



Supplement of

IT-SNOW: a snow reanalysis for Italy blending modeling, in situ data, and satellite observations (2010–2021)

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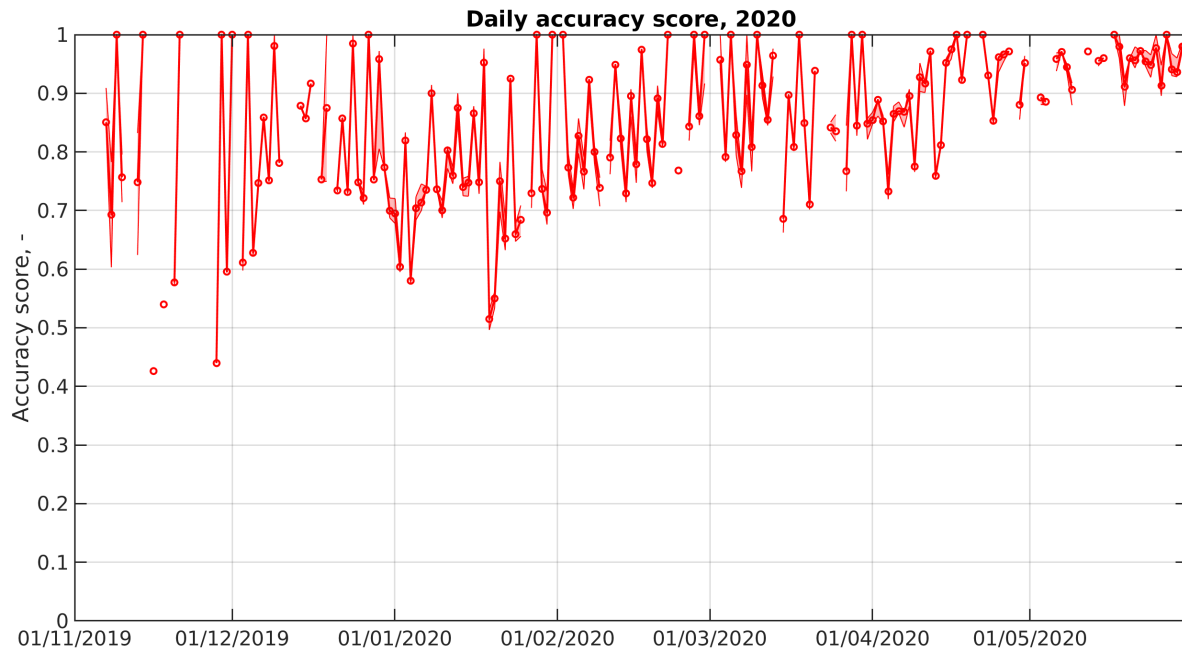


Figure S1. 2020 daily accuracy scores for Sen2Cor-based, daily snow-covered area maps from Sentinel-2 as employed in S3M Italy. Accuracy was computed according to Piazzini et al. (2018) as the proportion of true snow-no-snow classification over total classification. The red band represents score variability for a range of thresholds between 5 and 30 cm used to classify snow vs. no-snow conditions in in-situ snow-depth sensor data (Parajka and Blöschl, 2006; Da Ronco et al., 2020).

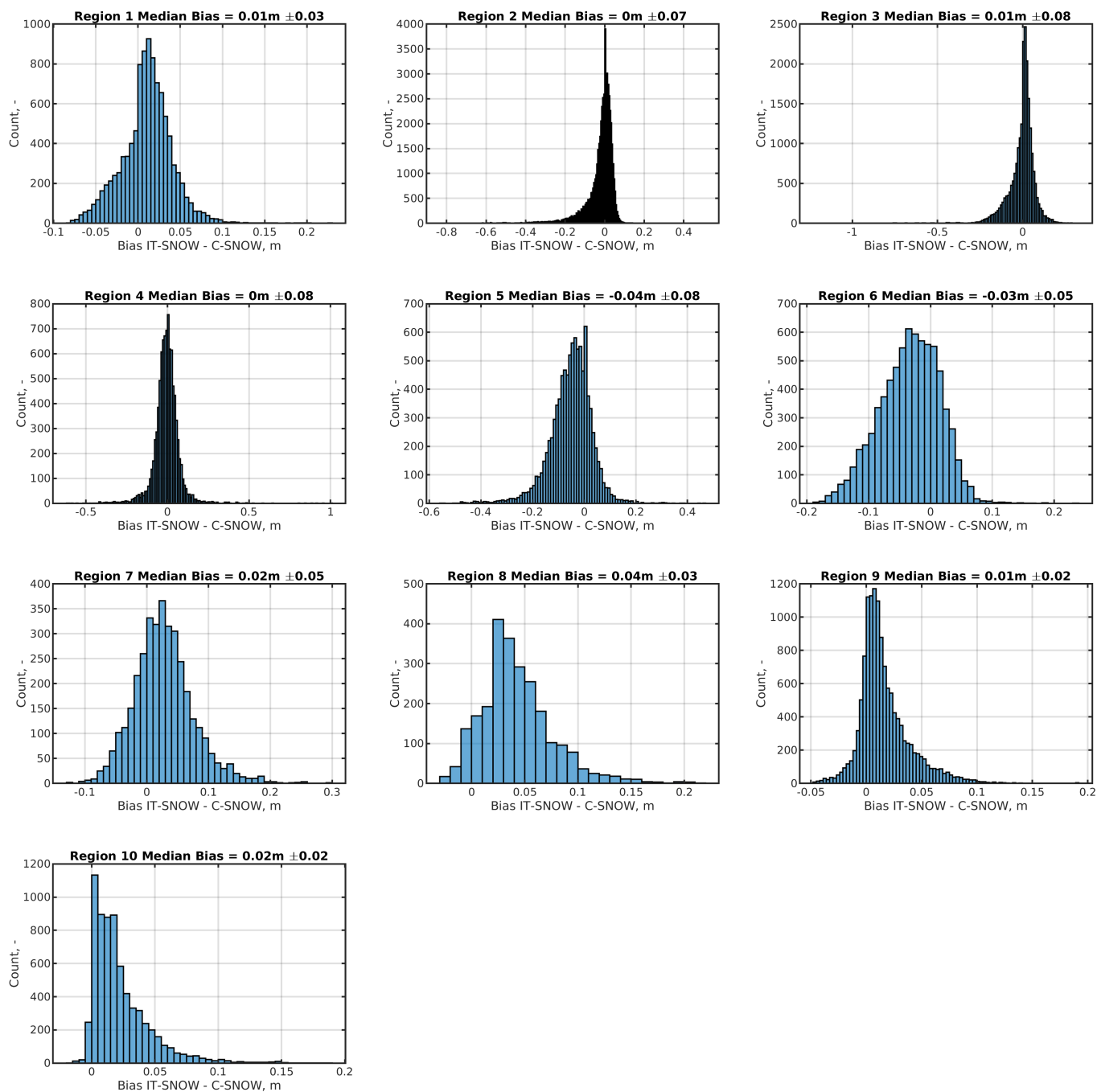


Figure S2. Frequency distribution of pixelwise bias between IT-SNOW snow depth and the Sentinel-1 C-SNOW dataset, aggregated by snow homogeneous regions (see Figure 4 in the main text)

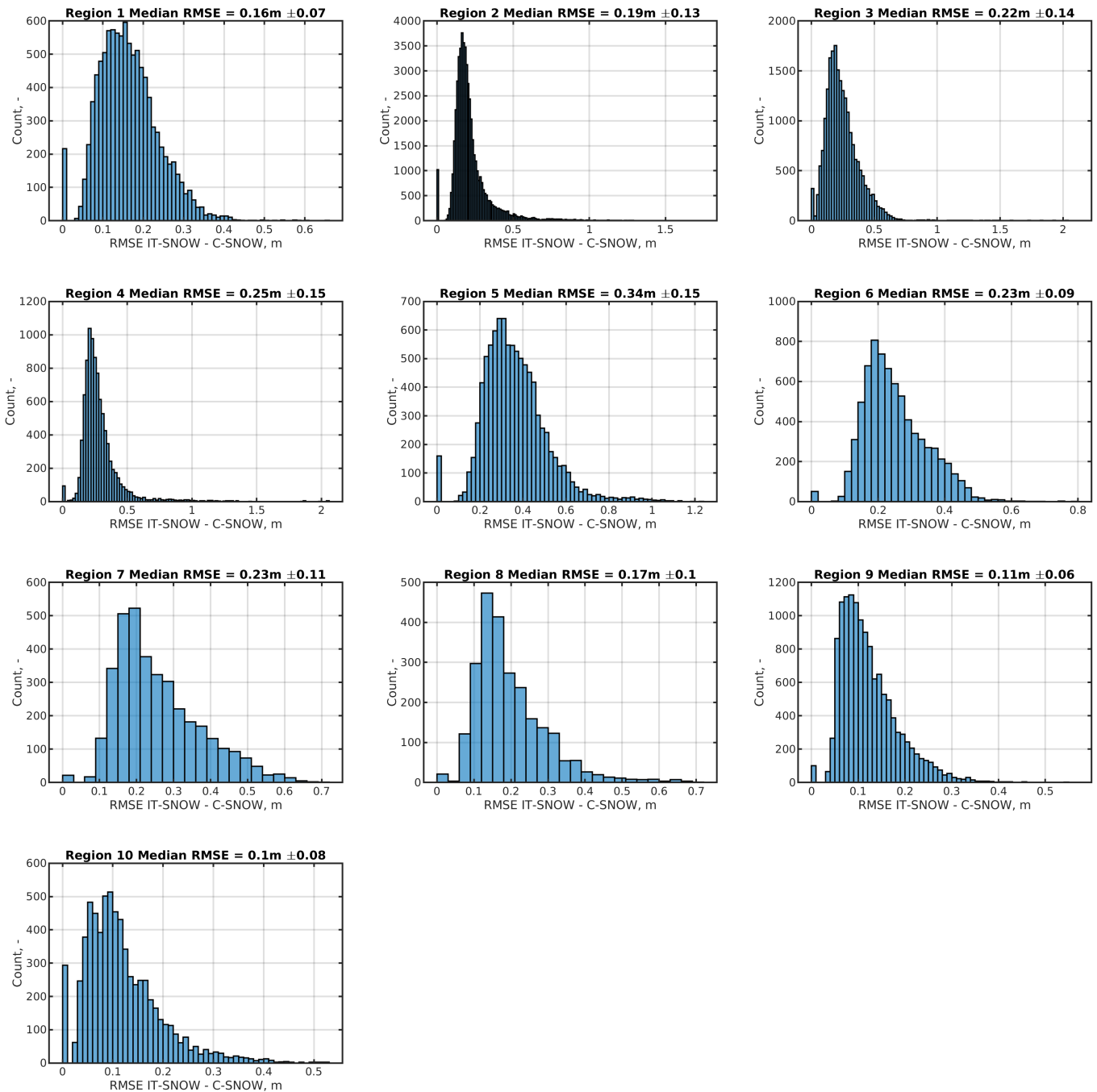


Figure S3. Frequency distribution of pixelwise Root Mean Square Error (RMSE) between IT-SNOW snow depth and the Sentinel-1 C-SNOW dataset, aggregated by snow homogeneous regions (see Figure 4 in the main text)

References

- Da Ronco, P., Avanzi, F., De Michele, C., Notarnicola, C., and Schaepli, B.: Comparing MODIS snow products Collection 5 with Collection 6 over Italian Central Apennines, *International Journal of Remote Sensing*, 41, 4174–4205, <https://doi.org/10.1080/01431161.2020.1714778>, 2020.
- 5 Parajka, J. and Blöschl, G.: Validation of MODIS snow cover images over Austria, *Hydrology and Earth System Sciences*, 10, 679–689, <https://doi.org/10.5194/hess-10-679-2006>, 2006.
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