

Calibration results

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Normalized Residuals

Reprojection error (cam0): mean 1.3597301283620729, median 0.9822386974348416, std: 1.2555106512862815
Gyroscope error (imu0): mean 5.981955298454289, median 4.776891311903368, std: 4.754156620228435
Accelerometer error (imu0): mean 0.6755161681561698, median 0.5301431814609289, std: 0.5478952705146959

Residuals

Reprojection error (cam0) [px]: mean 1.3597301283620729, median 0.9822386974348416, std: 1.2555106512862815
Gyroscope error (imu0) [rad/s]: mean 1.172219051628101, median 0.9360757016717904, std: 0.9316206301467433
Accelerometer error (imu0) [m/s²]: mean 1.6546699249827341, median 1.2985802851949866, std: 1.3420638452451623

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[ 0.05451905 -0.99831541 0.01984973 0.00184827]
 [ 0.6290915 0.01890406 -0.77710136 0.00777034]
 [ 0.77541703 0.05485412 0.62906237 0.03486991]
 [ 0. 0. 0. 1. ]]
```

T_ic: (cam0 to imu0):

```
[[ 0.05451905 0.6290915 0.77541703 -0.03202774]
 [-0.99831541 0.01890406 0.05485412 -0.0002145 ]
 [ 0.01984973 -0.77710136 0.62906237 -0.0159337 ]
 [ 0. 0. 0. 1. ]]
```

timeshift cam0 to imu0: [s] (t_imu = t_cam + shift)
-0.03522099226646433

Gravity vector in target coords: [m/s²]
[9.79808498 0.39456402 0.1013554]

Calibration configuration

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cam0

Camera model: pinhole

Focal length: [277.0839475135466, 368.83353527406734]

Principal point: [309.7544238276891, 228.20693144082884]

Distortion model: equidistant

Distortion coefficients: [0.046157353433677537, -0.042233733507246775, 0.05245768451793893, -0.022187016630998244]

Type: checkerboard

Rows

Count: 6

Distance: 0.02 [m]

Cols

Count: 9

Distance: 0.02 [m]

IMU configuration

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IMU0:

Model: calibrated

Update rate: 600.0

Accelerometer:

Noise density: 0.1

Noise density (discrete): 2.449489742783178

Random walk: 0.002

Gyroscope:

Noise density: 0.008

Noise density (discrete): 0.19595917942265423

Random walk: 4e-05

T_ib (imu0 to imu0)

[[1. 0. 0. 0.]

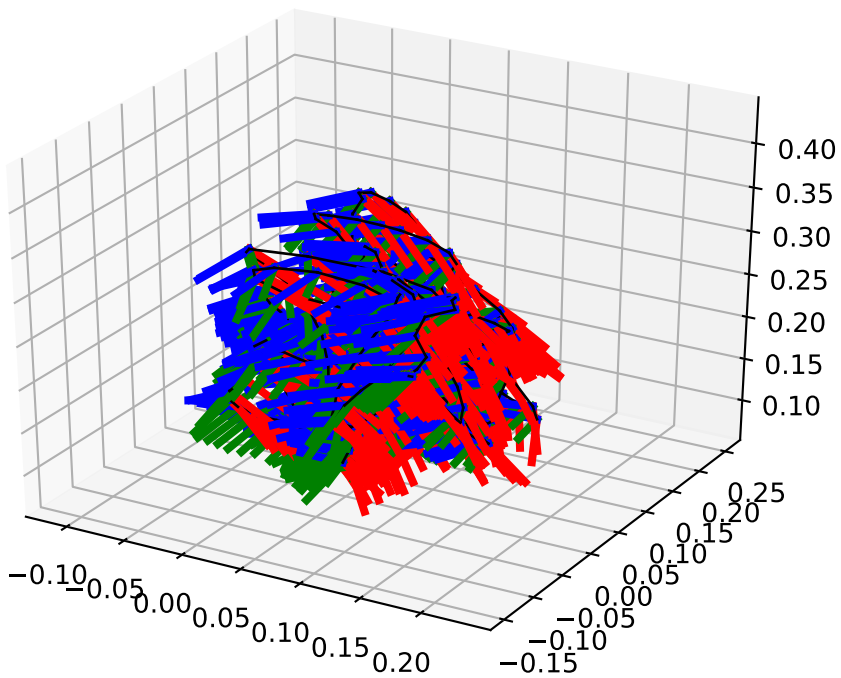
[0. 1. 0. 0.]

[0. 0. 1. 0.]

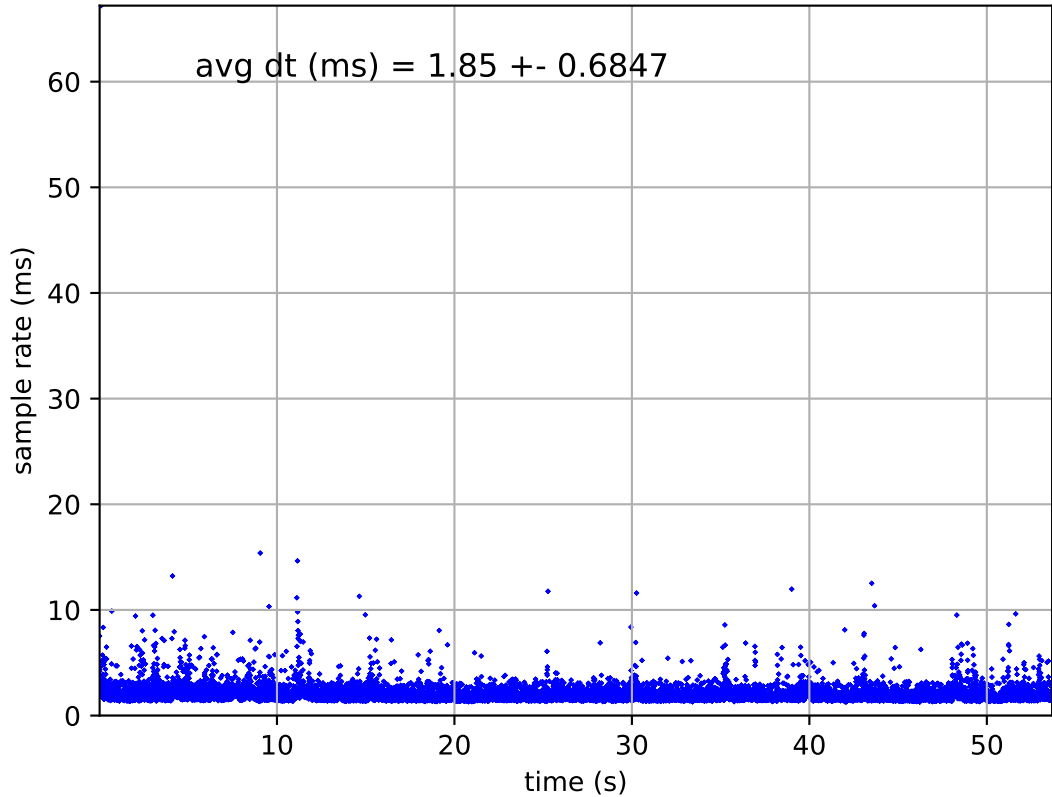
[0. 0. 0. 1.]]

time offset with respect to IMU0: 0.0 [s]

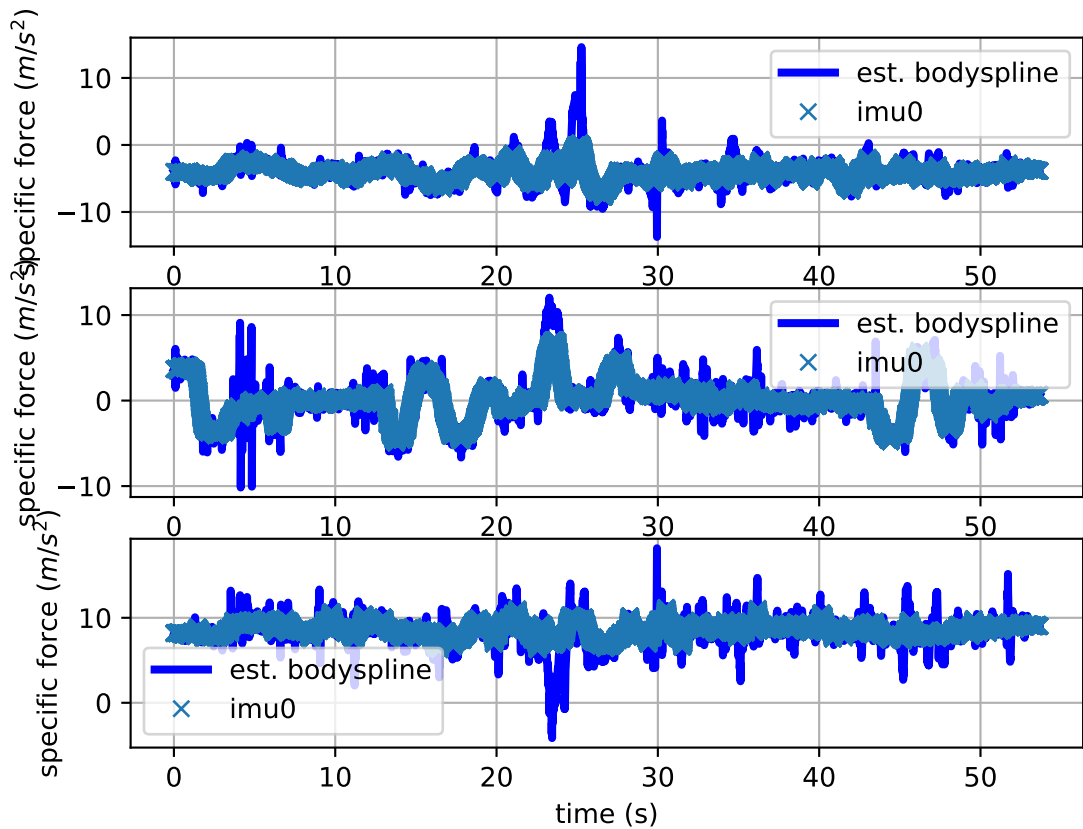
imu0: estimated poses



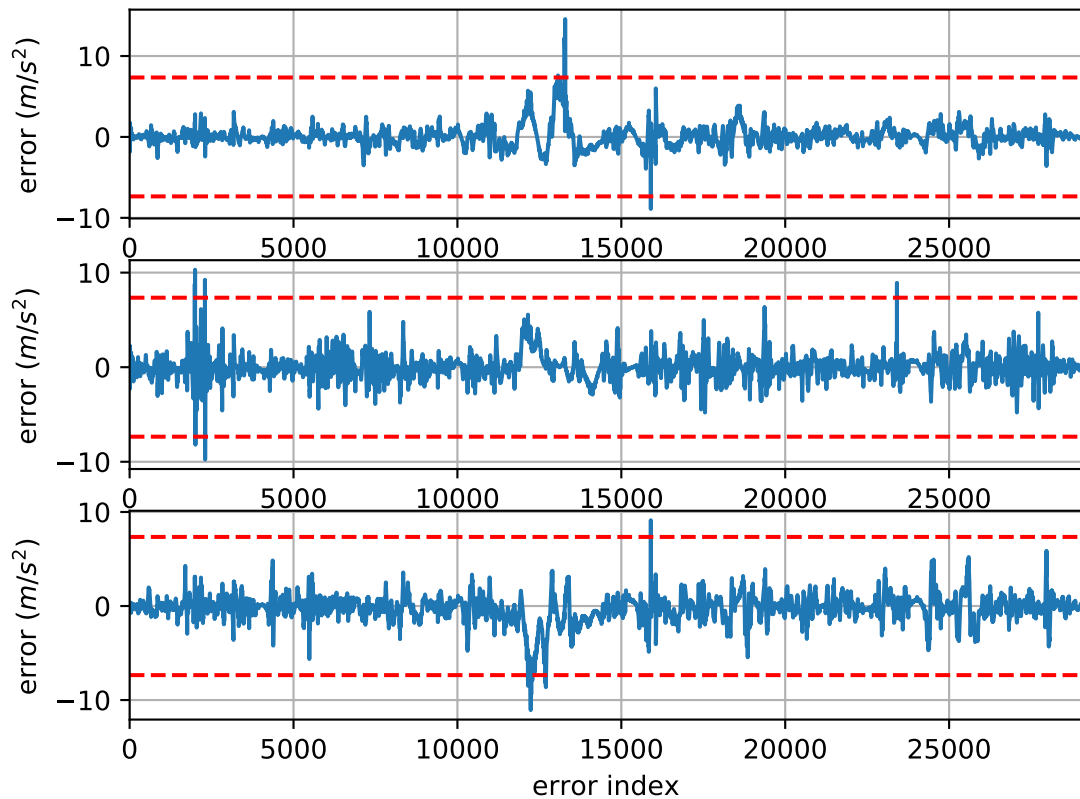
imu0: sample inertial rate



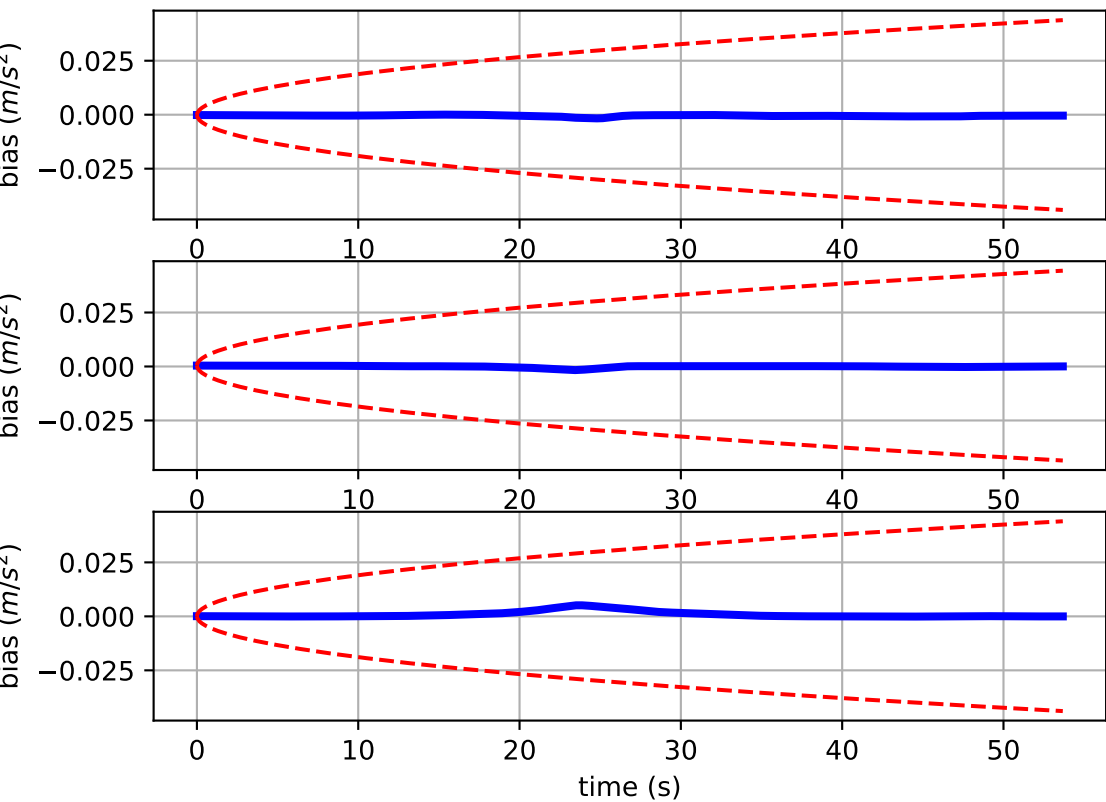
Comparison of predicted and measured specific force (imu0 frame)



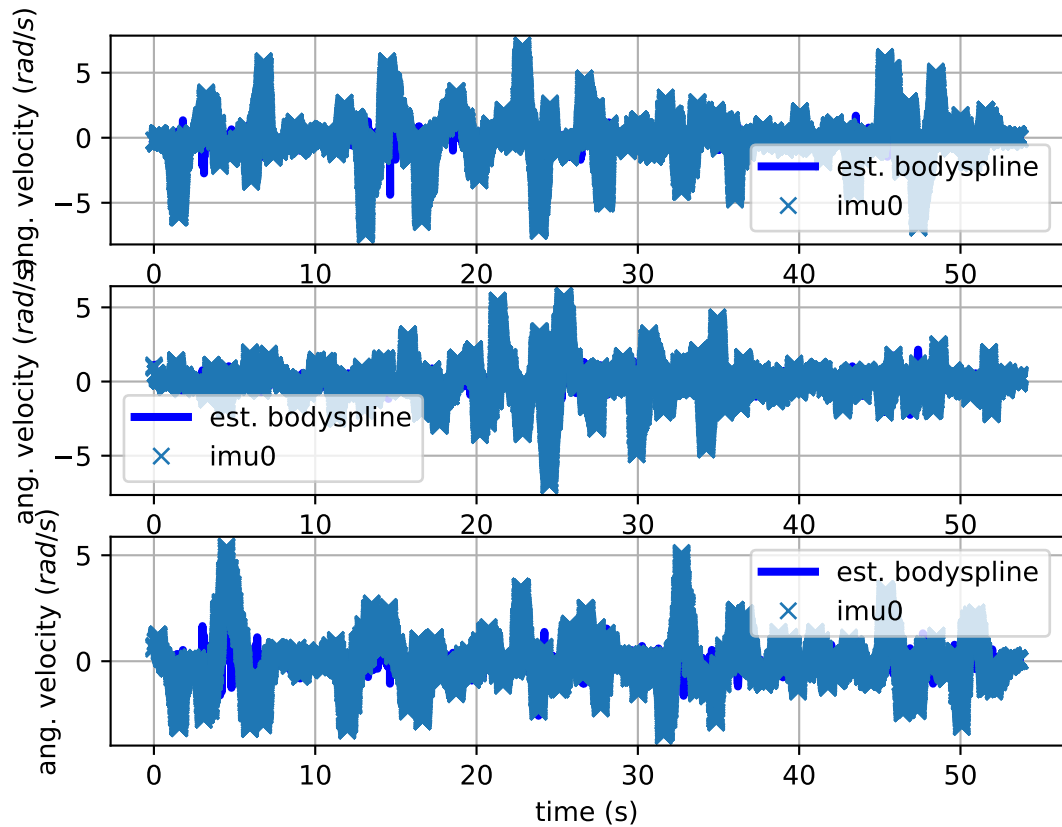
imu0: acceleration error



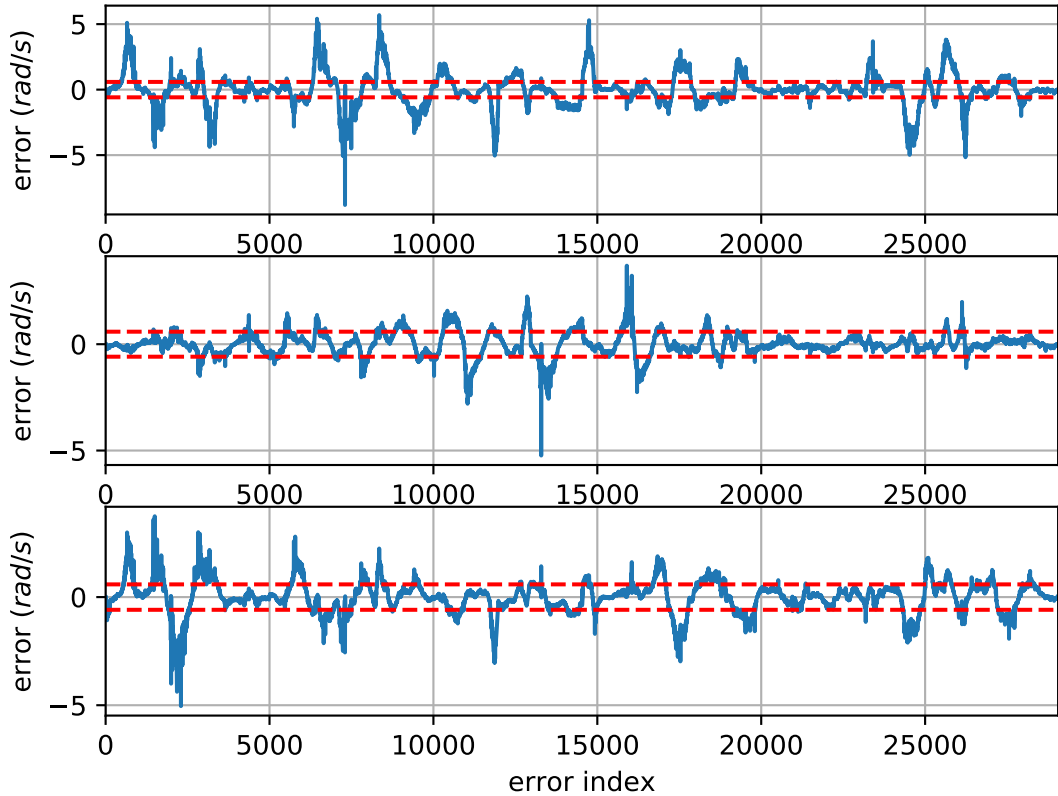
imu0: estimated accelerometer bias (imu frame)



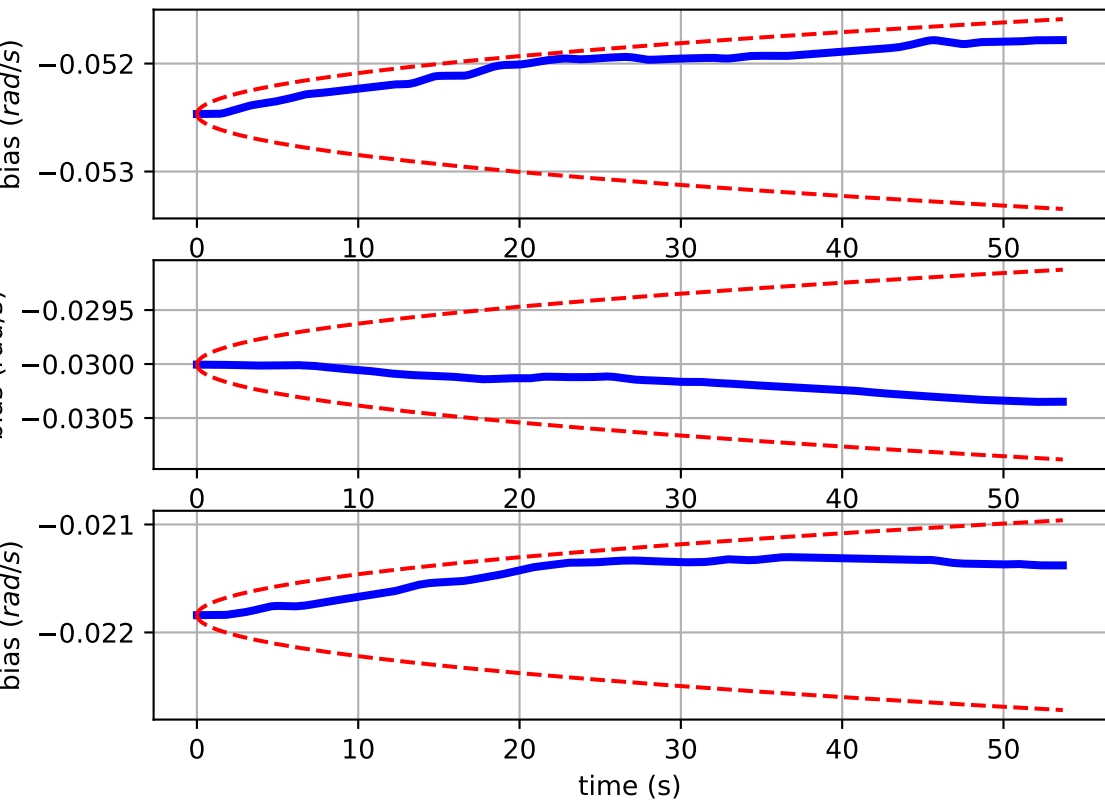
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

