The manuscript titled **'High Temporal Resolution Records of the Velocity of Hansbreen, a Tidewater Glacier in Svalbard'** presents a significant record and of glacier surface ice flow velocities, collected in situ using GNSS technology from 2006 to 2019. The study focuses on the Hansbreen glacier in Svalbard and provides a unique viewpoint on the movement patterns of this tidewater glacier. Here's an overall assessment:

The manuscript contributes to the field of glaciology by providing a wide-ranging dataset of ice-flow velocities. It addresses the significance of understanding glacier dynamics in the context of climate change and the need for in situ measurements. The manuscript is well-structured and comprises relevant background information, a detailed study area, an explanation of the methodology, and clear findings. The manuscript presents a well-documented dataset with a high temporal resolution, which is one of its primary strengths. The use of GNSS technology and the inclusion of accuracy assessments contribute to the reliability of the data. The study area, Hansbreen, is a well-studied tidewater glacier in Svalbard, making it relevant for broadening the understanding of glacier dynamics and their response to climate change. The preprint provides the stake network, GNSS processing, and how annual and seasonal velocities were calculated, ensuring that readers can comprehend the methodology. Relevant prior studies are cited throughout the manuscript, enhancing the paper's credibility and grounding it in the existing body of glacier research.

Recommendation to the Editor:

Based on the review, it is recommended to consider the manuscript for acceptance with minor revisions. The study provides a sound methodology and meaningful perceptions into glacier dynamics. The minor revisions primarily relate to improving the manuscript's organization, discussing data analysis implications, and emphasizing the relevance of the findings within the broader field of glaciology and climate science.

The only issue is that 15~30 minutes observations using GNSS can not always get fixed solutions for the baseline processing, which will lead to lower spatial accuracy. In order to get more robust positioning results, a little bit longer observation period (such as 40 minutes) is recommended for future field GNSS measurements, especially for the stakes far away from the base GNSS station.

As to the dataset publicly available through the Zenodo repository, only processed stake locations are presented. If the original or RINEX data of GNSS were available, we can re-calculate the stake positions with other software besides Leica GeoOffice, then more robust solutions are possible.

Improvement Suggestions in the manuscript

❖ While the introduction highlights the significance of long-term in situ measurements, it lacks a clear statement of the specific research objectives or questions the study aims to address. How about the sampling rate in field GNSS measurements?

❖ Consider providing more context about why Hansbreen in Svalbard is a suitable study area and how it fits into the broader field of glaciology. Explicitly state the research gap that this study intends to fill.

❖ The transition from general background information to the focus on Hansbreen could be made smoother.

❖ The final sentence about 'our understanding of the physics of glacier motion' is to some extent unclear. Clarify what specific visions this study may contribute to this understanding.

❖ Provide more context about the significance of these geographical and physical characteristics in section 2. Study area. How do these details relate to the objectives of the study or the broader field of glaciology?

❖ Include geographic coordinates in study area section and to locate Hansbreen on a map.

❖ It would be helpful to provide more context about why specific stakes were surveyed at different time intervals and how these intervals were determined. What impact do these intervals have on data accuracy and interpretation?

❖ Mention how the placing of stakes that shifted significantly was addressed in data analysis. Were corrections made to account for these shifts?

❖ When referencing previous studies (Błaszczyk et al., 2019b; W GMS), include more specific details about the findings or relevance of these studies in the context of this manuscript methodology.

❖ The continuous operation of the GNSS instrument on stake 4 is noteworthy, but it would be beneficial to explain why this particular stake required continuous monitoring and the specific insights gained from it.

❖ The information about measurement times (measurements at midnight) is mentioned but could be linked to the objectives or data analysis.

❖ When discussing the challenges related to discontinuities in stake position surveys, consider briefly mentioning how these issues were addressed or mitigated to maintain data accuracy.

❖ Given that stakes 11 and K have unique flow directions, consider explaining the relevance of this information in the broader understanding of glacier dynamics in the region.

❖ When discussing the challenges and limitations of the dataset, consider elaborating on how these challenges might impact the dataset's use and interpretation.

❖ Highlight the practical implications of the dataset, such as its applications in tuning numerical models, validating satellite-derived ice flow fields, and assessing short-term and seasonal glacial processes, more clearly.