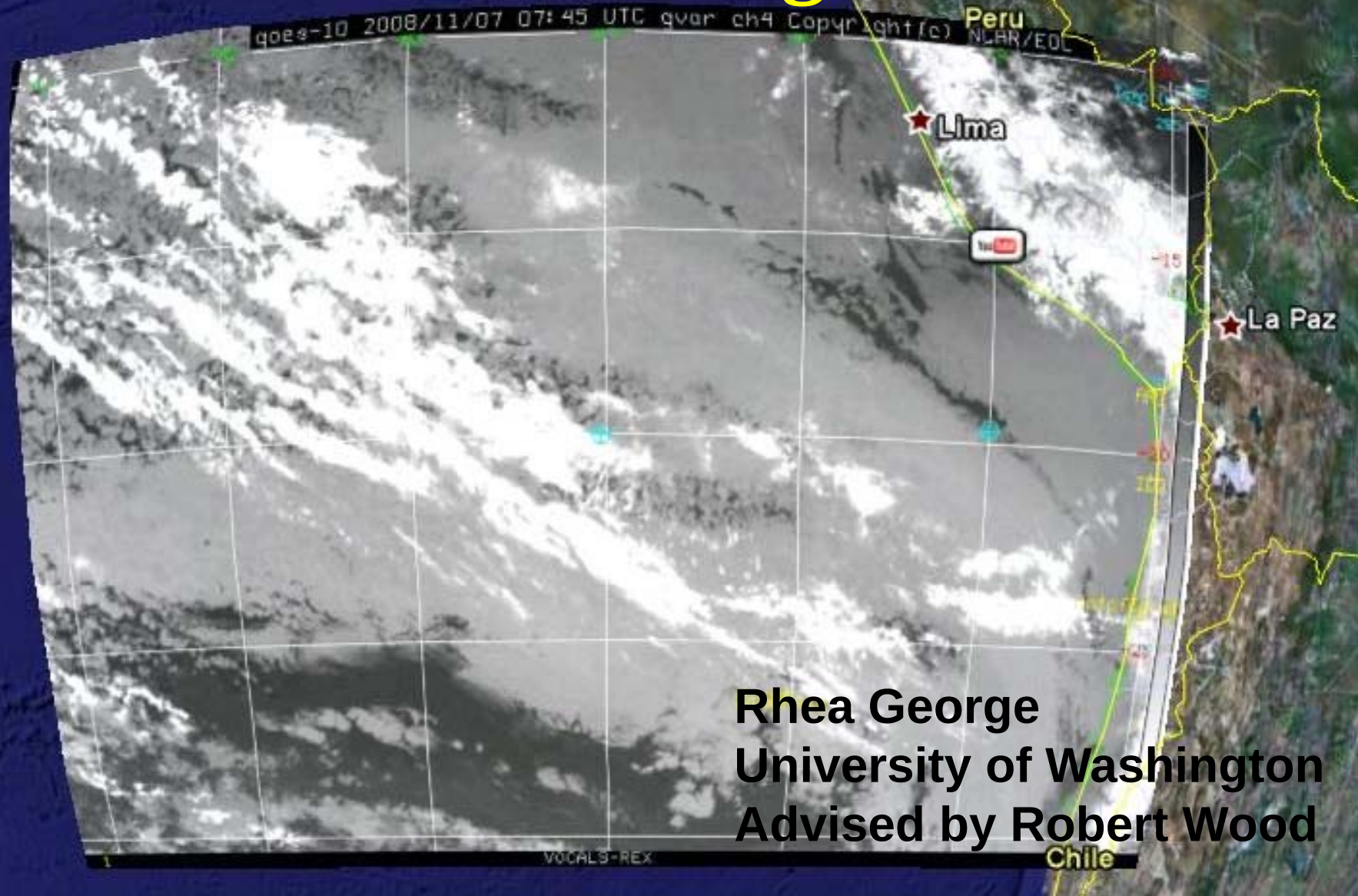
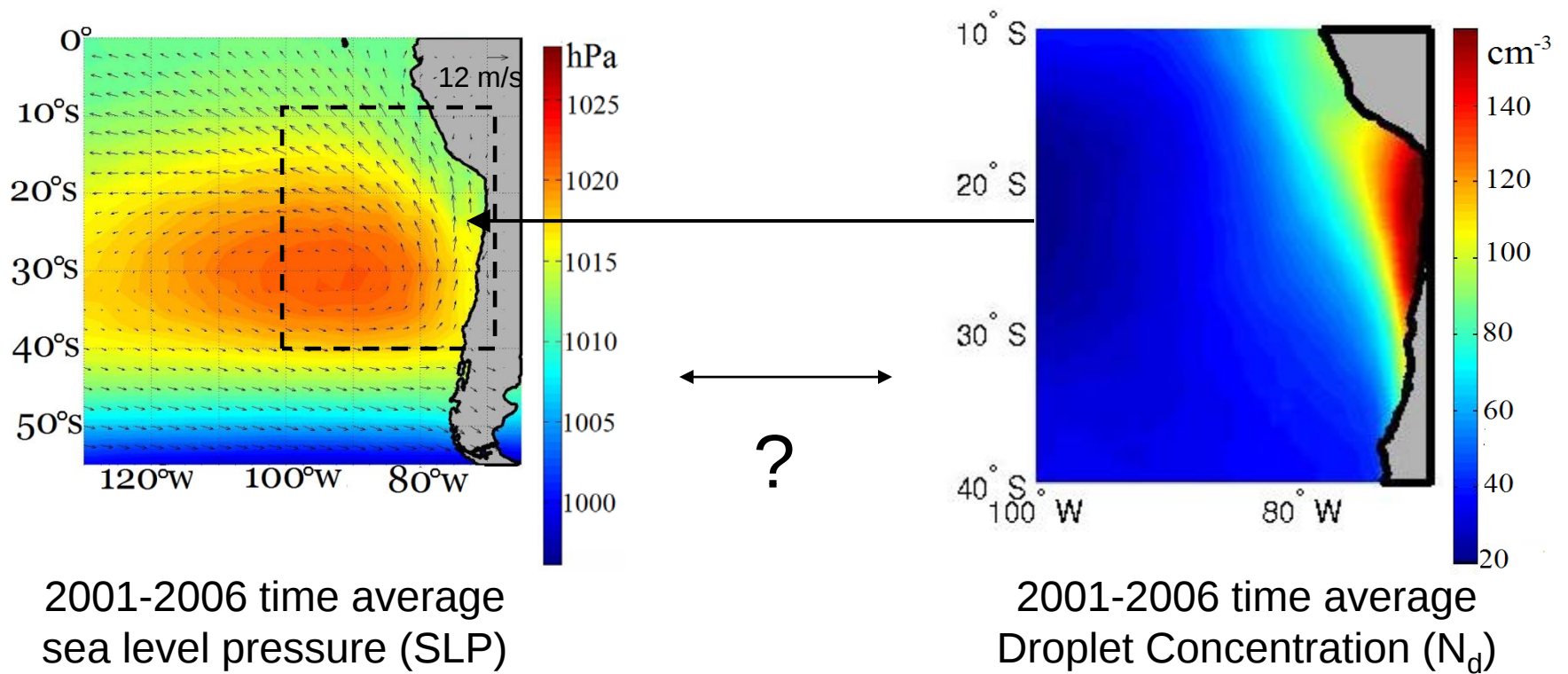


Synoptic variability in the VOCALS region



Rhea George
University of Washington
Advised by Robert Wood



Sea Level Pressure

NCEP Reanalysis

2.5° latitude x 2.5° longitude grid

Droplet Concentration (N_d)

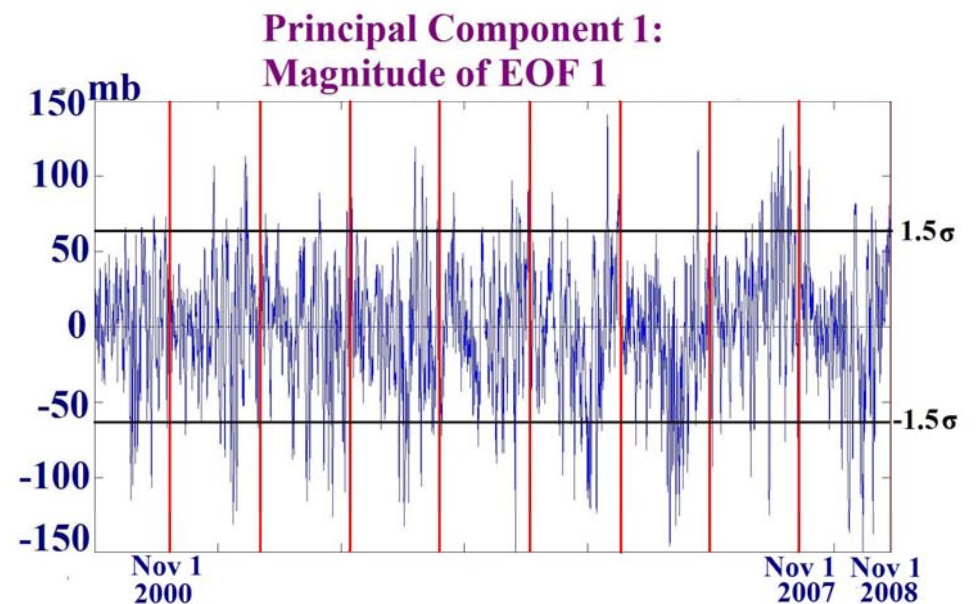
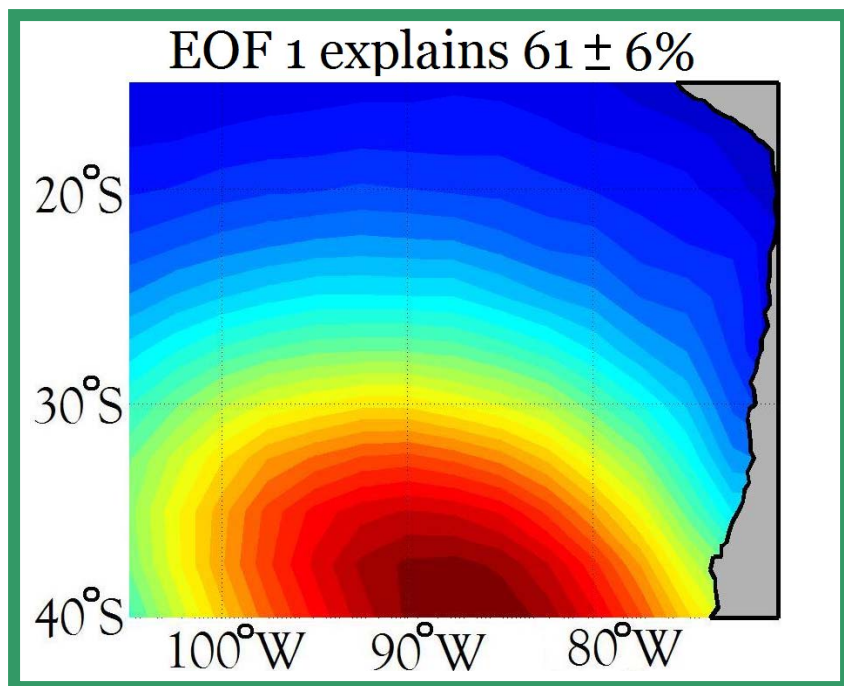
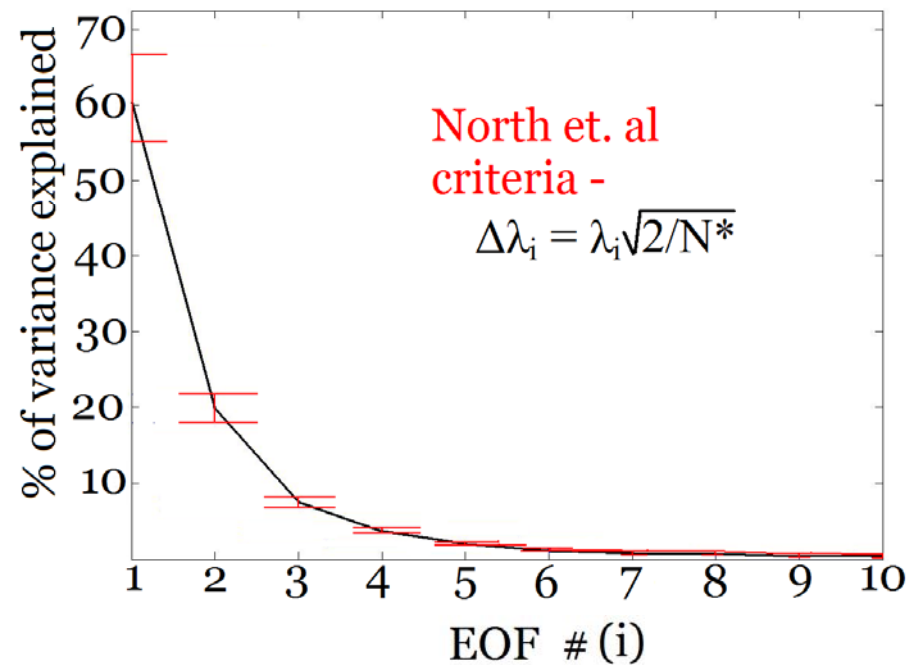
MODIS (satellite) data

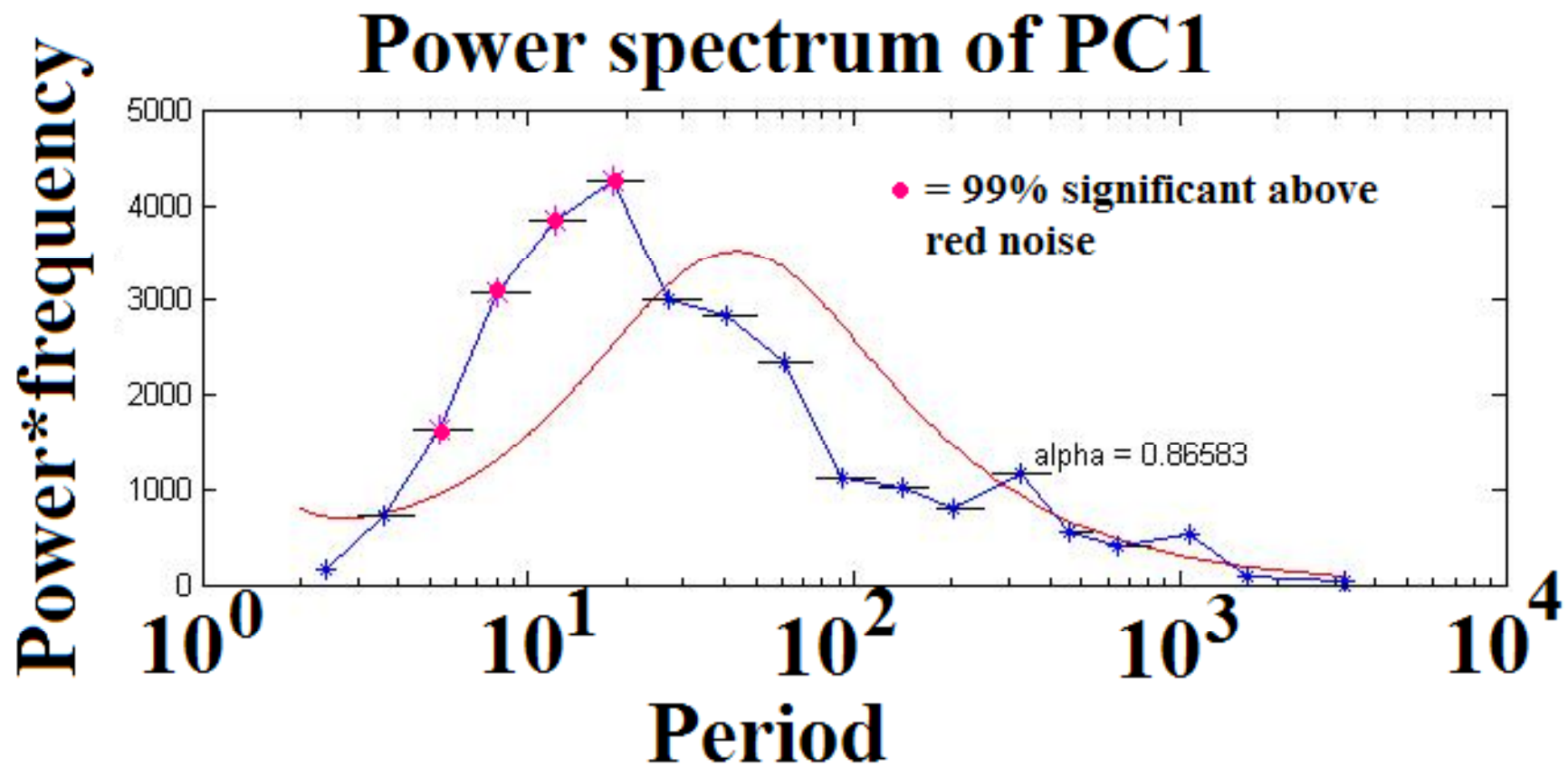
1° latitude x 1° longitude grid

EOF Analysis of SLP

(NCEP reanalysis data)

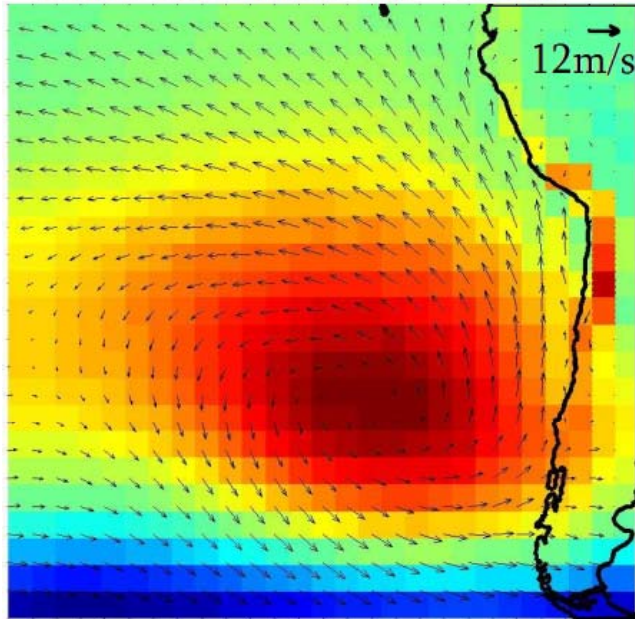
2000-2008



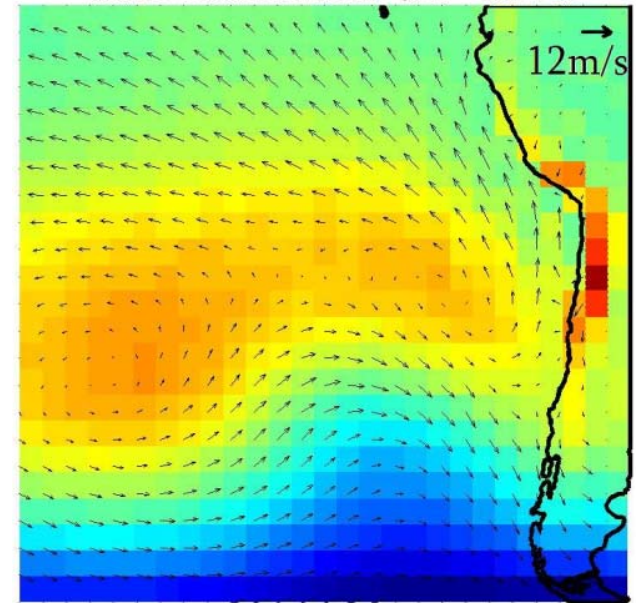


Composite SLP on subtropical high strength index

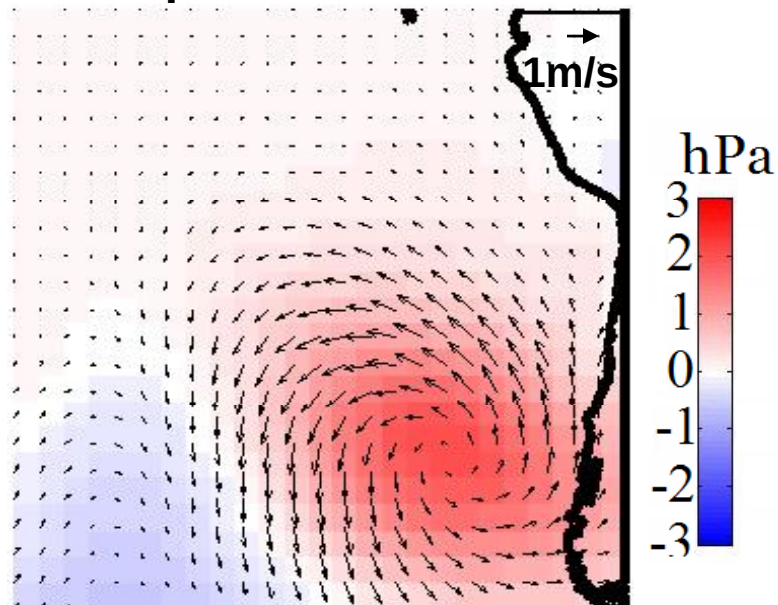
COMPOSITE SLP ON + DAYS



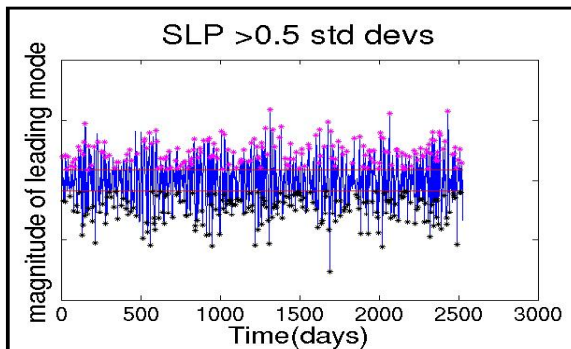
COMPOSITE SLP ON - DAYS



Composite Difference

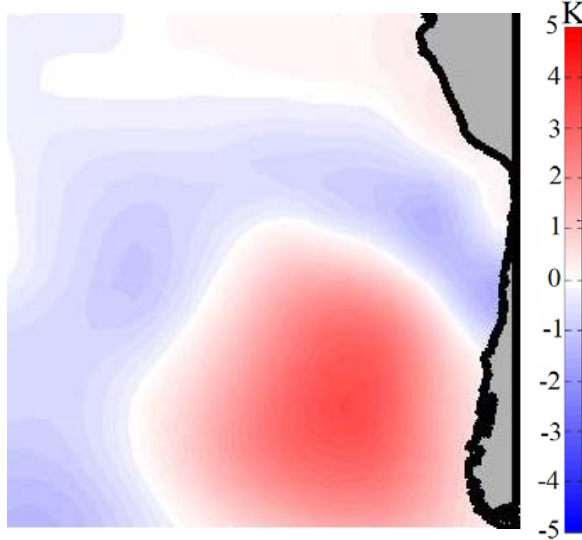


Subtropical high strength index

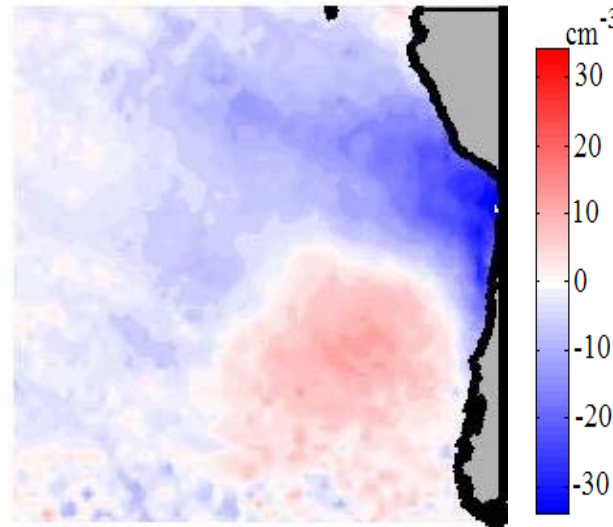


Composite difference plots on SLP dominant mode of variability

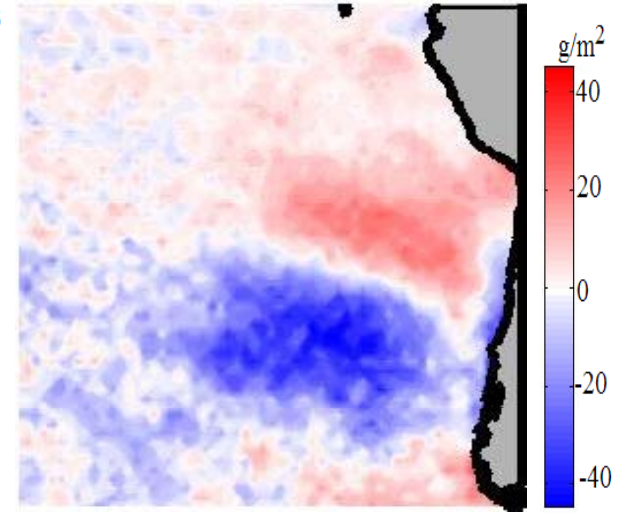
Stability = $\theta_{700\text{mb}} - \theta_{\text{Sea level}}$



Nd

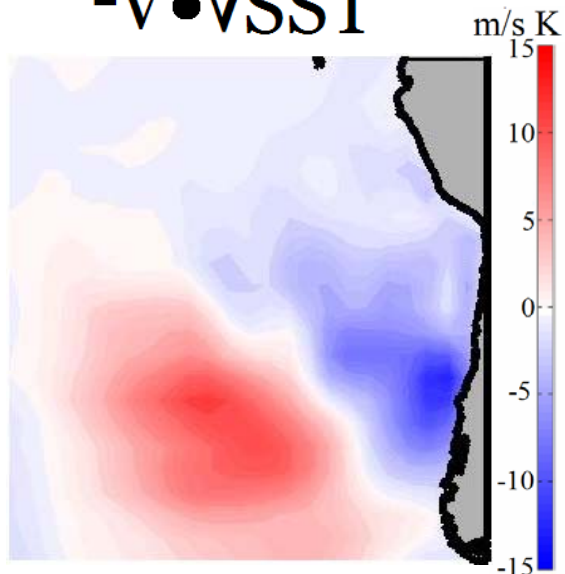


LWP

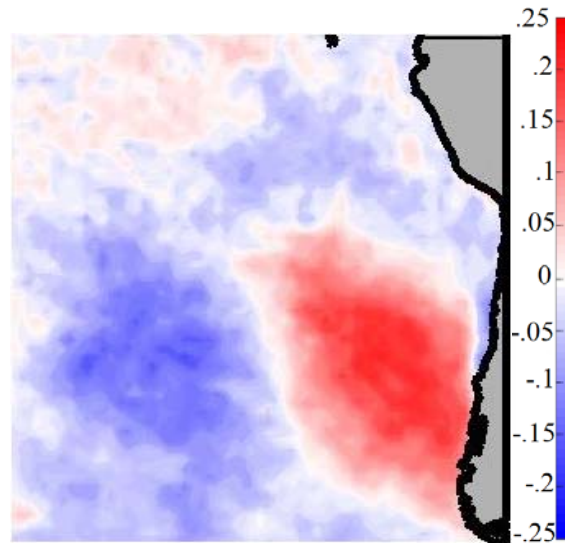


Temperature Advection

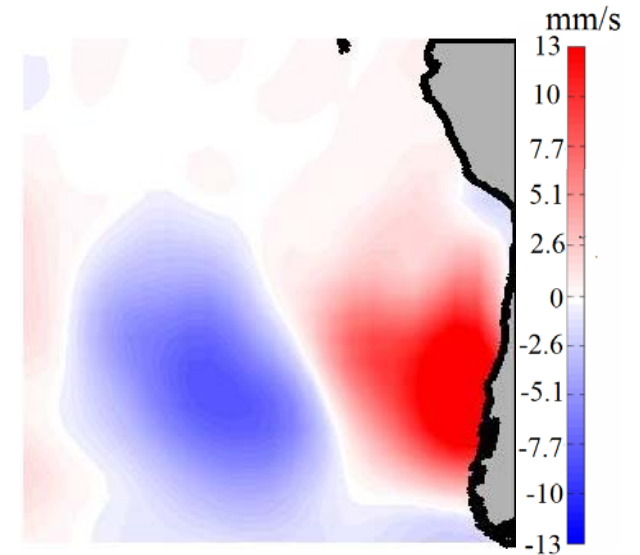
$$-\vec{V} \cdot \nabla \text{SST}$$



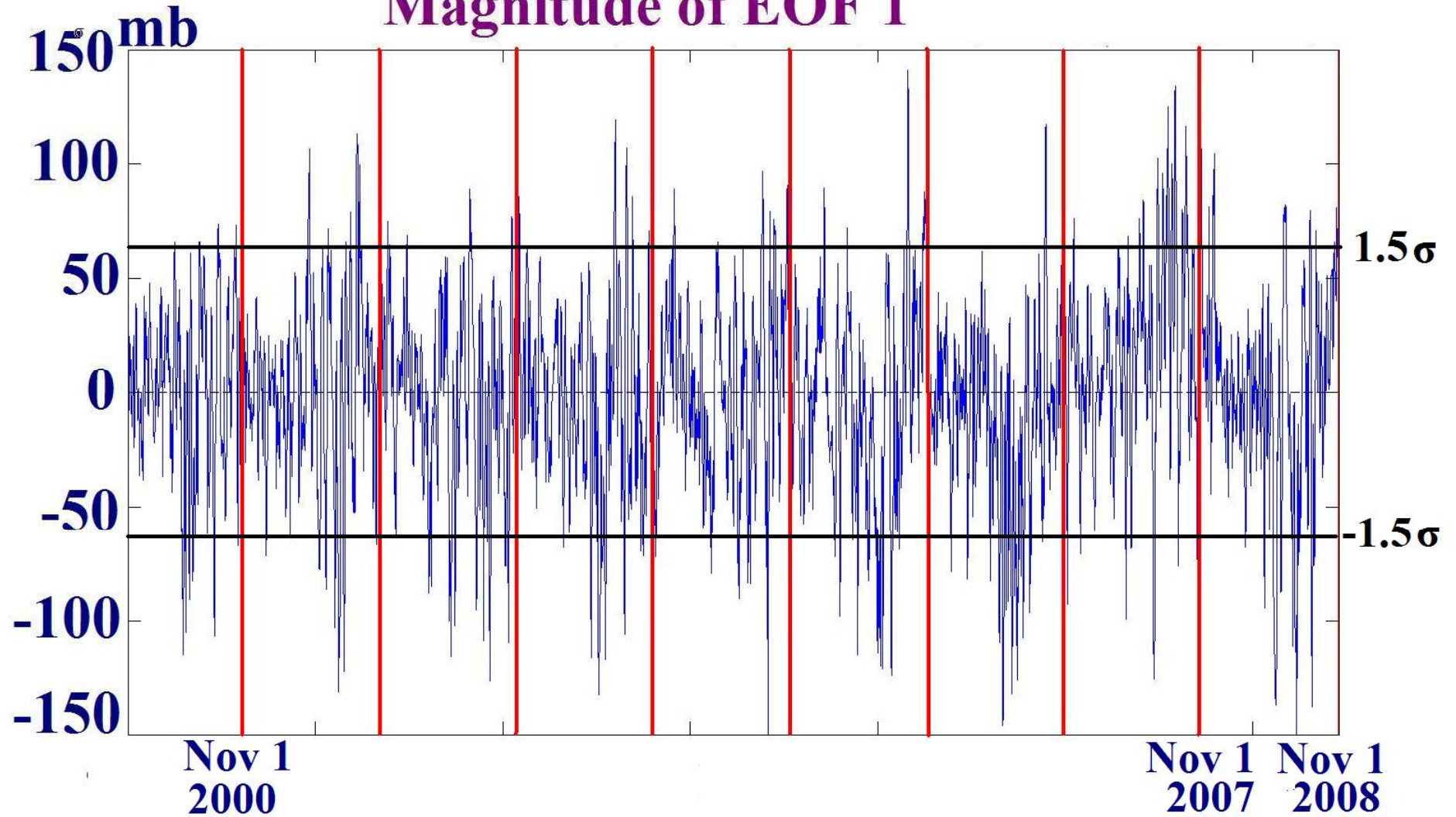
Low Cloud Fraction



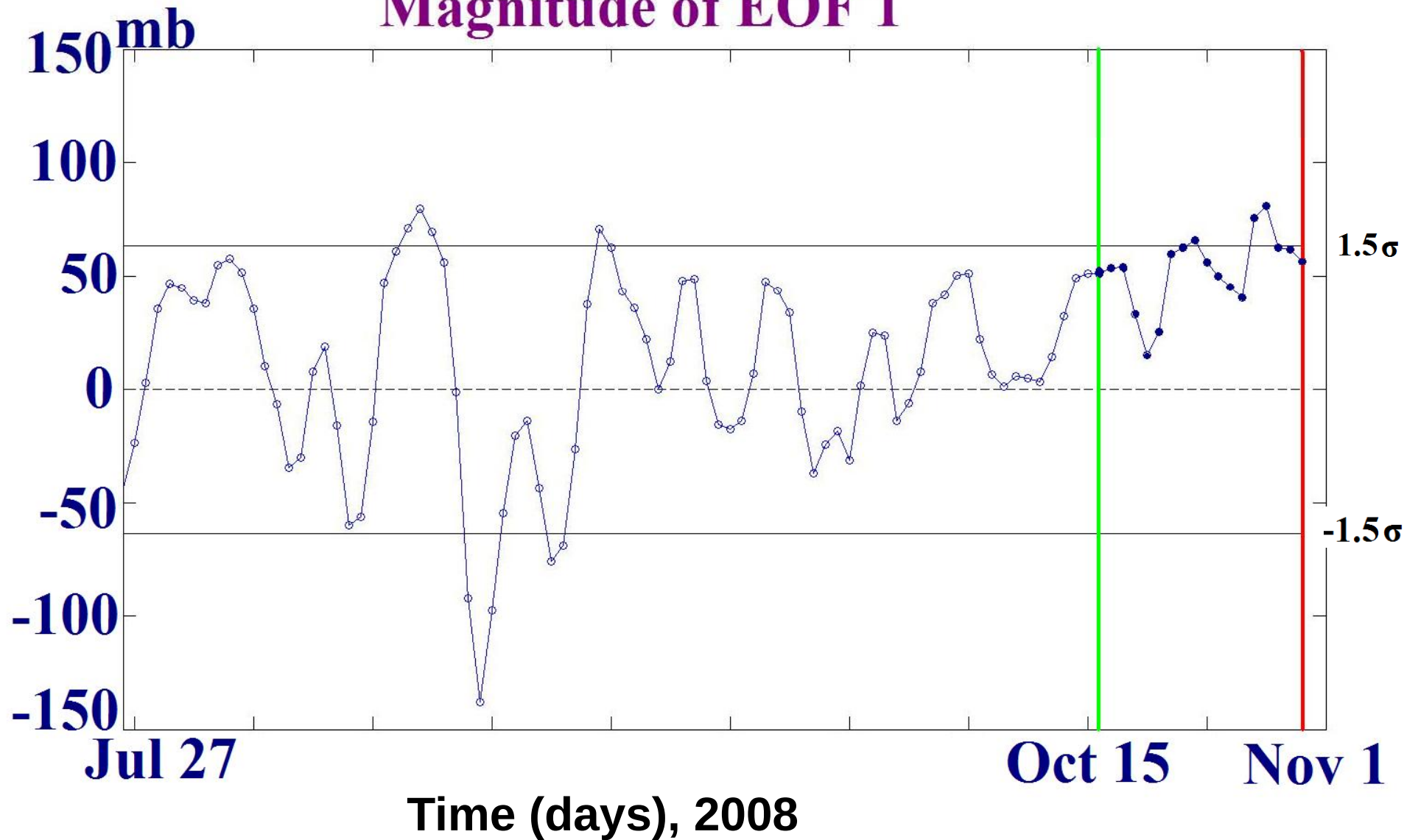
Omega



Principal Component 1: Magnitude of EOF 1

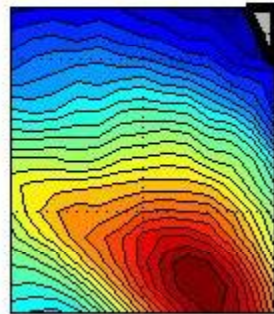


Principal Component 1: Magnitude of EOF 1

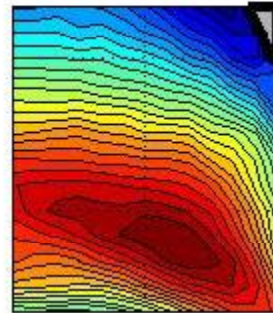


Sea Level
Pressure
during
VOCALS

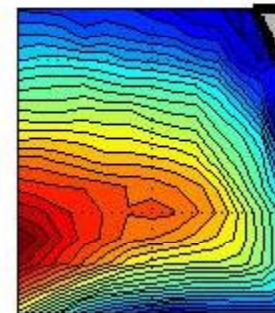
Oct 16



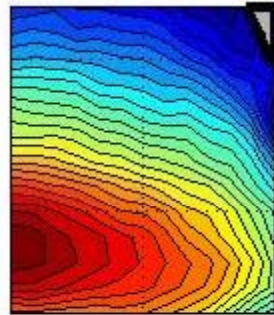
Oct 18



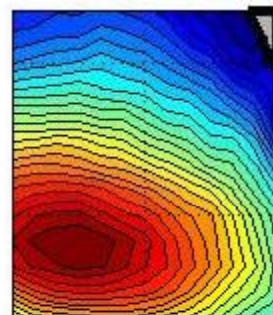
Oct 20



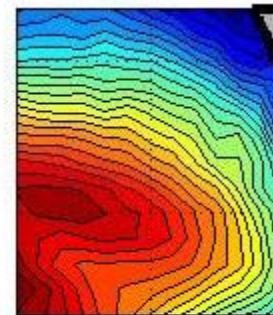
Oct 22



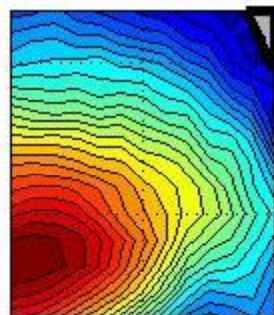
Oct 24



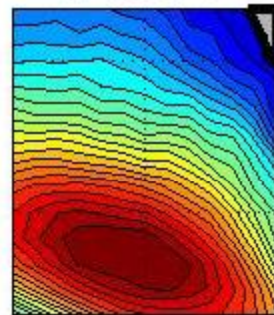
Oct 26



Oct 28



Oct 30



Nov 1

