

## ***Interactive comment on “Synoptic-scale controls of fog and low clouds in the Namib Desert” by Hendrik Andersen et al.***

### **Anonymous Referee #3**

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This is a well-written article. The authors are to be congratulated.

However, It has long been known that fog and low cloud in the coastal zone of the Namib and the South African west coast are largely due to a local/meso-scale phenomenon called a coastal low. This is a weak low pressure system trapped between the western escarpment to the east and the Benguela current to the east. It only extends to just above the height of the escarpment. The diameter of the coastal low and the extent of the cold water upwelling region often determines whether fog occurs or not. An interplay between an approaching cold front and a HIGH pressure system over the continent is thought to cause the coastal low and associated fog to move southwards from the Namibian coast, down the South African west coast, around the tip of South Africa and northwards towards Kwazulu-Natal. It is unclear why the authors

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need to work at synoptic scale when the phenomenon occurs at a much smaller scale. The role of a cut-off low in fog occurrence is really surprising.

It is suggested that much more information is provided on the research that has already been conducted on the occurrence of fog along the southern African west coast.

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Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2019-924>, 2019.

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