

Calibration results

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Normalized Residuals

Reprojection error (cam0): mean 0.403019191241, median 0.389609248569, std: 0.211171405563
Gyroscope error (imu0): mean 0.143747180539, median 0.0558393629627, std: 0.218978209364
Accelerometer error (imu0): mean 0.156155820845, median 0.0593867812984, std: 0.246429676105

Residuals

Reprojection error (cam0) [px]: mean 0.403019191241, median 0.389609248569, std: 0.211171405563
Gyroscope error (imu0) [rad/s]: mean 0.000689963586447, median 0.000268020054308, std: 0.00105106
Accelerometer error (imu0) [m/s²]: mean 0.00883350718728, median 0.00335942366152, std: 0.0139401

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[ 0.00105701  0.99998564 -0.00525454 -0.08480104]
 [ 0.00055978  0.00525395  0.99998604 -0.07960884]
 [ 0.99999928 -0.00105993 -0.00055422  0.00893843]
 [ 0.         0.         0.         1.         ]]
```

T_ic: (cam0 to imu0):

```
[[ 0.00105701  0.00055978  0.99999928 -0.00880422]
 [ 0.99998564  0.00525395 -0.00105993  0.08522755]
 [-0.00525454  0.99998604 -0.00055422  0.07916709]
 [ 0.         0.         0.         1.         ]]
```

timeshift cam0 to imu0: [s] (t_imu = t_cam + shift)
0.0

Gravity vector in target coords: [m/s²]
[9.80646909 -0.01960278 0.03467997]

Calibration configuration

Camera model: pinhole
Focal length: [597.4178930587029, 598.6906574366154]
Principal point: [326.08543254160844, 235.62533219091245]
Distortion model: radtan
Distortion coefficients: [0.13654222667925014, -0.2879406629580801, -0.0019104594441876172, 0.0010
Type: checkerboard
Rows
 Count: 6
 Distance: 0.07 [m]
Cols
 Count: 7
 Distance: 0.07 [m]

IMU configuration

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IMU0:

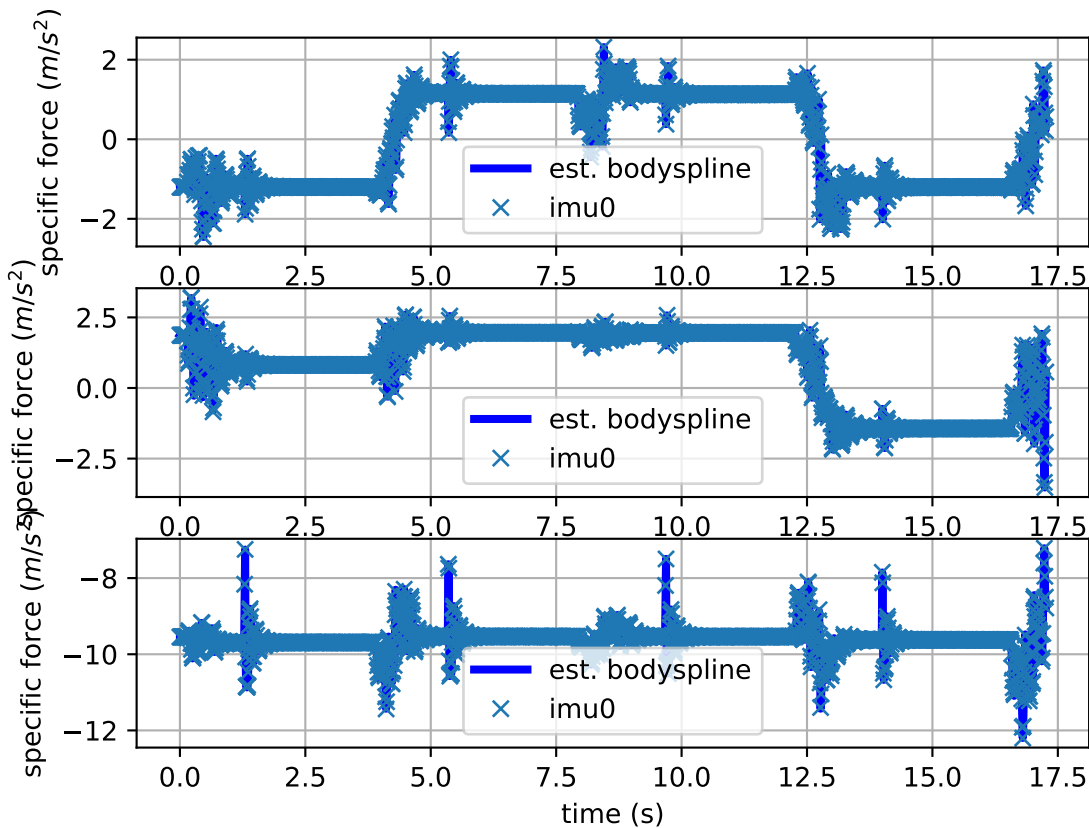
Model: calibrated
Update rate: 200.0
Accelerometer:
 Noise density: 0.004
 Noise density (discrete): 0.0565685424949
 Random walk: 0.006
Gyroscope:
 Noise density: 0.0003394
 Noise density (discrete): 0.00479984083069
 Random walk: 3.8785e-05

T_i_b

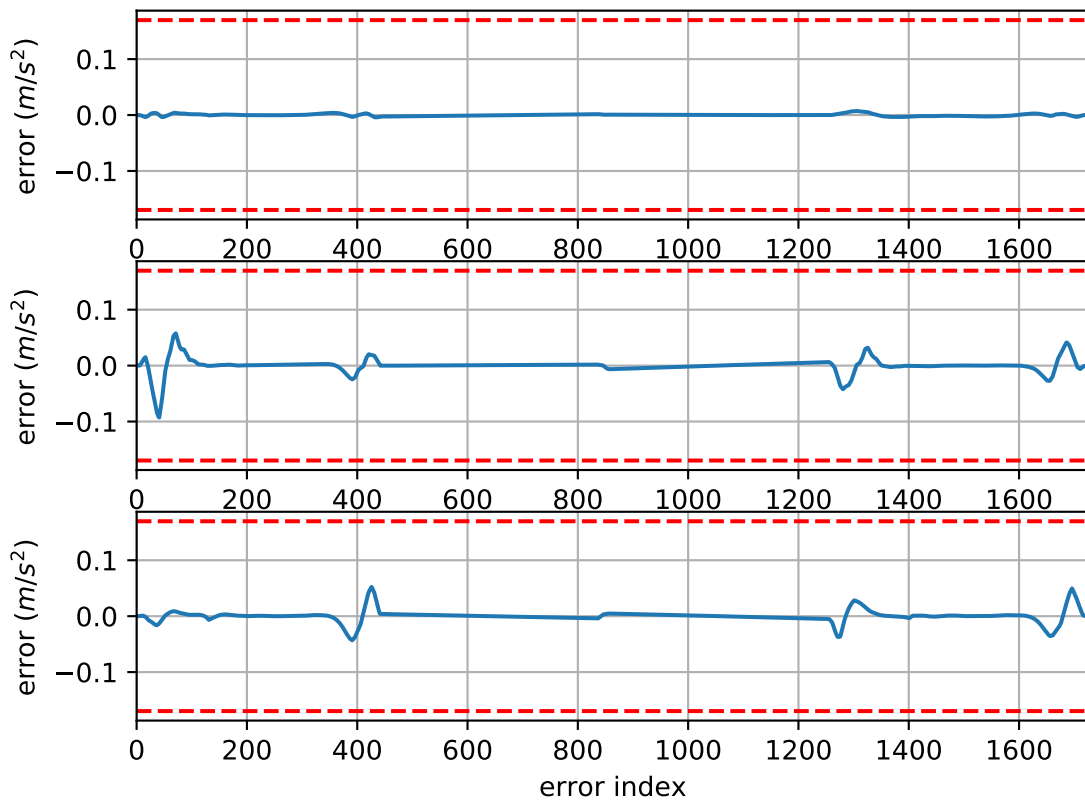
[[1. 0. 0. 0.]
[0. 1. 0. 0.]
[0. 0. 1. 0.]
[0. 0. 0. 1.]]

time offset with respect to IMU0: 0.0 [s]

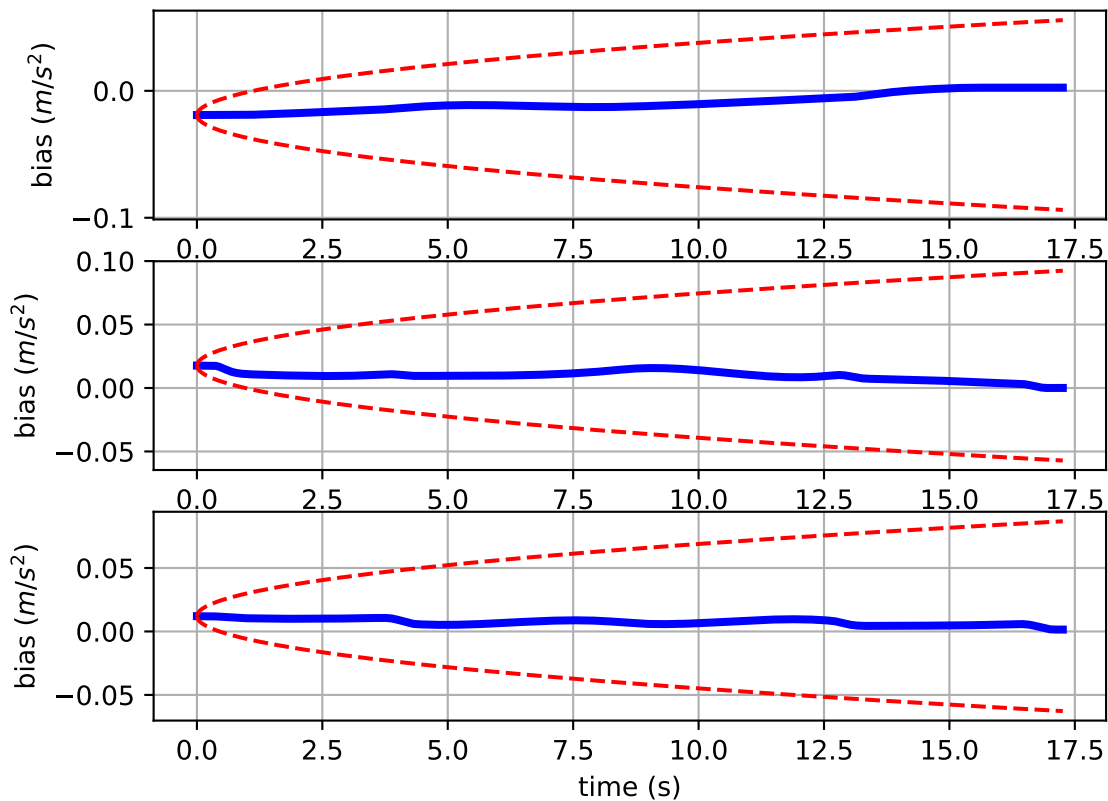
Comparison of predicted and measured specific force (imu0 frame)



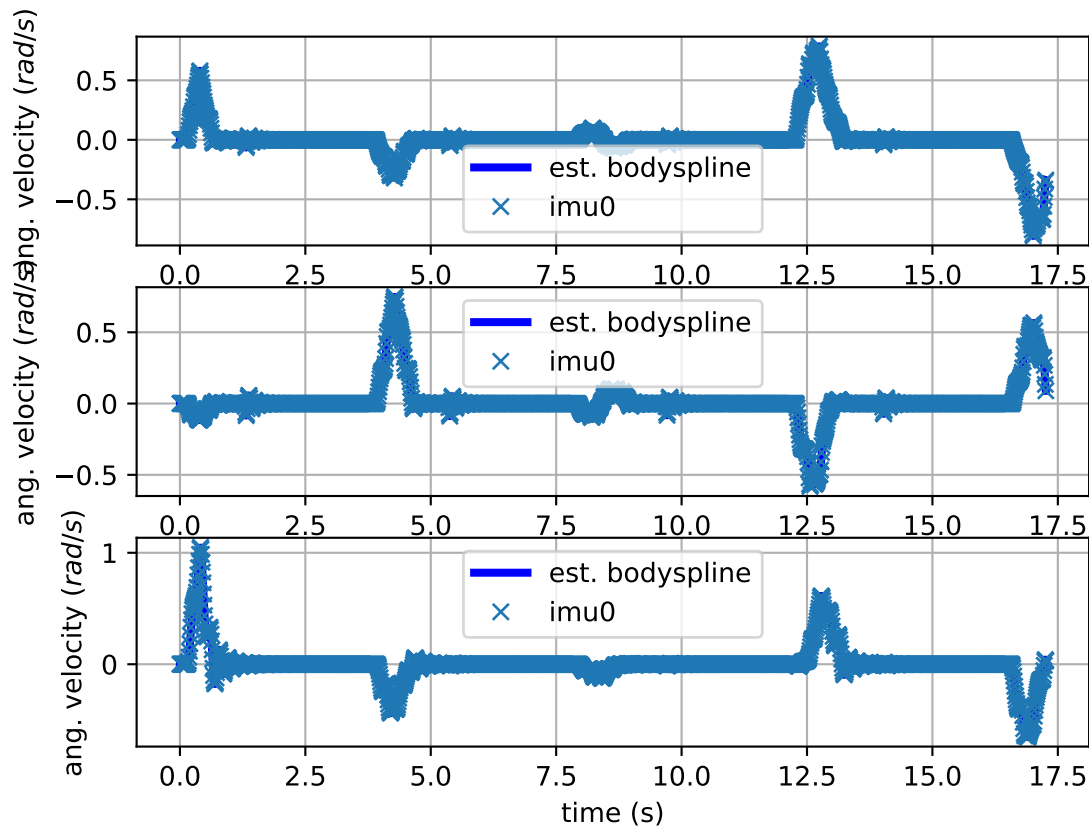
imu0: acceleration error



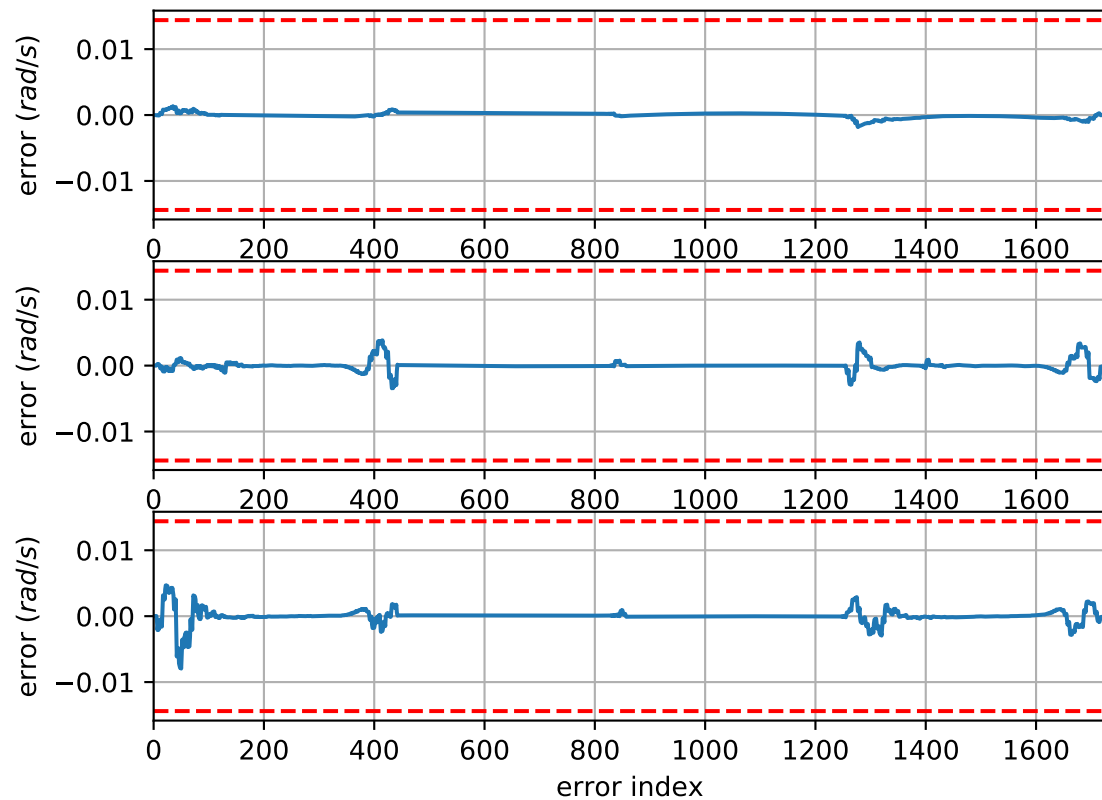
imu0: estimated accelerometer bias (imu frame)



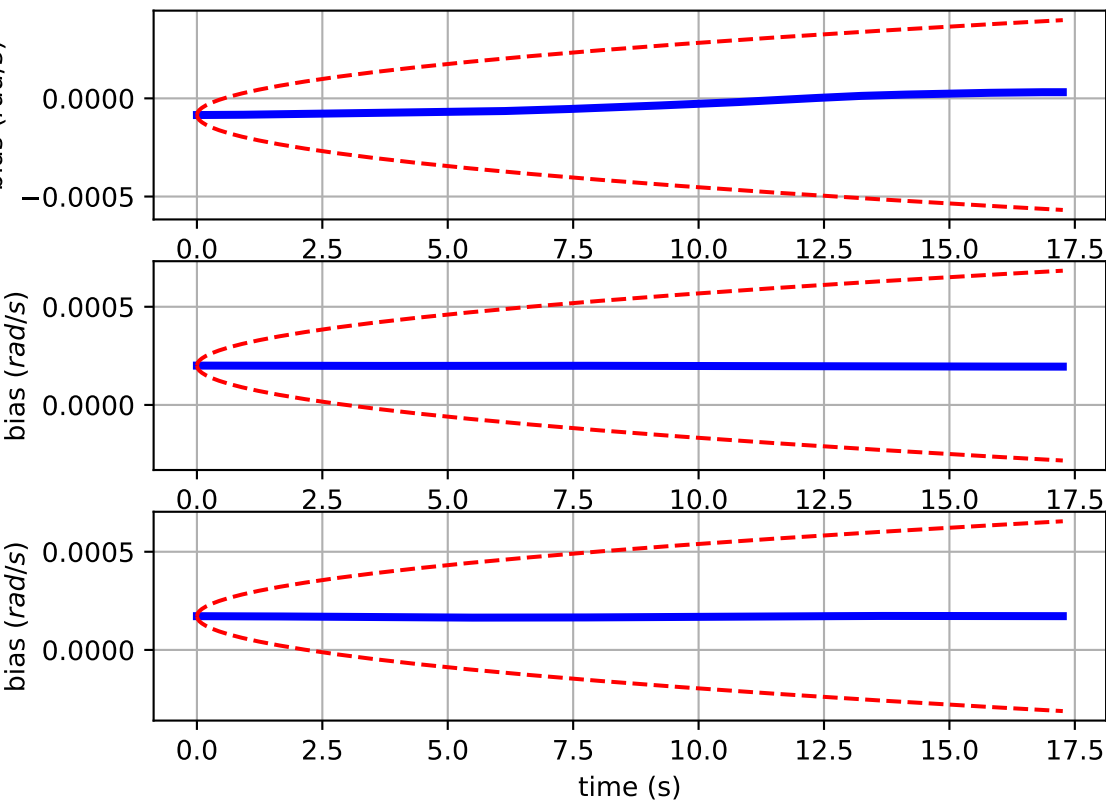
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

