

Some final rather cosmetic comments the authors may consider:

From the reply to rev #1:

The threshold value is an absolute value established by the user. It is not latitude dependent and it is not determined by computing percentiles, at least in the algorithm itself. However, we recommend computing them beforehand to decide the threshold. For instance, we have chosen an IVT threshold of 300 kg m⁻¹ s⁻¹, based on the 99th percentile value of the IVT on L1 (260 kg m⁻¹ s⁻¹). As for the L1 question, detection line 1 extends over a wide range of latitudes but we do not think that any of them are more represented than the others. In fact, this methodology is also applied by other ARDTs. In the figure below, we show the distribution of the mean impact latitude of the identified ARCI ARs (similar results were found for the other experiments), which turned to be more or less even.

I agree there is at least no significant increase with the higher latitudes up to 44°N. However, what would be if L1 would extend up to 55 to 65 °N. Would you recommend then the use of latitude dependent values to detect Ars impacting the UK or Norway? If so, you may consider mentioning this.

Line 64: Nevertheless, it should be taken into account that the spatial tracking given a fixed time step method may not be suitable for data obtained from RCMs whose spatial limits are very close to the detection area. This is the case for most of the RCM runs, as they are primarily land-focused."

That's true. However, not the limited size of domain may be problematic but also the fact that ARs loose moisture after landfalling which makes so that mapping over land methods with fixed time stepping deliver very uncertain results.

In my point of view Appendix D1 could be omitted. It is used in the main text to identify which of the aerosol treatment experiment is closest to observations. But a general statement about this would likely require more than two cases studies.