

Calibration results

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Normalized Residuals

Reprojection error (cam0): mean 0.709449942503, median 0.630775287316, std: 0.459225268192
Gyroscope error (imu0): mean 0.000668866382101, median 4.05602820964e-08, std: 0.00377249586953
Accelerometer error (imu0): mean 0.000300204109229, median 0.00030030295284, std: 5.76874071182e-06

Residuals

Reprojection error (cam0) [px]: mean 0.709449942503, median 0.630775287316, std: 0.459225268192
Gyroscope error (imu0) [rad/s]: mean 1.37117608331e-05, median 8.31485782976e-10, std: 7.73361653255e-05
Accelerometer error (imu0) [m/s²]: mean 9.60653149532e-07, median 9.60969449089e-07, std: 1.84599702778e-08

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[ -0.00563412 -0.99876184 -0.04942718 -0.00177196]
 [ -0.39605342  0.0476147  -0.91699211  0.00037397]
 [  0.91821019  0.01440936 -0.3958313  -0.00103774]
 [  0.          0.          0.          1.        ]]
```

T_ic: (cam0 to imu0):

```
[[ -0.00563412 -0.39605342  0.91821019  0.001091 ]
 [ -0.99876184  0.0476147  0.01440936 -0.00177262]
 [ -0.04942718 -0.91699211 -0.3958313  -0.00015543]
 [  0.          0.          0.          1.        ]]
```

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

0.0

Gravity vector in target coords: [m/s²]

[0.6172687 -9.54429769 2.16651421]

Calibration configuration

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cam0

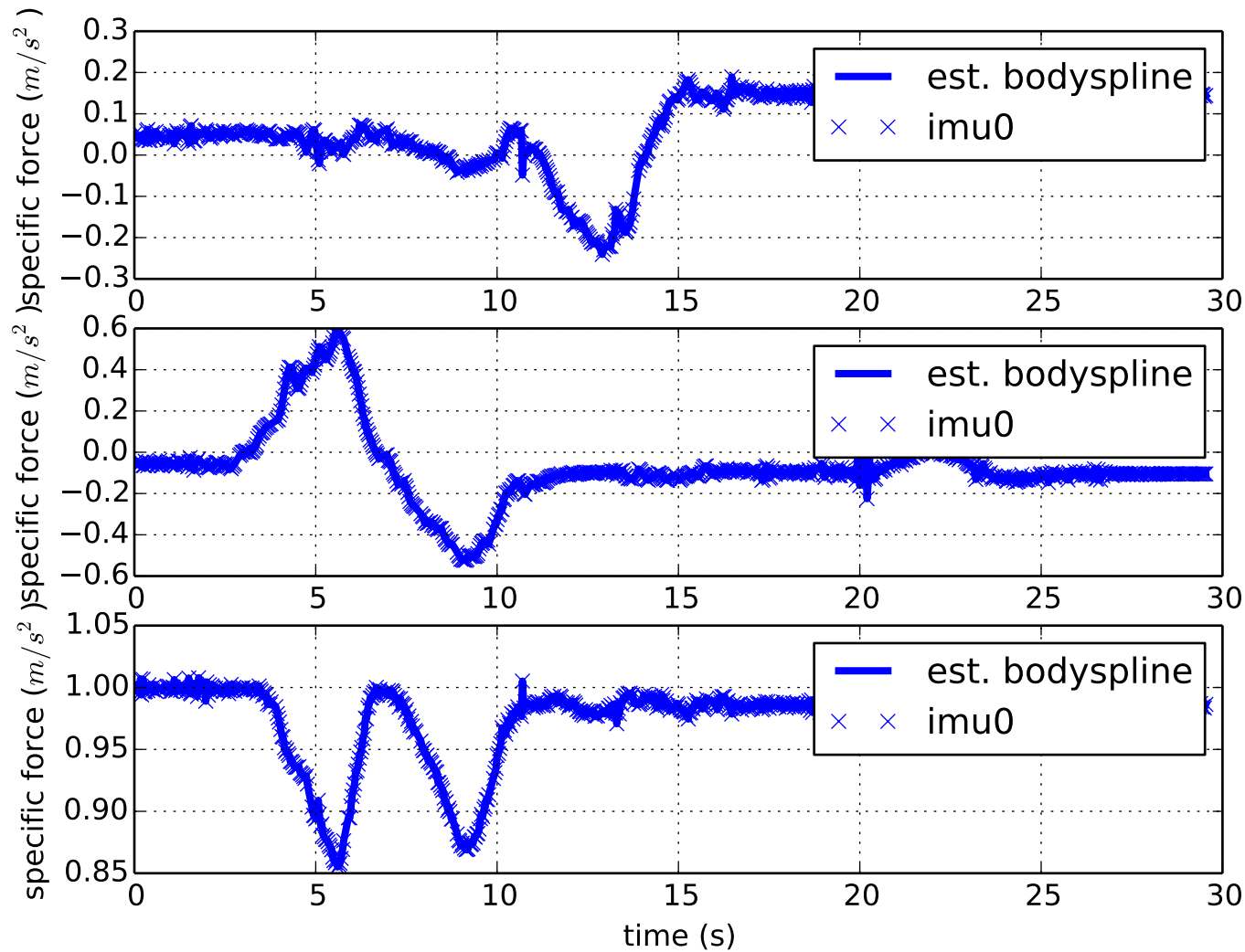
Camera model: omni
Focal length: [103.3344, 103.4761]
Principal point: [163.0093, 102.9141]
Omni xi: 1
Distortion model: radtan
Distortion coefficients: [1.2828, 0.0304, 0.0166, -0.0138]
Type: aprilgrid
Tags:
 Rows: 6
 Cols: 6
 Size: 0.067 [m]
 Spacing 0.0199995 [m]

IMU configuration
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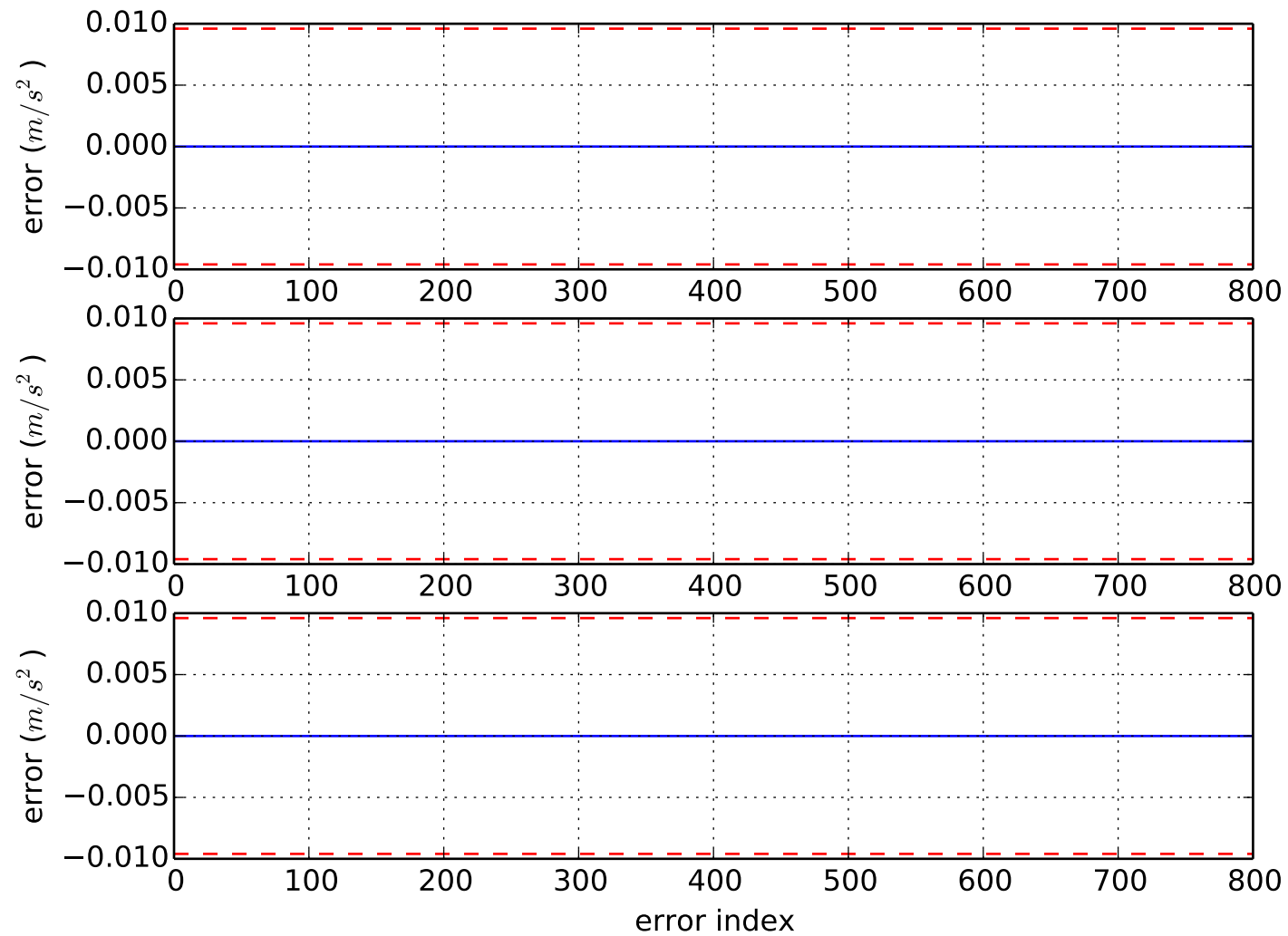
IMU0:

Model: calibrated
Update rate: 25
Accelerometer:
 Noise density: 0.00064
 Noise density (discrete): 0.0032
 Random walk: 8.86e-07
Gyroscope:
 Noise density: 0.0041
 Noise density (discrete): 0.0205
 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]

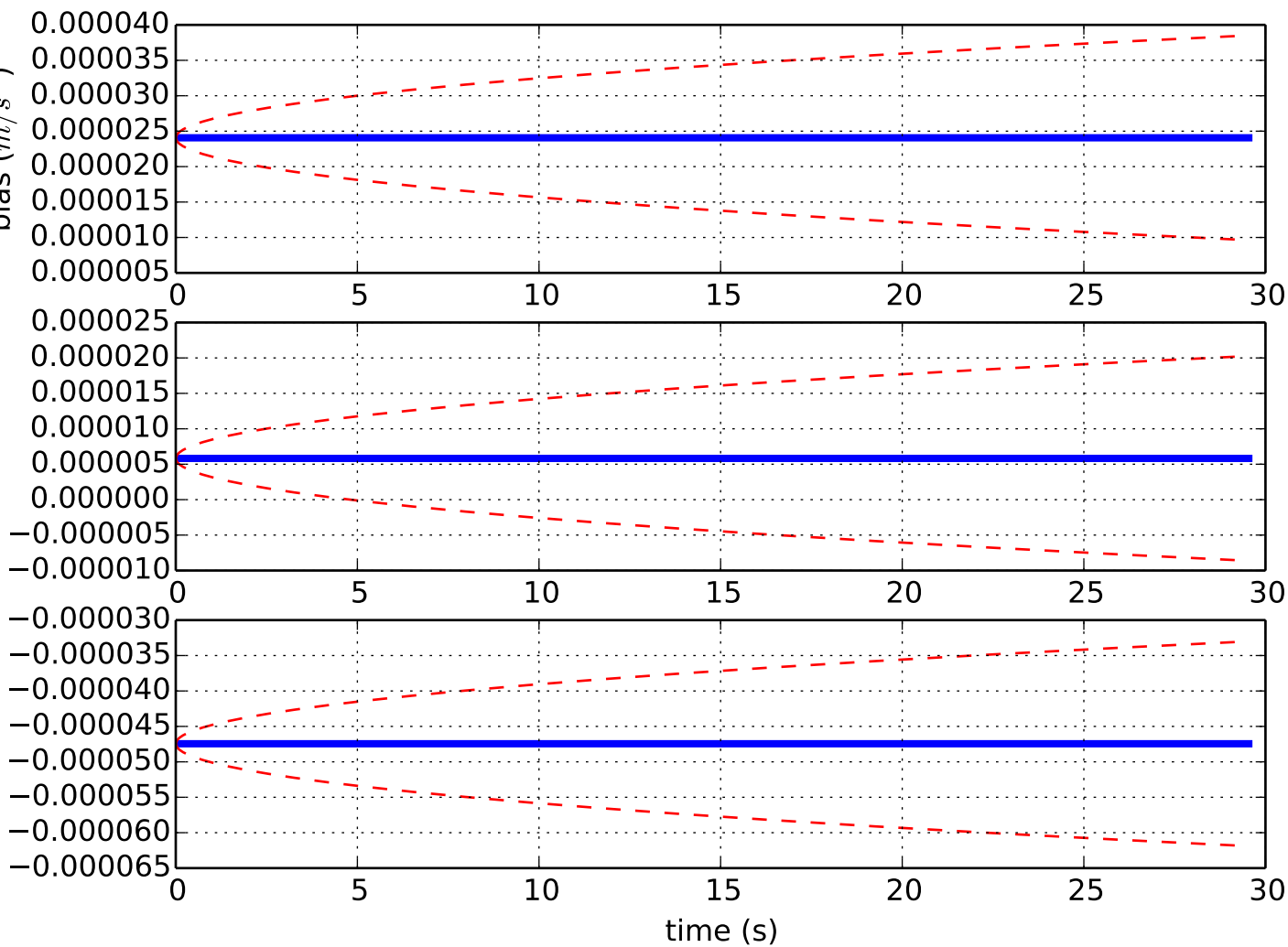
Comparison of predicted and measured specific force (imu0 frame)



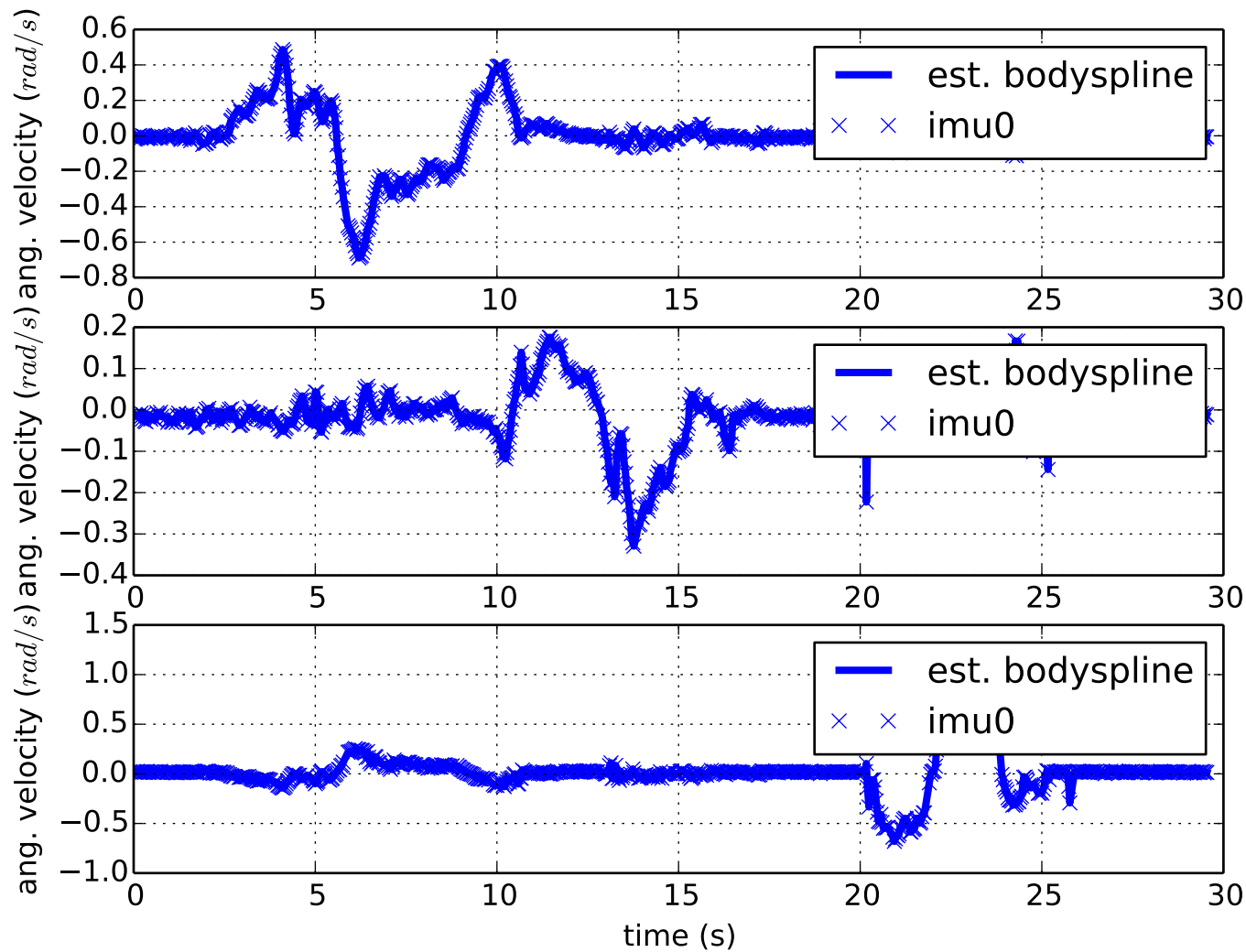
imu0: acceleration error



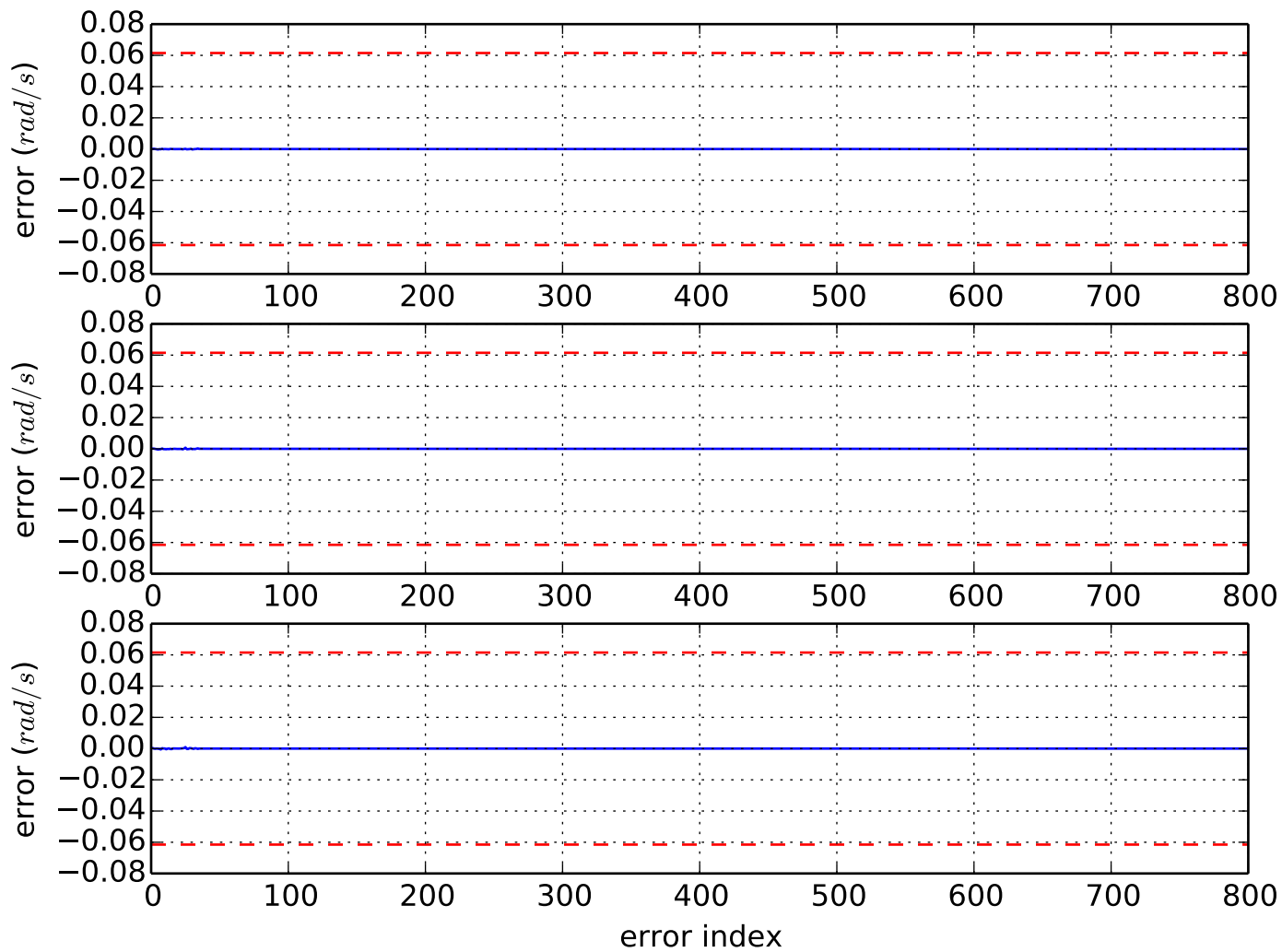
imu0: estimated accelerometer bias (imu frame)



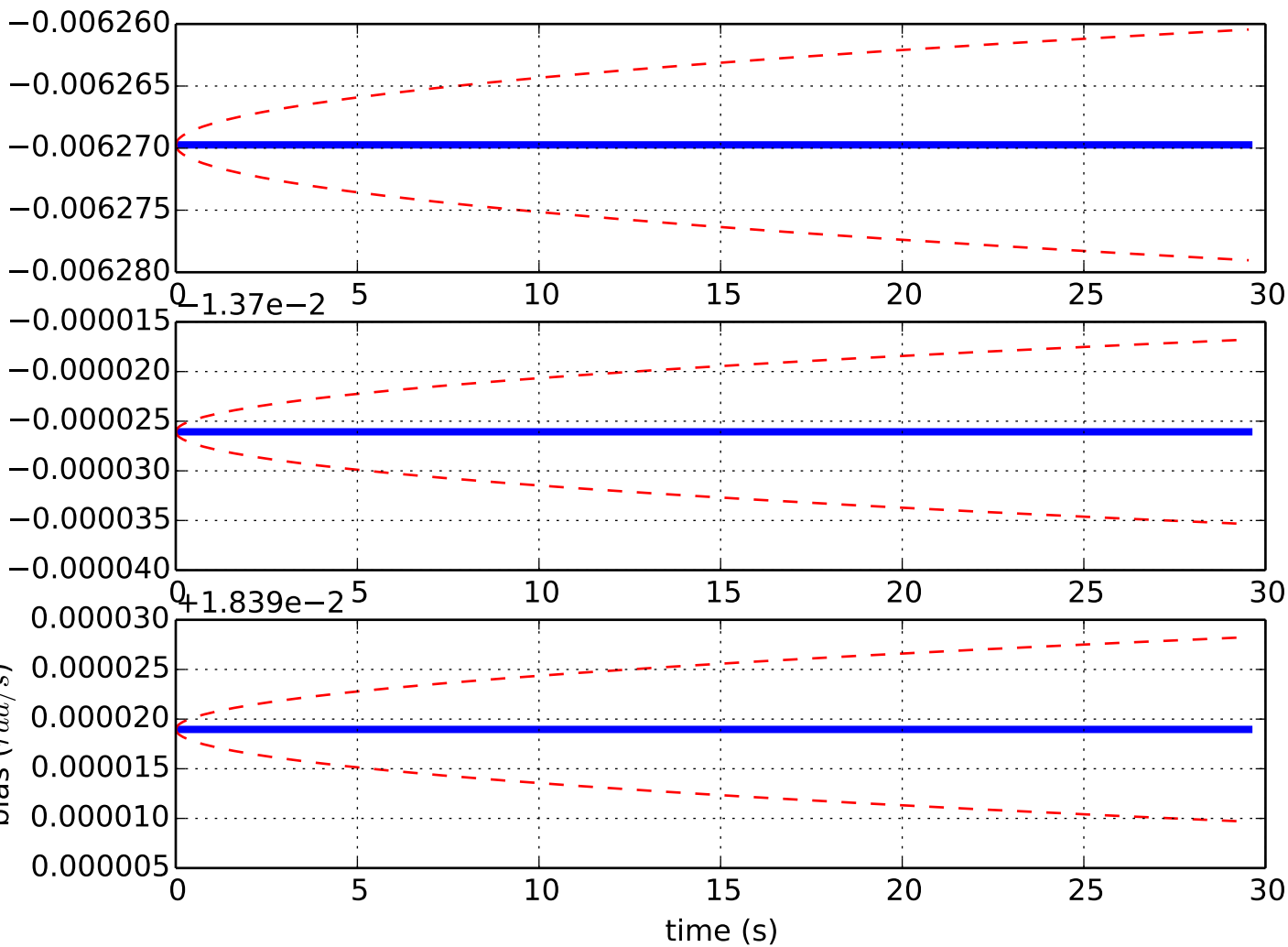
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

