

***Interactive comment on* “Prediction of tropical cyclonegenesis over the South China Sea using SSM/I satellite” by C. Zhang et al.**

Anonymous Referee #1

Received and published: 20 May 2010

Title: Prediction of tropical cyclonegenesis over the South China Sea using SSM/I satellite

Authors: C. Zhang, Q. Zhang, and L. Wang

Recommendation: Reconsider after major revisions

GENERAL COMMENTS:

The manuscript describes a method of predicting tropical cyclogenesis over the South China Sea by using rain rate data from SSM/I. The authors use a sample of 68 tropical disturbances over the South China Sea from 2000 to 2005 and calculate total latent heat release from the SSM/I data to derive a threshold of 3×10^{14} W that separates developing and non-developing disturbances. Developing disturbances tended to ex-

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ceed that threshold based on an average daily mean as well as a mean on the previous day prior to development.

This research has extremely important implications since forecasting tropical cyclogenesis remains a big problem. There are three main questions that could be answered, or at least mentioned, in this manuscript:

1. How is disturbance size accounted for in this methodology. Using a static 500 km radius may not be appropriate, and in some cases, small disturbances (which might not meet the proposed threshold) can still develop into tropical cyclones.
2. Do the authors believe this method would show similar results in other tropical cyclogenesis regions?
3. Is it possible to use other microwave data (i.e., AMSR-E, TRMM, SSMIS, etc.) to increase the number of passes over a particular disturbance, possibly providing a better mean TLH?

Due to the amount of grammar issues in this paper, it was often difficult to follow the authors' methodology and conclusion. It is my opinion that this manuscript should be reconsidered after major revisions. It is possible that once the paper is written more clearly, then the methodology and conclusions would present greater significance.

SPECIFIC COMMENTS:

1. Page 1496, line 21: It is not clear how the site <https://listserv.illinois.edu/archives> is related to real-time observations. The information on this site is not observations—it's products issued by various tropical cyclone warning centers.
2. Page 1498, lines 3-5: The WX-TROPL listserv is not from the National Hurricane Center. The listserv is just a compilation of tropical cyclone products issued by all tropical cyclone centers around the world. In addition, the National Hurricane Center in Miami does not have tropical cyclone forecasting responsibility for the Western Pacific Ocean, only the Atlantic and Eastern Pacific Ocean. The products that the authors

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used like came from the Japan Meteorological Agency, the Joint Typhoon Warning Center in Honolulu, or the National Weather Service Office in Guam.

3. Figure 1: the x-axis is not labeled, so it is unclear what the chart is showing.

TECHNICAL CORRECTIONS:

Numerous technical issues with English word usage, sentence structure, and clarity. There are too many to list, so it is recommended that the authors obtain some help in rectifying these issues.

Interactive comment on Atmos. Meas. Tech. Discuss., 3, 1495, 2010.

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