

# AOSC 615. Advanced Methods in Data Assimilation

## Suggested Model Description

1. Lorenz Model with 3 Variables
2. Lorenz Model with 40 Variables
3. Point Vortex Model
4. SPEEDY Model

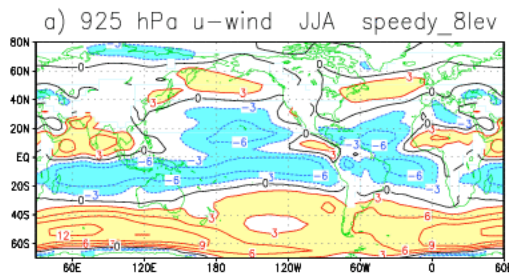
# SPEEDY: Simplified Parameterization, primitive-Equation Dynamics

- Model developed for climate studies
  - For computational efficiency, use of
    - Low resolution (Spectral model with T30L7)
    - Simplified physical parameterization
  - Maintain the basic characteristics of an atmospheric General Circulation Model (GCM)

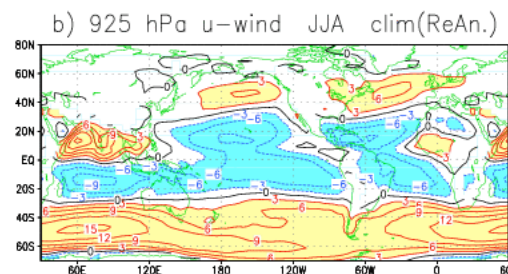
A data assimilation package has been developed by the UMD group and is available online

- Tutorial: <http://www.atmos.umd.edu/~ekalnay/SPEEDY-JunjieLiu/JunjieLiuTutorial.doc>
- State-of-art LETKF: <http://www.atmos.umd.edu/~miyoshi/letkfwiki/>

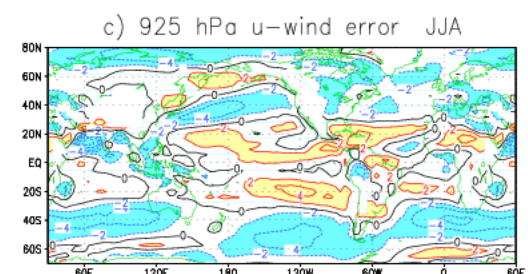
## Climatology



SPEEDY



ECMWF



Difference