Hydrol. Earth Syst. Sci. Discuss., 4, S182–S183, 2007
www.hydrol-earth-syst-sci-discuss.net/4/S182/2007/

Hydrology and Earth System Sciences Discussions

Interactive comment on "Development of a window correlation matching method for improved radar rainfall estimation" *by* T. Piman et al.

Anonymous Referee #2

Received and published: 19 April 2007

General comment:

I have read the paper with great interest and find it a good contribtion to the discussion of the application of radar to measure rainfall.

A general trend around The World is that radar with very fine resolutions are put into operation. This goes both for the US and the EU. The resolutions of these radars can go down into the order of 100mx100m - but still the researchers with radars having this fine resolution are discussing the very large variabilities in rain, which even radars with the very fine resolution don't capture. In the present paper then resolutions of the radar are: 3x3, 5x5, 7x7 and 9x9 km. It appears to me that some of the radar resolutions presented in the present paper are rather big compared to other radar applications. In

the paper the area of the radar windows is in order of 10-80 km2. When the resolution of the radar is in this order of magnitude then the mean area rainfall will most likely be underestimated. I would like the authors to comment on this and comment on how the selection of the resolution has an impact on an application e.g. within flood forecasting.

Further, I would like a comment from the authors on if they think that the application of the calibrated radar in the paper, will present more accurate computed runoff in a hydrological model - i.e. compared to the application of rain gauges.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 4, 523, 2007.