

## ***Interactive comment on “Atmospheric rivers moisture transport from a Lagrangian perspective” by A. M. Ramos et al.***

**Anonymous Referee #4**

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My main concern with this study is the attribution of a lot of the moisture sources to atmospheric rivers. Whilst it highlights studies that discuss the connection between atmospheric rivers and extra-tropical cyclones, given this study is focussed on the moisture sources I do not think this is adequately addressed. Looking at the figures it seems to me that all they are highlight are the storm tracks, and thus further raising the question of the interaction of atmospheric rivers to extra-tropical cyclones.

It also does not discuss, nor are there any plots of, any SST fields. Given the results show that a lot of this moisture is Atlantic in origin I feel this is a significant oversight. It is with little doubt that the SST pattern will have an effect on the moisture source for ARs, and there will be a strong variation between years which also is not addressed.

Overall I feel this study does not go into enough detail to reach the conclusions drawn.

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There are a number of unanswered questions, and some oversights in the analysis that need to be addressed before they can come to the conclusions they have.

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Interactive comment on Earth Syst. Dynam. Discuss., 6, 2617, 2015.