

Interactive comment on “Numerical experiments on isotopic diffusion in polar snow and firn using a multi-layer energy balance model” by Alexandra Touzeau et al. A. Kerkweg kerkweg@uni-bonn.de Received and published: 7 November 2017

Dear authors, In my role as Executive editor of GMD, I would like to bring to your attention our Editorial version 1.1: <http://www.geosci-model-dev.net/8/3487/2015/gmd-8-3487-2015.html> This highlights some requirements of papers published in GMD, which is also available on the GMD website in the ‘Manuscript Types’ section: http://www.geoscientific-model-development.net/submission/manuscript_types.html.

In particular, please note that for your paper, the following requirements have not been met in the Discussions paper:

- "The main paper must give the model name and version number (or other unique identifier) in the title."
- "If the model development relates to a single model then the model name and the version number must be included in the title of the paper. If the main intention of an article is to make a general (i.e. model independent) statement about the usefulness of a new development, but the usefulness is shown with the help of one specific model, the model name and version number must be stated in the title. The title could have a form such as, “Title outlining amazing generic advance: a case study with Model XXX (version Y)”.
- "All papers must include a section, at the end of the paper, entitled ‘Code availability’. Here, either instructions for obtaining the code, or the reasons why the code is not available should be clearly stated. It is preferred for the code to be uploaded as a supplement or to be made available at a data repository with an associated DOI (digital object identifier) for the exact model version described in the paper. Alternatively, for established models, there may be an existing means of accessing the code through a particular system. In this case, there must exist a means of permanently accessing the precise model version described in the paper. In some cases, authors may prefer to put models on their own website, or to act as a point of contact for obtaining the code. Given the impermanence of websites and email addresses, this is not encouraged, and authors should consider improving the availability with a more permanent arrangement. After the paper is accepted the model archive should be updated to include a link to the GMD paper."

Thus please add the models name (SURFEX/Crocus ?) and the version number to the title of your article. Additionally, it would be good if the explicit version described in this article would be archived in a permanent archive providing a DOI (e.g. Zenodo). Yours, Astrid Kerkweg

We apologize for not including the model references in the article title. We will add the relevant information to the title:

l. 1: ‘Numerical experiments on vapor diffusion in polar snow and firn and its impact on isotopes using **the multi-layer energy balance model Crocus in SURFEX V8.0**’

We will also update our code availability section. The model SURFEX is open-source and available online after free registration through the platform cnrm-game-meteo.fr. Therefore it is not necessary to provide a copy on Zenodo.

We have updated the code availability section:

l. 762: 'The code used in the manuscript is a **development of the open source code for SURFEX/ISBA-Crocus model based on version V8.0, hosted on an open git repository at CNRM (https://opensource.umr-cnrm.fr/projects/surfex_git2)**. Before downloading the code, you must register as a user at <https://opensource.umr-cnrm.fr/>. You can then obtain the code used in the present study by downloading the revision tagged 'Touzeau_jan2018' of the branch touzeau_dev (last access: January 2018). The meteorological forcing required to perform the runs is available as a supplement.'

***** Interactive comment on Geosci. Model Dev. Discuss.,
<https://doi.org/10.5194/gmd-2017-217>, 2017.