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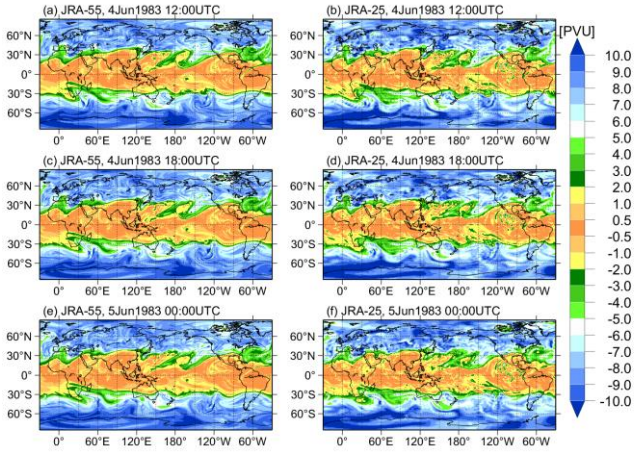
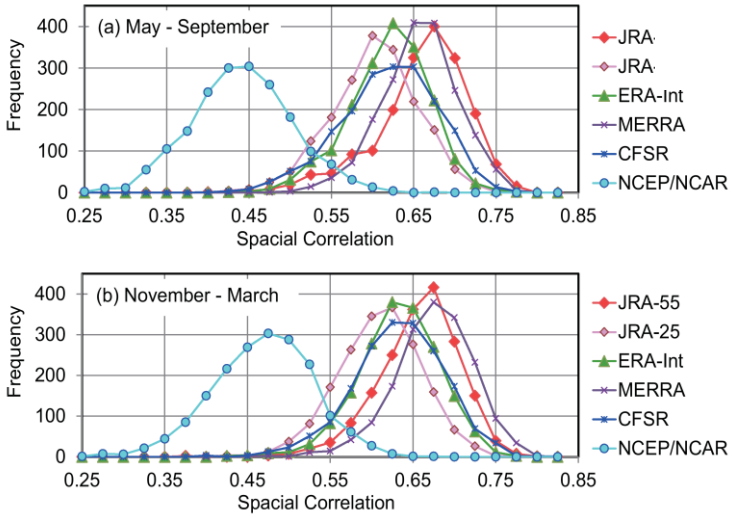


←
Figure 1. Field of isentropic potential vorticity map at 360 K. Unit: PVU (1PVU = 10^{-6} m^2 s^{-1} K kg^{-1}).



↓Figure 6. Frequency of spatial correlation of daily mean precipitation with TRMM3B42 over the tropics (22°S–22°N) during the period 1998 to 2009.

- Improvements were found in the representation of atmospheric circulation on the isentropic surface (Fig. 1) and in the consistency of momentum budget based on the mass-weighted isentropic zonal mean (MIM) method.
- In the tropics, the frequencies of high spatial correlations with precipitation estimated using Tropical Rainfall Measuring Mission (TRMM) Multisatellite Precipitation Analysis (TMPA) are clearly higher in JRA-55 than in JRA-25 (Fig. 6).
- The results indicate that JRA-55 generally improved the representation of phenomena on a wide range of space–time scales, such as equatorial waves, and transient eddies in the storm track regions, compared with JRA-25 during the satellite era, and improved the temporal consistency compared with the older reanalyses throughout the reanalysis period.