

Dear Drs Feng Liu and Xin Li,

As you must have seen, two referees have sent their comments on your paper and the Interactive Discussion of the latter has now been closed.

Referee 1 has remained anonymous, while Referee 2 has let his name known. He is Prof. P. J. van Leeuwen, from Reading University in the UK. While both of them say that there may be potential interest in your paper, they also say that they have found it very hard to understand what you have done (I can say the same for me). Both ask for a major revision of your paper, and both mention specific references of books and papers that deal with the question of filtering for stochastic processes.

You have already submitted a response to the comments by Referee 1. His/her comments bear mostly on the use you make of the notions of measure and scale. But concerning the notations you use, with which both referees (as well as myself) have had difficulties, I stress that the minor changes you describe in items 1-3) of part 3 of your response will not solve those difficulties. Your response must be given at a more fundamental and conceptual level.

I follow the suggestion of the referees, and I ask you to prepare a major revision of your paper. Please clarify the notions of measure and scale you introduce, and the use you make of them. The difficulties that the referees (and I) have met may result in part from inconsistencies between your vocabulary and notations and what we are used to. So please pay particular attention to the references given by the referees, and make your new version as consistent as possible with the existing literature. In particular, should you introduce notions that you consider as new, explain precisely in what they are new.

Please prepare your new version in strict agreement with the instructions you have received from the Editorial Office of *Nonlinear Processes in Geophysics (NPG)*. Your revised version will be submitted to further review, either by the two referees of the first version, or by other referees. As you must have been informed, submission of a revised manuscript does not necessarily ensure publication in *NPG*.

I thank you for having submitted your paper to *Nonlinear Processes in Geophysics*, and look forward to receiving a new version.

With regards,

Olivier Talagrand
Editor
Nonlinear Processes in Geophysics