

The current version of the manuscript ‘Operational and experimental snow observation systems in the upper Rofental: data from 2017 to 2023’ describes a dataset collected at three sites in the Rofental in the Austrian Alps. The dataset contains standard measurements as well as some more experimental sensor setups for snow measurements, e.g., to record blowing snow events at one site.

The manuscript extends the ESSD paper ‘The Rofental: a high Alpine research basin (1890–3770ma.s.l.) in the Oetztal Alps (Austria) with over 150 years of hydrometeorological and glaciological observations’ by Strasser et al. 2018. Moreover, it was already submitted in a previous version to TDC in 2021 with a dataset until 2020, which was, however, at this time too short. This dataset was now extended with three more years, which makes the dataset in my opinion sufficiently long for publication in ESSD.

In general, the Rofental research catchment is a great site for high-alpine research. As such freely available datasets are still very scarce, this dataset can be very helpful for snow monitoring and the development and testing of snow models in high-alpine regions. The dataset is easily accessible and is fully described in the manuscript; data gaps are mentioned and discussed.

The manuscript in its current version has been significantly improved by the reviewing process in 2021 compared to its previous version (not published).

*Thank you very much for reviewing our manuscript! In the following we answer the questions and describe how we will improve the manuscript:*

I have only a few minor points:

p.7, l.160f: ‘The station comprises a large set of operational snow cover sensors’. In this context, the word ‘large’ seems to be a bit too much. → ‘The station comprises several operational snow cover sensors’

*We agree on this, and we will change the sentence accordingly.*

p.10, Figure 4: Please indicate a line at the year 2017 as the dataset for this paper starts in this year.

*We will insert an indicating line in the Fig. 4.*

p.11, Figure 13 (and further figures): It is good that you keep the same colour for individual stations throughout the manuscript. However, yellow might be a too light colour.

*We agree on this. We will revise the color schemes throughout the manuscript and avoid overly light colours.*

p.12, l. 262: Mention that the season 2019/2020 is an example in sub-section 7.2. Why do you not show further seasons?

*We will follow the suggestion and extend the analysis and include more seasons of snow temperature profiles in this section.*

p.17, Figure 11: I would choose other colours here than the colours, you chose for representing data of specific stations.

*We fully agree on this, and we will change the colours here so that they differ from the station color coding,*

p.18, 1.369: ‘...over six winter seasons’. This is not the case for all sensors. Please add this information also in the conclusions.

*We will change the respective sentence accordingly.*