Supplementary material of: "Lidar-Based Snow Monitoring from Aerial Lifts: Gondola Deployment in the Austrian Alps"

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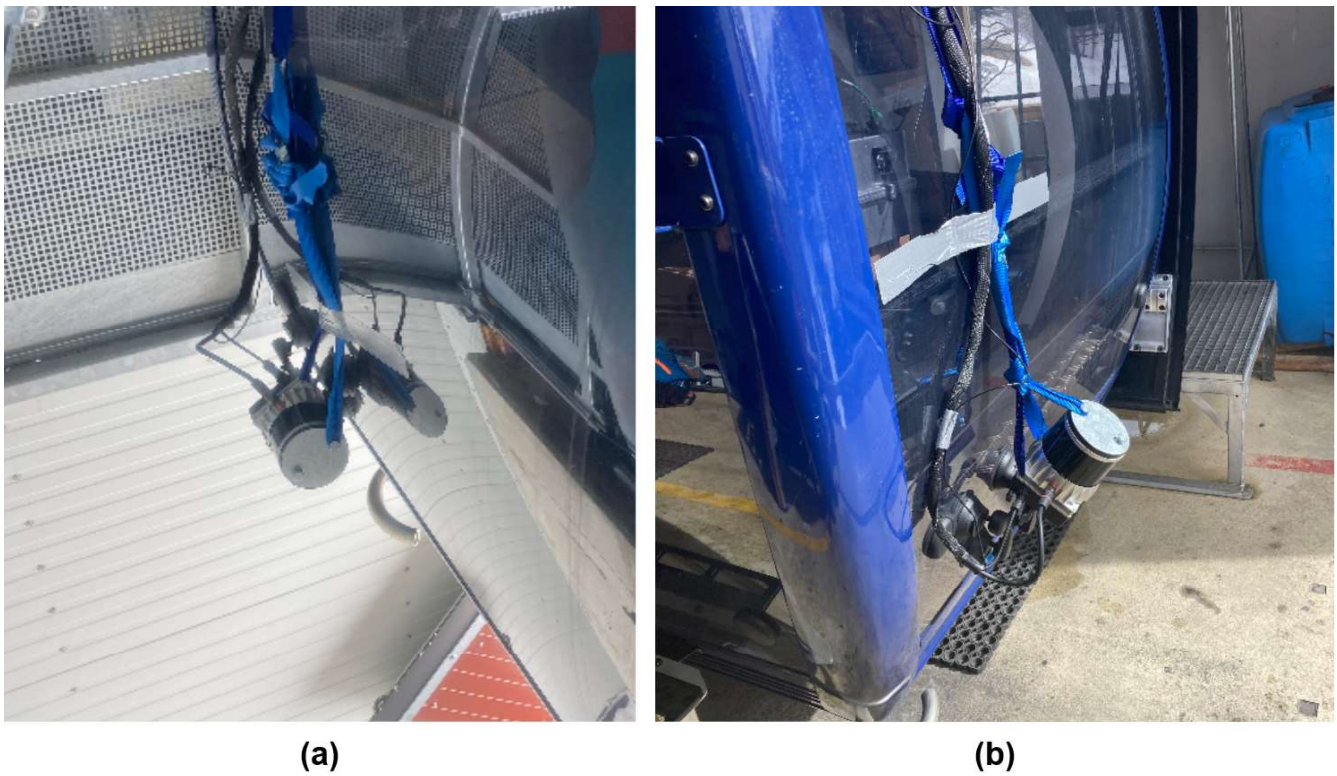

Fig. S1. MOLISENS lidar sensor mounting styles: (a) Vertically scanning lidar, used for the first four measurements; (b) Horizontally scanning lidar, used for the final two measurements.

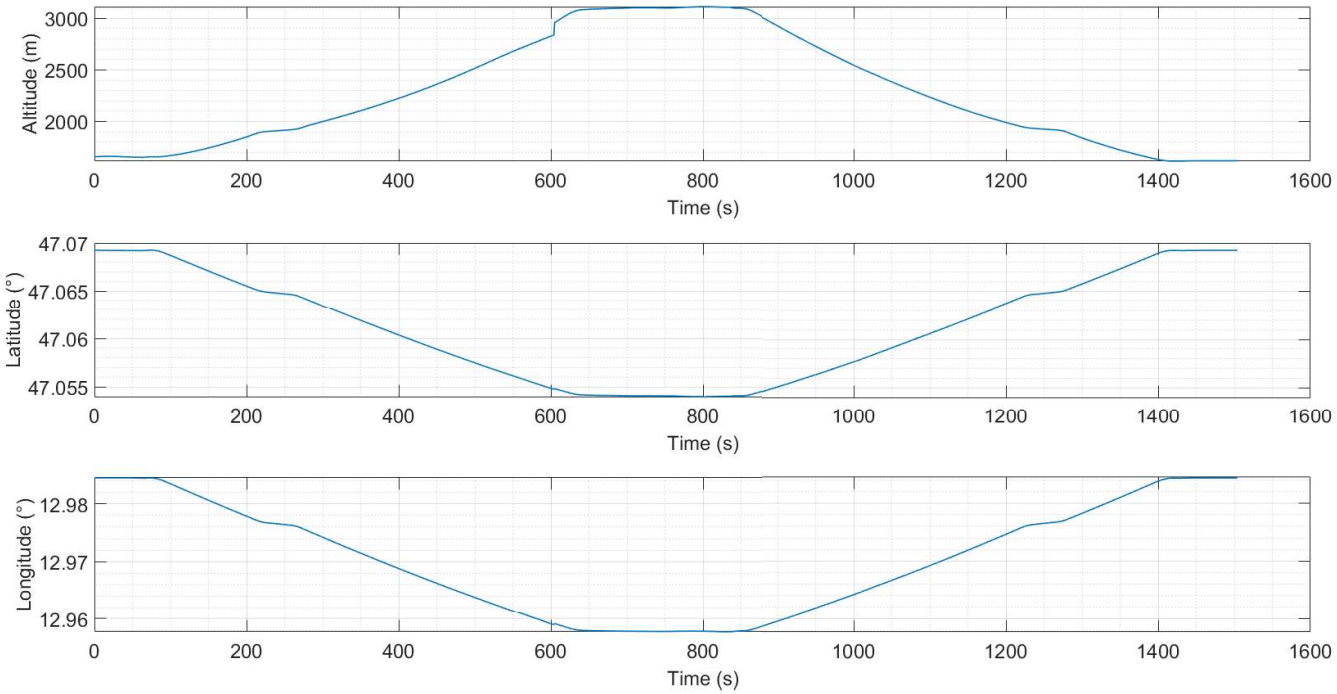

Fig. S2. GNSS data with lidar mounted horizontally (measurements M5 and M6).

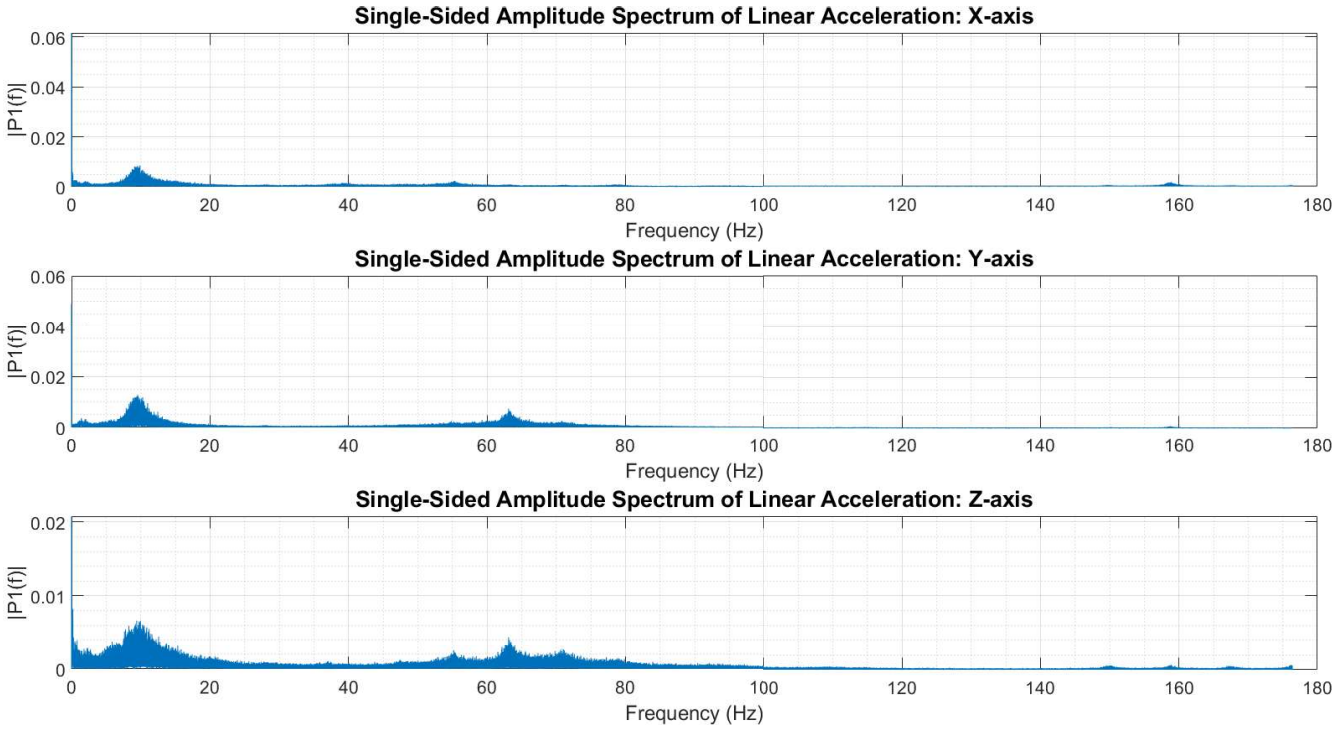

Fig. S3. FFT of the linear acceleration for the x-, y-, and z-axis with the lidar mounted horizontally (measurements M5 and M6). See Fig. 3 for the alignment of the x-, y-, and z-axis.

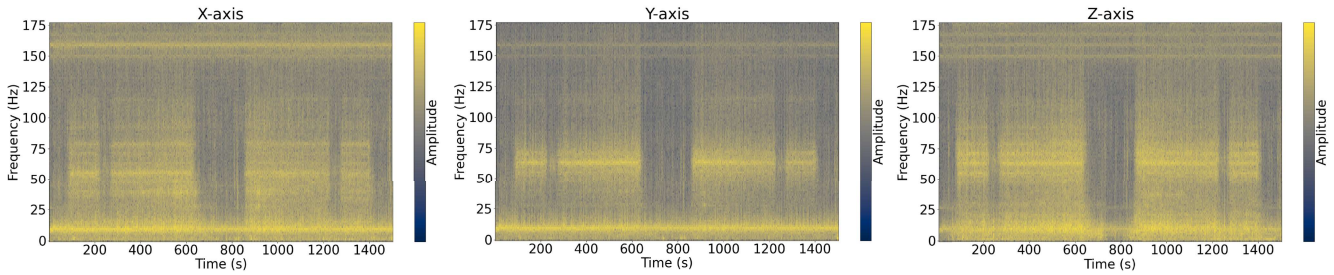

Fig. S4. Spectrogram of the linear acceleration for the x-, y-, and z-axis with the lidar mounted horizontally (measurements M5 and M6). See Fig. 3 for the alignment of the x-, y-, and z-axis.

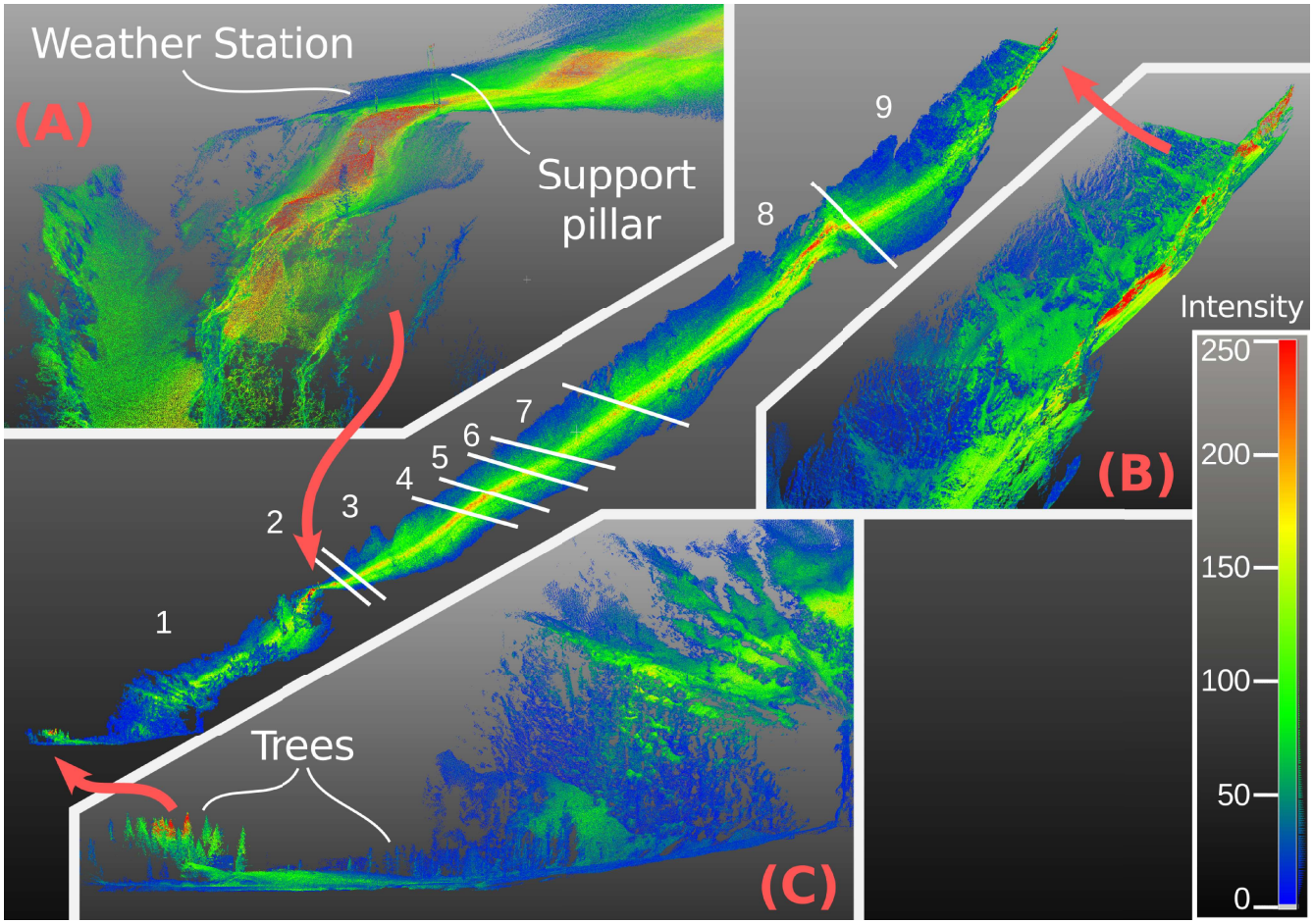

Fig. S5. Point cloud of the survey area viewed from the side consisting of 9 generated segments. Detail A) shows the section around the support pillar standing on top of a steep cliff next to a weather station. Detail B) shows the top part near the summit station and detail C) the valley part with trees clearly visible. Points are colored by returned laser intensity as recorded by the lidar (theoretical range of returned intensity is 0-65535; range recorded and displayed is 2-3217 with everything above 250 colored in red).

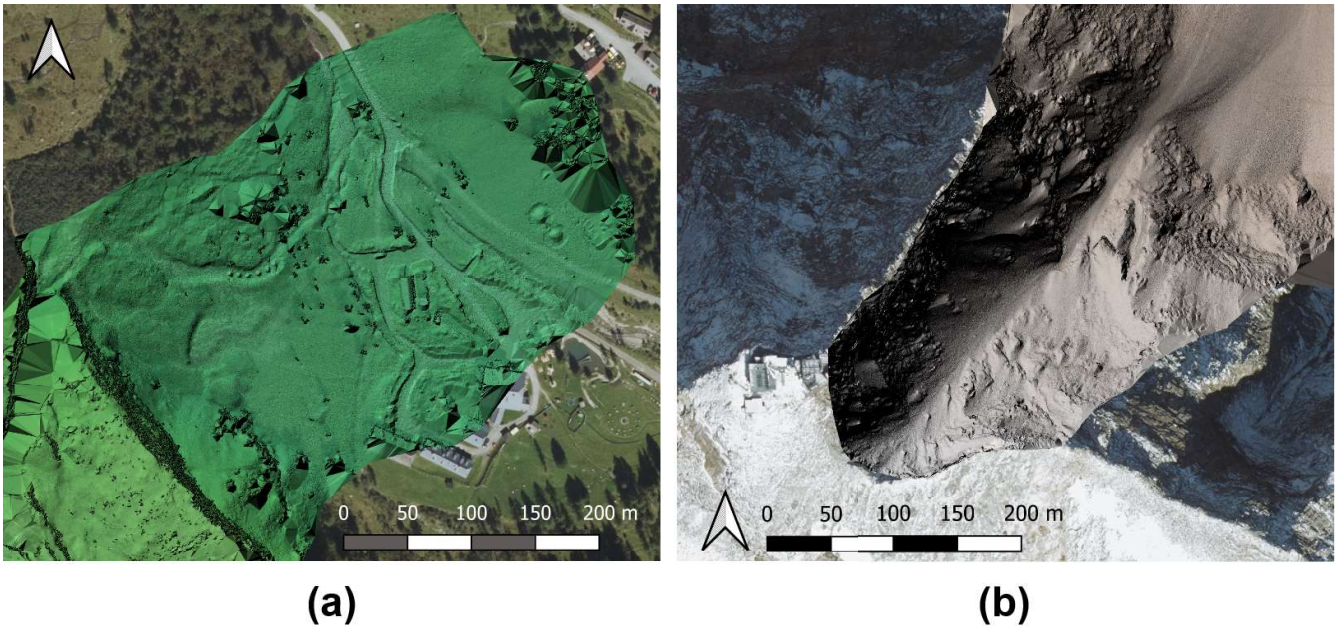

Fig. S6. 3D SLAM generated and subsequently georeferenced (by translation and scaling along x-, y- and z-axis) point cloud, with an aerial orthophoto from 2022 with 30 cm resolution from geoland.at as a reference: (a) part near the valley station; (b) part near the summit station.