

ATLANTIC EQUATORIAL MODE FORCING

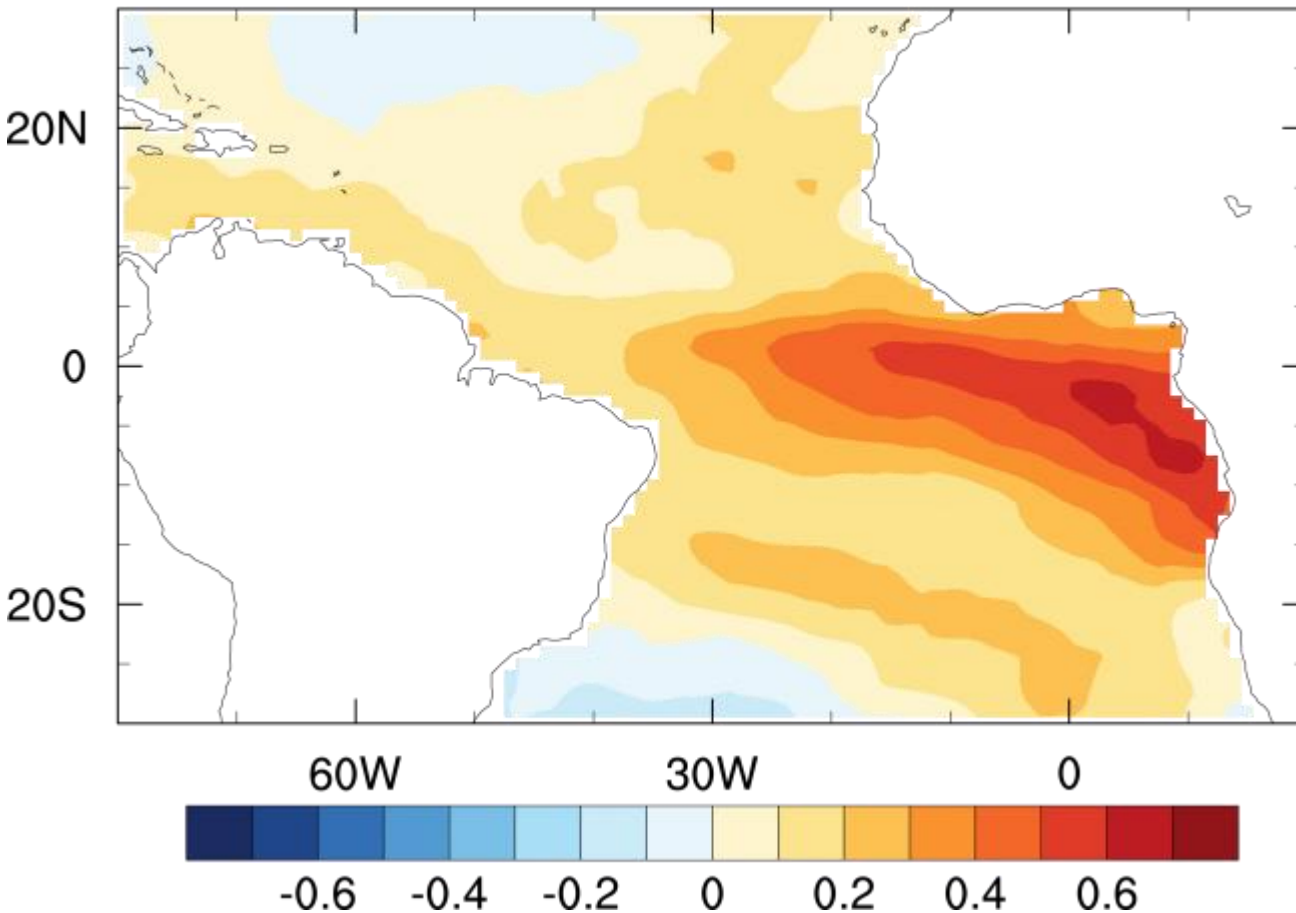
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Efi Rousi (*Greece*)

Atlantic Nino SST anomaly pattern



A zonal band of warmer than normal SSTs stretches along the equator and is most pronounced in the east.

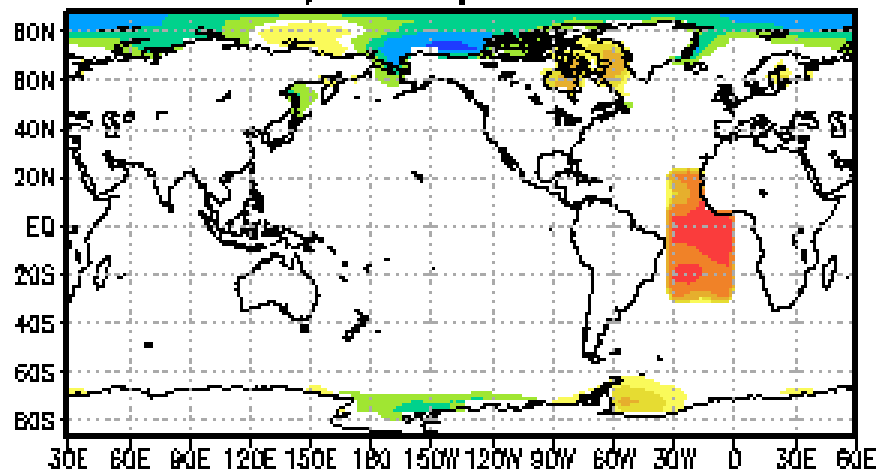
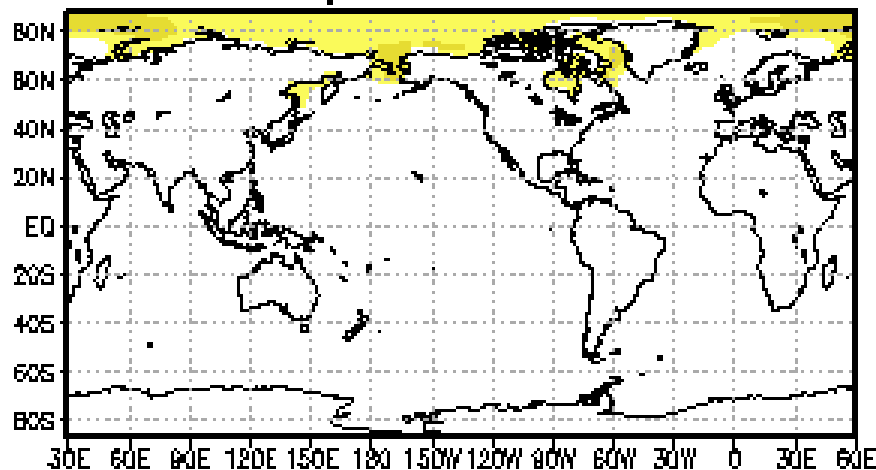
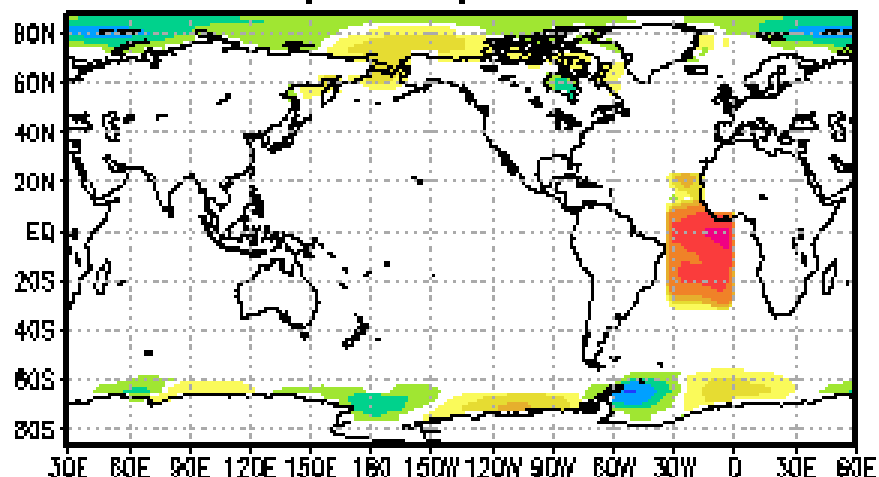
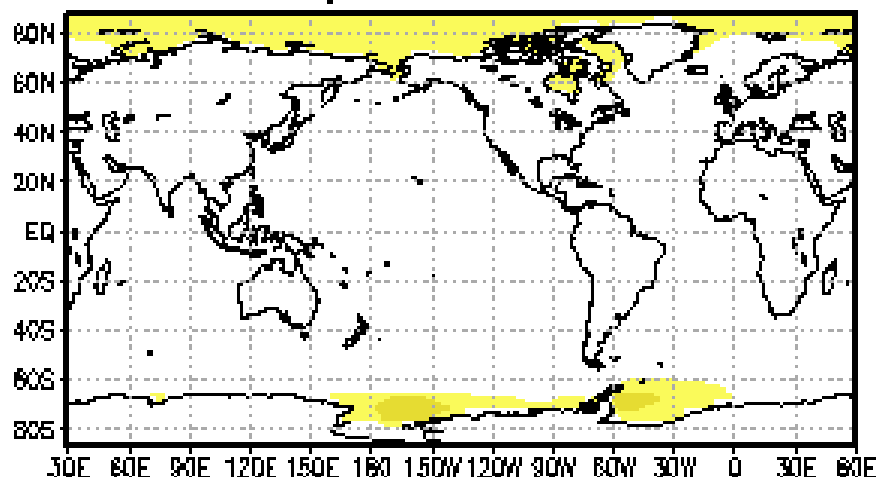
Data are from [EOF](#) analysis of [OISST](#).

Positive phase of the Atlantic zonal mode.

Every few years the temperatures in the eastern equatorial Atlantic become unusually warm. This has impacts on the rainfall over South America and tropical Africa.

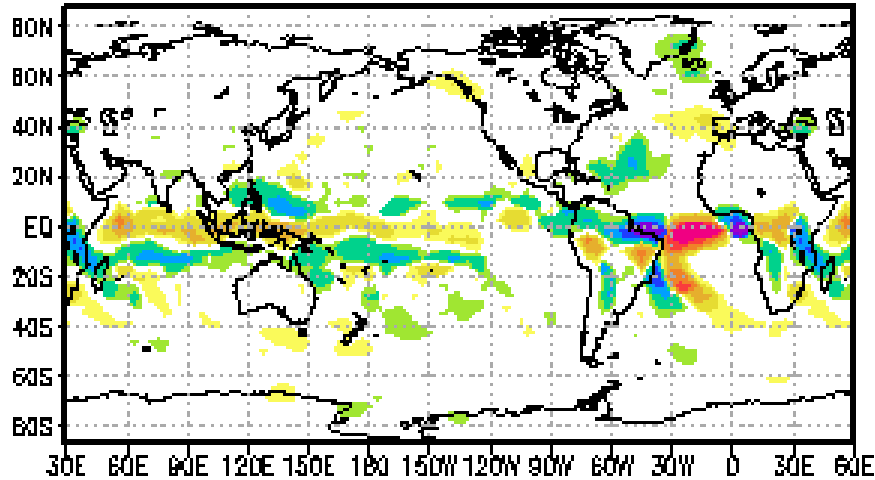
Experiment

- SPEEDY
 - Atmosphere-only simulation
 - Atlantic Equatorial Mode Forcing:
 - Simulation I: **Positive phase** (SST field in [(0-30)°W ; 30°S-20°N])
 - Simulation II: **Negative phase** (SST field in [(0-30)°W ; 30°S-20°N])
 - 100 member ensemble
 - Same forcing but different initial conditions.

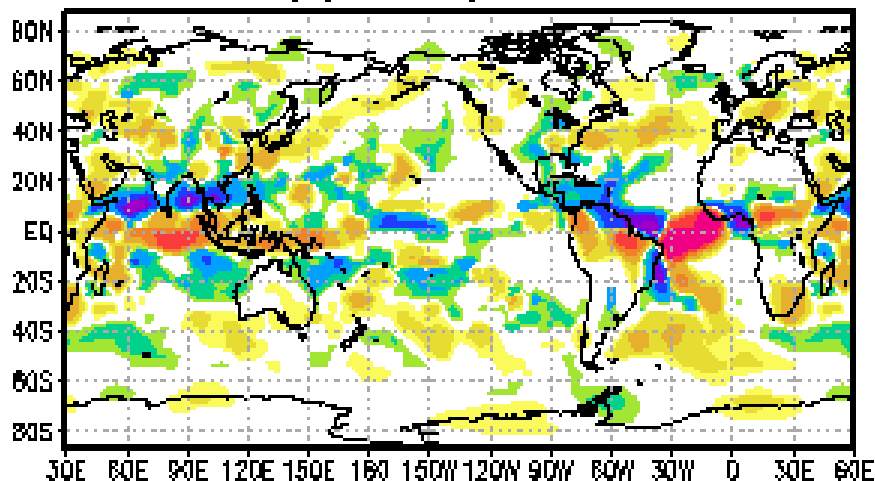
Signal: *ensemble mean*Noise: *ensemble spread*a) *est response JFM*b) *est noise JFM*c) *est response AMJ*d) *est noise AMJ*

Signal: *ensemble mean*

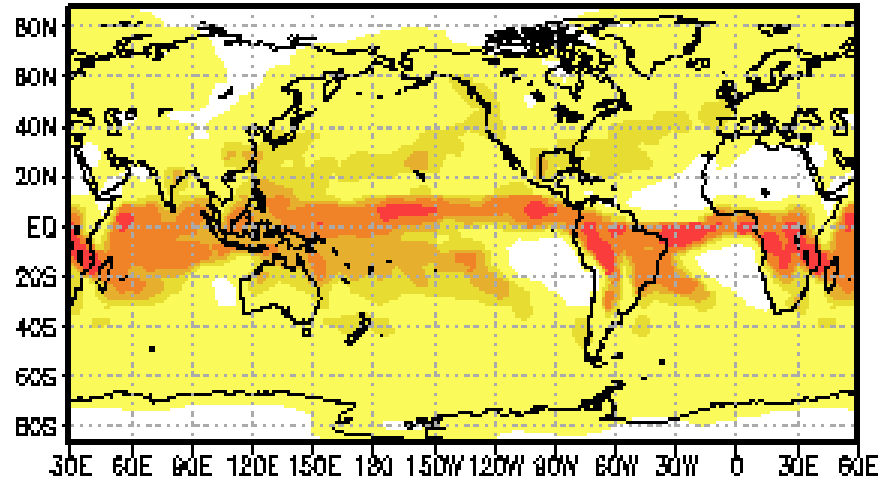
a) prec response JFM



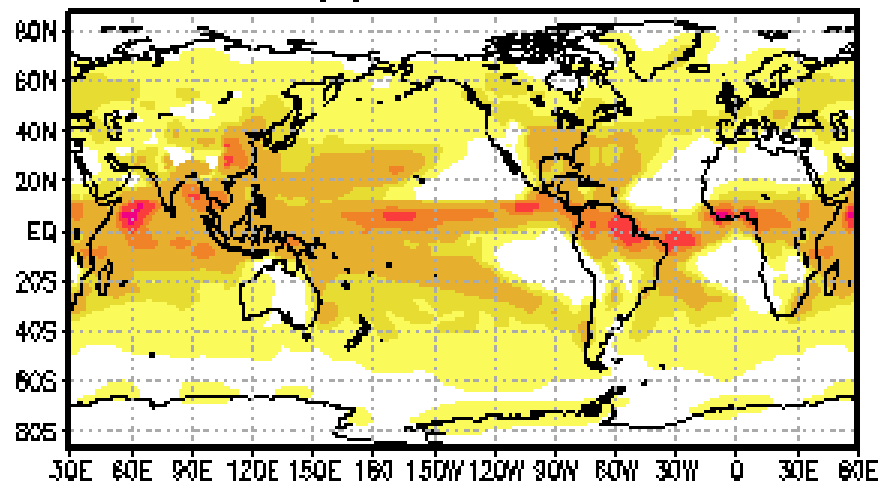
c) prec response AMJ

Noise: *ensemble spread*

b) prec noise JFM

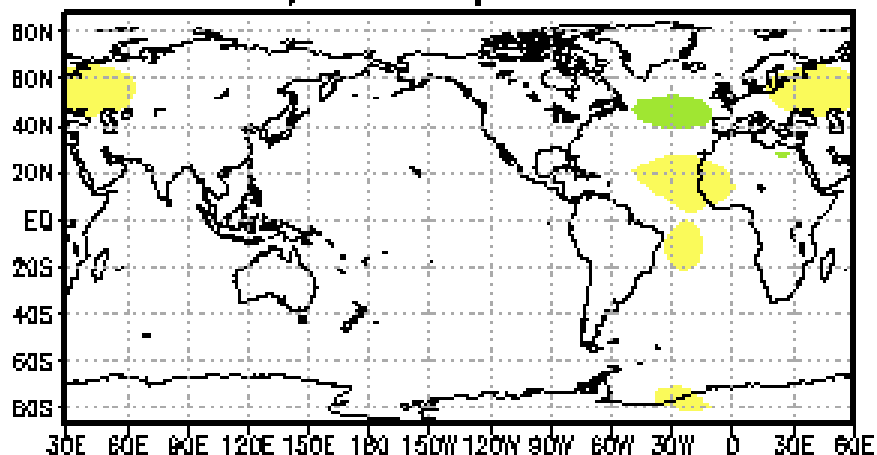


d) prec noise AMJ

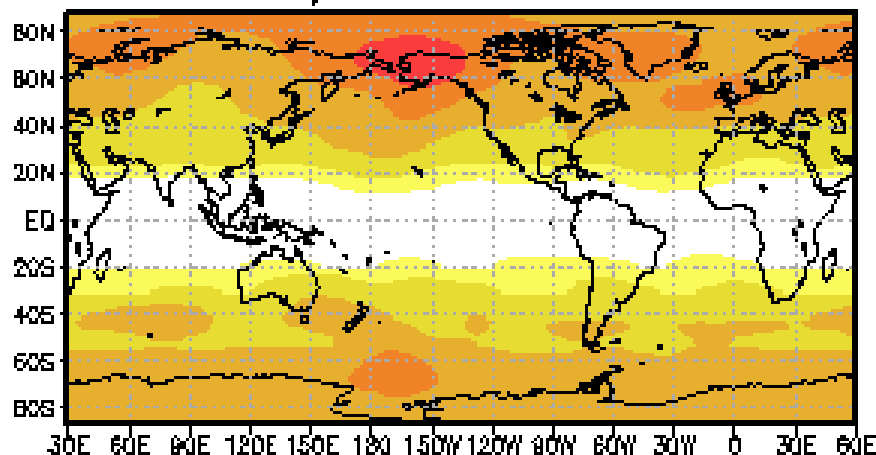


Signal: *ensemble mean*Noise: *ensemble spread*

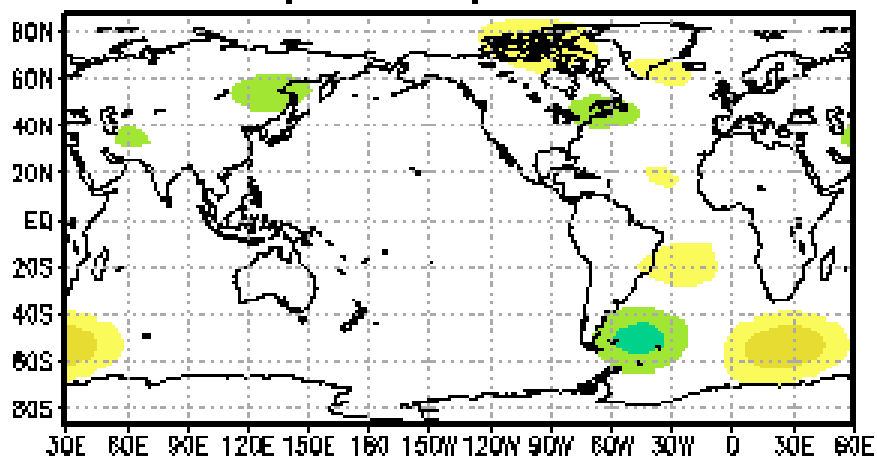
a) z200 response JFM



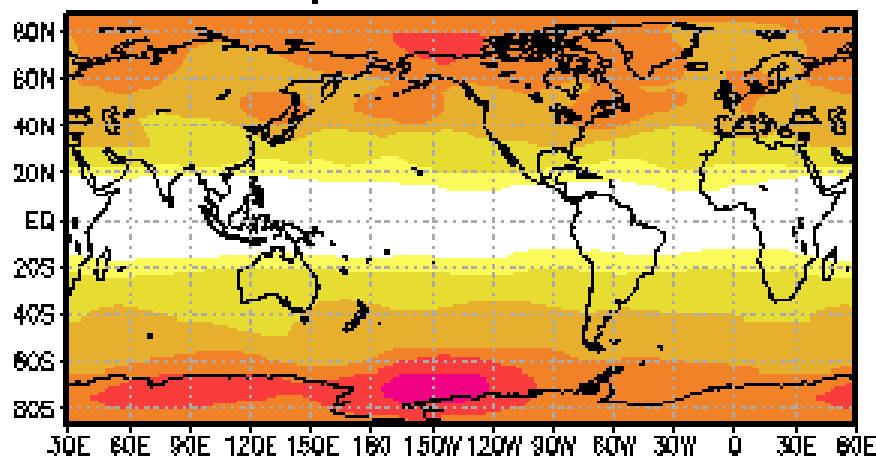
b) z200 noise JFM



c) z200 response AMJ



d) z200 noise AMJ

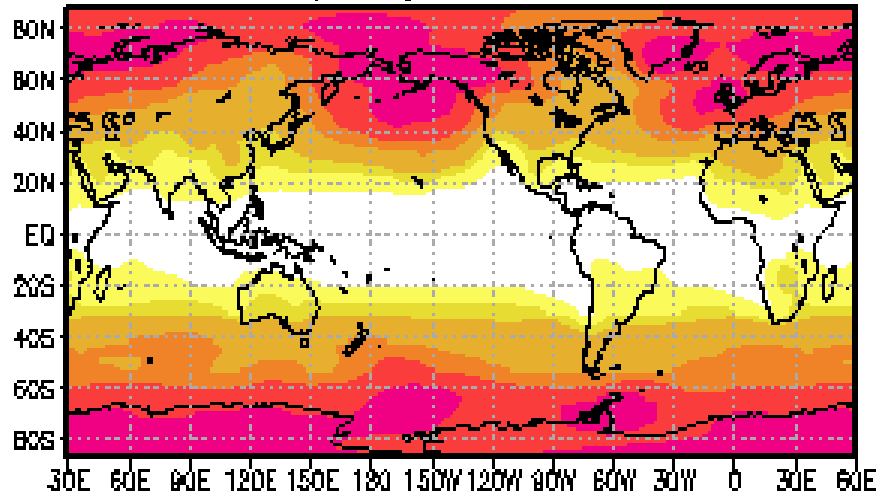
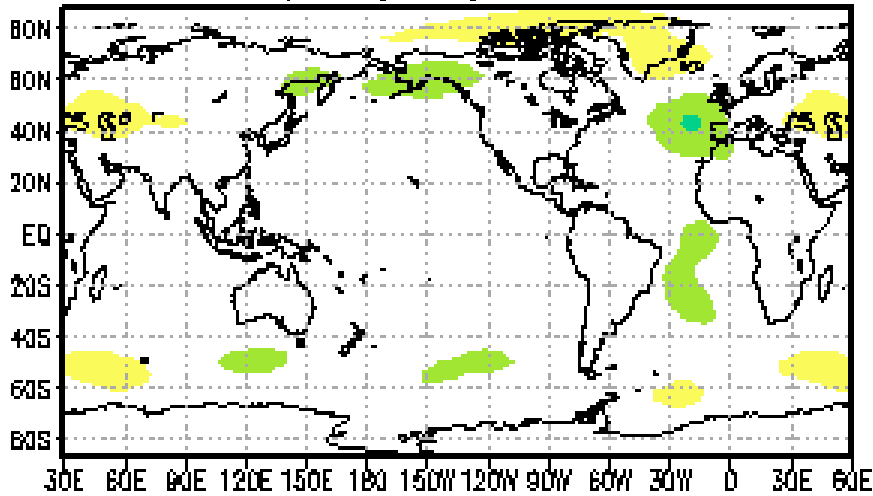


Signal: ensemble mean

Noise: ensemble spread

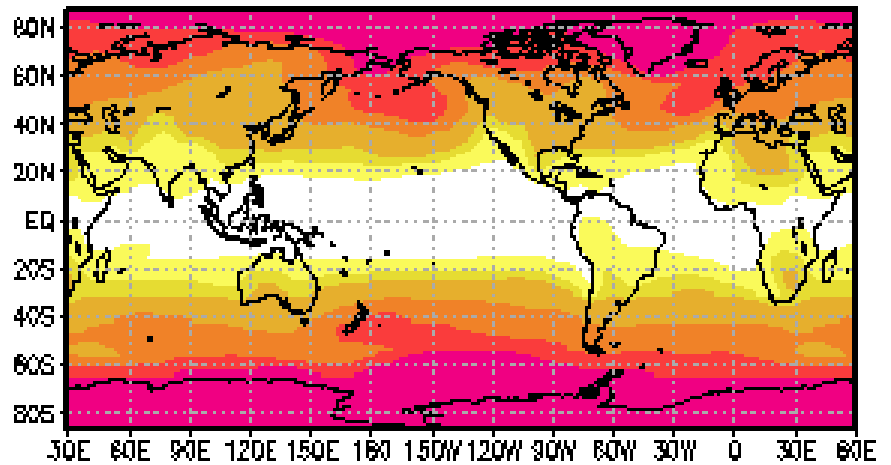
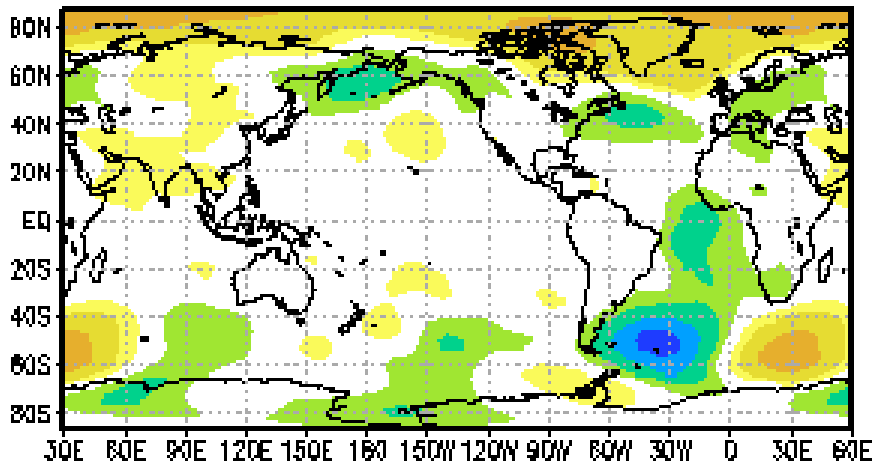
a) mslp response JFM

b) mslp noise JFM



c) mslp response AMJ

d) mslp noise AMJ





Thank you

grazie

Хвала

Ευχαριστώ

gracias