

ASP Report

WV03_20220417_1040010074793300_1040010075633C00

Processed on: 2024-04-14 17:55:43

Processing Parameters

Reference DEM:

/Users/ben/Dropbox/UW_Shean/COP/COP30_utqiagvik_lzw-adj_proj.tif

Bundle Adjust (0 hours and 7 minutes):

```
bundle_adjust -t dg --weight-image /nobackup/bpurintl/data/utqiagvik/WV/utqiagvik_wv_EE/2022/utqiagvik_10m_UTM4N_seaice_mask_0and1.tif --datum WGS84 --individually-normalize --normalize-ip-tiles --ip-per-tile 50 --matches-per-tile 10 --min-triangulation-angle 10 --mapproj-dem /Users/ben/Dropbox/UW_Shean/COP/COP30_utqiagvik_lzw-adj_proj.tif --propagate-errors --tri-weight 0.1 --tri-robust-threshold 0.1 --camera-weight 0 1040010074793300.r100.tif 1040010075633C00.r100.tif 1040010074793300.r100.xml 1040010075633C00.r100.xml -o ba/ba_50ips_10matches_dg_weight_image --threads 28
```

Stereo (3 hours and 41 minutes):

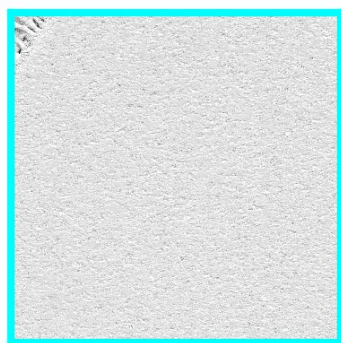
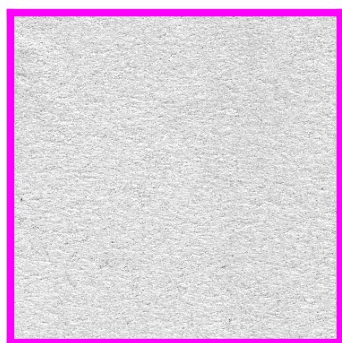
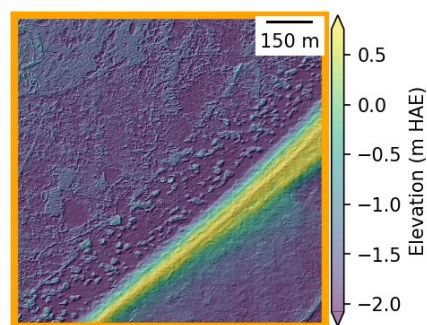
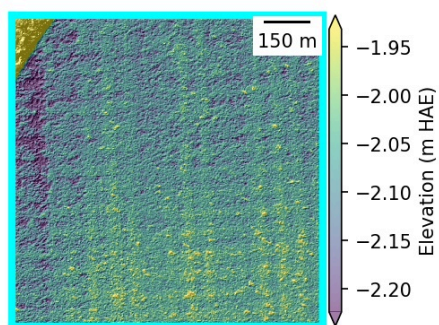
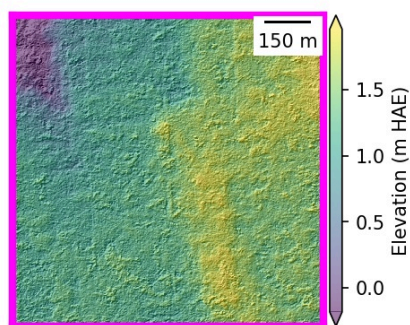
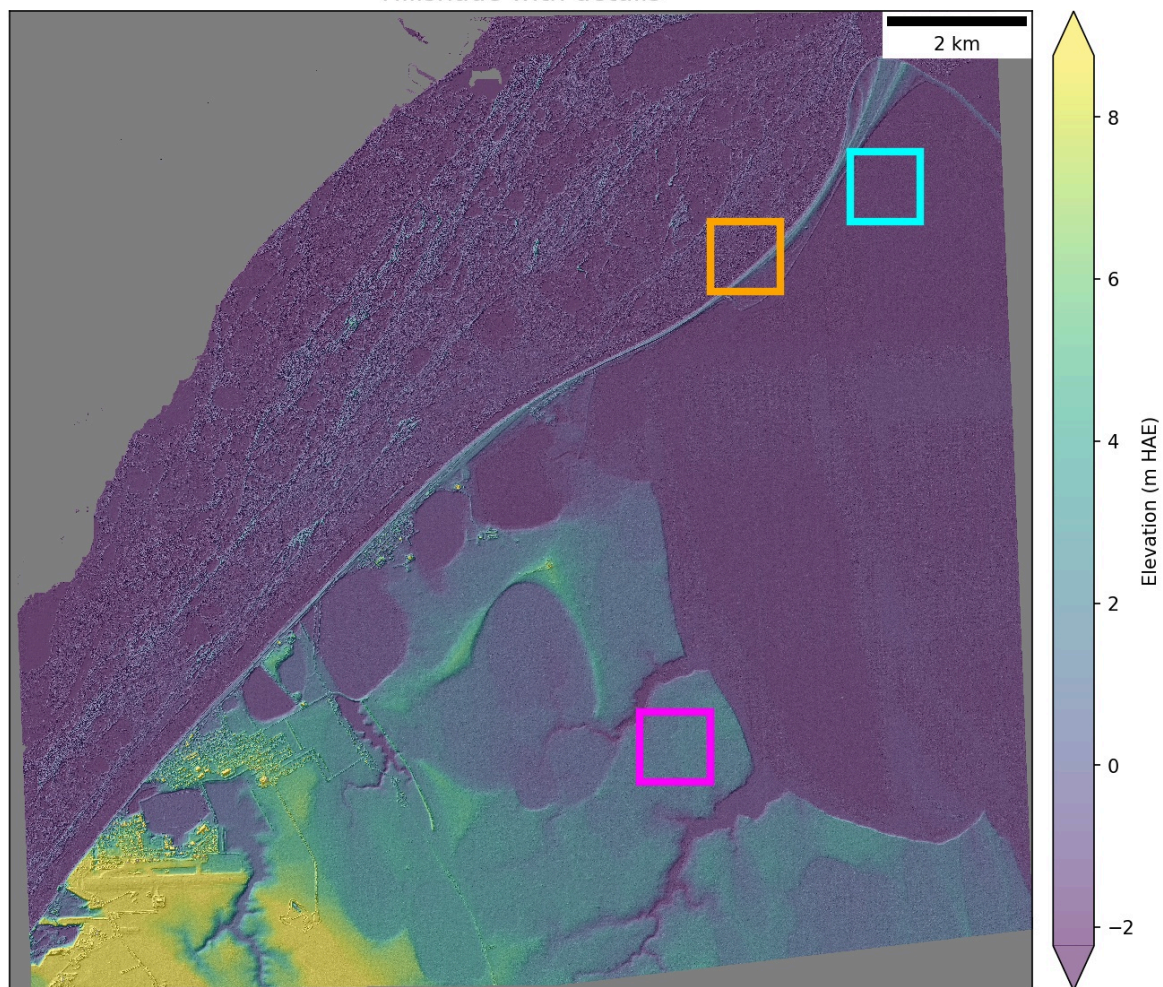
```
stereo --stereo-algorithm asp_mgm --corr-kernel 7 7 --subpixel-kernel 15 15 --cost-mode 4 --subpixel-mode 9 --corr-max-levels 5 --filter-mode 1 --erode-max-size 0 --individually-normalize --corr-memory-limit-mb 5000 --sgm-collar-size 256 --corr-tile-size 1024 --alignment-method none --corr-seed-mode 1 --compute-point-cloud-center-only --threads 24 1040010074793300_ortho_0.35m.tif 1040010075633C00_ortho_0.35m.tif ba/ba_50ips_10matches_dg_weight_image-1040010074793300.r100.adjusted_state ba/ba_50ips_10matches_dg_weight_image-1040010075633C00.r100.adjusted_state stereo_ba_50ips_10matches_dg_weight_image__ortho_0.35m_mode_asp_mgm_spm /Users/ben/Dropbox/UW_Shean/COP/COP30_utqiagvik_lzw-adj_proj.tif
```

point2dem (0 hours and 26 minutes):

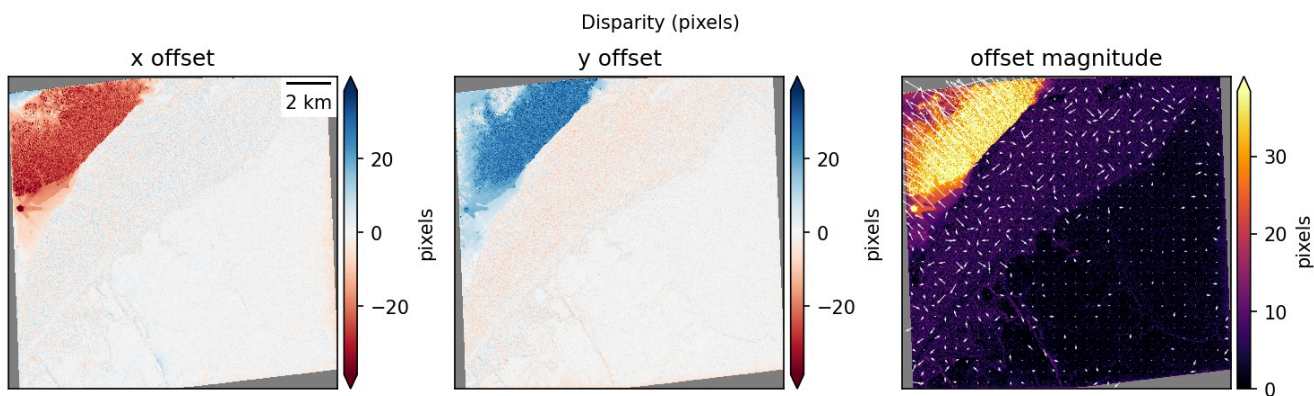
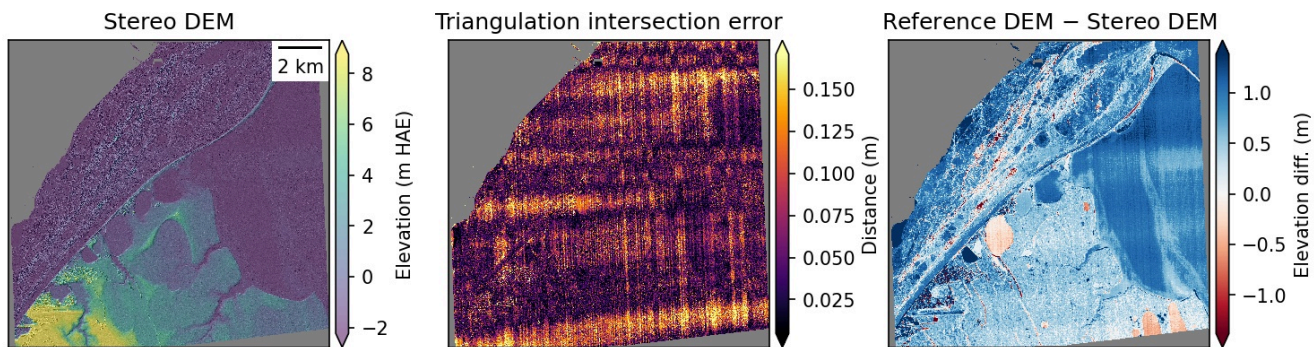
```
point2dem --nodata-value -9999 --t_srs EPSG:32604 --threads 24 --propagate-errors --remove-outliers --remove-outliers-params 75.0 3.0 --errorimage --tr 1 -o stereo_ba_50ips_10matches_dg_weight_image__ortho_0.35m_mode_asp_mgm_spm stereo_ba_50ips_10matches_dg_weight_image__ortho_0.35m_mode_asp_mgm_spm PC.tif
```

Plots

Hillshade with details



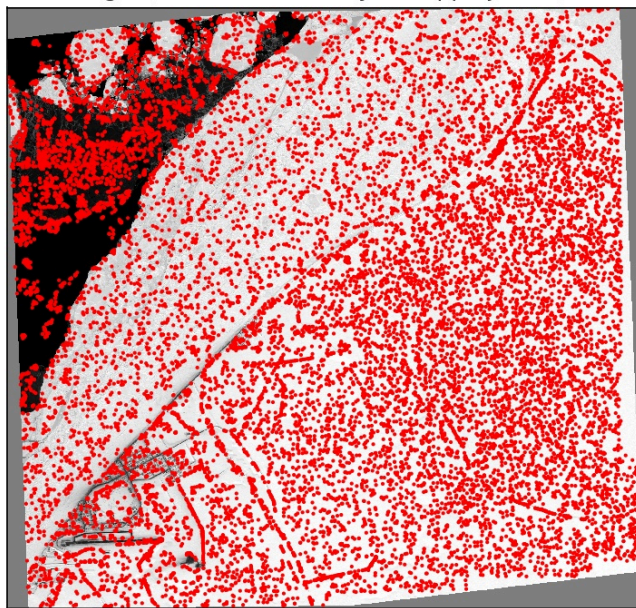
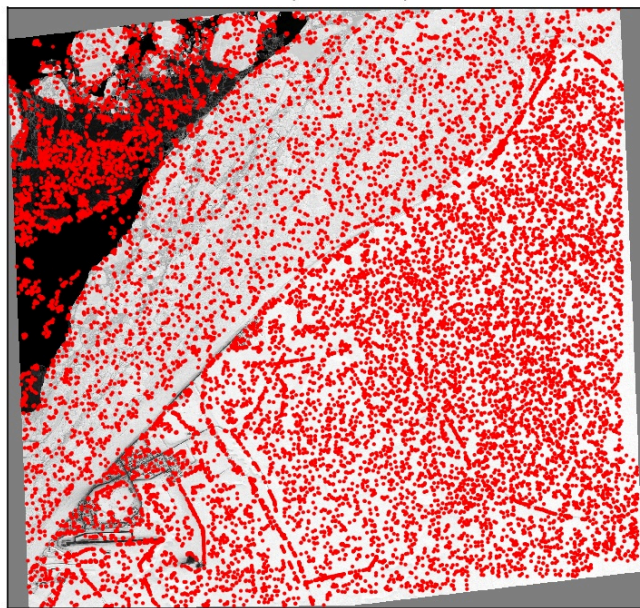
Stereo DEM Results



Stereo Match Points

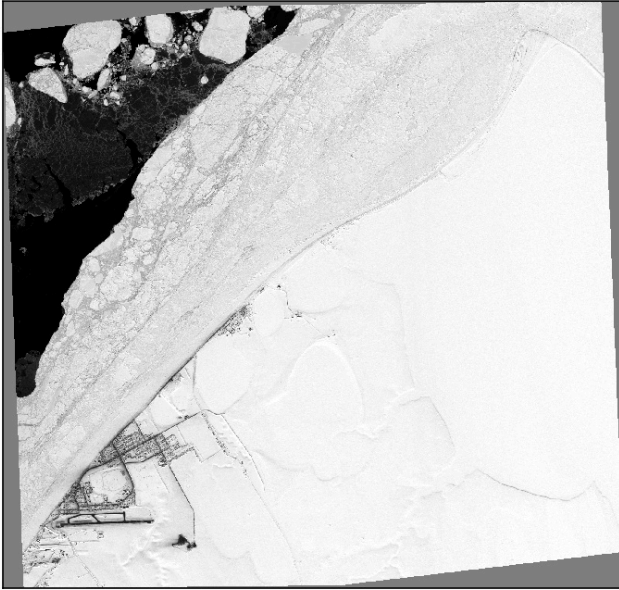
Left (n=18483)

Right (scenes shown only if mapprojected)

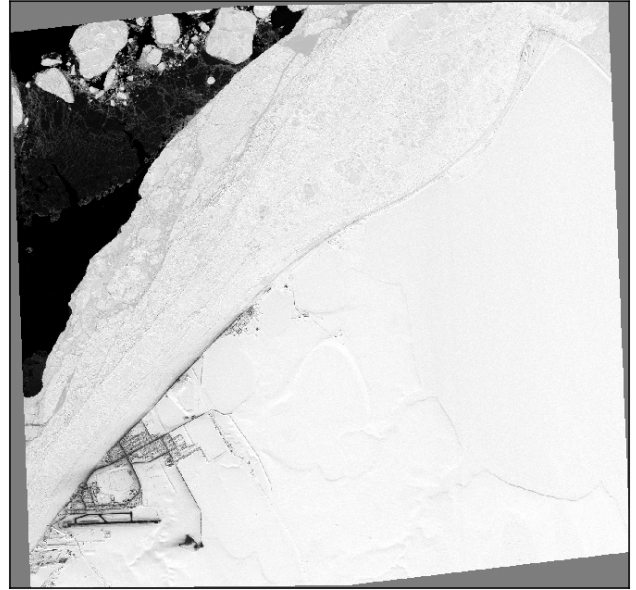


Stereo Scenes Map-projected Scenes

Left
20220417_2252_1040010074793300_1040010075633C00-L_sub.tif



Right
20220417_2252_1040010074793300_1040010075633C00-R_sub.tif

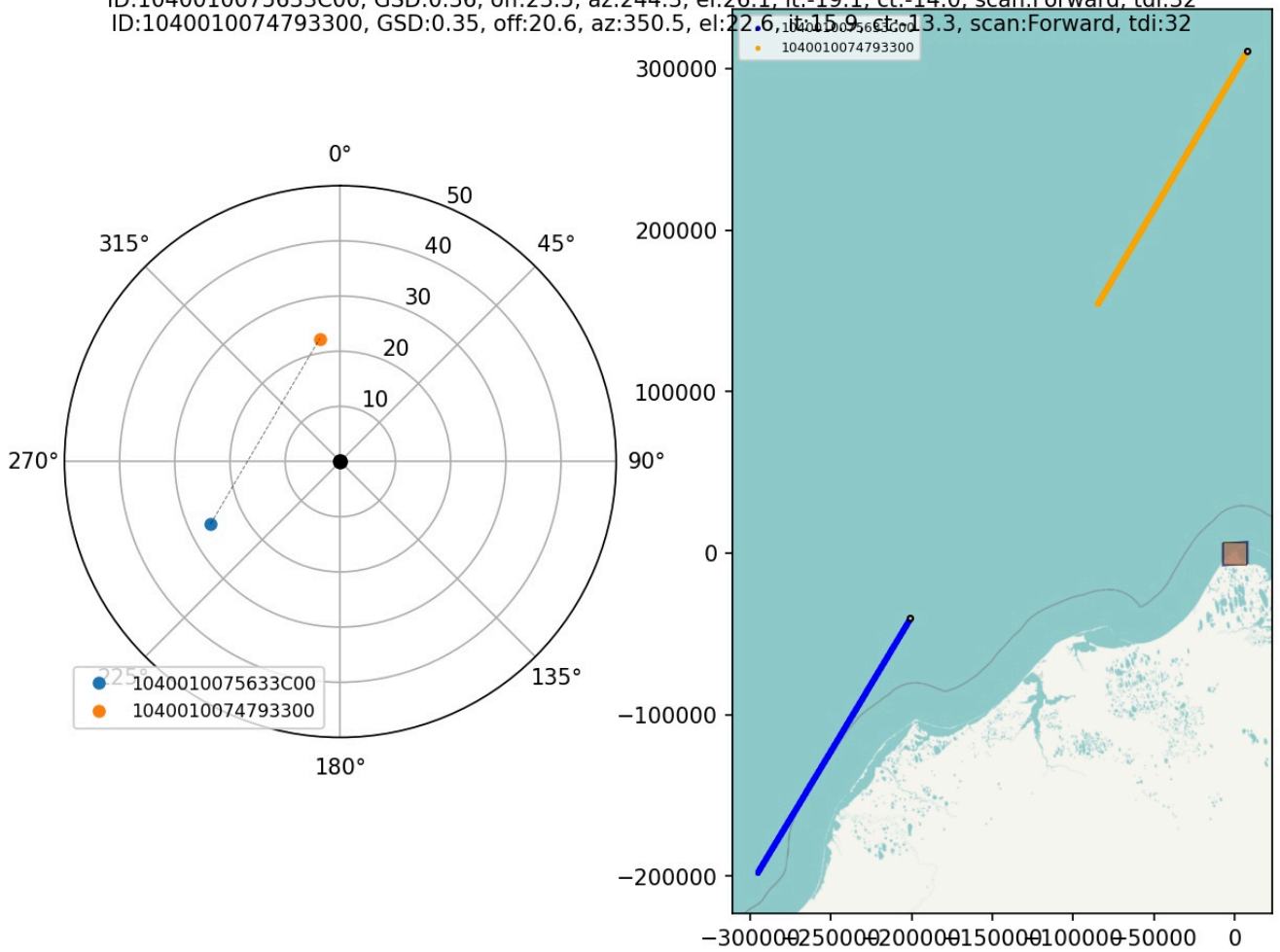


WV03_20220417_1040010074793300_1040010075633C00

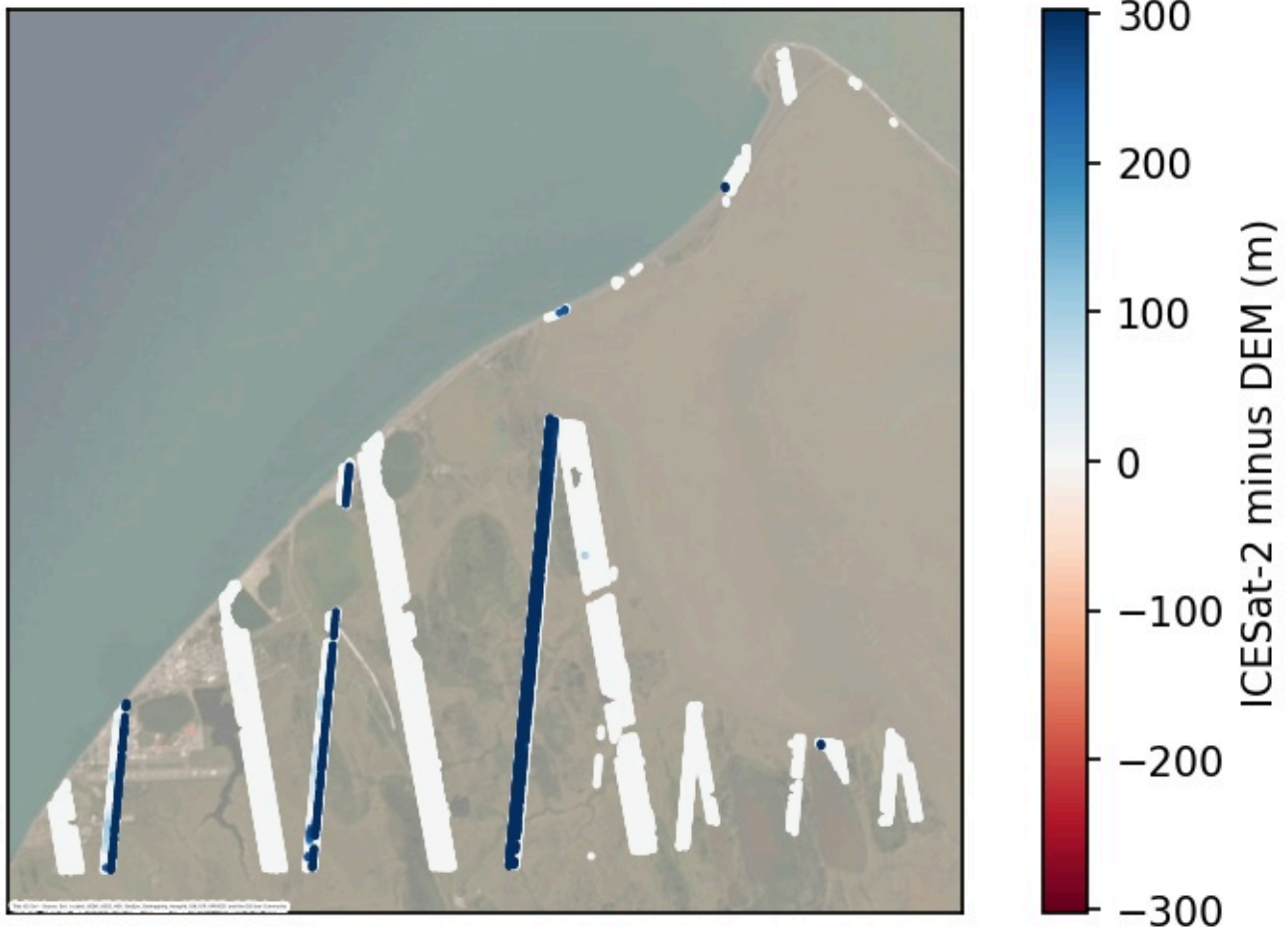
Center datetime: 2022-04-17 22:52:18.495475

Time offset: 0:00:58.884600

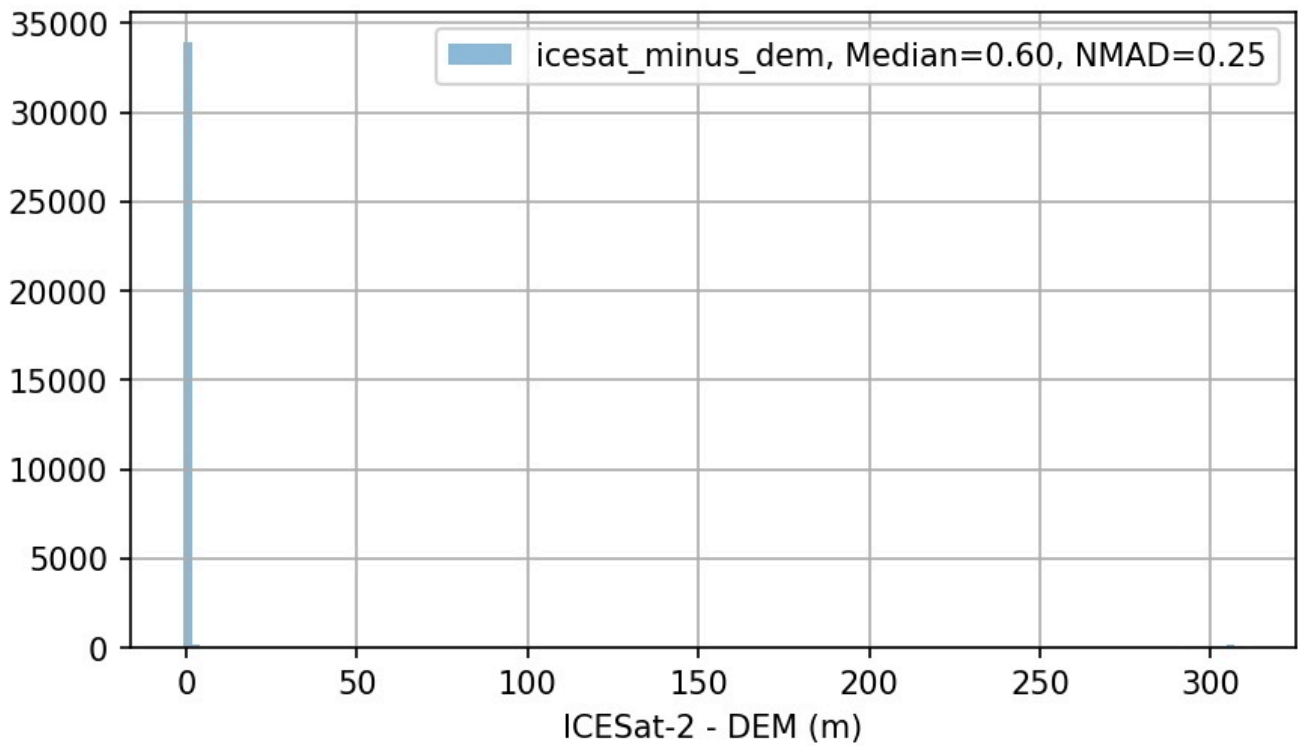
Conv. angle: 38.57, B:H ratio: 0.70, BIE: 74.74, Assym Angle: 88.56, Int. area: 194.13 km2
ID:1040010075633C00, GSD:0.36, off:23.5, az:244.3, el:26.1, it:-19.1, ct:-14.0, scan:Forward, tdi:32
ID:1040010074793300, GSD:0.35, off:20.6, az:350.5, el:22.6, it:15.9, ct:13.3, scan:Forward, tdi:32



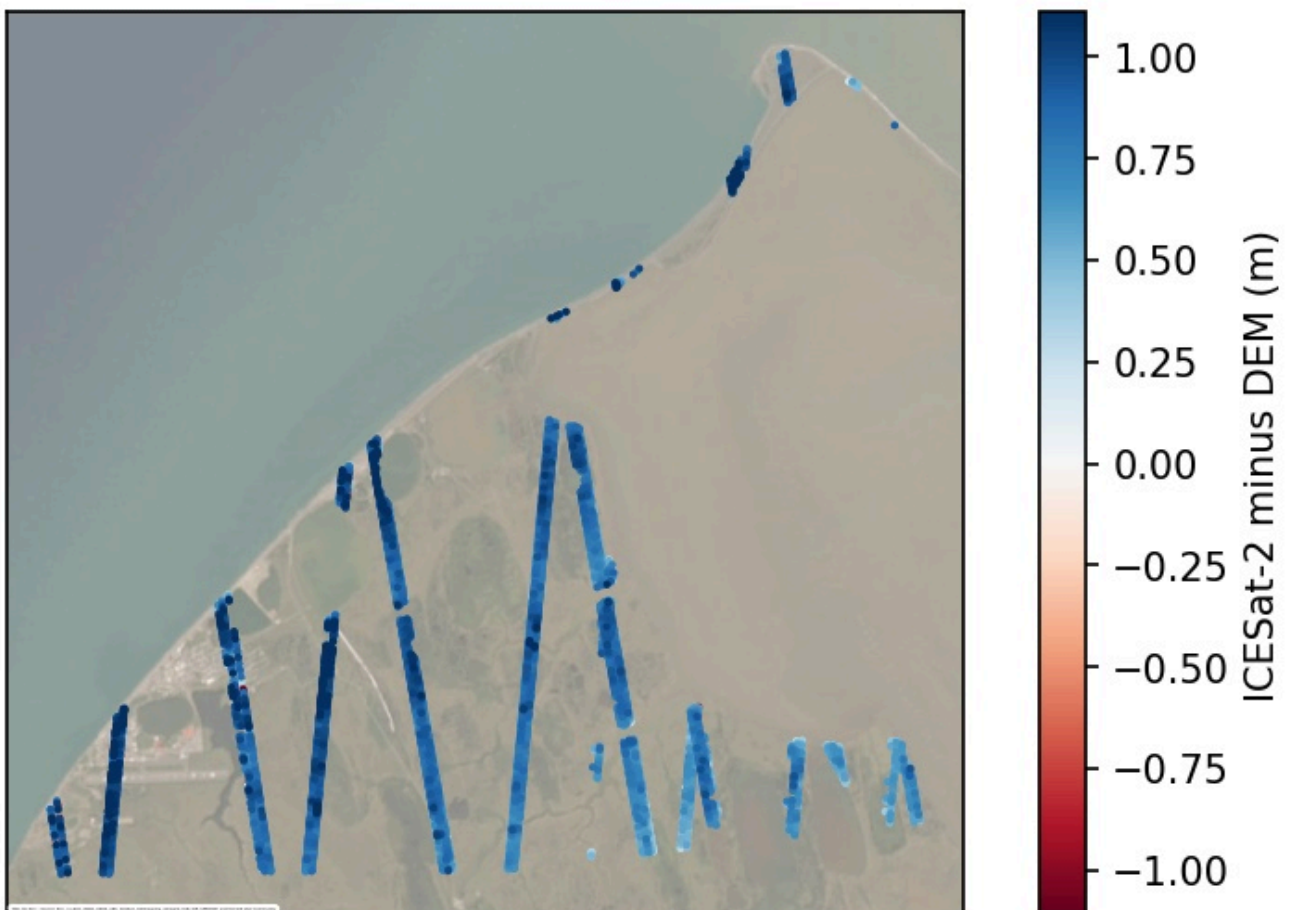
ICESat-2 ATL06-SR
all (n=39980)



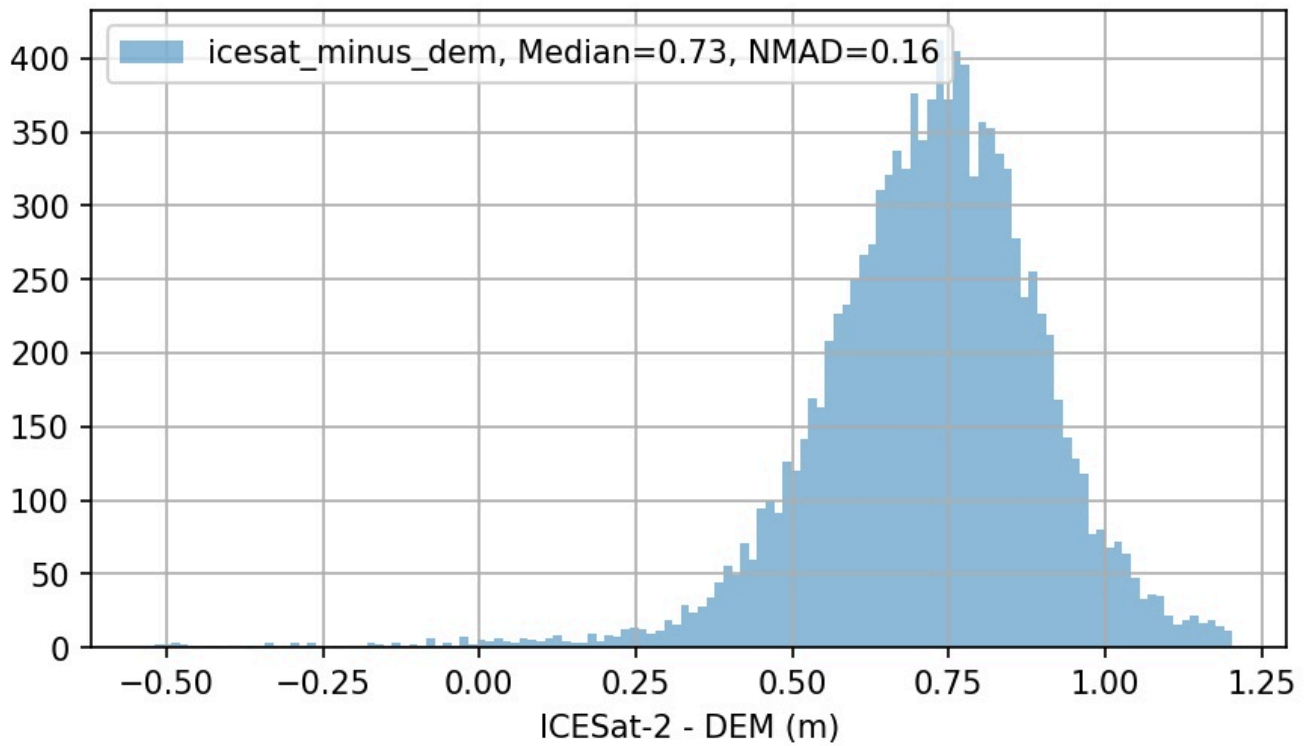
Histogram
all (n=39980)



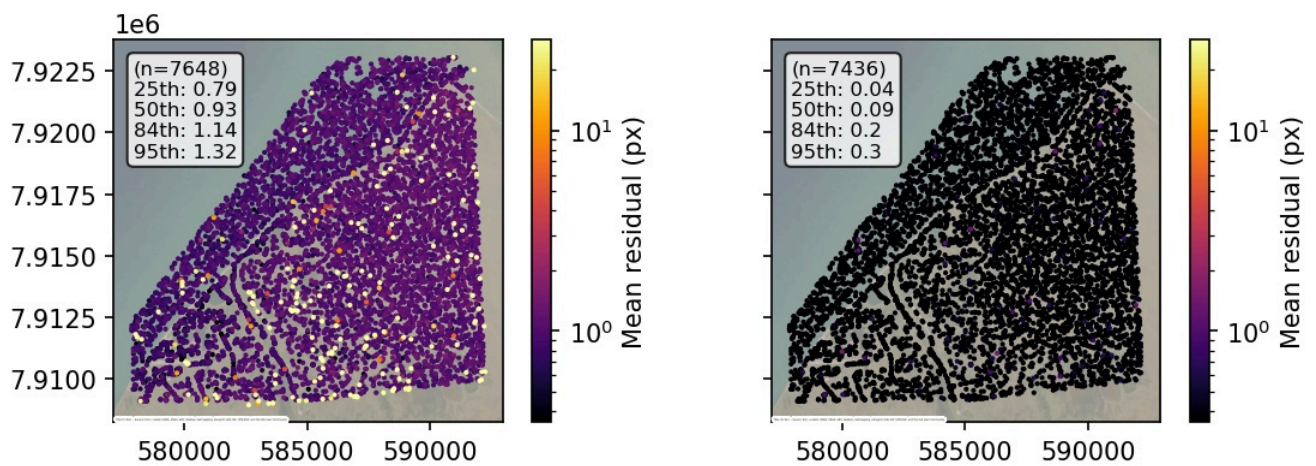
ICESat-2 ATL06-SR
ground_seasonal (n=12505)



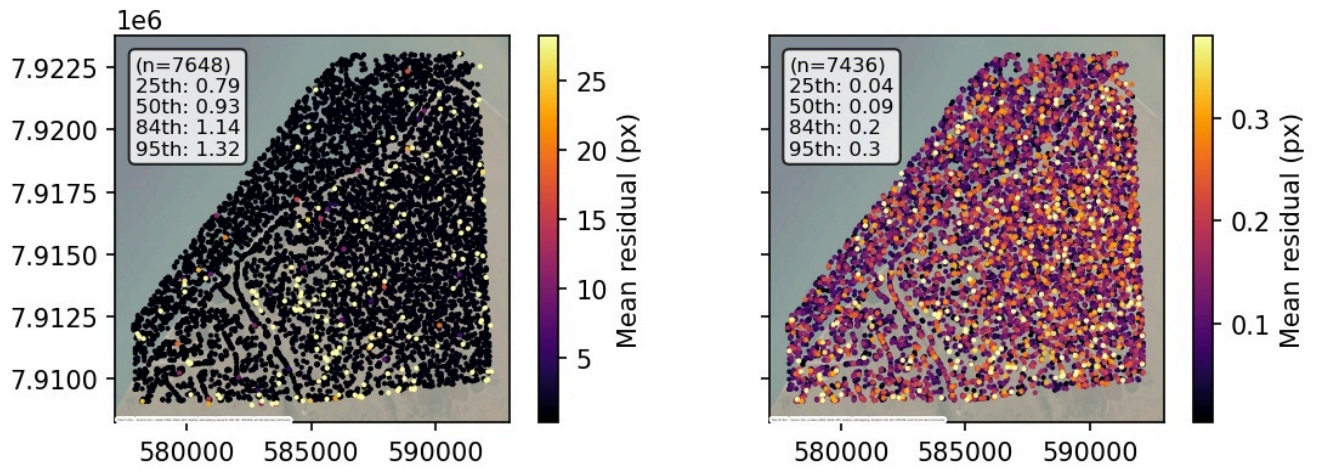
Histogram
ground_seasonal (n=12505)



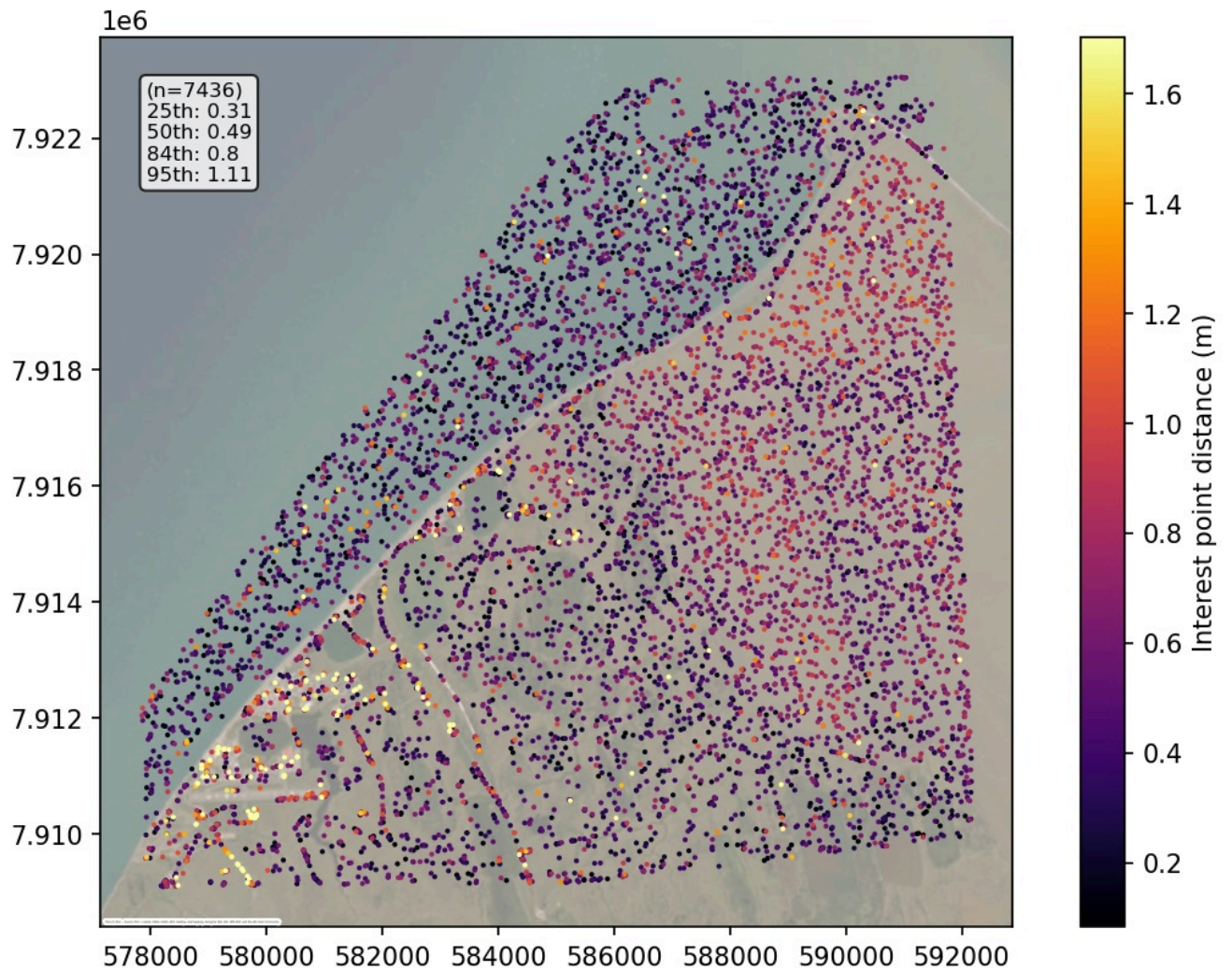
Bundle Adjust Initial and Final Residuals (Log Scale)



Bundle Adjust Initial and Final Residuals (Linear Scale)



Bundle Adjust Midpoint distance between final interest points projected onto reference DEM



Bundle Adjust Initial and Final Geodiff vs. Reference DEM

