

Calibration results

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Normalized Residuals

Reprojection error (cam0): mean 0.3822049627958689, median 0.11598471514674606, std: 1.141507418904368
Gyroscope error (imu0): mean 0.24043588557925216, median 0.12145006118353549, std: 0.48740884118410943
Accelerometer error (imu0): mean 0.4032925733716952, median 0.36208925092352273, std: 0.2213433734624386

Residuals

Reprojection error (cam0) [px]: mean 0.3822049627958689, median 0.11598471514674606, std: 1.141507418904368
Gyroscope error (imu0) [rad/s]: mean 0.04526832418686939, median 0.02286614050529997, std: 0.09176742224278263
Accelerometer error (imu0) [m/s²]: mean 1.927111176586805, median 1.7302233873112982, std: 1.0576770241433608

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[ [ 0.99878347 -0.01471939 0.0470629 0.00080373]
  [ 0.01347784 0.99955556 0.02659012 -0.00115897]
  [-0.04743338 -0.02592347 0.99853796 -0.01696154]
  [ 0.          0.          0.          1.          ] ]
```

T_ic: (cam0 to imu0):

```
[ [ 0.99878347 0.01347784 -0.04743338 -0.00159168]
  [-0.01471939 0.99955556 -0.02592347 0.00073058]
  [ 0.0470629 0.02659012 0.99853796 0.01692973]
  [ 0.          0.          0.          1.          ] ]
```

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

0.01704491945282673

Gravity vector in target coords: [m/s²]

[-9.78658554 0.62105977 0.07383181]

Calibration configuration

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cam0

Camera model: pinhole

Focal length: [459.5308873546033, 459.99193670838787]

Principal point: [394.7660495536289, 247.4833916976106]

Distortion model: radtan

Distortion coefficients: [-0.4056029974955945, 0.15310487535224113, -0.0006886532267972795,
-0.0004232687025758541]

Type: checkerboard

Rows

Count: 5

Distance: 0.03 [m]

Cols

Count: 7

Distance: 0.03 [m]

IMU configuration

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IMU0:

Model: calibrated

Update rate: 215.0

Accelerometer:

Noise density: 0.32588720961920065

Noise density (discrete): 4.778444493721634

Random walk: 0.0022869259200268854

Gyroscope:

Noise density: 0.012840321559479945

Noise density (discrete): 0.18827607234173913

Random walk: 0.00014646659275537142

T_ib (imu0 to imu0)

[[1. 0. 0. 0.]

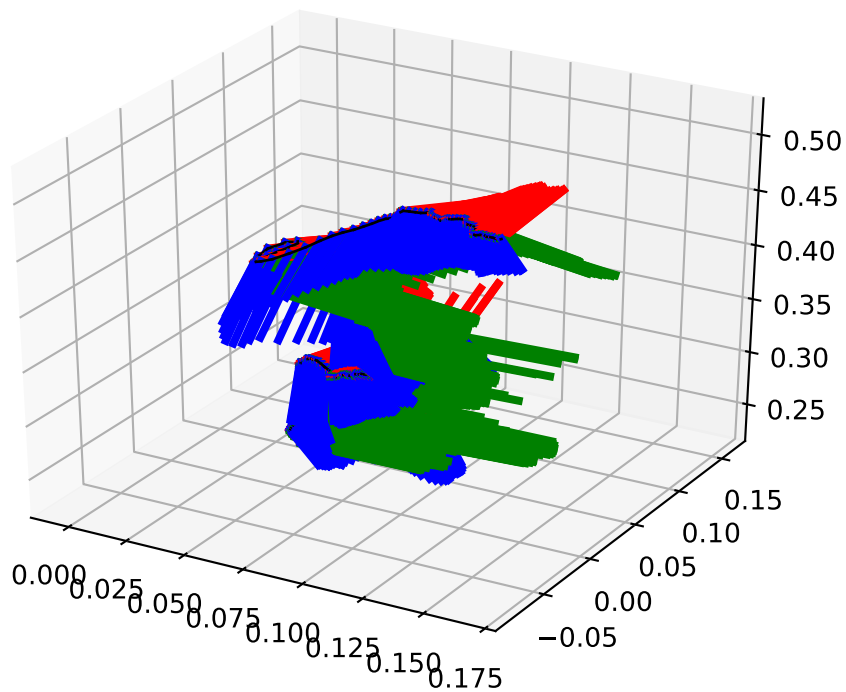
[0. 1. 0. 0.]

[0. 0. 1. 0.]

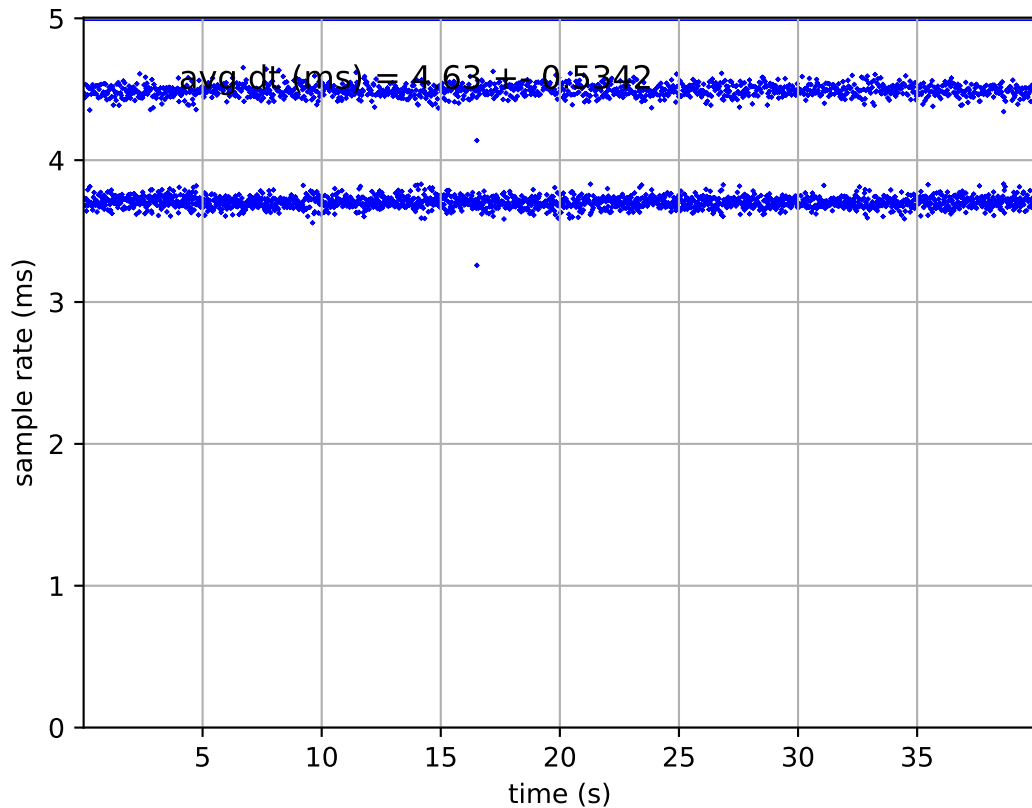
[0. 0. 0. 1.]]

time offset with respect to IMU0: 0.0 [s]

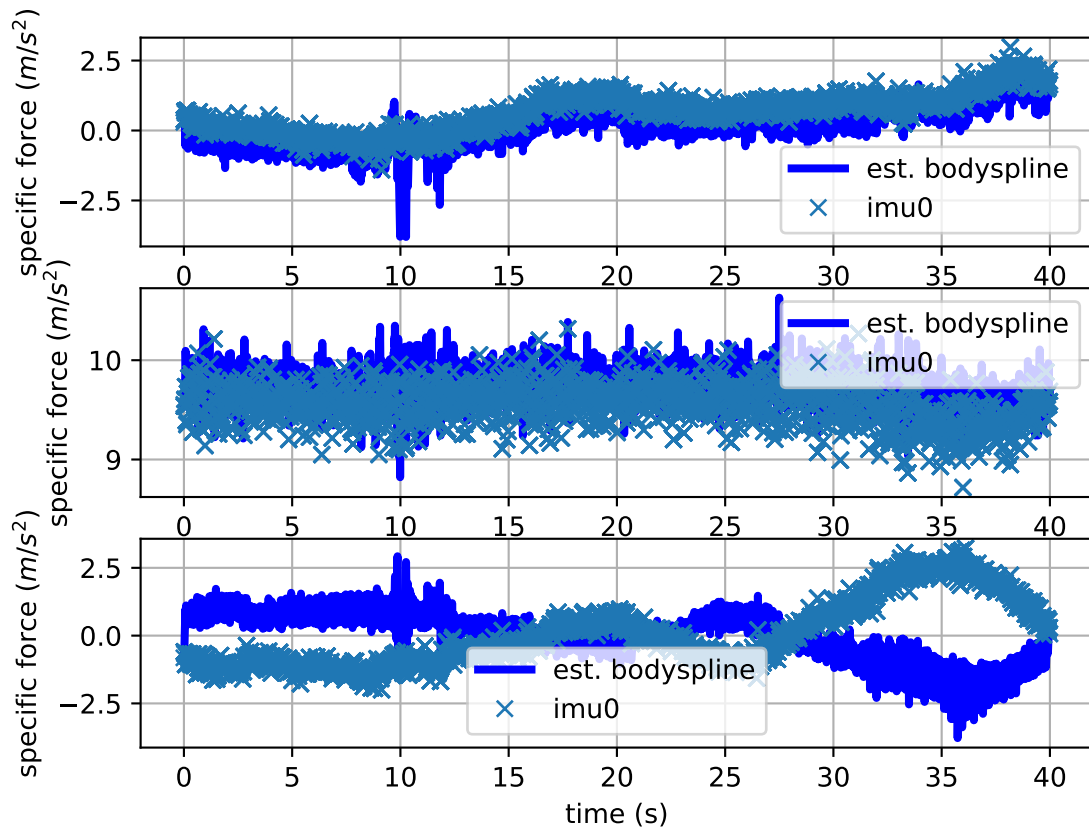
imu0: estimated poses



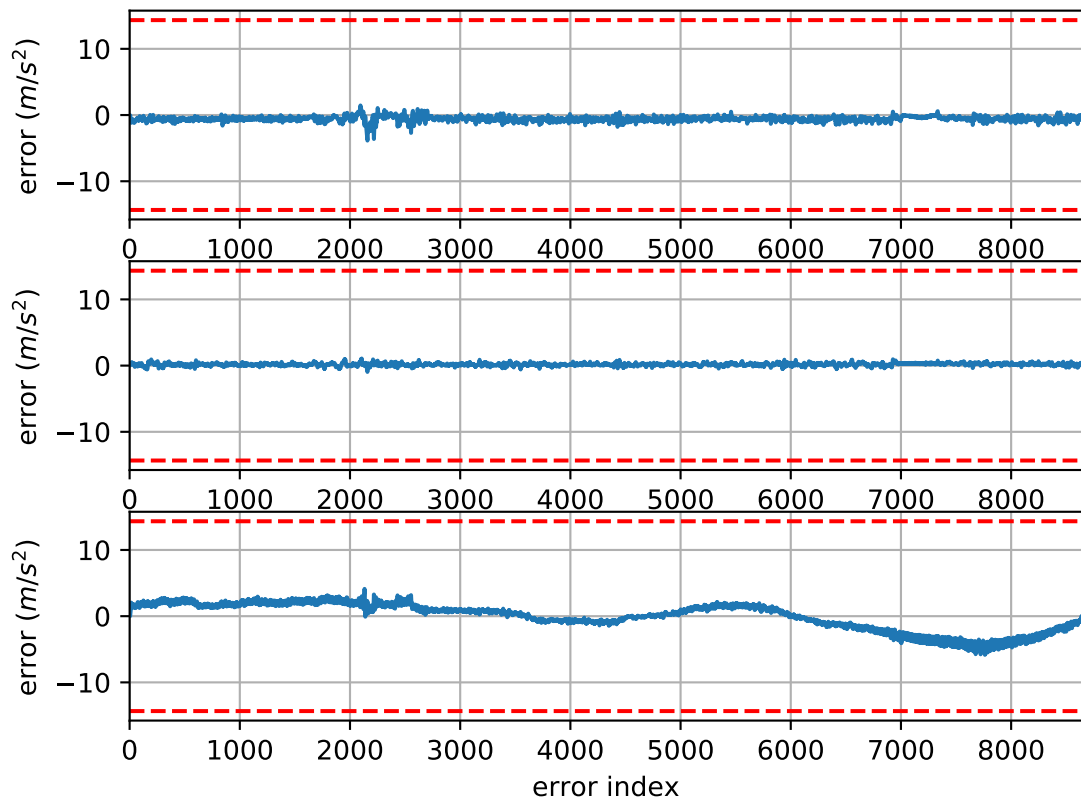
imu0: sample inertial rate



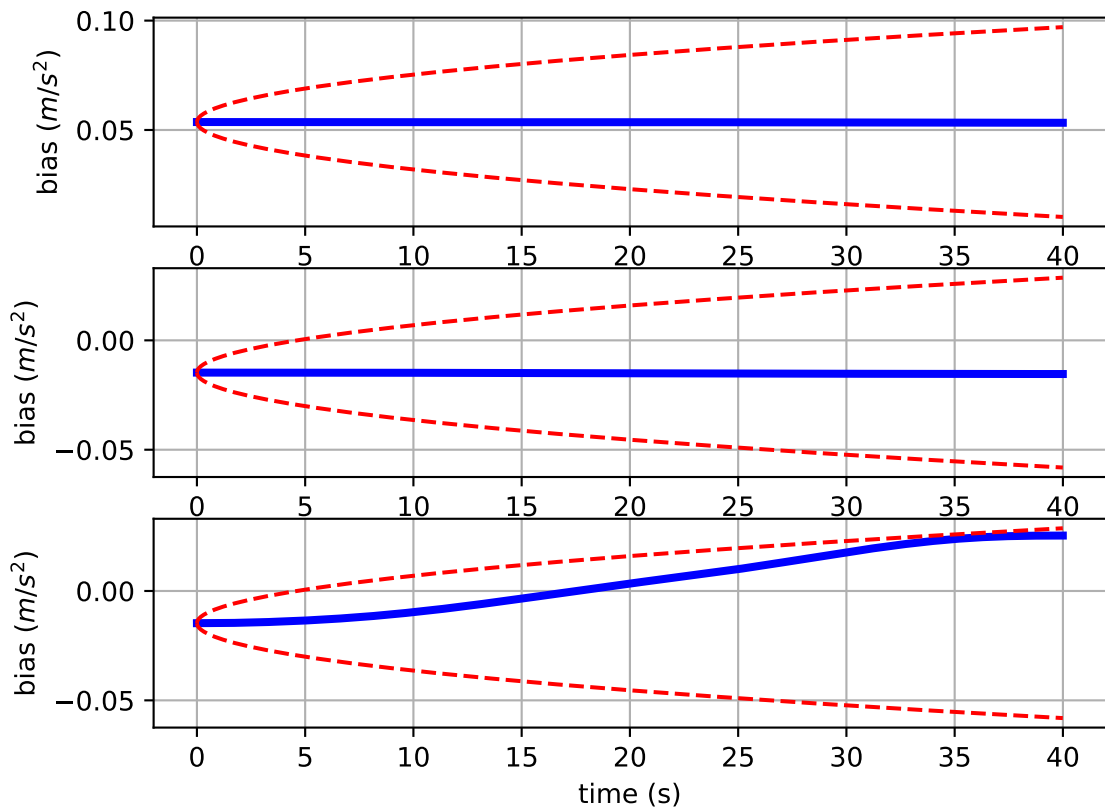
Comparison of predicted and measured specific force (imu0 frame)



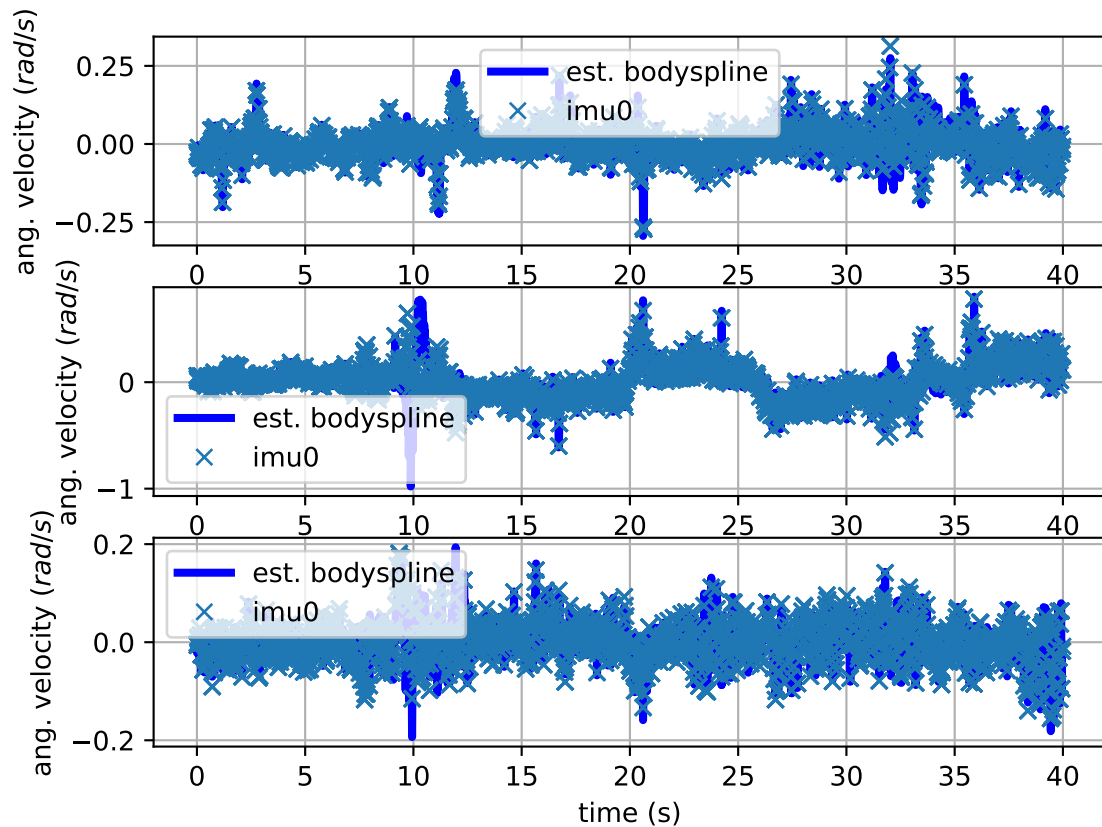
imu0: acceleration error



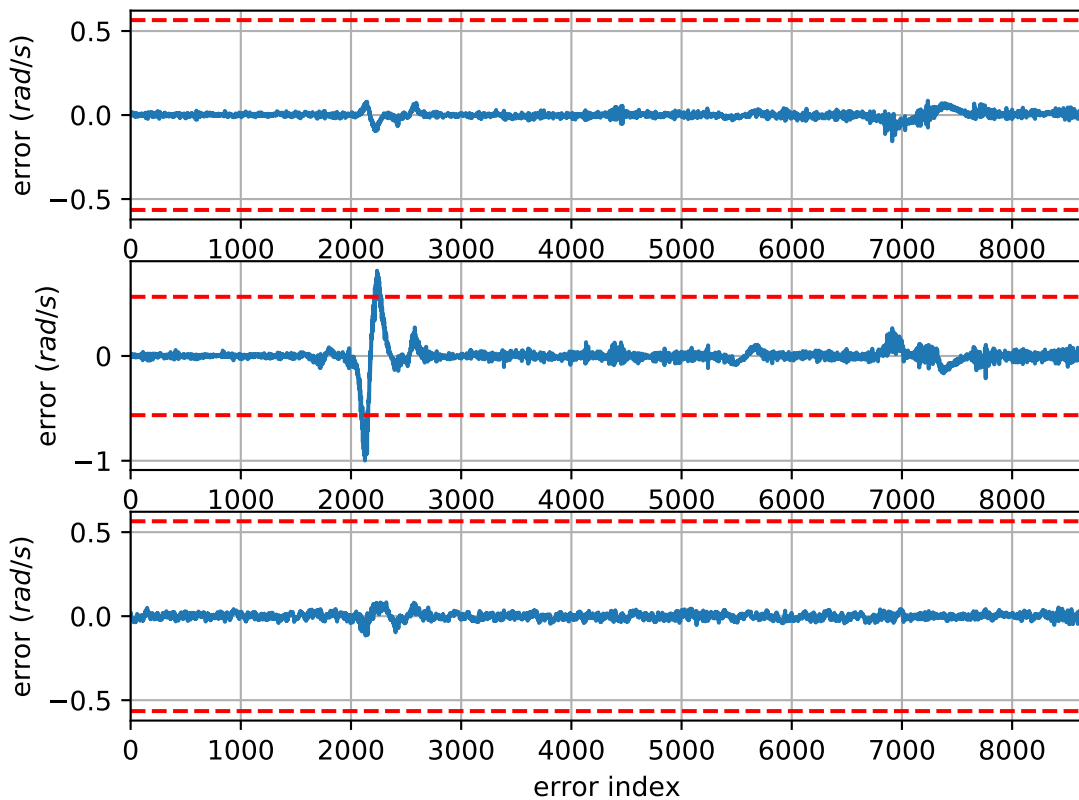
imu0: estimated accelerometer bias (imu frame)



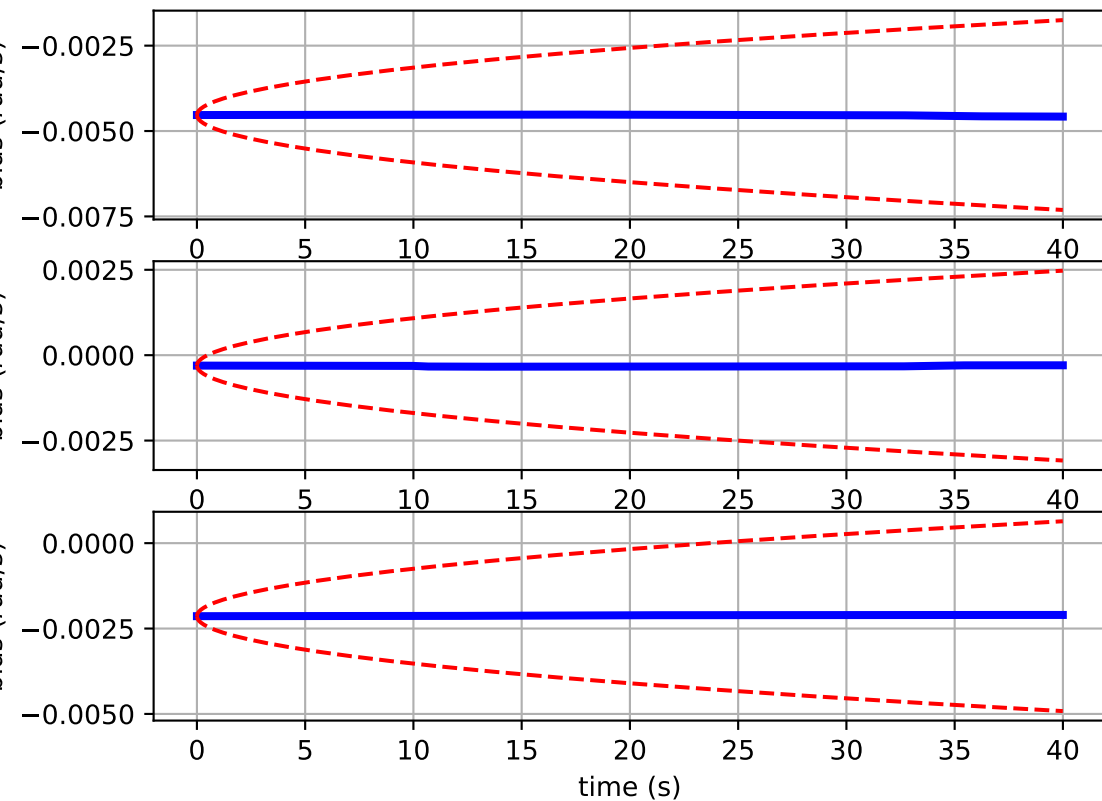
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

