

Calibration results

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Normalized Residuals

Reprojection error (cam0): mean 0.892751971641, median 0.785498679344, std: 0.562303466298

Gyroscope error (imu0): mean 1.28716916093, median 0.996763549114, std: 1.04497236097

Accelerometer error (imu0): mean 1.9287678903, median 1.61746052012, std: 1.2951653265

Residuals

Reprojection error (cam0) [px]: mean 0.892751971641, median 0.785498679344, std: 0.562303466298

Gyroscope error (imu0) [rad/s]: mean 0.00240700633093, median 0.00186394783684, std: 0.00195409831501

Accelerometer error (imu0) [m/s²]: mean 0.0358750827596, median 0.0300847656743, std: 0.024090075073

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[ 0.02406155 -0.00513319 0.9996973 -0.00185441]
 [-0.00956347 -0.99994224 -0.00490426 -0.08381843]
 [ 0.99966473 -0.00944257 -0.02410925 -0.10694917]
 [ 0.         0.         0.         1.        ]]
```

T_ic: (cam0 to imu0):

```
[[ 0.02406155 -0.00956347 0.99966473 0.10615634]
 [-0.00513319 -0.99994224 -0.00944257 -0.08483299]
 [ 0.9996973 -0.00490426 -0.02410925 -0.00113568]
 [ 0.         0.         0.         1.        ]]
```

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

0.0

Gravity vector in target coords: [m/s²]

[-0.16959246 -9.67520717 -1.59060601]

Calibration configuration

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cam0

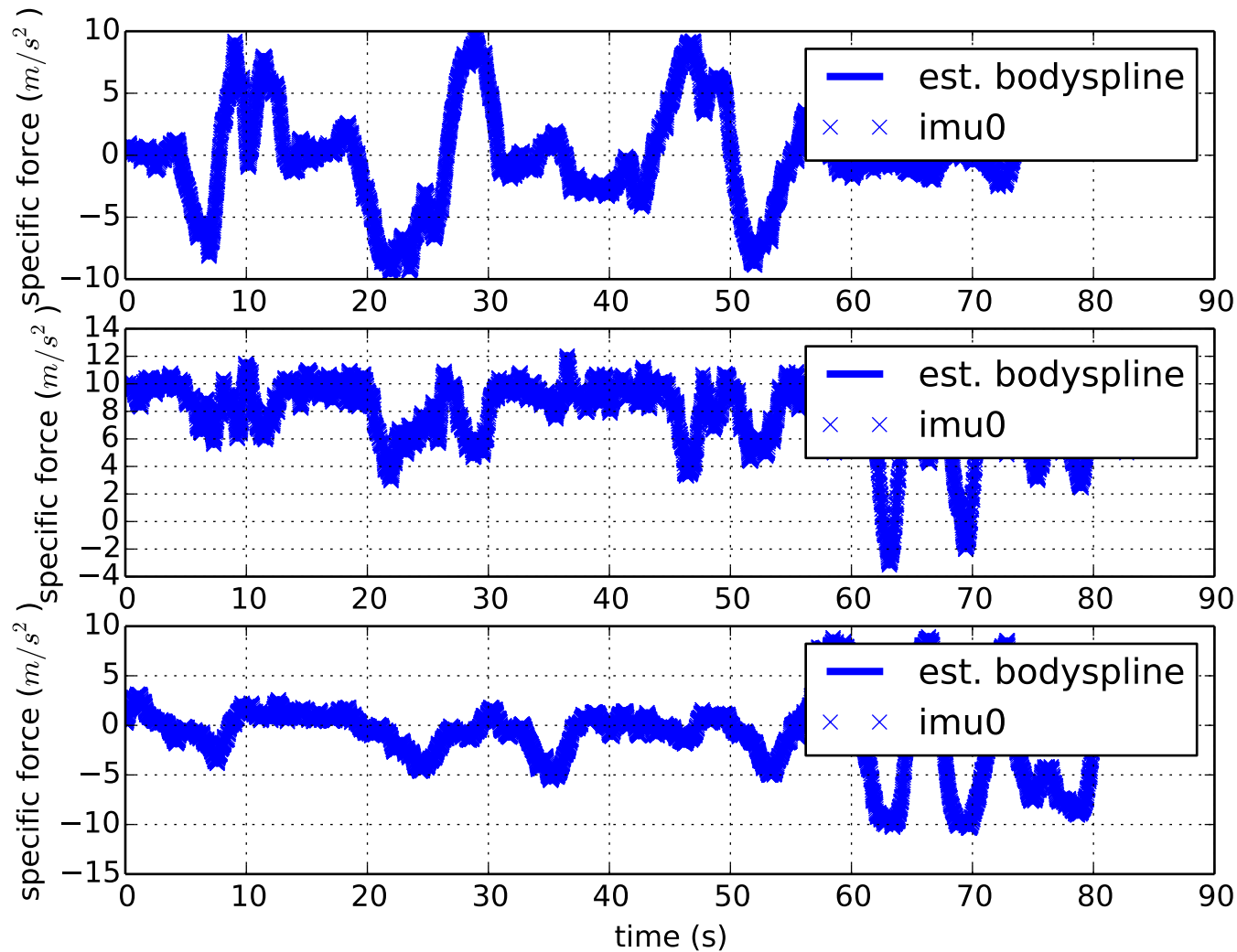
Camera model: pinhole
Focal length: [422.31476312913185, 422.08635749910906]
Principal point: [369.13617222708706, 242.38062482018685]
Distortion model: radtan
Distortion coefficients: [-0.3046810873817194, 0.0985876067379147, -0.00010757225295819505, -0.00012765178658212043]
Type: checkerboard
Rows
 Count: 11
 Distance: 0.07 [m]
Cols
 Count: 8
 Distance: 0.07 [m]

IMU configuration
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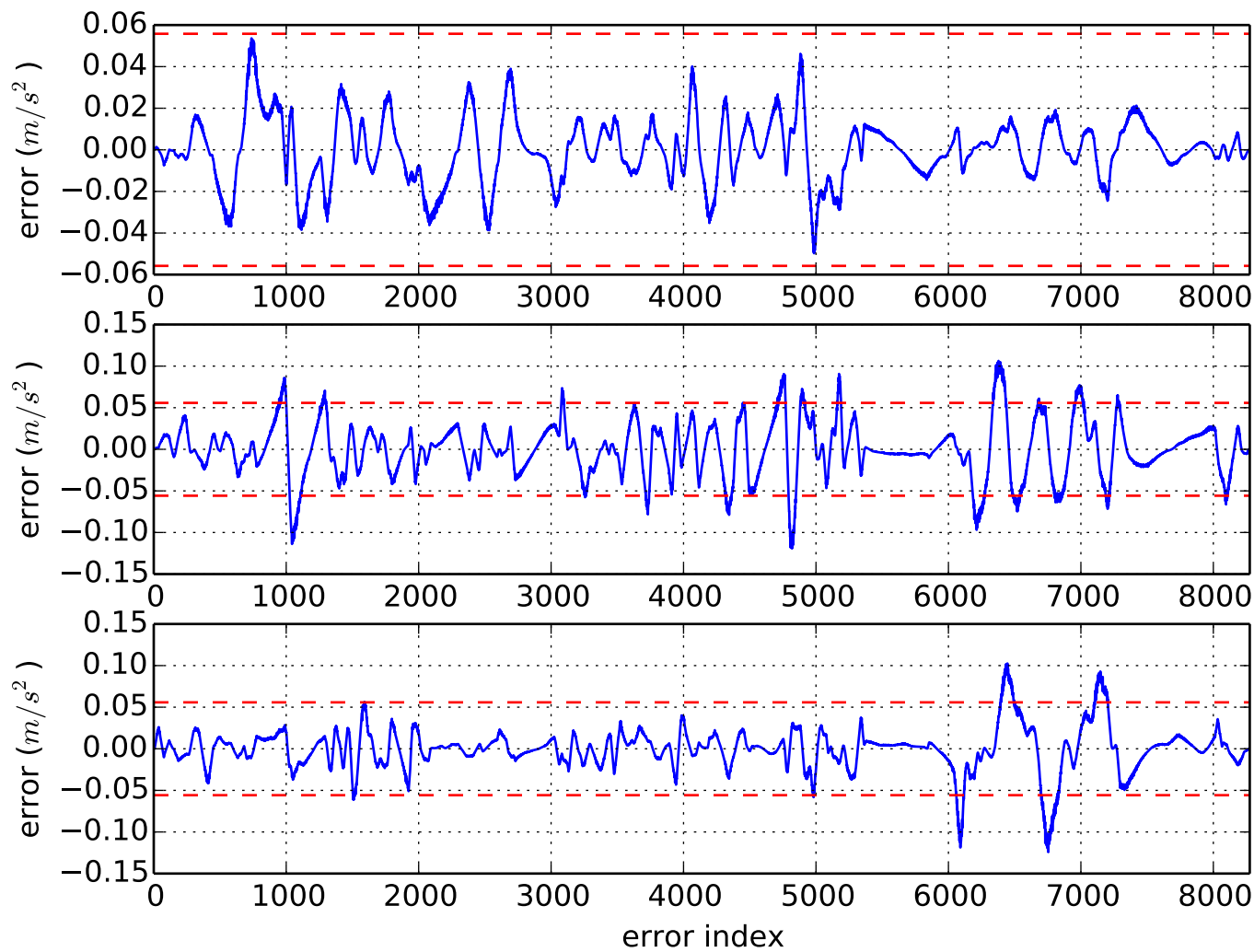
IMU0:

Model: calibrated
Update rate: 100.0
Accelerometer:
 Noise density: 0.00186
 Noise density (discrete): 0.0186
 Random walk: 0.000433
Gyroscope:
 Noise density: 0.000187
 Noise density (discrete): 0.00187
 Random walk: 2.66e-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]

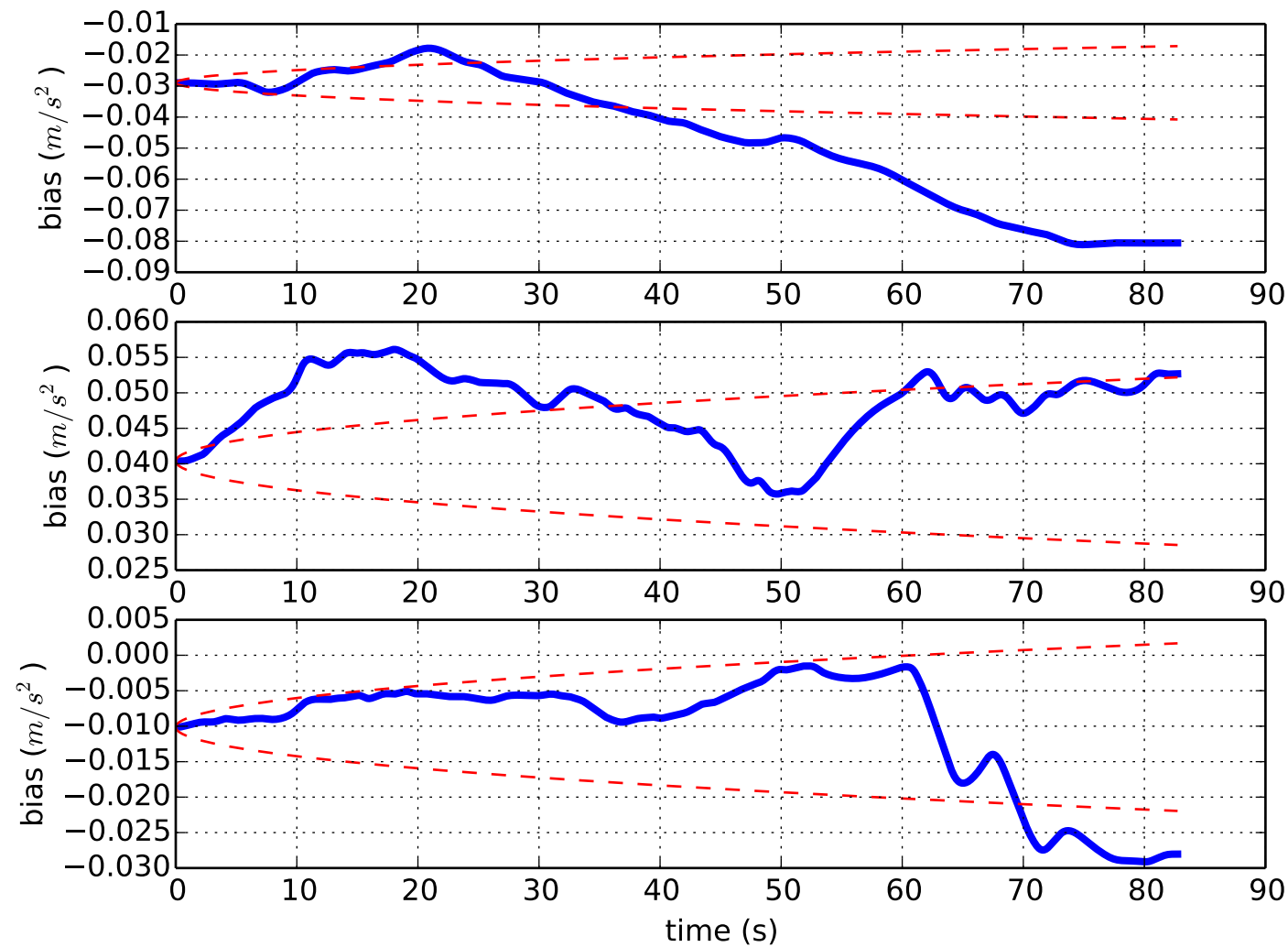
Comparison of predicted and measured specific force (imu0 frame)



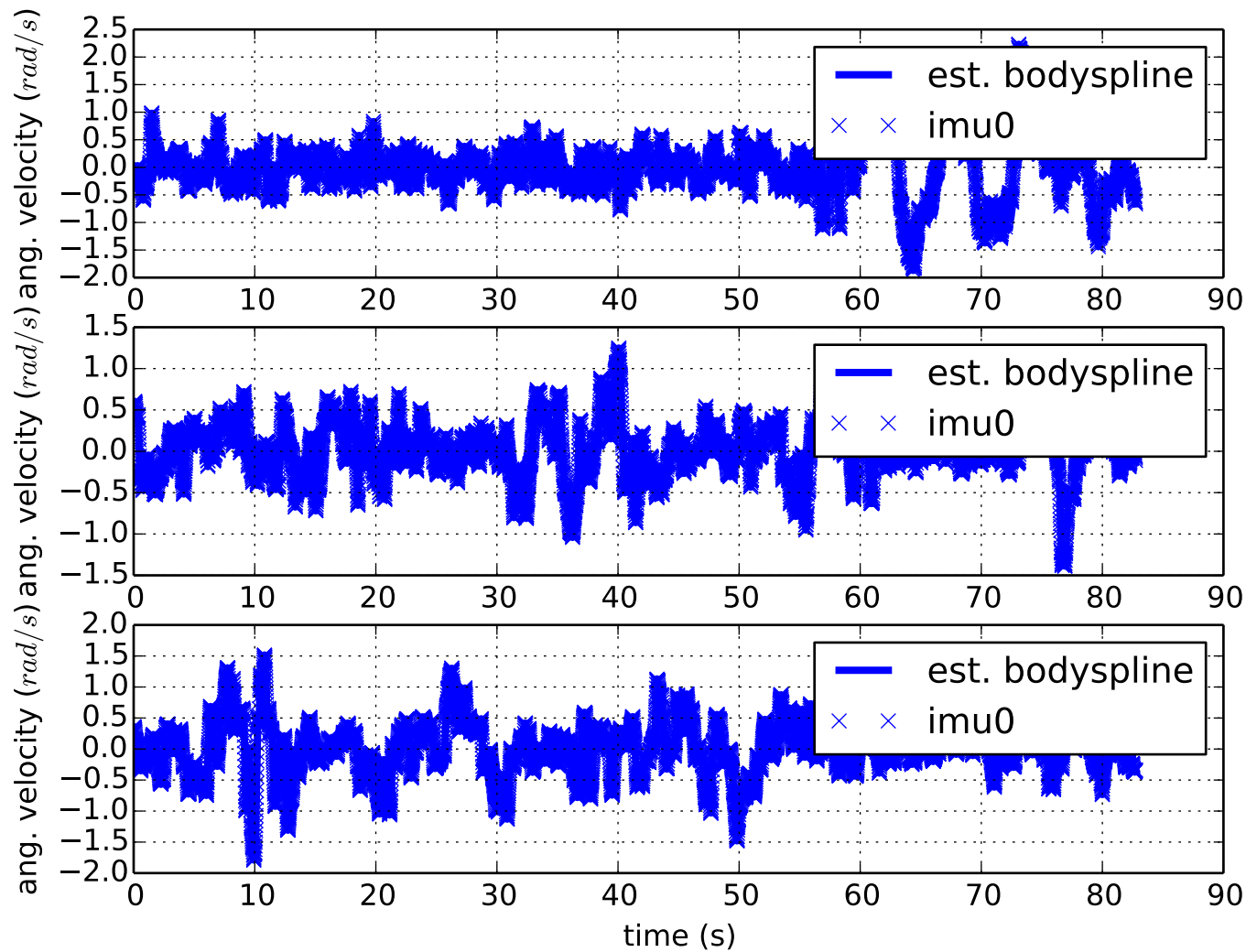
imu0: acceleration error



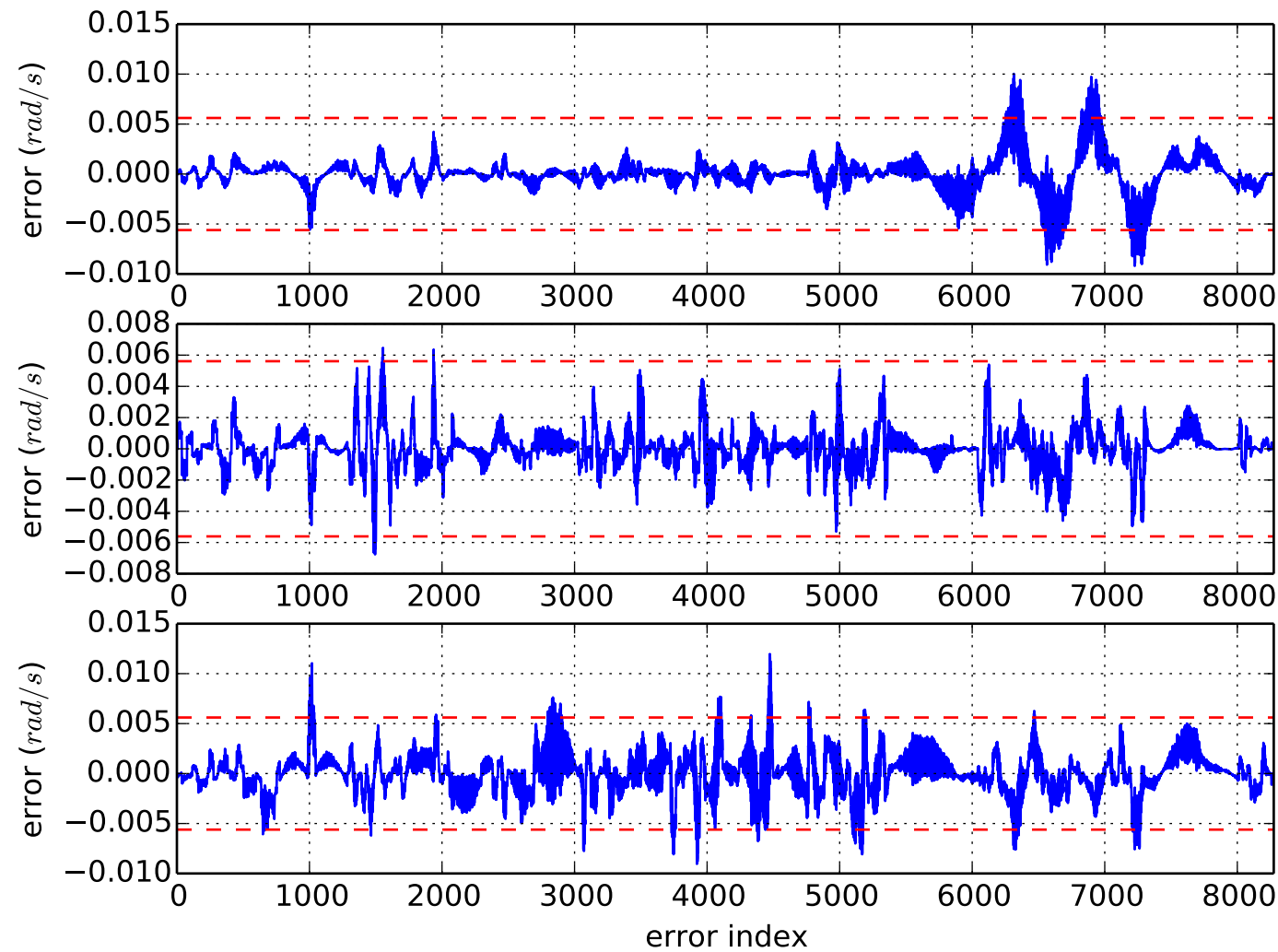
imu0: estimated accelerometer bias (imu frame)



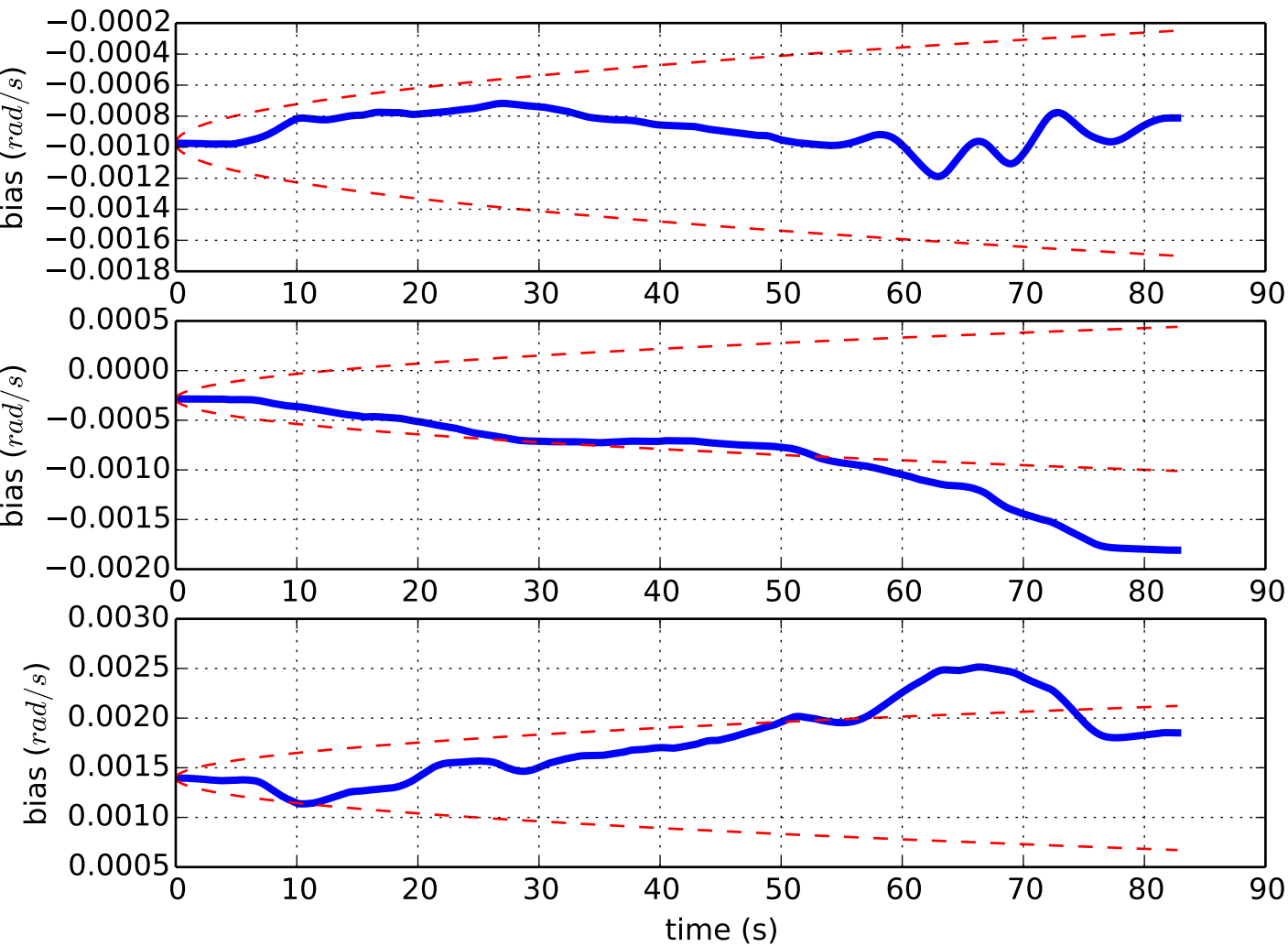
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

