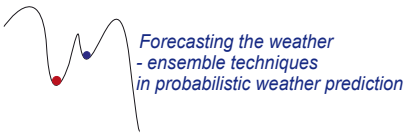
EMS Annual Meeting Abstracts
Vol. 8, EMS2011-852, 2011
11th EMS / 10th ECAM



The solar-weather system coupling: a fractal complex view

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Fractal sets have typically fine structures on arbitrarily small scales, some form of self-similarity, a fractal dimension greater than its topological and defined in a very simple way often recursively.

In previous work we explored Lorenz-type differential equations, as models of a solar dynamo. In the study Poincaré maps gave numerical evidence that the flow has an attractor with fractal structure.

We have also studied solar magnetic structures and solar storms, based on observations by Solar Dynamics Observatory. Many examples of fractal structures have been found.

In this work indicators, such as NAO, ENSO and PDO of the solar-weather system coupling, will be examined. Do they also show fractal structures?