

Calibration results

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Normalized Residuals

Reprojection error (cam0): mean 0.08032956593002599, median 0.07431213327097017, std: 0.0441369
Gyroscope error (imu0): mean 0.021036617506086187, median 0.017794705390360883, std: 0.013256
Accelerometer error (imu0): mean 0.08233290044988581, median 0.06711262909511674, std: 0.0786810

Residuals

Reprojection error (cam0) [px]: mean 0.08032956593002599, median 0.07431213327097017, std: 0.0441
Gyroscope error (imu0) [rad/s]: mean 0.00799391465231275, median 0.0067619880483371355, std: 0.00
Accelerometer error (imu0) [m/s^2]: mean 0.03128650217095661, median 0.025502799056144363, std: 0.

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[-0.99989169  0.00739604  0.01272431 -0.00302457]
 [ 0.01270714 -0.00236353  0.99991647  0.01118067]
 [ 0.0074255  0.99996986  0.00226929 -0.05718309]
 [ 0.         0.         0.         1.         ]]
```

T_ic: (cam0 to imu0):

```
[[-0.99989169  0.01270714  0.0074255 -0.0027417 ]
 [ 0.00739604 -0.00236353  0.99996986  0.05723017]
 [ 0.01272431  0.99991647  0.00226929 -0.01101148]
 [ 0.         0.         0.         1.         ]]
```

timeshift cam0 to imu0: [s] (t_imu = t_cam + shift)
0.0018128742099424312

Gravity vector in target coords: [m/s^2]
[-0.02074187 -9.80652455 0.00829909]

Calibration configuration

Camera model: pinhole

Focal length: [352.9514843860555, 353.32837903547403]

Principal point: [363.93345228274336, 266.14511705007413]

Distortion model: equidistant

Distortion coefficients: [-0.03890973498616883, -0.002604676547864069, 0.0004634700730293949, -0.0004634700730293949, -0.0004634700730293949, -0.0004634700730293949]

Type: aprilgrid

Tags:

Rows: 7

Cols: 12

Size: 0.15 [m]

Spacing 0.0375 [m]

IMU configuration

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IMU0:

Model: calibrated

Update rate: 400.0

Accelerometer:

Noise density: 0.019

Noise density (discrete): 0.37999999999999995

Random walk: 0.0043

Gyroscope:

Noise density: 0.019

Noise density (discrete): 0.37999999999999995

Random walk: 0.000266

T_i_b

[[1. 0. 0. 0.]

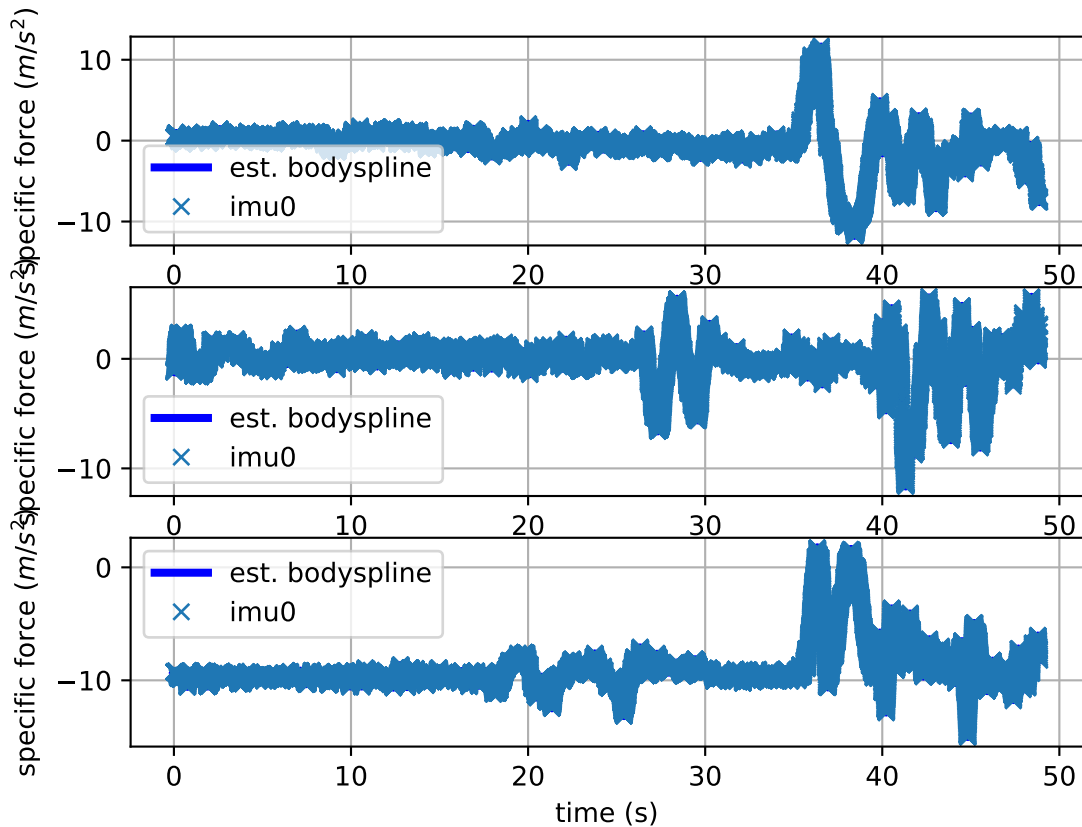
[0. 1. 0. 0.]

[0. 0. 1. 0.]

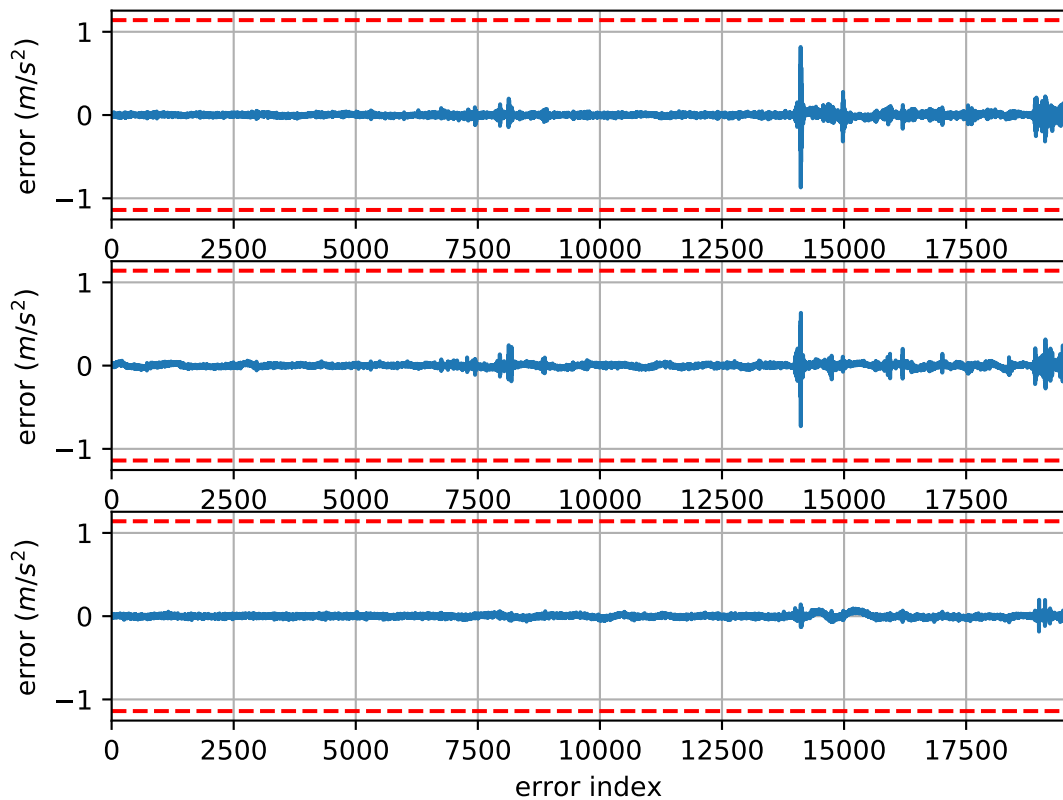
[0. 0. 0. 1.]]

time offset with respect to IMU0: 0.0 [s]

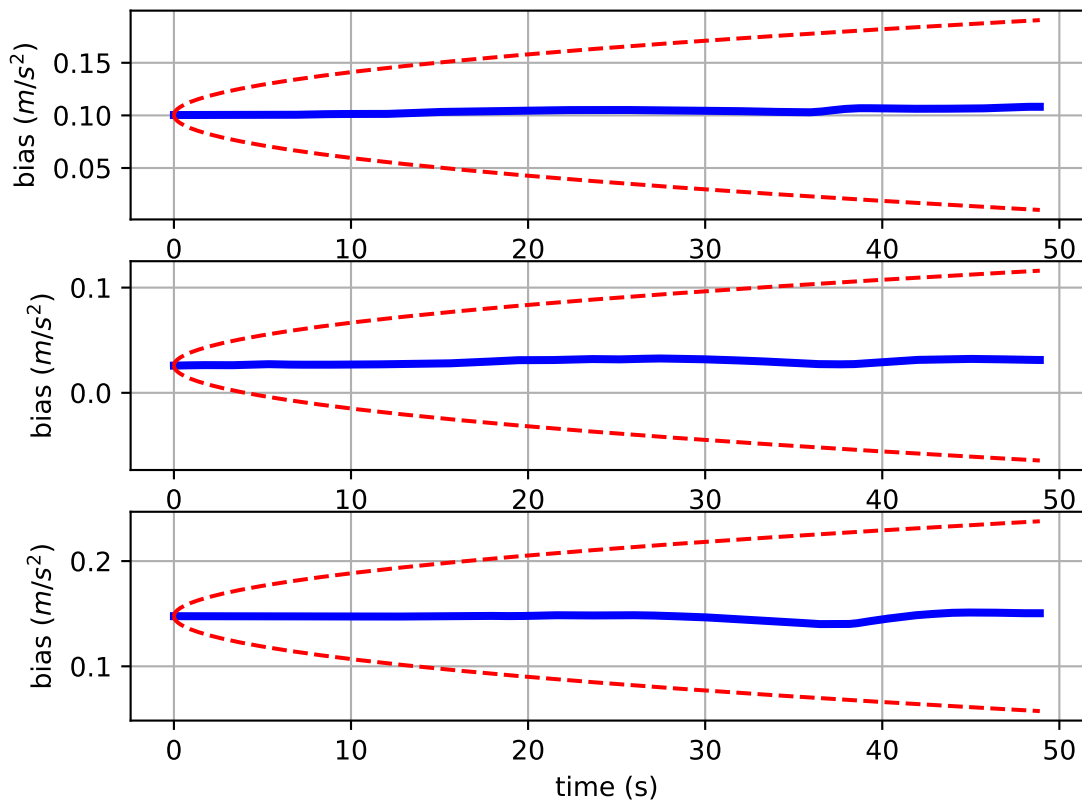
Comparison of predicted and measured specific force (imu0 frame)



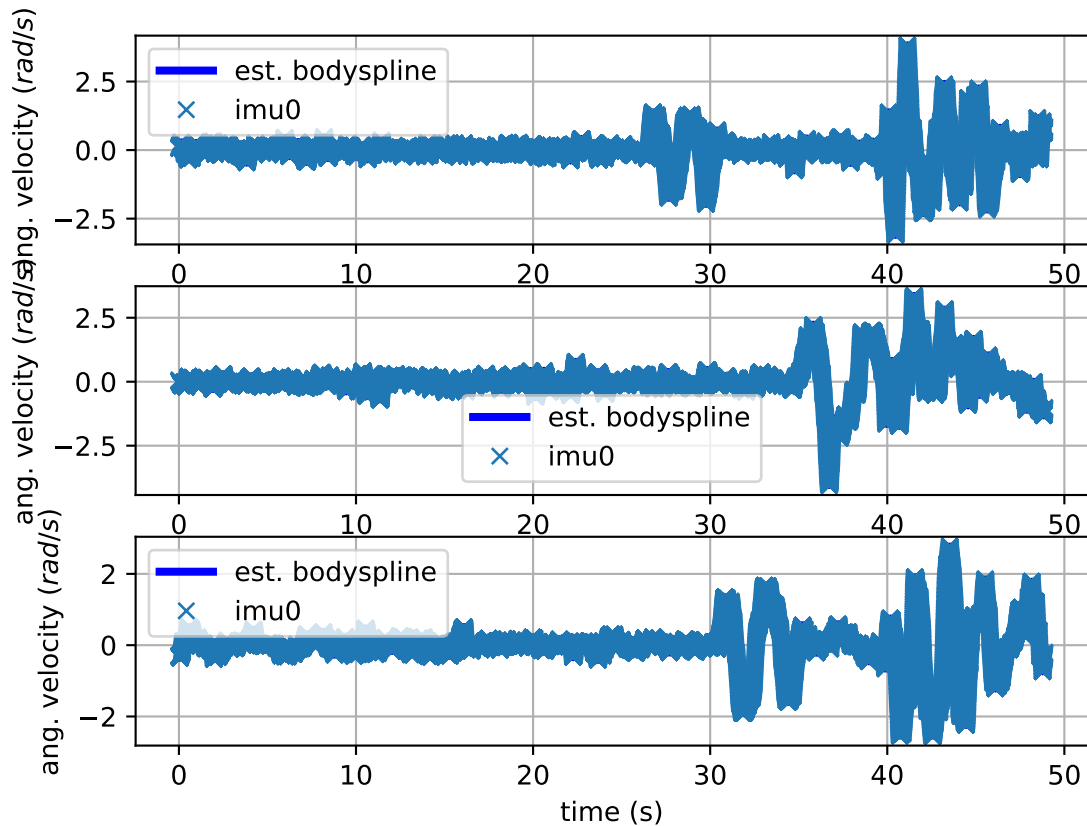
imu0: acceleration error



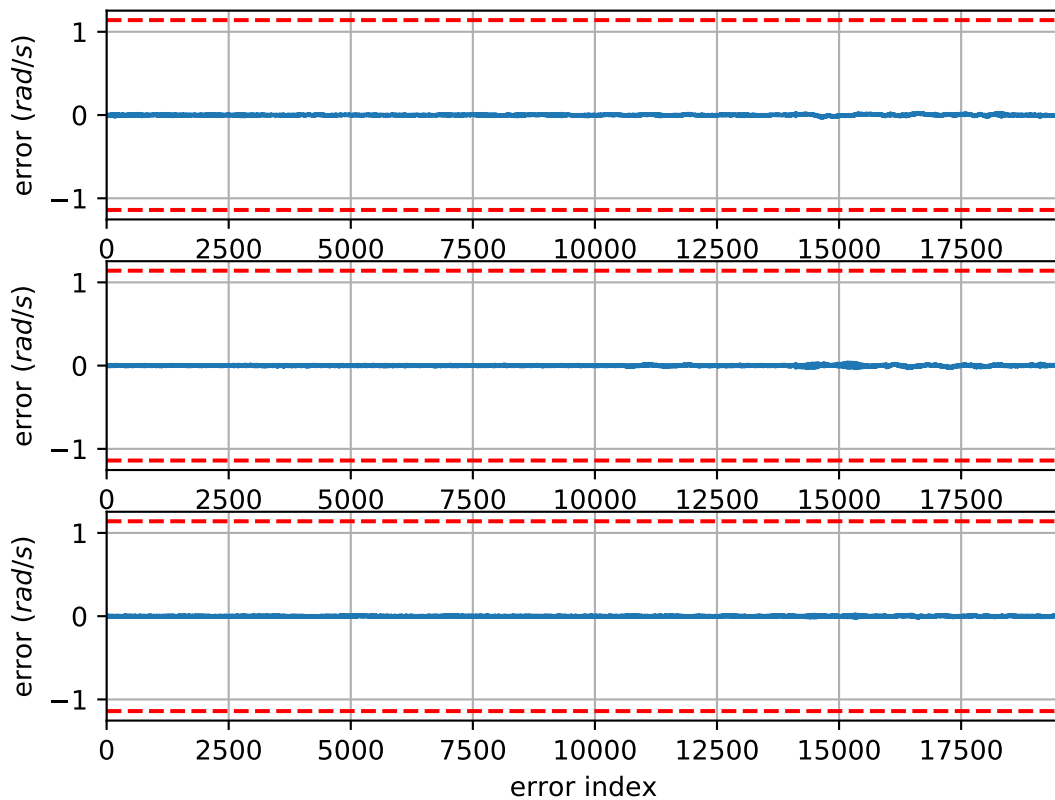
imu0: estimated accelerometer bias (imu frame)



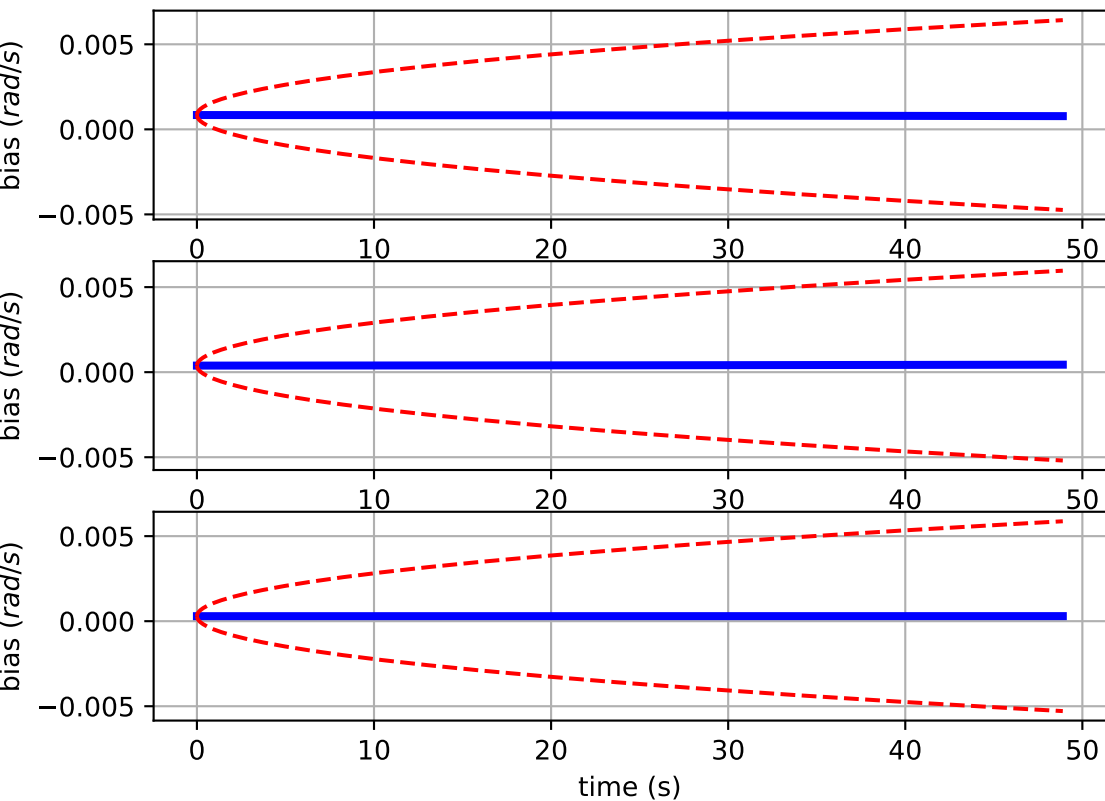
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

