

Calibration results

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Normalized Residuals

Reprojection error (cam0): mean 0.176113534573, median 0.172598967426, std: 0.0838843333775
Gyroscope error (imu0): mean 0.0147345378061, median 0.0132522903443, std: 0.00824477243389
Accelerometer error (imu0): mean 0.0178998372912, median 0.0160453885372, std: 0.0111373254206

Residuals

Reprojection error (cam0) [px]: mean 0.176113534573, median 0.172598967426, std: 0.0838843333775
Gyroscope error (imu0) [rad/s]: mean 0.0232973498685, median 0.0209537108509, std: 0.013036129840
Accelerometer error (imu0) [m/s²]: mean 0.0566042555868, median 0.0507399737199, std: 0.035219315

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[ 0.99988297 0.00533541 -0.01433836 -0.00152241]
 [-0.00543262 0.99996247 -0.00674936 -0.0066219 ]
 [ 0.01430181 0.00682647 0.99987442 -0.02315484]
 [ 0.         0.         0.         1.         ]]
```

T_ic: (cam0 to imu0):

```
[[ 0.99988297 -0.00543262 0.01430181 0.00181741]
 [ 0.00533541 0.99996247 0.00682647 0.00678784]
 [-0.01433836 -0.00674936 0.99987442 0.02308541]
 [ 0.         0.         0.         1.         ]]
```

timeshift cam0 to imu0: [s] (t_imu = t_cam + shift)
0.00580824097506

Gravity vector in target coords: [m/s²]

```
[ 1.1842827 -9.4668998 -2.26797387]
```

Calibration configuration

Camera model: pinhole
Focal length: [174.23979032083346, 174.11105443010973]
Principal point: [163.91078563399876, 140.9726709818771]
Distortion model: equidistant
Distortion coefficients: [-0.03560363132286886, 0.001974723646350411, -0.0045671620060236855, 0.001974723646350411, -0.0045671620060236855, 0.001974723646350411]
Type: aprilgrid
Tags:
 Rows: 4
 Cols: 5
 Size: 0.075 [m]
 Spacing 0.015 [m]

IMU configuration

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IMU0:

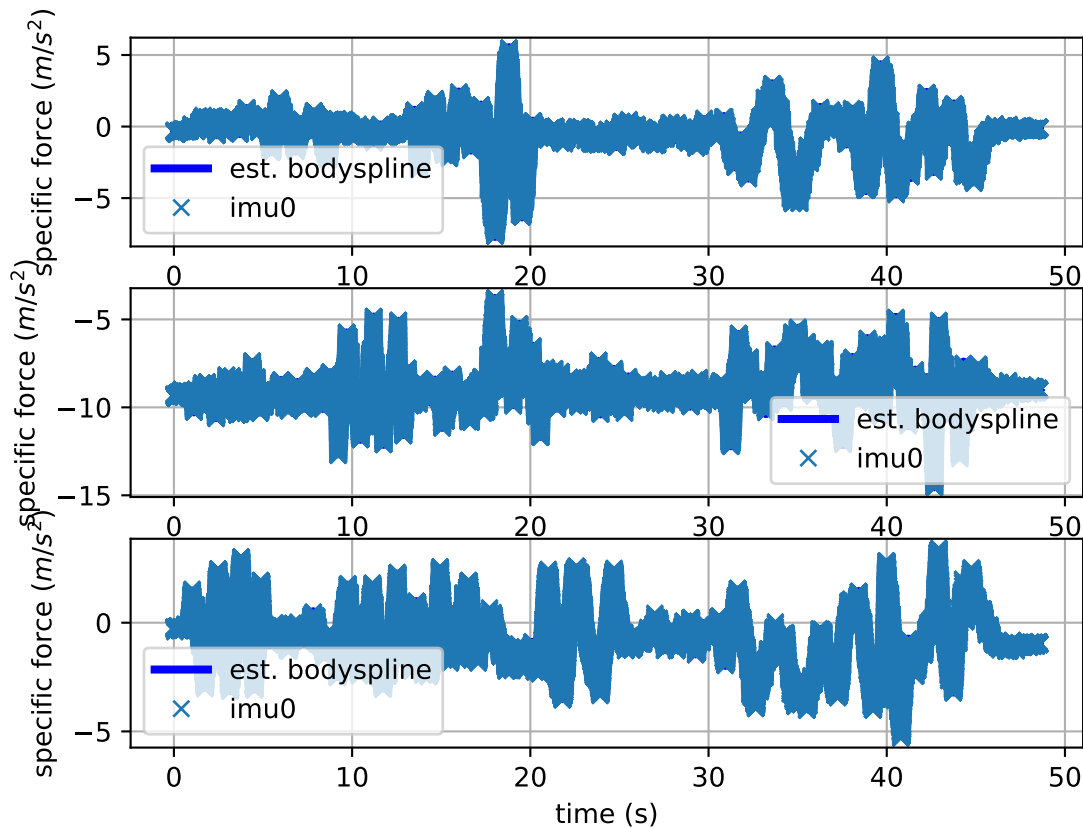
Model: calibrated
Update rate: 1000.0
Accelerometer:
 Noise density: 0.1
 Noise density (discrete): 3.16227766017
 Random walk: 0.002
Gyroscope:
 Noise density: 0.05
 Noise density (discrete): 1.58113883008
 Random walk: 4e-05

T_i_b

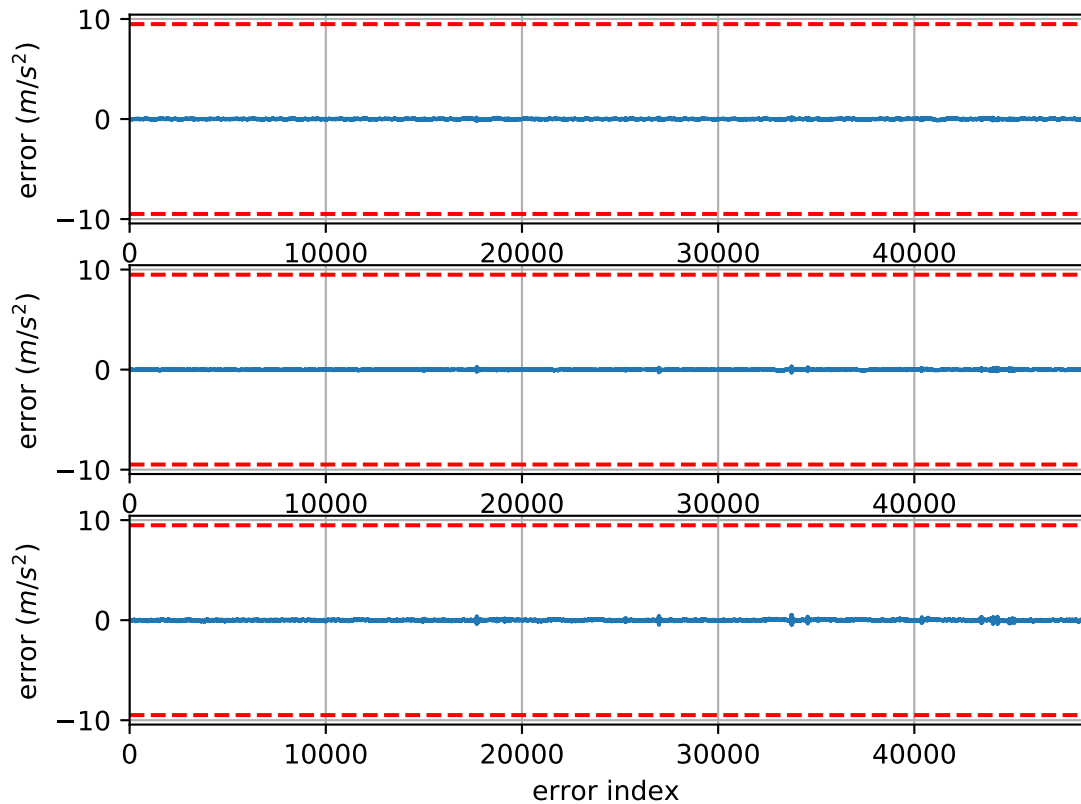
[[1. 0. 0. 0.]
 [0. 1. 0. 0.]
 [0. 0. 1. 0.]
 [0. 0. 0. 1.]]

time offset with respect to IMU0: 0.0 [s]

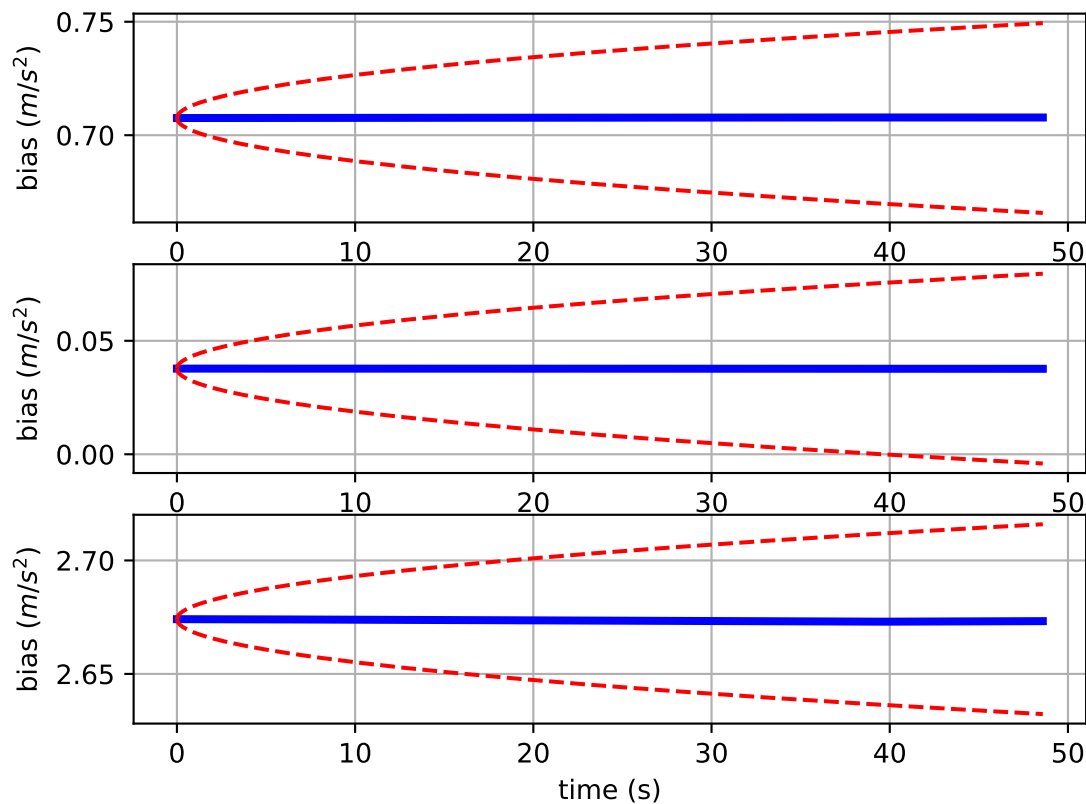
Comparison of predicted and measured specific force (imu0 frame)



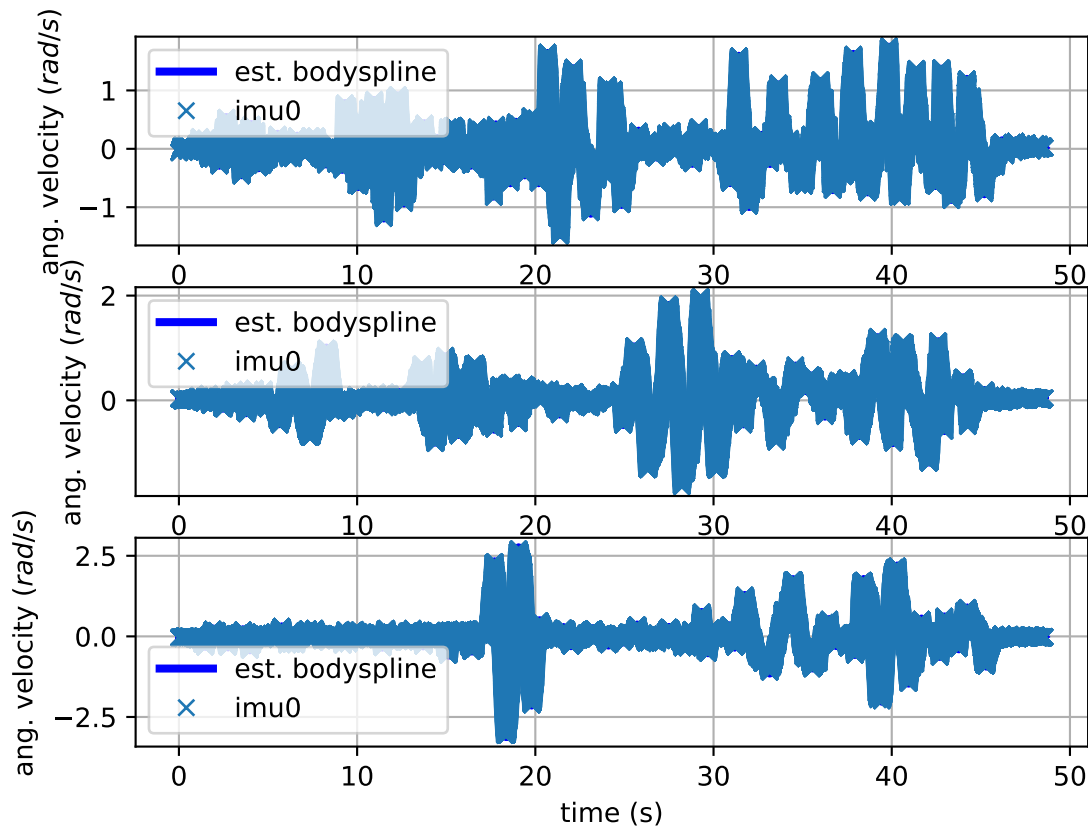
imu0: acceleration error



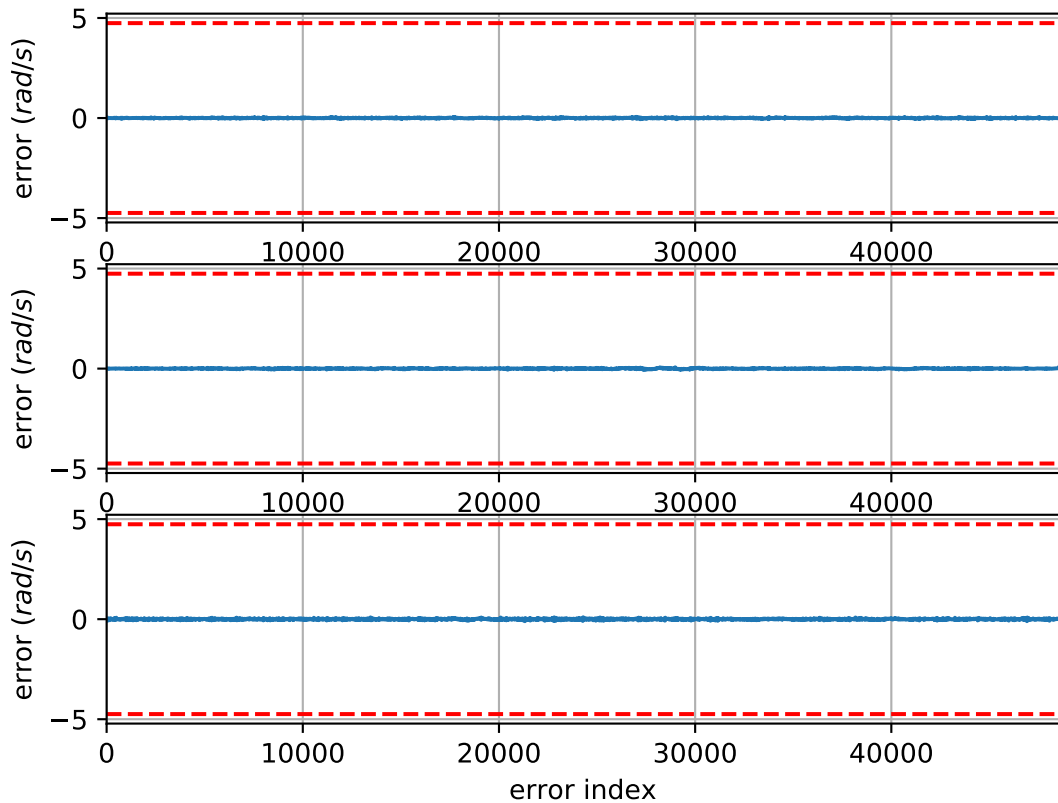
imu0: estimated accelerometer bias (imu frame)



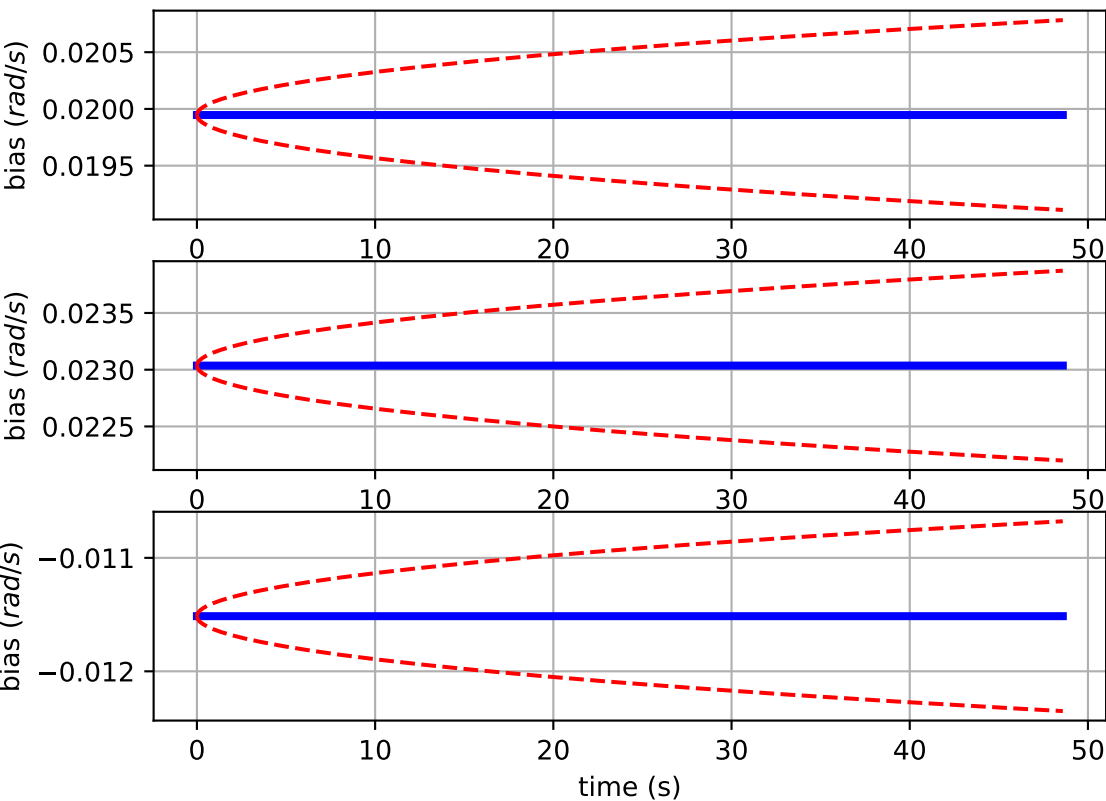
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

