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Hydrology and Earth System Sciences Discussions

Interactive comment on "A comparative analysis of two wind velocity retrieval techniques by using a single Doppler radar" *by* Hee-Chang Lim and Dong-In Lee

Anonymous Referee #1

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The authors aim to improve wind velocity retrieval techniques by using data obtained by a single Doppler radar. Though their theoretical approach has contribution to the improvement, the contents of their works are far from their purpose to study wind fields relating to weather phenomena under climate changes. The paper is recommended to include analyses using actual data and show the merit of author's methods before accepting for open-access review.

Minor comments are as follows. Line 13-19, Page965: Reason to mention the situation of only Korea on radar. Line 6-9, Page969: Reasons to calculate high elevation angles of wind component is not shown clearly. When we estimate winds of high elevation

angles by using Doppler radar, we have to consider terminal velocity of precipitation particles. The authors setting of wind field without mentioning environmental updraft and terminal velocity of precipitation particles is too ideal. Caption of Fig.4: Nothing on the left-hand side nor right-hand side. Fig.10: No denotation of (a), (b), (c) and (d) in the figure. Fig.12: Same as Fig.10. Fig.15: No denotation of (a) and (b) in the figure. Fig.18: No denotation of (a) and (b) in the figure. Nothing about (b) is mentioned in the caption.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 6, 963, 2009.