

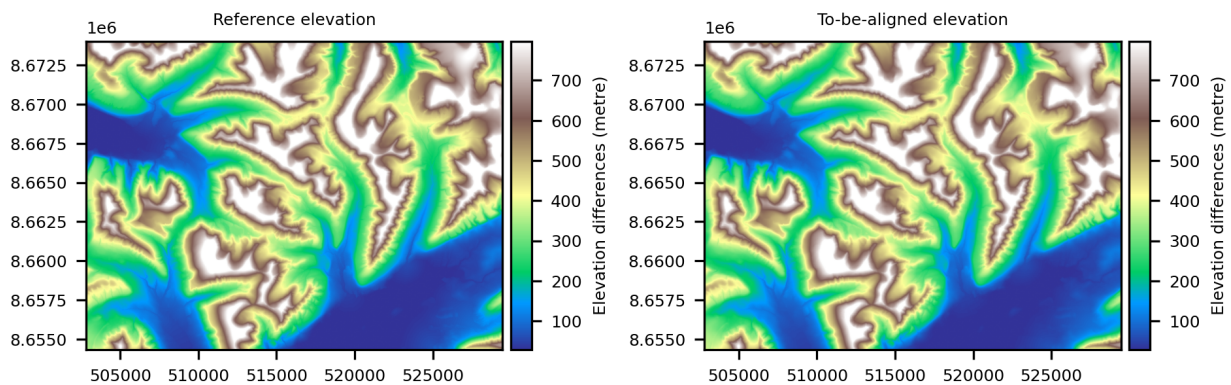
# Accuracy assessment report — xDEM

xDEM version: 0.2.3.dev26

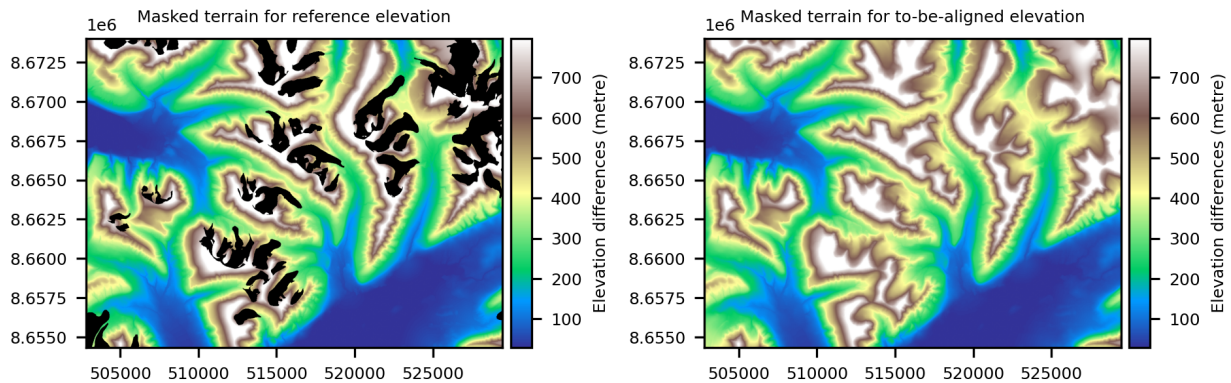
Date: 16/06/2026 18:38:22

Computing time: 16.27 seconds

## Elevation inputs



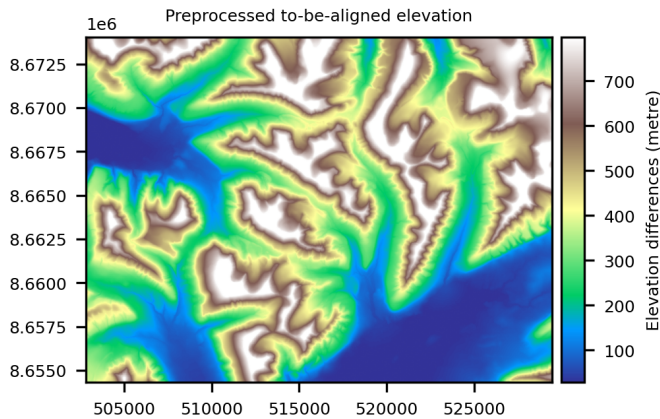
## Masked elevation data



## Information about inputs

Information	Value
reference_elev	{'path_to_elev': 'longyearbyen_ref_dem', 'path_to_mask': 'longyearbyen_glacier_outlines', 'downsample': '1'}
to_be_aligned_elev	{'path_to_elev': 'longyearbyen_tba_dem', 'downsample': '1'}
sampling_grid	reference_elev

# Preprocessed elevation data



## Coregistration user configuration

### Information Value

```
step_one      {'method': 'LZD'}
step_two      {}
step_three    {}
process       True
```

## LZD inputs

### Information Value

```
random        {'subsample': '500000.', 'random_state': '42'}
fitorbin      {'fit_minimizer': 'least_squares', 'fit_loss_func': 'linear'}
iterative     {'max_iterations': '200', 'tolerance': '0.01'}
specific      {}
affine        {'only_translation': 'False'}
```

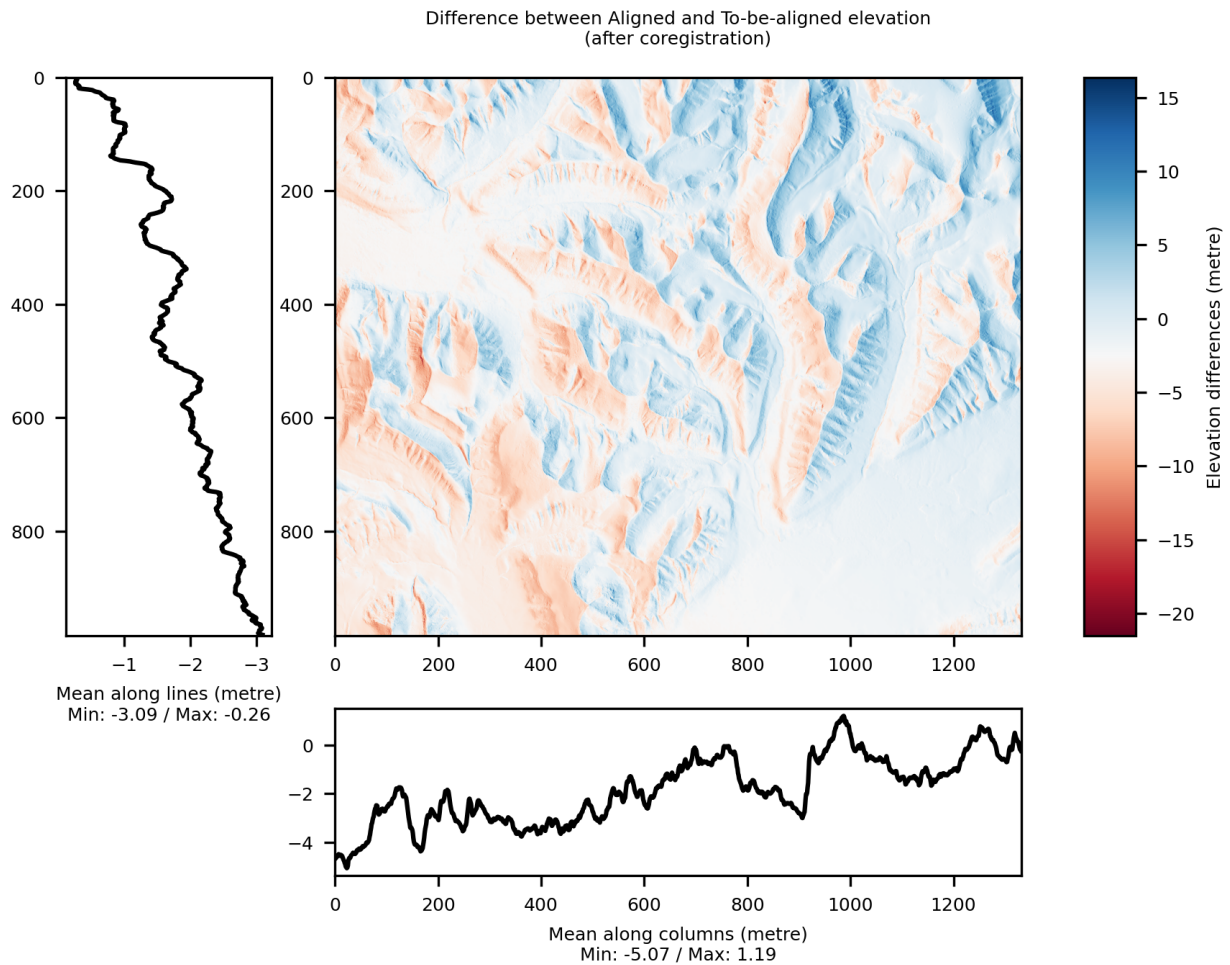
## LZD outputs

### Information Value

```
affine        {'centroid': '(515701.41, 8663817.91, 350.16)', 'matrix':
               '[[ 9.99999981e-01 1.39939504e-04 -1.32752396e-04
                  1.01017703e+01]\n [-1.39956035e-04 9.99999982e-01 -1.24523993e-04
                  2.21586437e+00]\n [ 1.32734967e-04 1.24542571e-04 9.99999983e-01
                  -1.86375355e+00]\n [ 0.00000000e+00 0.00000000e+00
```

```
0.00000000e+00 1.00000000e+00]]', 'shift_x': '10.1', 'shift_y': '2.22',
'shift_z': '-1.86'}
```

```
random {'subsample_final': '500000'}
```



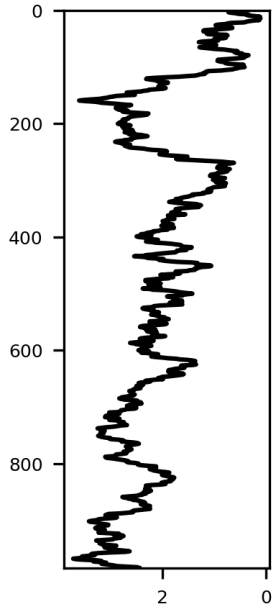
## Statistics

Data	Reference elevation	To-be-aligned elevation	Aligned elevation	Difference before coreg	Difference after coreg
Minimum	8.052	8.376	5.411	-54.510	-51.386
Maximum	1022.211	1022.295	1020.810	45.715	45.391
Mean	348.468	381.322	379.721	2.109	0.052
Median	318.295	365.234	363.397	2.334	0.020
Standard deviation	239.731	243.954	244.258	4.316	2.951
NMAD	278.100	291.272	291.818	3.417	2.060
Valid count	1145221	1312020	1309704	1145221	1143107

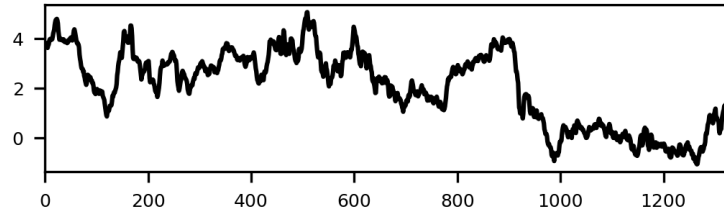
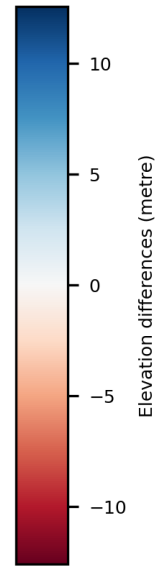
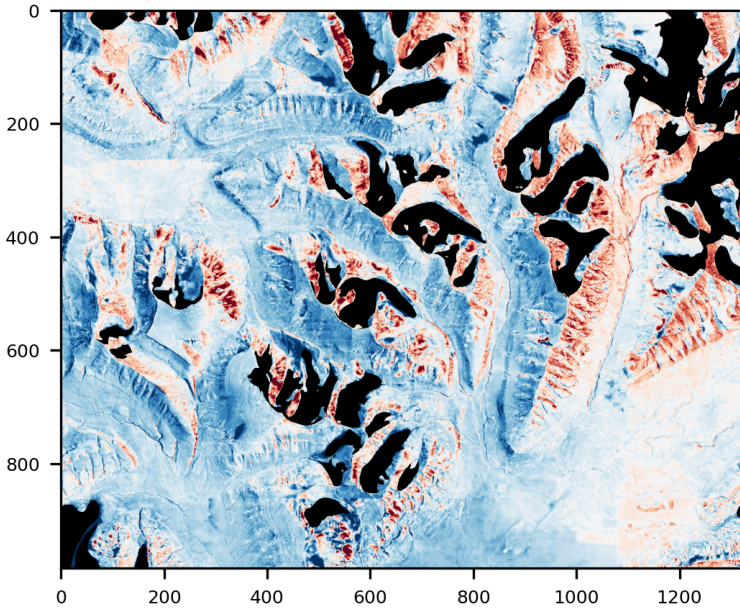
Total count	1312020	1312020	1312020	1312020	1312020
Percentage valid points	87.29%	100.00%	99.82%	87.29%	87.13%

# Elevation differences

Difference between To-be-aligned and Reference elevation  
(before coregistration)

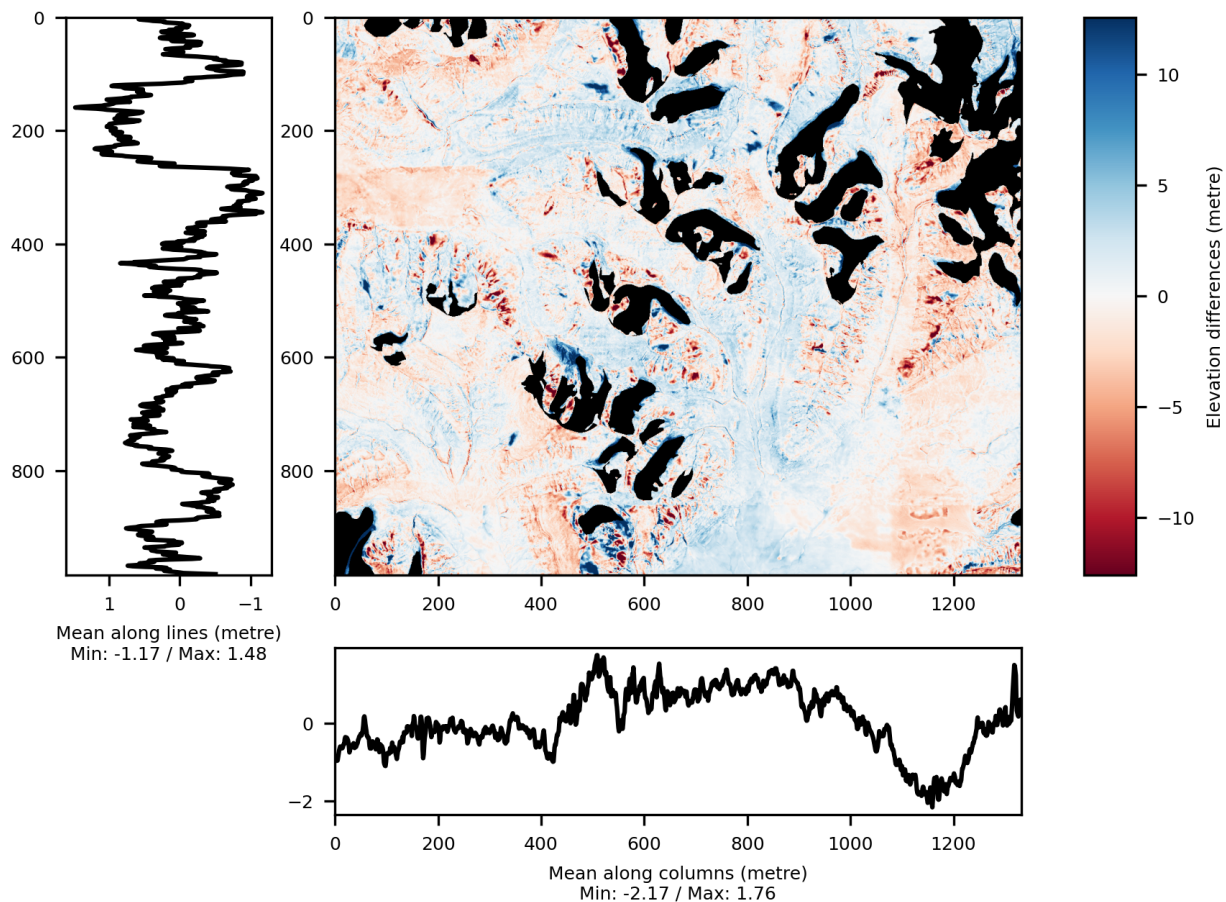


Mean along lines (metre)  
Min: 0.11 / Max: 3.71



Mean along columns (metre)  
Min: -1.08 / Max: 5.08

Difference between Aligned and Reference elevation  
(after coregistration)



## Differences histogram

