Review **tc-2022-90** *"Channelised, distributed, and disconnected: Spatial structure and temporal evolution of the subglacial drainage under a valley glacier in the Yukon"* by Rada Giacaman and Schoof

This paper proposes a comprehensive analysis of a large number of pressure measurements performed from 311 boreholes drilled between 2008 to 2015 on a Yukon glacier. This constitute a unique dataset with up to 157 simultaneously working sensors. This paper presents in detail the methodology adopted to compare and group these sensors as a function of their response to surface input melt, with the aim of drawing some pictures of the basal hydrology network. These results support the traditional view of a distribute system early in the melt season that transforms into a more channelized one, but suggesting also an highly heterogeneous distribution of the basal diffusivity as well as the existence of disconnected areas. This paper is overall very well written and easy to follow, the figure are clear and to the point and the methods very rigorous. I would suggest the authors to emphasize a bit more the uniqueness of the dataset they have acquired alors these years of repeated field measurements. If I am correct, this is the third paper based on this dataset, and I still think that few more papers could certainly comme out, continuing exploring its different aspects? This could be emphasized at the end of the present paper?

I have only minor remarks that are listed below.

Minor remarks:

- page 3, line 18: about the winter measurements, if most boreholes display pressure near overburden pressure for several months, one should expect high or even increasing surface velocity? Do you have observation of surface velocity all around the year that show that? May be this link with the surface velocity measurements (as mentioned in 2.1) even if I understand you don't have surface velocity in 2015?
- page 3, line 19: which size are expected to be this "water pockets"? The wording make me think to a feature that as similar vertical and horizontal dimensions, whereas I expect more a flat feature? May be "water patches" would be more appropriate here?
- page 3, line 20: sometime you are using upper case after a colon, sometime not. Here I would said that a starting a new sentence would work better as the second point is at the beginning of a new sentence (even a new paragraph).
- Figure 1: cases b, c, d are not steady, in comparison to a that can be steady. May be it should be mentioned in the caption. Also, how long do we expect these unsteady situations to last? Give order of magnitude.
- page 4, line 3: missing a verb in the last part of the sentence?
- page 4, line 12: it is obvious, but may be you should mention here that you are measuring water pressure in these boreholes?
- page 11, line 7: how sensitive are your results to this choice of a 6-day time window?
- Figure 7, caption: for c, you should mention that f is defined in Figs. 10 and 11.

- page 16, line 11: Is that that in winter the pressure is not showing any daily variations and more a monotonic signal? Any suggestion how the connection between the different boreholes could anyway be qualified?
- page 18, line 20: in this chapter?
- page 20, line 6: a small increase
- page 22, lines 12-14: don't really get the point of this isolated paragraph with the surrounding ones.
- page 26, line 11: section 2.6
- page 27, line 12: Fig. 5,
- page 32, line 23: resolution of our data?
- page 34, line 35: May be you could conclude by a bit of prospective? Which new measurements could allow a better understanding and complement these measurements? Array of seismometers? What more could still be inferred from this existing dataset?