

Calibration results

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Normalized Residuals

Reprojection error (cam0): mean 0.40683936316877956, median 0.3501845313970696, std: 0.26813884451818754
Gyroscope error (imu0): mean 0.11010212195242976, median 0.0949145130938065, std: 0.06756249064730994
Accelerometer error (imu0): mean 0.3517593994122728, median 0.3192994341170933, std: 0.19736854107420146

Residuals

Reprojection error (cam0) [px]: mean 0.40683936316877956, median 0.3501845313970696, std:
0.26813884451818754
Gyroscope error (imu0) [rad/s]: mean 0.007785395705559131, median 0.006711469584164992, std:
0.004777389529056555
Accelerometer error (imu0) [m/s²]: mean 0.049746291334105075, median 0.04515575901864478, std:
0.0279121267572927

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[ 0.014775  0.99954017 -0.02647936  0.0655352 ]  
 [-0.99988927  0.01481673  0.00138037 -0.01990149]  
 [ 0.00177207  0.02645603  0.99964841 -0.00491213]  
 [ 0.         0.         0.         1.         ]]
```

T_ic: (cam0 to imu0):

```
[[ 0.014775 -0.99988927  0.00177207 -0.02085886]  
 [ 0.99954017  0.01481673  0.02645603 -0.06508024]  
 [-0.02647936  0.00138037  0.99964841  0.0066732 ]  
 [ 0.         0.         0.         1.         ]]
```

timeshift cam0 to imu0: [s] (t_imu = t_cam + shift)
-5.3580886699517466e-05

Gravity vector in target coords: [m/s²]

[-0.0201935 -9.54999678 -2.22835739]

Calibration configuration

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cam0

Camera model: pinhole

Focal length: [458.9432286546919, 457.5637533402653]

Principal point: [367.0272509347057, 249.3128033381081]

Distortion model: radtan

Distortion coefficients: [-0.2879529995338575, 0.0781311194952221, 0.00021265916642721963,
-0.0001221450347654466]

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: 200.0

Accelerometer:

Noise density: 0.01

Noise density (discrete): 0.1414213562373095

Random walk: 0.0002

Gyroscope:

Noise density: 0.005

Noise density (discrete): 0.07071067811865475

Random walk: 4e-06

T_ib (imu0 to imu0)

[[1. 0. 0. 0.]

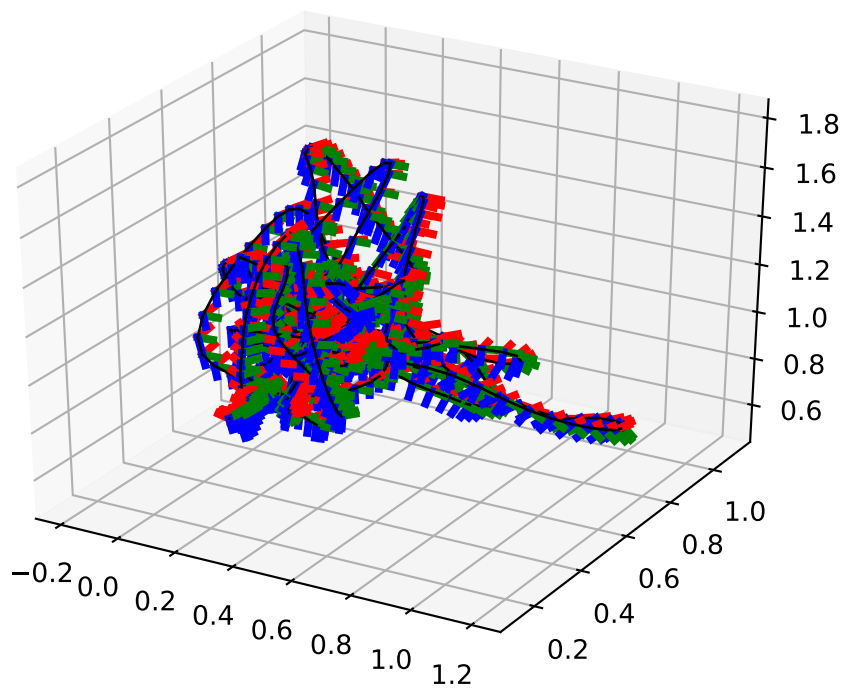
[0. 1. 0. 0.]

[0. 0. 1. 0.]

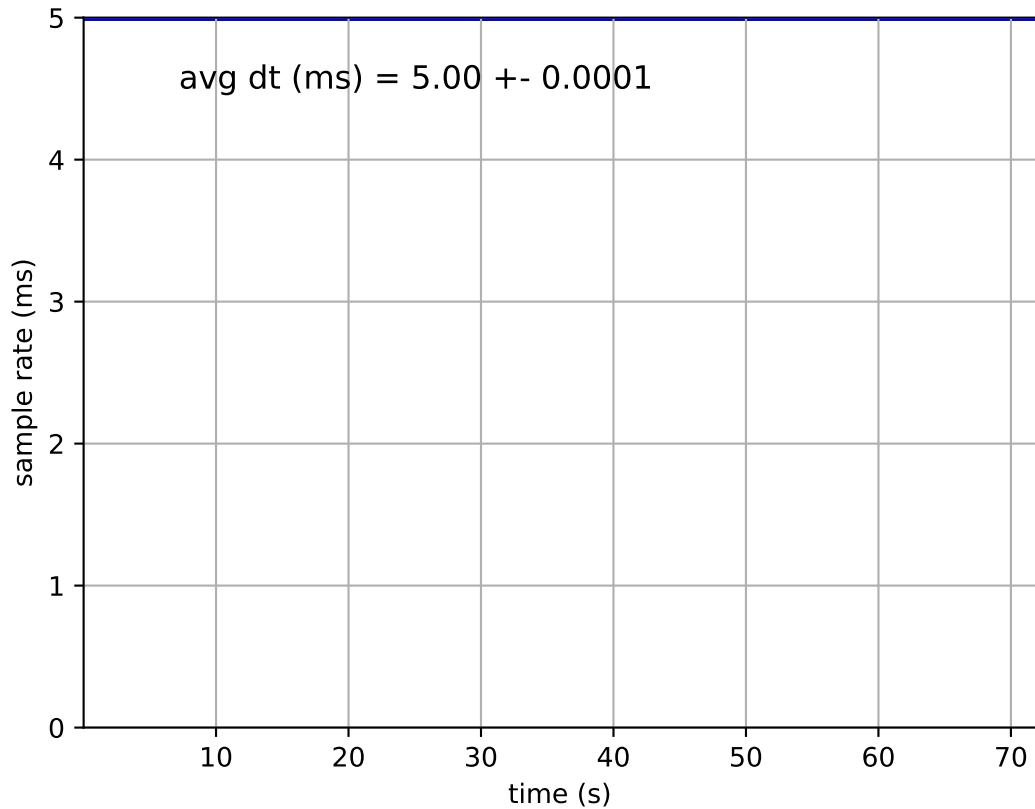
[0. 0. 0. 1.]]

time offset with respect to IMU0: 0.0 [s]

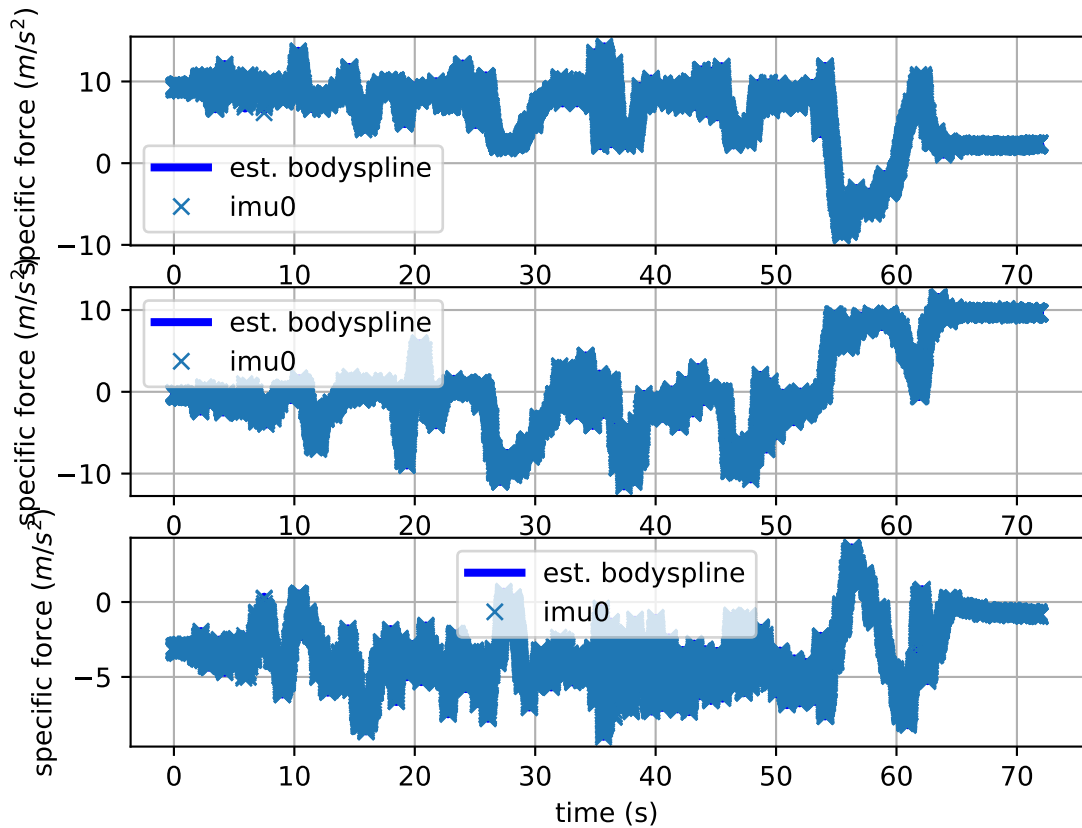
imu0: estimated poses



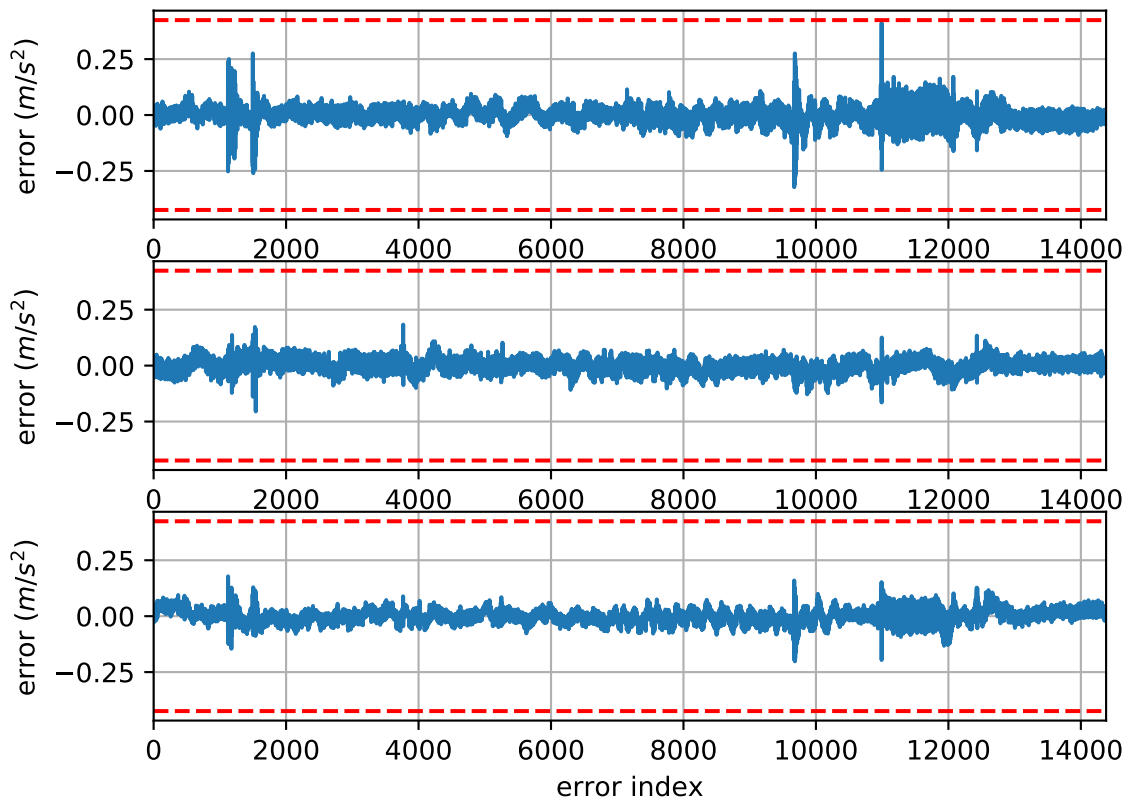
imu0: sample inertial rate



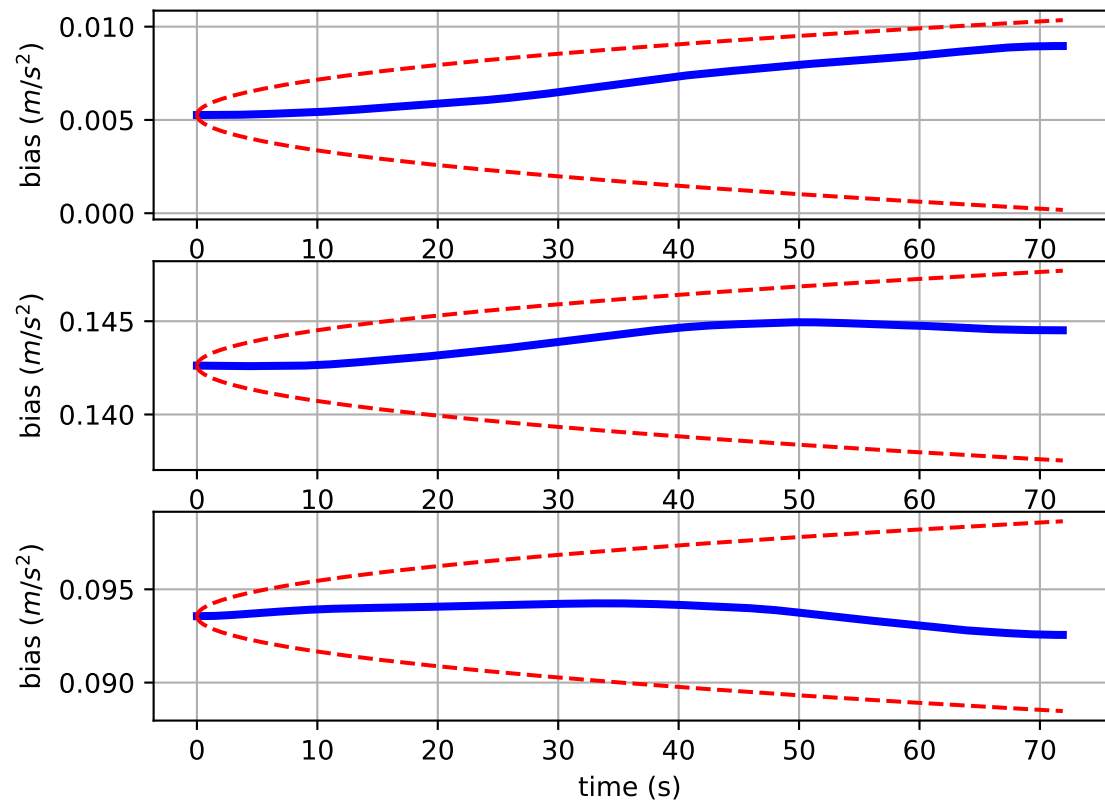
Comparison of predicted and measured specific force (imu0 frame)



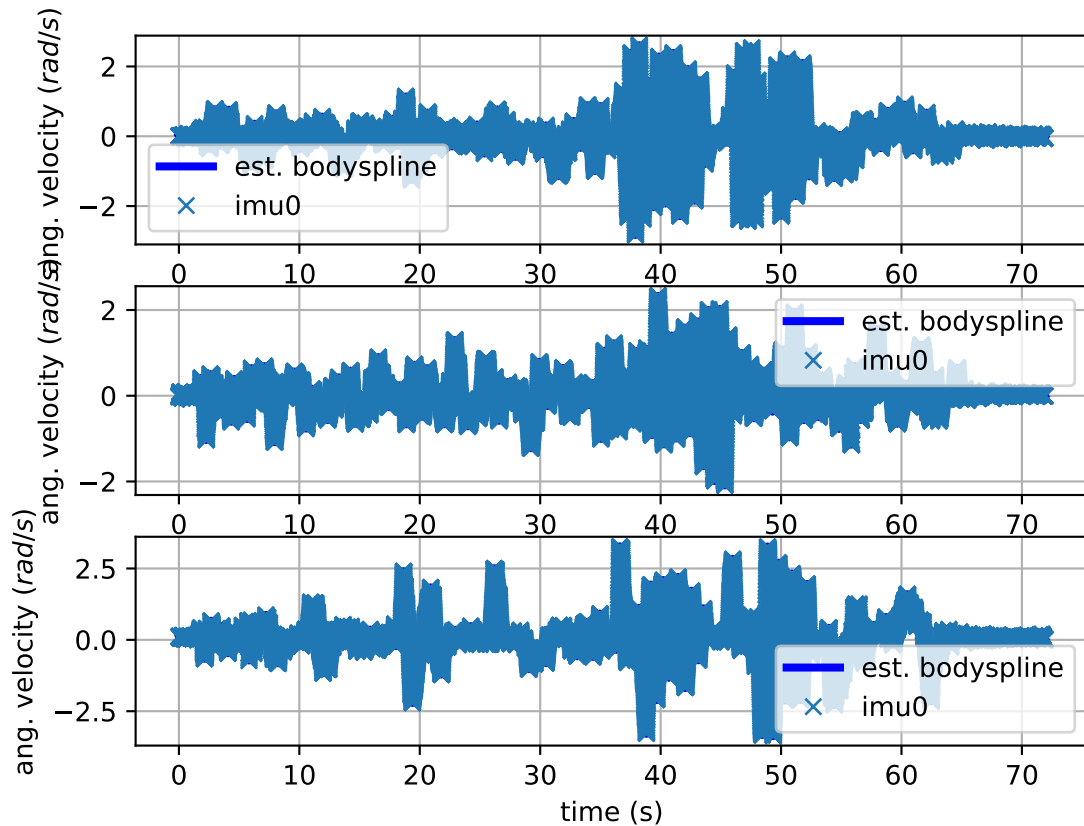
imu0: acceleration error



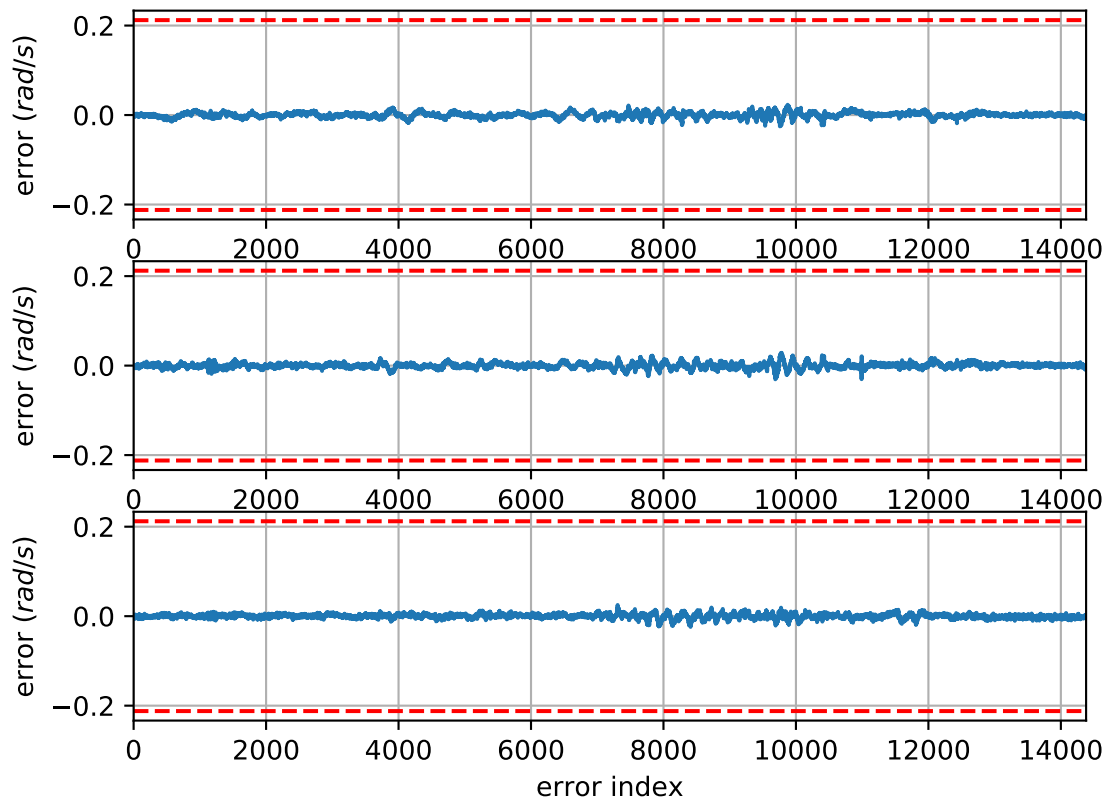
imu0: estimated accelerometer bias (imu frame)



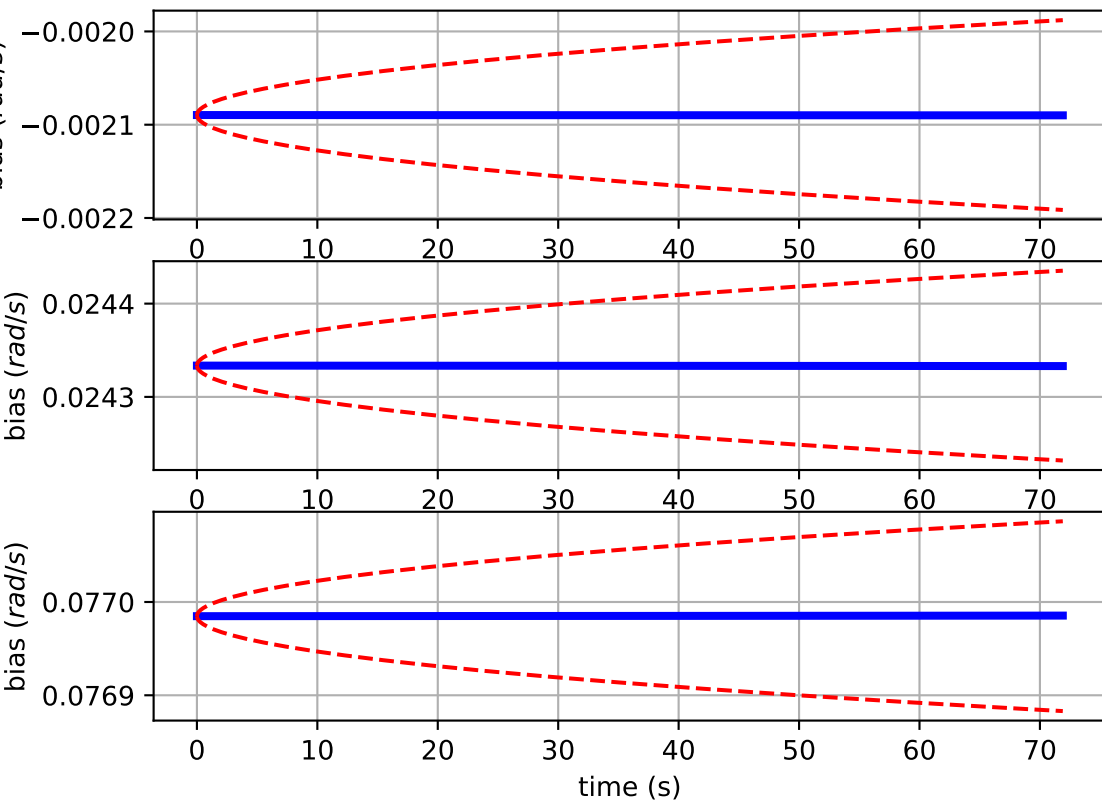
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

