

Calibration results

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Normalized Residuals

Reprojection error (cam0): mean 0.250575287188, median 0.20346032422, std: 0.223865639665
Gyroscope error (imu0): mean 0.000281467330178, median 6.93985273326e-08, std: 0.00149100781219
Accelerometer error (imu0): mean 0.000502606538171, median 0.000503200728406, std: 3.43154765244e-06

Residuals

Reprojection error (cam0) [px]: mean 0.250575287188, median 0.20346032422, std: 0.223865639665
Gyroscope error (imu0) [rad/s]: mean 6.32080624351e-06, median 1.55845669399e-09, std: 3.34830030982e-05
Accelerometer error (imu0) [m/s²]: mean 1.76184920644e-06, median 1.76393209537e-06, std: 1.20290307609e-08

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[ -0.00963161 -0.99951489 -0.02961792  0.00027807]
 [ -0.04145916  0.02999299 -0.99868992 -0.00116448]
 [  0.99909377 -0.00839106 -0.04172793  0.00064143]
 [  0.          0.          0.          1.        ]]
```

T_ic: (cam0 to imu0):

```
[[ -0.00963161 -0.04145916  0.99909377 -0.00068645]
 [ -0.99951489  0.02999299 -0.00839106  0.00031824]
 [ -0.02961792 -0.99868992 -0.04172793 -0.00112795]
 [  0.          0.          0.          1.        ]]
```

timeshift cam0 to imu0: [s] ($t_{imu} = t_{cam} + \text{shift}$)

0.0

Gravity vector in target coords: [m/s²]

[-0.2183502 -9.77897818 -0.70166366]

Calibration configuration

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cam0

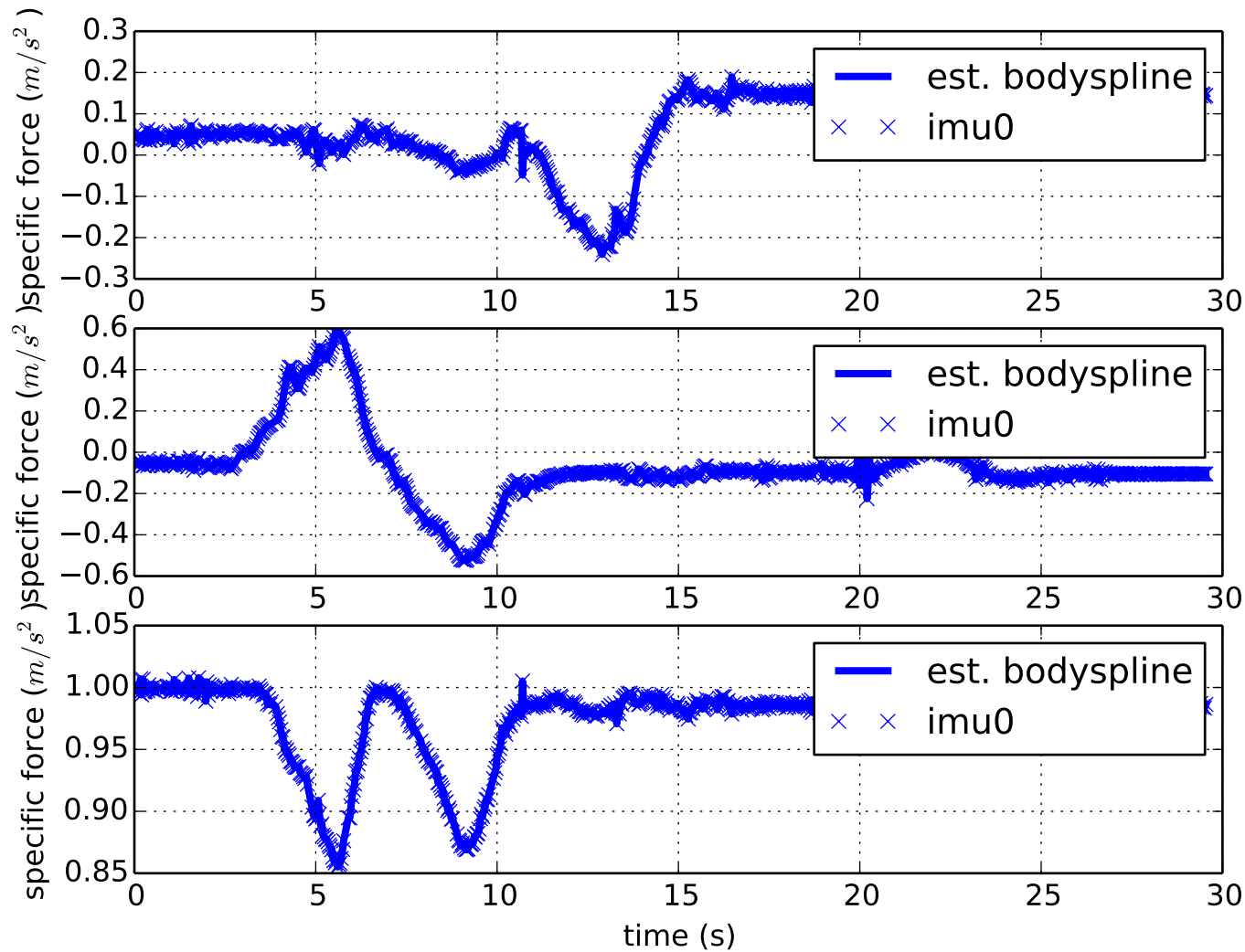
Camera model: omni
Focal length: [822.8369, 824.154721]
Principal point: [322.830094, 203.9253462]
Omni xi: 3.28244682
Distortion model: radtan
Distortion coefficients: [0.8560437616, 17.43165613, 0.0, 0.0]
Type: aprilgrid
Tags:
 Rows: 6
 Cols: 6
 Size: 0.067 [m]
 Spacing 0.0199995 [m]

IMU configuration
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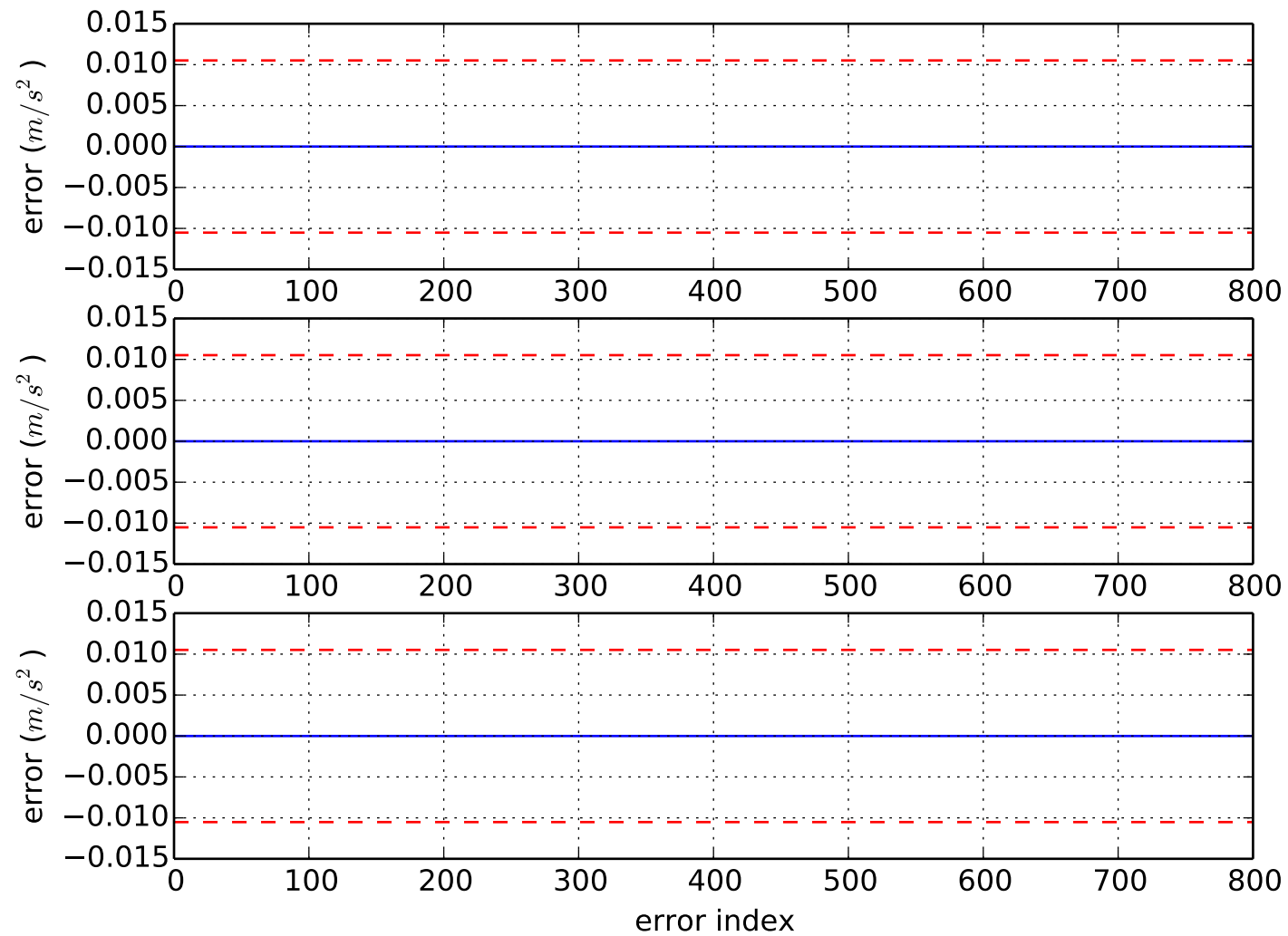
IMU0:

Model: calibrated
Update rate: 30.0
Accelerometer:
 Noise density: 0.00064
 Noise density (discrete): 0.00350542436803
 Random walk: 8.86e-07
Gyroscope:
 Noise density: 0.0041
 Noise density (discrete): 0.0224566248577
 Random walk: 5.7e-07
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]

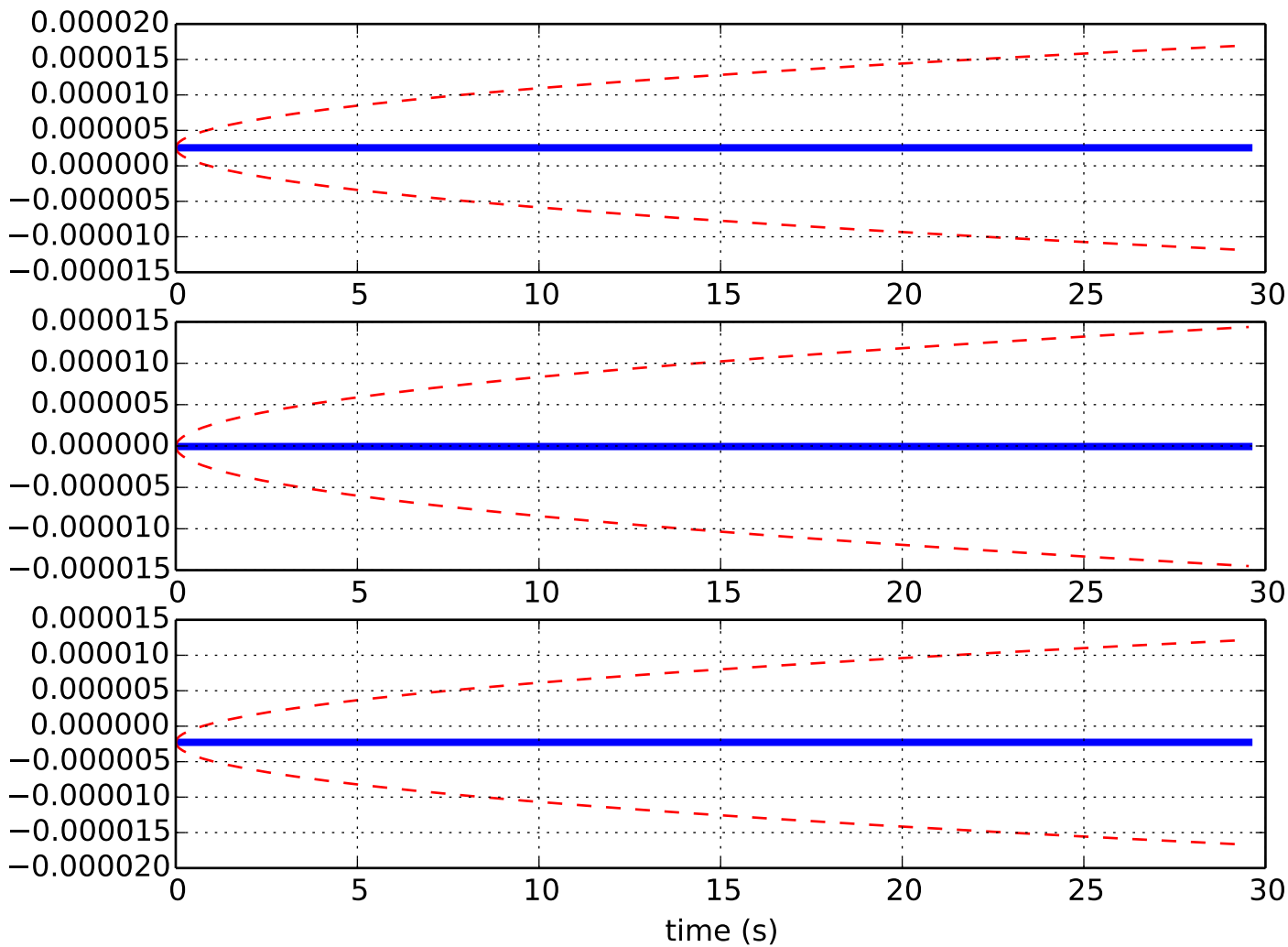
Comparison of predicted and measured specific force (imu0 frame)



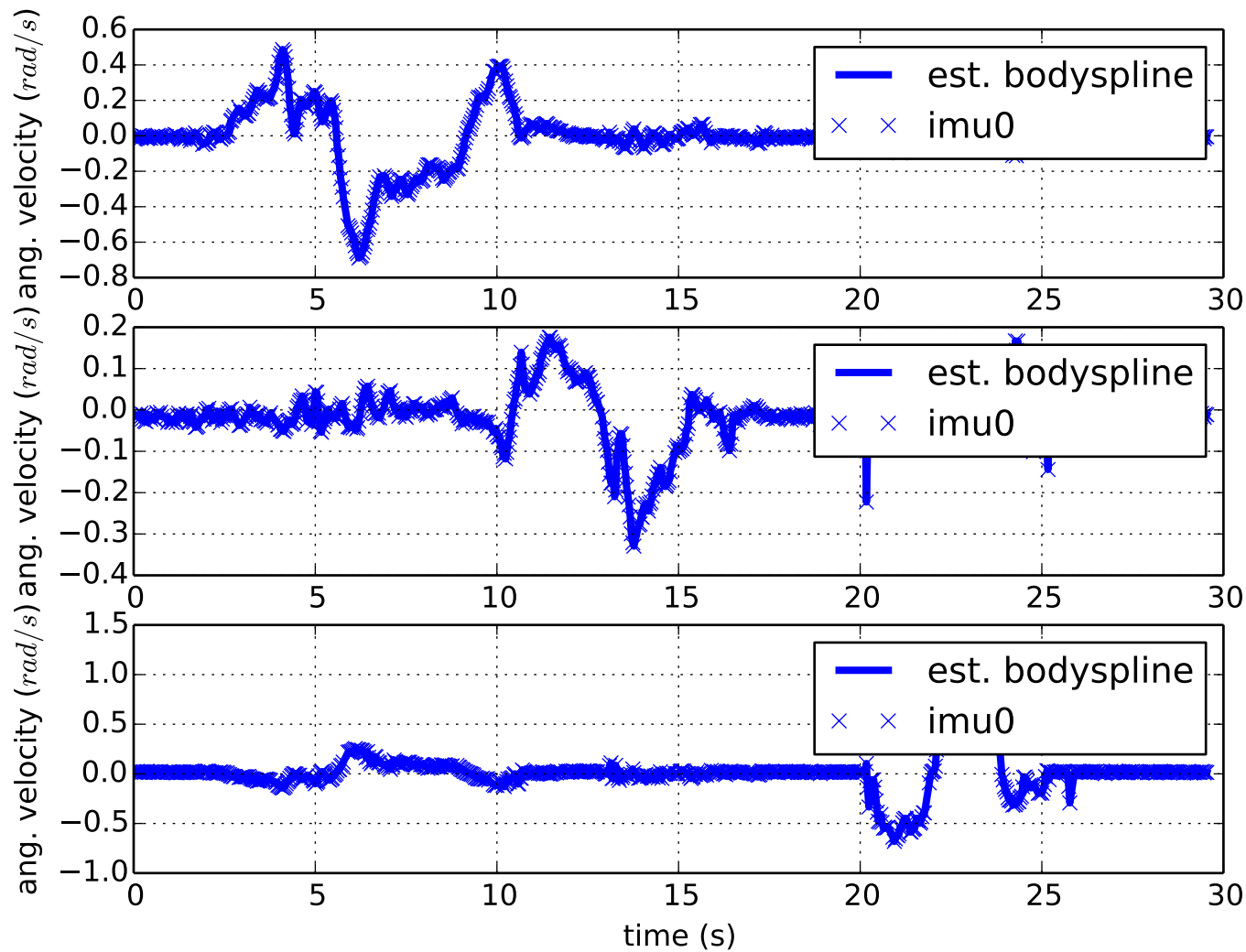
imu0: acceleration error



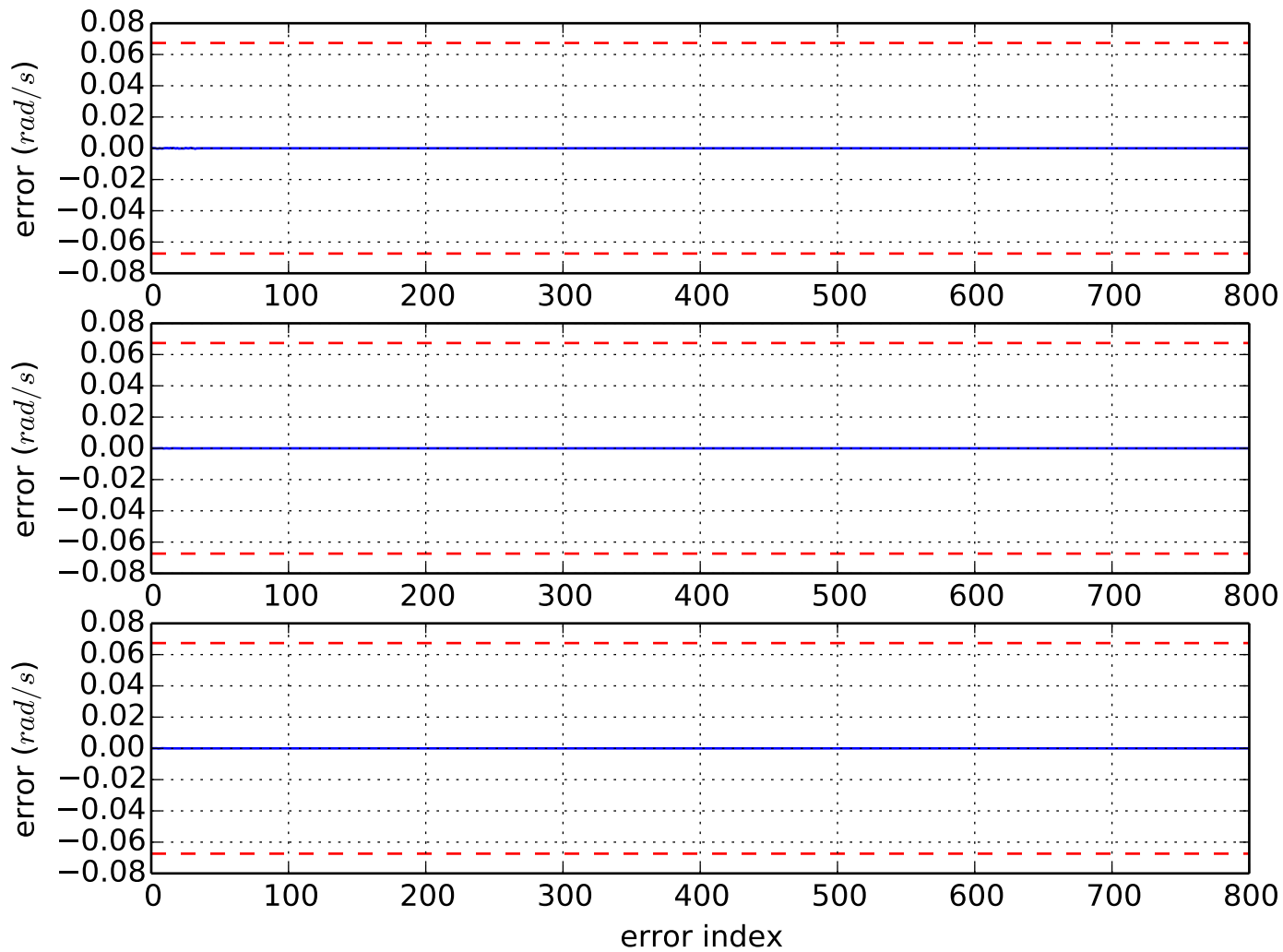
imu0: estimated accelerometer bias (imu frame)



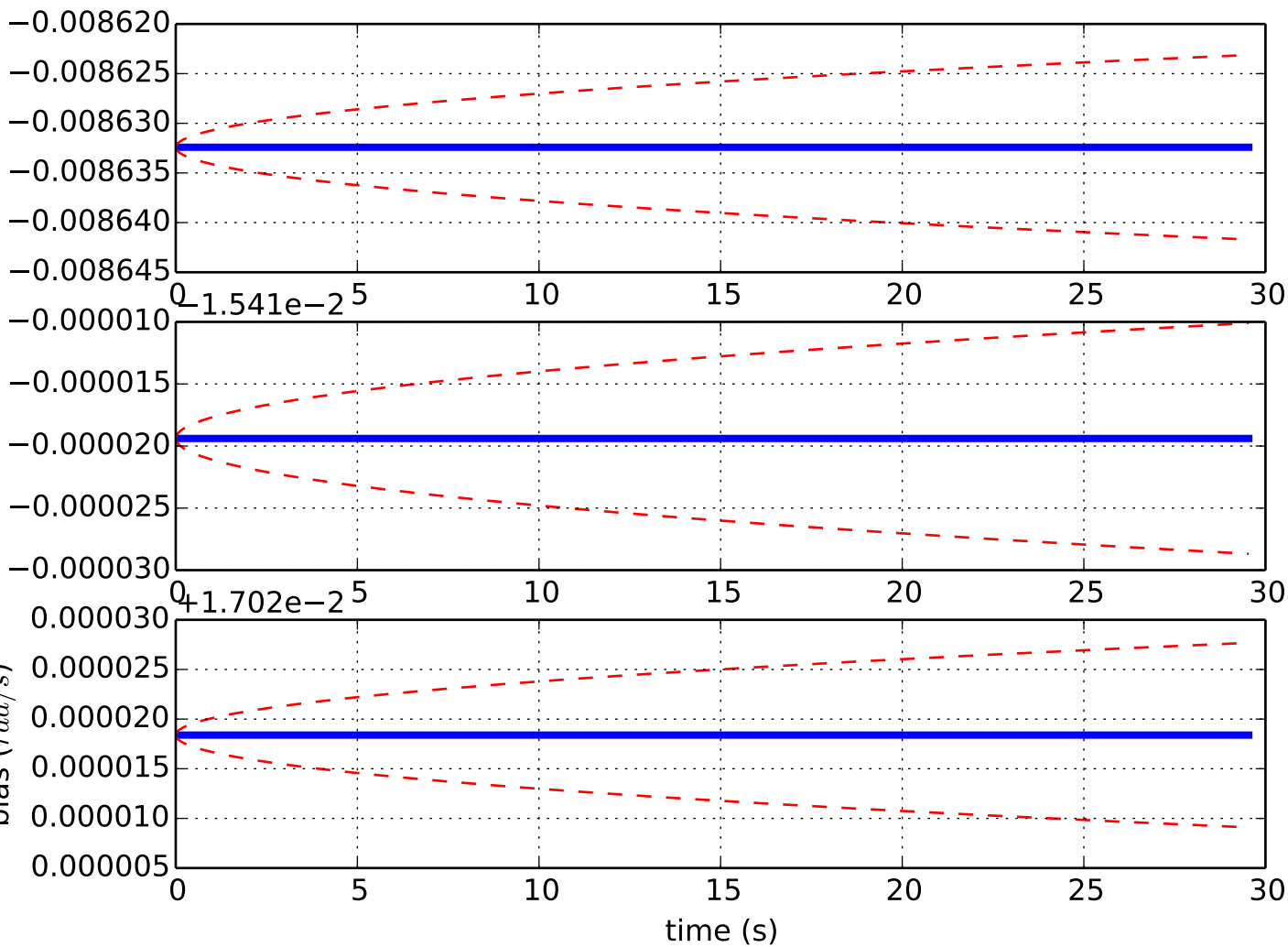
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

