

Calibration results

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Normalized Residuals

Reprojection error (cam0): mean 0.28217441127318044, median 0.1714986003209027, std: 0.43384065464734356
Gyroscope error (imu0): mean 0.3606857854171972, median 0.22410535852054642, std: 0.48650861965882514
Accelerometer error (imu0): mean 0.22063693040316454, median 0.168075625276714, std: 0.21145566422364928

Residuals

Reprojection error (cam0) [px]: mean 0.28217441127318044, median 0.1714986003209027, std:
0.43384065464734356
Gyroscope error (imu0) [rad/s]: mean 0.006337543223024726, median 0.003937713803976534, std:
0.00854835297125877
Accelerometer error (imu0) [m/s²]: mean 0.0382000551911985, median 0.029099834511537345, std:
0.0366104533319735

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[ 0.99975767  0.02179718 -0.00307846  0.01228428]
 [-0.02178439  0.99975417  0.00412876 -0.00735126]
 [ 0.00316777 -0.0040607   0.99998674 -0.0460467 ]
 [ 0.         0.         0.         1.         ]]
```

T_ic: (cam0 to imu0):

```
[[ 0.99975767 -0.02178439  0.00316777 -0.01229558]
 [ 0.02179718  0.99975417 -0.0040607   0.0068947 ]
 [-0.00307846  0.00412876  0.99998674  0.04611426]
 [ 0.         0.         0.         1.         ]]
```

timeshift cam0 to imu0: [s] (t_imu = t_cam + shift)
0.011645764495642252

Gravity vector in target coords: [m/s²]

```
[ 9.76715642 -0.00129956 -0.87810968]
```

Calibration configuration

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cam0

Camera model: pinhole

Focal length: [898.6688804109466, 898.9738808863659]

Principal point: [636.8292946802843, 356.1554967448297]

Distortion model: radtan

Distortion coefficients: [0.10701023140471895, -0.223355254026636, -0.0011639206722372725, 0.0002625123925514004]

Type: checkerboard

Rows

Count: 8

Distance: 0.03 [m]

Cols

Count: 11

Distance: 0.03 [m]

IMU configuration

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IMU0:

Model: calibrated

Update rate: 200.0

Accelerometer:

Noise density: 0.012242518973609421

Noise density (discrete): 0.17313536370088387

Random walk: 0.00039120568570580365

Gyroscope:

Noise density: 0.0012424442465566502

Noise density (discrete): 0.017570815039728363

Random walk: 1.773126703119309e-05

T_ib (imu0 to imu0)

[[1. 0. 0. 0.]

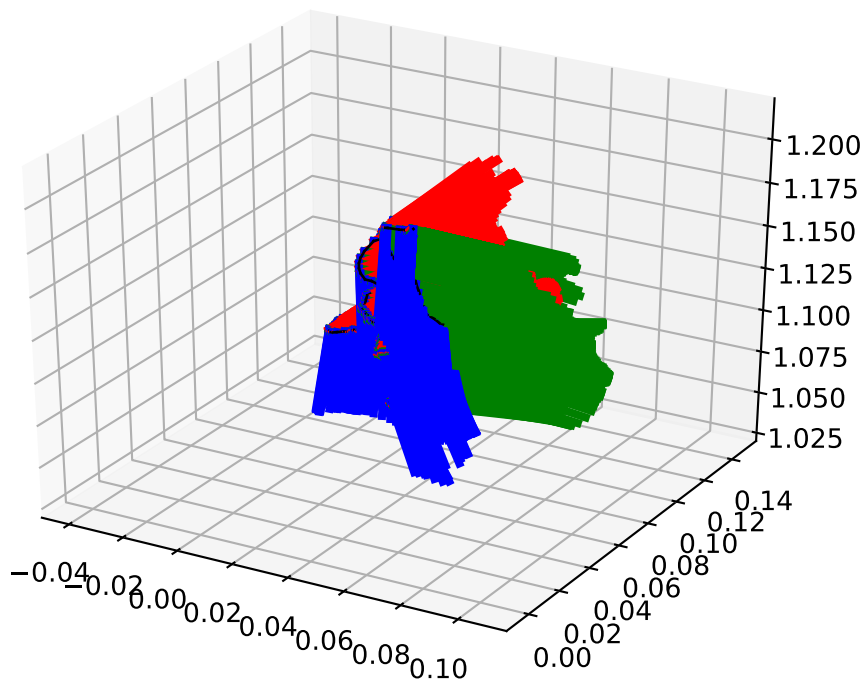
[0. 1. 0. 0.]

[0. 0. 1. 0.]

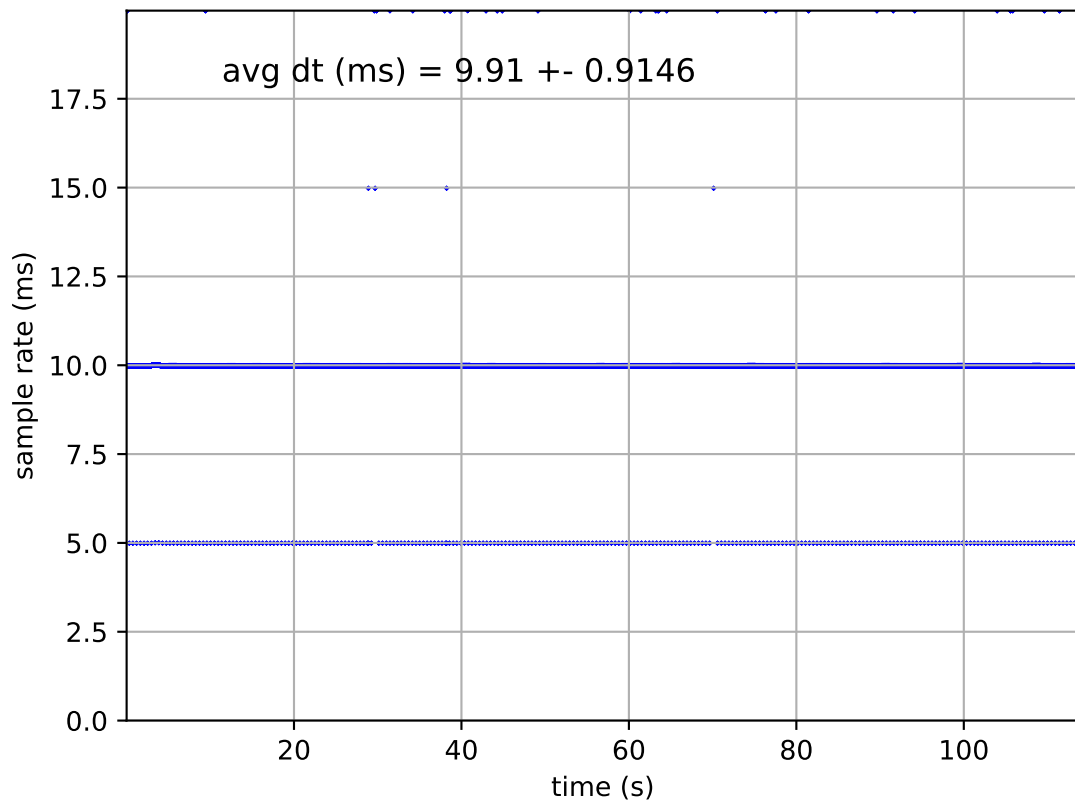
[0. 0. 0. 1.]]

time offset with respect to IMU0: 0.0 [s]

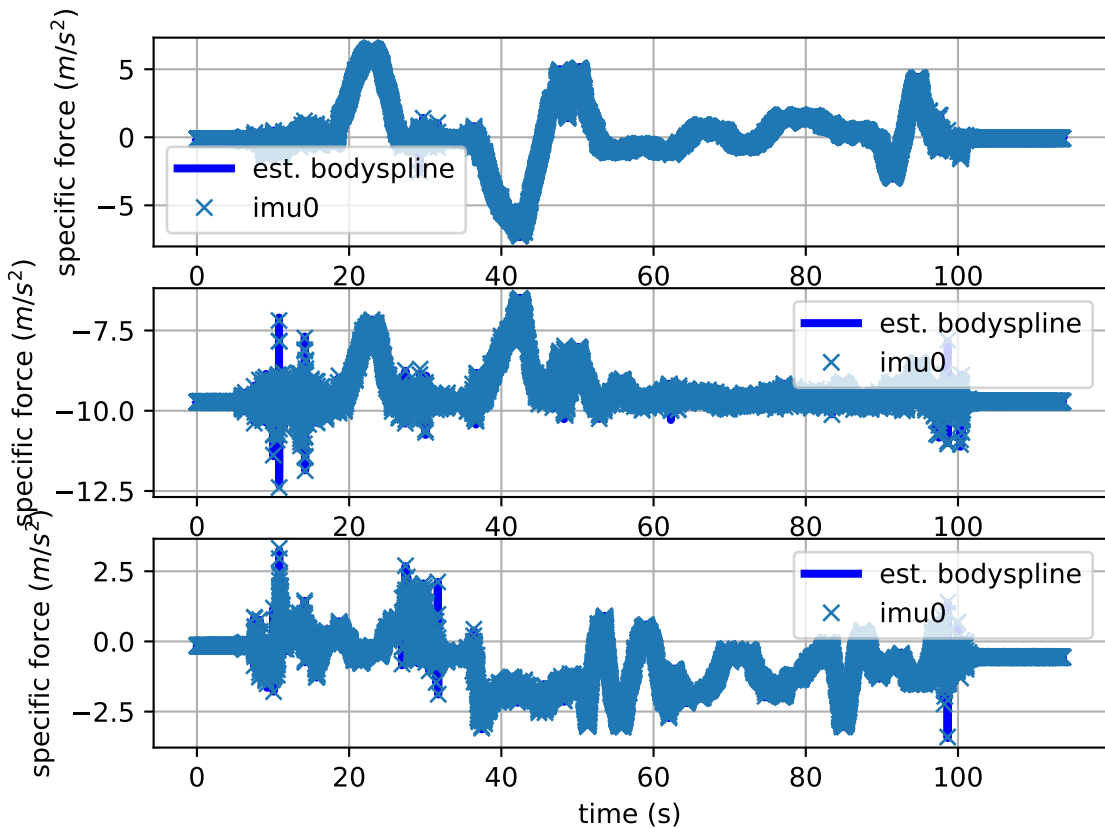
imu0: estimated poses



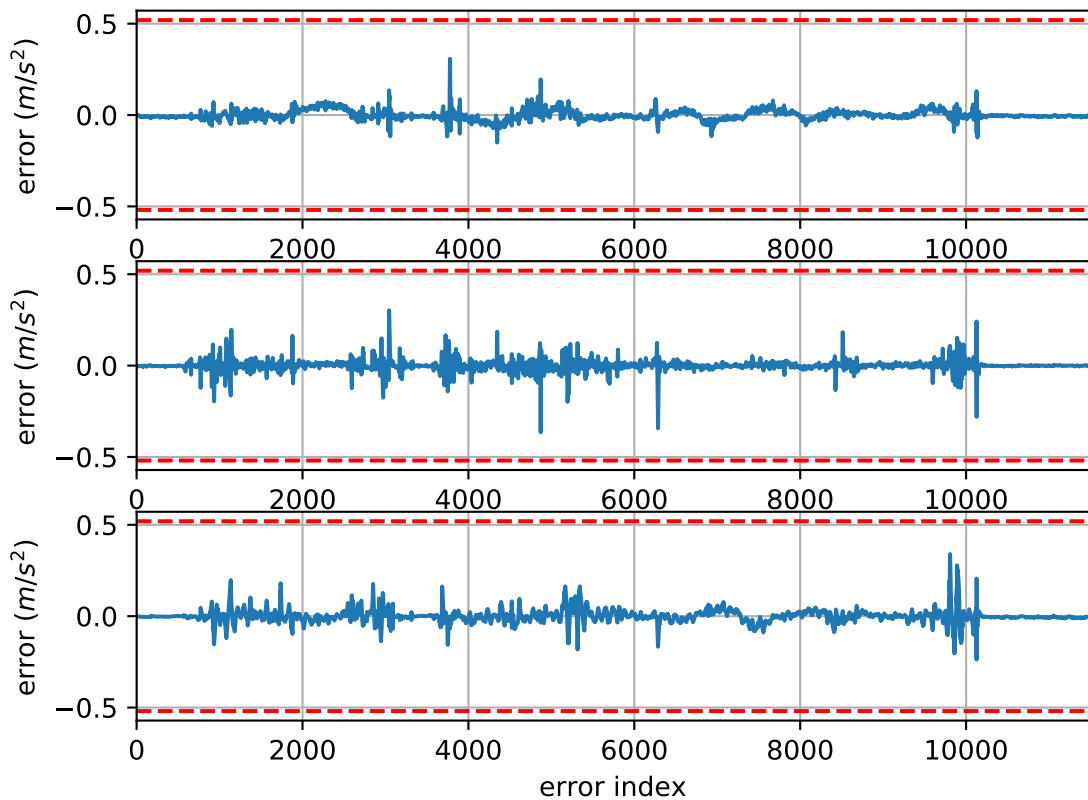
imu0: sample inertial rate



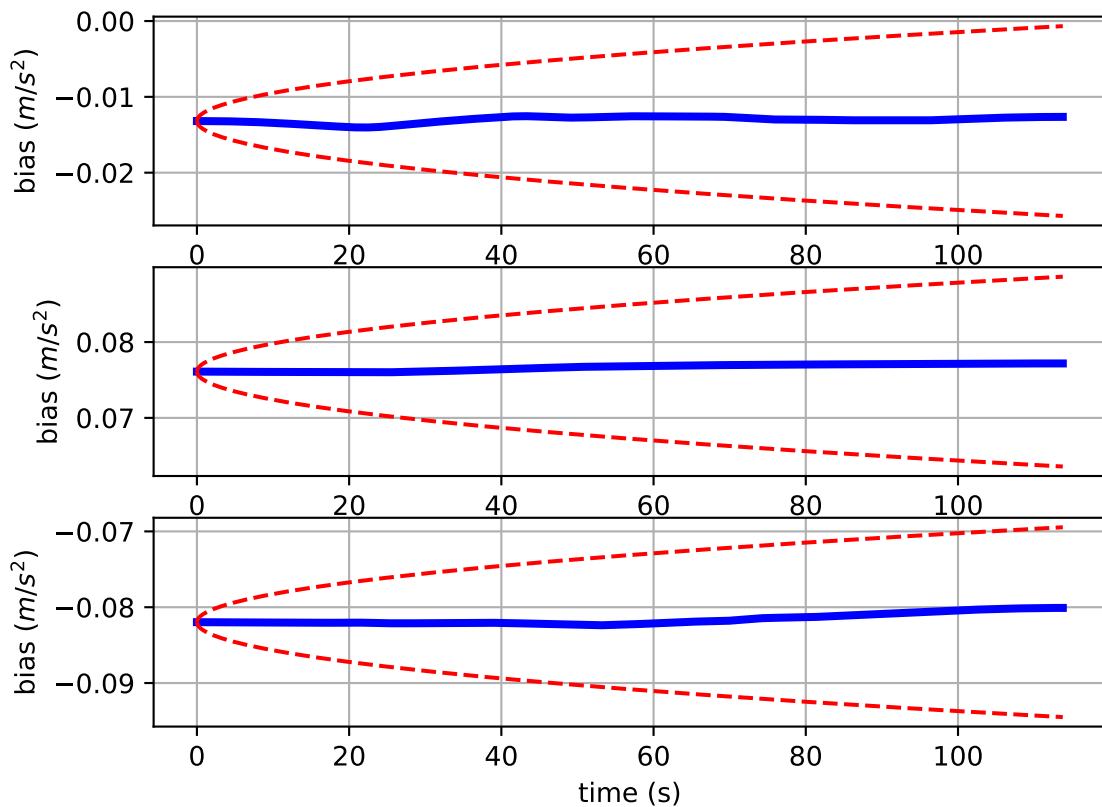
Comparison of predicted and measured specific force (imu0 frame)



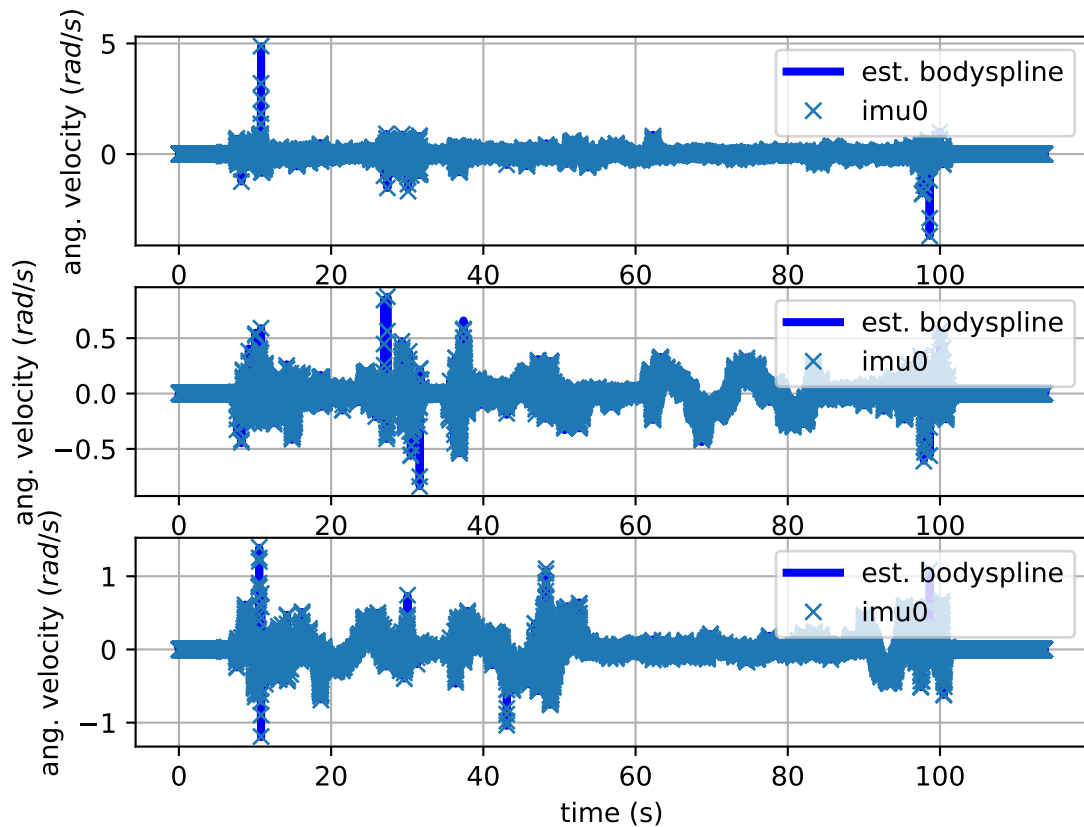
imu0: acceleration error



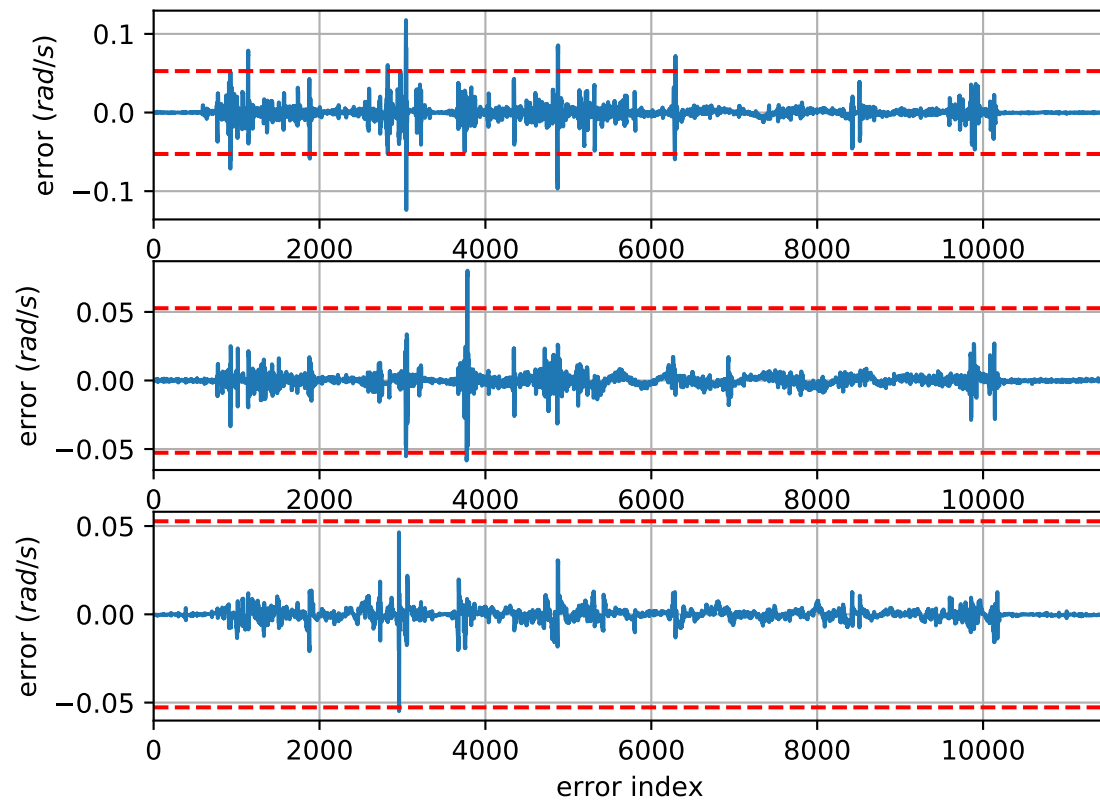
imu0: estimated accelerometer bias (imu frame)



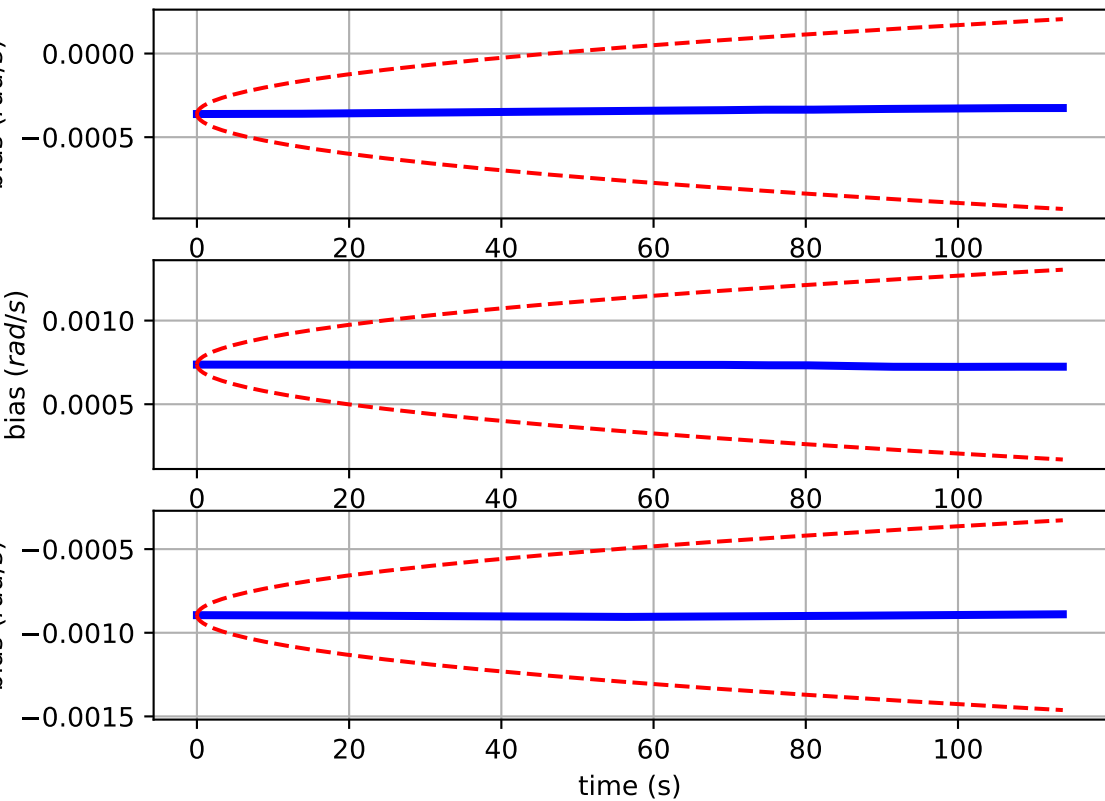
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

