

Status of JRA-25 and JCDAS

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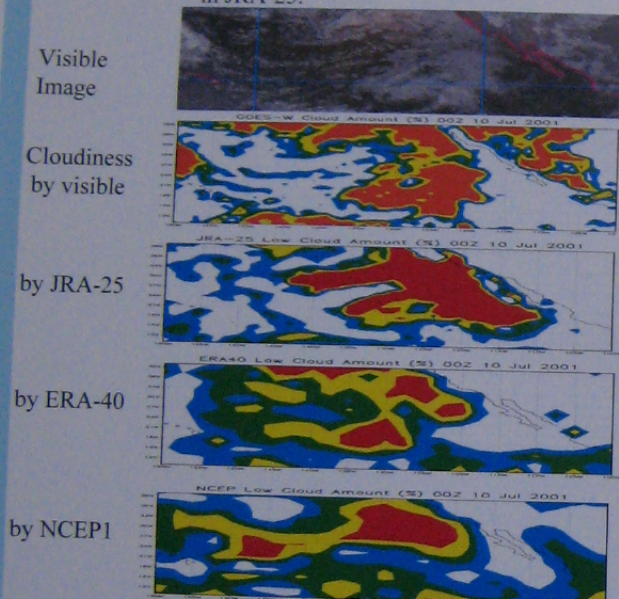
1. Current status of JRA-25 and JCDAS

- JRA-25, JMA version long-term reanalysis, has been completed.
- Now analysis is being continued as JCDAS with the same system.
- The data are opened for researchers by establishing the JRA-25 Data Access System (<http://jra.kishou.go.jp>) in June 2006.
- In December 2006, JMA and CEOP signed a contract for providing reanalysis data to CEOP.
- According to this contraction, all products will be provided to CEOP.
- Reference: The JRA-25 Reanalysis (Onogi K., et al., 2007, JMSJ accepted)
- Onogi K., et al.: JRA-25: Japanese 25-year reanalysis project – progress and status. Q.J.R.M.S., 2005

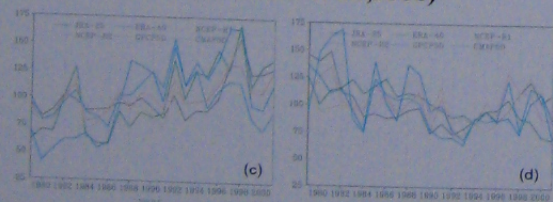
2. Recent results of comparative studies among JRA-25, ERA-40 and NCEP1/2

Low clouds (Inoue et al.)

Expression of low clouds is improved in JRA-25.



Intense precipitation variations (Takahashi et al., 2006)



Interannual variations of NPC10 (intense precipitation class) based on pentad over the (c) sea and (d) land. NPC is normalized by climatological average in the class.

Mass transport (Zhao et al., 2006)

JRA-25 shows good consistency in mass flux and hemispheric total mass.

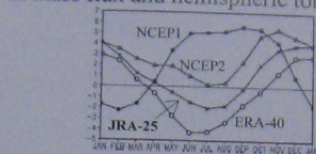


Figure 1. Annual cycle of the whole mass flux (\bar{F}) ($10^{12} \text{ kg m}^{-2} \text{ s}^{-1}$) at the equator for ERA-40 (open circle line), NCEP 1 (closed circle line), NCEP 2 (open triangle line)

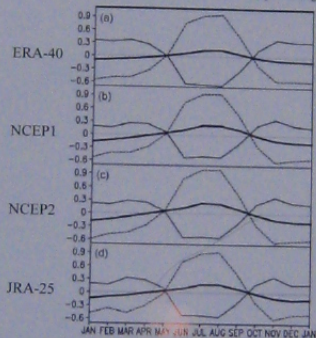


Figure 2. Annual variation in the average surface pressure (in hPa) over the NH (thin solid line), SH (dashed line) and the globe (thick solid line) for (a) ERA-40, (b) NCEP 1, (c) NCEP 2 and (d) JRA-25 reanalysis. Plotted are departures from the annual mean values.

Energetics (Watarai et al., 2007)

JRA-25's spectra follow a power law for the wider range in wave number.

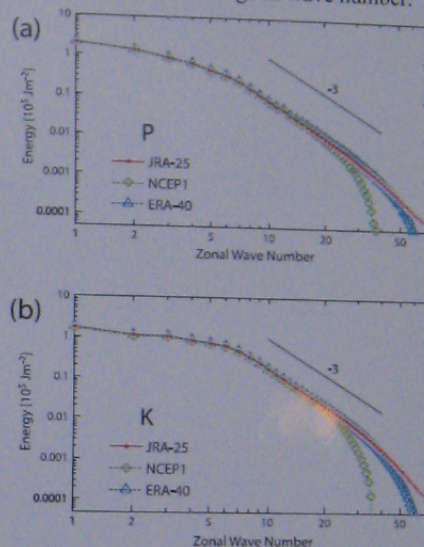
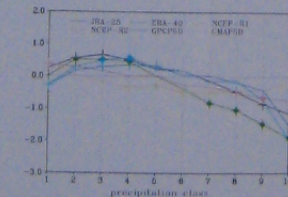
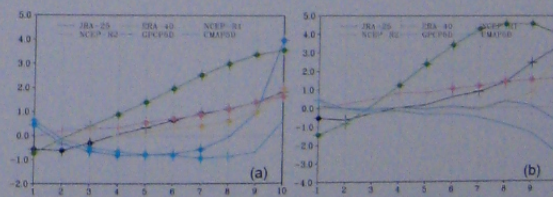


Fig. 3. Spectra of (a) the available potential energy and (b) the kinetic energy for 22 winters. Circle, diamond and triangle symbols represent the JRA-25, NCEP1 and ERA-40, respectively.

Reanalyses show a similar tendency. More reliable and longer-term data are needed for validation.



Trends of NPC for 1979-2001 based on pentad precipitation in each class over the land over 30S-30N. Closed circle (Plus sign) shows statistical significance at 1(5)% level.



(a) Trends of NPC over the sea (30S-30N) for 1979-2001
 (b) For 1988-2001

3. Announcement of the third WCRP International Conference on Reanalysis

The third reanalysis conference will be held at IIS, university of Tokyo for January 28-February 1, 2008 under the co-organization of WCRP, JMA, CRIEPI and University of Tokyo.

Outline of the agenda is as follows.

- Introduction of reanalysis
- Applications of reanalysis products
- Characteristics of reanalysis products
- Data assimilation techniques for reanalysis
- Future reanalyses

Deadline of submission is July 31, 2007.

The first call for papers will appear on the web pages of the WCRP and JRA-25 soon.

3rd Reanalysis Conf.