

Two referees have now submitted their reviews of the paper, and the associated open discussion has been closed.

The authors have been given until 22 October next to submit their response to the referees. That is a rather strict deadline and I will be willing as Editor to wait for a longer time if the authors need it. I wish however to make at this stage the following comments and recommendations.

Referee 1 is rather critical of the paper, and considers that the statements on which it is based (to start with ll. 30-31 of the abstract *The increasing difficulty to enhance NWP models forecasting capabilities is caused largely by catastrophe/tipping phenomena in the atmosphere as well as the multiplicity of NWP equation solutions*) are not justified. While considering there can be material of scientific interest of the paper, the referee recommends rejection of the paper in its present state. He/she also makes specific suggestions as to a possible future line of action.

Referee 2 is less critical. He/she writes that he/she has had difficulties in understanding the paper, but also writes *There is always a concern that a paper that is radically different from the norm is not accepted because reviewers do not fully understand it. I do not want to be that reviewer, so I think we should give the authors a second opportunity with this manuscript*. The referee calls for major revisions of the paper.

At this stage, I see as Editor two possible ways of action for the authors, between which they can choose.

1 They withdraw their paper, and may then proceed as suggested by referee 1, *i. e.*, write a more complete and better structured review paper on the question of tipping points /catastrophes in the atmospheric and climatic system. And in addition, as they anticipate, write another paper, with appropriate examples, on the application of catastrophe theory in Numerical Weather Prediction. These possible papers will be processed as new papers, independently of the present paper.

2. They submit a revised version of the present paper. They will then have to give a point-by-point response to all comments and suggestions of both referees (as well as to the external comments that have been posted by Nima Zafarmomen). In case they disagree with a particular comment, or decide not to follow a particular suggestion, they will have to state precisely their reasons for that. I mention however that a revised version of the present paper, unless it has been substantially modified and widened in scope, will probably not satisfy the conditions required by *Nonlinear Processes in Geophysics* for Review articles (*i. e.*, summarizing the status of knowledge and outlining future directions of research).

A revised version of the paper will be submitted to further review.