

Calibration results

Normalized Residuals

Reprojection error (cam0): mean 0.118212329771, median 0.104767884173, std: 0.0746050131947

Gyroscope error (imu0): mean 0.0360029421778, median 0.0301321491743, std: 0.0236395979299

Accelerometer error (imu0): mean 0.0934599397844, median 0.0692584892131, std: 0.0750585907994

Residuals

Reprojection error (cam0) [px]: mean 0.118212329771, median 0.104767884173, std: 0.0746050131947

Gyroscope error (imu0) [rad/s]: mean 0.00684055901379, median 0.00572510834311, std: 0.0044915236

Accelerometer error (imu0) [m/s^2]: mean 0.017757388559, median 0.0131591129505, std: 0.0142611322

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[ 0.9999608 -0.00764705 -0.00446318  0.00654266]
 [ 0.00446383  0.00006752  0.99999003  0.01138236]
 [-0.00764668 -0.99997076  0.00010166 -0.07541938]
 [ 0.          0.          0.          1.        ]]
```

T_ic: (cam0 to imu0):

```
[[ 0.9999608  0.00446383 -0.00764668 -0.00716992]
 [-0.00764705  0.00006752 -0.99997076 -0.07536791]
 [-0.00446318  0.99999003  0.00010166 -0.01134538]
 [ 0.          0.          0.          1.        ]]
```

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

0.00178910479546

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

```
[-0.00338912 -9.68304835 -1.55144646]
```

Calibration configuration

Camera model: pinhole

Focal length: [351.6547241343154, 350.97590029372265]

Principal point: [342.91570997688115, 288.27050308689036]

Distortion model: equidistant

Distortion coefficients: [-0.03713375423447921, -0.007489770634057738, 0.003287983152377356, -0.000

Type: aprilgrid

Tags:

Rows: 6

Cols: 6

Size: 0.088 [m]

Spacing 0.0264 [m]

IMU configuration

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IMU0:

Model: calibrated

Update rate: 100.0

Accelerometer:

Noise density: 0.019

Noise density (discrete): 0.19

Random walk: 0.0043

Gyroscope:

Noise density: 0.019

Noise density (discrete): 0.19

Random walk: 0.000266

T_i_b

[[1. 0. 0. 0.]

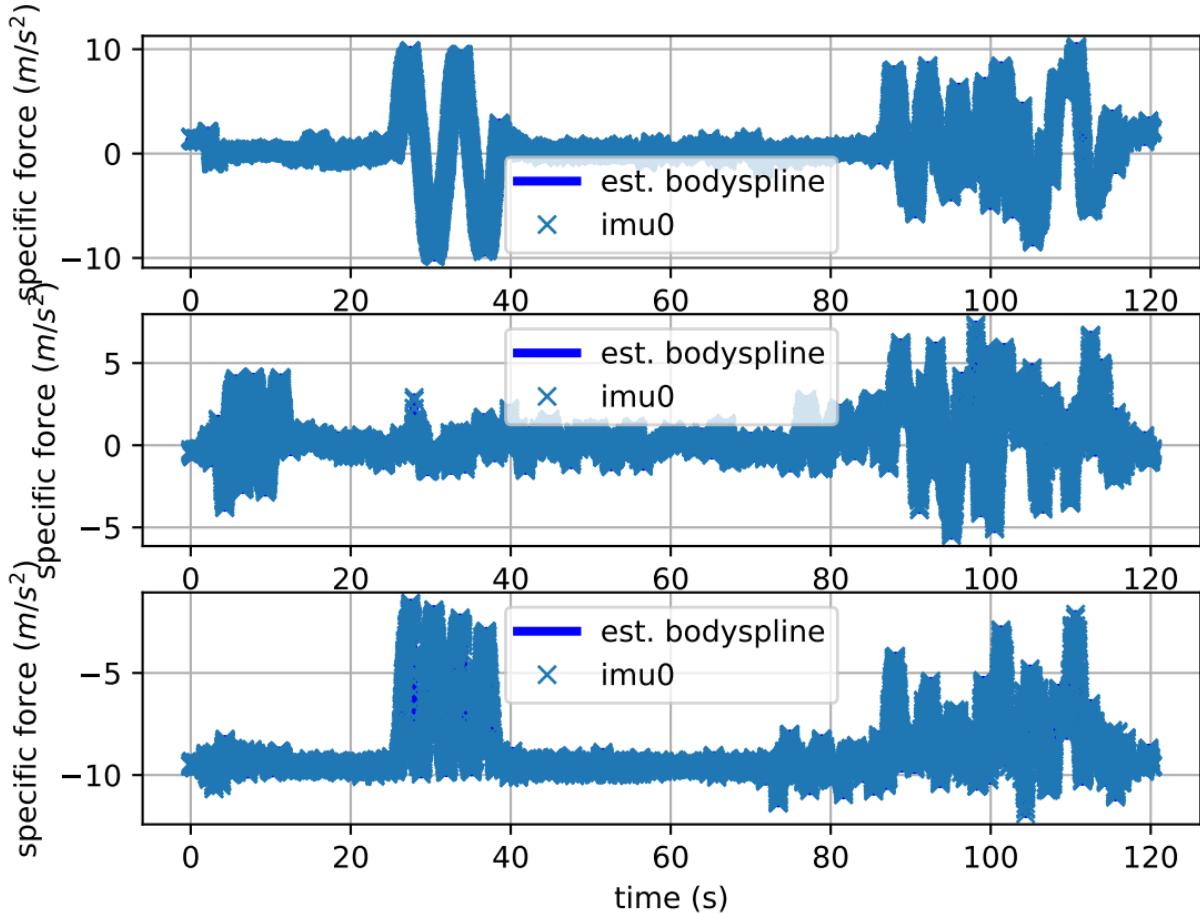
 [0. 1. 0. 0.]

 [0. 0. 1. 0.]

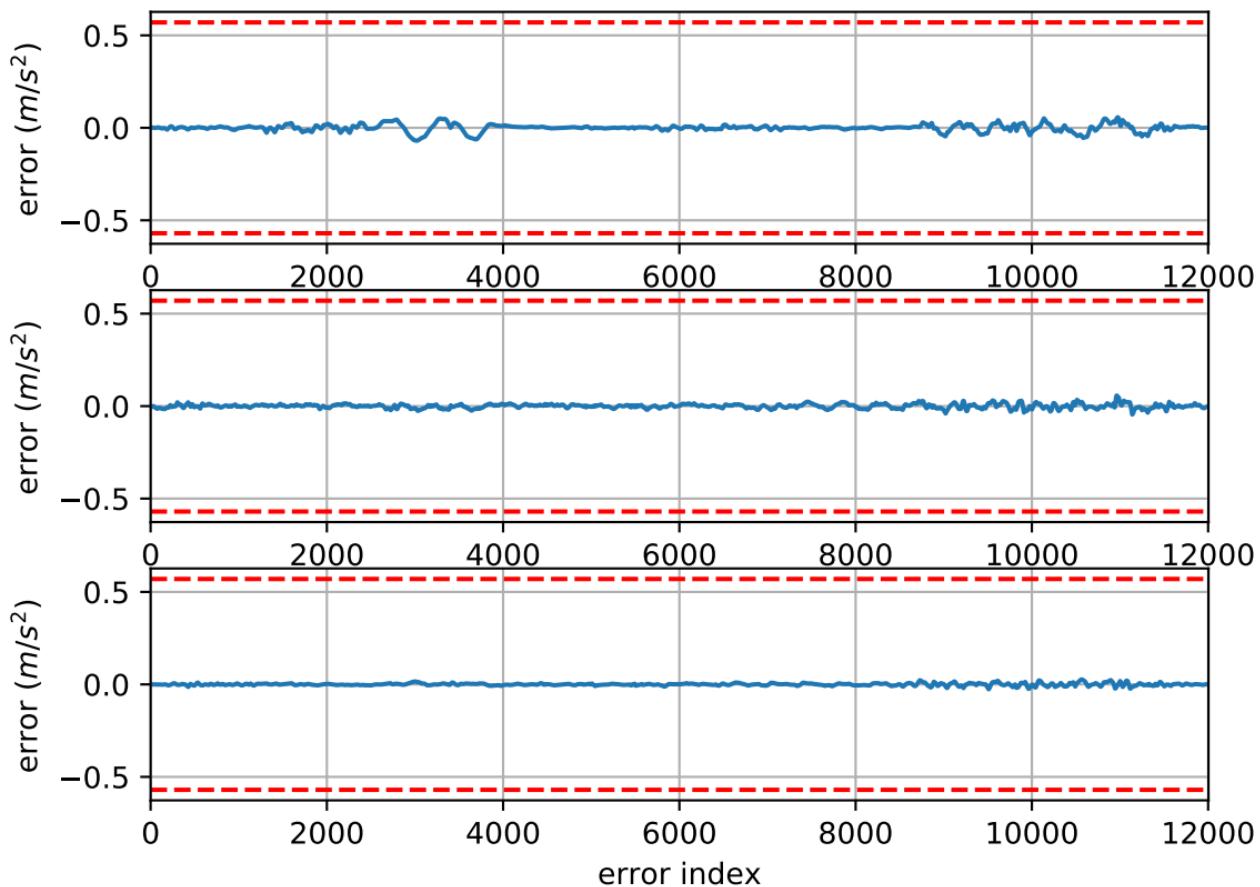
 [0. 0. 0. 1.]]

time offset with respect to IMU0: 0.0 [s]

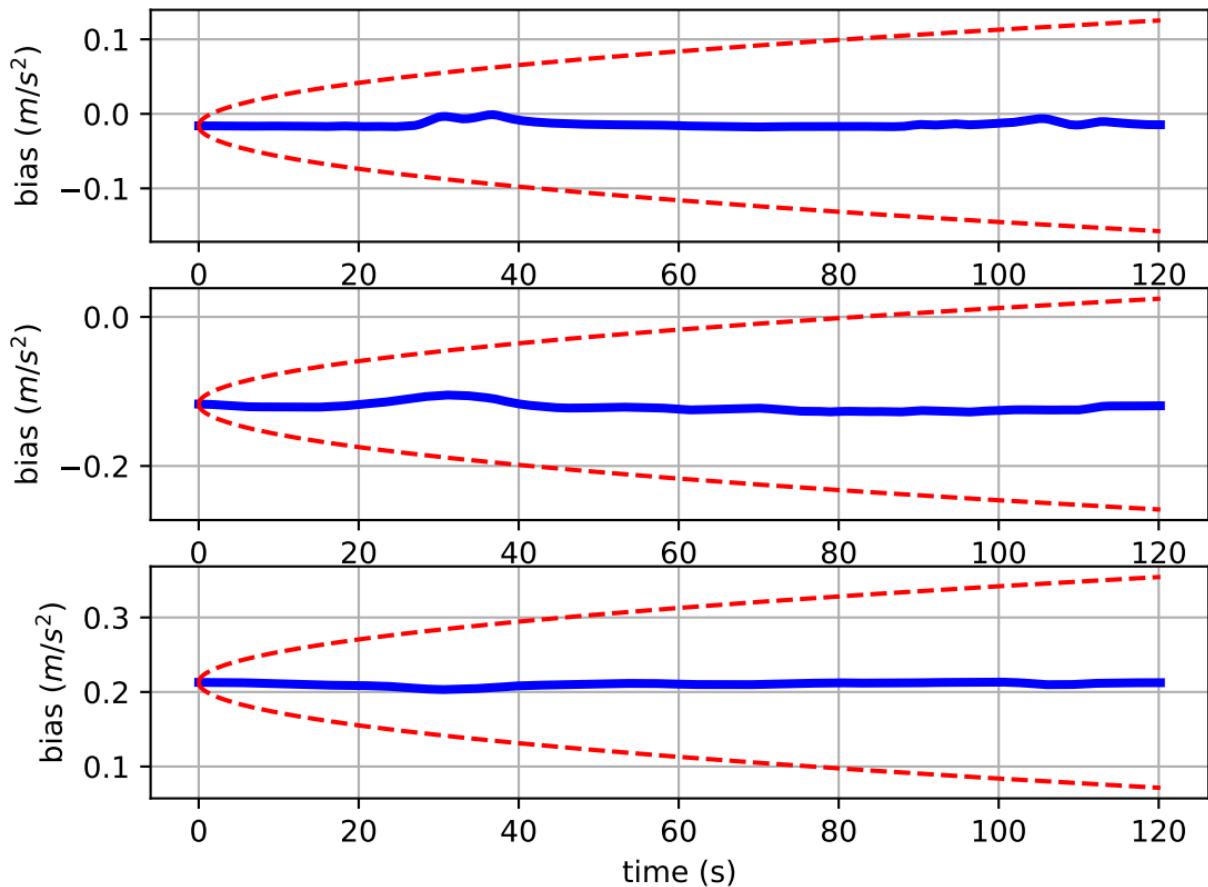
Comparison of predicted and measured specific force (imu0 frame)



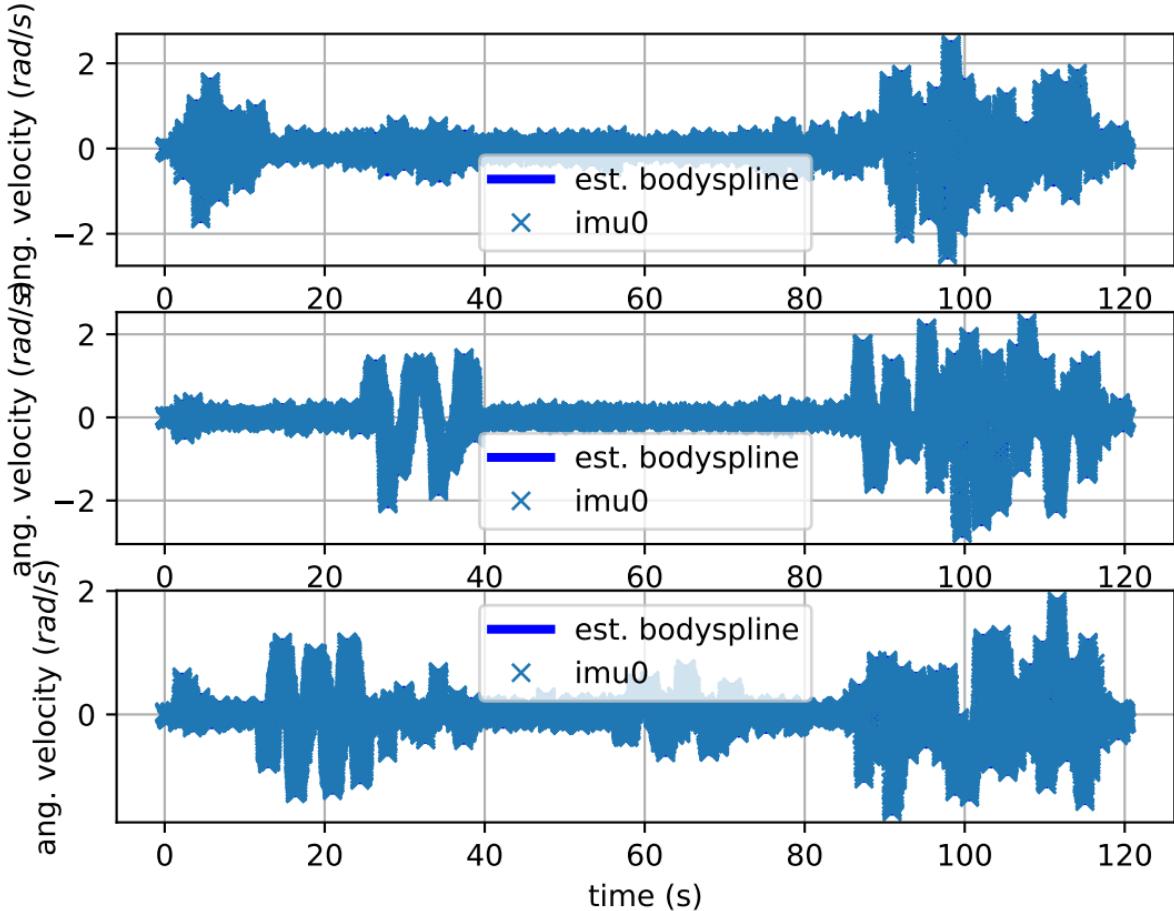
imu0: acceleration error



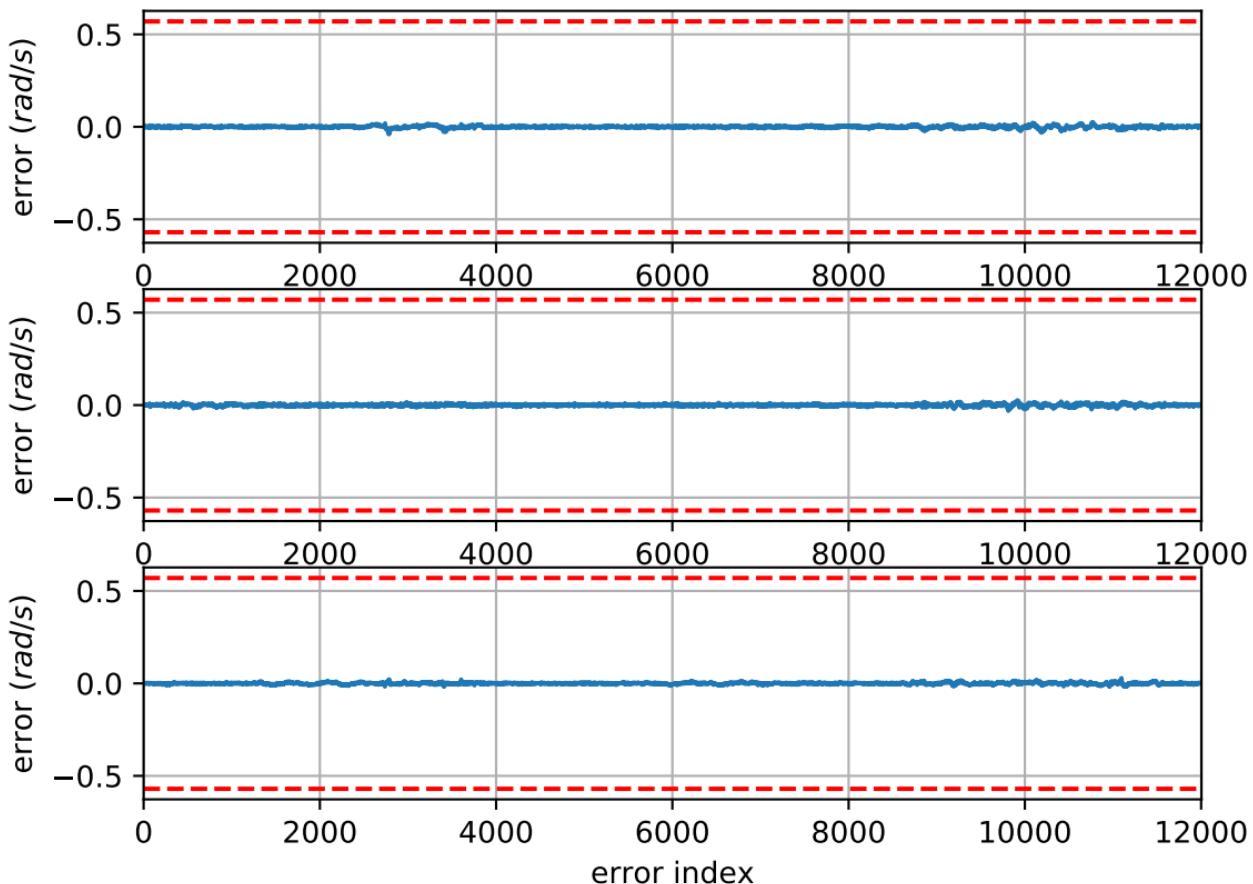
imu0: estimated accelerometer bias (imu frame)



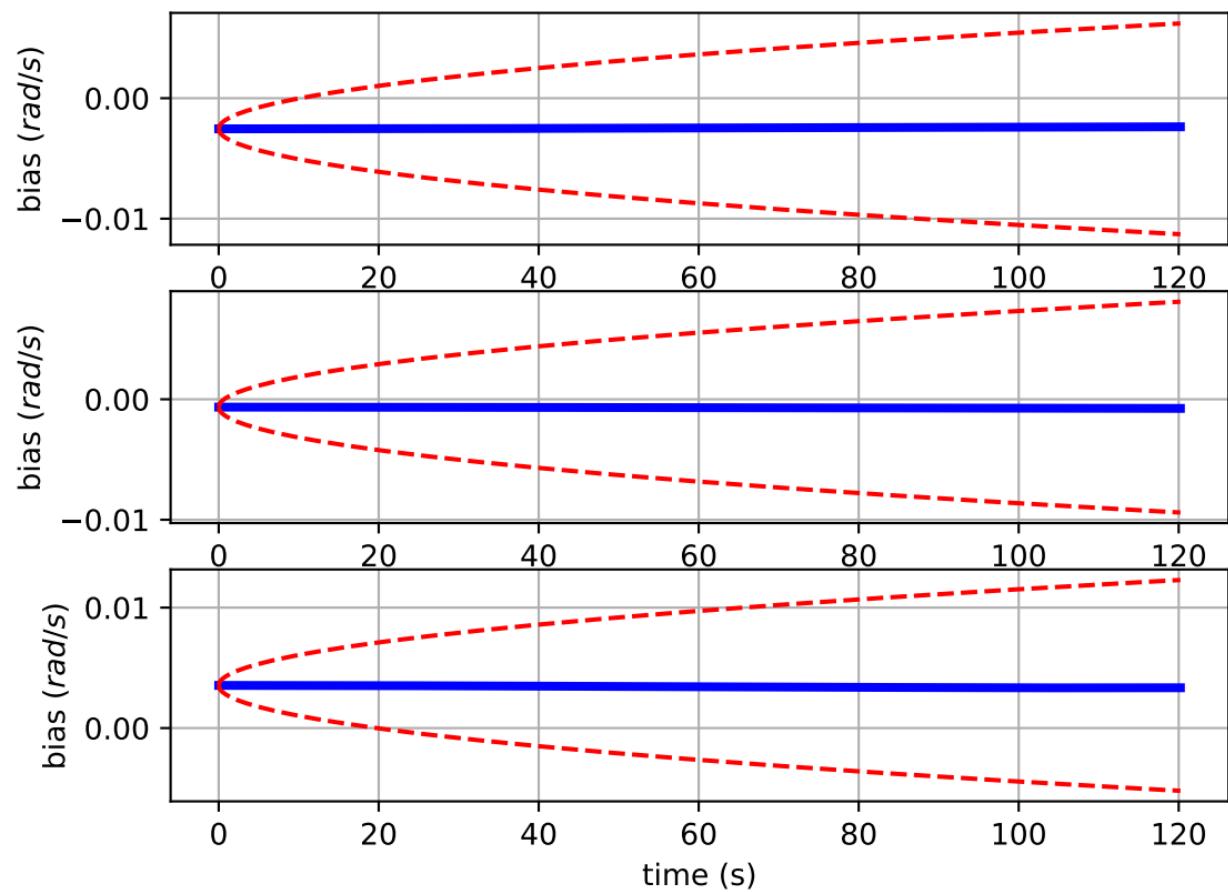
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

