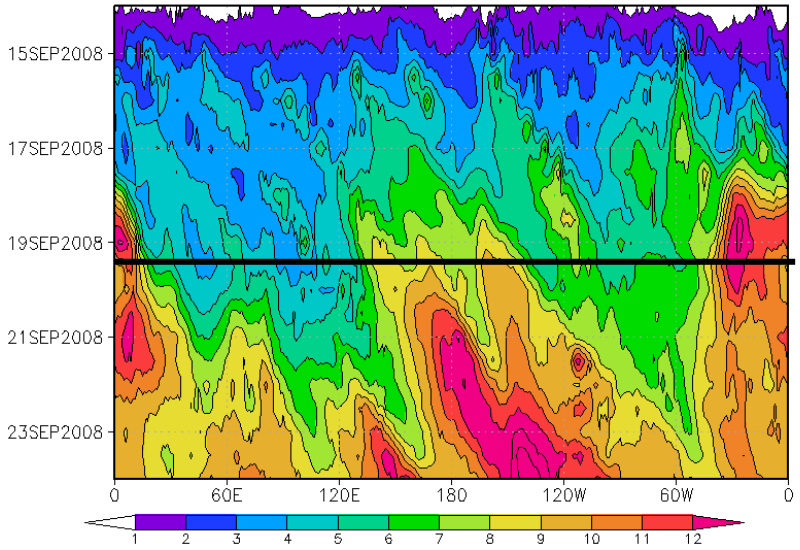


Probability of high vorticity values
combined with low shear values

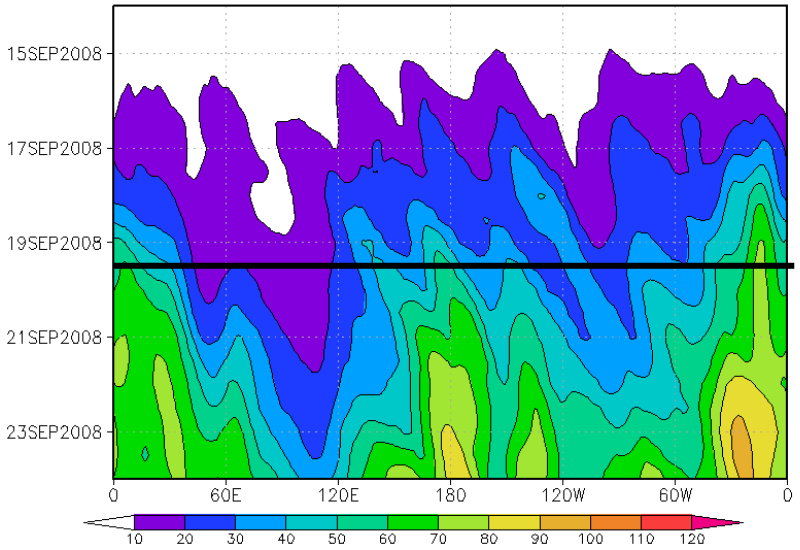


Spread (http://catalog.eol.ucar.edu/tparc/)

Hovmoeller plot (30° - 60° lat.)
Stdev 51 EC members: Theta on PVU = 2

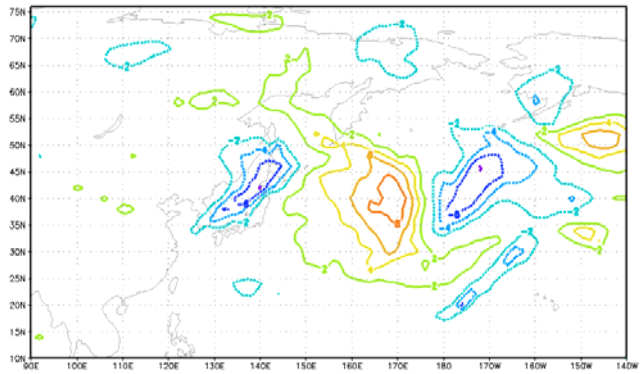


Hovmoeller plot (30° - 60° lat.)
Stdev 51 EC members: 500 hPa Geopot.

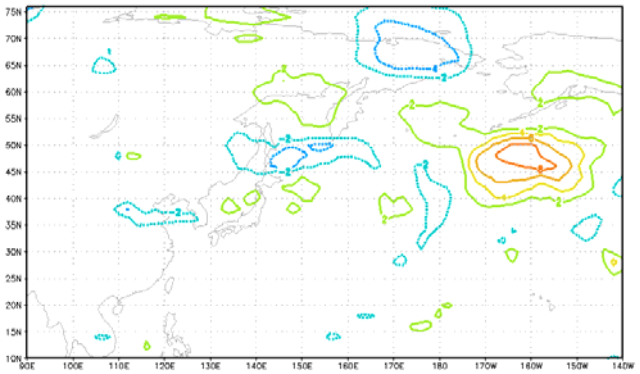


- Standarddeviation between 51 ECMWF ensemble members
- Variables: potential temperature on PVU = 2 / geopotential at 500 hPa

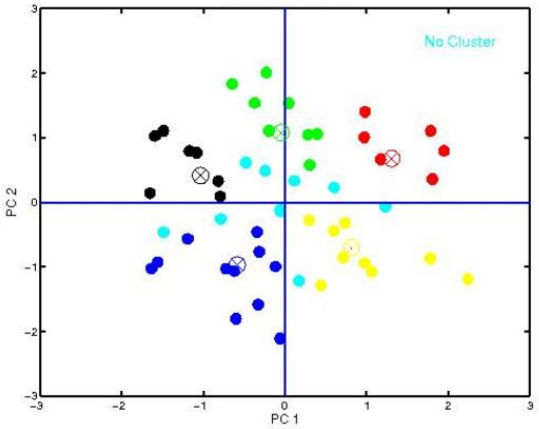
EOF 1 theta on PV2 for 84 hours



EOF 2 theta on PV2 for 84 hours



Clusters on PC 1 / PC 2

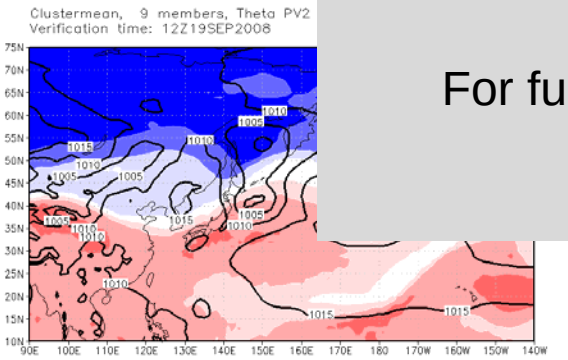


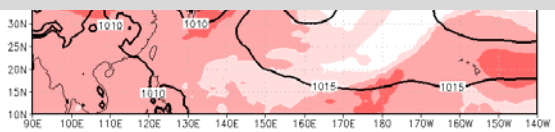
EOFs / PCs:

- Binary files in GrADS format
- Variable: potential temperature on PVU = 2
- Time: 48 - 132 hour forecast (in TPARC / TCS-08 Field Catalog only for 84 h)
- Information about contribution of the members to the clusters available

Clusters (http://catalog.eol.ucar.edu/tparc/)

- Clustering variable: potential temperature on PVU = 2
- Exist also for 500 hPa Geopotential
- Only for 500 hPa Geopotential: Std.dev. within each cluster
- Time: 48 - 132 hour forecast (in TPARC / TCS-08 Field Catalog only for 84 h)
- Number: 5 clusters every 12 hours
- Information about the cluster, e. g. number of members contributing, clustering time, are indicated in header





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