

Interactive comment on “A Lagrangian analysis of the present-day sources of moisture for major ice-core sites” by A. Drumond et al.

Anonymous Referee #1

Received and published: 16 February 2016

This is an informative contribution to the body of the literature on the moisture sources for ice-core sites. The authors implement a lagrangian approach (the FLEXPART model and ERA-Interim data) to identify the moisture sources of fourteen ice-core sites. From the point of view of this reviewer the results are interesting and useful for being exploited in the future, especially through the comparison with isotopic signals. On the other hand the paper is well structured and is presented in a clear form. I recommend to accept the paper for publication with minor revisions.

Specific comments

*Some ice core sites are widely known (as Vostok) but not all of them, at least for this reviewer. Could the authors add a bibliographic reference for the data of table 1?.

*The applicability of the method for computing moisture sources has been widely

C1

demonstrated in many regions around the world, even for reduced regions. In this work, besides the fact that the horizontal resolution is 1° and that there are areas with low data density (as Antarctica), the sites are generally located in high altitudes. How many particles are typically found in these fourteen locations?.

Technical corrections

*In page 8 (summary), lines 1-2 and lines 7-9 are repeated.

Interactive comment on Earth Syst. Dynam. Discuss., doi:10.5194/esd-2015-97, 2016.