

Calibration results

Normalized Residuals

Reprojection error (cam0): mean 0.8201432730877137, median 0.5961216839455301, std: 0.7600882508010353

Gyroscope error (imu0): mean 1.073765774721665, median 0.7171480669594665, std: 1.3007322404419062

Accelerometer error (imu0): mean 1.8262767751345739, median 1.3177393237414092, std: 1.8294729706361847

Residuals

Reprojection error (cam0) [px]: mean 0.8201432730877137, median 0.5961216839455301, std: 0.7600882508010353

Gyroscope error (imu0) [rad/s]: mean 0.001933296135986373, median 0.0012912123103776736, std:

0.0023419452115160592

Accelerometer error (imu0) [m/s^2]: mean 0.2104608329422187, median 0.15185678285532433, std:

0.21082916373231245

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[-0.0049694  0.99998764  0.00016365  0.06352855]
 [ 0.3103124  0.00031778 -0.99951836  0.04015097]
 [-0.99950606 -0.00496193 -0.03103244 -0.21643553]
 [ 0.          0.          0.          1.        ]]
```

T_ic: (cam0 to imu0):

```
[[-0.0049694  0.03103124 -0.99950606 -0.21725886]
 [ 0.99998764  0.00031778 -0.00496193 -0.06461447]
 [ 0.00016365 -0.99951836 -0.03103244  0.03340471]
 [ 0.          0.          0.          1.        ]]
```

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

-0.1568528744146281

Gravity vector in target coords: [m/s^2]

```
[ 0.02060305 -9.80451585  0.19866376]
```

Calibration configuration

cam0

Camera model: pinhole

Focal length: [927.3060574361, 927.2113306474747]

Principal point: [647.1368473568529, 354.372336106029]

Distortion model: radtan

Distortion coefficients: [0.09042915919597855, -0.17615862547703662, -0.0011429319282755383, 0.002764615503021377]

Type: aprilgrid

Tags:

Rows: 6

Cols: 6

Size: 0.02 [m]

Spacing 0.006 [m]

IMU configuration

IMU0:

Model: calibrated

Update rate: 100

Accelerometer:

Noise density: 0.011524038185652905

Noise density (discrete): 0.11524038185652904

Random walk: 0.0012306092406376534

Gyroscope:

Noise density: 0.0001800482173579718

Noise density (discrete): 0.0018004821735797178

Random walk: 5.309855482461205e-05

T_ib (imu0 to imu0)

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

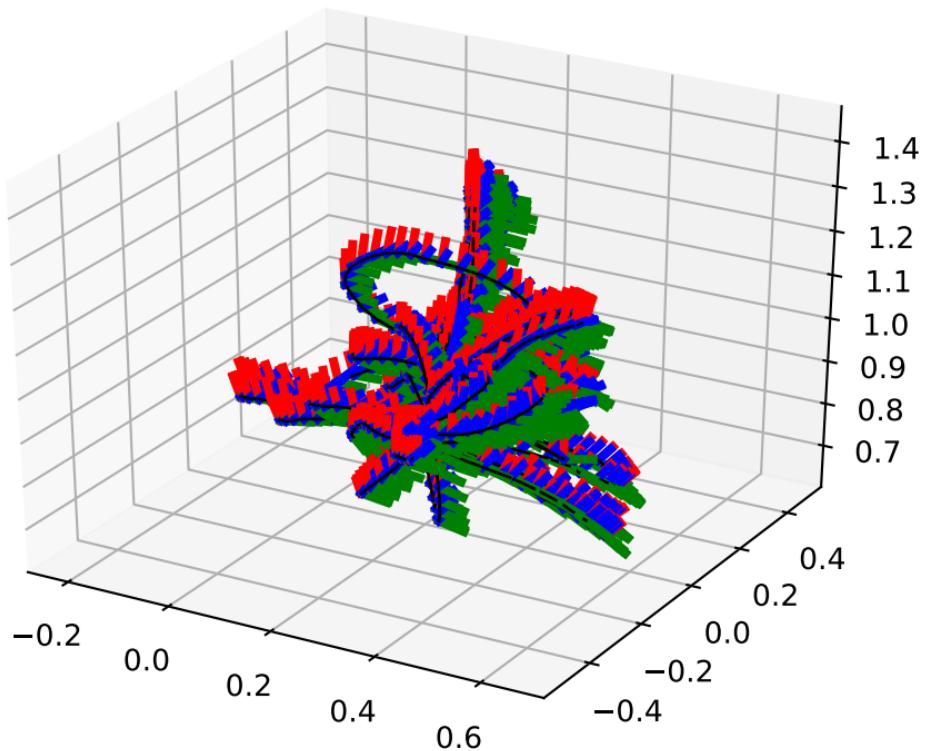
[0. 1. 0. 0.]

[0. 0. 1. 0.]

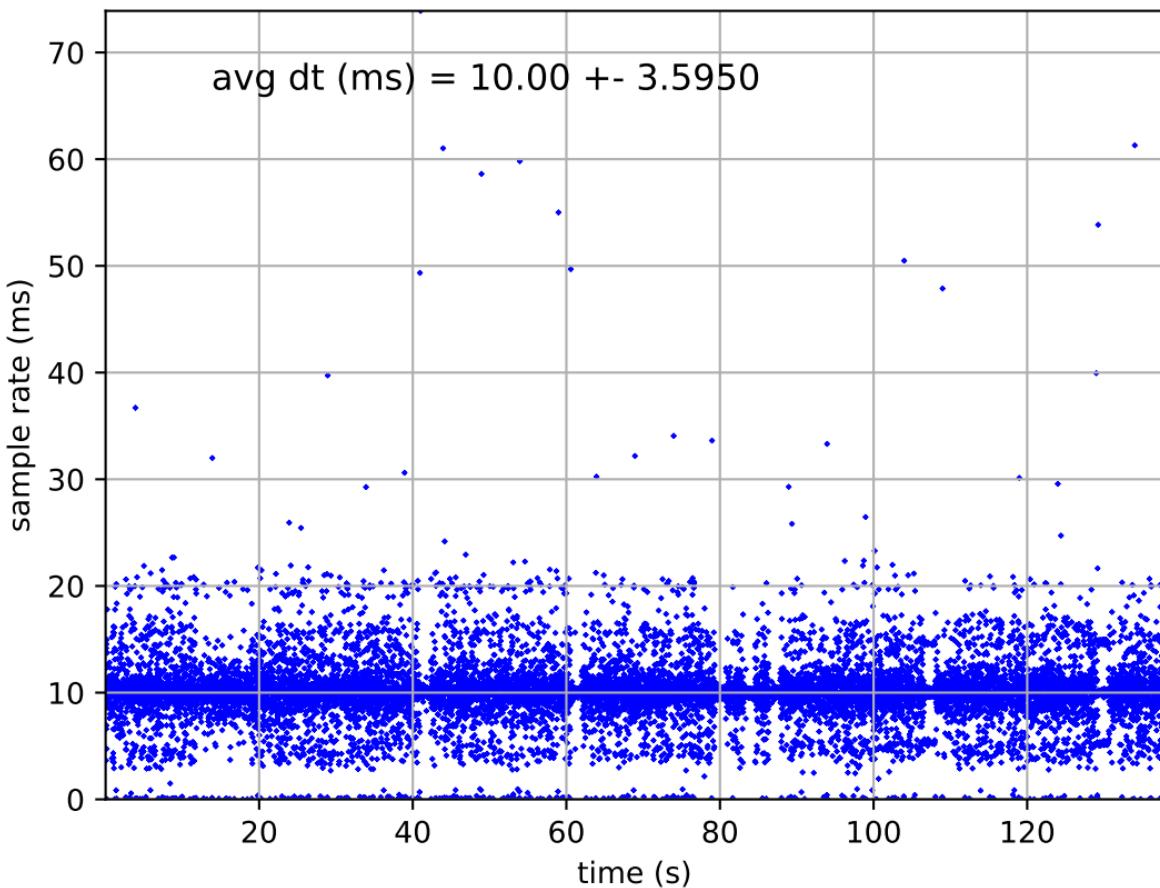
[0. 0. 0. 1.]]

time offset with respect to IMU0: 0.0 [s]

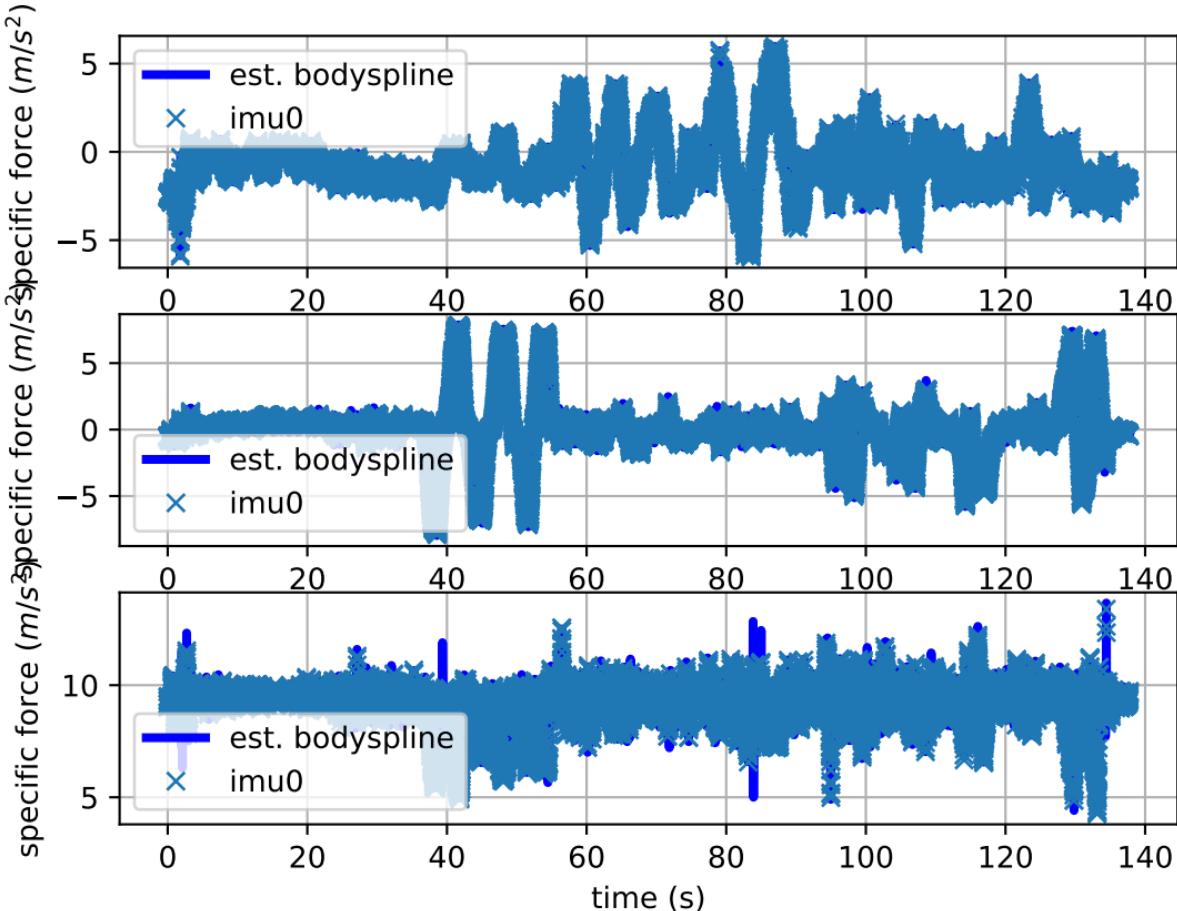
imu0: estimated poses



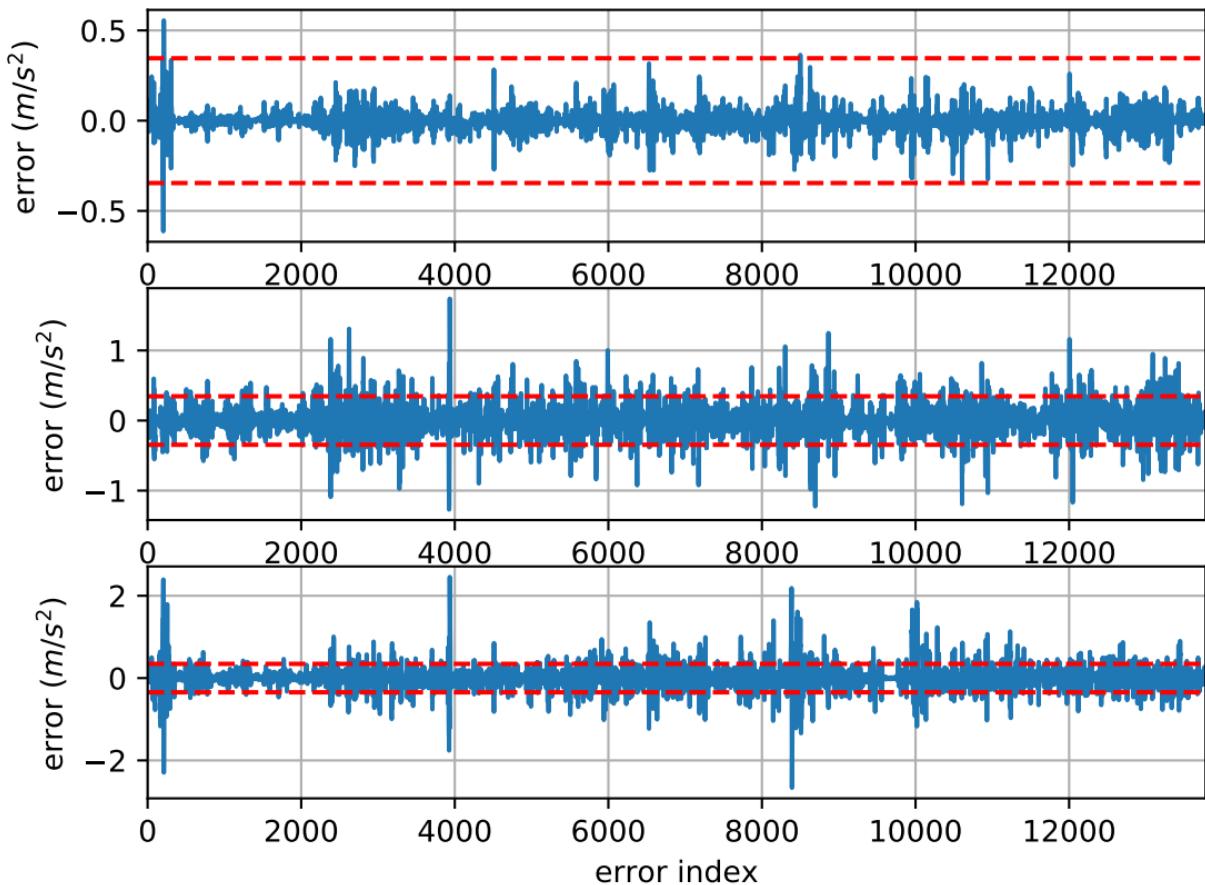
imu0: sample inertial rate



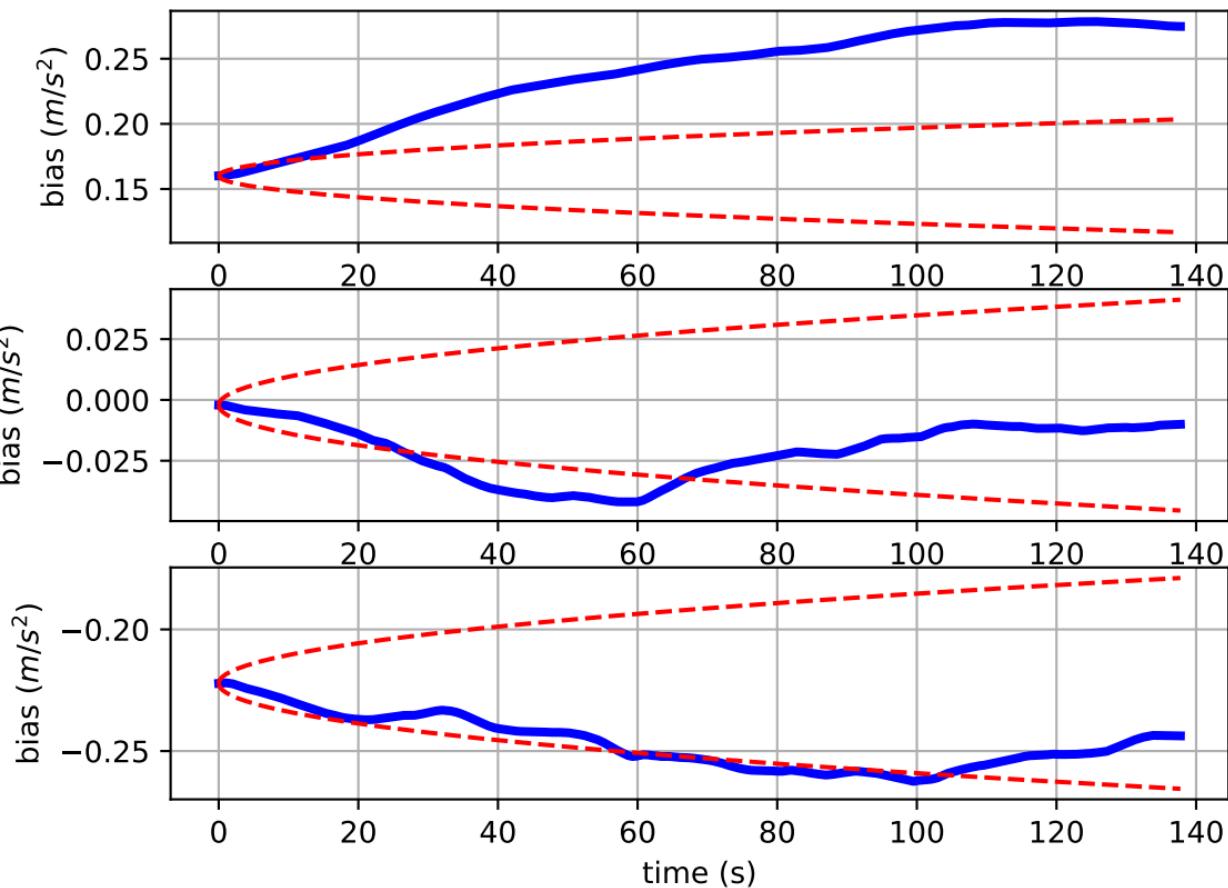
Comparison of predicted and measured specific force (imu0 frame)



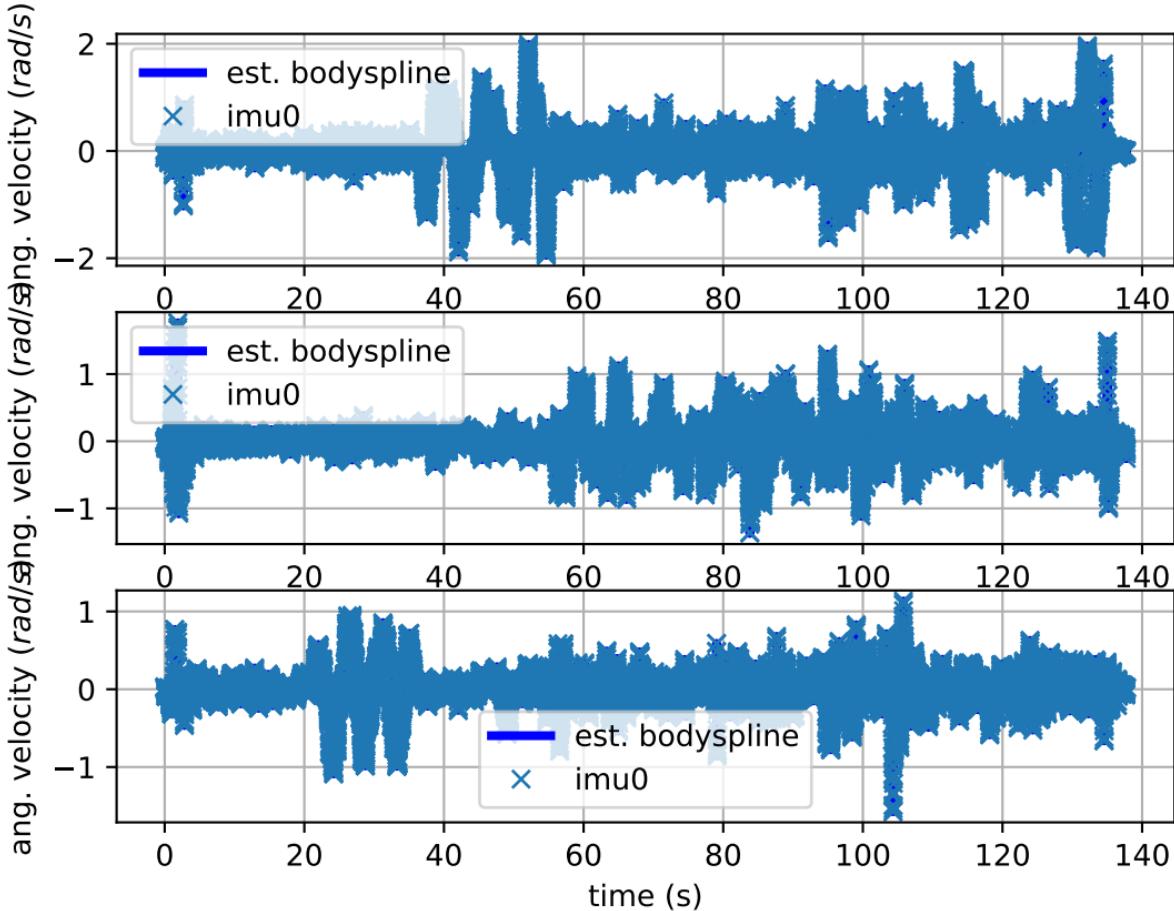
imu0: acceleration error



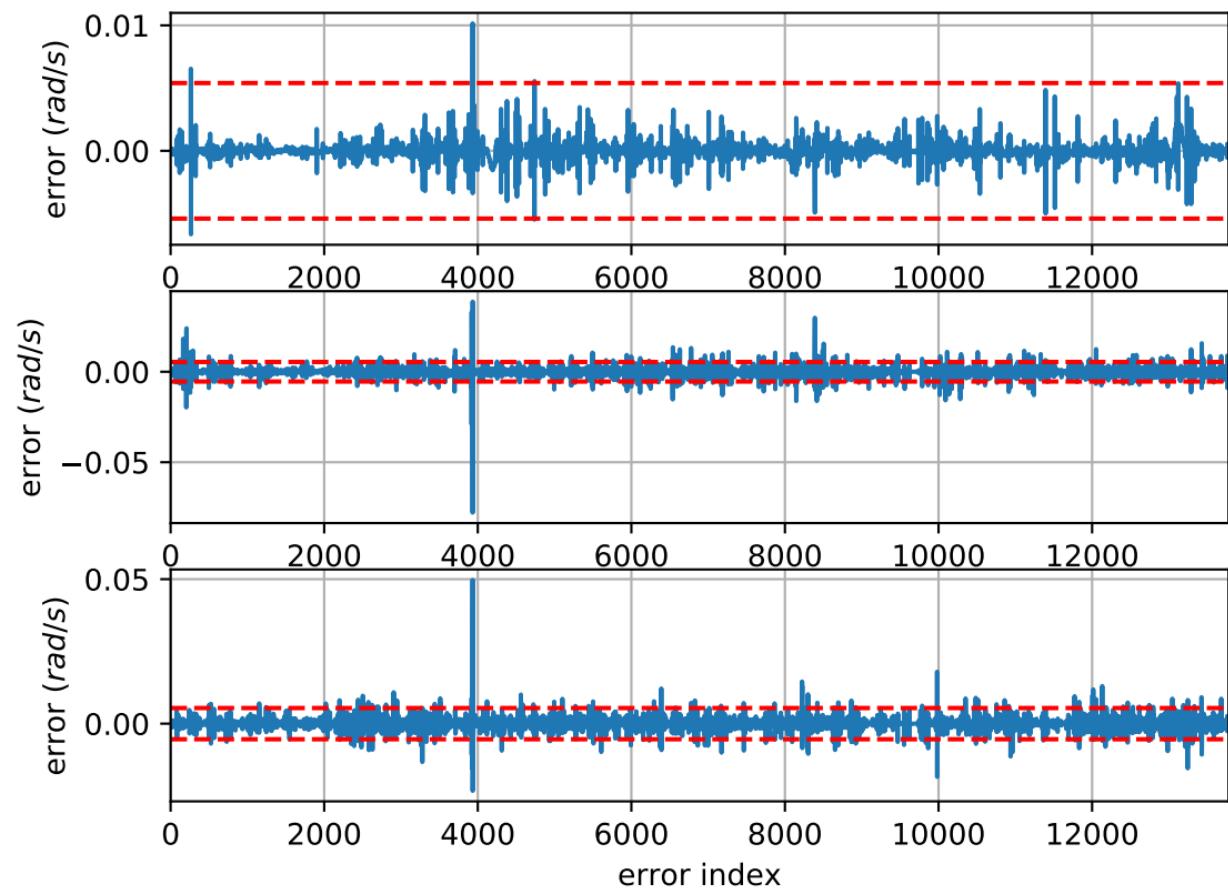
imu0: estimated accelerometer bias (imu frame)



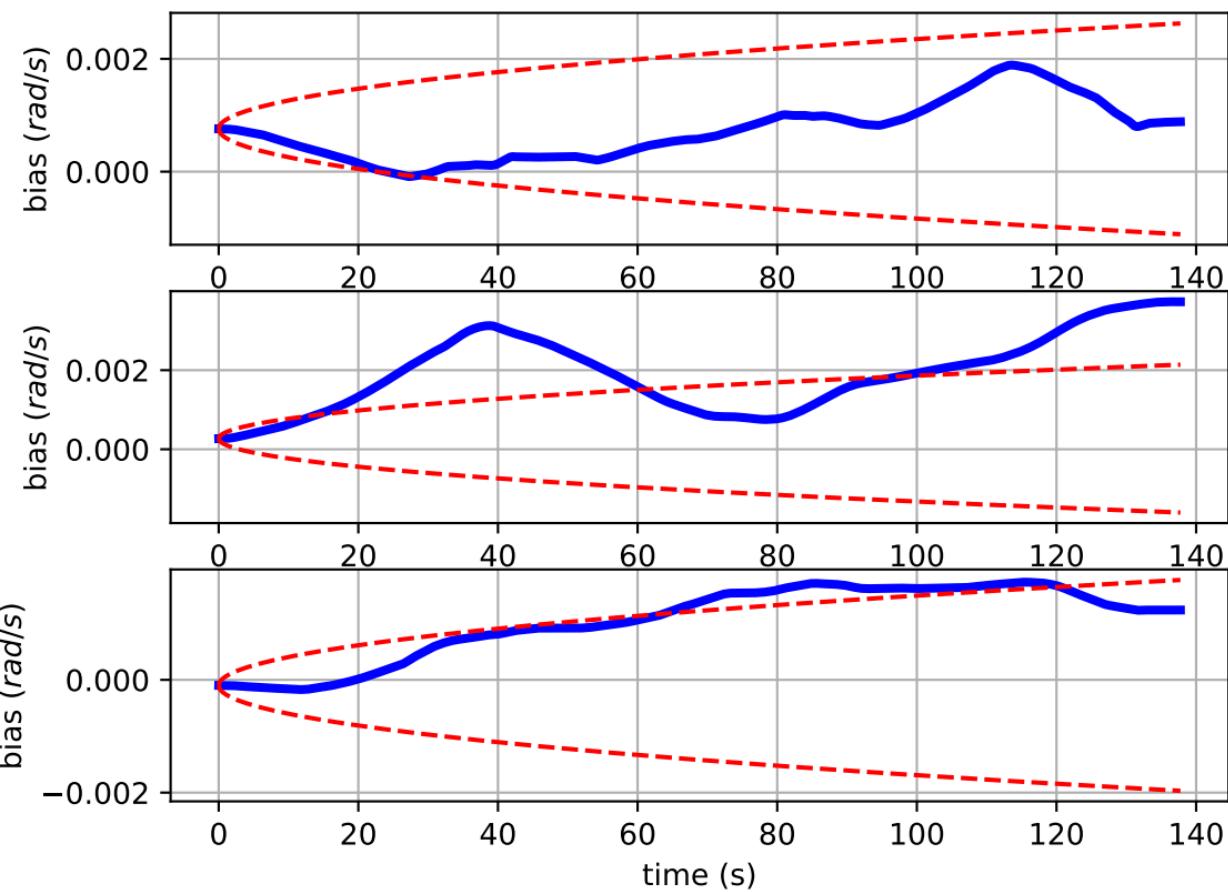
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

