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Interactive comment on "Subglacial drainage patterns of Devon Island, Canada: Detailed comparison of river and tunnel valleys" *by* Anna Grau Galofre et al.

A. Grau Galofre

agraugal@eos.ubc.ca

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I would like to thank Stephen Livingstone for this very detailed and constructive revision, which we believe will greatly enrich the manuscript. My coauthors and I agree on all the general revisions you proposed, and after considering the changes and literature sources you suggested, our plan is to modify the manuscript in the following way:

(1) Change the term 'tunnel valleys' to 'subglacial meltwater channels' throughout the manuscript

(2) Addition of literature relevant to the study

a. We will dedicate a subsection to the characterization of the meltwater channels as subglacial or lateral following the study by Greenwood 2007.

b.In the discussion section, we will also compare these features with meltwater subglacial channels identified in other parts of the globe, as suggested, including tunnel valleys. In particular, we will consider the length scales (longitude, cross section, and depth), presence and size of potholes, and the network geometry.

(3) Results subsection with a more detailed, qualitative description of the subglacial meltwater channels.

a. For this description, we will follow the structure used in Sugden 1991 and consider first the network scale, then the dominant channel, and then the tributaries. Here we will discuss spacing, although a detailed consideration of this particular observation will be the focus of another study.

b. As suggested, we will also consider in more detail the anabranching structure of the networks. We will make further observations from LiDAR and DEM data of the depth variation between the anabranching channels and include the time-dependence discussion suggested. We will consider adding a figure with cross sectional profiles along the anabranching section.

c. We will add to the paper the description of overdeepenings and potholes (with an image containing examples), and add details regarding the presence or absence of hanging walls and chutes in the channel junctions.

d. We will also include two figures with panels showing (1) images of the cross section at the site of channel initiation and downstream (i.e., >10 channel widths), and (2) cross sectional profiles of rivers and subglacial meltwater channels. This should address the lack of details regarding headwall geometry, cross sectional shape and evolution.

(4) Addition of a summary table, which will include the different channel networks visited (columns) and the presence/ absence of features characteristic of subglacial melt-

water channels (rows, i.e., undulations, stepped profile, concave profiles, potholes/ overdeepenings, etc.)

(5) Assess other minor specific comments.

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