Workshop on Representing model uncertainty and error in numerical weather and climate prediction models
20-24 June 2011
Present medium range forecast models

- **Global forecast model**
  - 16 km grid point distance
  - 91 vertical levels
  - Hydrostatic
  - Forecast range: 10 days

- **Ensemble Prediction System**
  - 51 parallel forecasts
  - Perturbed initial conditions and stochastic model error
  - 32 km grid point distance
Forecast quality – Days of useful skill
(500 hPa height, anomaly correlation>0.6, N. Hemisphere)
Seasonal forecast

NINO3 SST anomaly plume
ECMWF forecast from 1 Apr 2010
Monthly mean anomalies relative to NCEP adjusted O1v2 1971-2000 climatology

Forecast issue date: 15 Apr 2010
Model climate error DJF
Cy 31r1 introduced September 2006

Z500 Difference 31R1-er40 (12-2 1963-2006)
Model climate error DJF
Cy 32r3 introduced March 2008

Z500 Difference 32R3-er40 (12-2 1963-2006)
Model climate error DJF
Cy 36r4 introduced November 2010

Z500 Difference 36R4-er40 (12-2 1963-2006)
Temperature and wind error
850 hPa D+5 fcsts March-May 2011