

Calibration results

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Normalized Residuals

Reprojection error (cam0): mean 7.33363546018, median 3.96680332562, std: 14.7017619151
Gyroscope error (imu0): mean 13.7118143188, median 12.5203136396, std: 8.07229916762
Accelerometer error (imu0): mean 12.3963827158, median 10.0262551699, std: 8.81545115088

Residuals

Reprojection error (cam0) [px]: mean 7.33363546018, median 3.96680332562, std: 14.7017619151
Gyroscope error (imu0) [rad/s]: mean 0.0658145262303, median 0.0600955126204, std: 0.038745751142
Accelerometer error (imu0) [m/s²]: mean 0.701245302439, median 0.567170641642, std: 0.49867722304

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[-0.96031331 0.21439496 0.17841844 -0.09281305]
 [-0.1581532 0.10836195 -0.98145059 -0.2160275 ]
 [-0.22975183 -0.97071751 -0.07015418 -0.48737467]
 [ 0.         0.         0.         1.         ]]
```

T_ic: (cam0 to imu0):

```
[[-0.96031331 -0.1581532 -0.22975183 -0.23527027]
 [ 0.21439496 0.10836195 -0.97071751 -0.42979531]
 [ 0.17841844 -0.98145059 -0.07015418 -0.22965213]
 [ 0.         0.         0.         1.         ]]
```

timeshift cam0 to imu0: [s] (t_imu = t_cam + shift)
1.4233752595317872

Gravity vector in target coords: [m/s²]
[-9.46858202 1.81287087 1.79662924]

Calibration configuration

Camera model: pinhole
Focal length: [556.7964796694548, 556.9975798250968]
Principal point: [310.99526457802625, 238.84661477849423]
Distortion model: radtan
Distortion coefficients: [0.035790581919920295, -0.20991635744262138, -0.0011931133308055674, -0.0011931133308055674, -0.0011931133308055674, -0.0011931133308055674]
Type: checkerboard
Rows
 Count: 6
 Distance: 0.07 [m]
Cols
 Count: 7
 Distance: 0.07 [m]

IMU configuration

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IMU0:

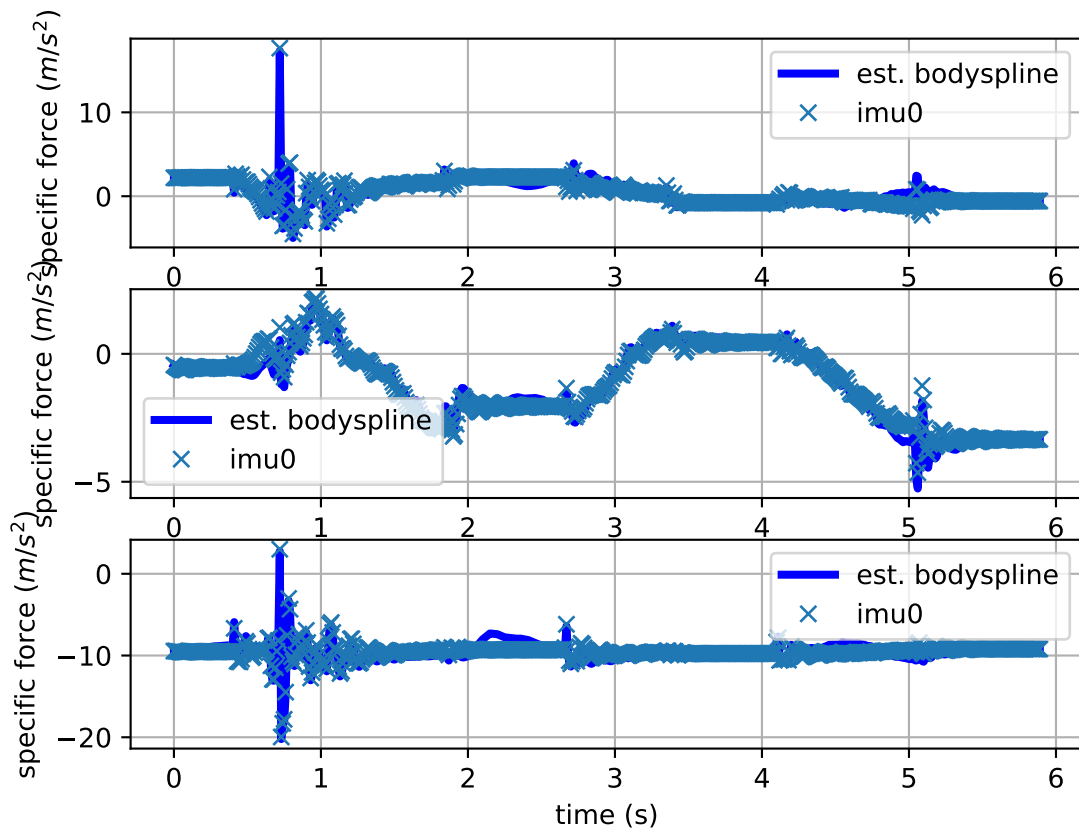
Model: calibrated
Update rate: 200.0
Accelerometer:
 Noise density: 0.004
 Noise density (discrete): 0.0565685424949
 Random walk: 0.006
Gyroscope:
 Noise density: 0.0003394
 Noise density (discrete): 0.00479984083069
 Random walk: 3.8785e-05

T_i_b

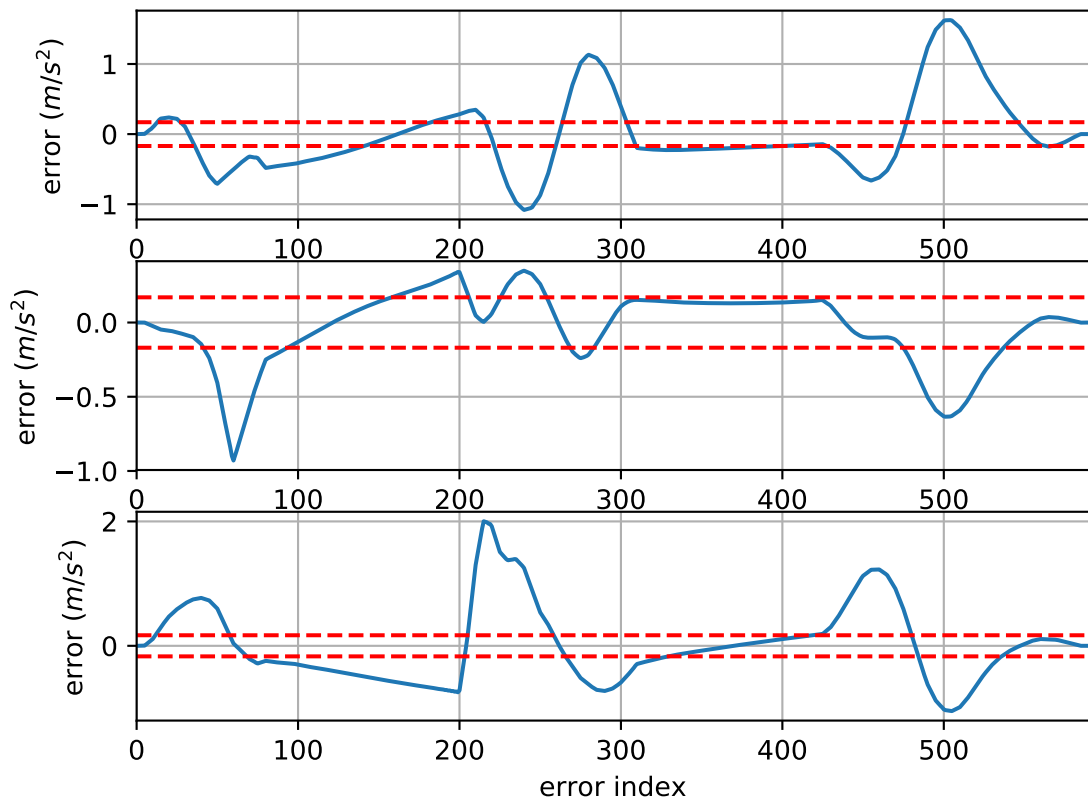
[[1. 0. 0. 0.]
[0. 1. 0. 0.]
[0. 0. 1. 0.]
[0. 0. 0. 1.]]

time offset with respect to IMU0: 0.0 [s]

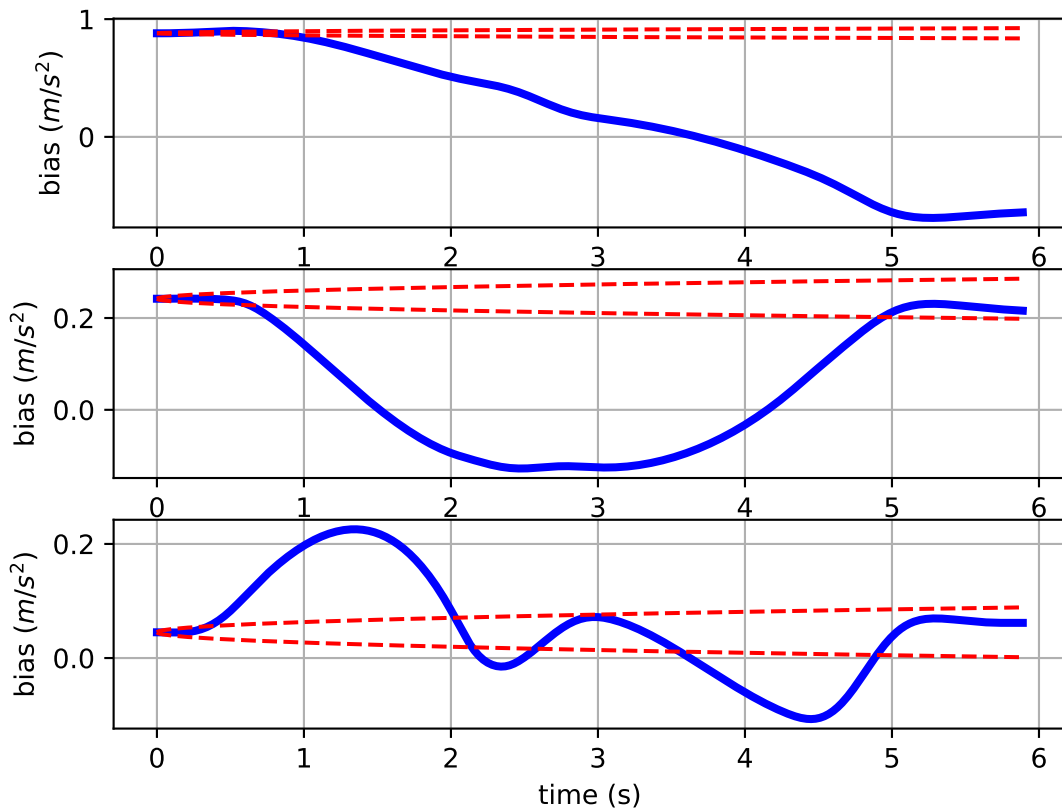
Comparison of predicted and measured specific force (imu0 frame)



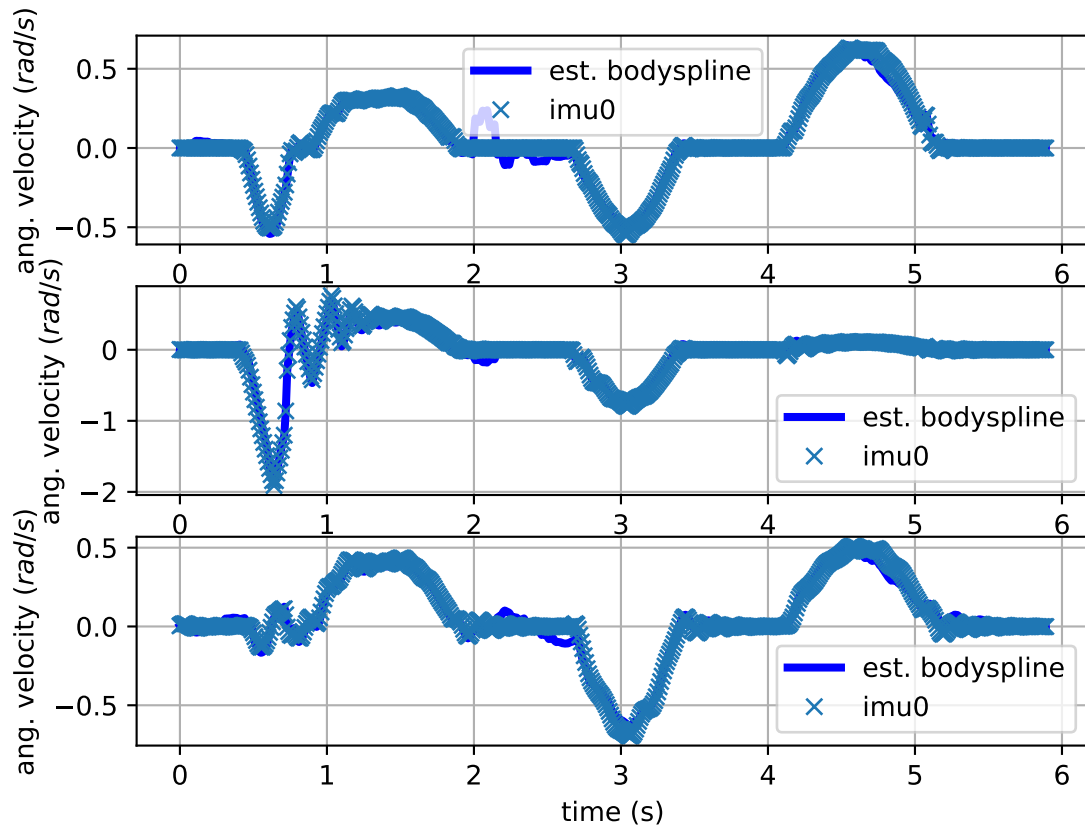
imu0: acceleration error



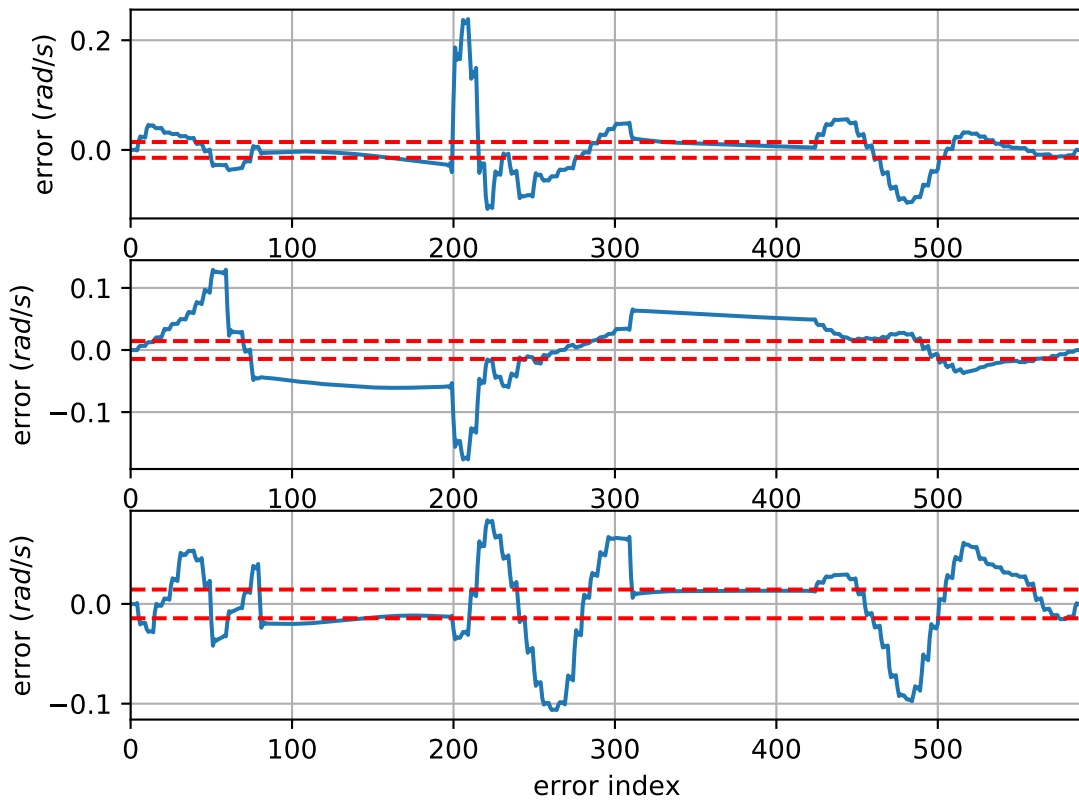
imu0: estimated accelerometer bias (imu frame)



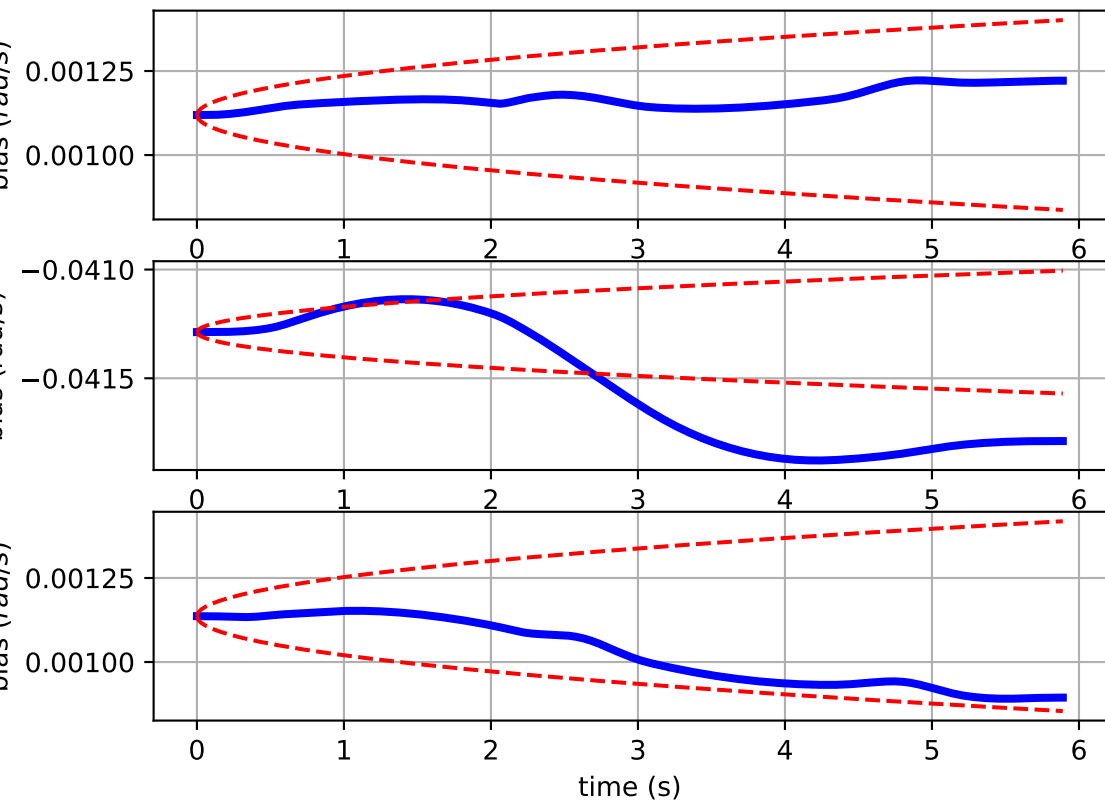
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

