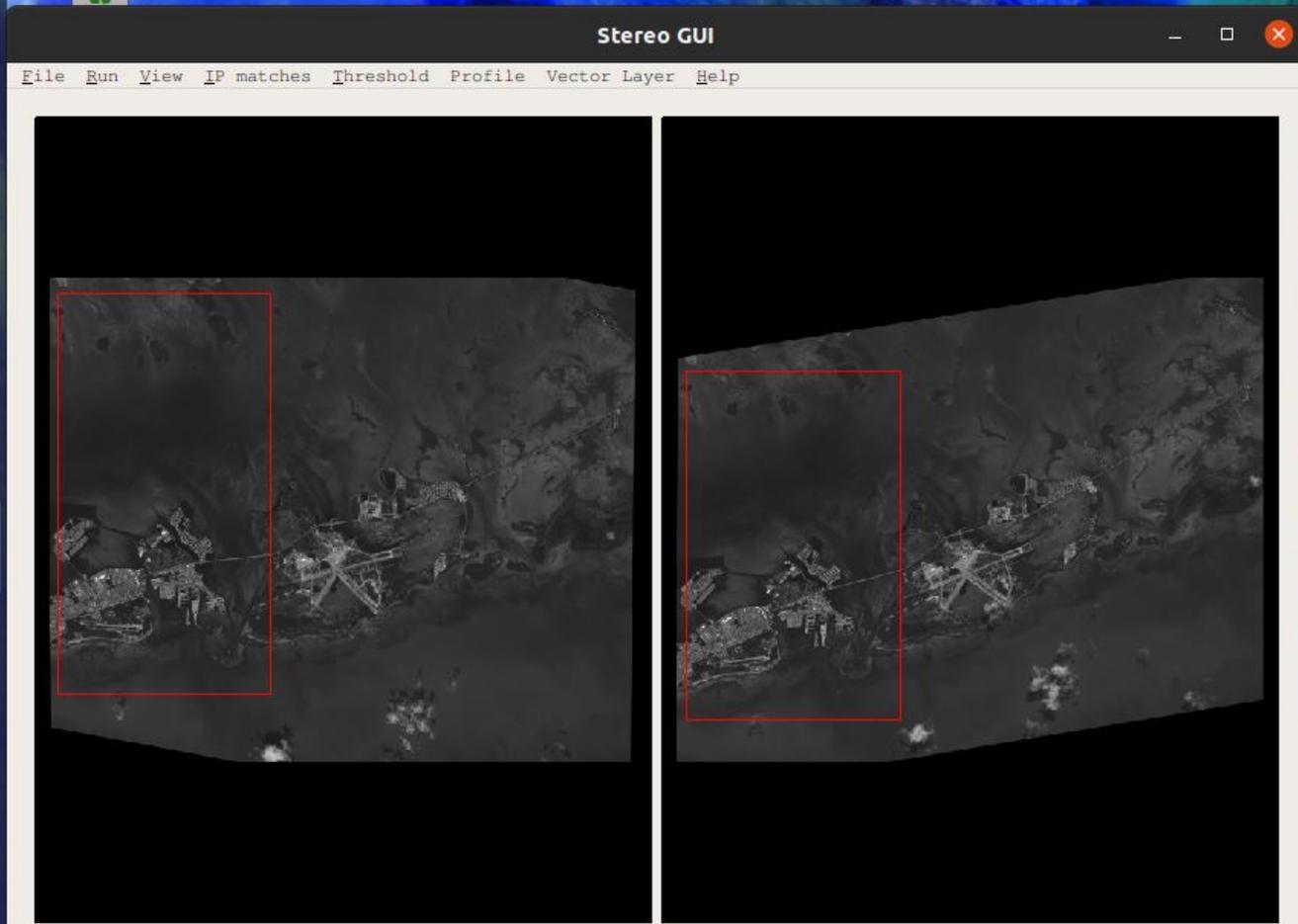


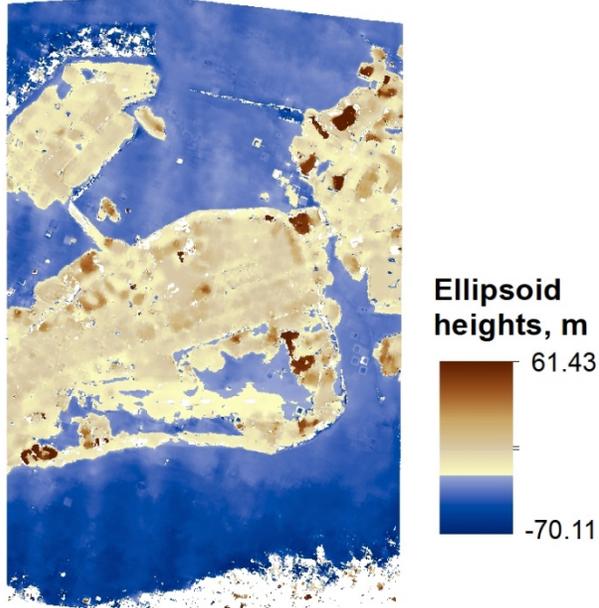
Running a test area 2 x 4 km Florida Keys, USA

```

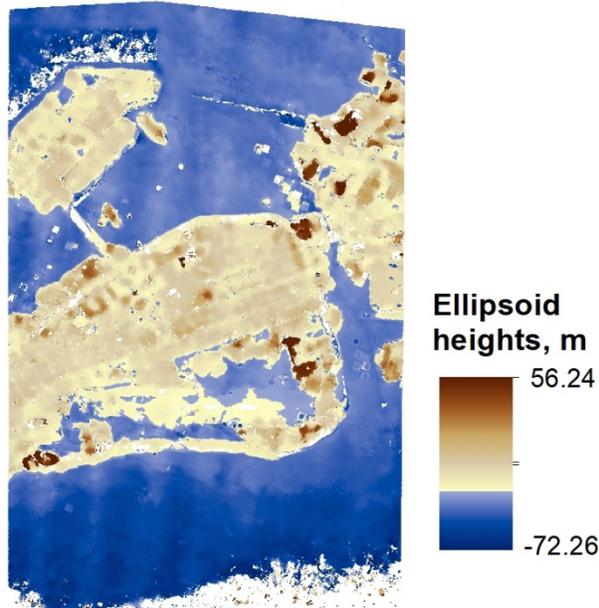
--> Triangulating: [*****]
Triangulating: [*****]
*****
*****
*****
****
--> Triangulating: [*****]
Triangulating: [*****]
*****
*****
*****
*****] Complete!
--> Universe Radius Limits: [ 0, Inf ]
Rejected 0/3573760 vertices (0%).
  
```



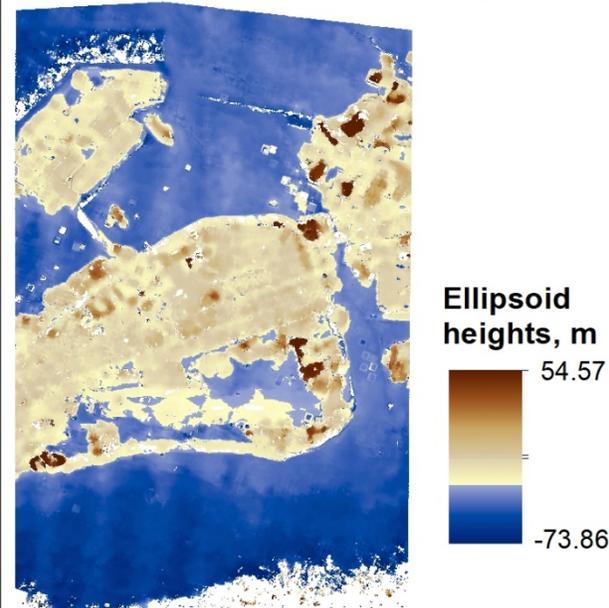
GRN TB, No camera adjustment
No topographic alignment



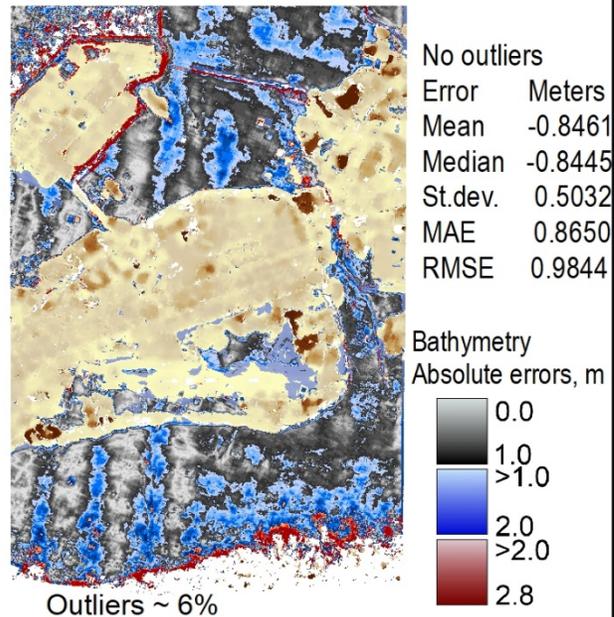
GRN TB, Camera adjustment
No Topographic alignment



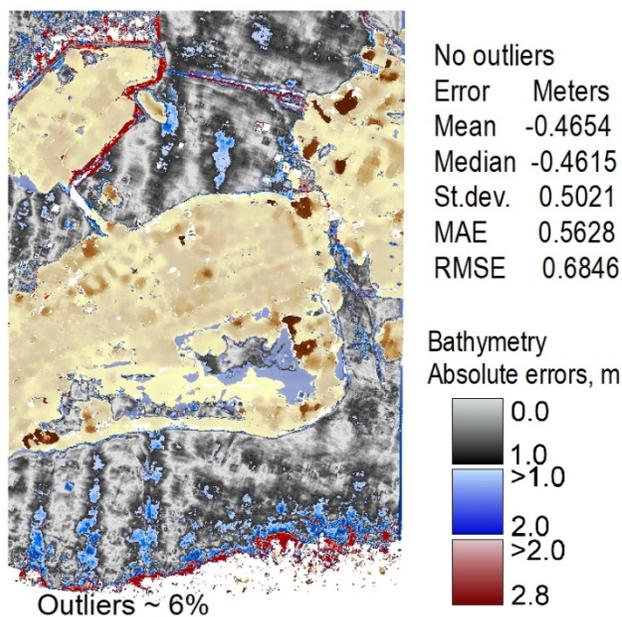
GRN TB, Camera adjustment
Topographic alignment only



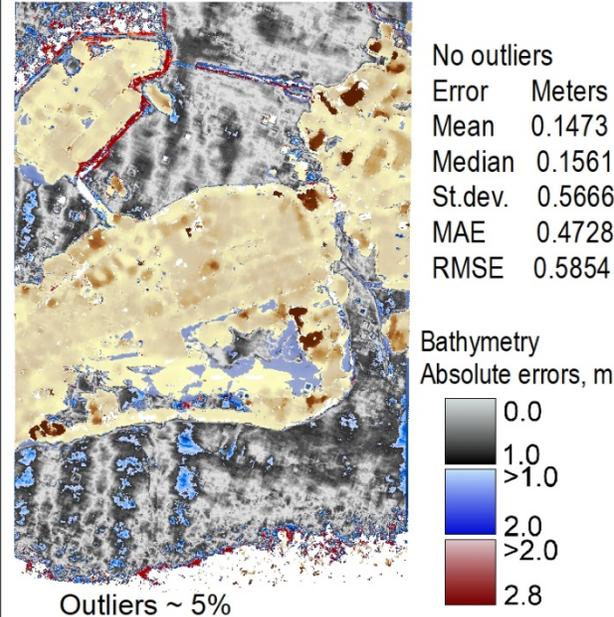
GRN TB, No camera adjustment
No topographic alignment



GRN TB, Camera adjustment
No topographic alignment



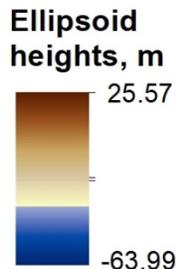
GRN TB, Camera adjustment
Topographic alignment only



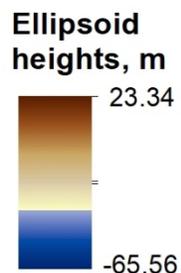
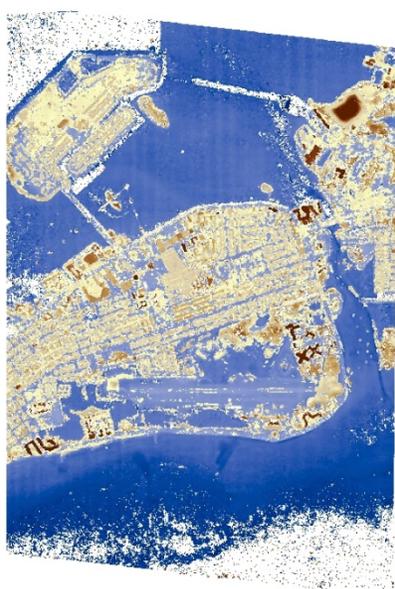
Test Green band

- Seamless topobathymetry, or only topo / bathymetry
- Max. depth penetration ~ 7 m
- Water elevation surface: Digitizing, Stereo GUI
- Use KDE for NIR1 band threshold
- Refraction index (Parrish, 2000): $n=1.340125$
- Camera/bundle adjustment
- Alignment to previous FS topographic data (in ellipsoid height) using Iterative Closest Point (ICP) method.

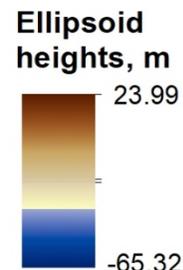
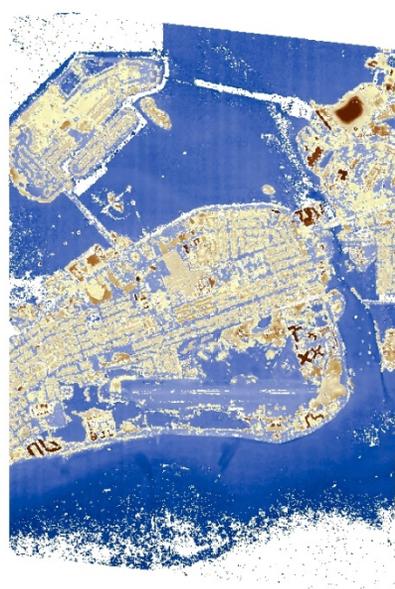
PAN TB, No camera adjustment
No topographic alignment



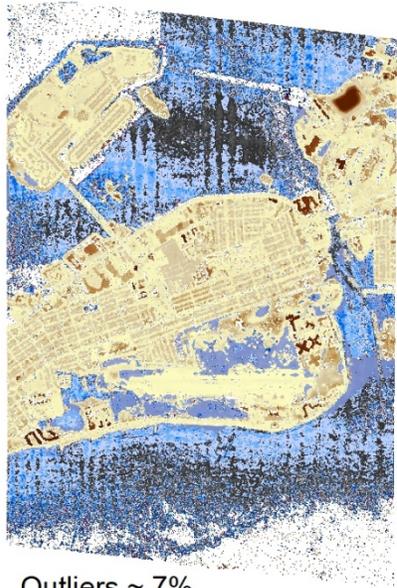
PAN TB, Camera adjustment
No Topographic alignment



PAN TB, Camera adjustment
Topographic alignment only

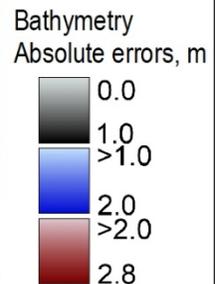


PAN TB, No camera adjustment
No topographic alignment



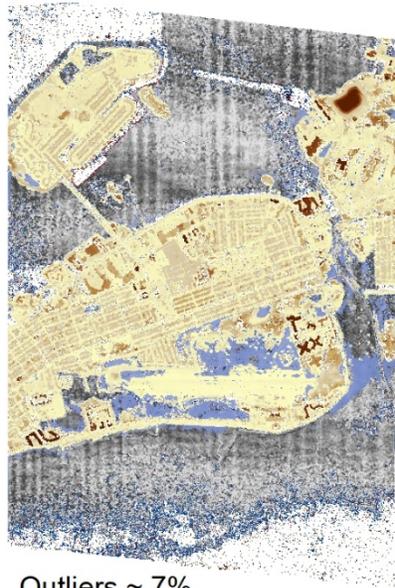
No outliers

Error	Meters
Mean	1.0526
Median	1.0586
St.dev.	0.2320
MAE	1.0526
RMSE	1.0778



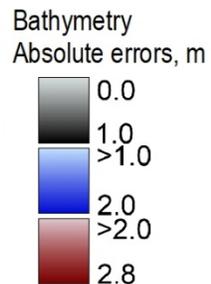
Outliers ~ 7%

PAN TB, Camera adjustment
No topographic alignment



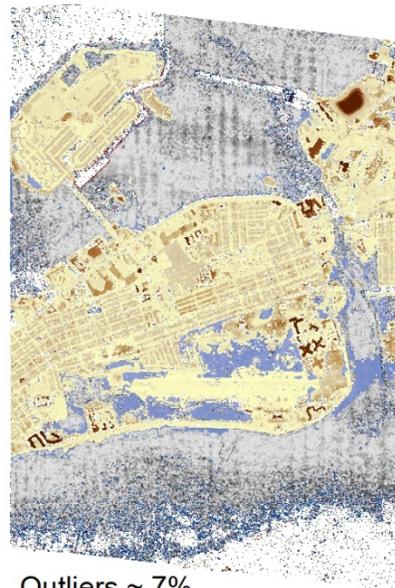
No outliers

Errors	Meters
Mean	0.3324
Median	0.3384
St.dev.	0.2317
MAE	0.3513
RMSE	0.4052



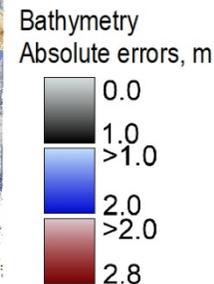
Outliers ~ 7%

PAN TB, Camera adjustment
Topographic alignment only



No outliers

Errors	Meters
Mean	-0.0558
Median	-0.0517
St.dev.	0.2417
MAE	0.1943
RMSE	0.2480



Outliers ~ 7%

Test PAN band

- Seamless topo-bathymetry, or only topo / bathymetry
- Max. depth penetration ~ 4.5 m
- Water elevation surface: Use results from the GRN band
- Land/water mask: Transform NIR1 land/water mask to match PAN size and resolution
- Refraction index (Parrish, 2000): $n=1.337172$
- Camera/bundle adjustment
- Alignment to previous FS topographic data (in ellipsoid height) using Iterative Closest Point (ICP) method.