

Calibration results

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Normalized Residuals

Reprojection error (cam0): mean 0.378445520585, median 0.314523732738, std: 0.273222343755
Gyroscope error (imu0): mean 0.636638420161, median 0.572424687256, std: 0.346898879598
Accelerometer error (imu0): mean 0.785632675132, median 0.710112976808, std: 0.475467015767

Residuals

Reprojection error (cam0) [px]: mean 0.378445520585, median 0.314523732738, std: 0.273222343755
Gyroscope error (imu0) [rad/s]: mean 0.00261584107715, median 0.0023519975595, std: 0.00142534963
Accelerometer error (imu0) [m/s²]: mean 0.0326271794991, median 0.0294908604139, std: 0.019746057

Transformation (cam0):

T_ci: (imu0 to cam0):

```
[[ 0.99996544  0.00734233 -0.00389993 -0.02753431]
 [-0.00734522  0.99997276 -0.00072794 -0.00305871]
 [ 0.00389448  0.00075656  0.99999213 -0.02360512]
 [ 0.         0.         0.         1.         ]]
```

T_ic: (cam0 to imu0):

```
[[ 0.99996544 -0.00734522  0.00389448  0.02760283]
 [ 0.00734233  0.99997276  0.00075656  0.00327866]
 [-0.00389993 -0.00072794  0.99999213  0.02349532]
 [ 0.         0.         0.         1.         ]]
```

timeshift cam0 to imu0: [s] (t_imu = t_cam + shift)
0.00252437791367

Gravity vector in target coords: [m/s²]
[-0.11133985 -9.6943596 -1.47492993]

Calibration configuration

Camera model: pinhole
Focal length: [416.85223429743274, 414.92069080087543]
Principal point: [421.02459311003213, 237.76180565241077]
Distortion model: radtan
Distortion coefficients: [-0.045761895748285604, 0.03423951132164367, -0.00040139057556727315, 0.0
Type: aprilgrid
Tags:
 Rows: 6
 Cols: 6
 Size: 0.088 [m]
 Spacing 0.0264 [m]

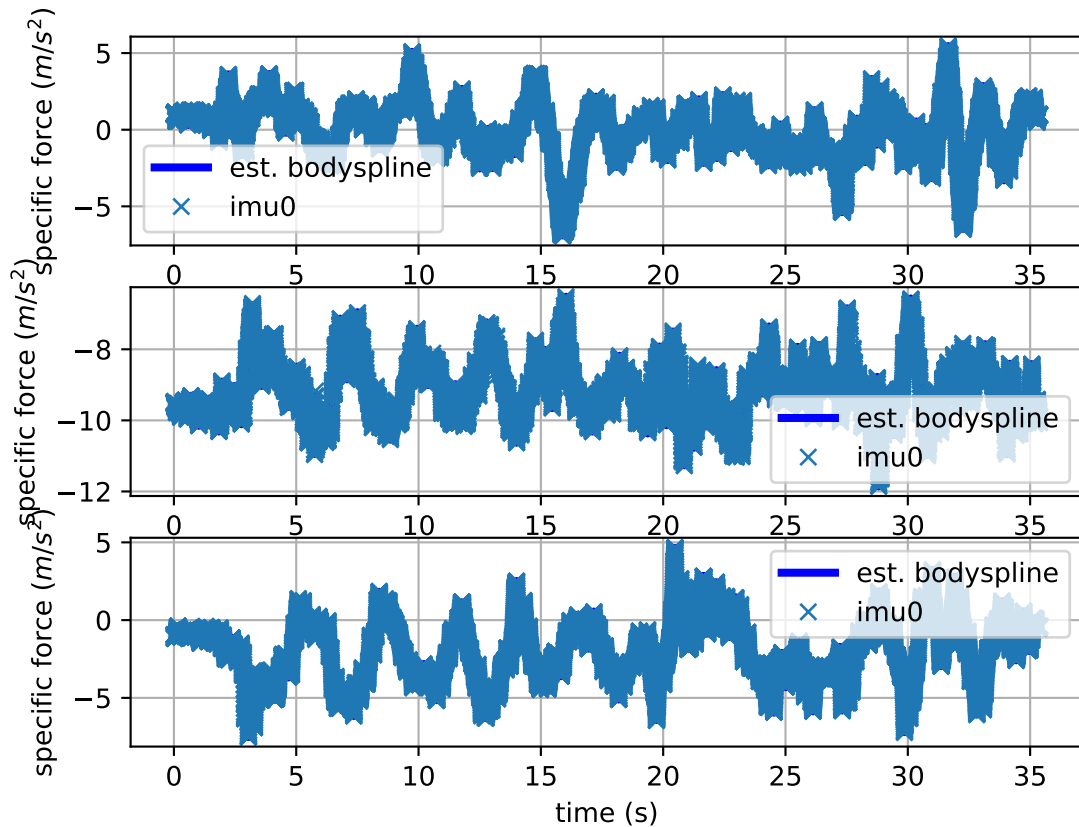
IMU configuration

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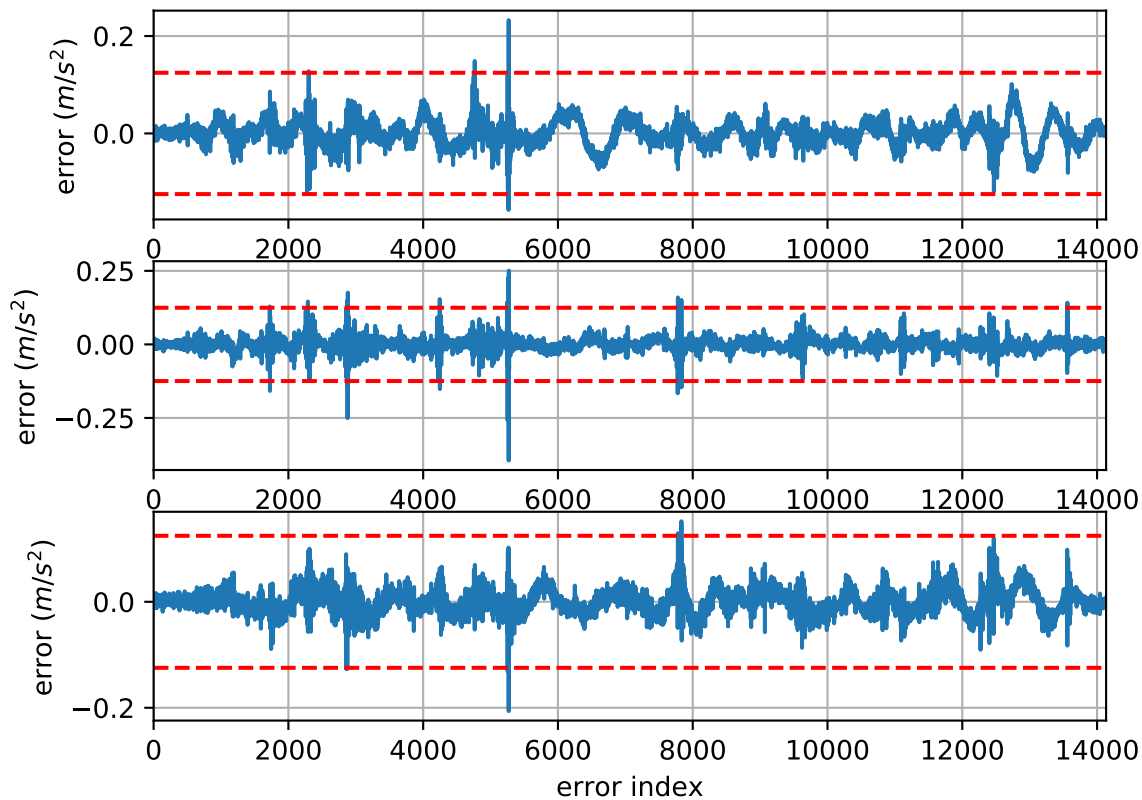
IMU0:

Model: calibrated
Update rate: 400
Accelerometer:
 Noise density: 0.00207649074
 Noise density (discrete): 0.0415298148
 Random walk: 0.00041327852
Gyroscope:
 Noise density: 0.00020544166
 Noise density (discrete): 0.0041088332
 Random walk: 1.110622e-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]

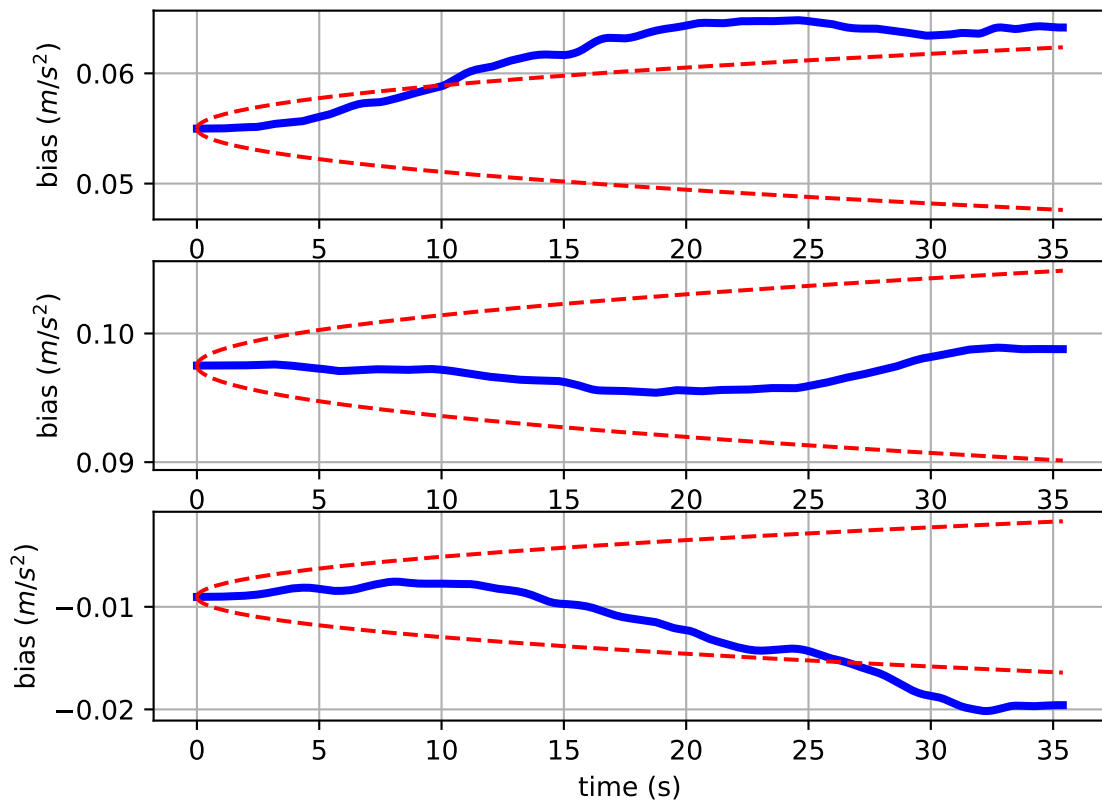
Comparison of predicted and measured specific force (imu0 frame)



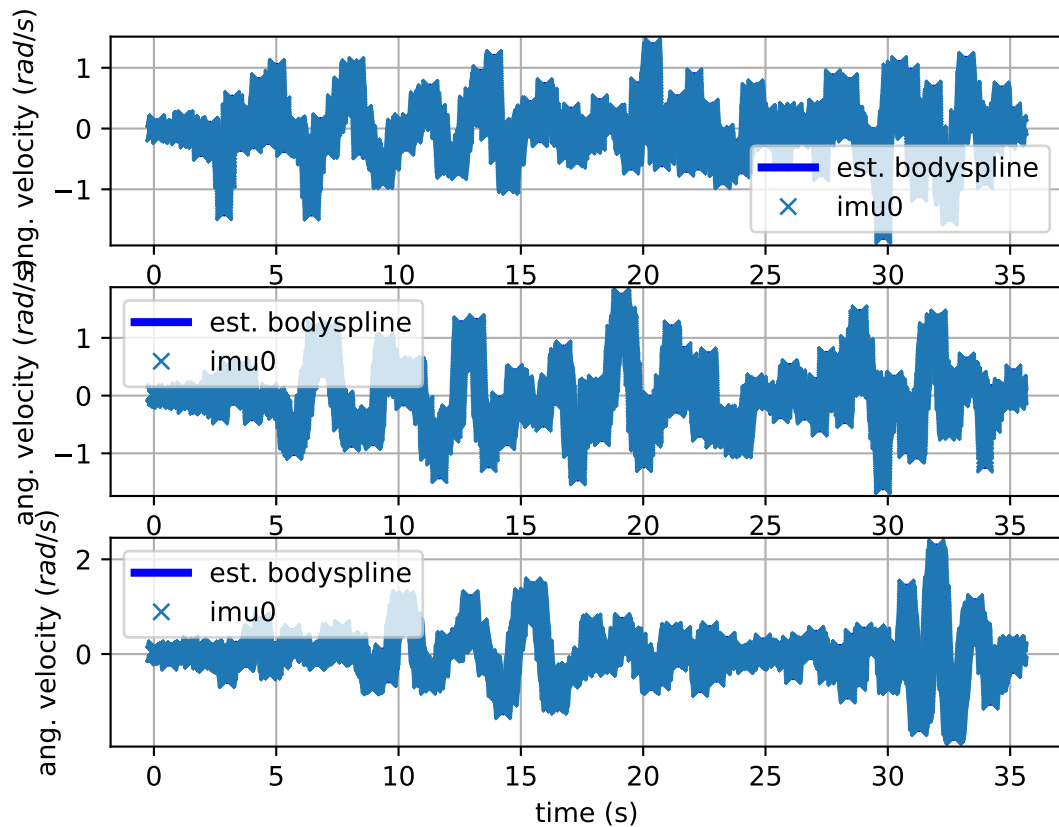
imu0: acceleration error



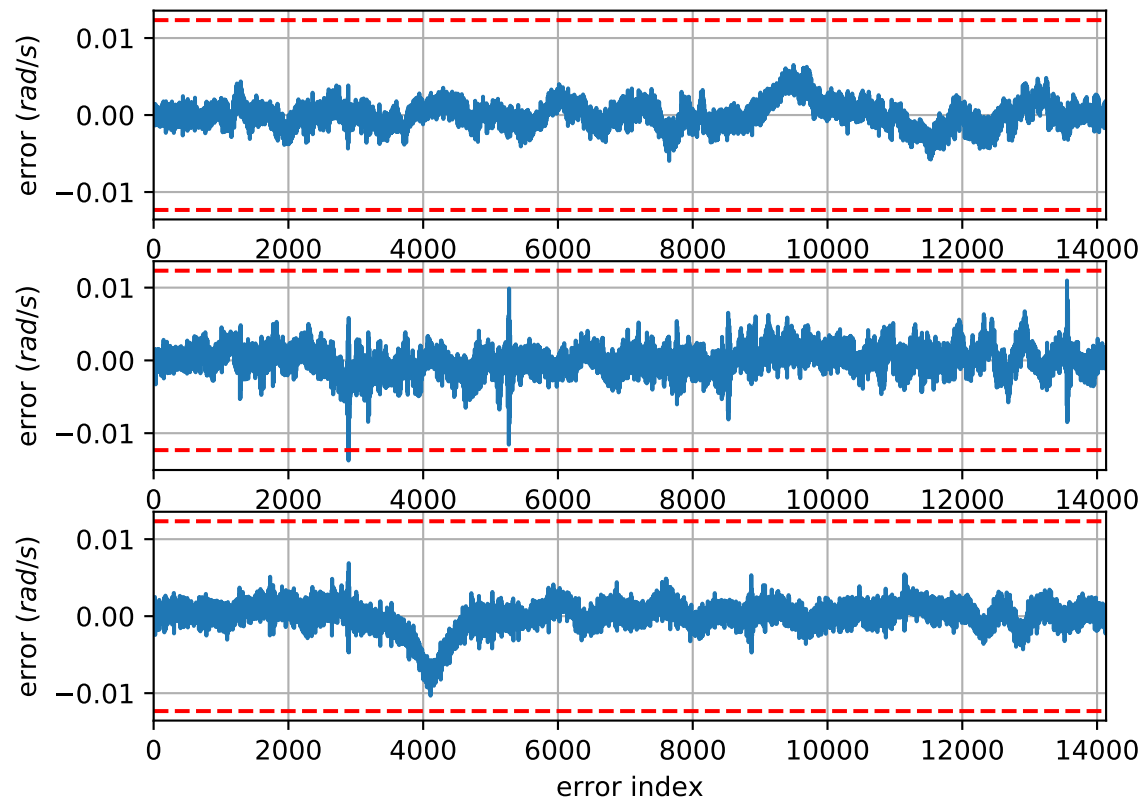
imu0: estimated accelerometer bias (imu frame)



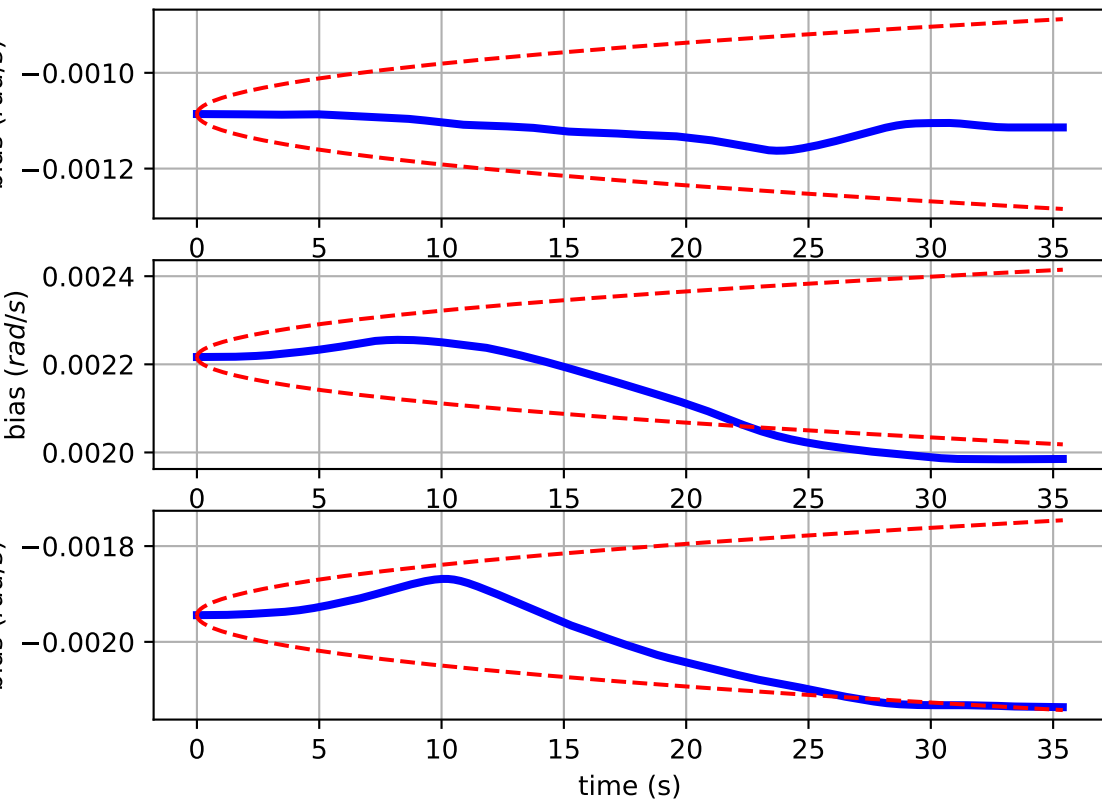
Comparison of predicted and measured angular velocities (body frame)



imu0: angular velocities error



imu0: estimated gyro bias (imu frame)



cam0: reprojection errors

