

Calibration results

Normalized Residuals

Reprojection error (cam0): mean 0.2618088893407216, median 0.20773128685452819, std: 0.30983709842938073

Gyroscope error (imu0): mean 0.49595888905192326, median 0.362949622898755, std: 0.6008593907722937

Accelerometer error (imu0): mean 0.400606018492705, median 0.26986919091364786, std: 0.7827538633036482

Residuals

Reprojection error (cam0) [px]: mean 0.2618088893407216, median 0.20773128685452819, std: 0.30983709842938073

Gyroscope error (imu0) [rad/s]: mean 0.0021135027762404076, median 0.0015466907692657937, std: 0.00256053075881943

Accelerometer error (imu0) [m/s^2]: mean 0.0801481786156725, median 0.053992009899391805, std: 0.15660347960875906

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[-0.99991602  0.00734013  0.01068063 -0.06410733]
 [-0.01072126 -0.00551832 -0.9999273 -0.0419488 ]
 [-0.00728066 -0.99995783  0.00559656 -0.06768289]
 [ 0.          0.          0.          1.        ]]
```

T_ic: (cam0 to imu0):

```
[[-0.99991602 -0.01072126 -0.00728066 -0.06504447]
 [ 0.00734013 -0.00551832 -0.99995783 -0.06744097]
 [ 0.01068063 -0.9999273  0.00559656 -0.04088226]
 [ 0.          0.          0.          1.        ]]
```

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

-0.005539621203977999

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

```
[ 0.00764259 -9.806534 -0.0159784 ]
```

Calibration configuration

cam0

Camera model: pinhole

Focal length: [392.59904852429565, 392.50624902130187]

Principal point: [323.4648160379844, 238.86345955126814]

Distortion model: radtan

Distortion coefficients: [-0.3358266646965245, 0.10180877221204587, -8.911335434829571e-05, -0.0002897227755827224]

Type: aprilgrid

Tags:

Rows: 6

Cols: 6

Size: 0.088 [m]

Spacing 0.026399999999999996 [m]

IMU configuration

IMU0:

Model: calibrated

Update rate: 100

Accelerometer:

Noise density: 0.02000673352767714

Noise density (discrete): 0.2000673352767714

Random walk: 0.001224627431466927

Gyroscope:

Noise density: 0.0004261447516911305

Noise density (discrete): 0.004261447516911304

Random walk: 2.14534407581717e-05

T_ib (imu0 to imu0)

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

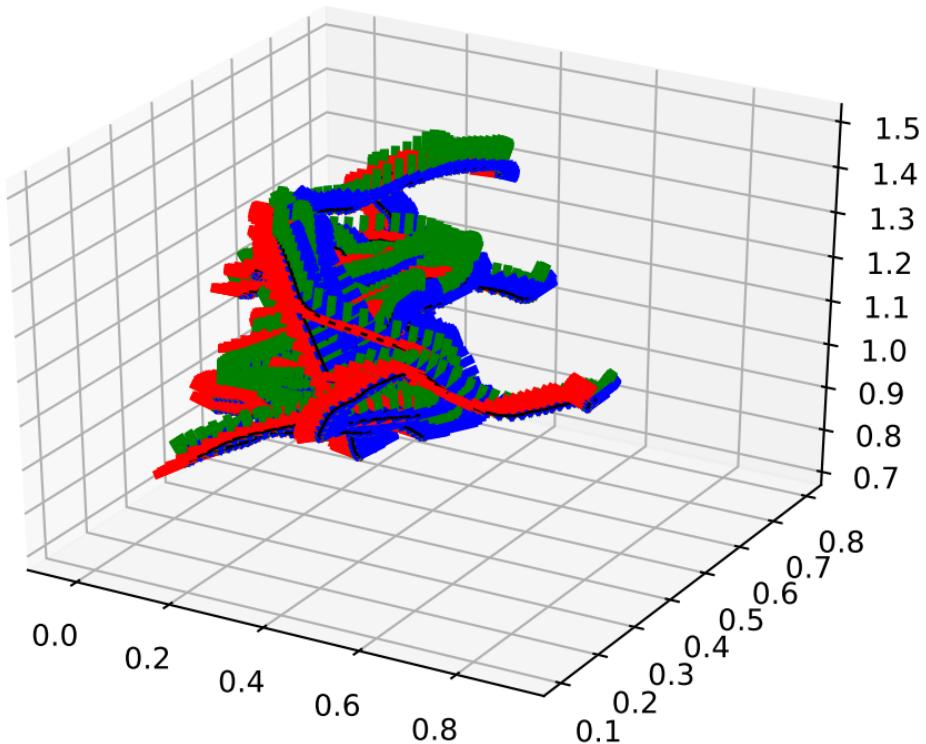
[0. 1. 0. 0.]

[0. 0. 1. 0.]

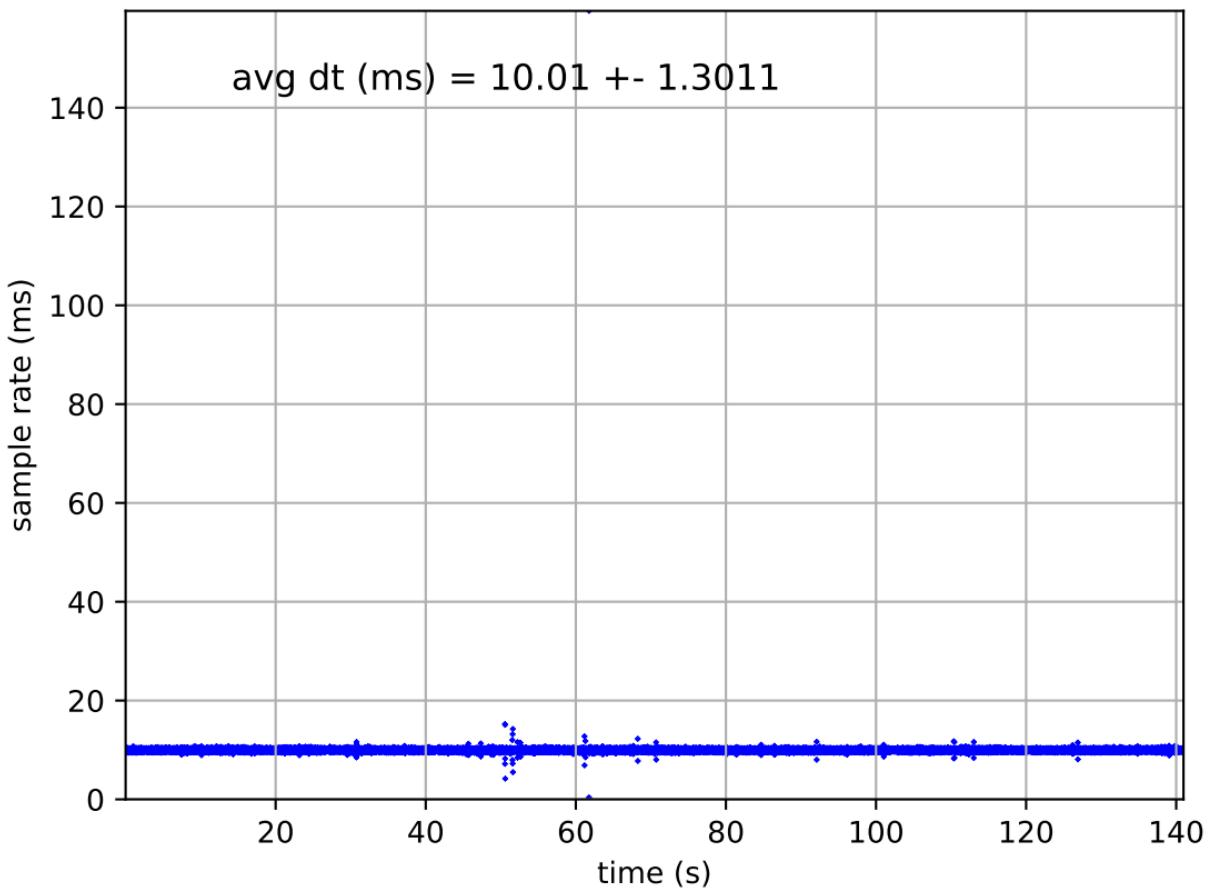
[0. 0. 0. 1.]]

time offset with respect to IMU0: 0.0 [s]

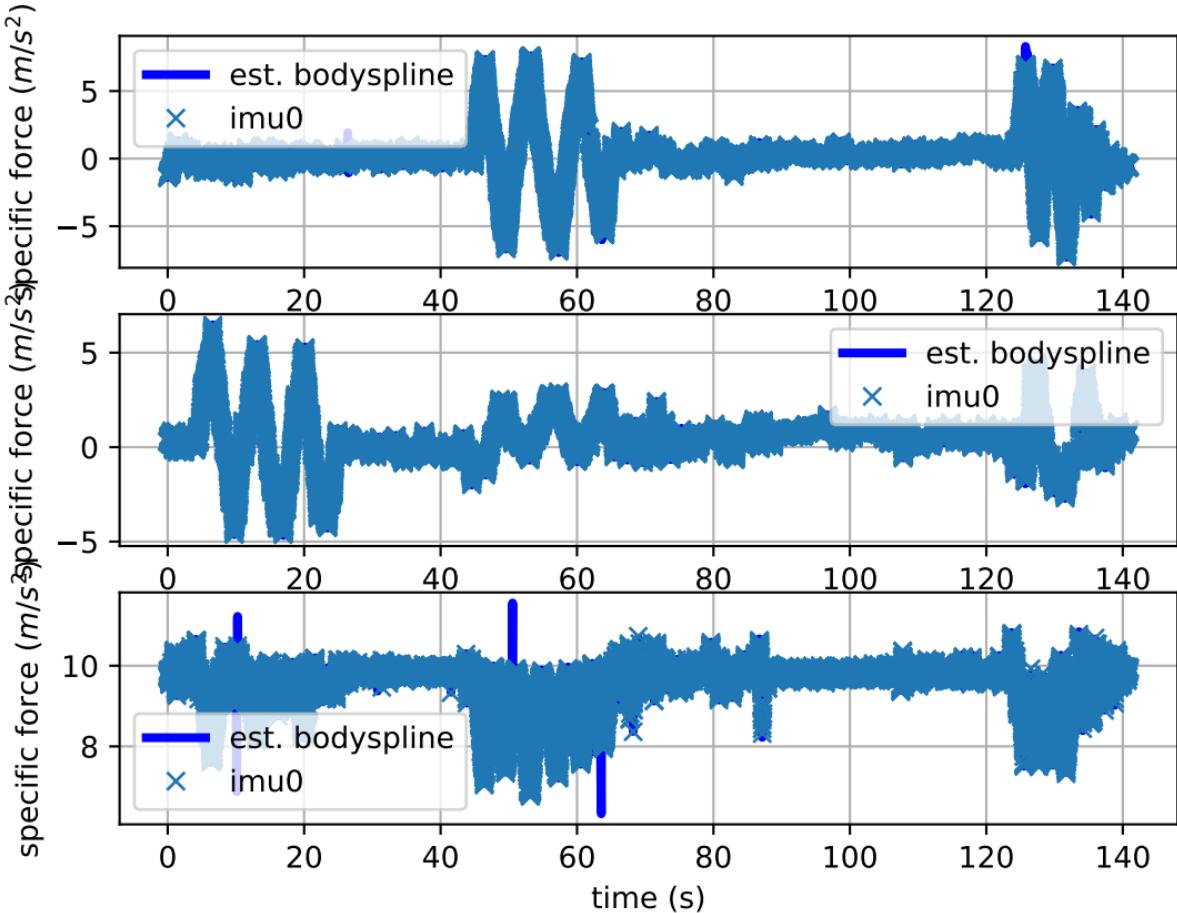
imu0: estimated poses



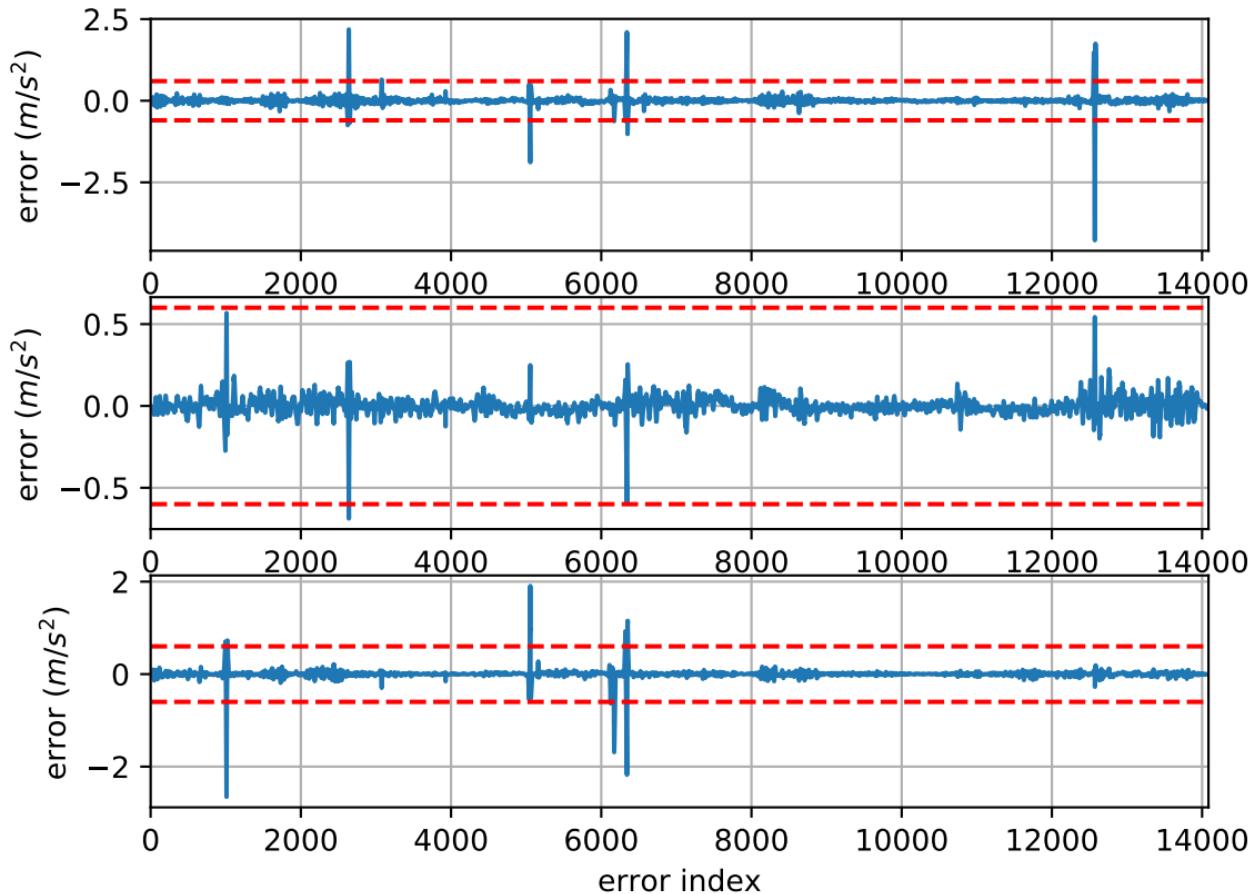
imu0: sample inertial rate



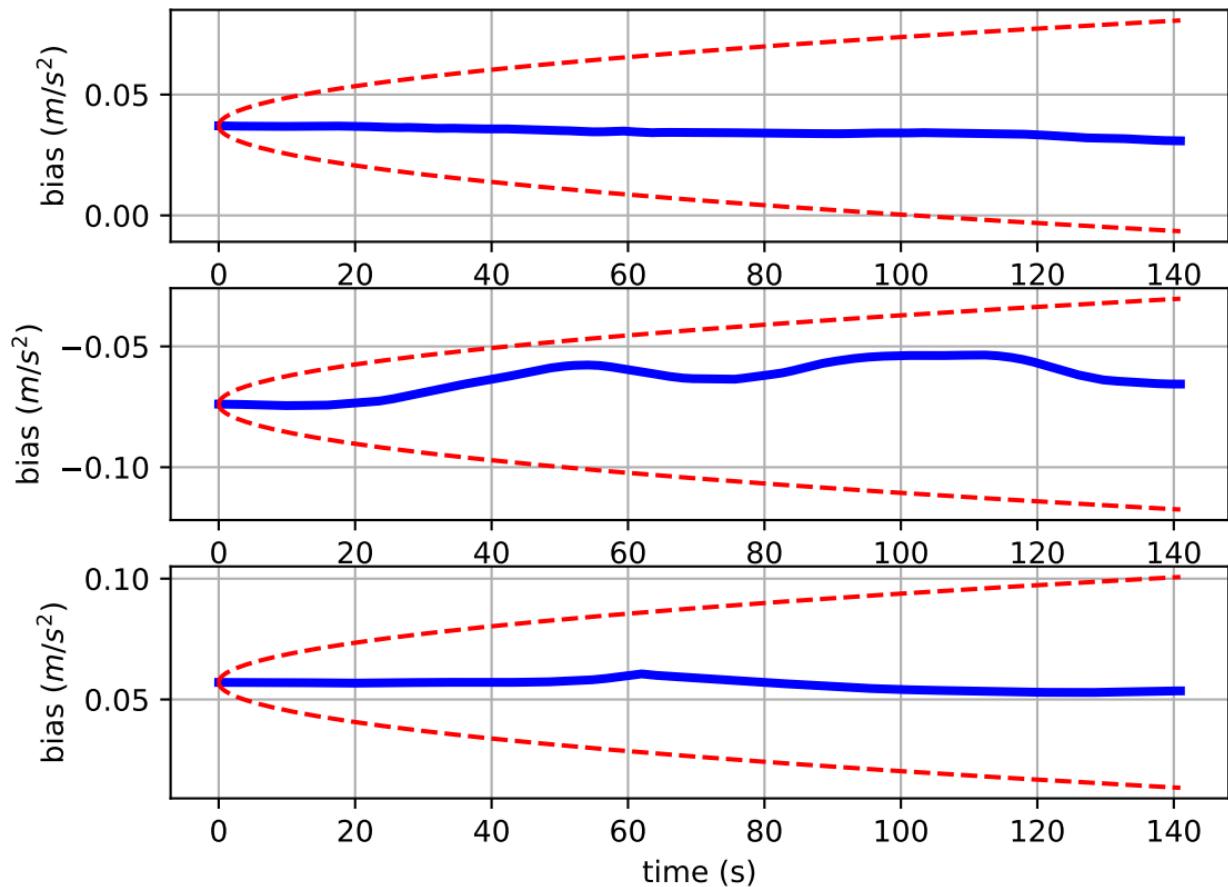
Comparison of predicted and measured specific force (imu0 frame)



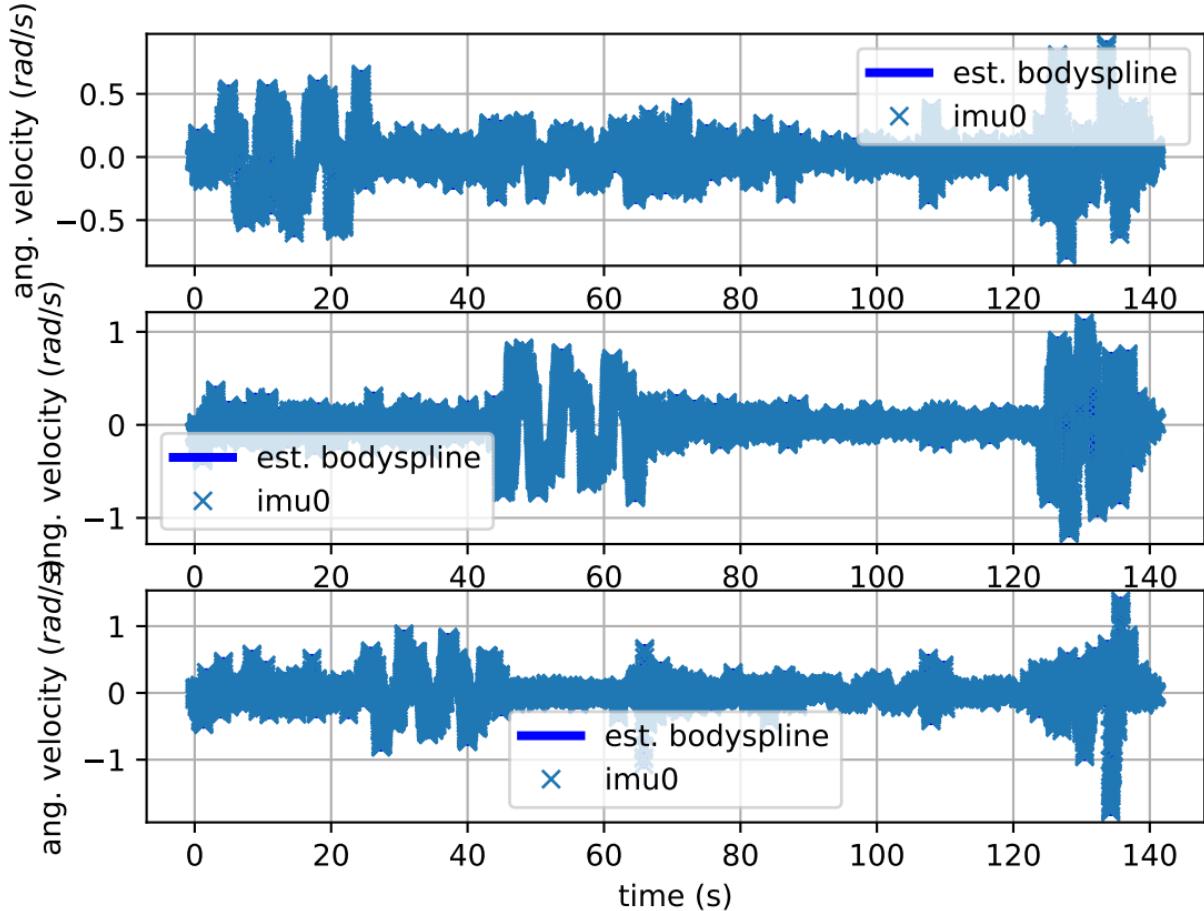
imu0: acceleration error



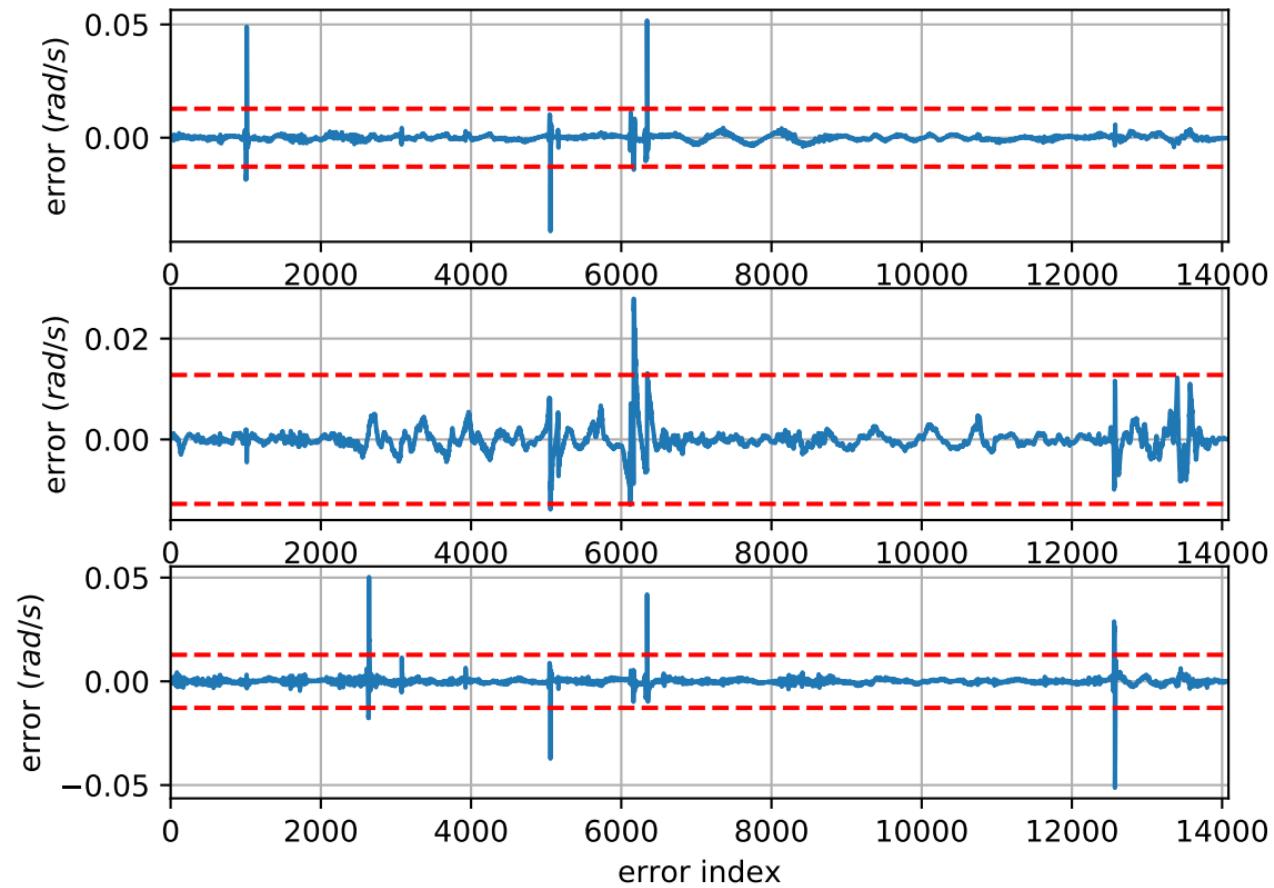
imu0: estimated accelerometer bias (imu frame)



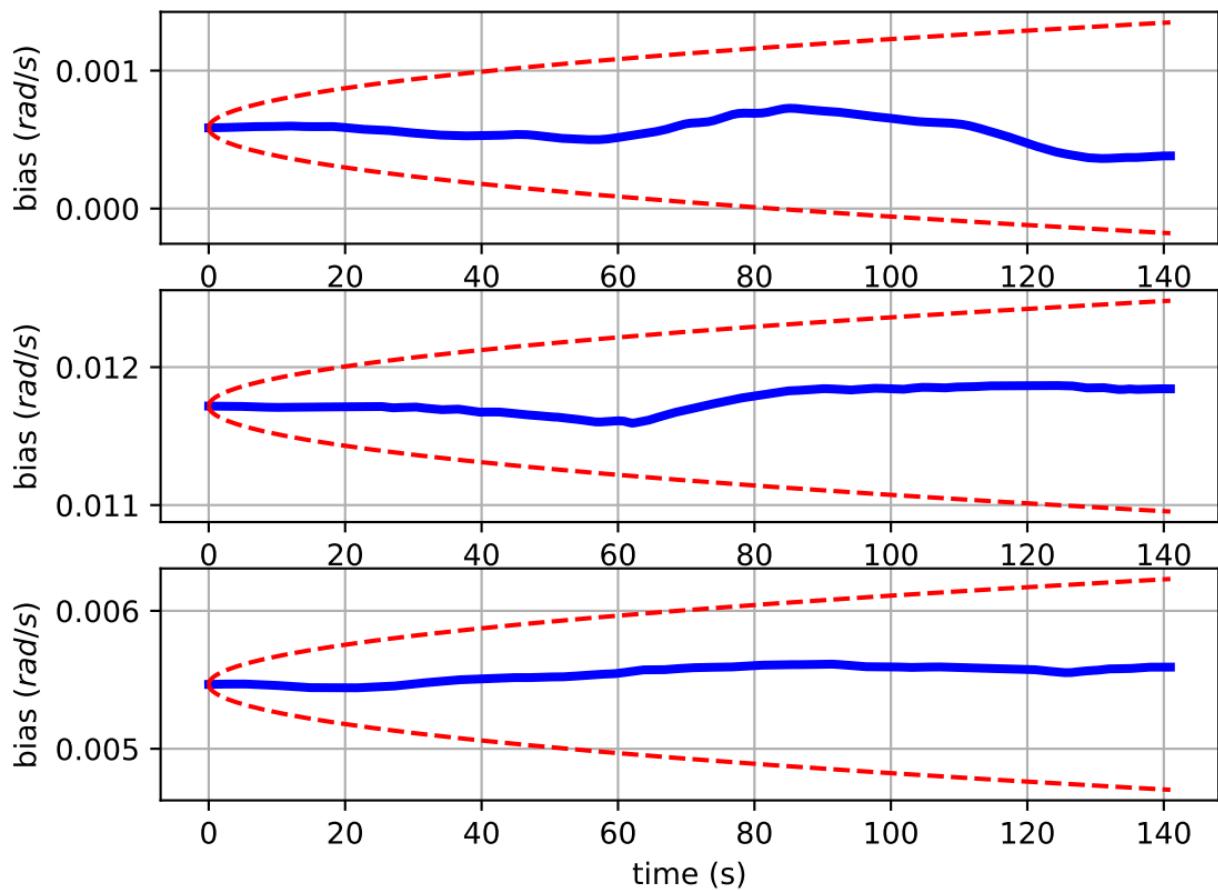
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

