

Calibration results

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Normalized Residuals

Reprojection error (cam0): mean 0.32973559178718975, median 0.27772958707607315, std: 0.2534016201242205
Gyroscope error (imu0): mean 0.44555180962752394, median 0.3737760289518345, std: 0.30251954950098064
Accelerometer error (imu0): mean 0.42363183132329313, median 0.32646424218558645, std: 0.3361951374120127

Residuals

Reprojection error (cam0) [px]: mean 0.32973559178718975, median 0.27772958707607315, std: 0.2534016201242205
Gyroscope error (imu0) [rad/s]: mean 0.0019210534350647967, median 0.0016115830052695257, std: 0.0013043516089160392
Accelerometer error (imu0) [m/s²]: mean 0.11475793671621468, median 0.08843613740689309, std: 0.09107214673390264

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[ 0.49018183 -0.87150518 0.01415925 0.02461466]
 [-0.01451394 -0.02440377 -0.99959682 -0.04502733]
 [ 0.87149935 0.4897787 -0.02461125 -0.08039869]
 [ 0.          0.          0.          1.          ]]
```

T_ic: (cam0 to imu0):

```
[[ 0.49018183 -0.01451394 0.87149935 0.05734822]
 [-0.87150518 -0.02440377 0.4897787 0.05973053]
 [ 0.01415925 -0.99959682 -0.02461125 -0.04733642]
 [ 0.          0.          0.          1.          ]]
```

timeshift cam0 to imu0: [s] (t_imu = t_cam + shift)
0.0013733051169191341

Gravity vector in target coords: [m/s²]
[-0.08606288 -9.73461679 -1.18247711]

Calibration configuration

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cam0

Camera model: pinhole

Focal length: [393.5198419123395, 393.76503250724346]

Principal point: [328.6480398360448, 252.00143881191187]

Distortion model: radtan

Distortion coefficients: [-0.3244079019356779, 0.09291513378960177, -0.0029913299326806784,
-0.0022246422534985275]

Type: aprilgrid

Tags:

Rows: 6

Cols: 6

Size: 0.088 [m]

Spacing 0.02639999999999996 [m]

IMU configuration

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IMU0:

Model: calibrated

Update rate: 100

Accelerometer:

Noise density: 0.02708907316

Noise density (discrete): 0.2708907316

Random walk: 0.00264054372

Gyroscope:

Noise density: 0.00043116275

Noise density (discrete): 0.0043116275

Random walk: 5.597187e-05

T_ib (imu0 to imu0)

[[1. 0. 0. 0.]

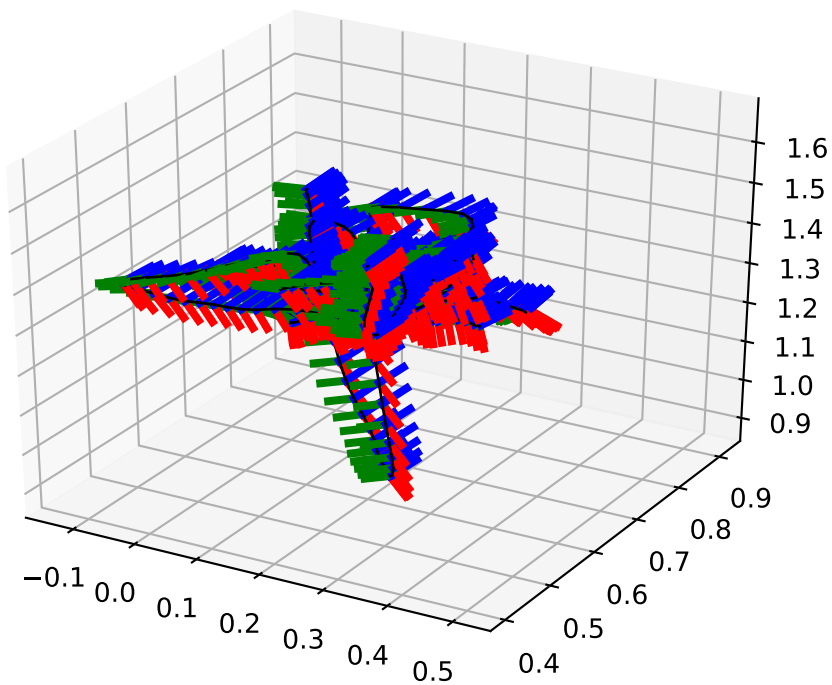
[0. 1. 0. 0.]

[0. 0. 1. 0.]

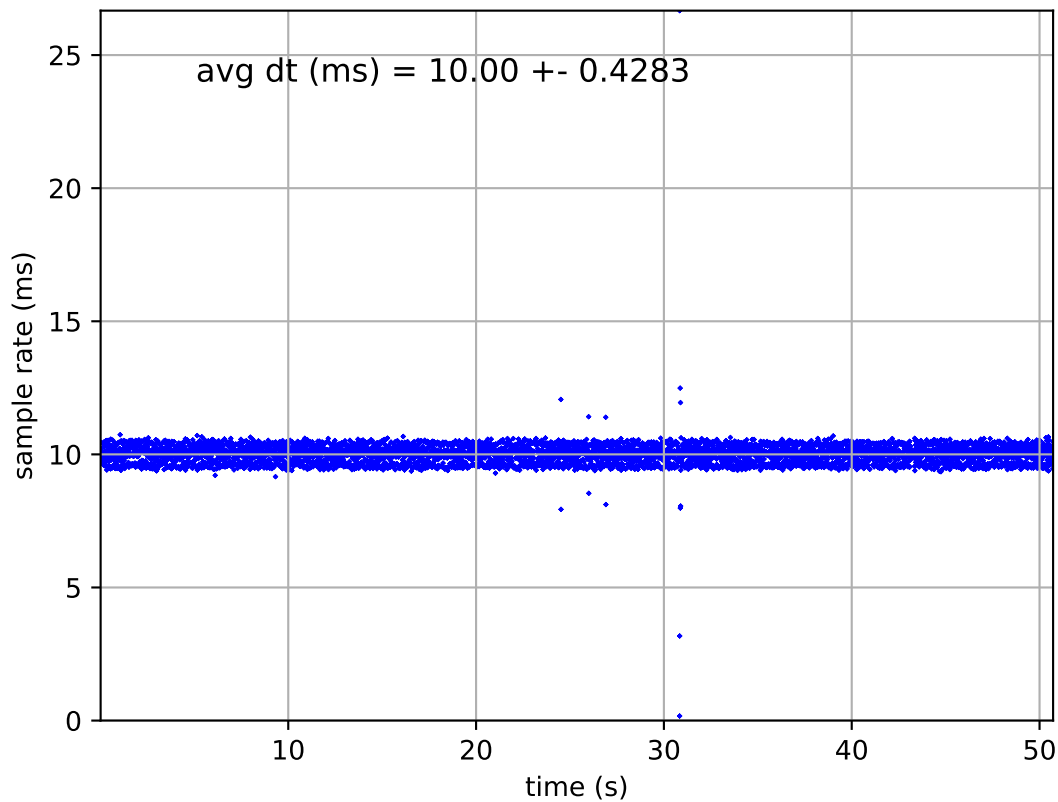
[0. 0. 0. 1.]]

time offset with respect to IMU0: 0.0 [s]

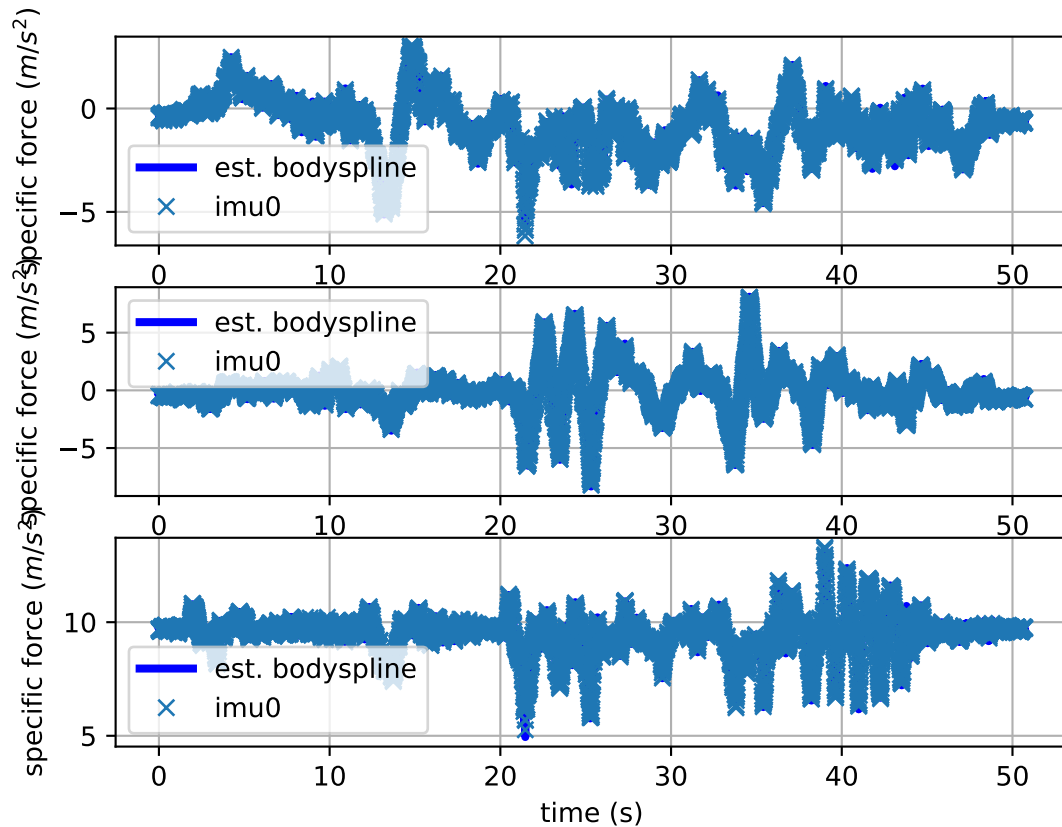
imu0: estimated poses



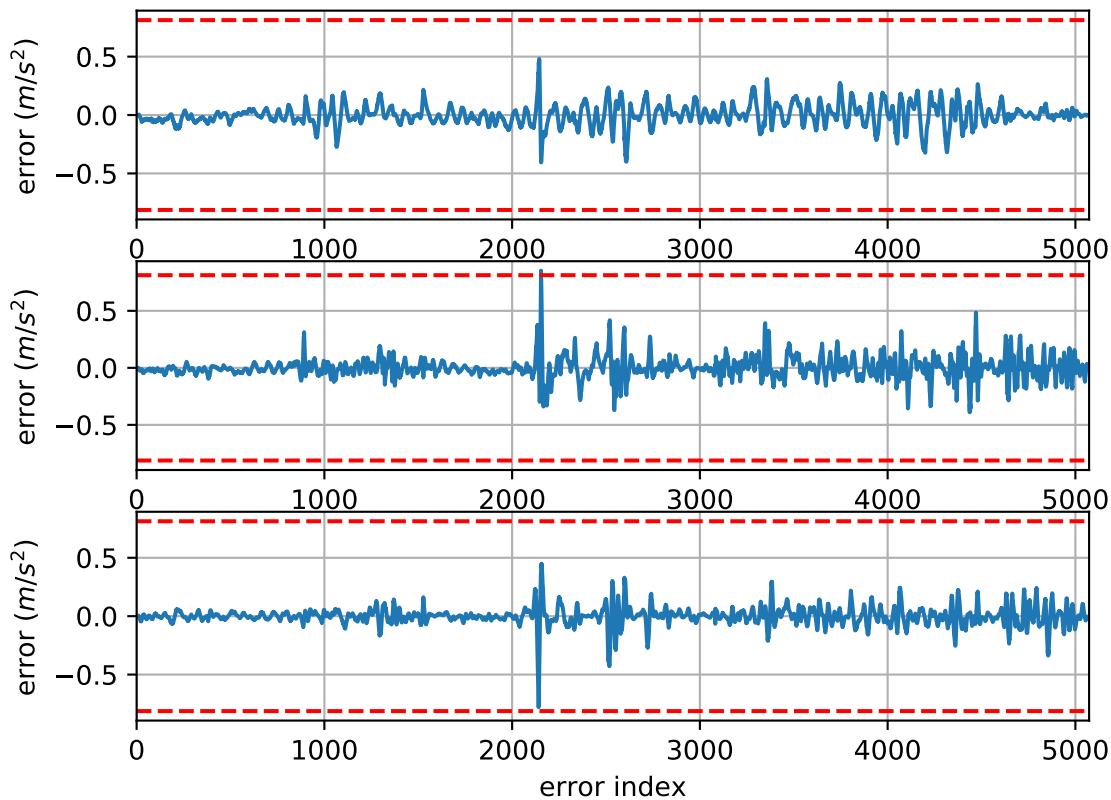
imu0: sample inertial rate



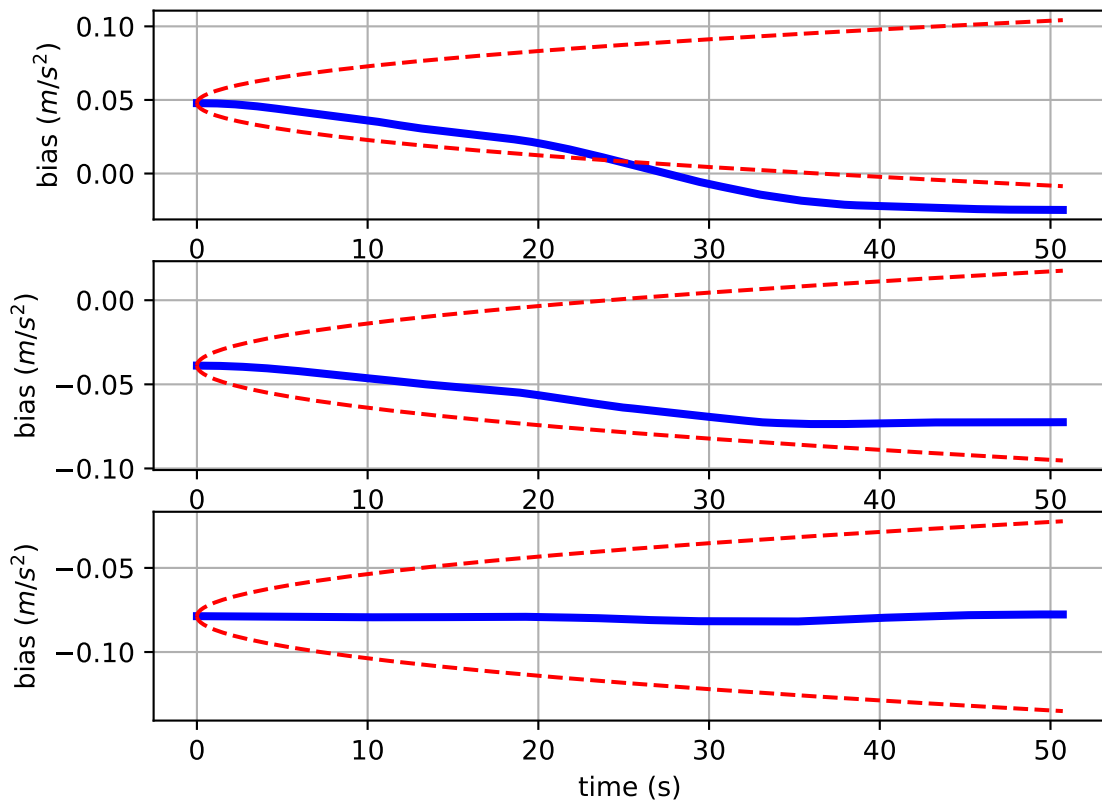
Comparison of predicted and measured specific force (imu0 frame)



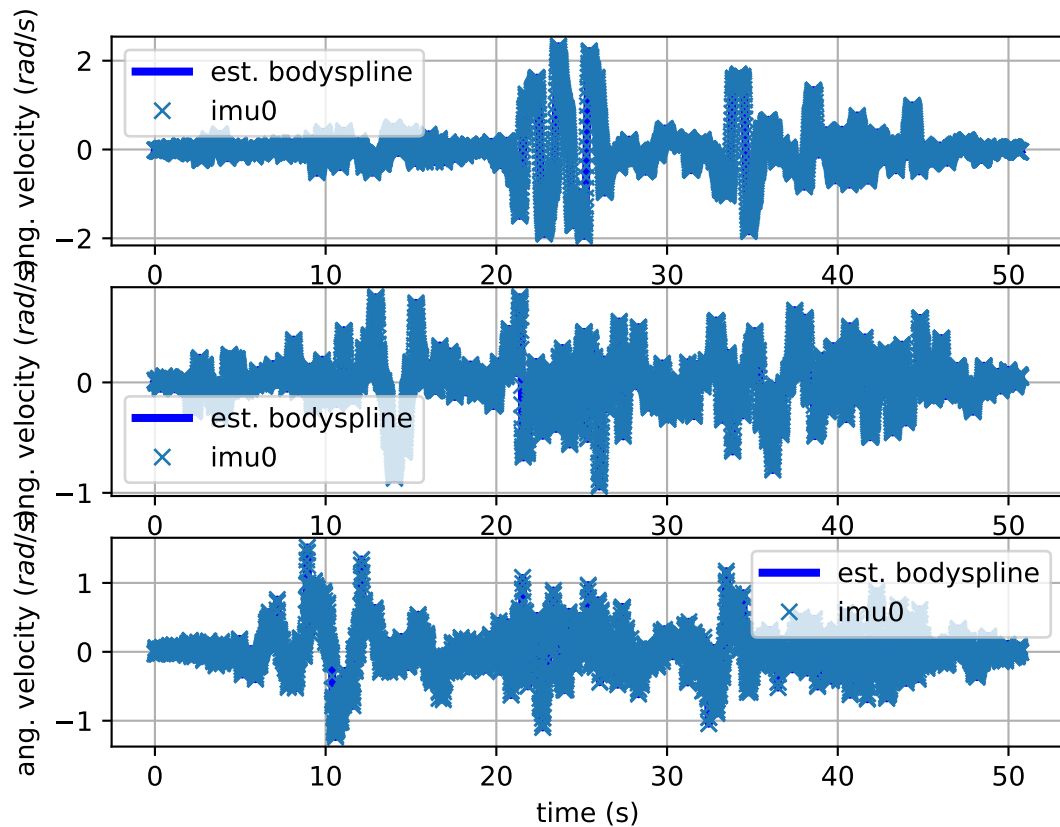
imu0: acceleration error



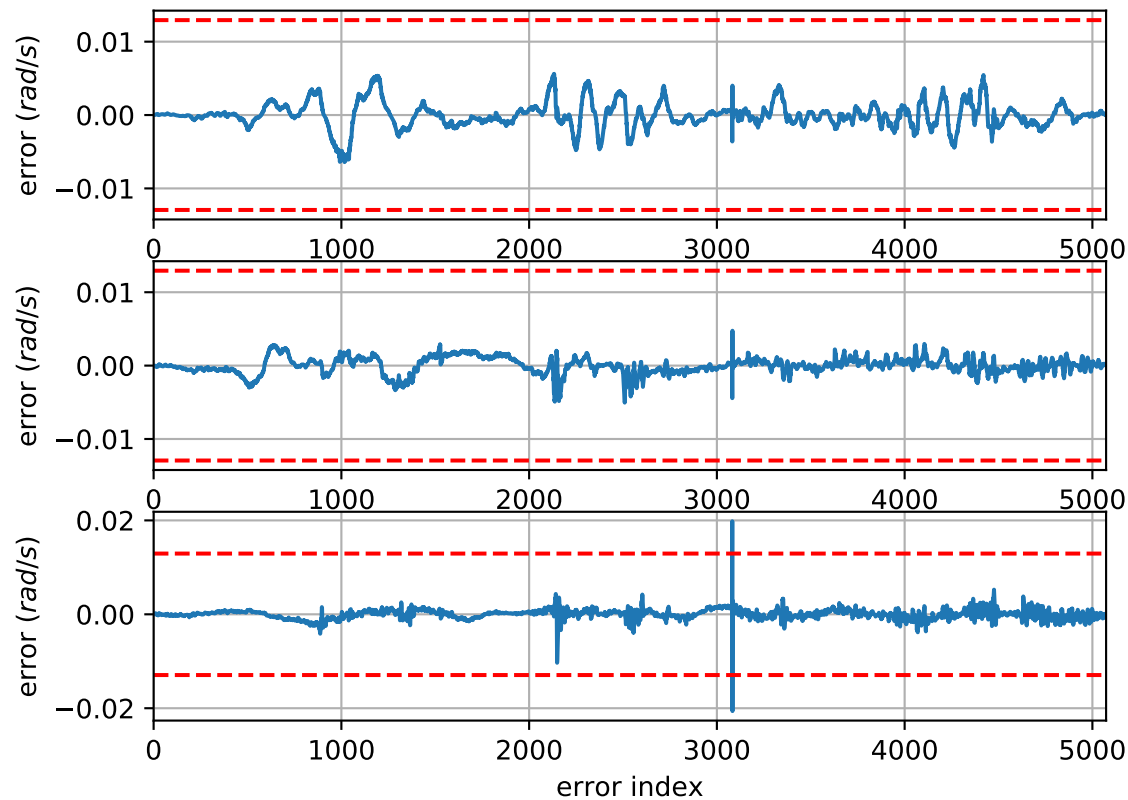
imu0: estimated accelerometer bias (imu frame)



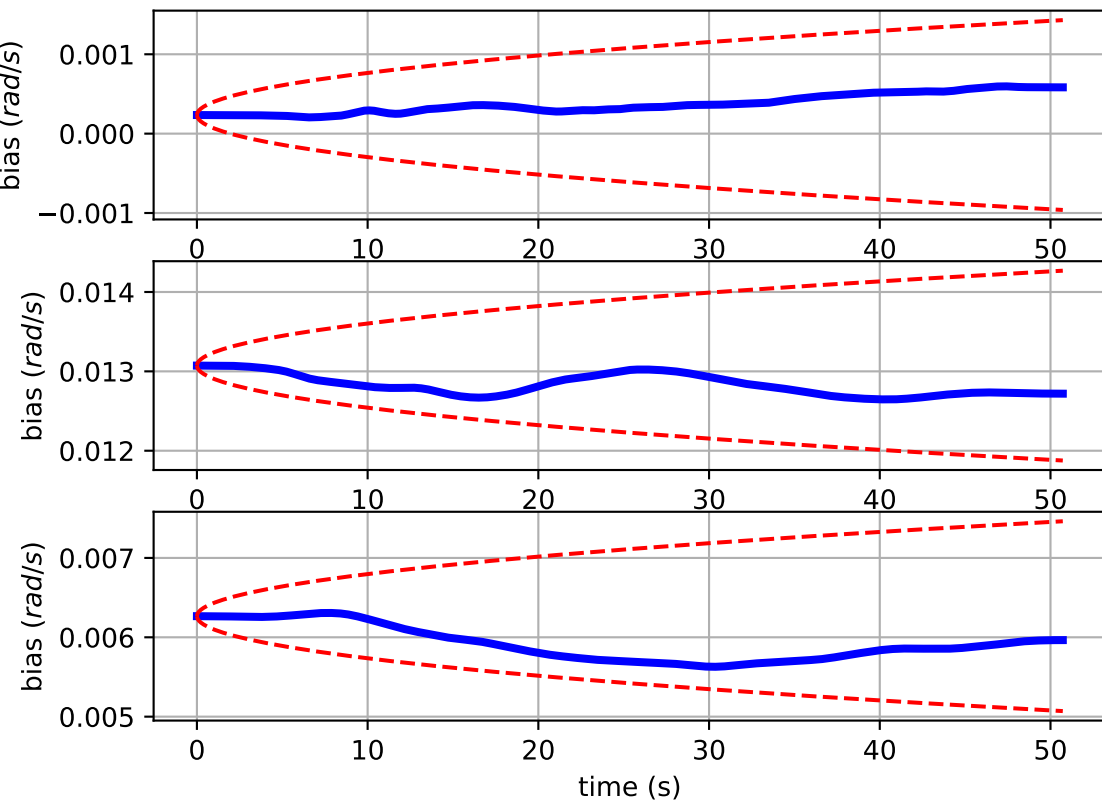
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

