

Calibration results

Normalized Residuals

Reprojection error (cam0): mean 0.40076405590060854, median 0.35567662760103513, std: 0.2479891

Gyroscope error (imu0): mean 0.27422054618834046, median 0.20070077927310837, std: 0.26075295

Accelerometer error (imu0): mean 1.2929874357600717, median 0.9298451690957751, std: 1.228916426

Residuals

Reprojection error (cam0) [px]: mean 0.40076405590060854, median 0.35567662760103513, std: 0.2479

Gyroscope error (imu0) [rad/s]: mean 0.04242602185579944, median 0.03105141378454054, std: 0.0403

Accelerometer error (imu0) [m/s^2]: mean 0.03382836680115323, median 0.02432749350728346, std: 0.0

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[-0.9998487  0.00103908  0.0173635 -0.00215006]
 [ 0.00030567 -0.99701055  0.07726498  0.06989097]
 [ 0.01739188  0.0772586  0.99685938  0.00146817]
 [ 0.        0.        0.        1.       ]]
```

T_ic: (cam0 to imu0):

```
[[-0.9998487  0.00030567  0.01739188 -0.00219663]
 [ 0.00103908 -0.99701055  0.0772586  0.06957084]
 [ 0.0173635  0.07726498  0.99685938 -0.00682635]
 [ 0.        0.        0.        1.       ]]
```

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

0.00029113708542802697

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

[-0.09790484 -9.80605842 0.0074679]

Calibration configuration

Camera model: pinhole
Focal length: [595.4004159407851, 593.4144868269653]
Principal point: [325.5790322979441, 244.6964356993332]
Distortion model: radtan
Distortion coefficients: [0.12496895507988227, -0.31518878758447316, -0.00012944067080840156, -7.66
Type: aprilgrid
Tags:
Rows: 6
Cols: 6
Size: 0.021 [m]
Spacing 0.005999994000000001 [m]

IMU configuration

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IMU0:

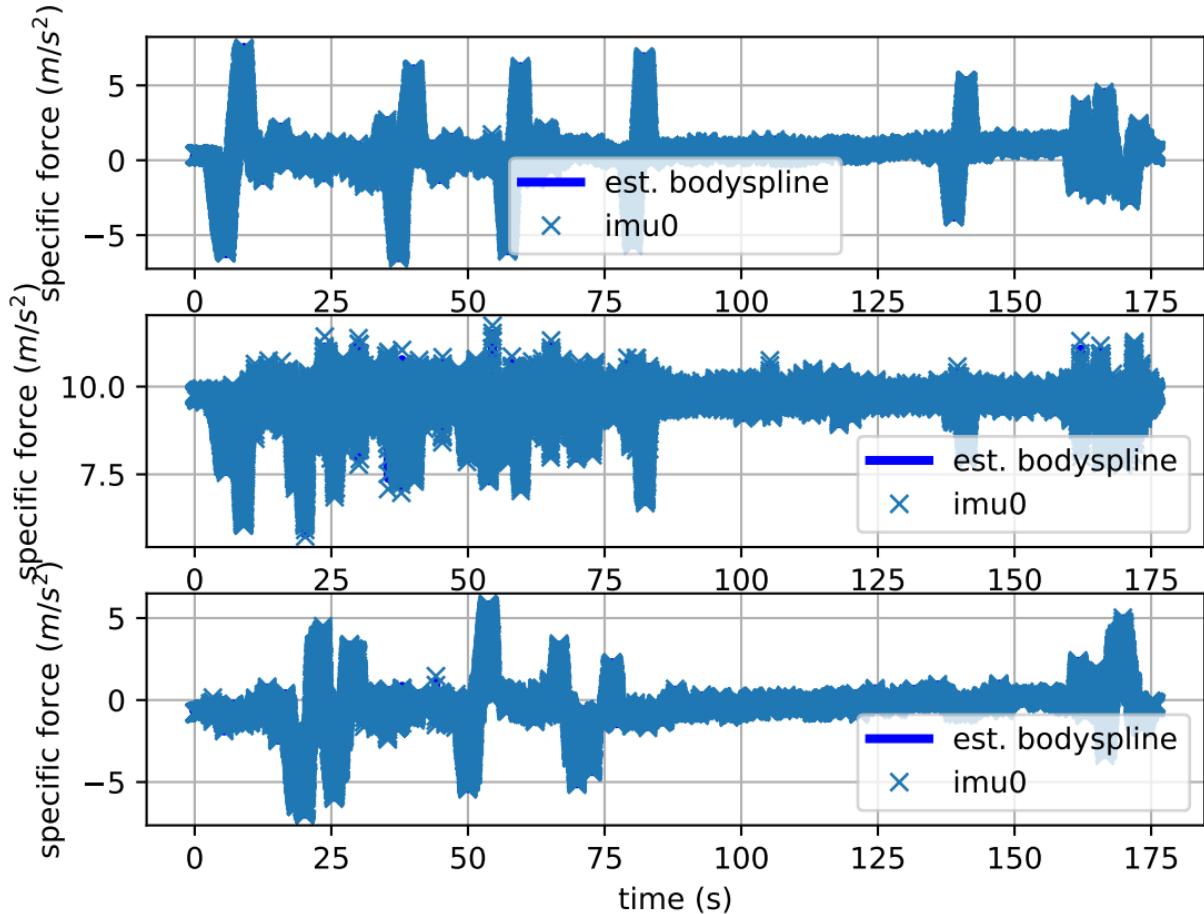
Model: calibrated
Update rate: 200.0
Accelerometer:
Noise density: 0.00185
Noise density (discrete): 0.02616295090390226
Random walk: 2.548e-05

Gyroscope:
Noise density: 0.01094
Noise density (discrete): 0.1547149637236166
Random walk: 0.0005897

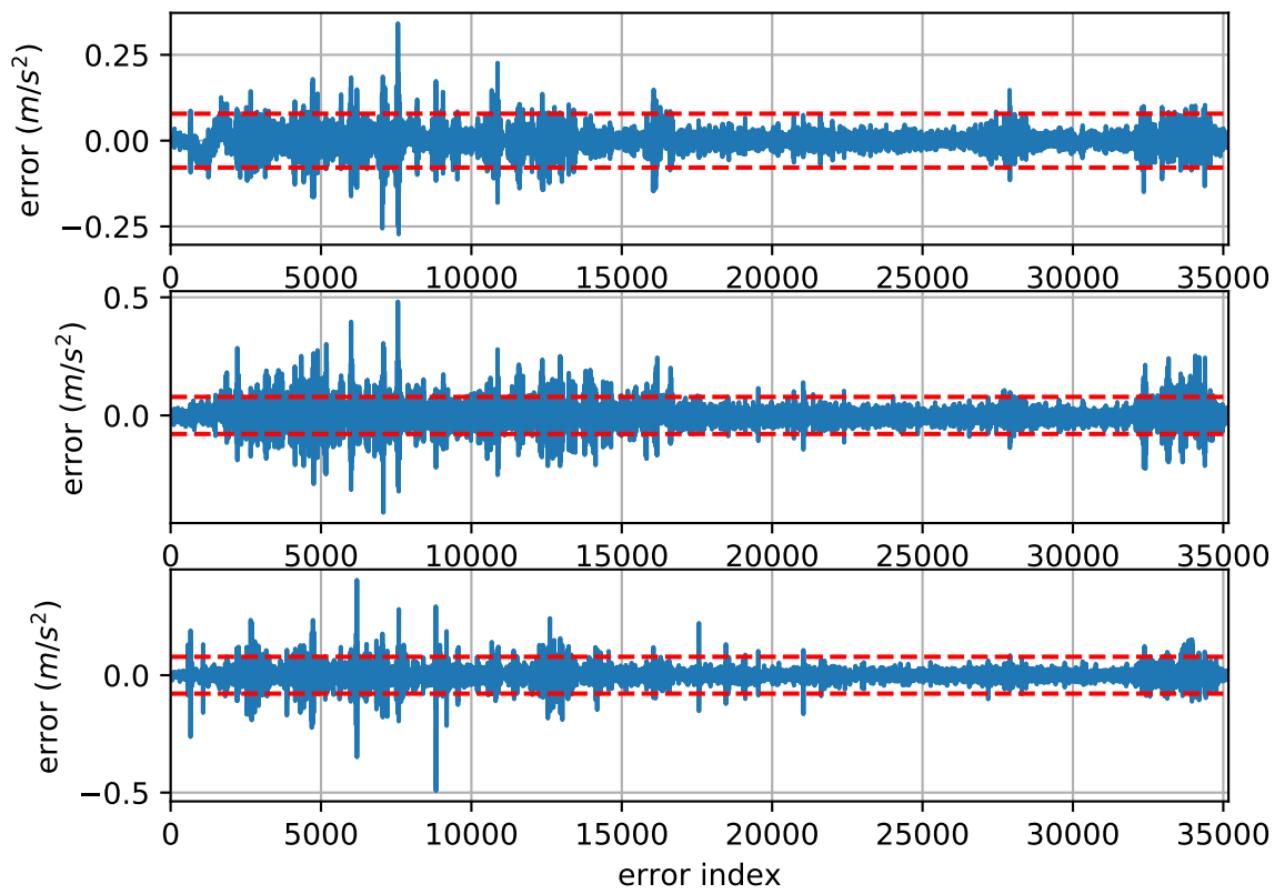
T_i_b
[[1. 0. 0.]
[0. 1. 0. 0.]
[0. 0. 1. 0.]
[0. 0. 0. 1.]]

time offset with respect to IMU0: 0.0 [s]

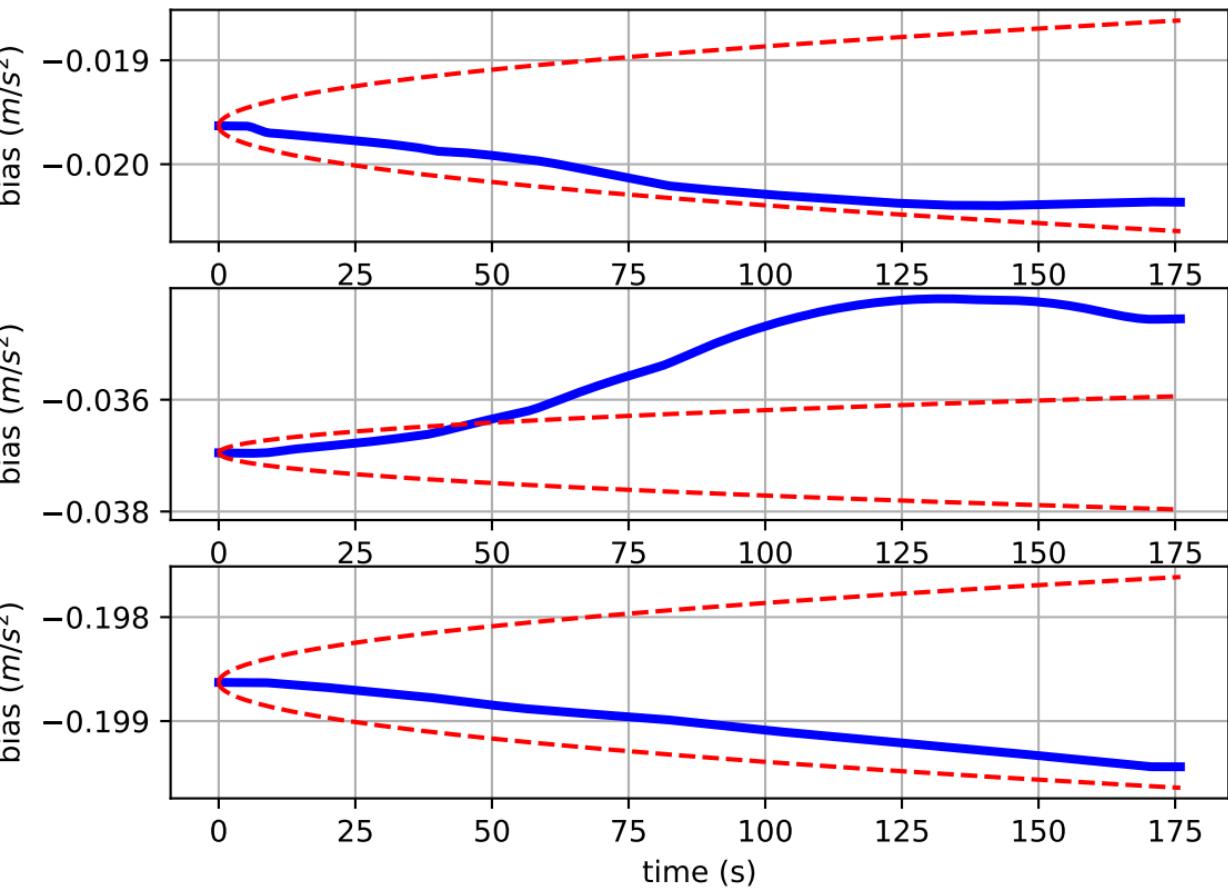
Comparison of predicted and measured specific force (imu0 frame)



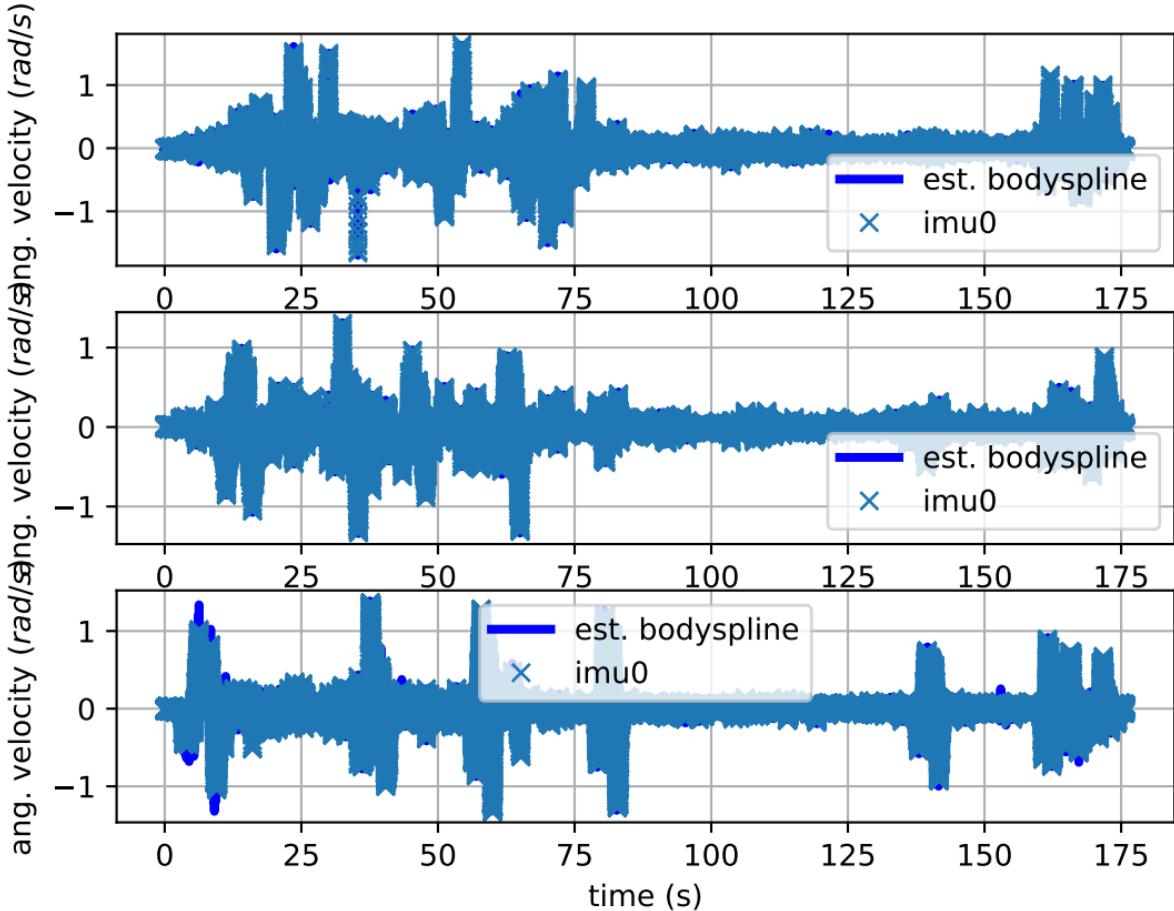
imu0: acceleration error



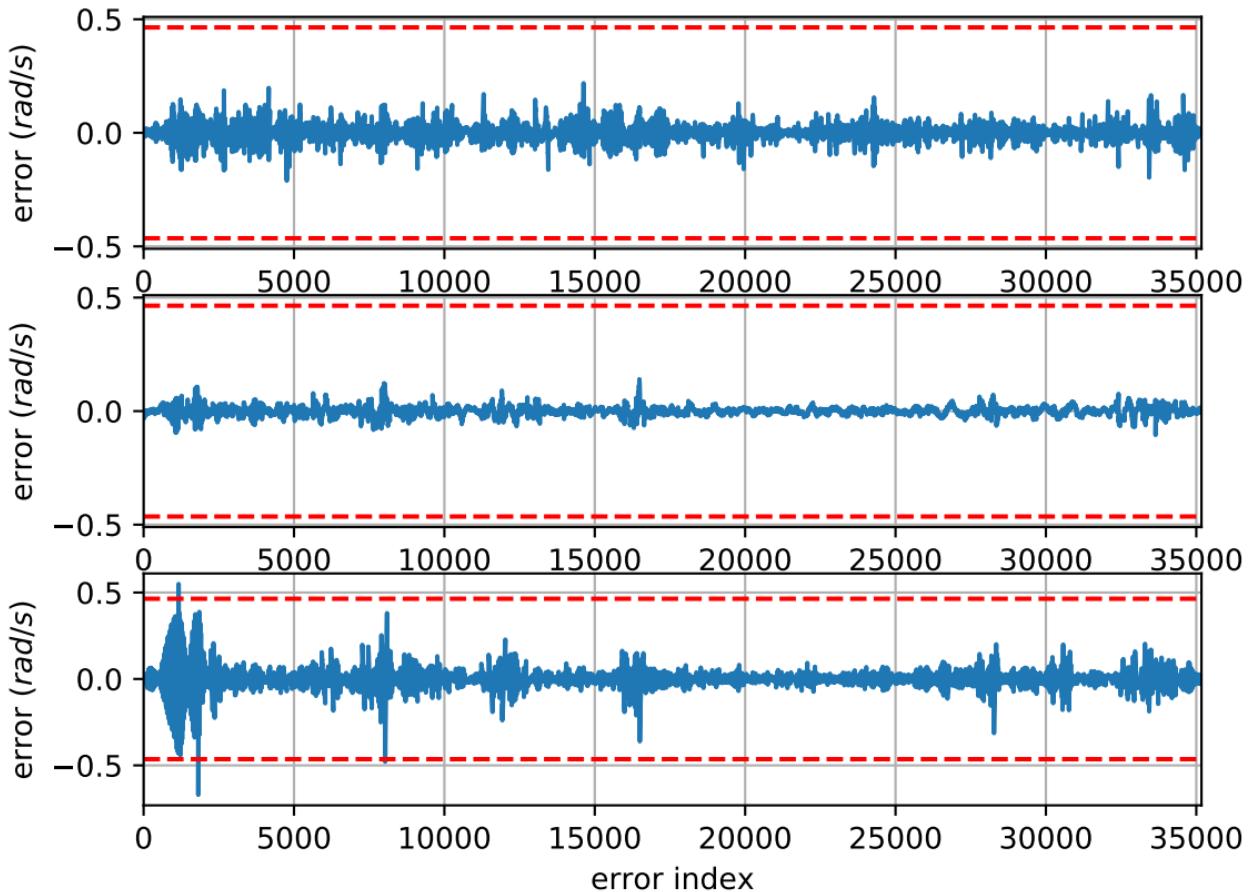
imu0: estimated accelerometer bias (imu frame)



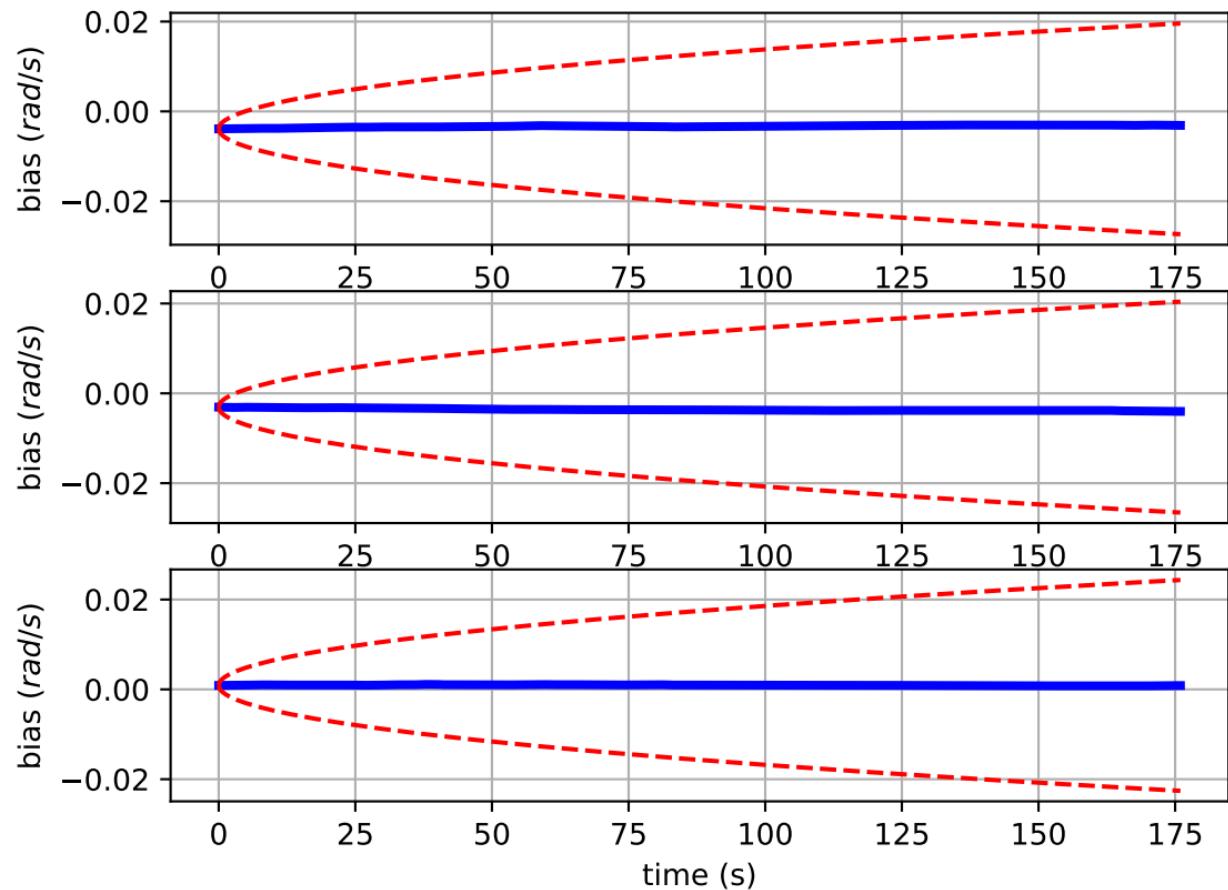
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

