

Calibration results

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Normalized Residuals

Reprojection error (cam0): mean 0.0891580321126, median 0.0834872426725, std: 0.0467720269586
Gyroscope error (imu0): mean 0.809950063093, median 0.783835316361, std: 0.339343528018
Accelerometer error (imu0): mean 17.8545667519, median 17.9226705625, std: 1.1194034636

Residuals

Reprojection error (cam0) [px]: mean 0.0891580321126, median 0.0834872426725, std: 0.0467720269586
Gyroscope error (imu0) [rad/s]: mean 0.000444259820905, median 0.000429935811025, std: 0.00018613
Accelerometer error (imu0) [m/s²]: mean 1.01000681803, median 1.01385935134, std: 0.0633230223995

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[-0.10004566 -0.99498284 0.00014477 0.05699523]
 [ 0.9949825  -0.10004574 -0.00081692 0.00225545]
 [ 0.00082731 0.00006232 0.99999966 -0.1027971 ]
 [ 0.         0.         0.         1.         ]]
```

T_ic: (cam0 to imu0):

```
[[-0.10004566 0.9949825 0.00082731 0.00354304]
 [-0.99498284 -0.10004574 0.00006232 0.05694133]
 [ 0.00014477 -0.00081692 0.99999966 0.10279066]
 [ 0.         0.         0.         1.         ]]
```

timeshift cam0 to imu0: [s] (t_imu = t_cam + shift)
0.003511059721943004

Gravity vector in target coords: [m/s²]
[-0.00508081 9.80651526 -0.02560276]

Calibration configuration

Camera model: pinhole
Focal length: [585.7561, 585.7561]
Principal point: [320.5, 240.5]
Distortion model: radtan
Distortion coefficients: [0.0, 0.0, 0.0, 0.0]
Type: checkerboard
Rows
 Count: 6
 Distance: 0.06 [m]
Cols
 Count: 7
 Distance: 0.06 [m]

IMU configuration

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IMU0:

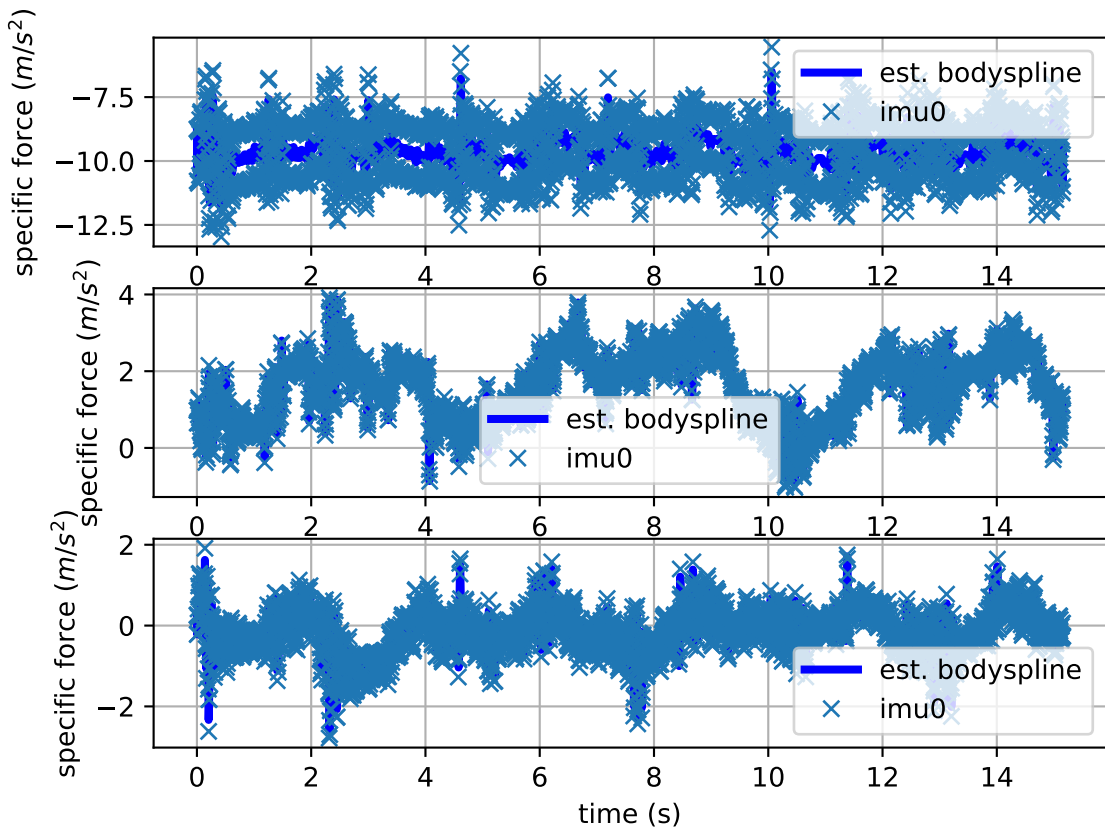
Model: calibrated
Update rate: 200.0
Accelerometer:
 Noise density: 0.004
 Noise density (discrete): 0.0565685424949
 Random walk: 0.006
Gyroscope:
 Noise density: 3.8785e-05
 Noise density (discrete): 0.000548502730166
 Random walk: 0.0003394

T_i b

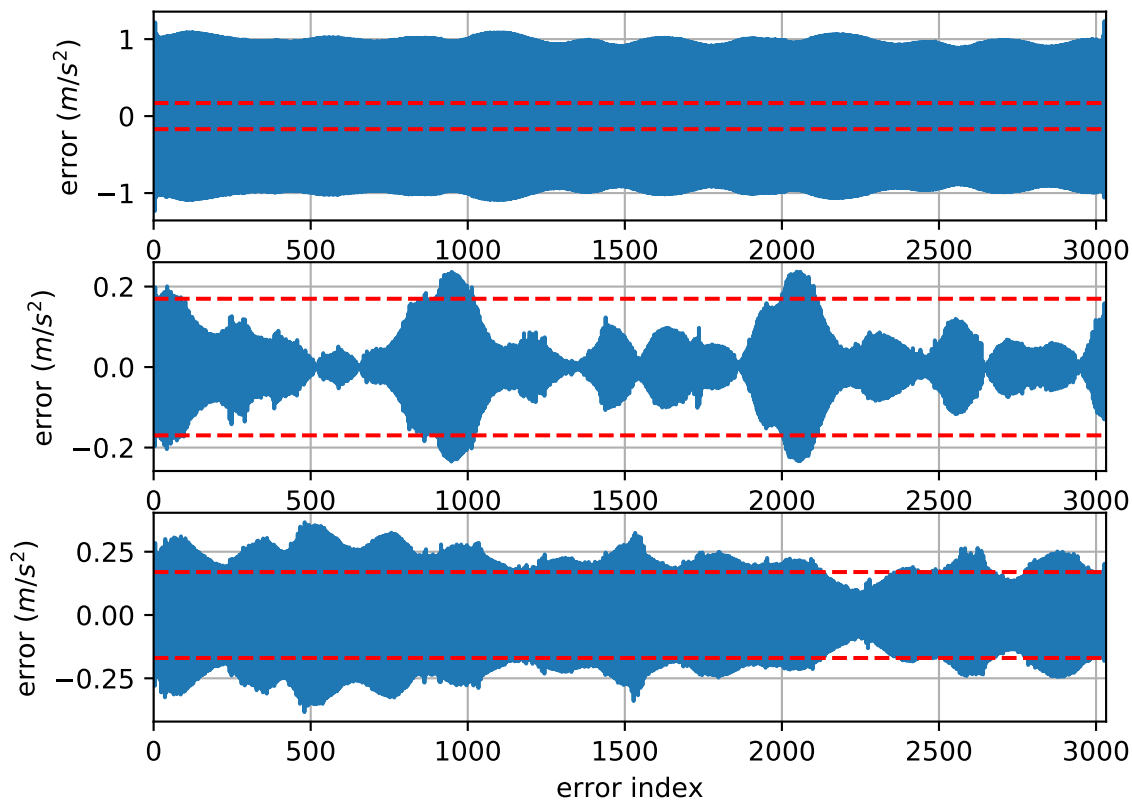
[[1. 0. 0. 0.]
[0. 1. 0. 0.]
[0. 0. 1. 0.]
[0. 0. 0. 1.]]

time offset with respect to IMU0: 0.0 [s]

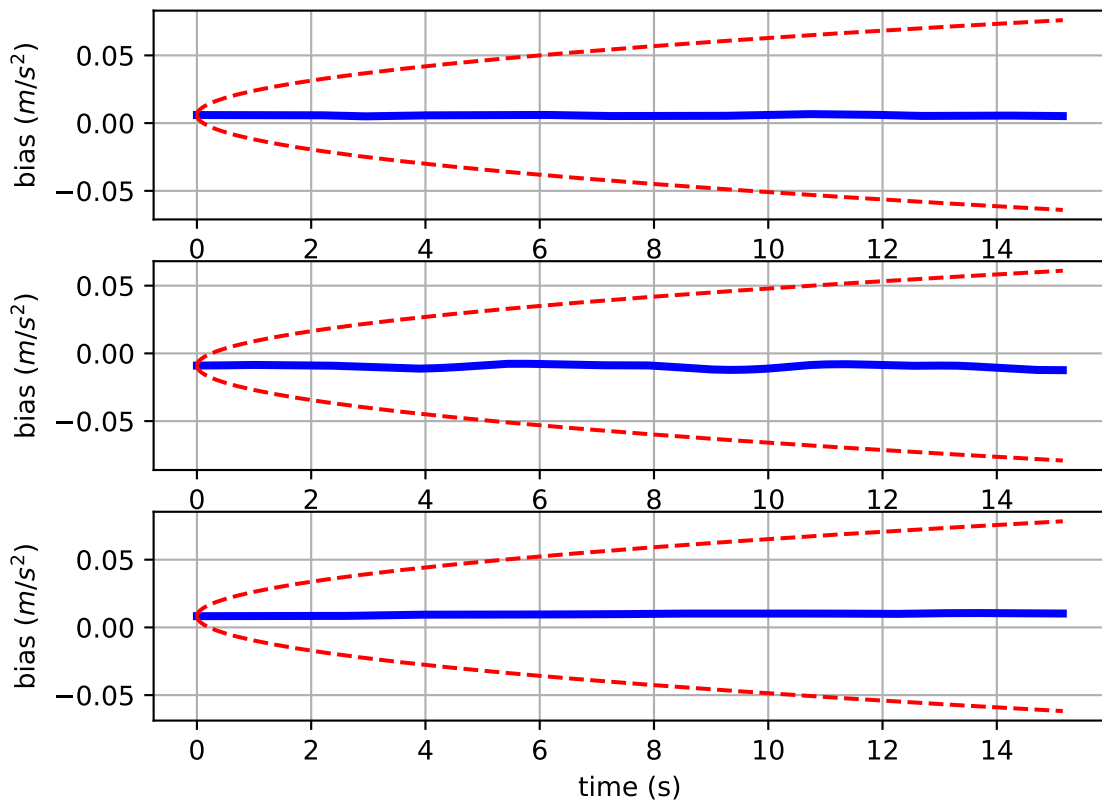
Comparison of predicted and measured specific force (imu0 frame)



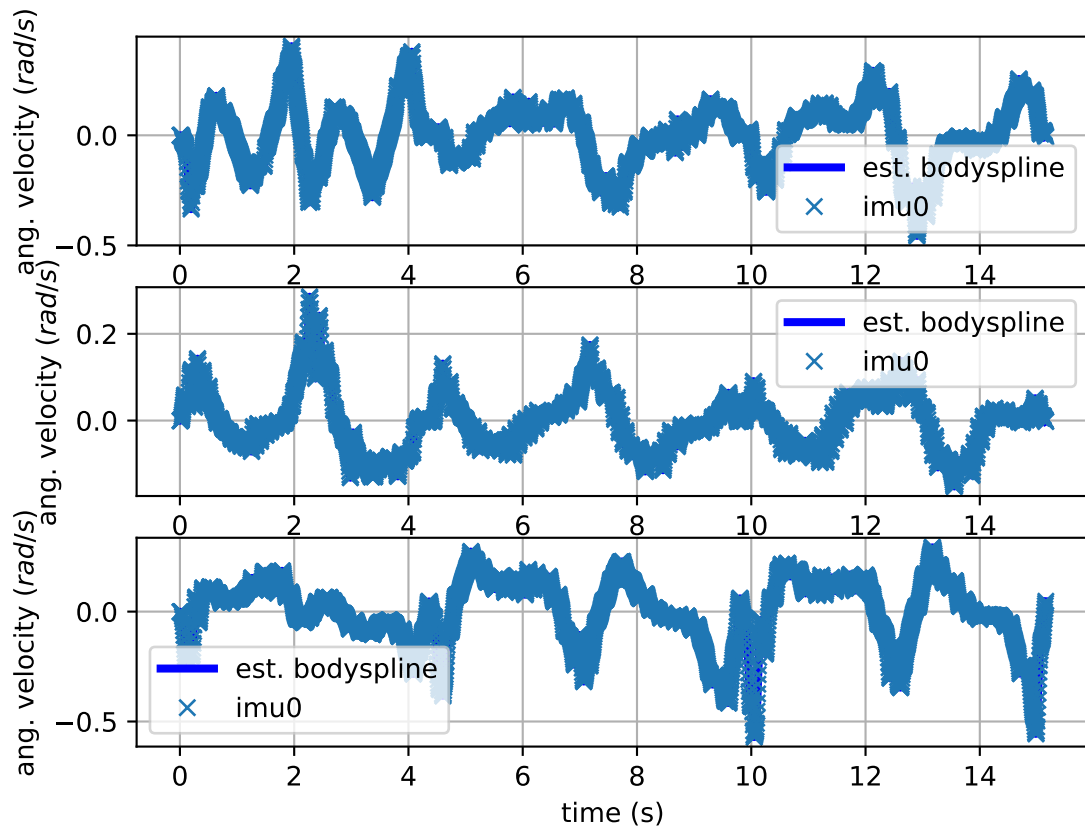
imu0: acceleration error



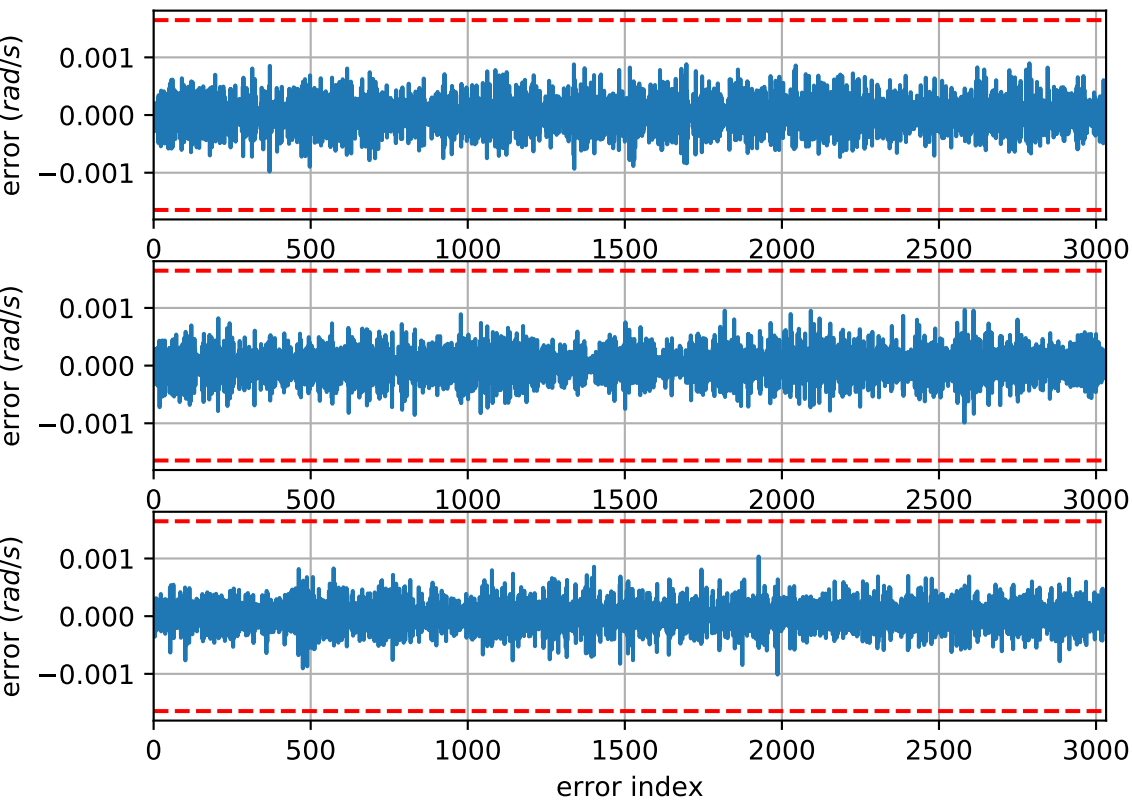
imu0: estimated accelerometer bias (imu frame)



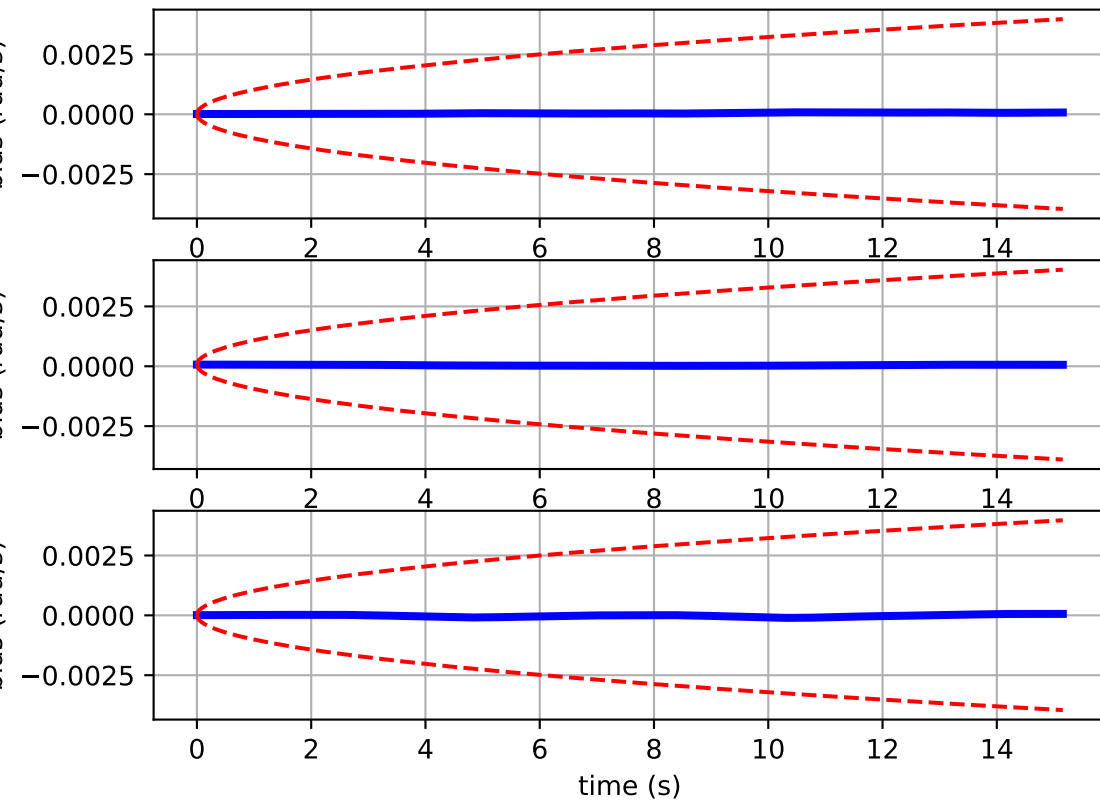
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

