

Interactive comment on “Behavior analysis of convective and stratiform rain using Markovian approach over Mediterranean region from meteorological radar data” by M. Lazri et al.

e. doni

emanuel.doni92@yahoo.com

Received and published: 4 June 2012

The authors analyze in this paper the chronological behavior of precipitation in the north of Algeria using a Markovian approach. The probabilistic approach examines the evolution of the rainfall phenomenon on two distinct study areas, one located at the sea and other located at the ground. The authors determine the probability precipitations and analyze their activities to discern the difference of behavior in the ground and in the sea. The approach developed in this paper allows characterizing the variability of the convective-strati-form in the Mediterranean region. The authors present clearly their

C2045

research objectives. They also describe properly the related approaches, reference literature as well as problems not solved by the previous or related work. The authors validate their model by the obtained test results, which they discuss in detail. The future research perspectives are also explored.

However, the English of this manuscript needs to be improved. Suggestions:

Page 6226, line5, in the abstract, “one is located in sea and other is located in ground.” “other” should be “the other”. Page 6226, line6“L’ONM ” is French Page 6227 line 14, “In this context, analysis of precipitation data is of great interest to interpret and predict behavior rainfall, and . . .” Should “behavior rainfall” be “behavior of rainfall” or “rainfall behavior”? Page 6227 line 8, Storms occurring provide high intensity WHAT DO YOU MEAN? page 6227, line 5, “the climate is influenced both by the tropical” should be “climate is influenced by both the tropical Page 6228, line23“installed” is French

Page 6229, line21, “this coastal radar located. . . , it records . . .” should be “this coastal radar located. . . , records . . .

page 6230, line 10, “The values of each area are obtained by equation (2), which represent the weighted average on the 15x15 pixels of the area. ” should be “The values of each area are obtained by equation (2). They represent the weighted average on the 15x15 pixels of the area. ”

page 6233, line 20, “Possible developments of the process does not depend” should be “do not”

1. It is claimed that “our contribution in this paper is to provide a better description of precipitation chronological behavior in sea and in ground, using measurements of instantaneous weather radar.” You do not show the improvement by a comparison with other models. 2. More discussions should be done about the results, limitations and application of the method. Page 6234 line 15, The results show that the probability of finding the same state at the next moment is stronger than that to find a different state

C2046

for the two areas. “stronger” be “larger” or “higher”.

Generally, the article is acceptable but space remains for improvement.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 9, 6225, 2012.

C2047