

# **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/bpurint1/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):

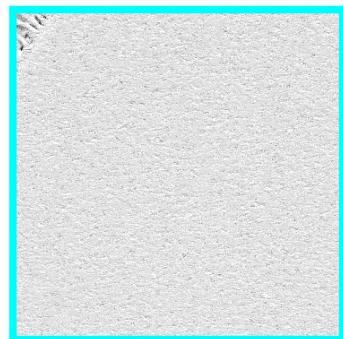
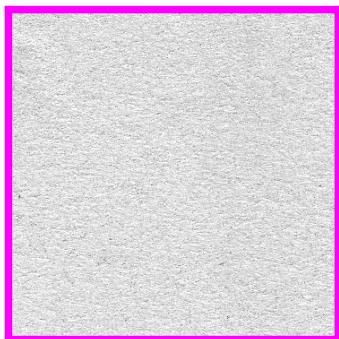
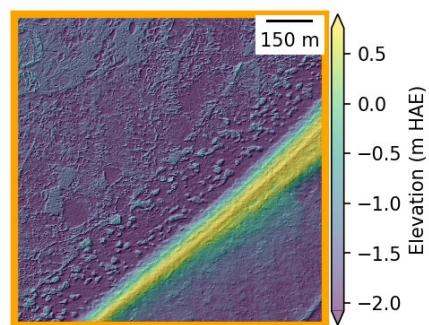
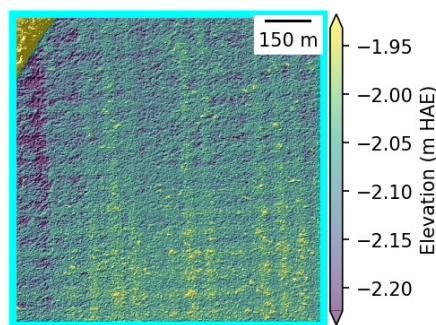
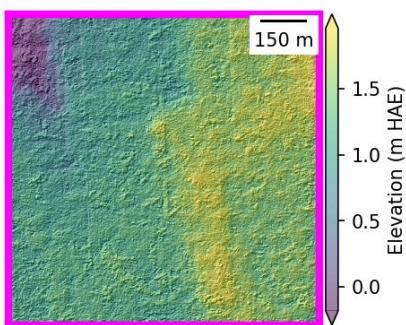
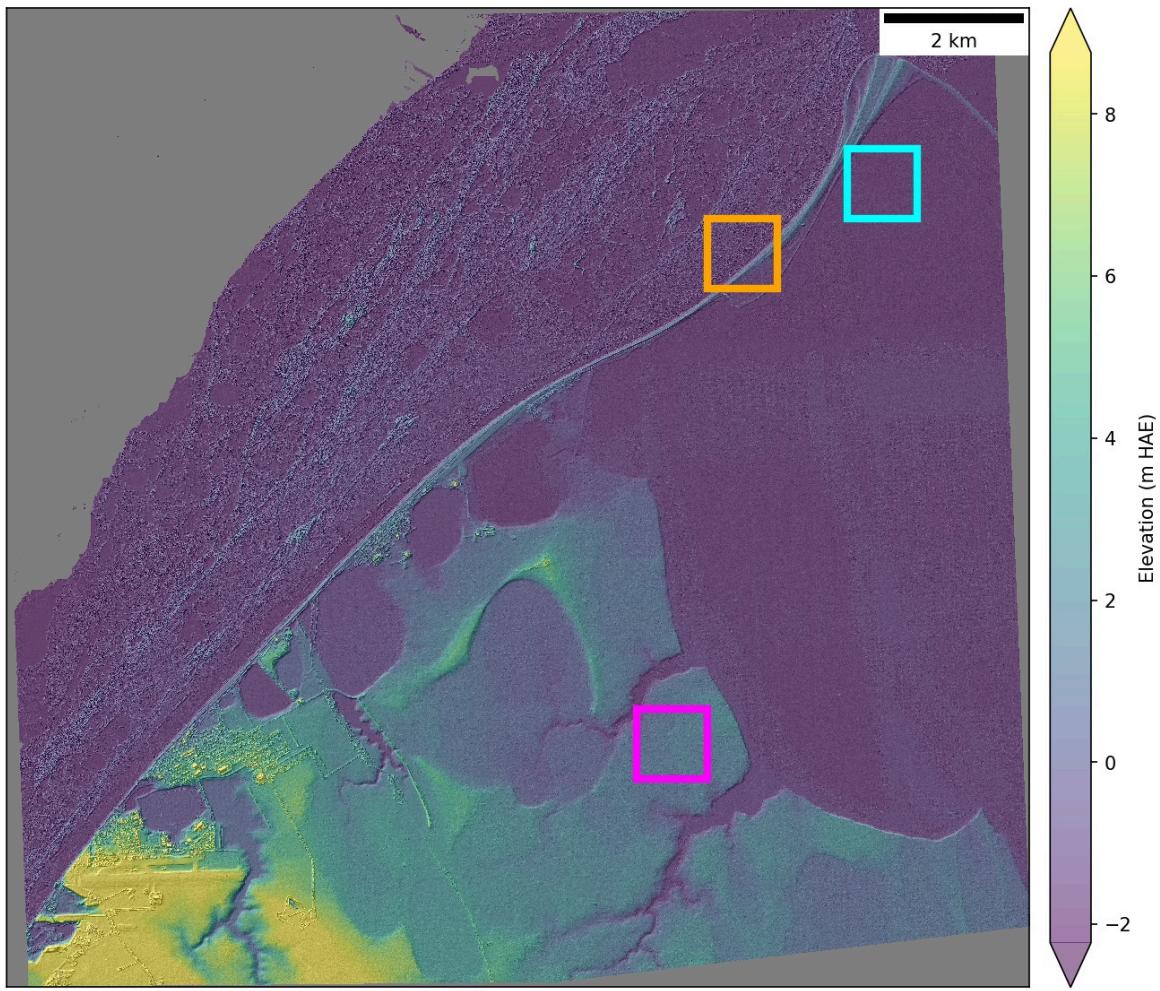
```
stereo --stereo-algorithm asp_mgm --corr-kernel 7 7 --subpixel-kernel 15 15 --cost-mode 4 --subpixel-mode 9 --corr-max-levels 5 --filter-mode 1 --erode-max-size 0 --individually-normalize --corr-memory-limit-mb 5000 --sgm-collar-size 256 --corr-tile-size 1024 --alignment-method none --corr-seed-mode 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
```

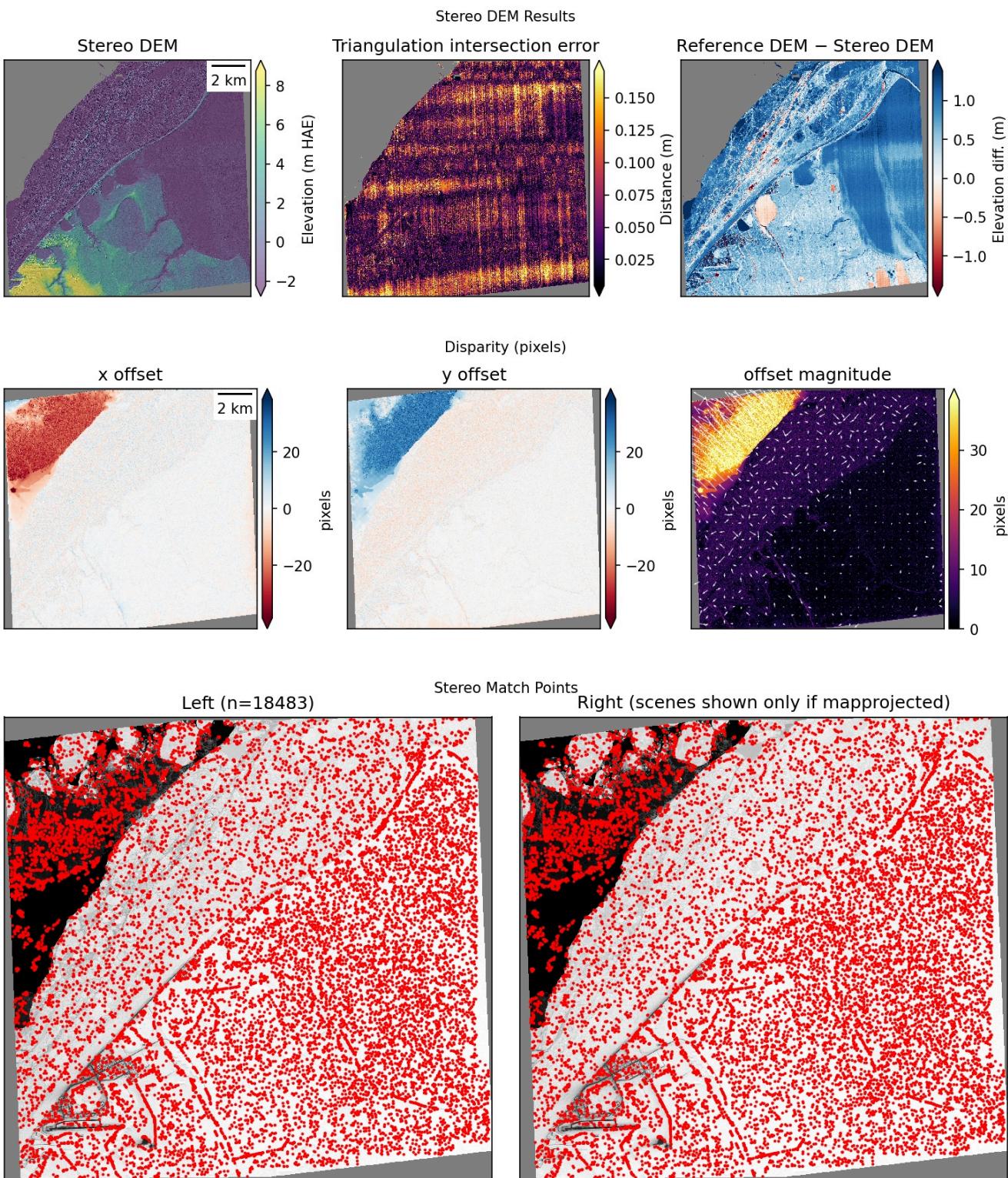
## point2dem (0 hours and 26 minutes):

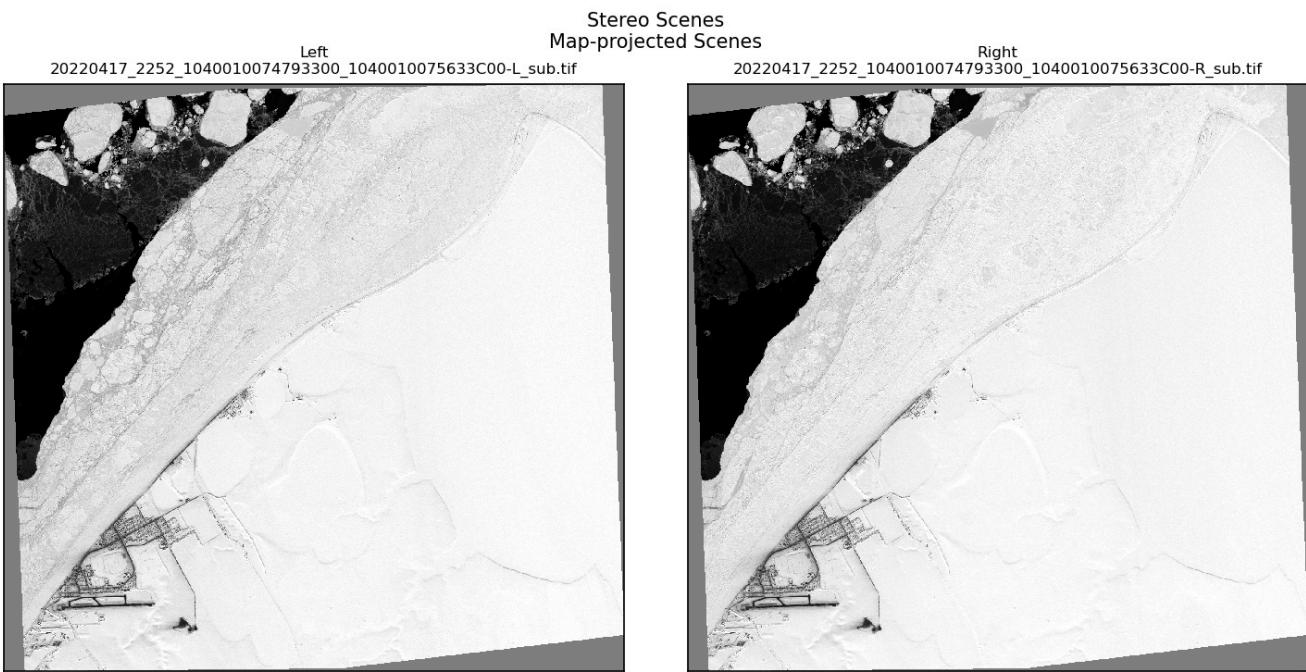
```
point2dem --nodata-value -9999 --t_srs EPSG:32604 --threads 24 --propagate-errors --remove-outliers --remove-outliers-params 75.0 3.0 --errorimage --tr 1 -o stereo_ba_50ips_10matches_dg_weight_image__ortho_0.35m_mode_asp_mgm_spm stereo_ba_50ips_10matches_dg_weight_image__ortho_0.35m_mode_asp_mgm_spm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

# Plots

Hillshade with details







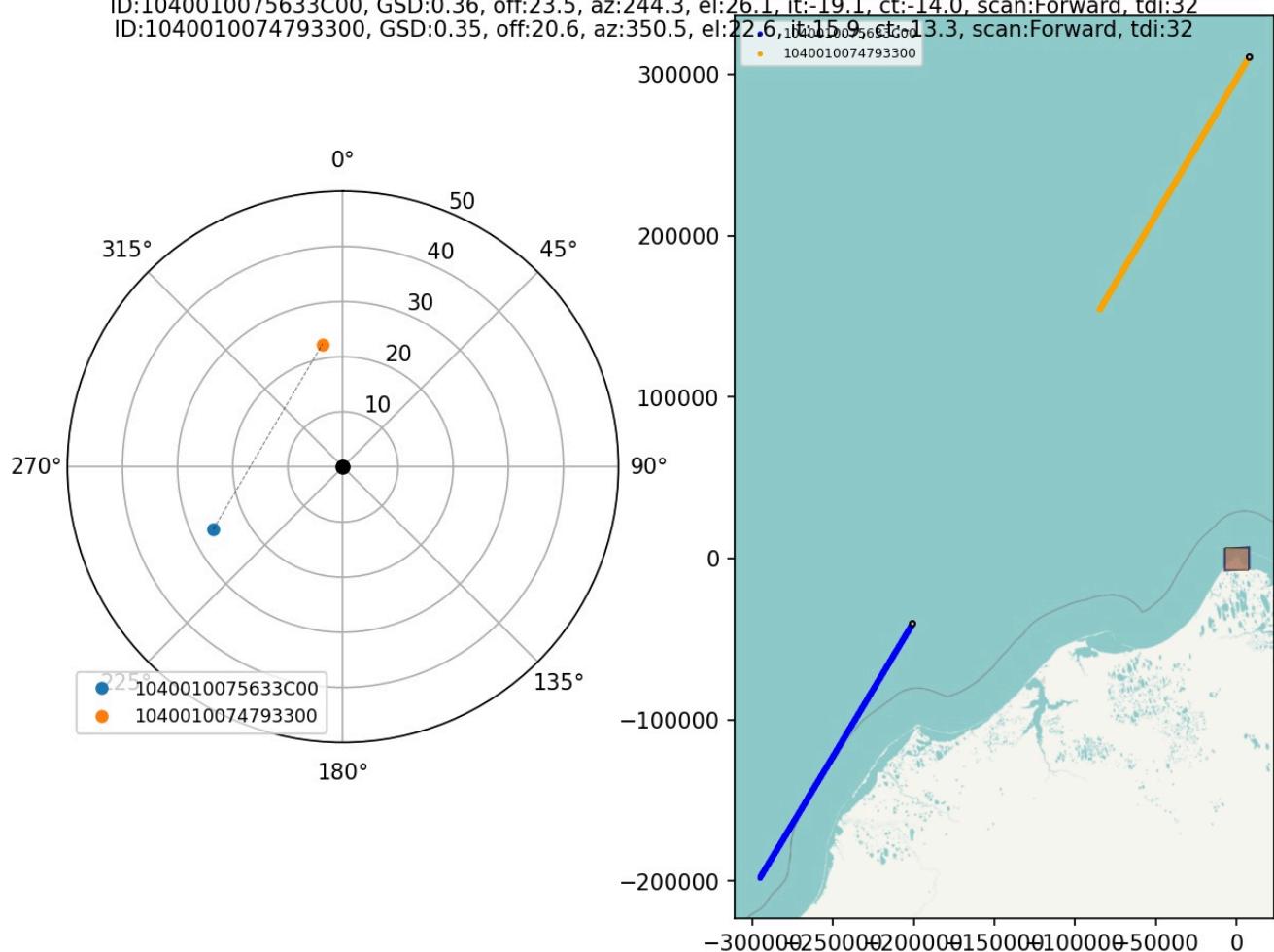
WV03\_20220417\_1040010074793300\_1040010075633C00

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

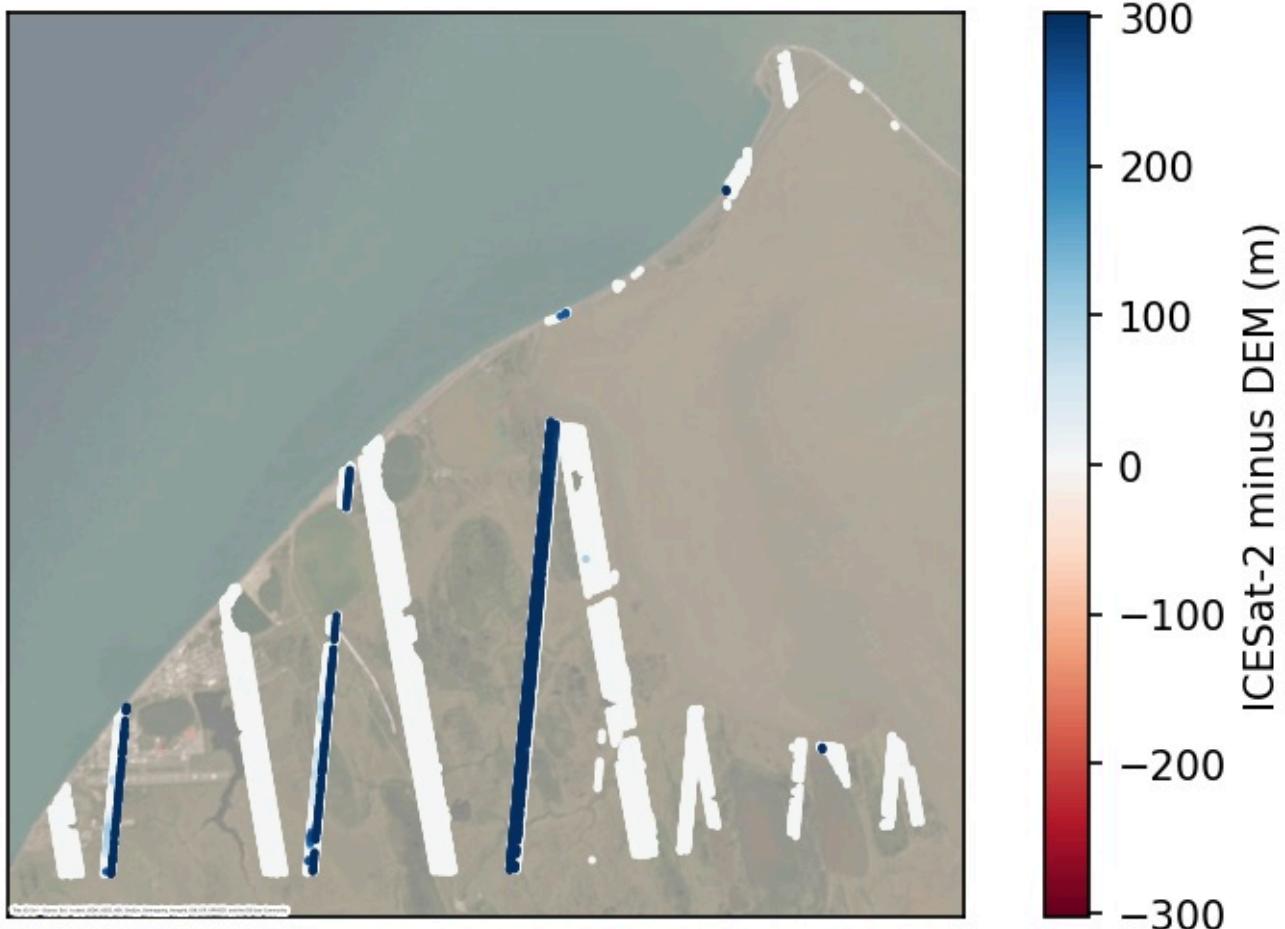
Time offset: 0:00:58.884600

Conv. angle: 38.57, B:H ratio: 0.70, BIE: 74.74, Assym Angle: 88.56, Int. area: 194.13 km<sup>2</sup>

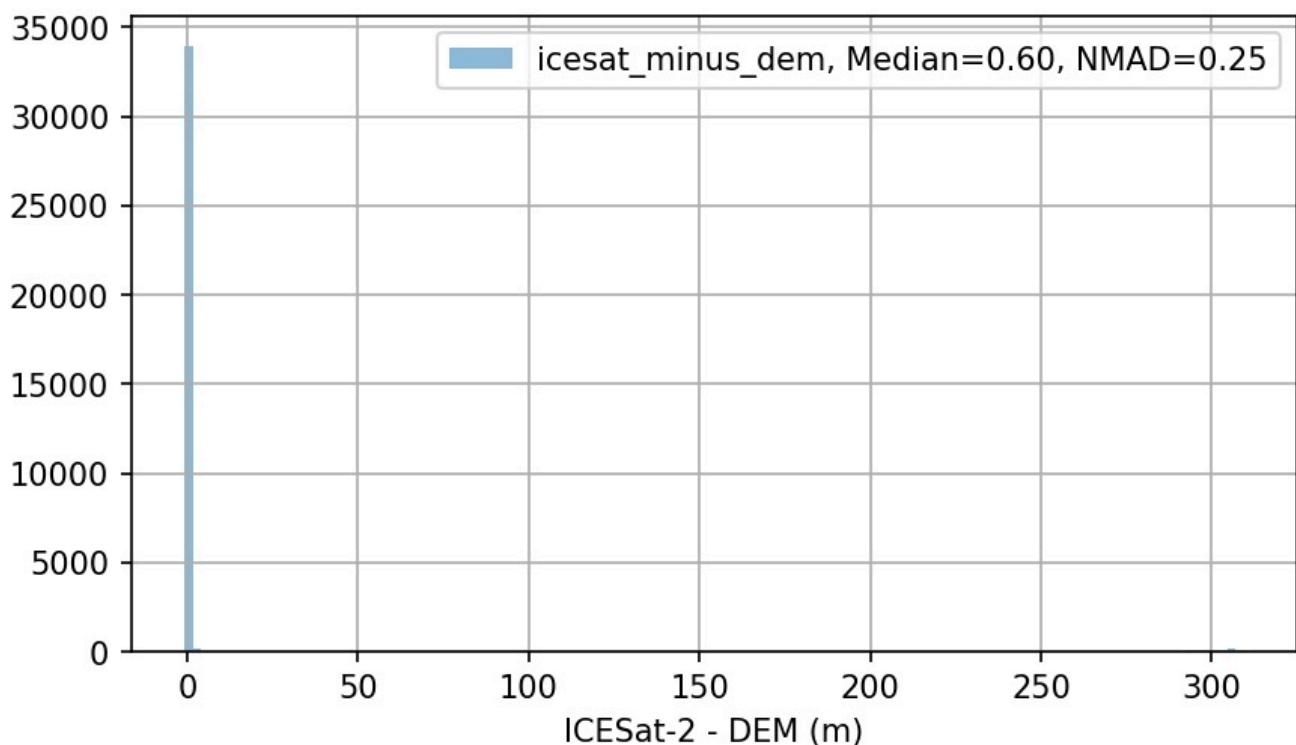
ID:1040010075633C00, GSD:0.36, off:23.5, az:244.3, el:26.1, it:-19.1, ct:-14.0, scan:Forward, tdi:32  
ID:1040010074793300, GSD:0.35, off:20.6, az:350.5, el:12.6, it:15.9, ct:13.3, scan:Forward, tdi:32



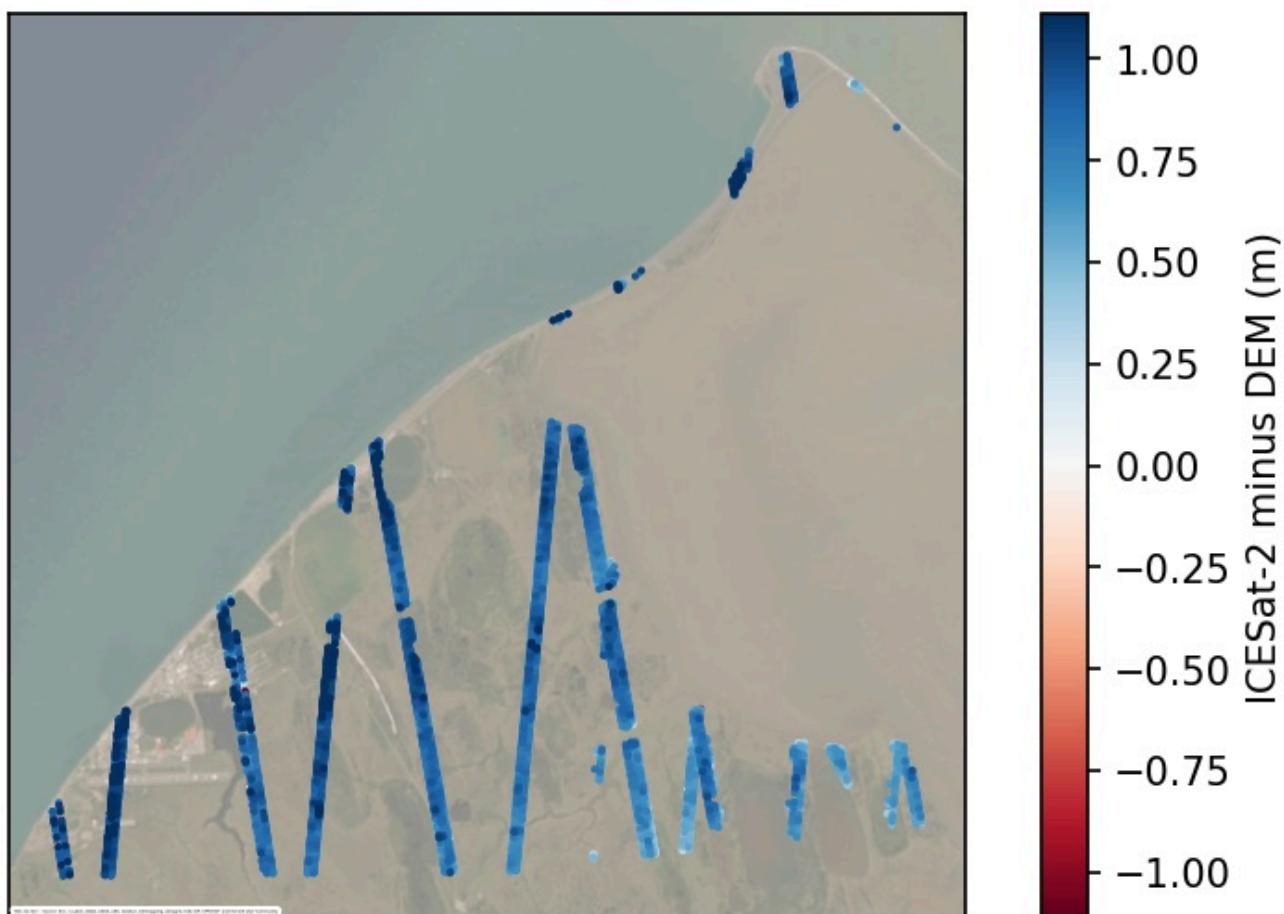
ICESat-2 ATL06-SR  
all (n=39980)



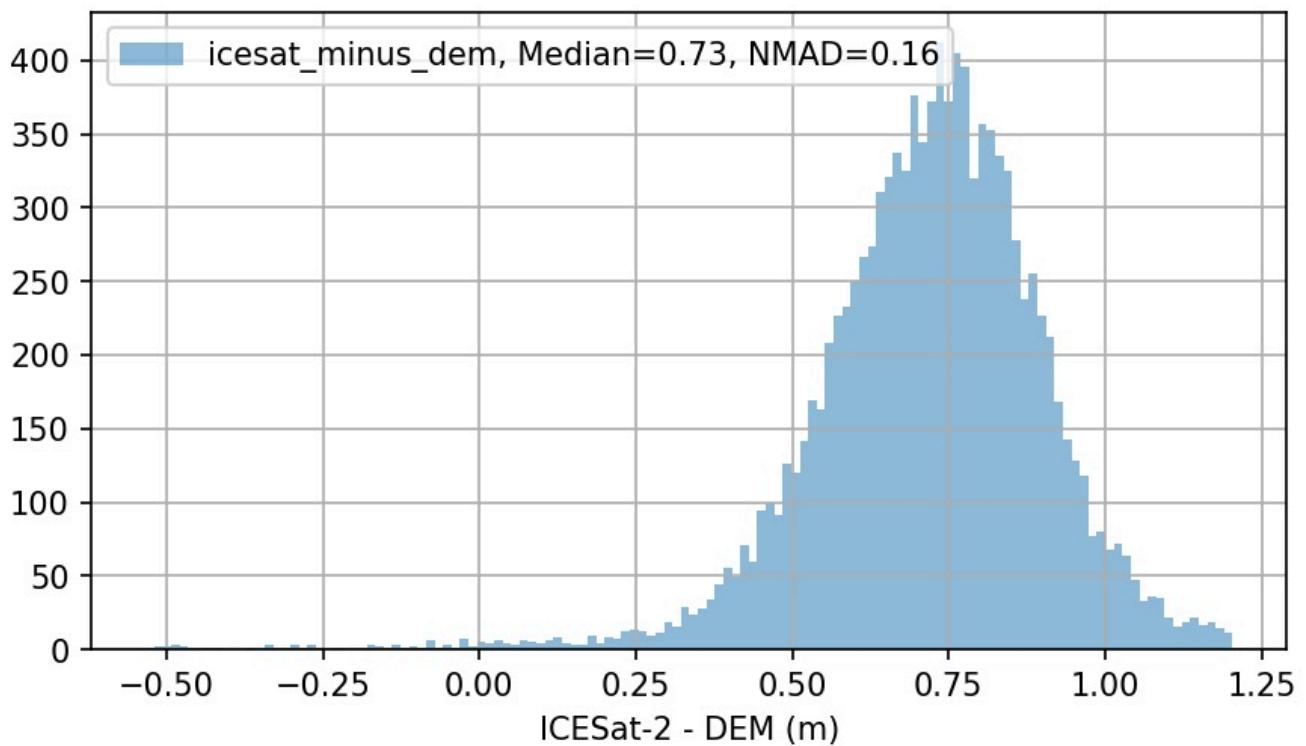
Histogram  
all (n=39980)



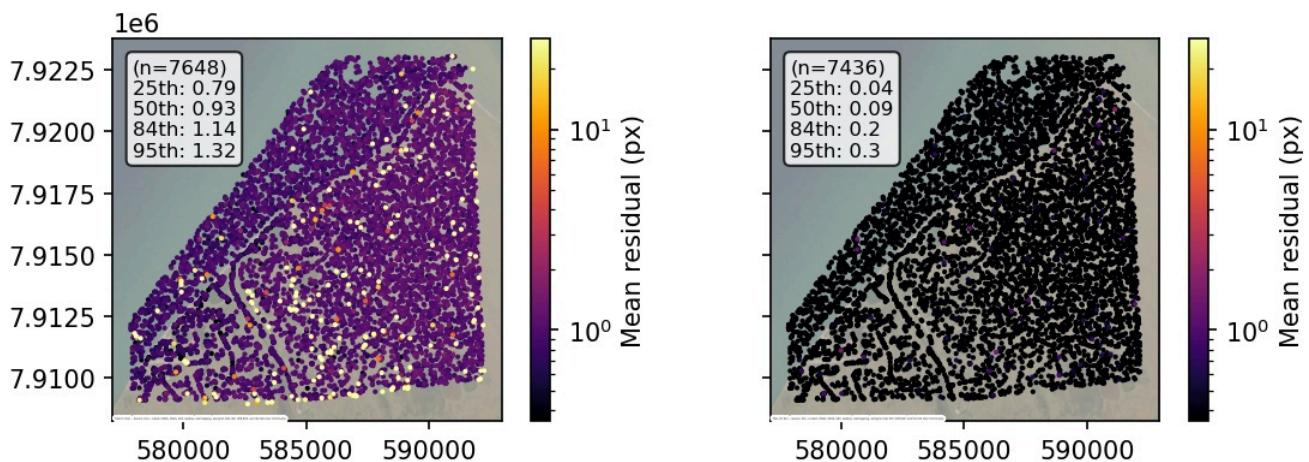
ICESat-2 ATL06-SR  
ground\_seasonal (n=12505)



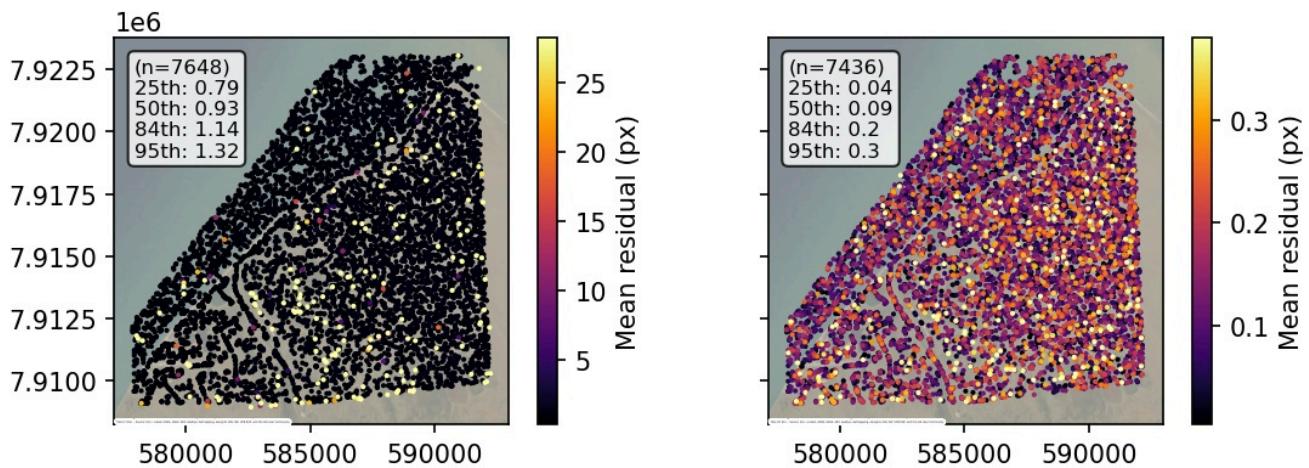
Histogram  
ground\_seasonal (n=12505)



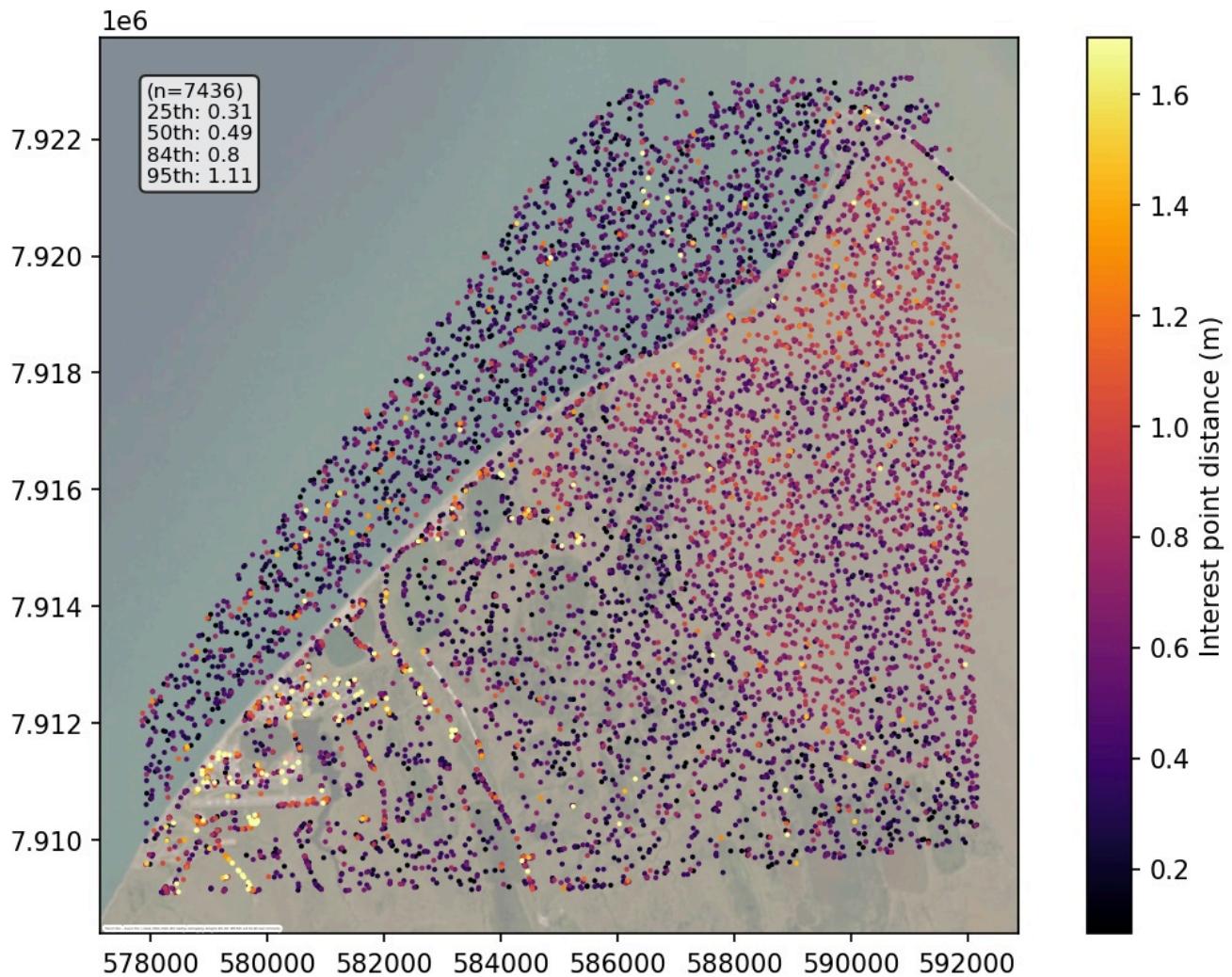
Bundle Adjust Initial and Final Residuals (Log Scale)



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

