

Calibration results

Normalized Residuals

Reprojection error (cam0): mean 0.26060557996282646, median 0.20807890414653282, std: 0.2698895346148151

Gyroscope error (imu0): mean 0.520950274873999, median 0.41702240385027334, std: 0.5225403509815032

Accelerometer error (imu0): mean 0.4189901473808183, median 0.3091509583148264, std: 0.7002739312179902

Residuals

Reprojection error (cam0) [px]: mean 0.26060557996282646, median 0.20807890414653282, std: 0.2698895346148151

Gyroscope error (imu0) [rad/s]: mean 0.0022200022552960642, median 0.0017771190873841305, std: 0.00222677821176088

Accelerometer error (imu0) [m/s^2]: mean 0.08382624229370203, median 0.06185100842830754, std: 0.14010193938257237

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[-0.49748779 -0.86747035 -0.00104492  0.03373449]
[-0.01415871 -0.0069155 -0.99987585 -0.03365464]
[ 0.86735542  0.49744082 -0.01572264 -0.08937043]
[ 0.          0.          1.          ]]]
```

T_ic: (cam0 to imu0):

```
[[-0.49748779 -0.01415871  0.86735542  0.06025692]
[-0.86747035 -0.0069155  0.49744082  0.07348743]
[-0.00104492 -0.99987585 -0.01572264 -0.03502035]
[ 0.          0.          1.          ]]]
```

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

-0.0059641504083725524

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

```
[ 0.02839863 -9.80650808 -0.00396582]
```

Calibration configuration

cam0

Camera model: pinhole

Focal length: [392.8114151560641, 392.88374894018546]

Principal point: [322.4666924919608, 248.22708354340855]

Distortion model: radtan

Distortion coefficients: [-0.3420086542144001, 0.10879941637207781, -0.0003229586599770064, -0.0004542659834325975]

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.]

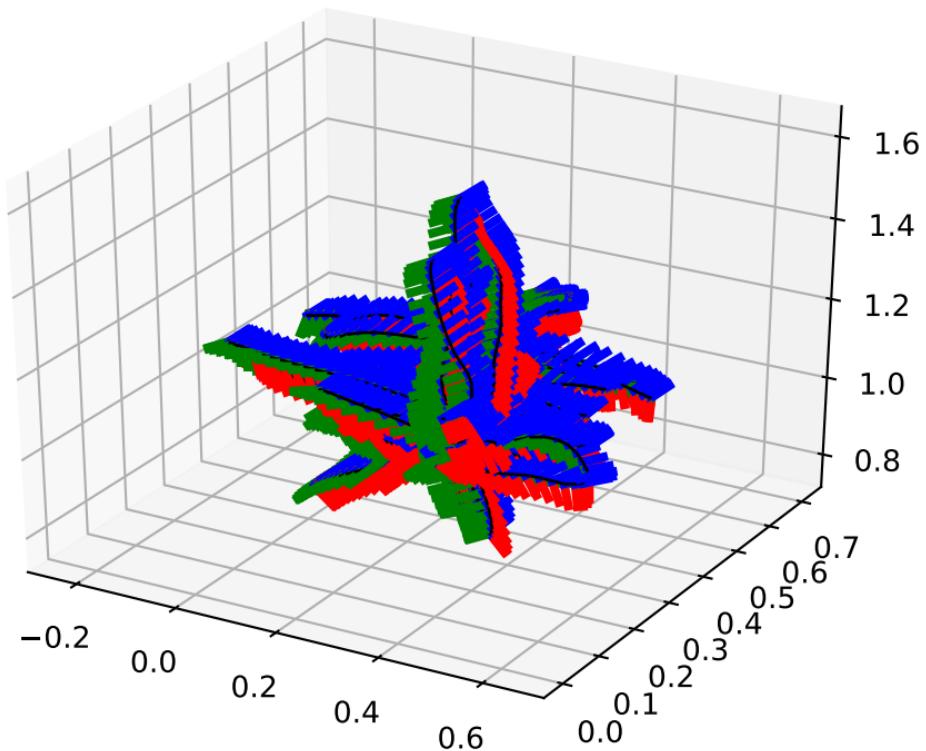
[0. 1. 0. 0.]

[0. 0. 1. 0.]

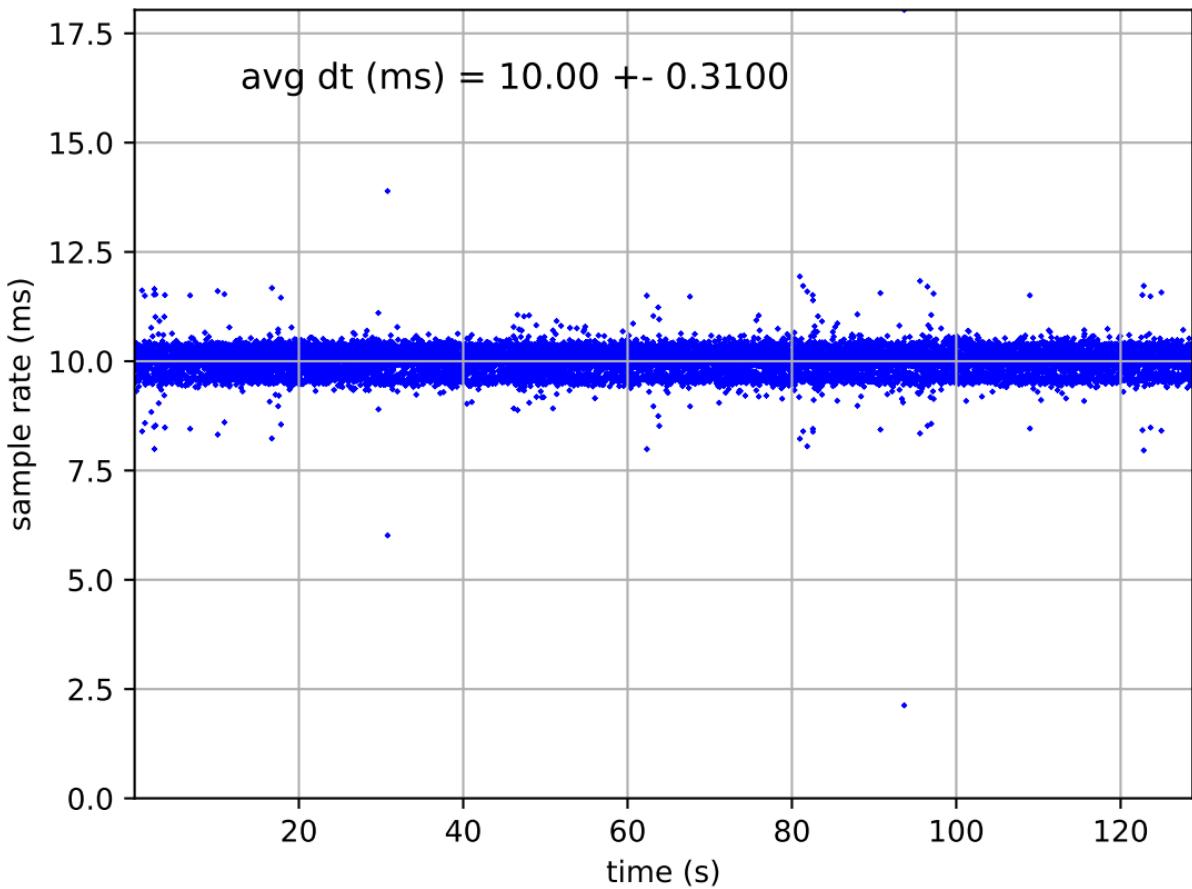
[0. 0. 0. 1.]]

time offset with respect to IMU0: 0.0 [s]

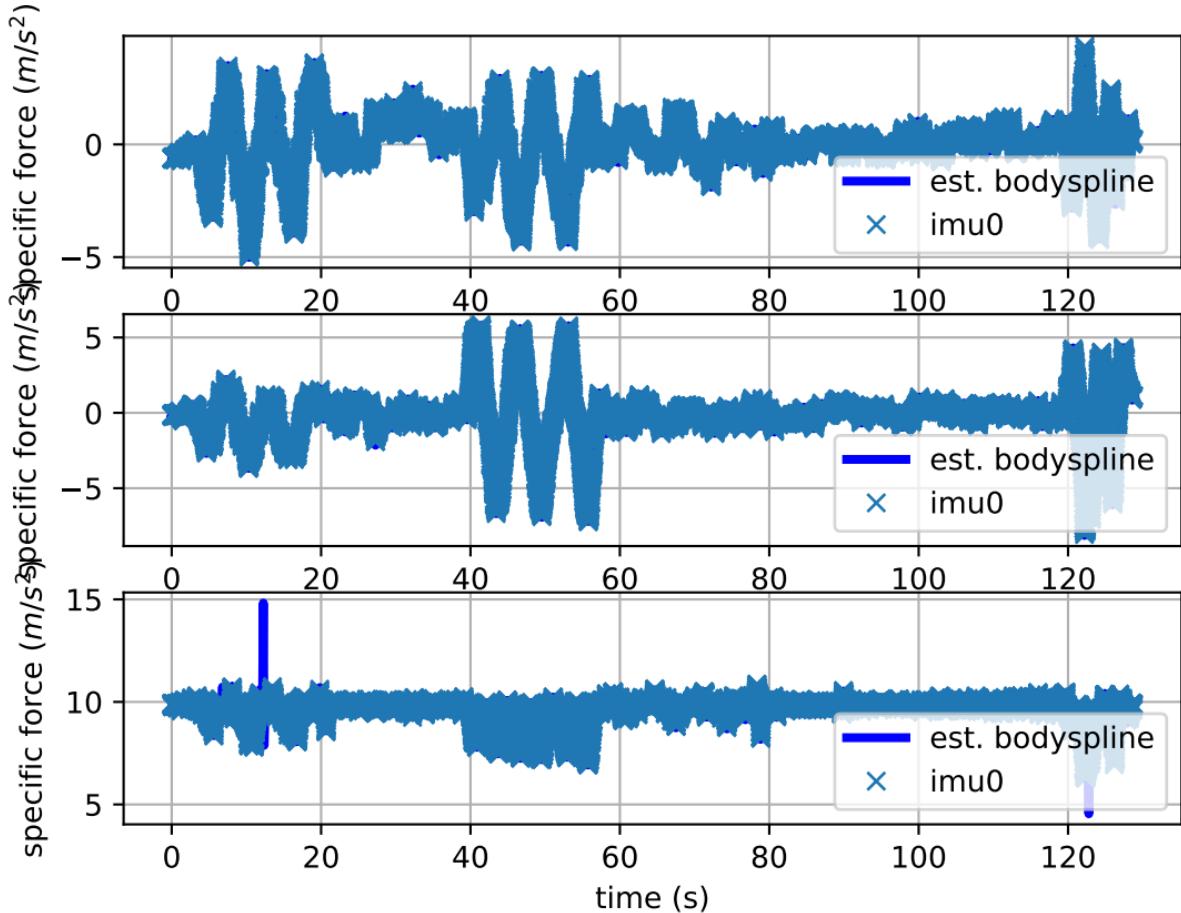
imu0: estimated poses



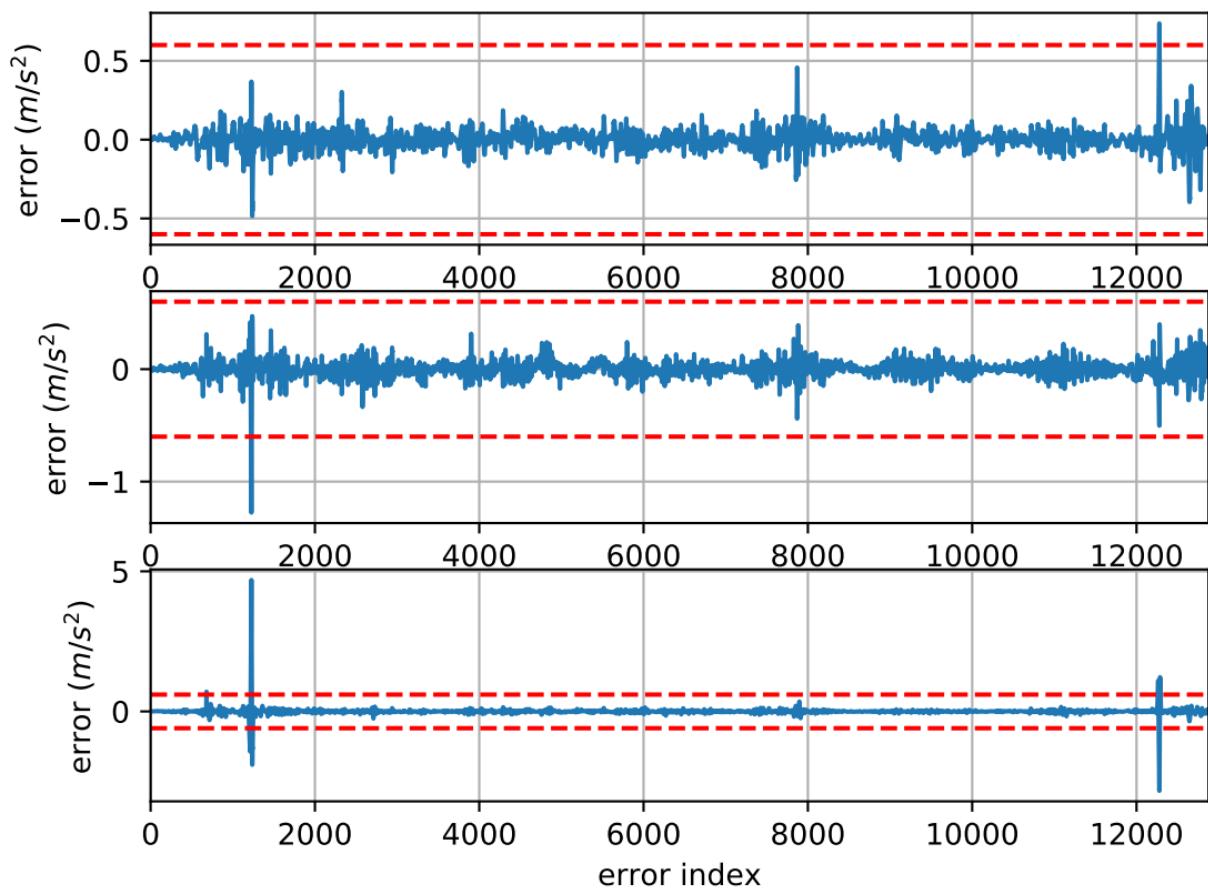
imu0: sample inertial rate



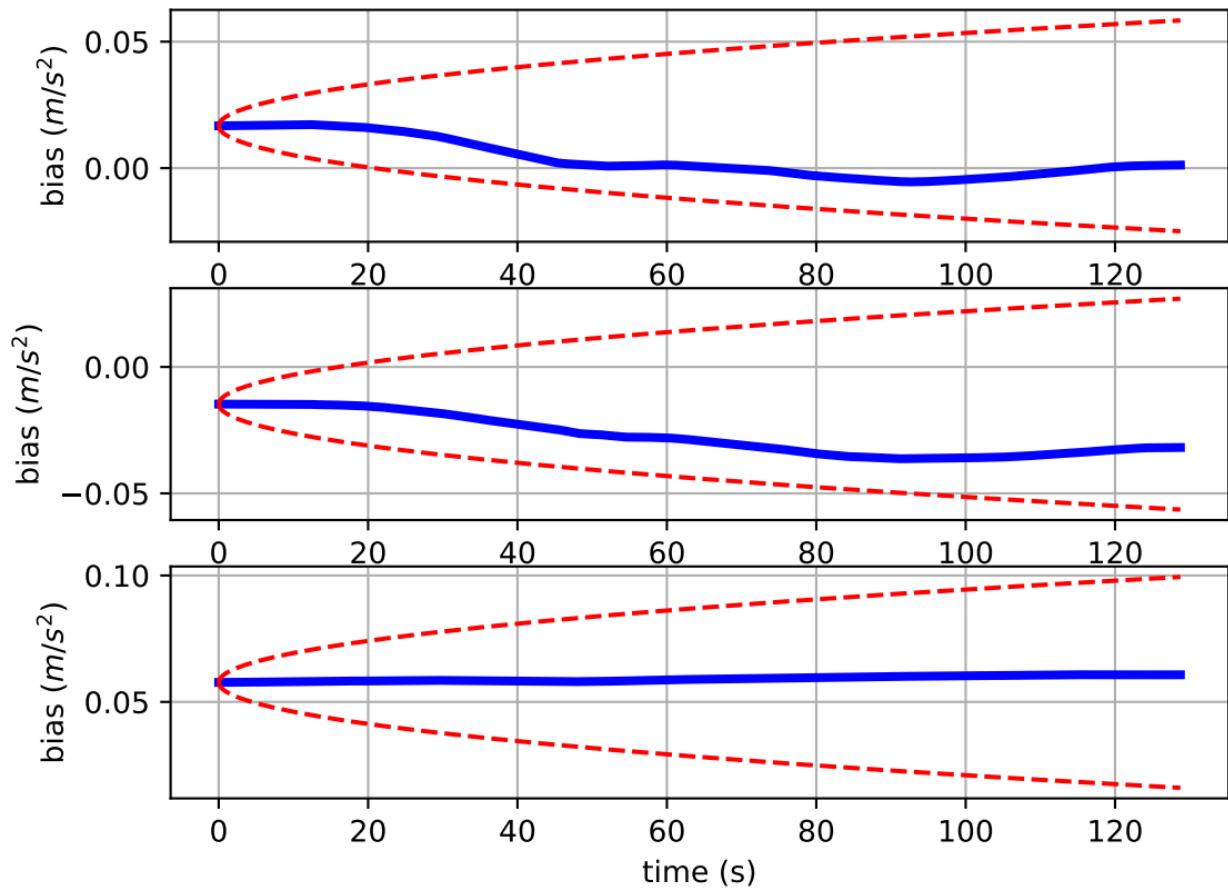
Comparison of predicted and measured specific force (imu0 frame)



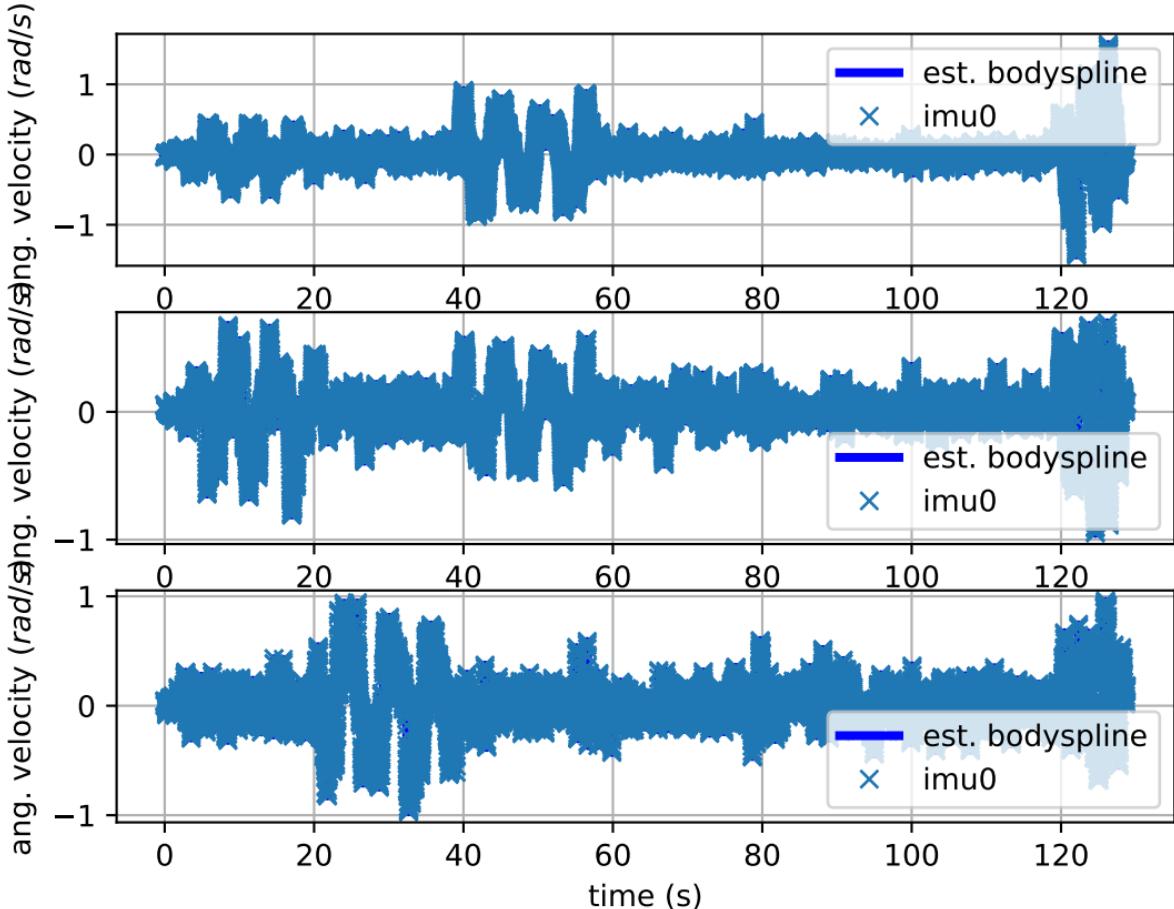
imu0: acceleration error



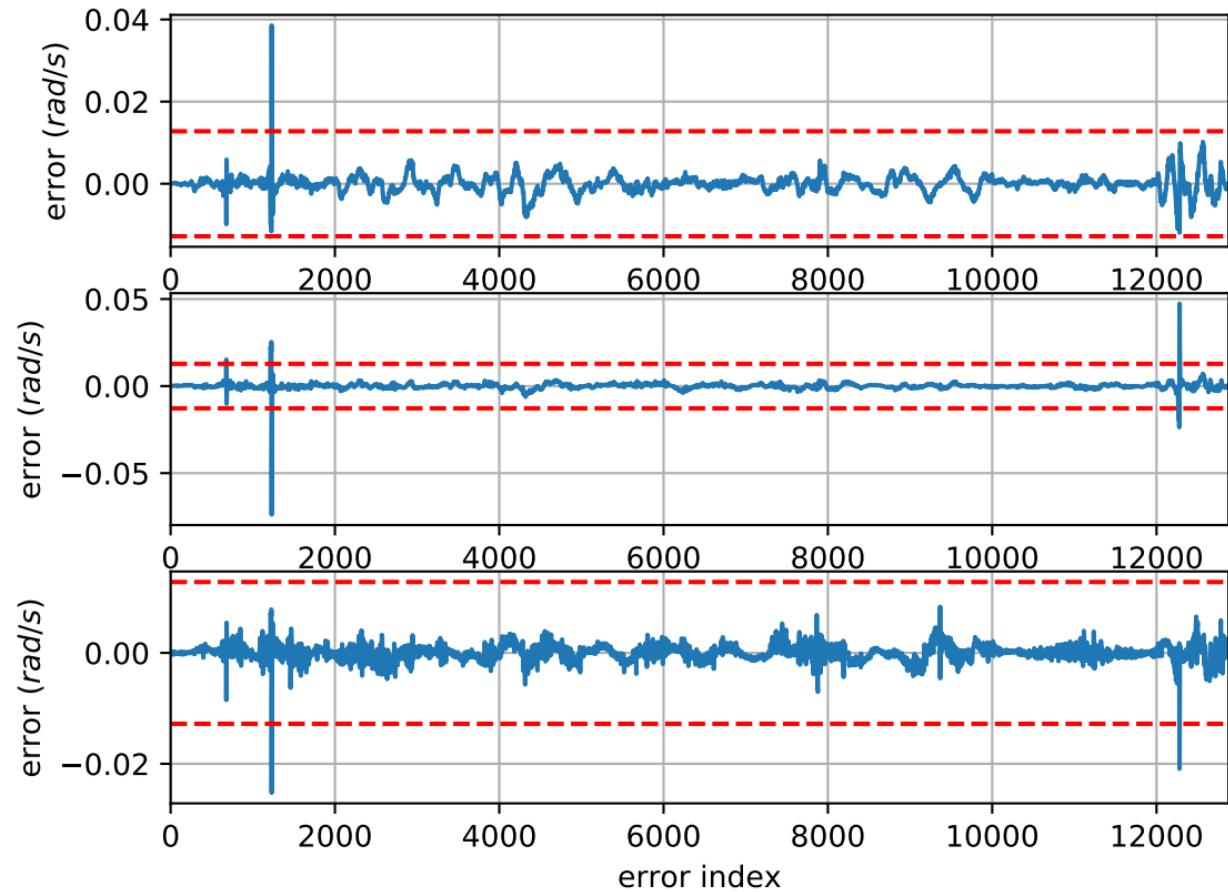
imu0: estimated accelerometer bias (imu frame)



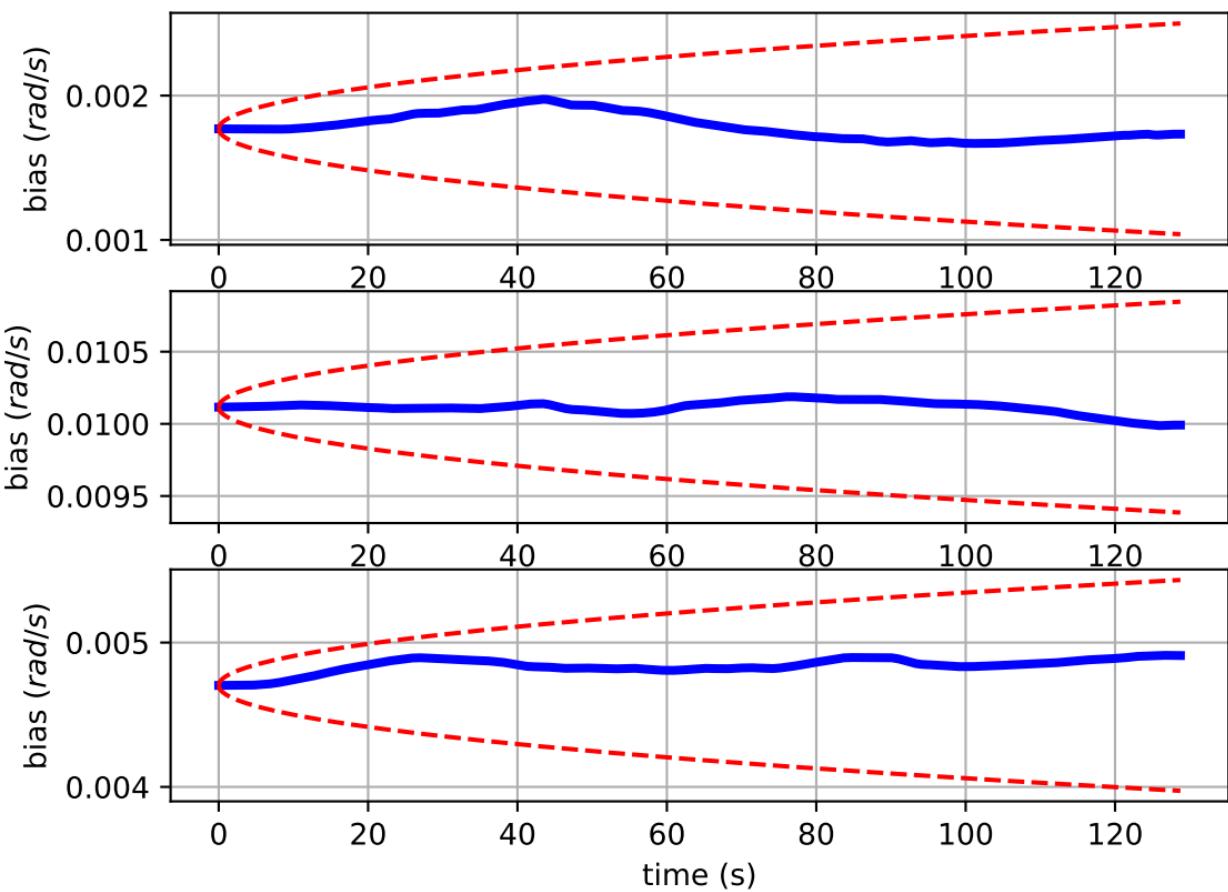
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

