

Calibration results

=====

Normalized Residuals

Reprojection error (cam0): mean 0.265554415974, median 0.227262680231, std: 0.178779807097

Gyroscope error (imu0): mean 0.207647829556, median 0.167782006761, std: 0.165393476104

Accelerometer error (imu0): mean 0.183926754497, median 0.153914863424, std: 0.133010144994

Residuals

Reprojection error (cam0) [px]: mean 0.265554415974, median 0.227262680231, std: 0.178779807097

Gyroscope error (imu0) [rad/s]: mean 0.00969856962845, median 0.00783656385167, std: 0.0077250031

Accelerometer error (imu0) [m/s^2]: mean 0.0649621459303, median 0.0543620738913, std: 0.046978616

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[-0.99960041 0.01530091 0.02376781 0.01410683]
 [-0.01547086 0.99985593 0.00698324 0.00011201]
 [-0.02365754 -0.00734816 0.99969312 -0.00386219]
 [ 0.        0.        0.        1.       ]]
```

T_ic: (cam0 to imu0):

```
[[-0.99960041 -0.01547086 -0.02365754 -0.01419083]
 [ 0.01530091 0.99985593 -0.00734816 -0.00035622]
 [ 0.02376781 0.00698324 0.99969312 0.00352493]
 [ 0.        0.        0.        1.       ]]
```

timeshift cam0 to imu0: [s] (t_imu = t_cam + shift)

0.00915779696717

Gravity vector in target coords: [m/s^2]

```
[ 0.13104317 -9.80563393 -0.02817374]
```

Calibration configuration

Camera model: pinhole
Focal length: [617.4807176153506, 615.6362885538713]
Principal point: [315.0081886383012, 239.12171429624556]
Distortion model: radtan
Distortion coefficients: [0.1595618416353091, -0.3138305679819154, -0.0018869672988472675, -0.00529
Type: aprilgrid
Tags:
Rows: 6
Cols: 6
Size: 0.021 [m]
Spacing 0.0063 [m]

IMU configuration

=====

IMU0:

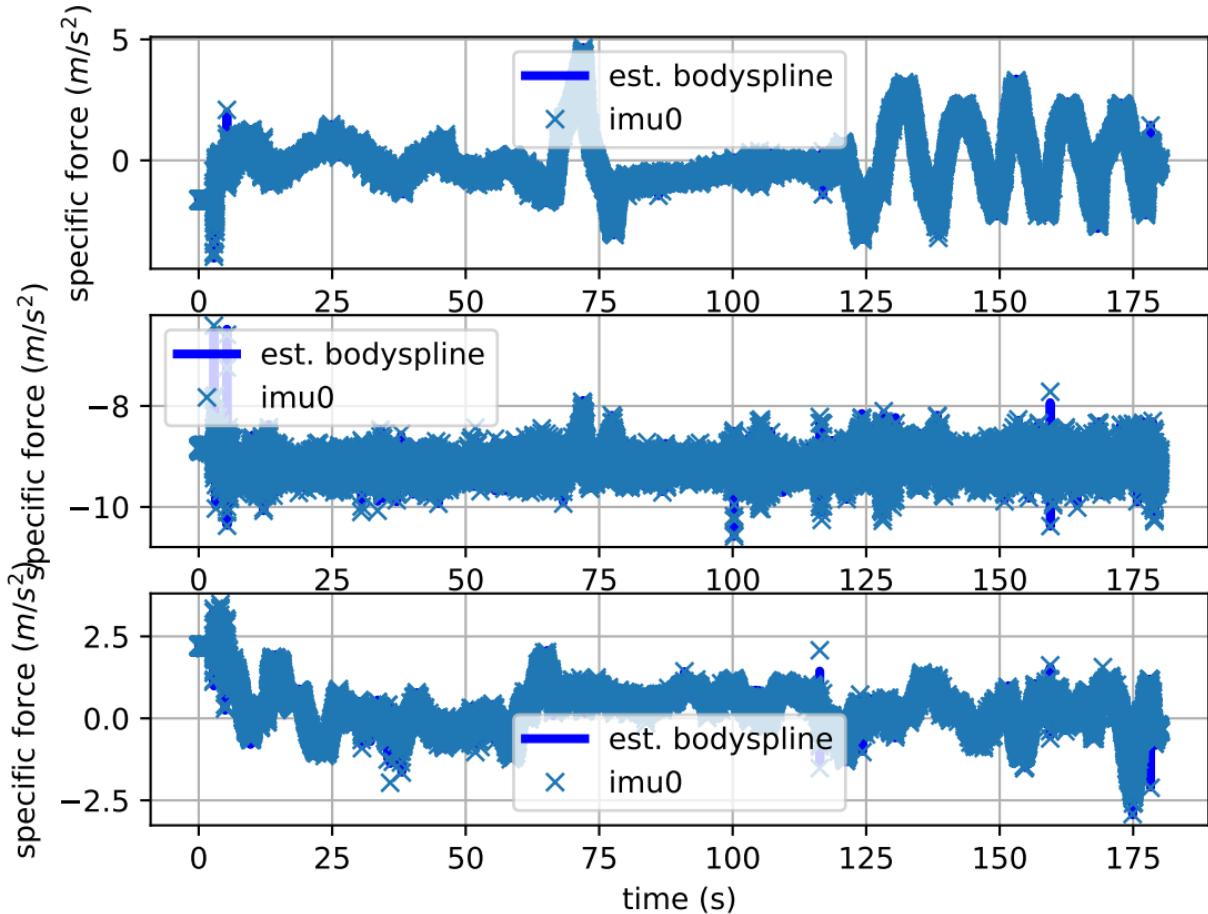
Model: calibrated
Update rate: 200.0
Accelerometer:
Noise density: 0.0249747101955
Noise density (discrete): 0.353195738749
Random walk: 0.000645528513138

Gyroscope:
Noise density: 0.00330267085707
Noise density (discrete): 0.0467068191812
Random walk: 3.06220511947e-05

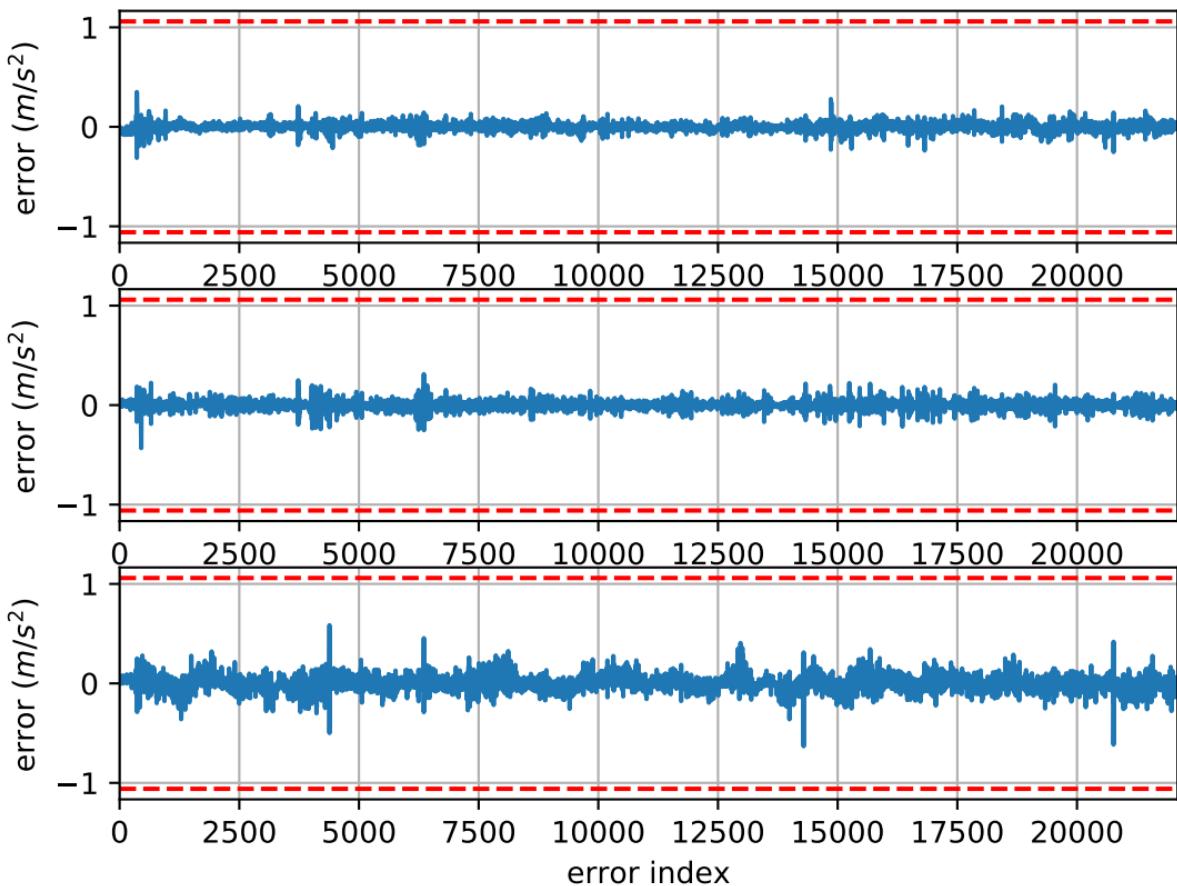
T_i_b
[[1. 0. 0. 0.]
 [0. 1. 0. 0.]
 [0. 0. 1. 0.]
 [0. 0. 0. 1.]]

time offset with respect to IMU0: 0.0 [s]

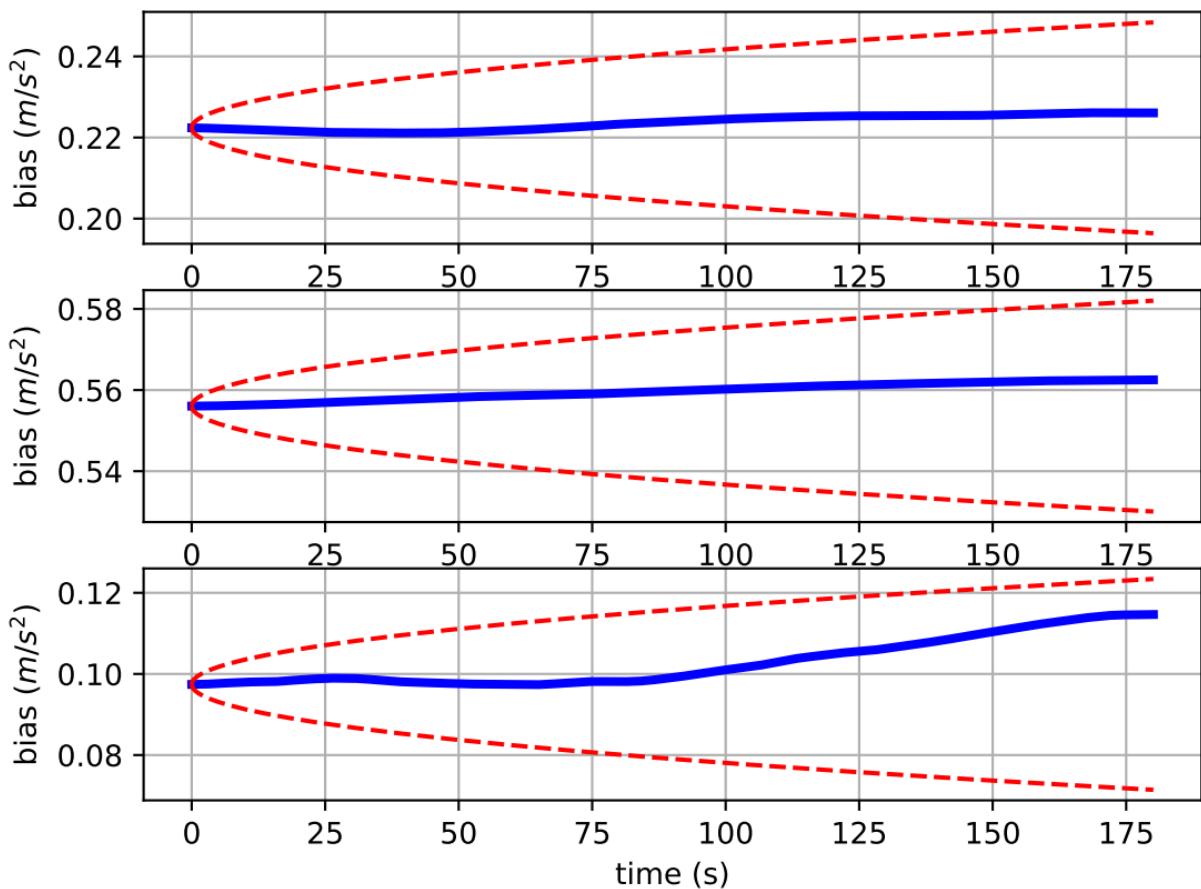
Comparison of predicted and measured specific force (imu0 frame)



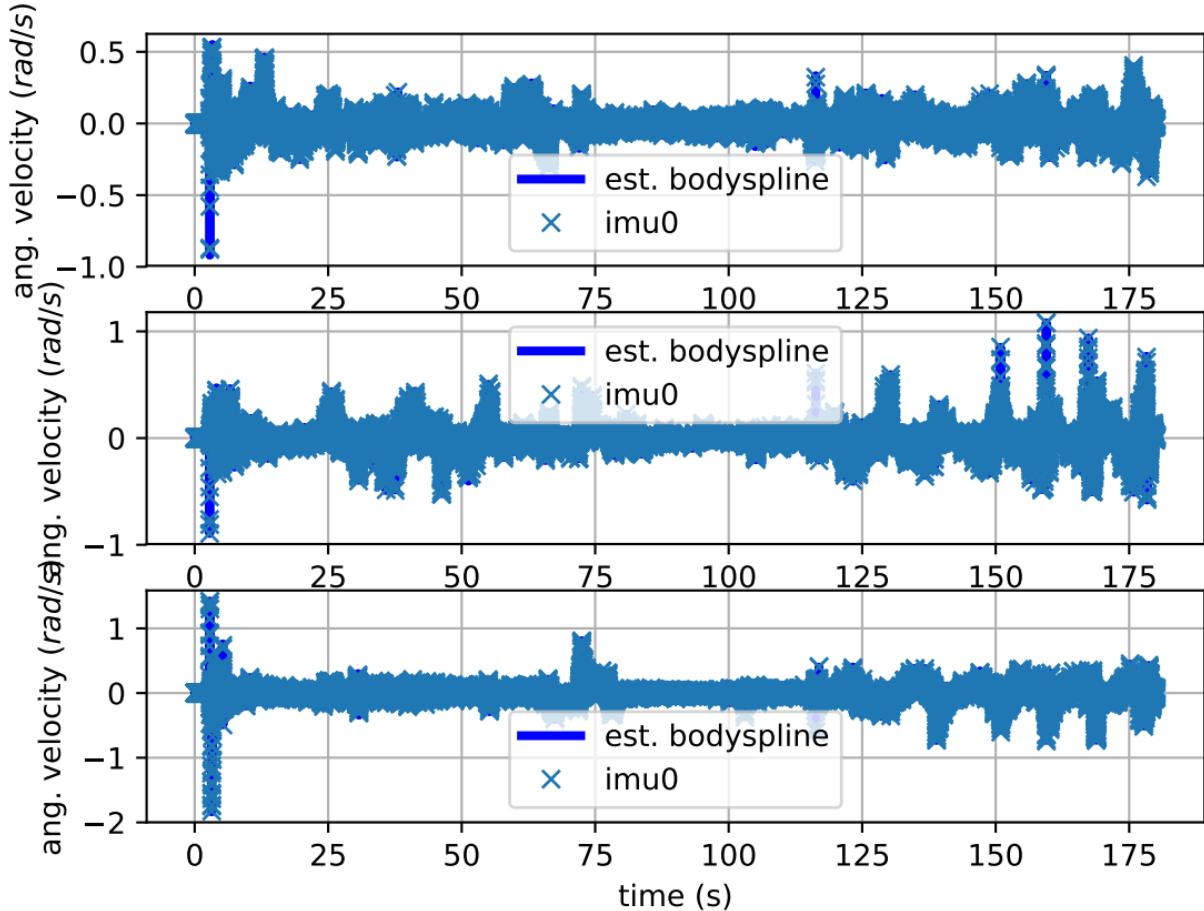
imu0: acceleration error



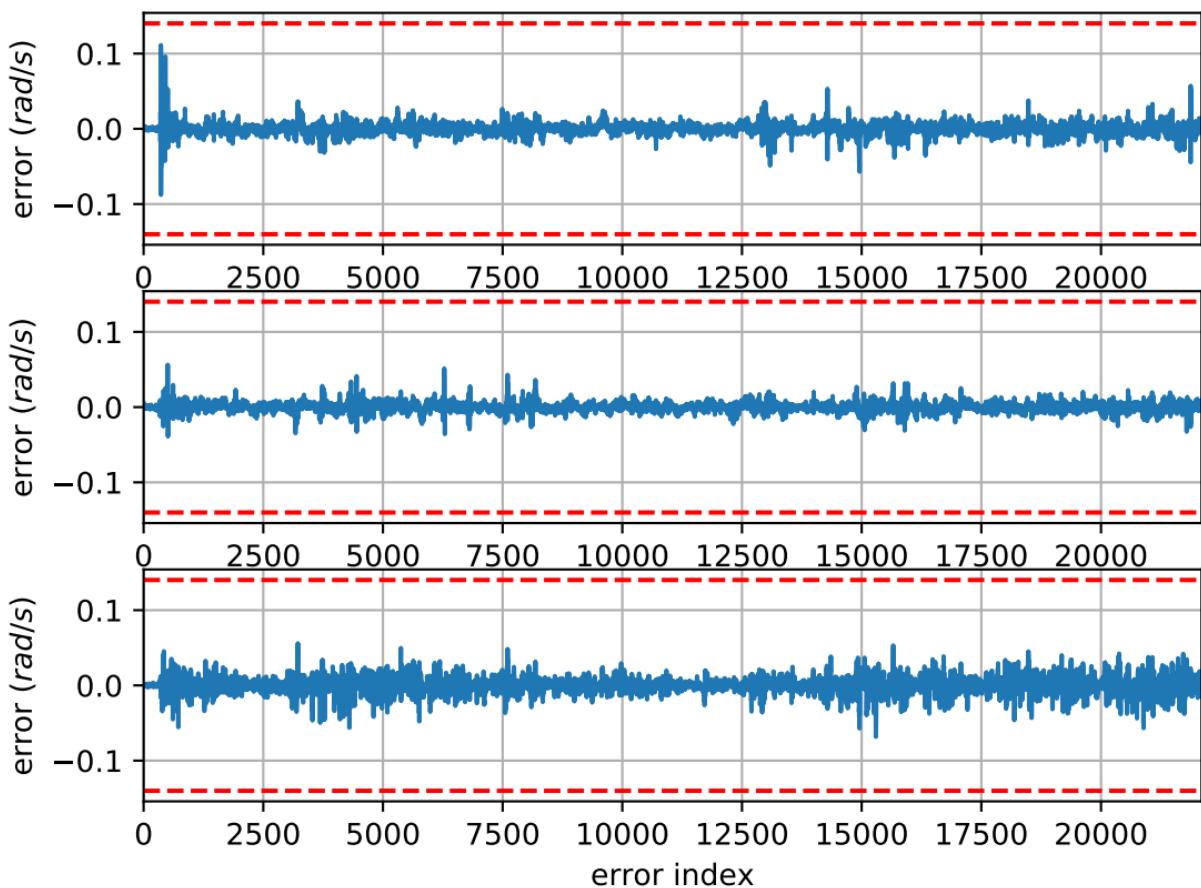
imu0: estimated accelerometer bias (imu frame)



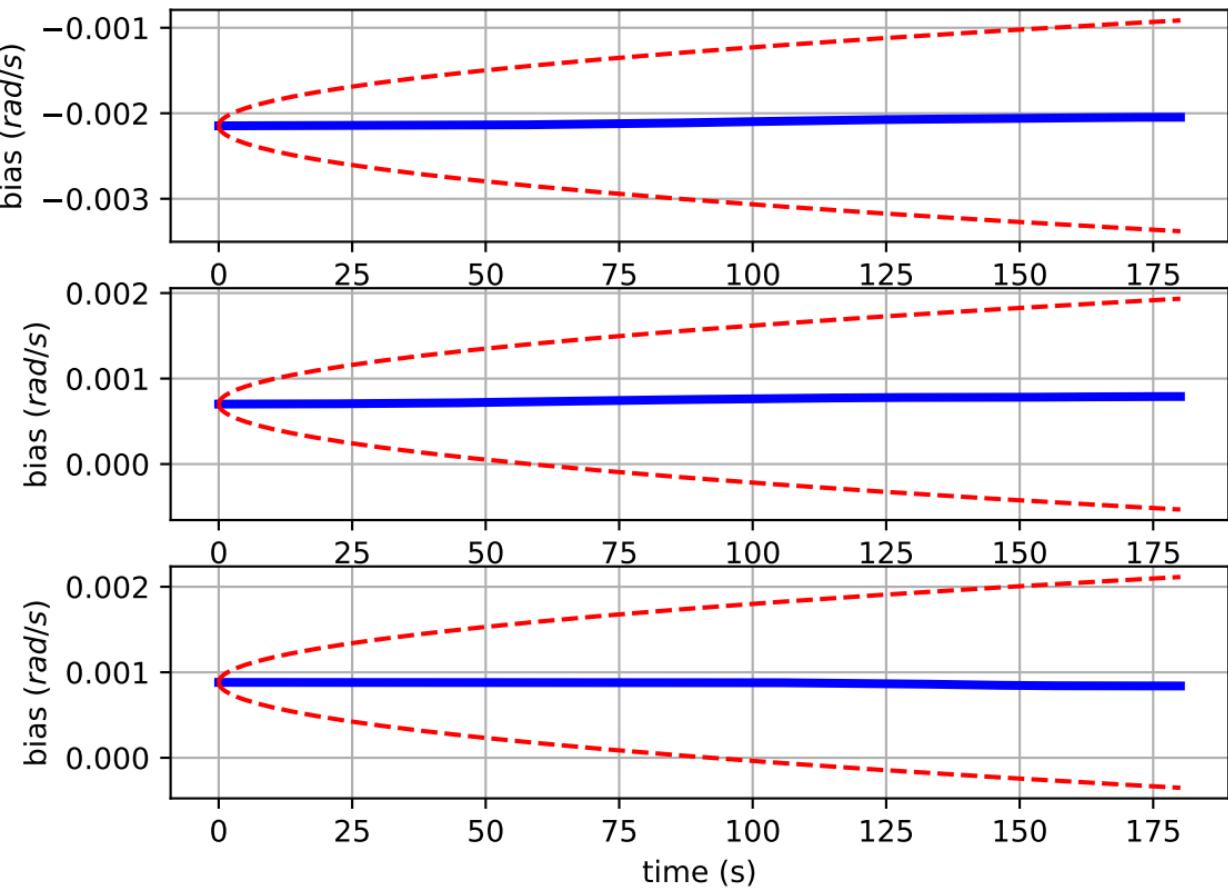
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

