

Calibration results

Normalized Residuals

Reprojection error (cam0): mean 0.32158912191259015, median 0.27373327784667656, std: 0.21911423

Gyroscope error (imu0): mean 0.5118538296639479, median 0.2775234702846455, std: 0.6360911072

Accelerometer error (imu0): mean 2.305918532980199, median 1.8382402920201115, std: 1.6764707888

Residuals

Reprojection error (cam0) [px]: mean 0.32158912191259015, median 0.27373327784667656, std: 0.2191

Gyroscope error (imu0) [rad/s]: mean 0.07919144668825191, median 0.04293703363754112, std: 0.0984

Accelerometer error (imu0) [m/s^2]: mean 0.06032963336675929, median 0.04809379050969713, std: 0.0

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[-0.99996757  0.00468451  0.00655109 -0.00111251]
 [-0.00432363 -0.99852855  0.05405585  0.00949196]
 [ 0.00679468  0.05402577  0.99851642  0.00530418]
 [ 0.          0.          0.          1.        ]]
```

T_ic: (cam0 to imu0):

```
[[-0.99996757 -0.00432363  0.00679468 -0.00110748]
 [ 0.00468451 -0.99852855  0.05402577  0.00919664]
 [ 0.00655109  0.05405585  0.99851642 -0.00580211]
 [ 0.          0.          0.          1.        ]]
```

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

-0.007688637695939736

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

```
[ 0.11142954 -9.80174308 -0.28607517]
```

Calibration configuration

Camera model: pinhole
Focal length: [381.50091715225676, 380.6841806683357]
Principal point: [321.71880735049814, 239.39601119612195]
Distortion model: radtan
Distortion coefficients: [-0.002546507979782821, -0.0019901595883390177, 0.0013933664140284017, -0.00019901595883390177, 0.00013933664140284017]
Type: aprilgrid
Tags:
Rows: 6
Cols: 6
Size: 0.021 [m]
Spacing 0.005999994000000001 [m]

IMU configuration

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IMU0:

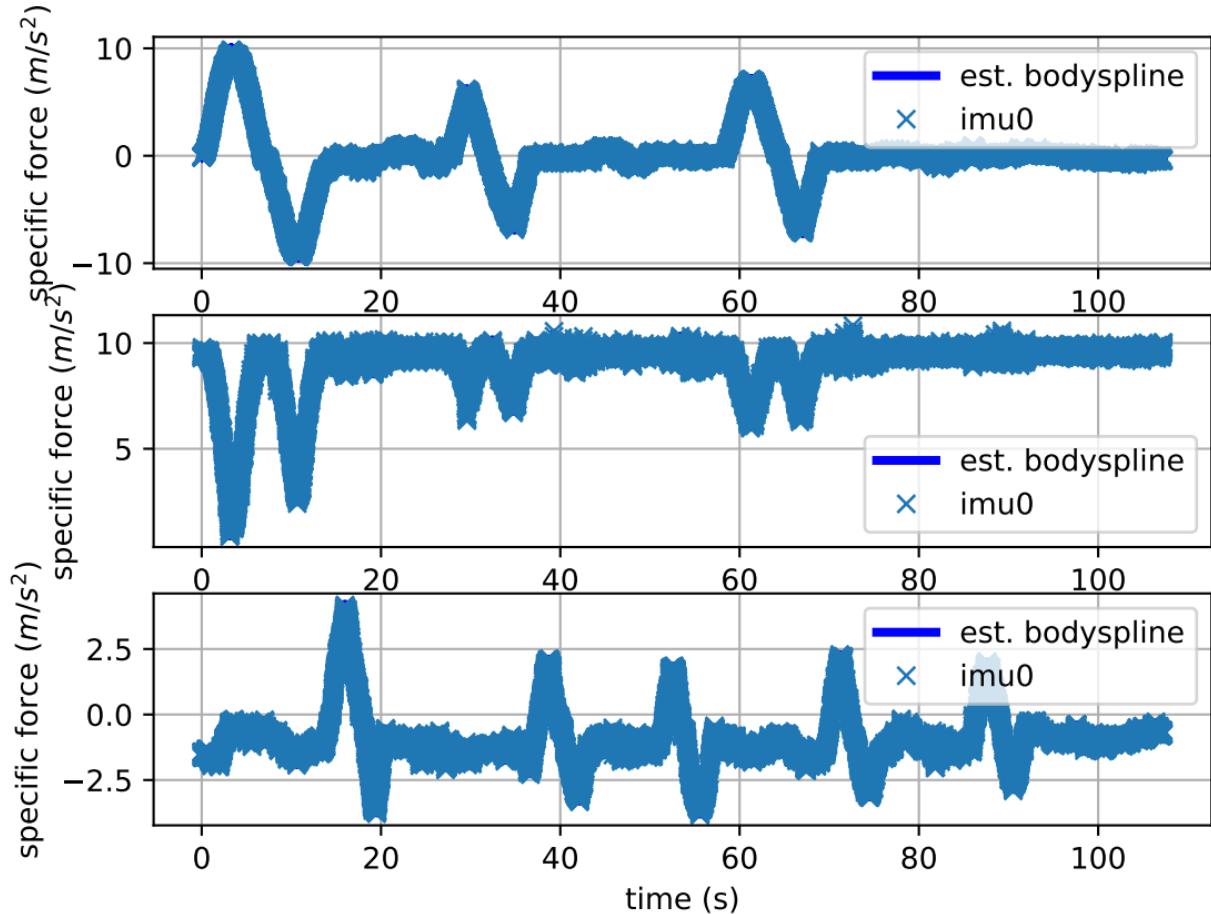
Model: calibrated
Update rate: 200.0
Accelerometer:
Noise density: 0.00185
Noise density (discrete): 0.02616295090390226
Random walk: 2.548e-05

Gyroscope:
Noise density: 0.01094
Noise density (discrete): 0.1547149637236166
Random walk: 0.0005897

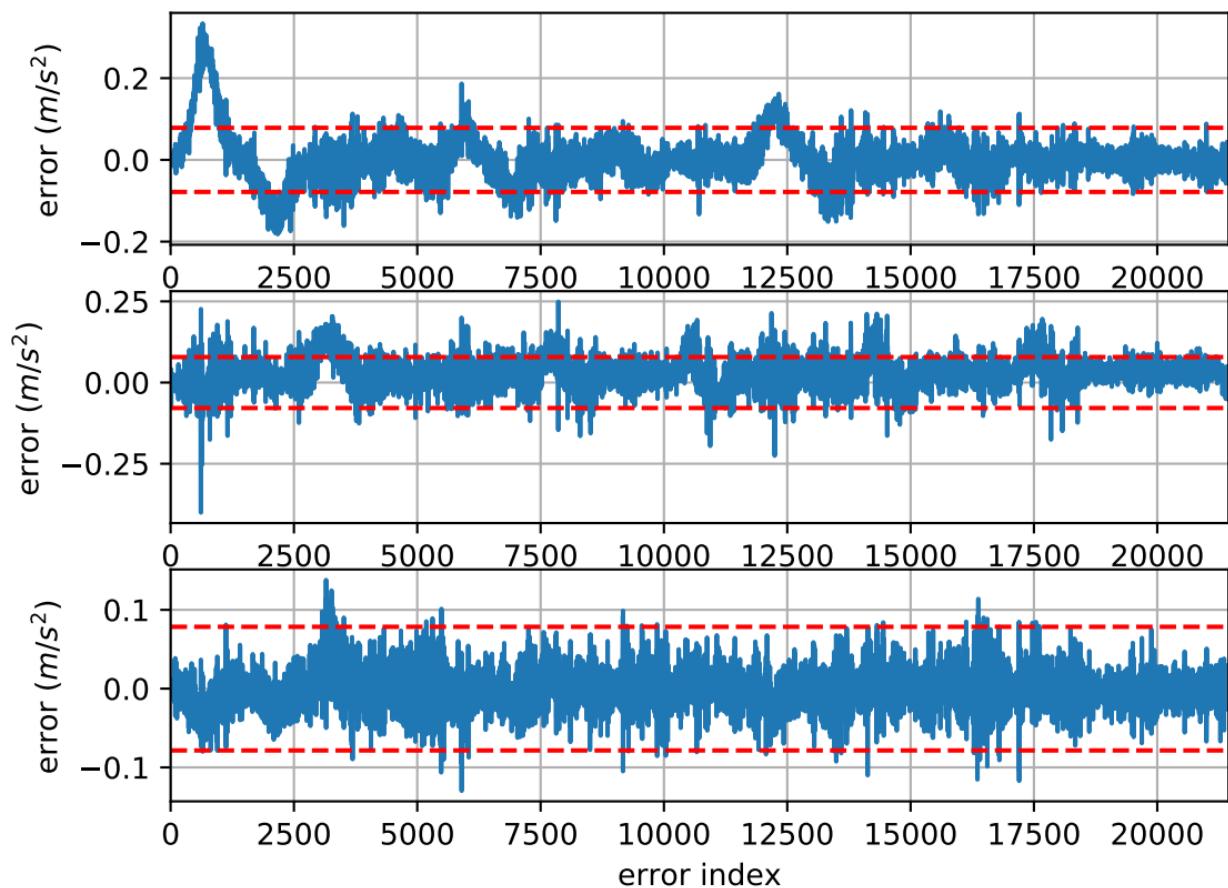
T_i_b
[[1. 0. 0.
[0. 1. 0.
[0. 0. 1.
[0. 0. 0. 1.]

time offset with respect to IMU0: 0.0 [s]

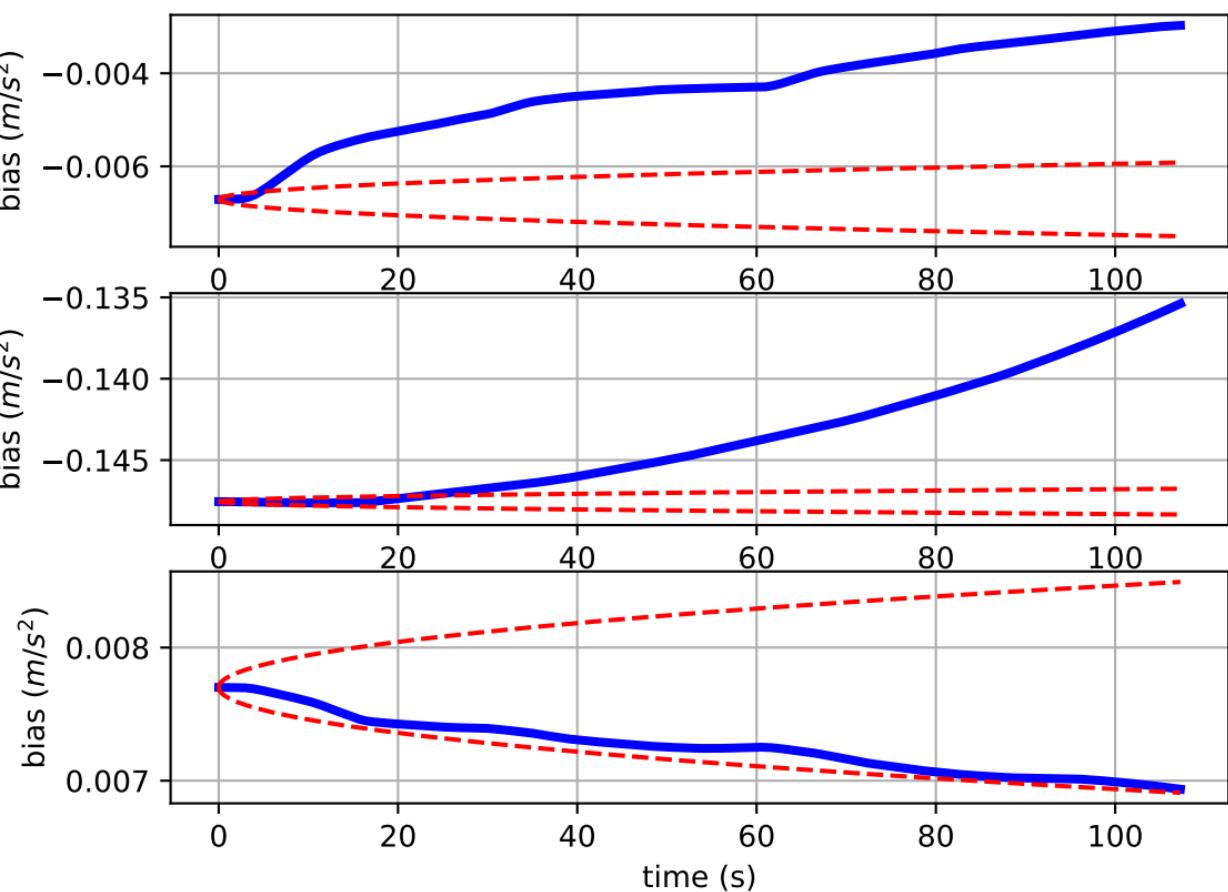
Comparison of predicted and measured specific force (imu0 frame)



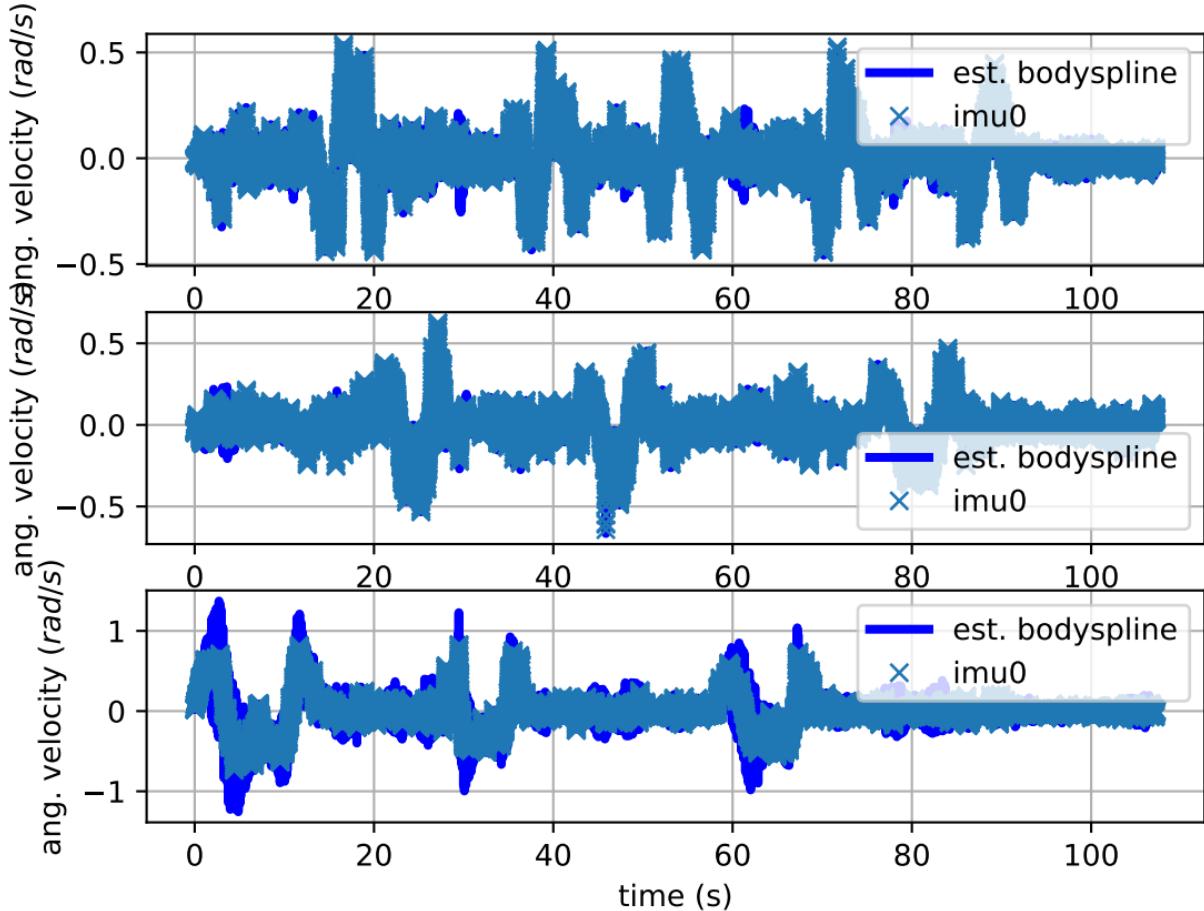
imu0: acceleration error



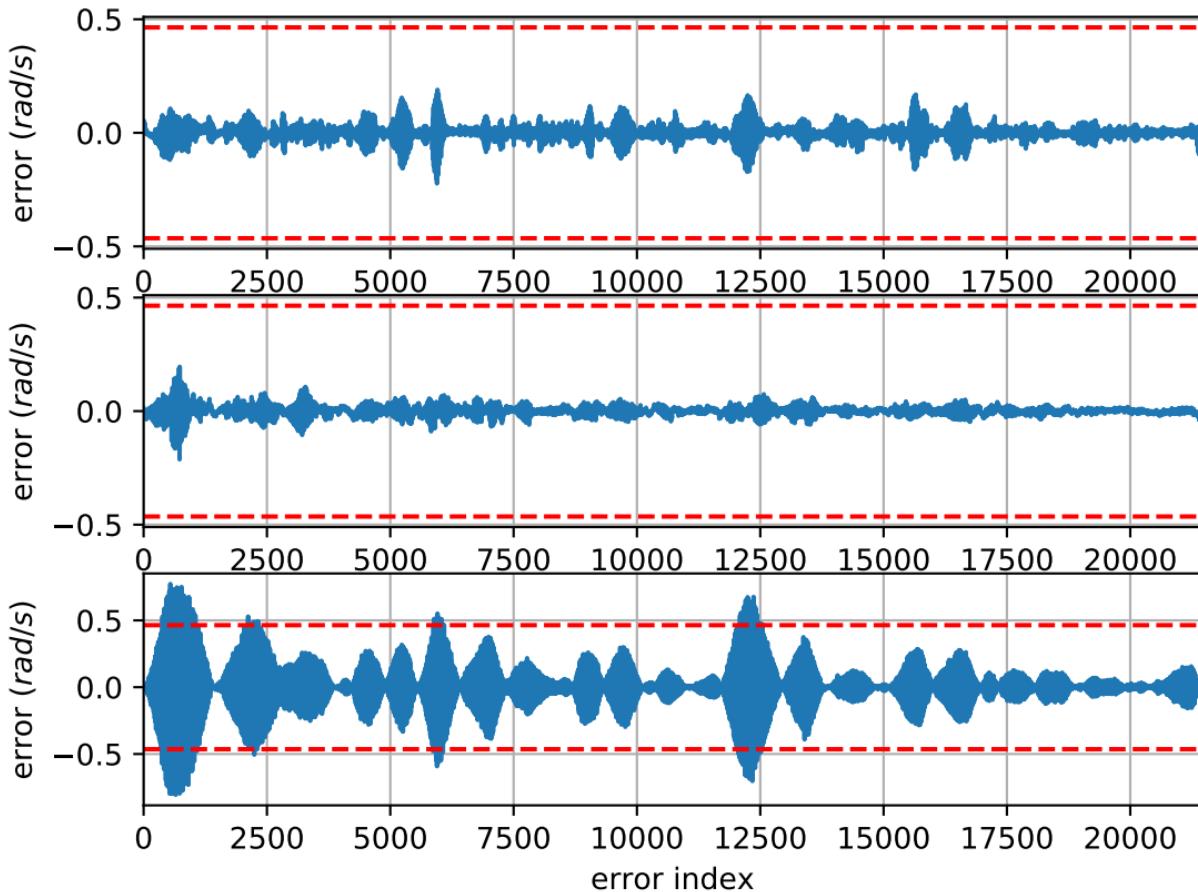
imu0: estimated accelerometer bias (imu frame)



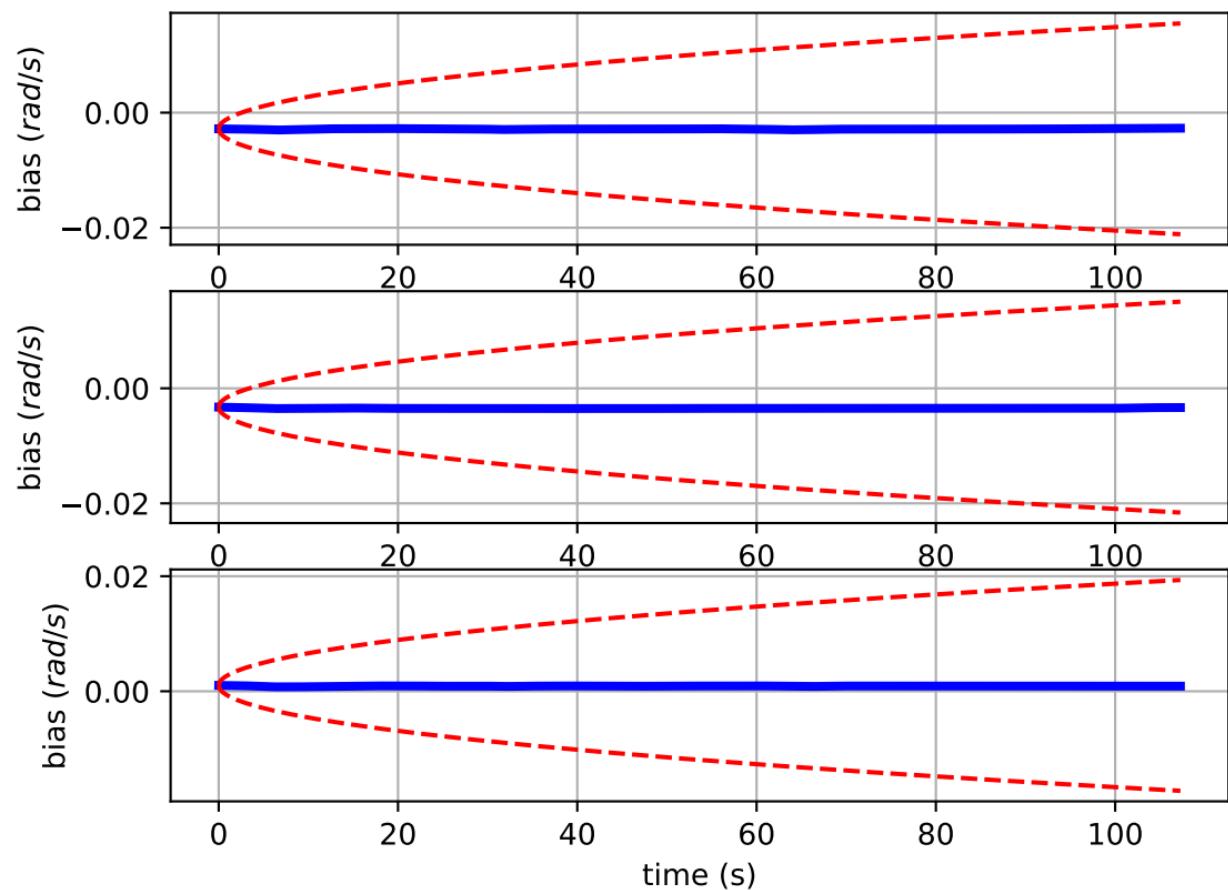
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

