

## ***Interactive comment on “Observed poleward expansion of the Hadley circulation since 1979” by Y. Hu and Q. Fu***

### **Anonymous Referee #2**

Received and published: 24 July 2007

General comments:

This manuscript demonstrates direct evidences of the expansion of the Hadley Circulation since 1979 based on long-term atmospheric reanalyses, satellite observed OLR and tropospheric temperature data. The paper is well-written in clear language. Figures and captions are clear too. Literatures are cited properly. In general, I think this is an excellent paper about an important climate topic with solid base.

Below are two specific comments to inspire discussion:

1. Since the reason of the expansion of the Hadley Circulation is still unknown, do authors have any plan or suggestion about further investigation?
2. The expansion and intensification of the Hadley Circulation happened in the same

period, is there any perspective about the relation between these two changes?

Technique comments:

1. Page 9368 line 25: should be “Held and Soden, 2006).”
2. Page 9381 Fig.3: It would be easier for readers to make comparison if the three plots have same Y axis range.

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Interactive comment on Atmos. Chem. Phys. Discuss., 7, 9367, 2007.

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Interactive Discussion

Discussion Paper