

Calibration results

=====

Normalized Residuals

Reprojection error (cam0): mean 0.127454691674, median 0.113981283464, std: 0.0792339243848
Gyroscope error (imu0): mean 0.0102169712072, median 0.00903016572121, std: 0.00583823594913
Accelerometer error (imu0): mean 0.0151477496305, median 0.0134896823692, std: 0.0102487106667

Residuals

Reprojection error (cam0) [px]: mean 0.127454691674, median 0.113981283464, std: 0.0792339243848
Gyroscope error (imu0) [rad/s]: mean 0.0161544499015, median 0.0142779456639, std: 0.009231061558
Accelerometer error (imu0) [m/s²]: mean 0.0479013902584, median 0.0426581211989, std: 0.032409268

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[ 0.9999641  0.00319788 -0.0078464  0.00126503]
 [ -0.00321631  0.9999921 -0.00233704 -0.00256521]
 [ 0.00783887  0.00236219  0.99996649 -0.02223153]
 [ 0.         0.         0.         1.         ]]
```

T_ic: (cam0 to imu0):

```
[[ 0.9999641 -0.00321631  0.00783887 -0.00109897]
 [ 0.00319788  0.9999921  0.00236219  0.00261366]
 [-0.0078464 -0.00233704  0.99996649  0.02223472]
 [ 0.         0.         0.         1.         ]]
```

timeshift cam0 to imu0: [s] (t_imu = t_cam + shift)
0.00573388930048

Gravity vector in target coords: [m/s²]
[-0.0431094 -0.00274046 -9.80645486]

Calibration configuration

Camera model: pinhole
Focal length: [173.07989681517137, 173.0734479068749]
Principal point: [163.31033691005516, 134.99889292308214]
Distortion model: equidistant
Distortion coefficients: [-0.03252275347038443, 0.0010042799356776398, -0.0048537750326187136, 0.0
Type: aprilgrid
Tags:
 Rows: 4
 Cols: 5
 Size: 0.075 [m]
 Spacing 0.015 [m]

IMU configuration

=====

IMU0:

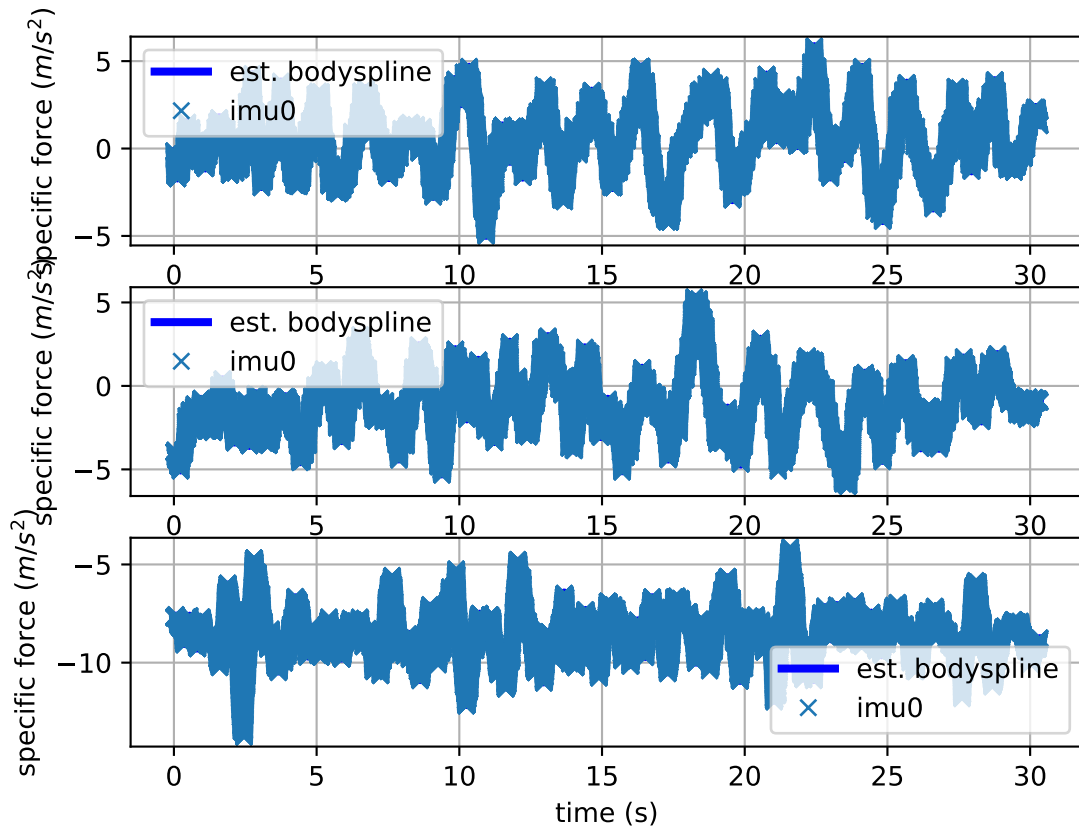
Model: calibrated
Update rate: 1000.0
Accelerometer:
 Noise density: 0.1
 Noise density (discrete): 3.16227766017
 Random walk: 0.002
Gyroscope:
 Noise density: 0.05
 Noise density (discrete): 1.58113883008
 Random walk: 4e-05

T_i_b

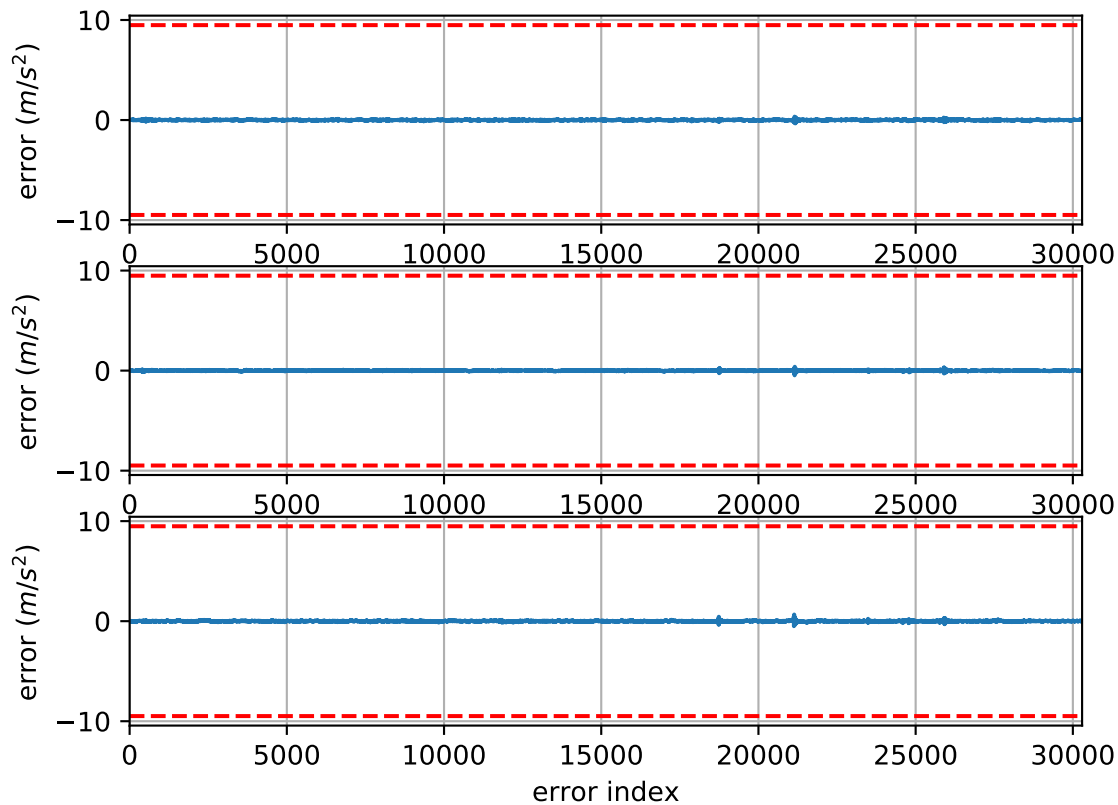
[[1. 0. 0. 0.]
 [0. 1. 0. 0.]
 [0. 0. 1. 0.]
 [0. 0. 0. 1.]]

time offset with respect to IMU0: 0.0 [s]

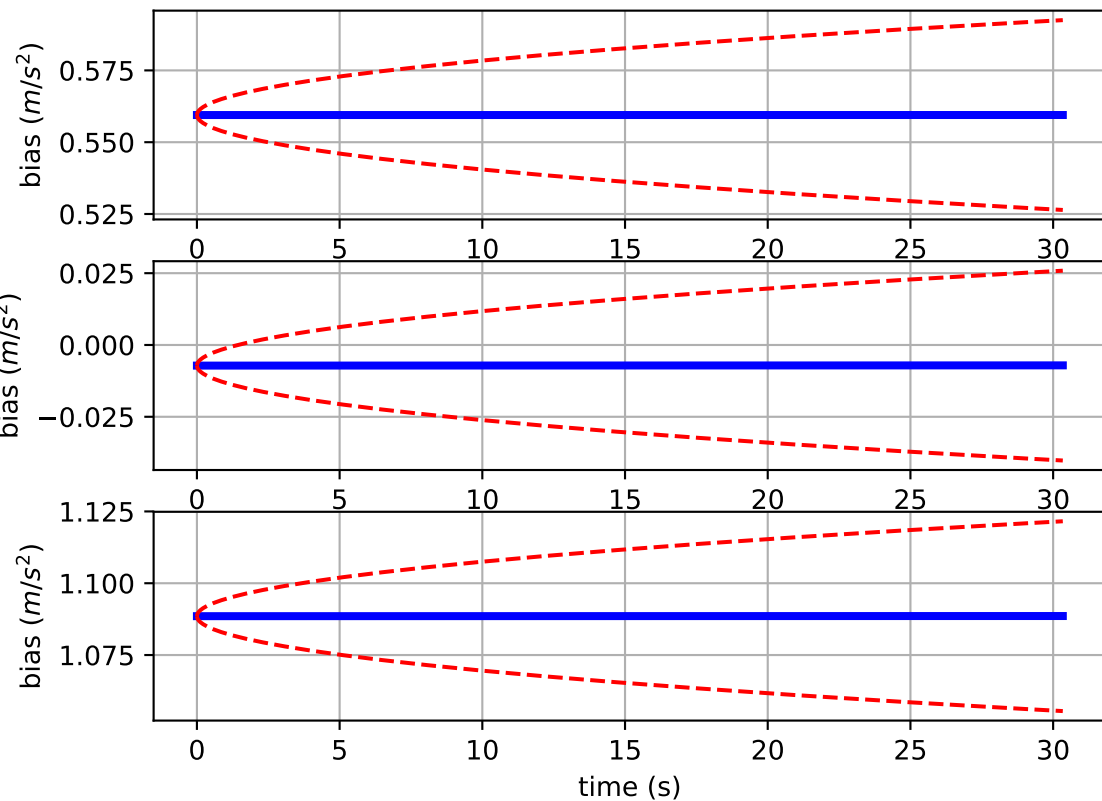
Comparison of predicted and measured specific force (imu0 frame)



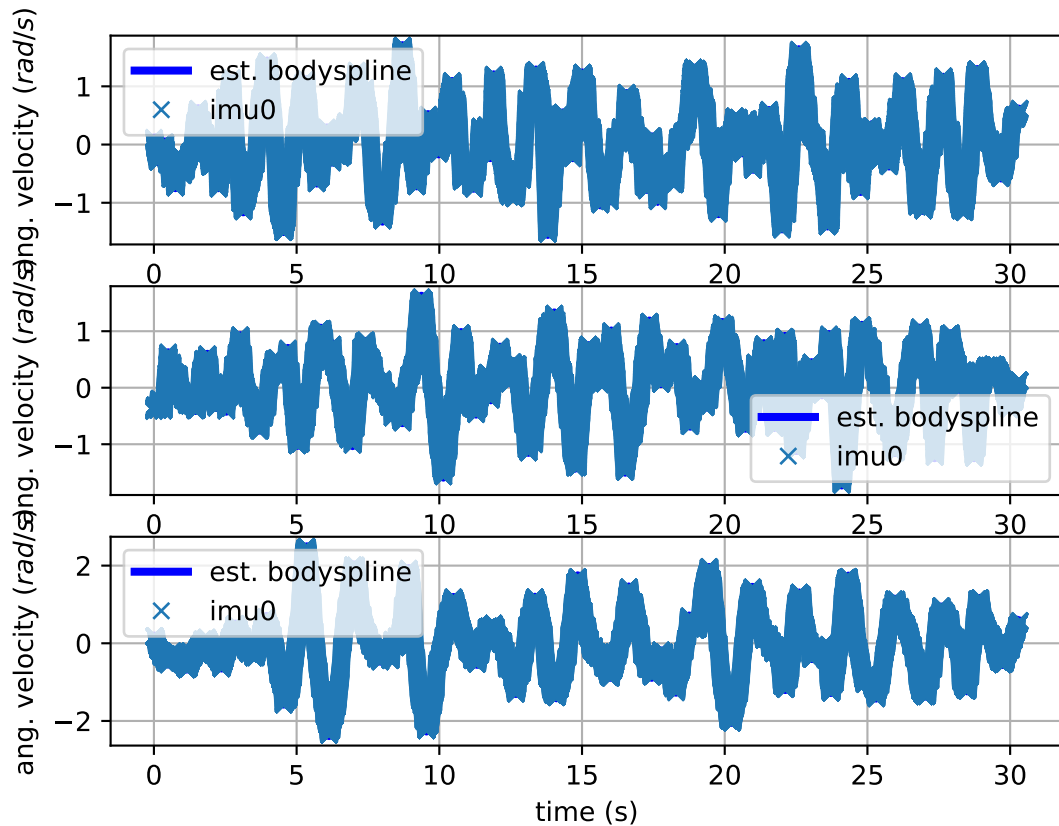
imu0: acceleration error



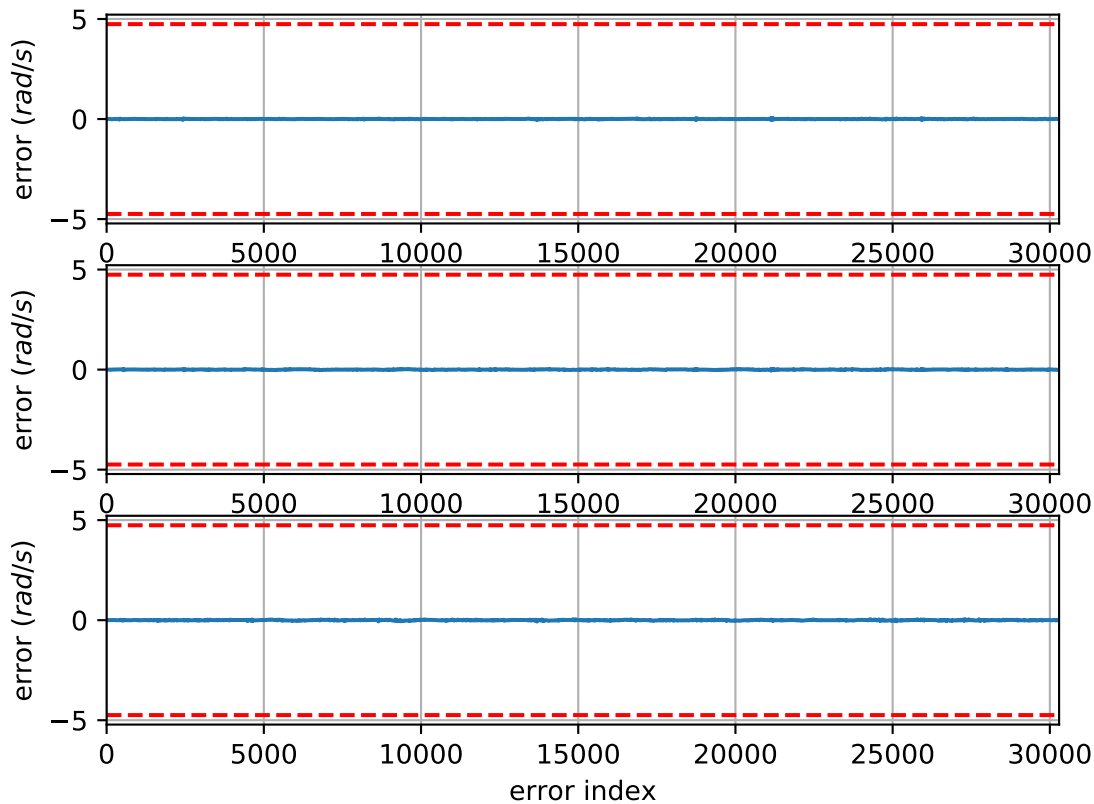
imu0: estimated accelerometer bias (imu frame)



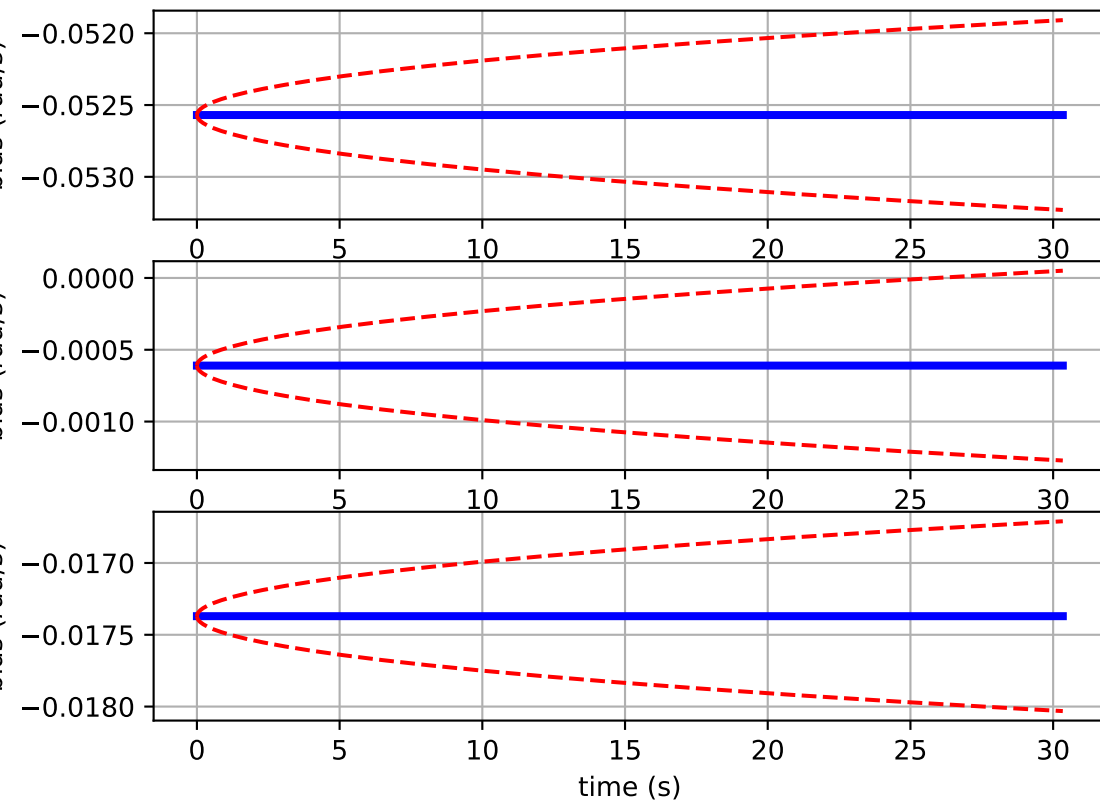
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

