

Calibration results

Normalized Residuals

Reprojection error (cam0): mean 1.2237782789420484, median 1.0038819803310892, std: 0.9095955662468984
Gyroscope error (imu0): mean 0.2070073707865282, median 0.13804626234638134, std: 0.21191221360059231
Accelerometer error (imu0): mean 0.24167454513774303, median 0.16235004764999017, std: 0.24279476144164272

Residuals

Reprojection error (cam0) [px]: mean 1.2237782789420484, median 1.0038819803310892, std: 0.9095955662468984
Gyroscope error (imu0) [rad/s]: mean 0.08651884122351529, median 0.05769650910528632, std:
0.08856882289829308
Accelerometer error (imu0) [m/s²]: mean 0.5982331665276246, median 0.4018759320978913, std: 0.601006112872867

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[ 0.01674632 -0.99979468  0.0114091  0.0000733 ]
 [-0.99984877 -0.01669151  0.00488244 -0.00200831]
 [-0.004691  -0.01148914 -0.99992299  0.02045387]
 [ 0.          0.          0.          1.        ]]
```

T_ic: (cam0 to imu0):

```
[[ 0.01674632 -0.99984877 -0.004691  -0.00191329]
 [-0.99979468 -0.01669151 -0.01148914  0.00027476]
 [ 0.0114091  0.00488244 -0.99992299  0.02046126]
 [ 0.          0.          0.          1.        ]]
```

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

-0.3835597622789176

Gravity vector in target coords: [m/s²]

```
[-0.21863488  9.80230168  0.18842341]
```

Calibration configuration

cam0

Camera model: pinhole

Focal length: [1580.21787, 1582.69632]

Principal point: [959.62805, 535.57104]

Distortion model: radtan

Distortion coefficients: [0.101524, -0.248828, 0.000507, 0.004128]

Type: aprilgrid

Tags:

Rows: 6

Cols: 6

Size: 0.021 [m]

Spacing 0.0063 [m]

IMU configuration

IMU0:

Model: calibrated

Update rate: 200.0

Accelerometer:

Noise density: 0.17503487119062797

Noise density (discrete): 2.475366887260138

Random walk: 0.11540370899319194

Gyroscope:

Noise density: 0.02955356570015007

Noise density (discrete): 0.4179505342963654

Random walk: 0.0038742360784085003

T_ib (imu0 to imu0)

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

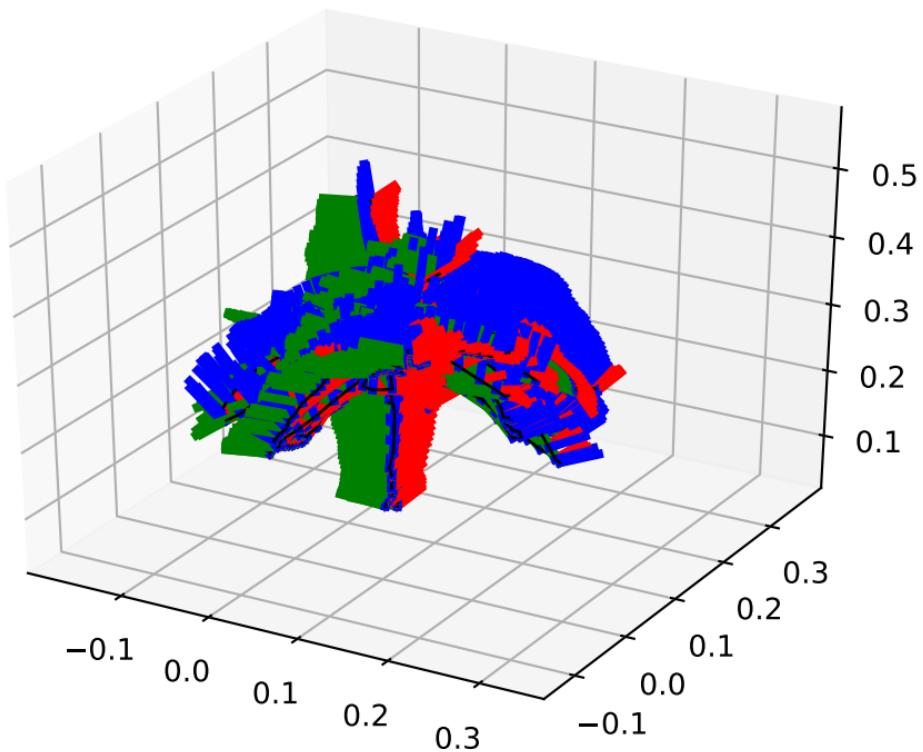
[0. 1. 0. 0.]

[0. 0. 1. 0.]

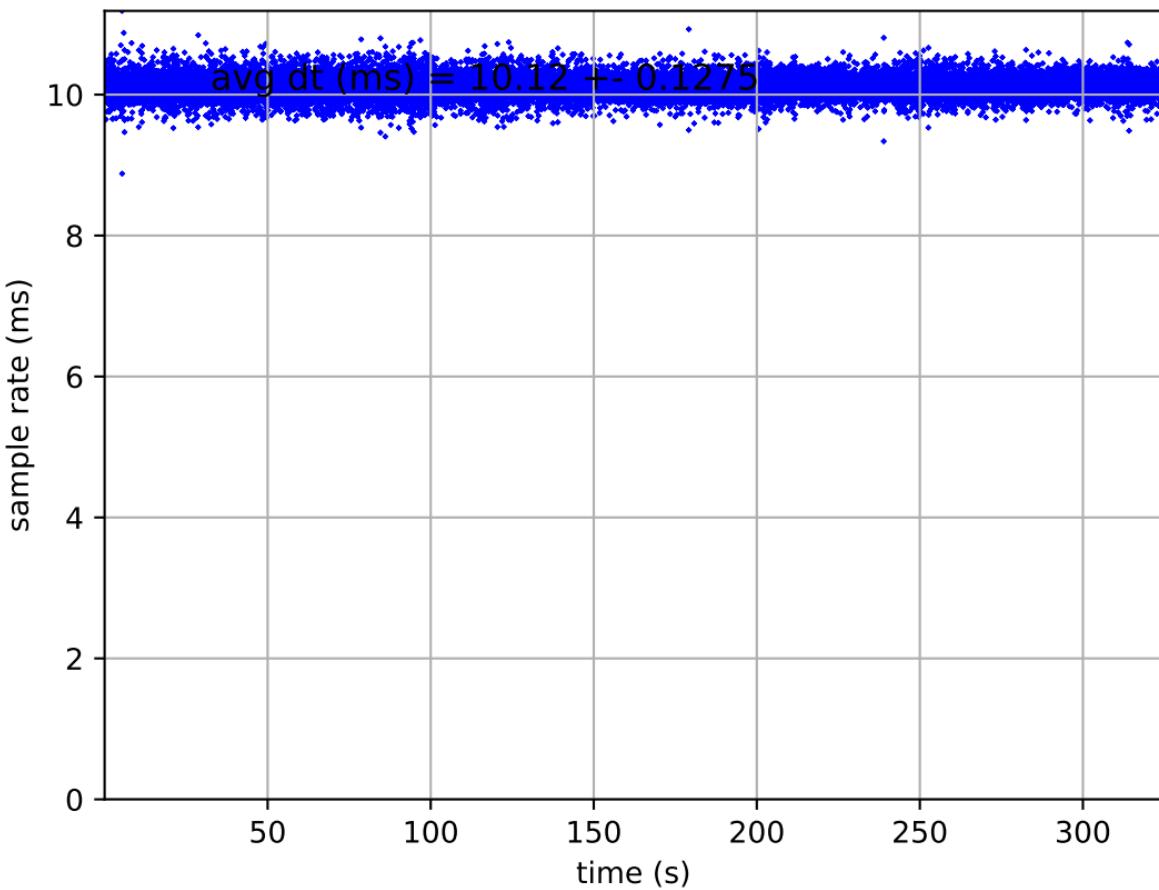
[0. 0. 0. 1.]]

time offset with respect to IMU0: 0.0 [s]

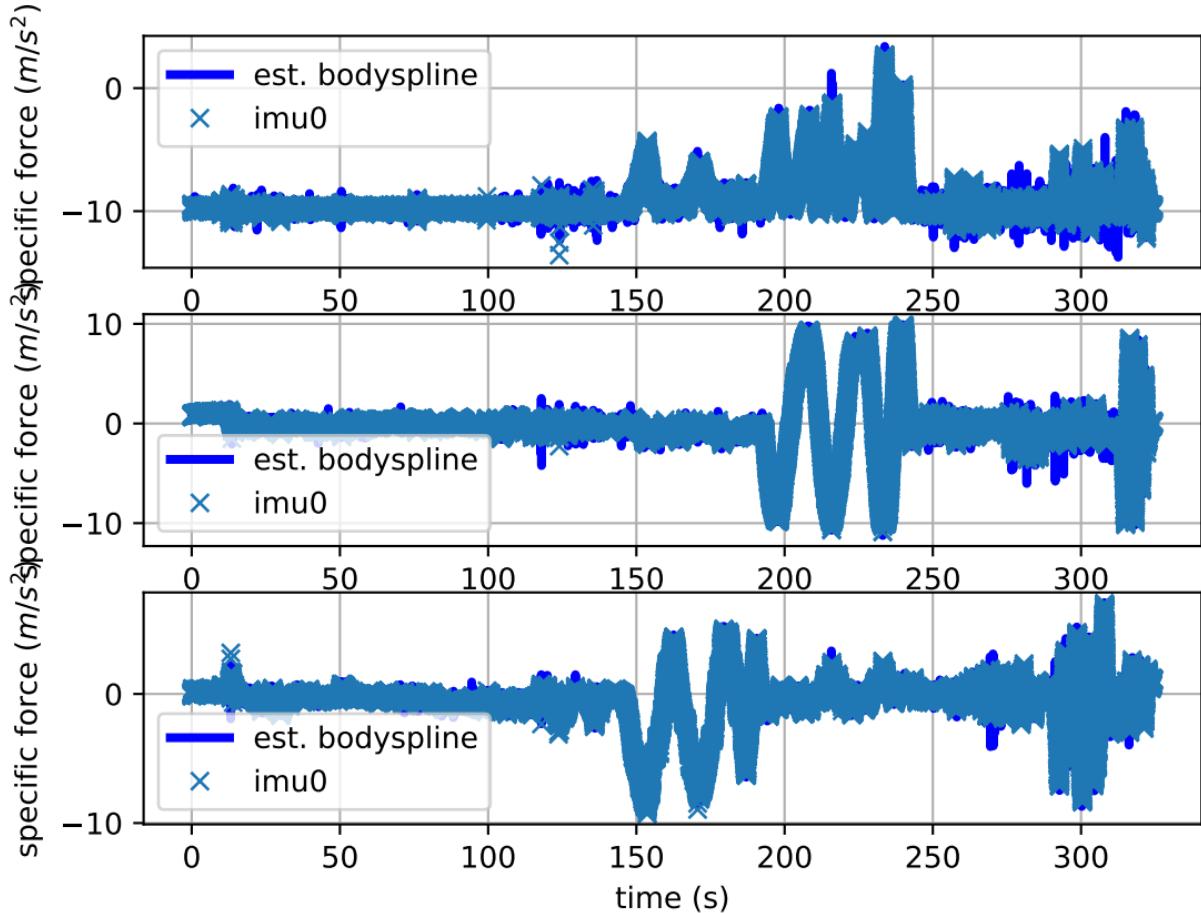
imu0: estimated poses



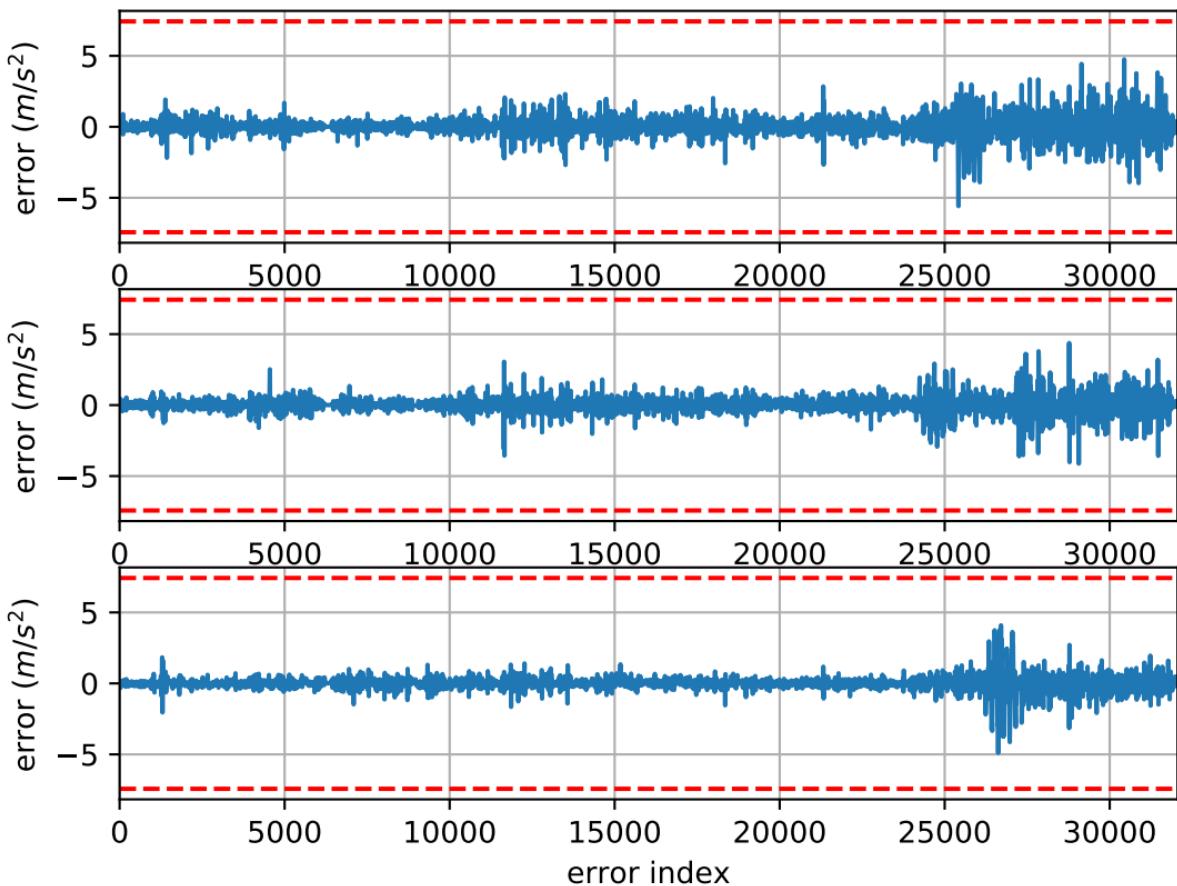
imu0: sample inertial rate



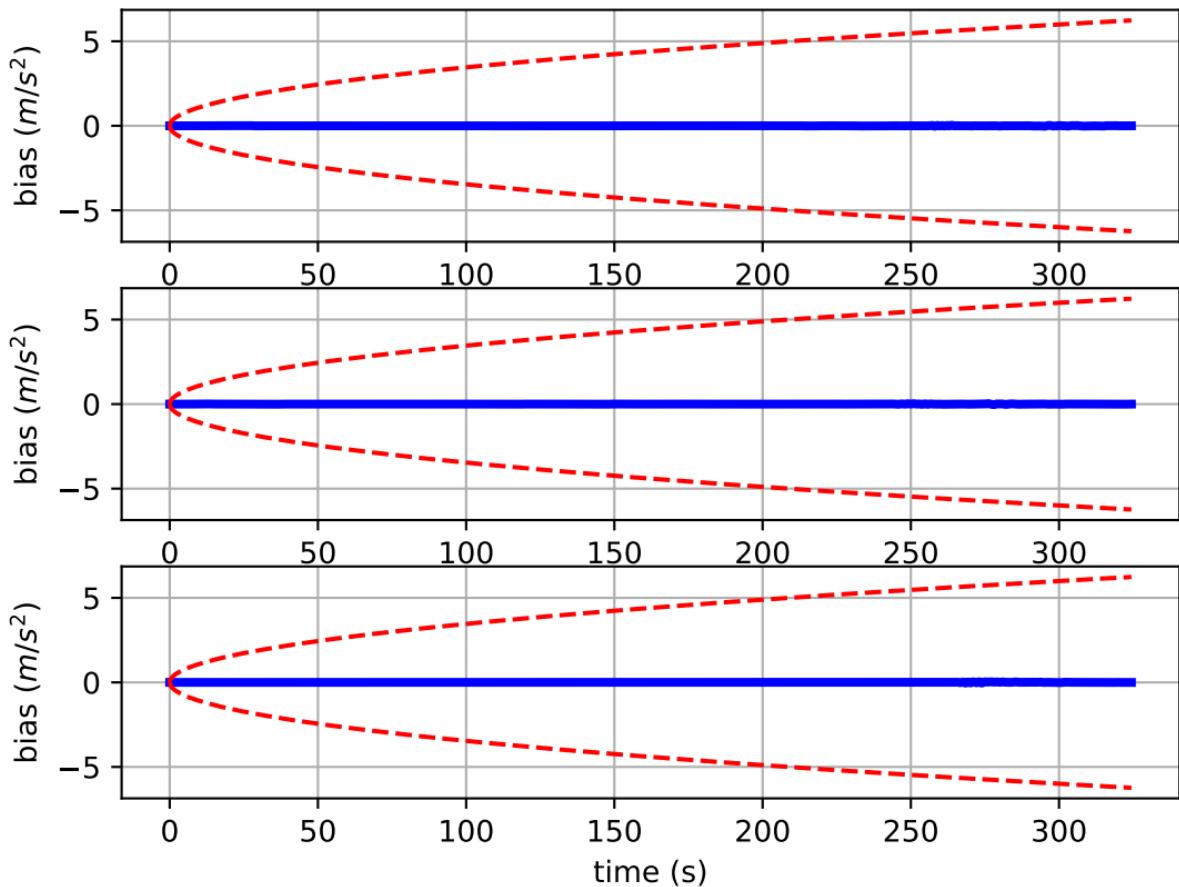
Comparison of predicted and measured specific force (imu0 frame)



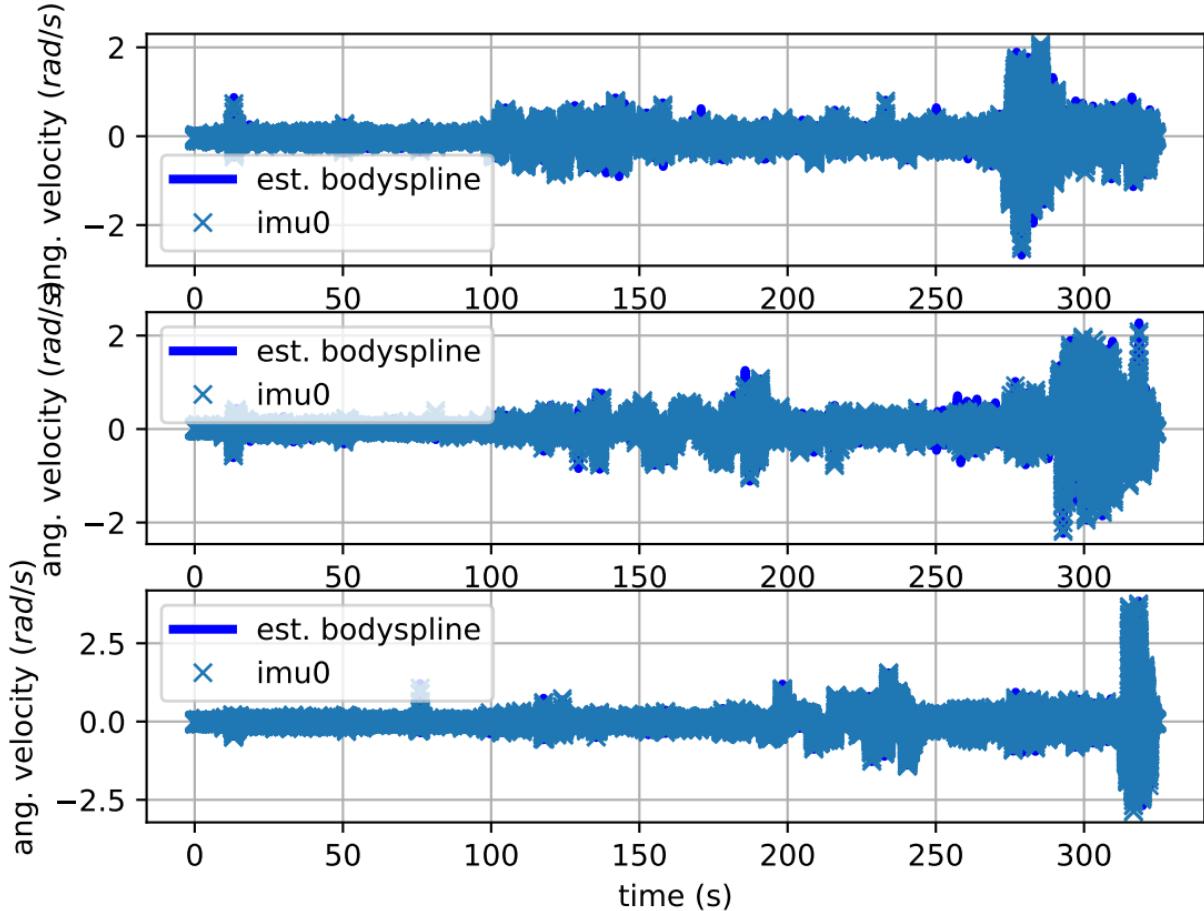
imu0: acceleration error



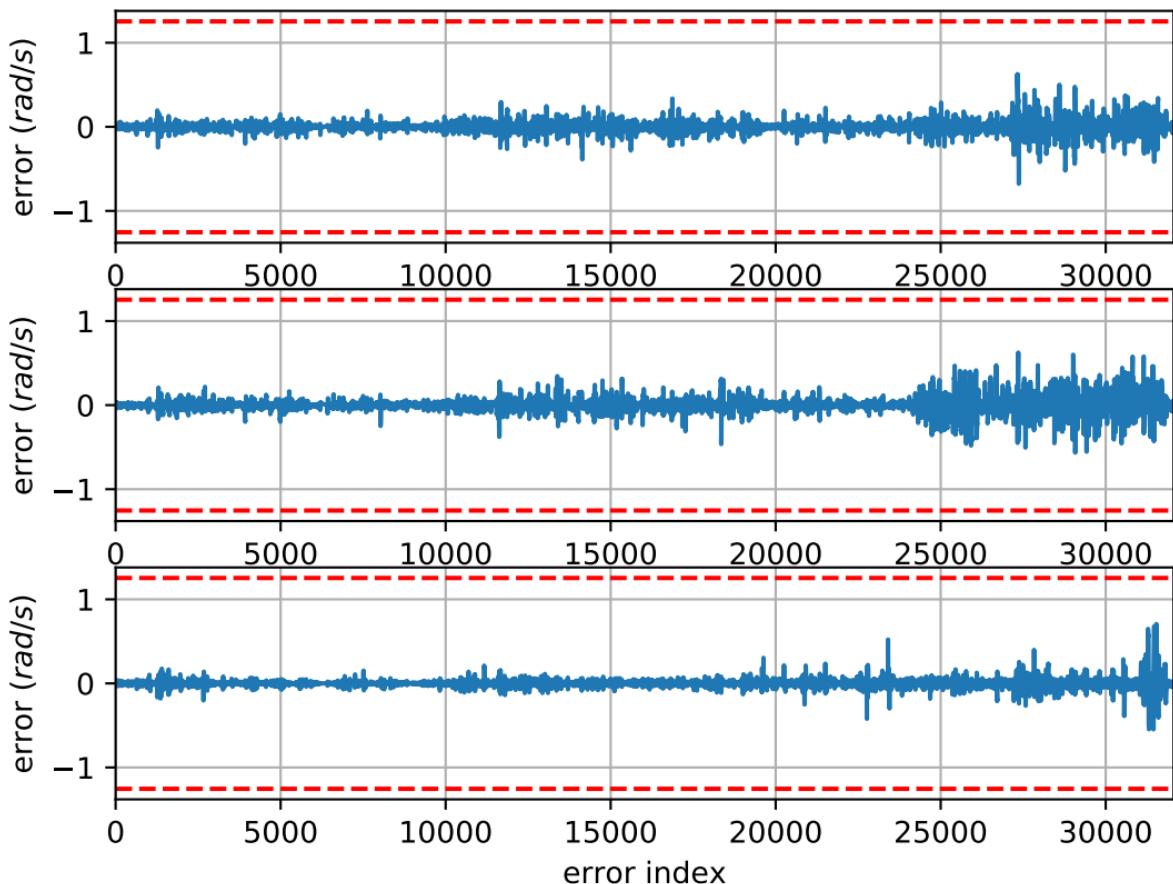
imu0: estimated accelerometer bias (imu frame)



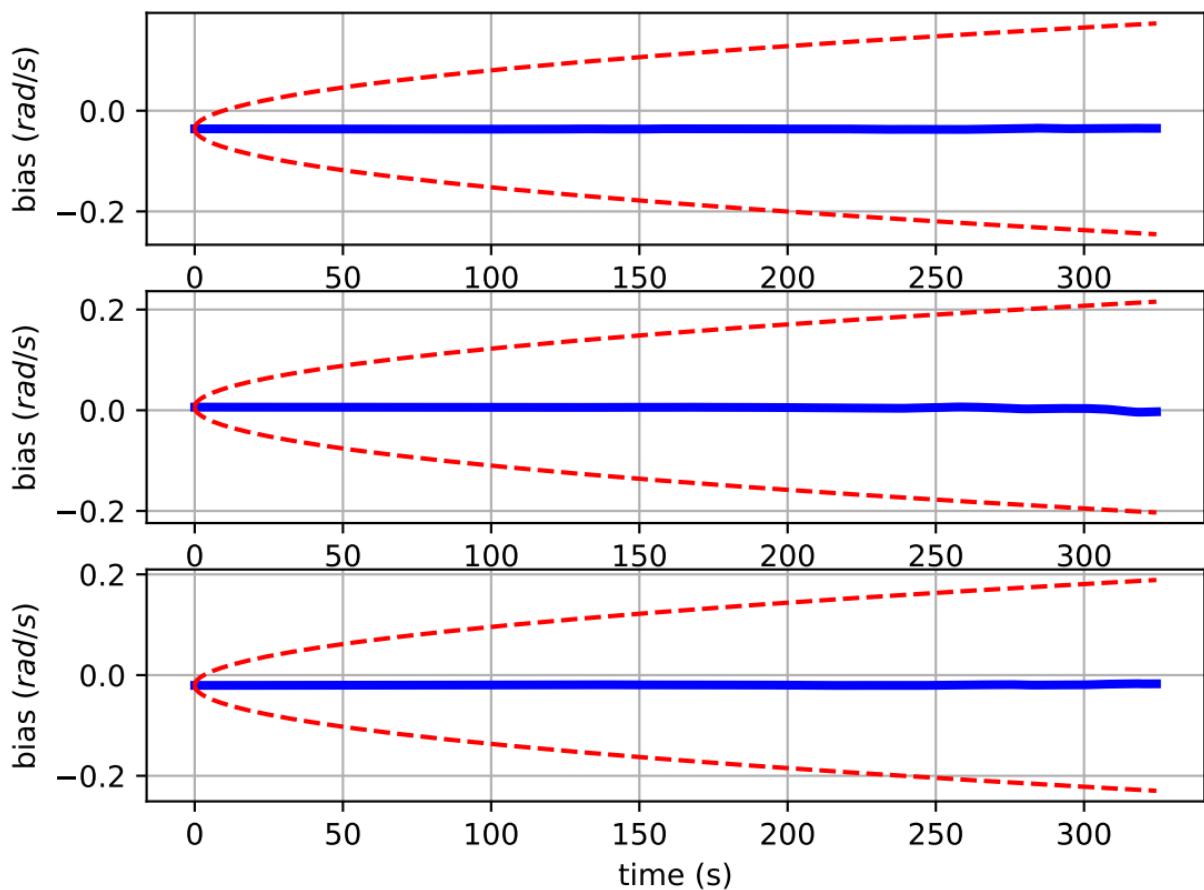
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

