

The manuscript titled “*InSAR Svalbard Ground Motion Service: Observing Surface Displacements in the High Arctic*” presents an operational InSAR-based platform for monitoring ground displacement in Svalbard using Sentinel-1 data. The topic is highly relevant for Arctic geohazard and permafrost research, and the development of an open-access InSAR service for Svalbard represents an important contribution to the community. The paper is concise and generally well structured. However, the manuscript currently lacks sufficient methodological detail to fully support several of the scientific interpretations presented. I therefore recommend publication after **minor** revision.

Comments:

1. **Lines 79 – 94 (Method):** the present description of the methodology is insufficiently detailed. The two complementary SBAS processing strategies that were applied to generate two types of InSAR Svalbard products must be described in greater depth, with a full account of the strategies and the type of results obtained.
2. **Lines 102 – 112 & 128 – 136 (Results):** the authors discuss the interpretation of displacement signals. These signals include thaw subsidence, rock glaciers, solifluction, and permafrost creep. However, the absence of quantitative validation against independent datasets or report is evident.
3. **Lines 149 – 158 (Potential applications):** the authors discuss the potential of the data to support several operational and research activities. The following list details the relevant applications of the current InSAR Svalbard products: It is recommended that the author provide illustrative examples of research papers on each of these pertinent applications.

I can suggest these papers:

- *Chen, J., Wu, Y., O'Connor, M., Cardenas, M. B., Schaefer, K., Michaelides, R., & Kling, G. (2020). Active layer freeze-thaw and water storage dynamics in permafrost environments inferred from InSAR. Remote Sensing of Environment, 248, 112007.*
- *Poggi, F., Nardini, O., Fiaschi, S., Montalti, R., Intrieri, E., & Raspini, F. (2025). Multi-Sensor Satellite Analysis for Landslide Characterization: A Case of Study from Baipaza, Tajikistan. Remote Sensing, 17(12), 2003.*
- *Cigna, F., Banks, V. J., Donald, A. W., Donohue, S., Graham, C., Hughes, D., ... & Parker, K. (2017). Mapping ground instability in areas of geotechnical infrastructure using satellite InSAR and Small UAV surveying: A case study in Northern Ireland. Geosciences, 7(3), 51.*
- *Becattini, F., Poggi, F., Tanteri, L., Confuorto, P., Del Soldato, M., Moretti, S., & Raspini, F. (2025). Open-source InSAR data for the characterization of geomorphic processes at different scales. Geografia Fisica e Dinamica Quaternaria, 48(1-2), 103-119.*

4. **Line 146:** The designation of chapter “*6 Potential applications and future perspectives*” should be changed to “*5 Potential applications and future perspectives*”.