Calibration results
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Normalized Residuals
----------------------------
Reprojection error (cam0):    mean 1.97235813951, median 1.49951449429, std: 1.61988477771
Gyroscope error (imu0):       mean 0.690088159934, median 0.620877341523, std: 0.375157156463
Accelerometer error (imu0):   mean 1.5250178101, median 1.12346002274, std: 1.21648803954

Residuals
----------------------------
Reprojection error (cam0) [px]:    mean 1.97235813951, median 1.49951449429, std: 1.61988477771
Gyroscope error (imu0) [rad/s]:    mean 0.000850252366283, median 0.000764978244015, std: 0.000462228275357
Accelerometer error (imu0) [m/s^2]: mean 0.0271294732795, median 0.0199859165353, std: 0.0216408487461

Transformation (cam0):
-----------------------
T_ci:  (imu0 to cam0):
[[ 0.99970154  0.00836096  0.02295488  0.03199641]
 [ 0.00787798 -0.99974737  0.0210507   0.00010539]
 [ 0.02312508 -0.02086358 -0.99951485  0.00169301]
 [ 0.          0.          0.          1.        ]]

T_ic:  (cam0 to imu0):
[[ 0.99970154  0.00787798  0.02312508 -0.03202685]
 [ 0.00836096 -0.99974737 -0.02086358 -0.00012684]
 [ 0.02295488  0.0210507  -0.99951485  0.00095549]
 [ 0.          0.          0.          1.        ]]

timeshift cam0 to imu0: [s] (t_imu = t_cam + shift)
-0.0553047783851


Gravity vector in target coords: [m/s^2]
[-0.18778266  9.66680596 -1.6389091 ]


Calibration configuration
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cam0

-----
  Camera model: pinhole
  Focal length: [3512.9804344883687, 3515.7691715628425]
  Principal point: [1767.404360690051, 2373.26776919397]
  Distortion model: radtan
  Distortion coefficients: [0.054035310809794915, -0.06459059122466279, 0.001764042666214944, 0.002933604813141197]
  Type: checkerboard
  Rows
    Count: 7
    Distance: 0.03 [m]
  Cols
    Count: 6
    Distance: 0.03 [m]


IMU configuration
=================

IMU0:
----------------------------
  Model: calibrated
  Update rate: 101.703460693
  Accelerometer:
    Noise density: 0.001764
    Noise density (discrete): 0.0177896107834
    Random walk: 0.001764
  Gyroscope:
    Noise density: 0.00012217304764
    Noise density (discrete): 0.0012320923842
    Random walk: 0.00012217304764
  T_i_b
    [[ 1.  0.  0.  0.]
     [ 0.  1.  0.  0.]
     [ 0.  0.  1.  0.]
     [ 0.  0.  0.  1.]]
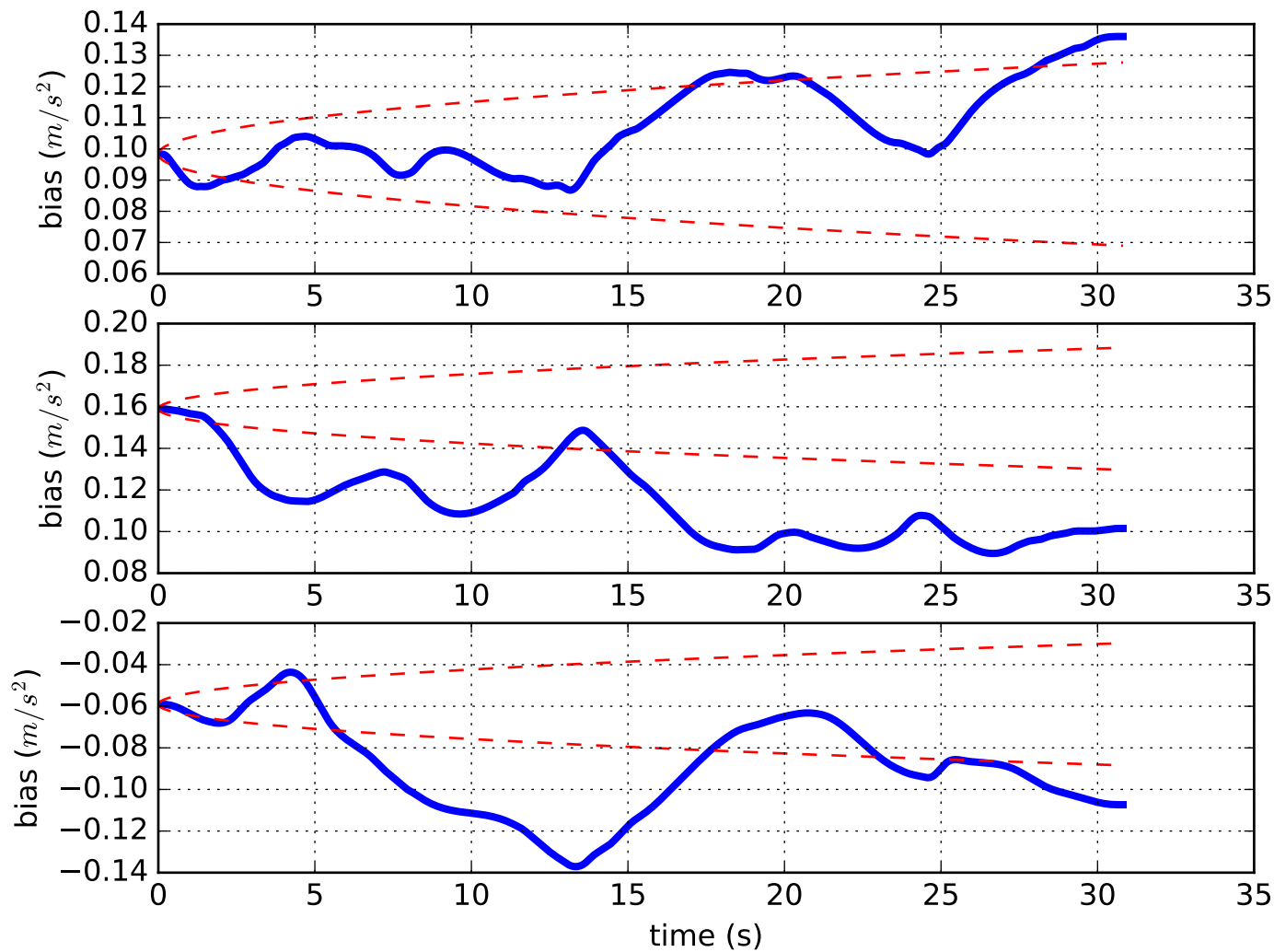  time offset with respect to IMU0: 0.0 [s]

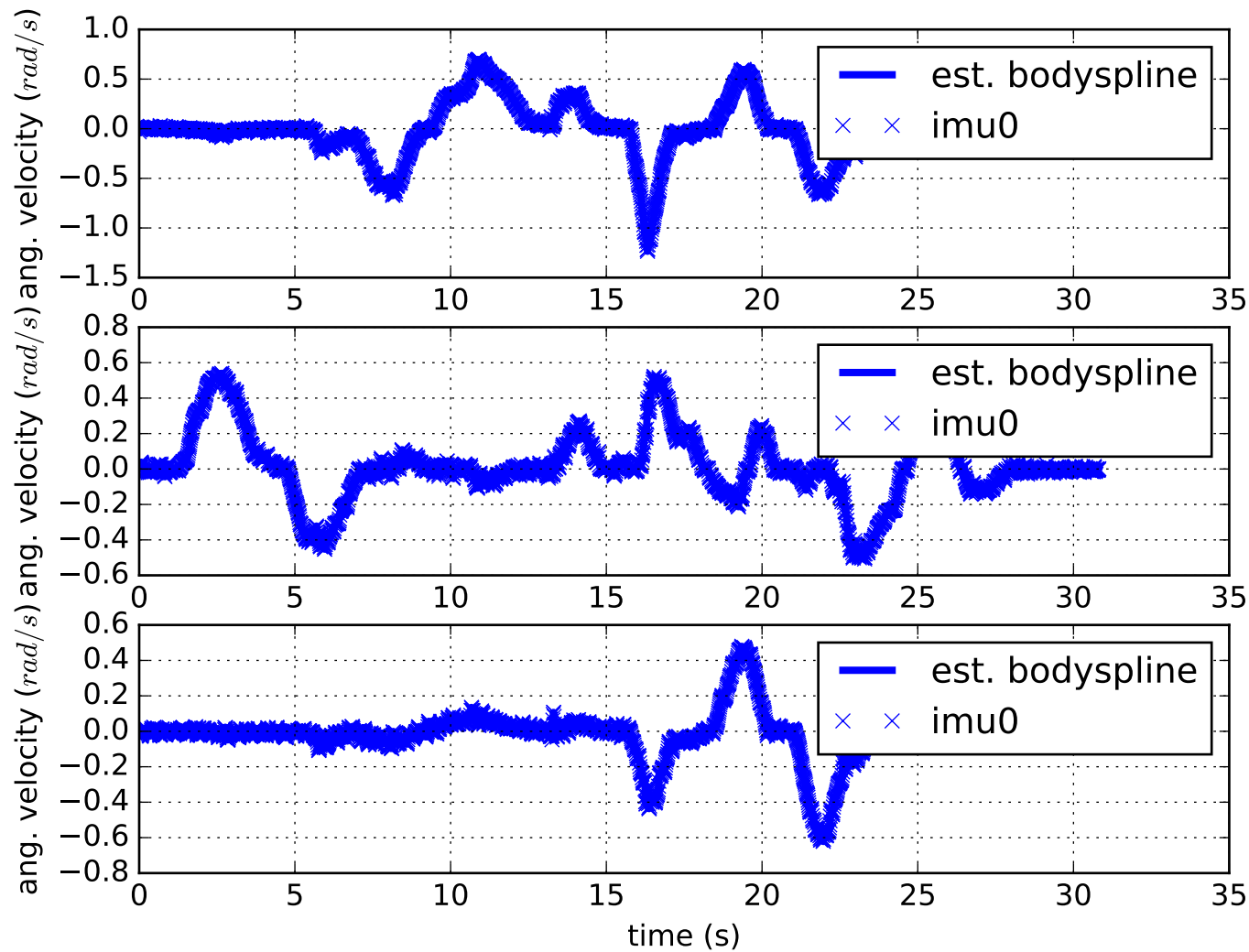Comparison of predicted and measured specific force (imu0 frame)
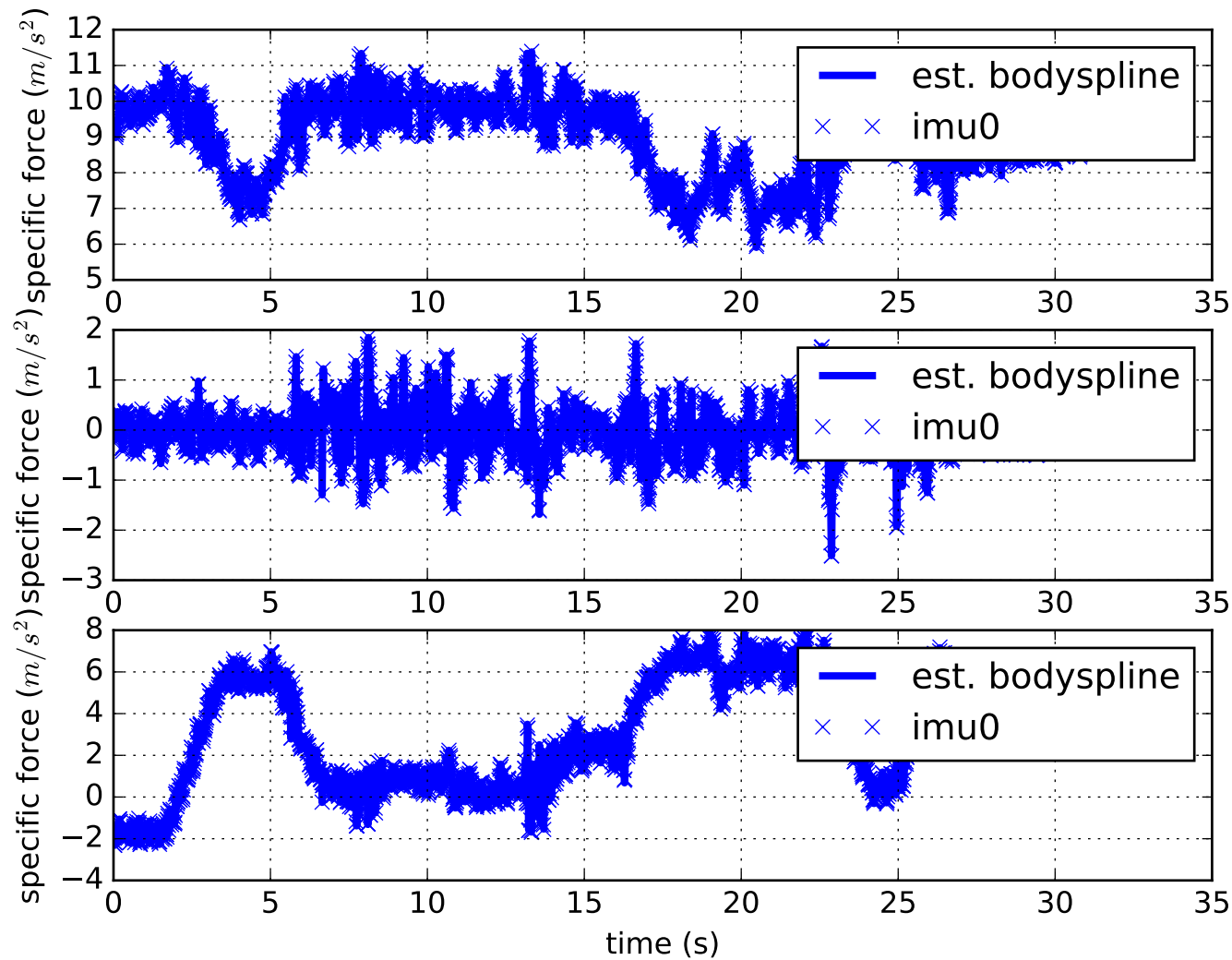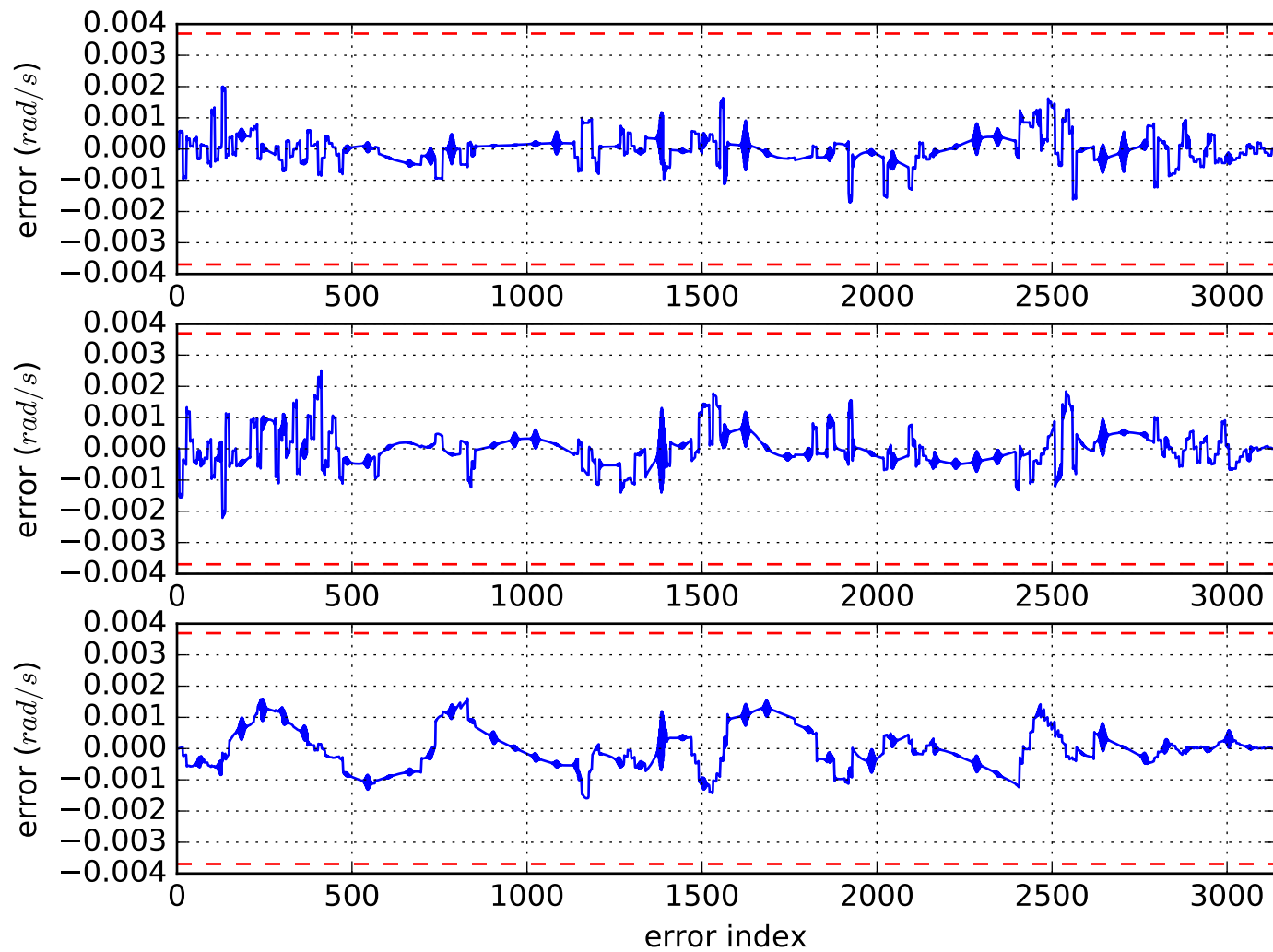
imu0: acceleration error
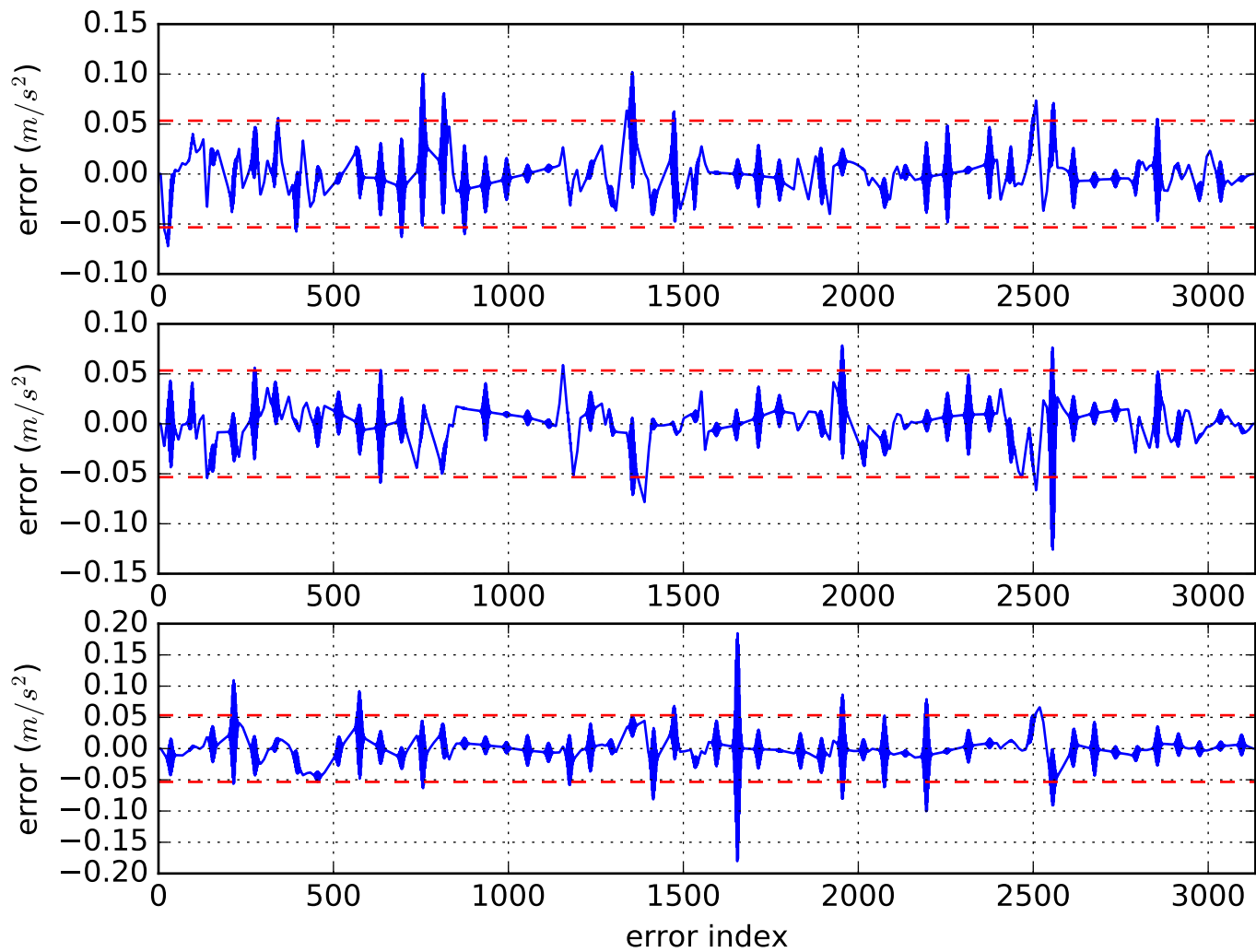
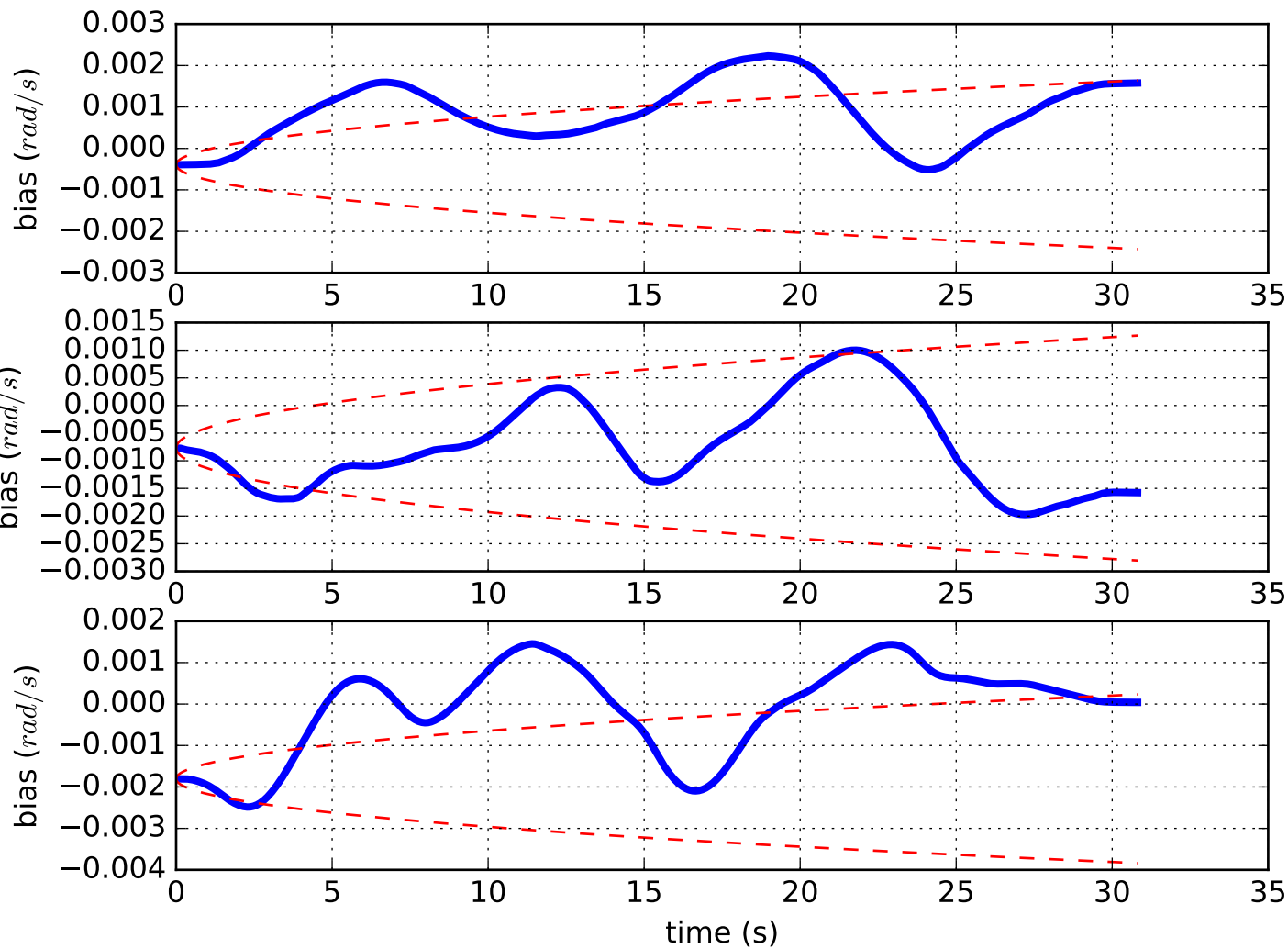imu0: estimated accelerometer bias (imu frame)

Comparison of predicted and measured angular velocities (body frame)

imu0: angular velocities error

imu0: estimated gyro bias (imu frame)

cam0: reprojection errors