Hydrol. Earth Syst. Sci. Discuss., 7, C1165–C1166, 2010
www.hydrol-earth-syst-sci-discuss.net/7/C1165/2010/

Hydrology and Earth System Sciences Discussions

Interactive comment on "A past discharge assimilation system for ensemble streamflow forecasts over France – Part 2: Impact on the ensemble streamflow forecasts" *by* G. Thirel et al.

Anonymous Referee #2

Received and published: 17 June 2010

GENERAL COMMENTS:

The overall quality of the paper is good. The authors made a useful attempt to incorporate data assimilation into ensemble streamflow forecasts. It is also very good that the authors used various scores to assess the performance before and after data assimilation. The authors didn't focus on any single event but rather cover the entire range of hydrograph using different thresholds. I would say this is a very comprehensive study, although the study time period is a bit short to be more convincing.

SPECIFIC/SCIENTIFIC COMMENTS:

Page 2457, Introduction: A good review paper on EPS can be considered to add to your reference: Ensemble flood forecasting: A review, H.L. Cloke, F. Pappenberger / Journal of Hydrology 375 (2009) 613-626

Page 2457, Introduction L17-18: Please consider to refer to the following paper: Tracking the uncertainty in flood alerts driven by grand ensemble weather predictions He, Y, F Wetterhall, HL Cloke, F Pappenberger, M Wilson, J Freer, and G McGregor. Meteorological Applications 16(1): 91-101

Page 2464, L6 and L15: can the authors please consider replacing 'duration' or 'range' with 'lead time'?

Page 2470, L2-3: '. . ., with a perfect prediction if the resolution is zero, and a bad score if the resolution is equal to 1'. Do you mean 'reliability' here?

Page 2476, L3: what do you mean by 'global models'?

Page 2480, A6 False Alarm Rate: a, b and c are not defined in this context, or mention Table 1 in A6 for the convenience of the readers.

TECHNICAL CORRECTIONS: Page 2464, L5: '. . .decreased the most rapidly. . .' –> . . .decreased most rapidly . . .

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 7, 2455, 2010.