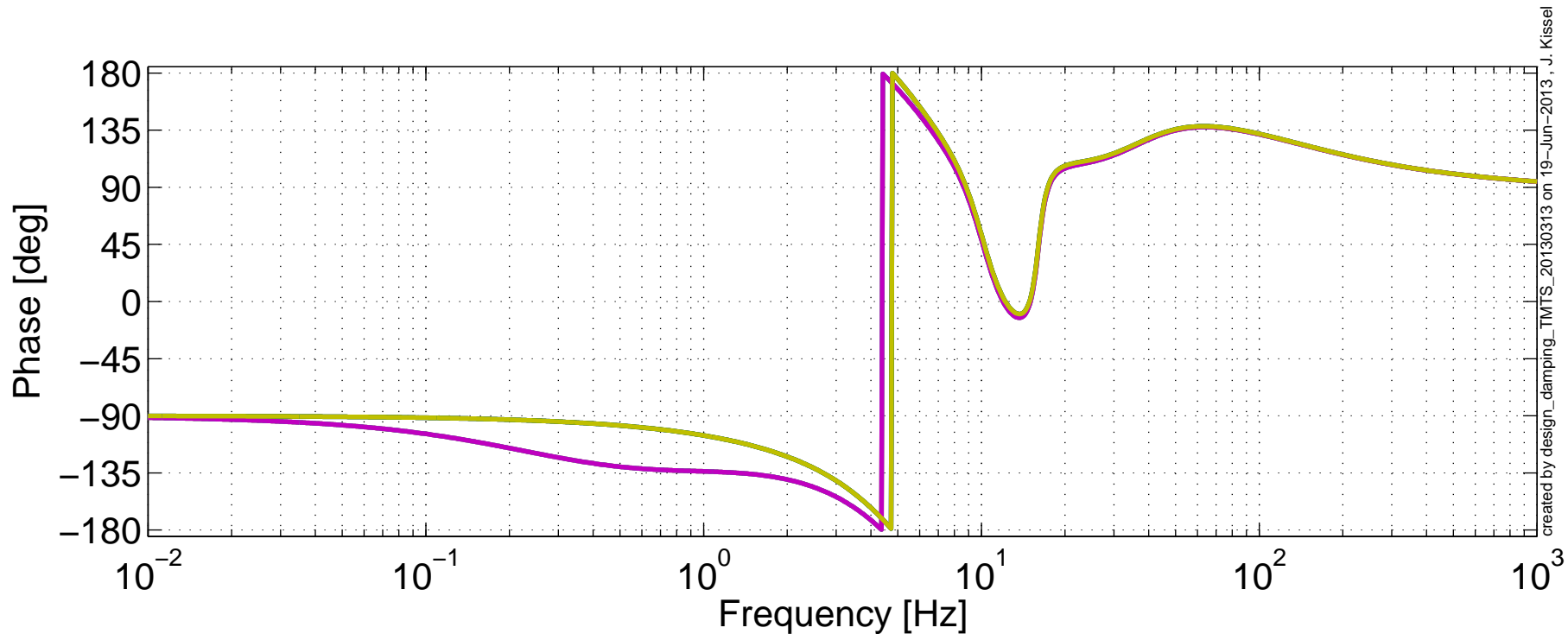
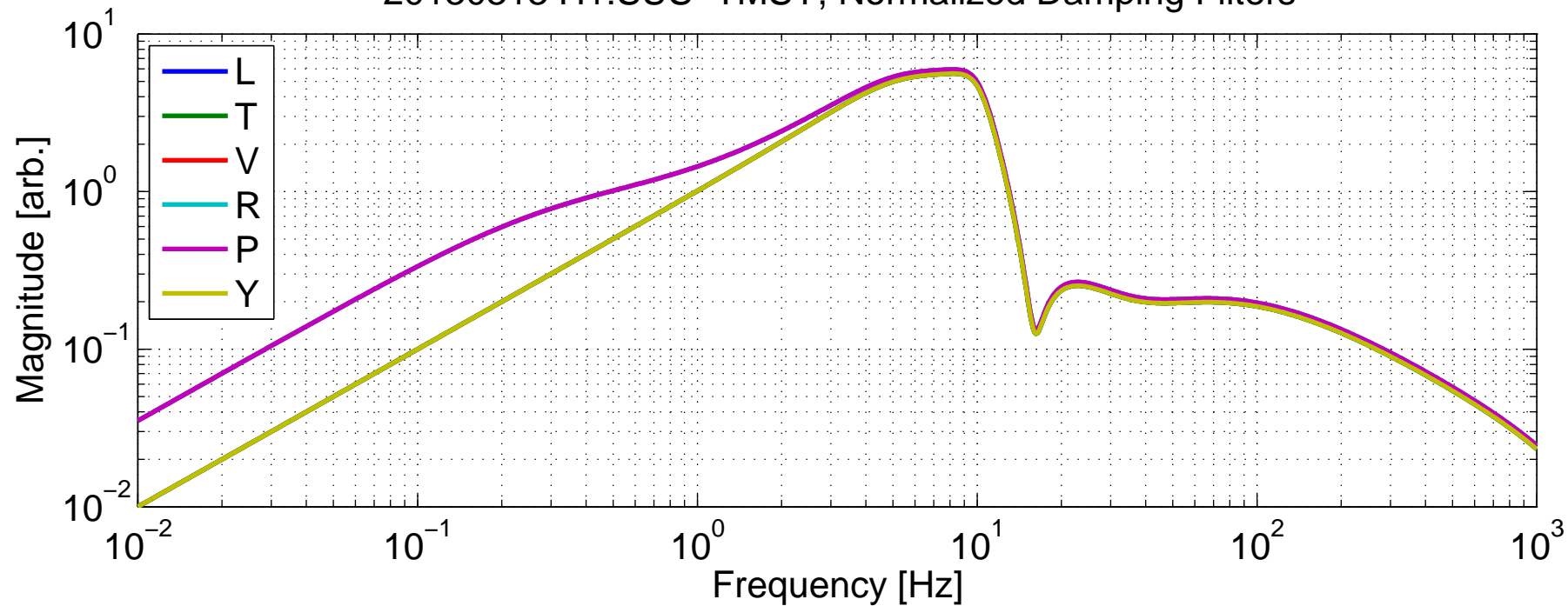
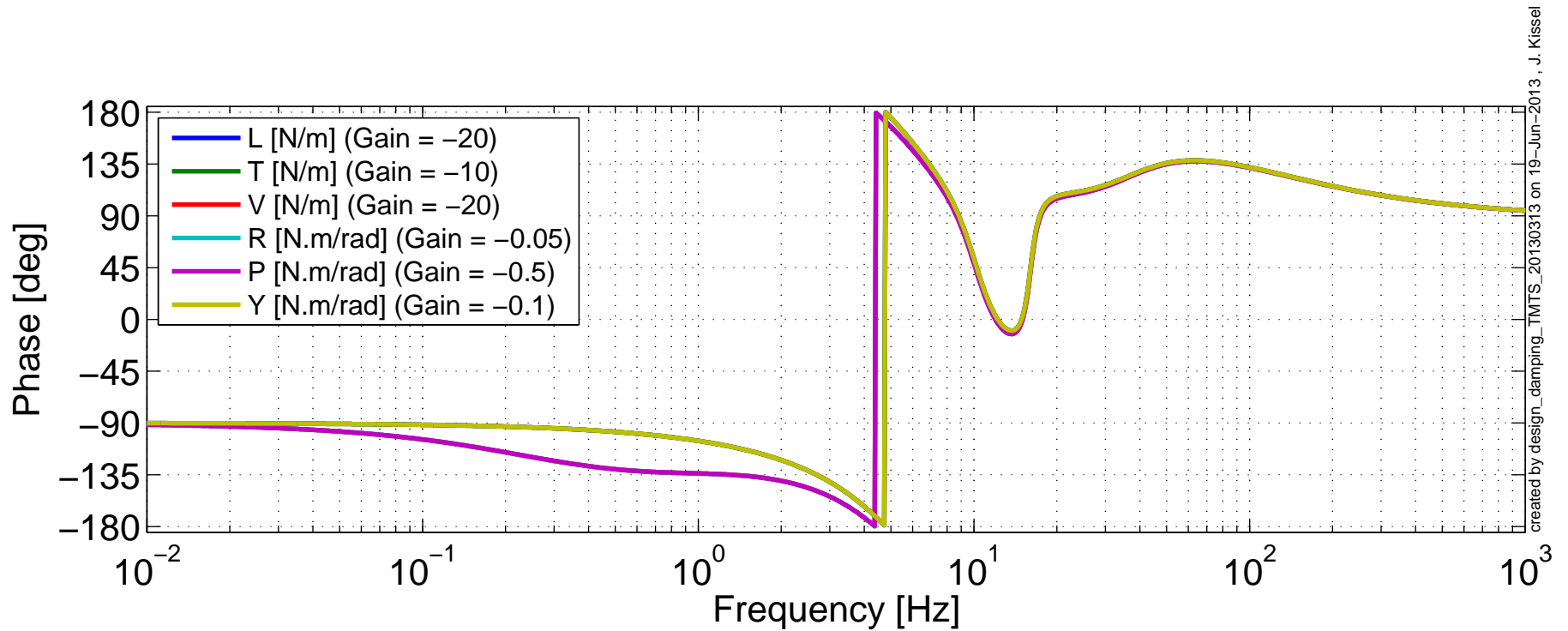
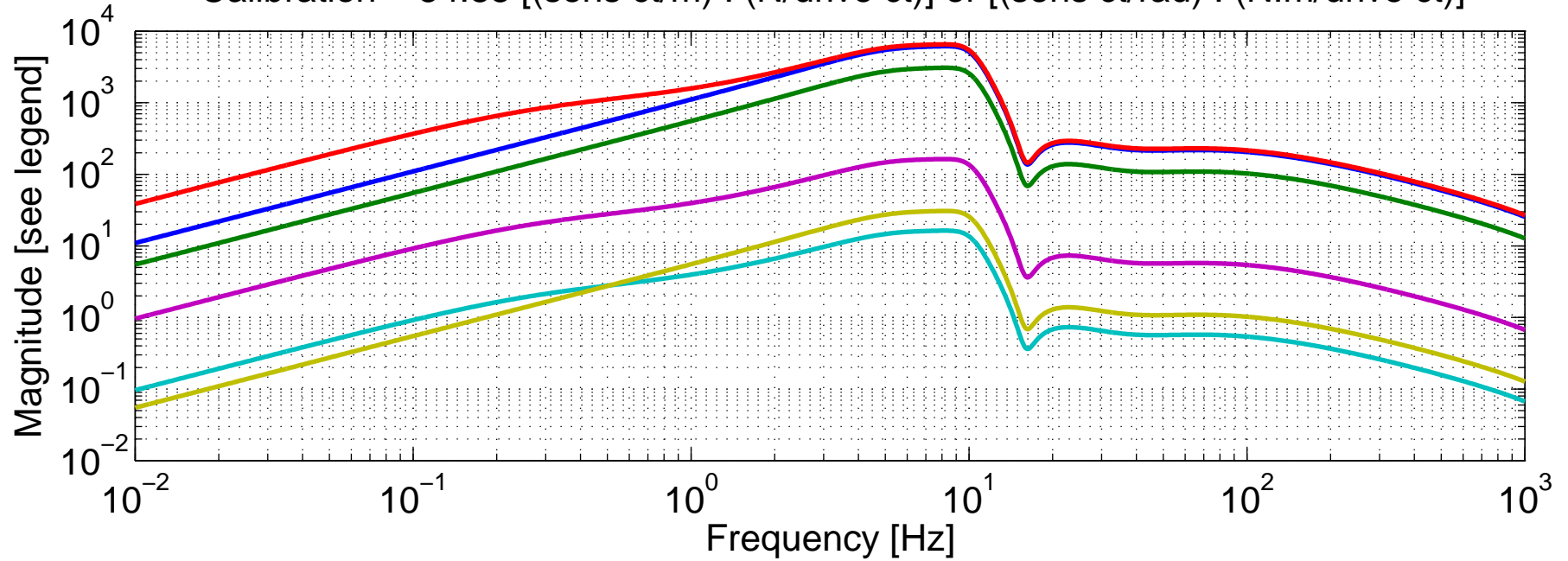


20130313 H1:SUS-TMSY, Normalized Damping Filters



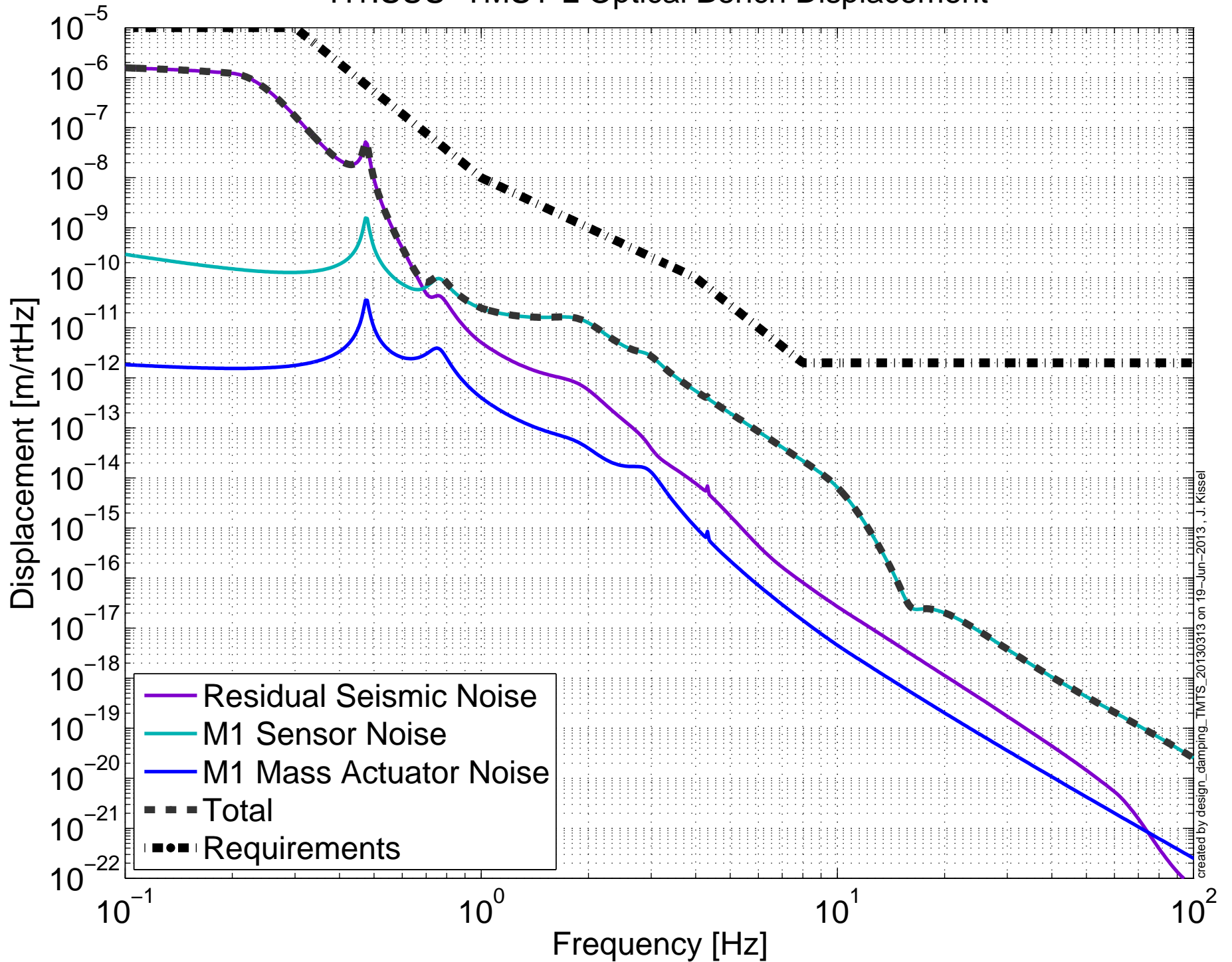
created by design_damping_TMTS_20130313 on 19-Jun-2013, J. Kissel

20130313 H1:SUS-TMSY, Calibrated Damping Filters
 Calibration = 54.83 [(sens ct/m) . (N/drive ct)] or [(sens ct/rad) . (N.m/drive ct)]



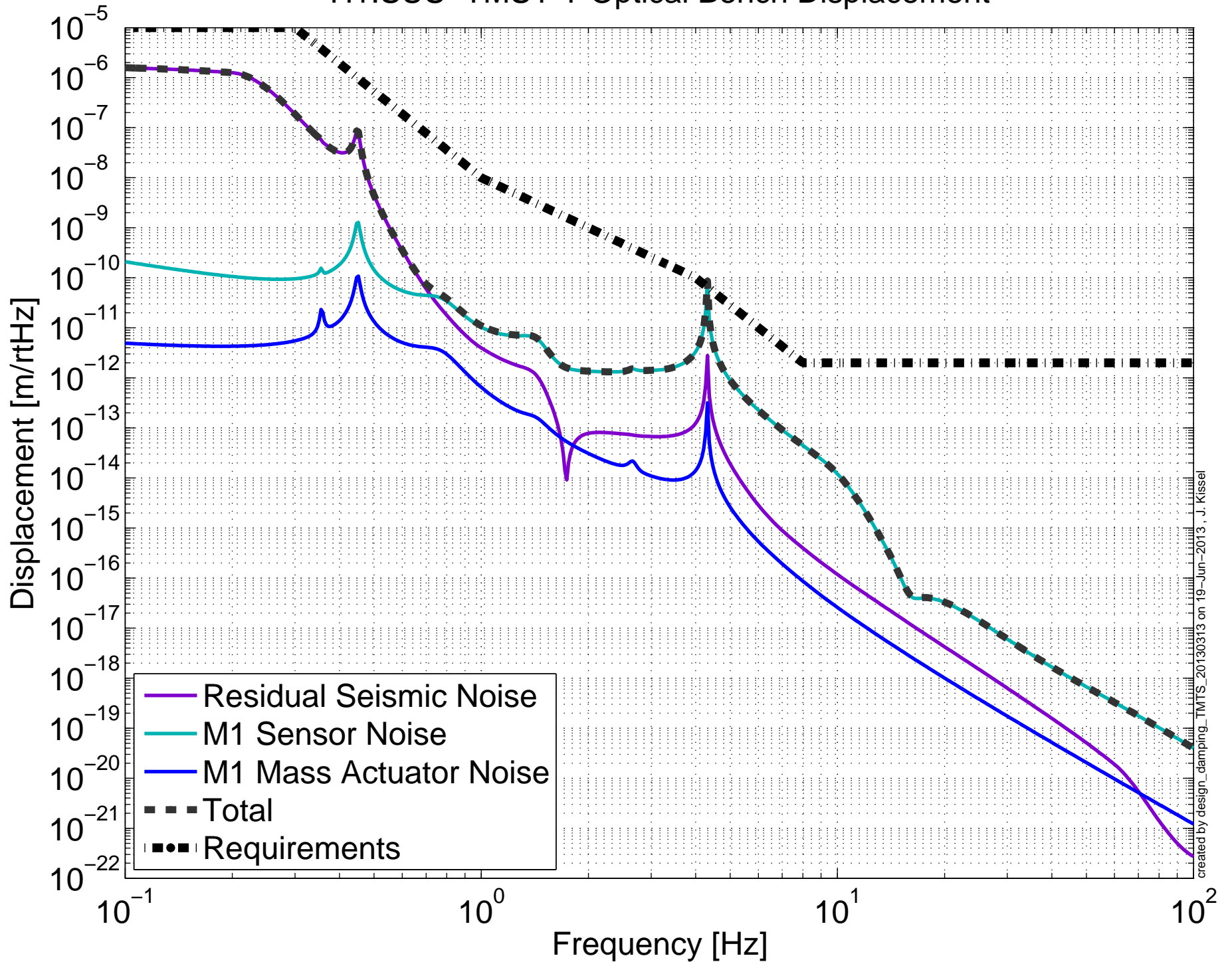
Damping Loop Performance

H1:SUS-TMSY L Optical Bench Displacement



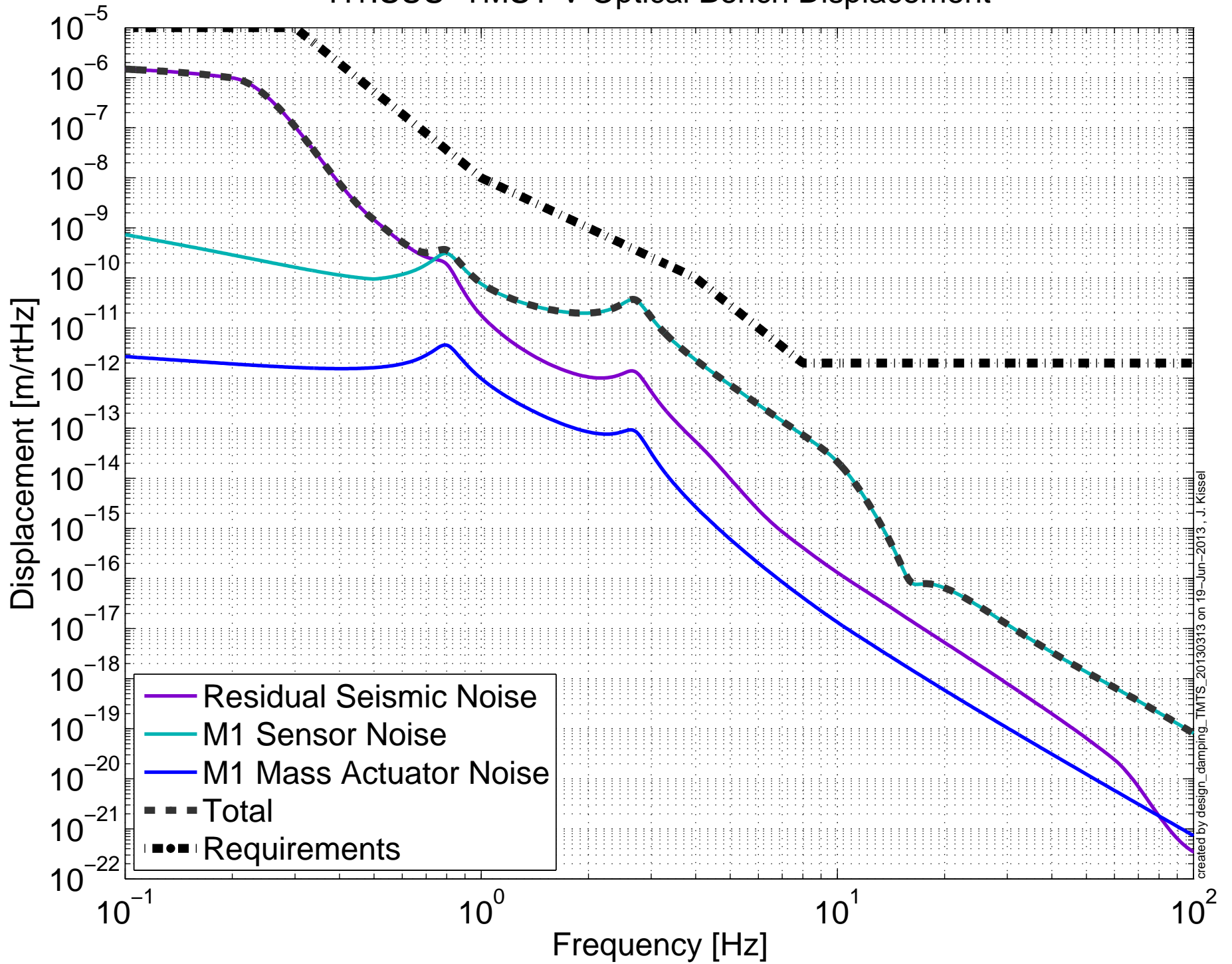
Damping Loop Performance

H1:SUS-TMSY T Optical Bench Displacement



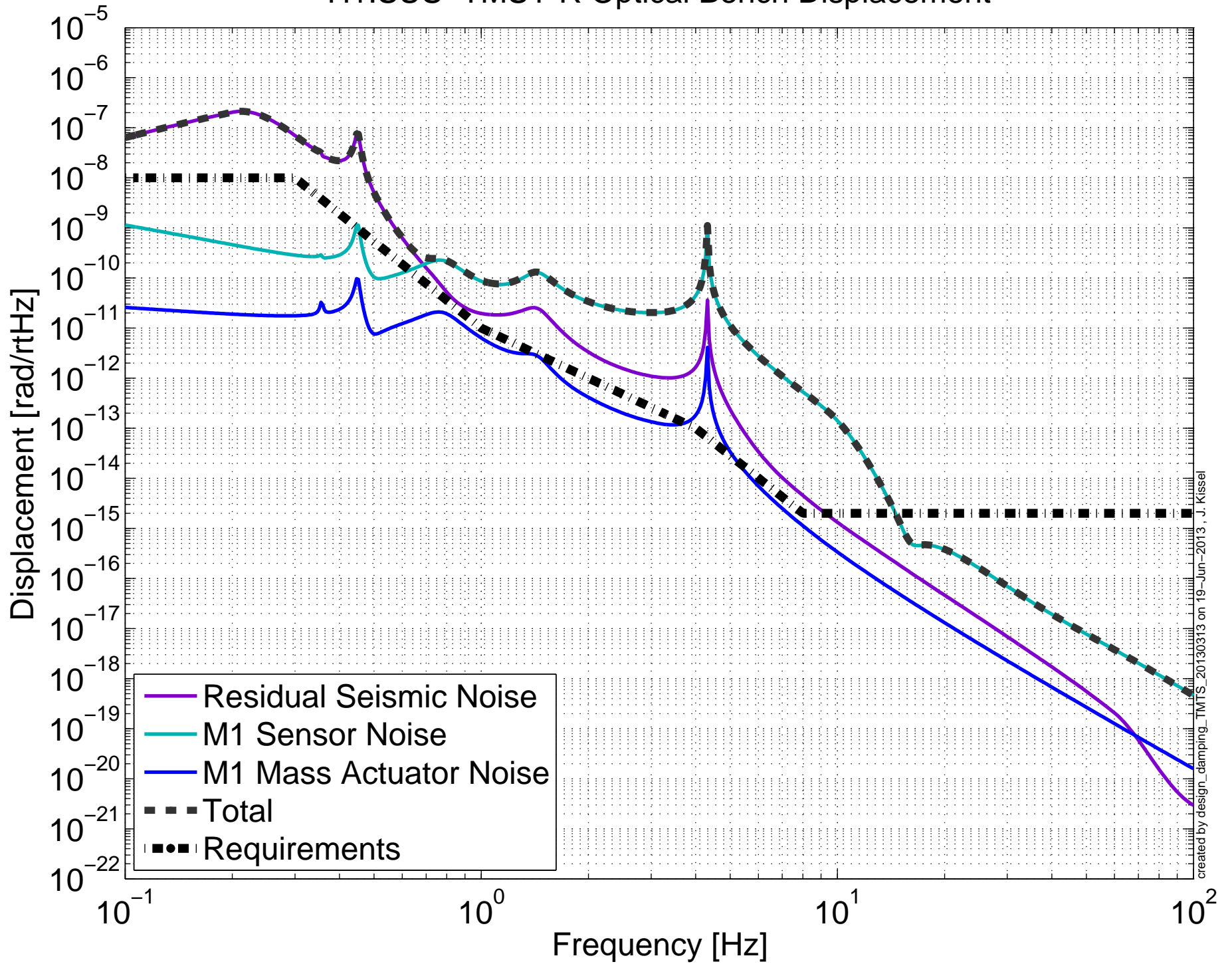
Damping Loop Performance

H1:SUS-TMSY V Optical Bench Displacement



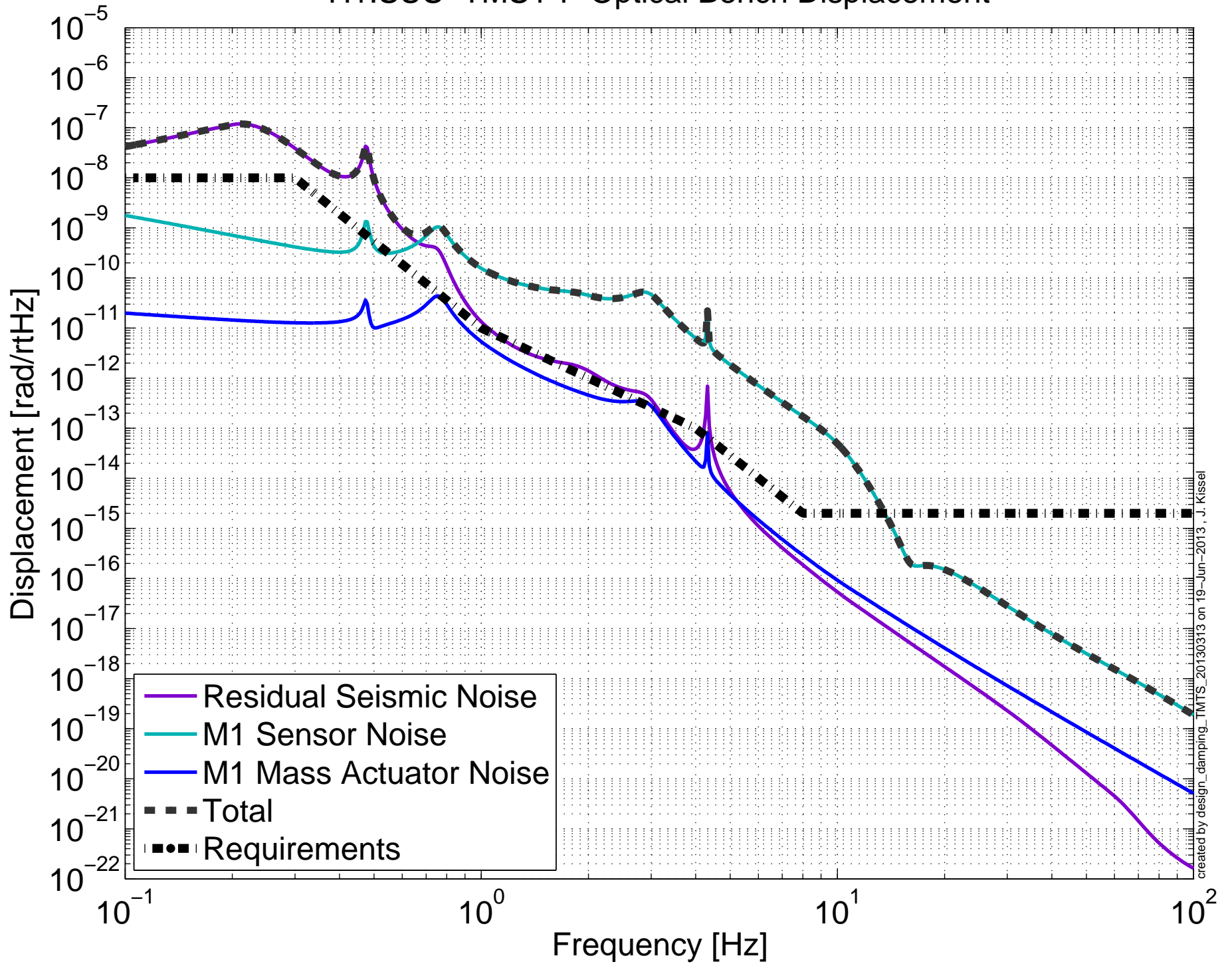
Damping Loop Performance

H1:SUS-TMSY R Optical Bench Displacement



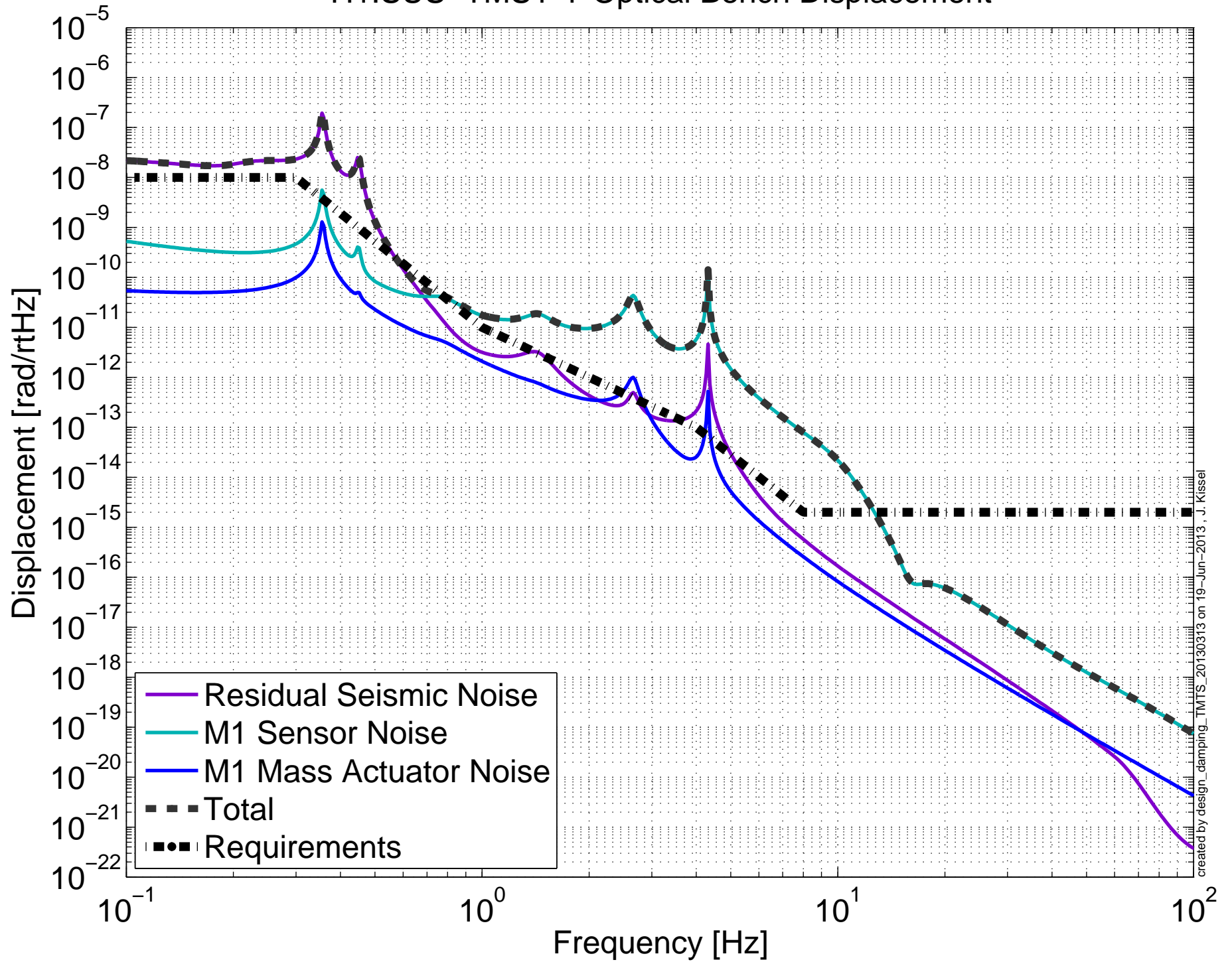
Damping Loop Performance

H1:SUS-TMSY P Optical Bench Displacement



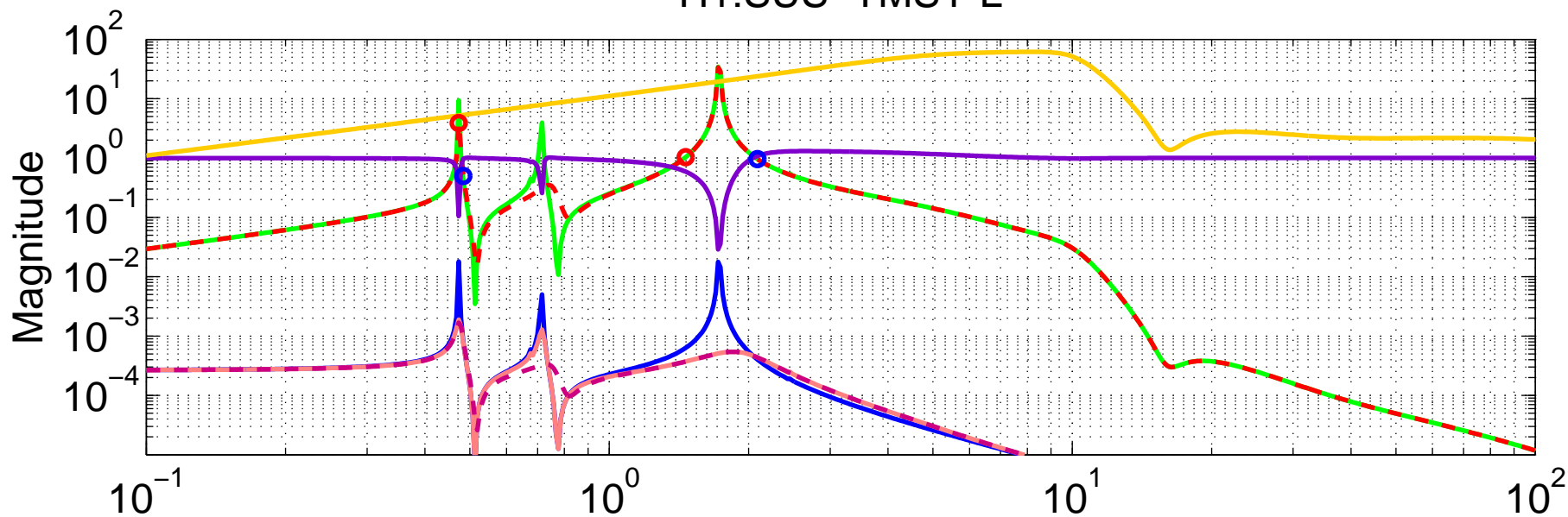
Damping Loop Performance

H1:SUS-TMSY Y Optical Bench Displacement

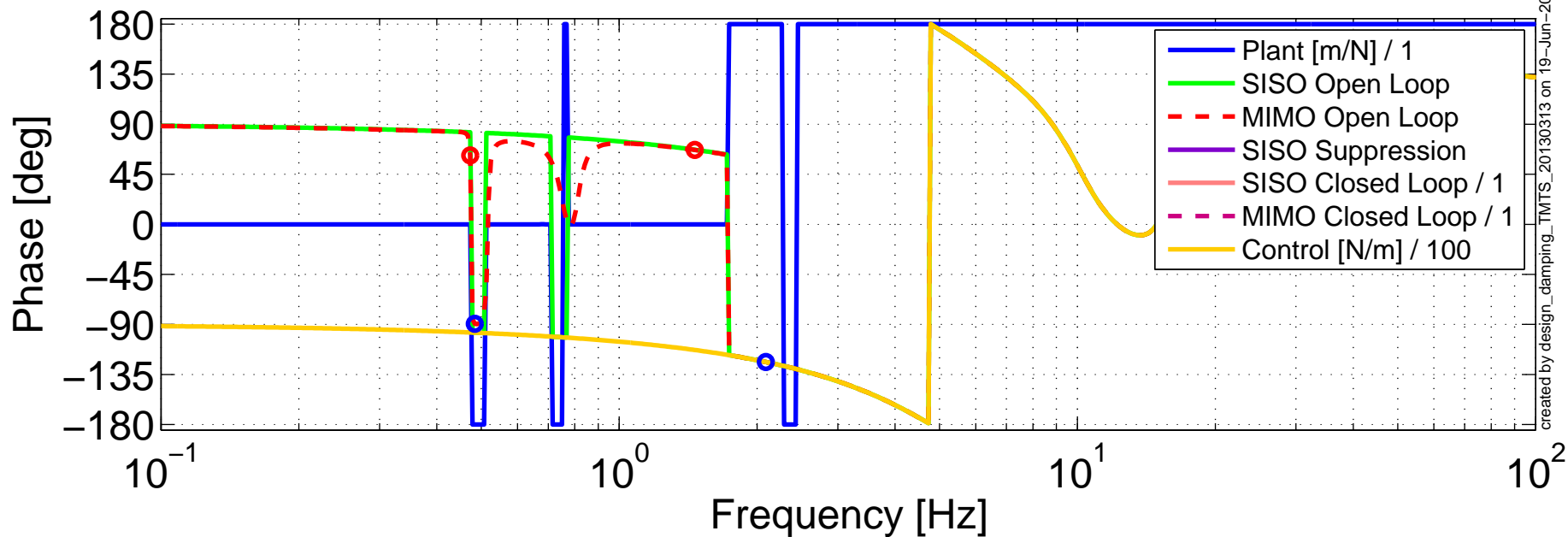


Damping Loop Design

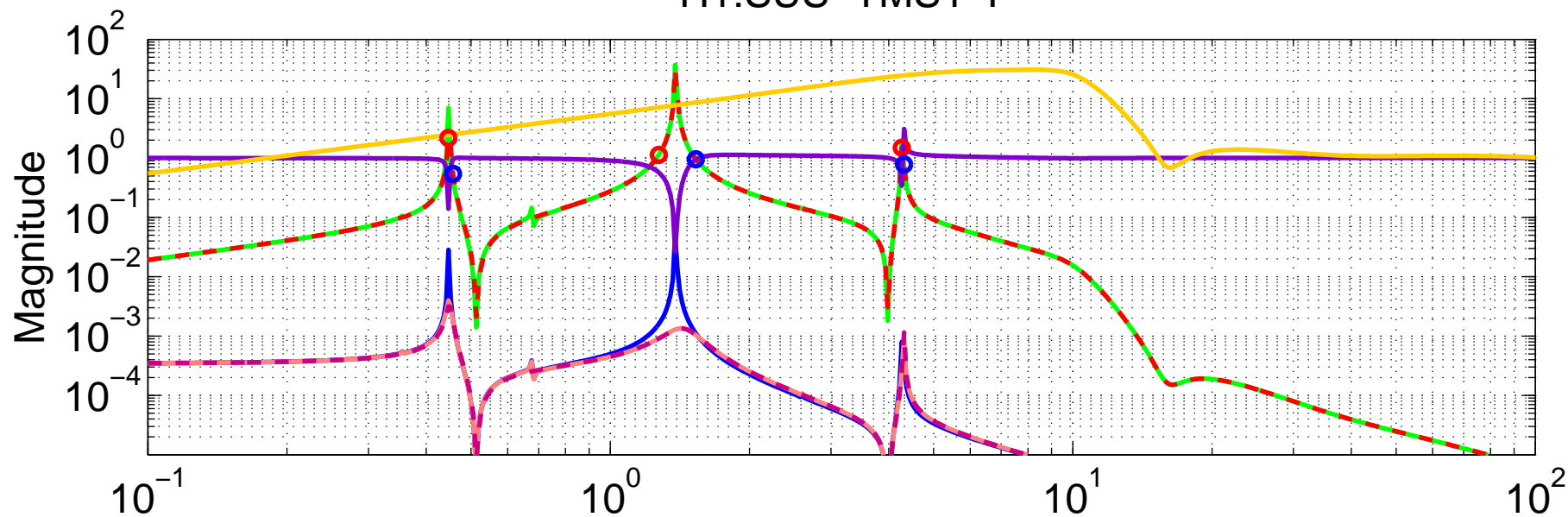
H1:SUS-TMSY L



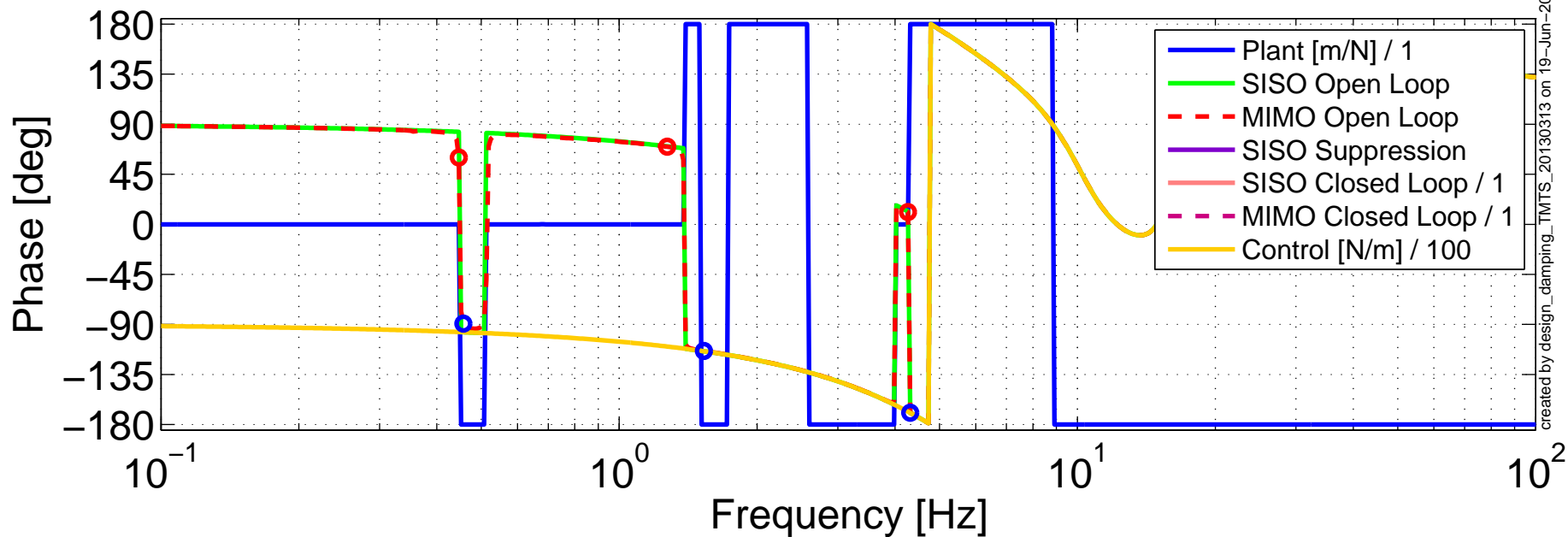
MIMO LUGF Phase Margins (red): [118 113] [deg]
MIMO UUGF Phase Margins (blue): [90.5 56.2] [deg]



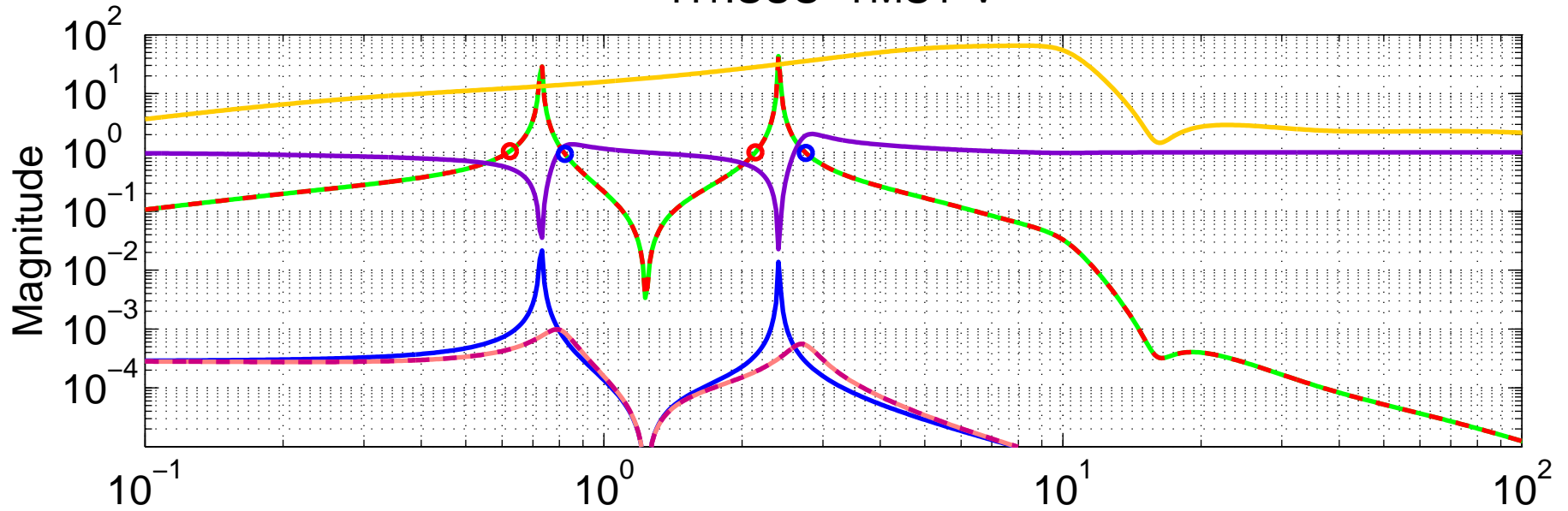
Damping Loop Design H1:SUS-TMSY T



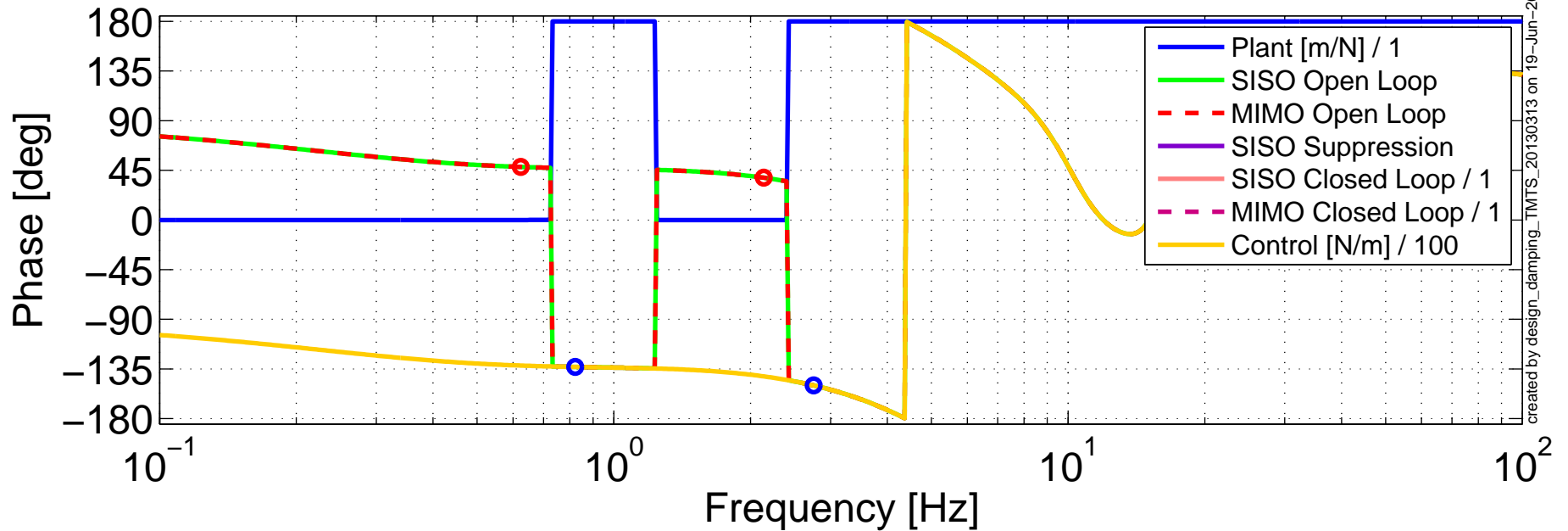
MIMO LUGF Phase Margins (red): [120 110 169] [deg]
MIMO UUGF Phase Margins (blue): [90.7 66.2 10.7] [deg]



Damping Loop Design H1:SUS-TMSY V

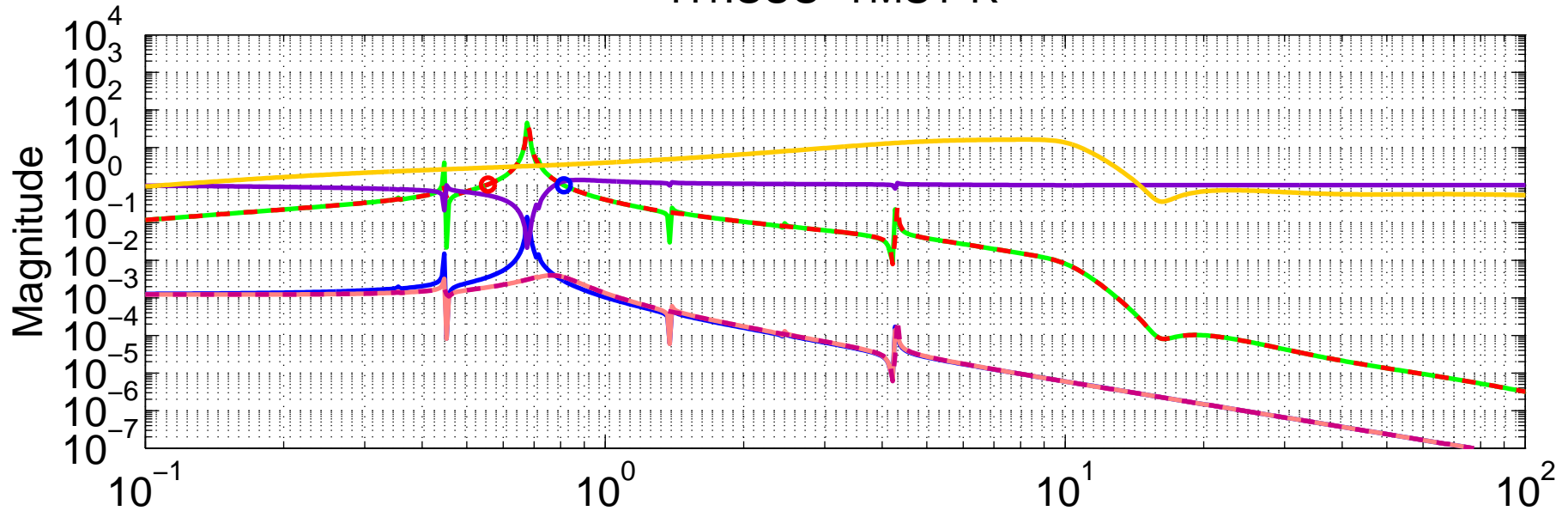


MIMO LUGF Phase Margins (red): [132 142] [deg]
MIMO UUGF Phase Margins (blue): [46.8 30] [deg]

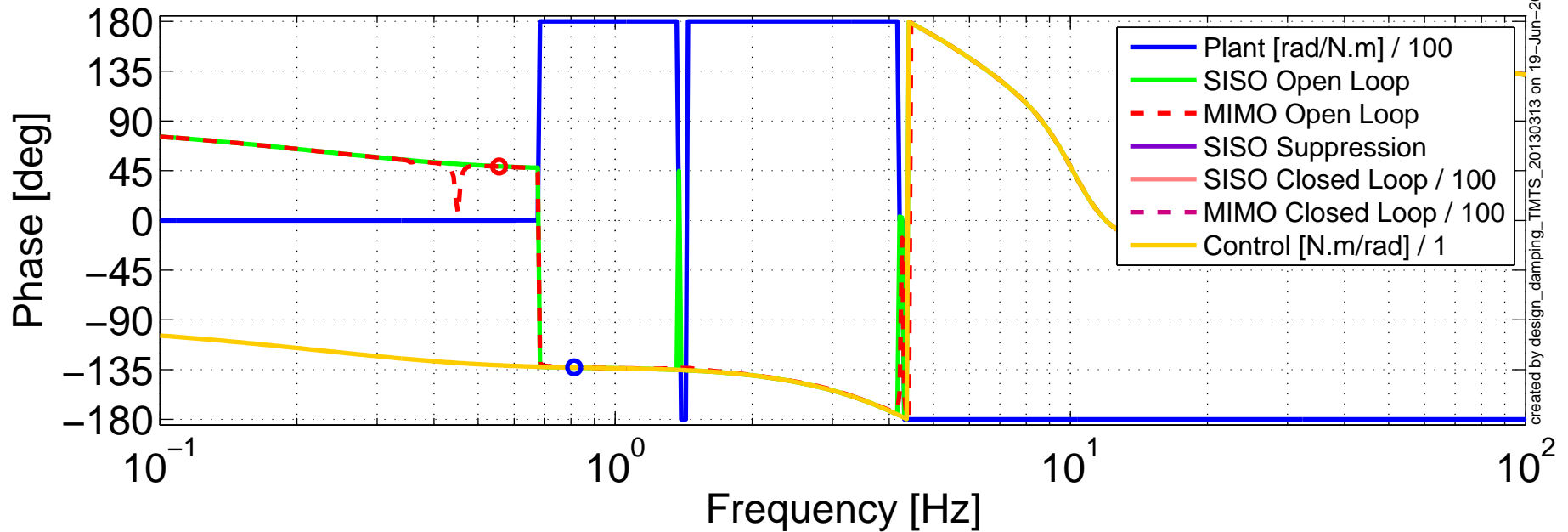


Damping Loop Design

H1:SUS-TMSY R

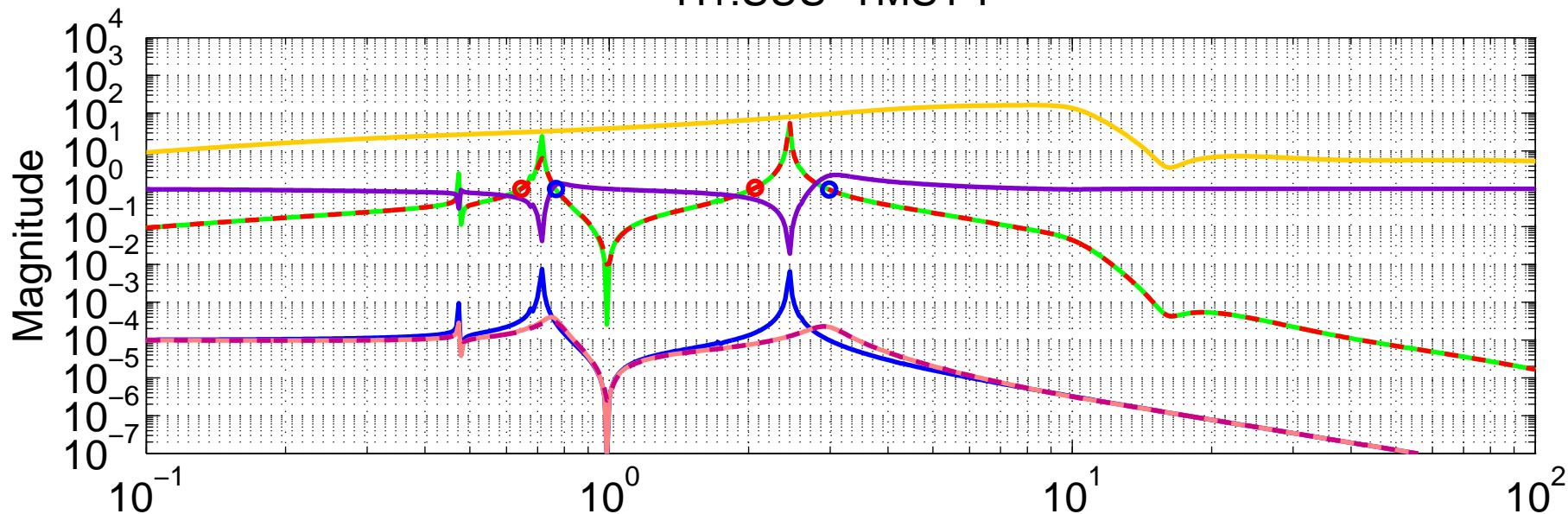


MIMO LUGF Phase Margins (red): [131] [deg]
MIMO UUGF Phase Margins (blue): [47] [deg]

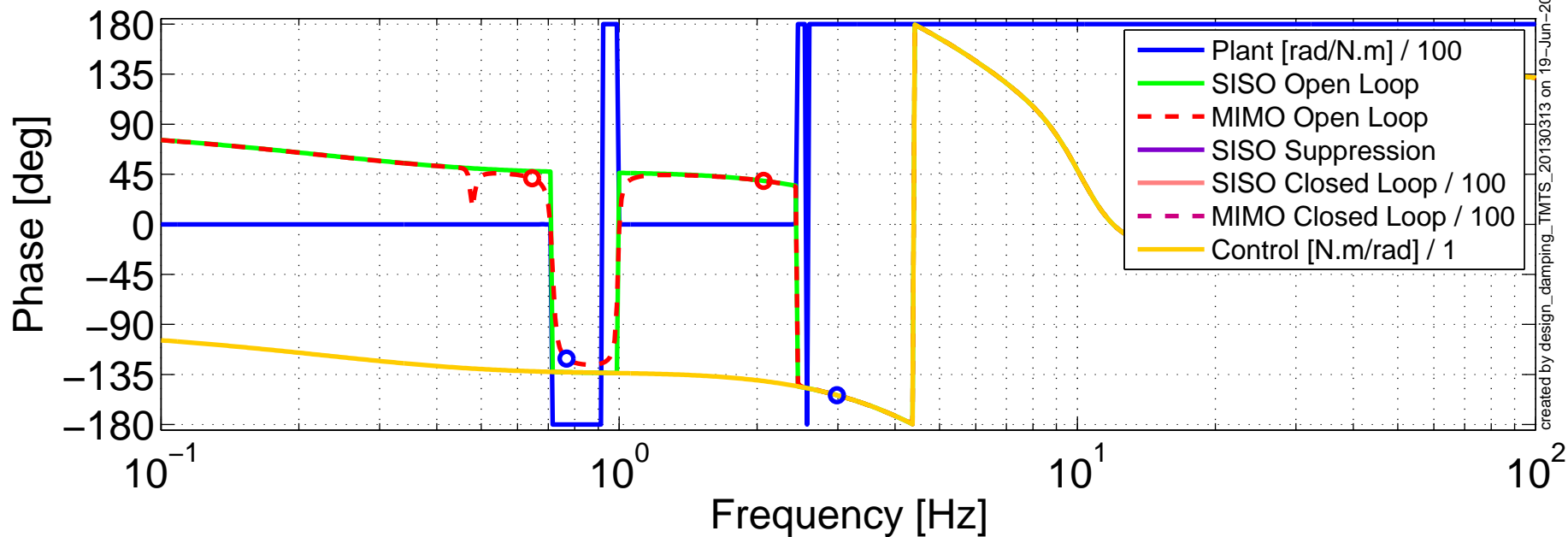


Damping Loop Design

H1:SUS-TMSY P

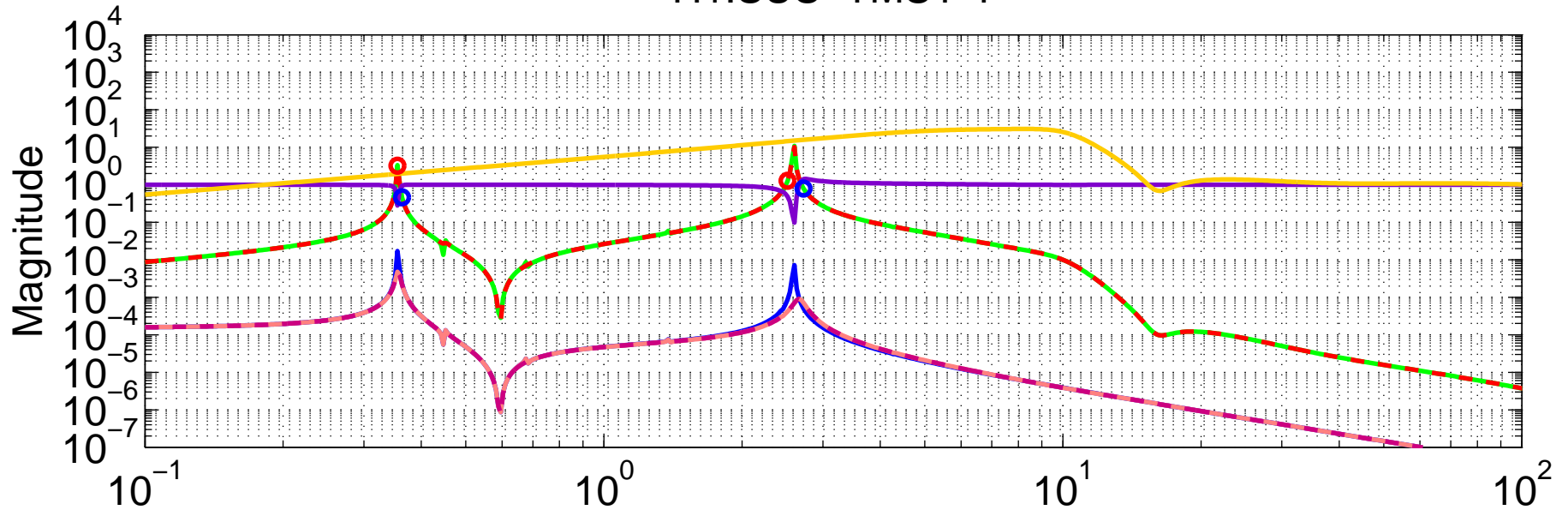


MIMO LUGF Phase Margins (red): [139 141] [deg]
MIMO UUGF Phase Margins (blue): [59.3 26.4] [deg]

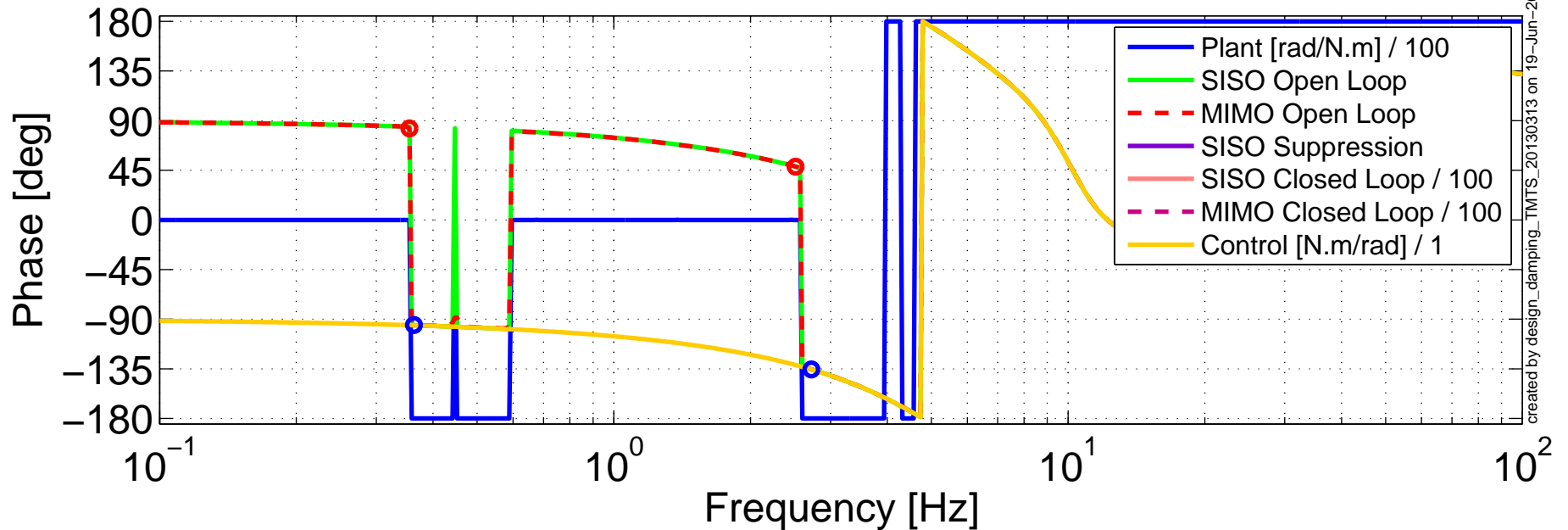


Damping Loop Design

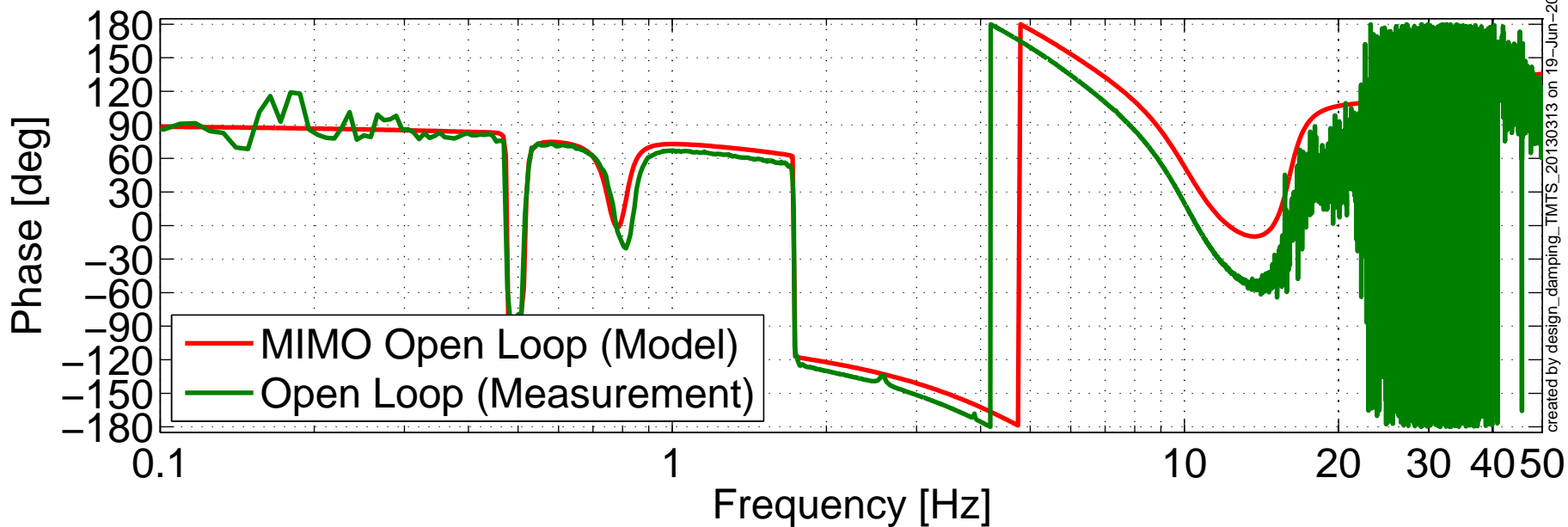
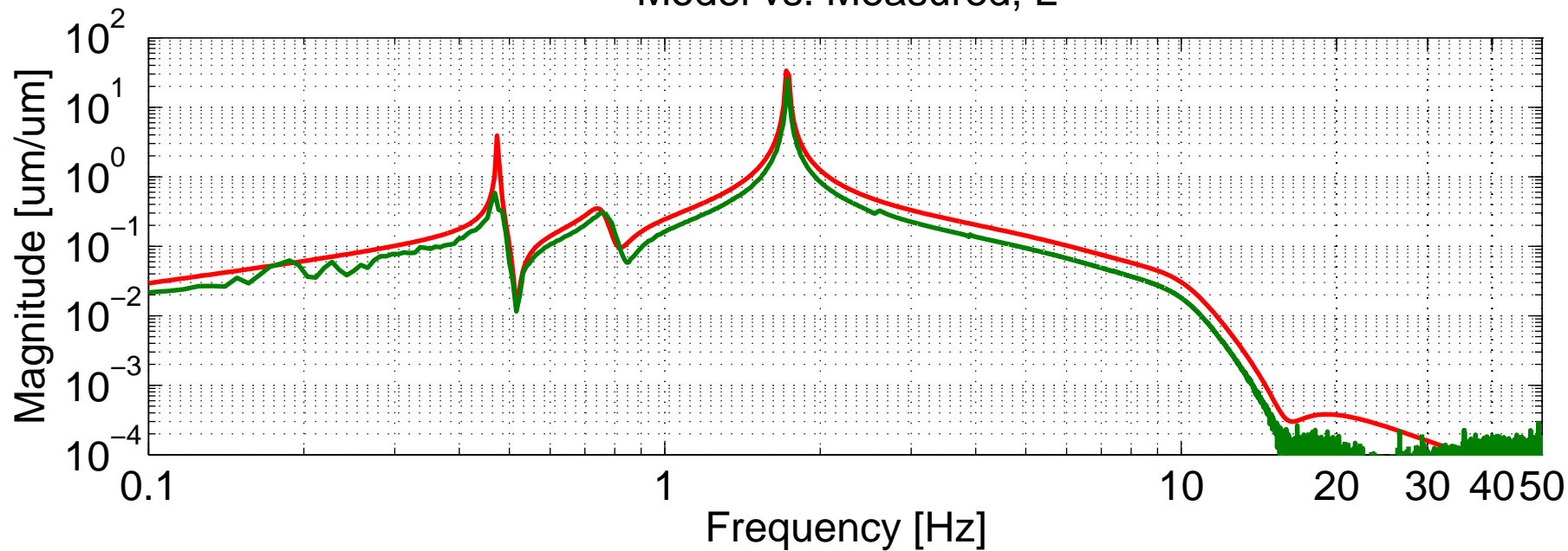
H1:SUS-TMSY Y



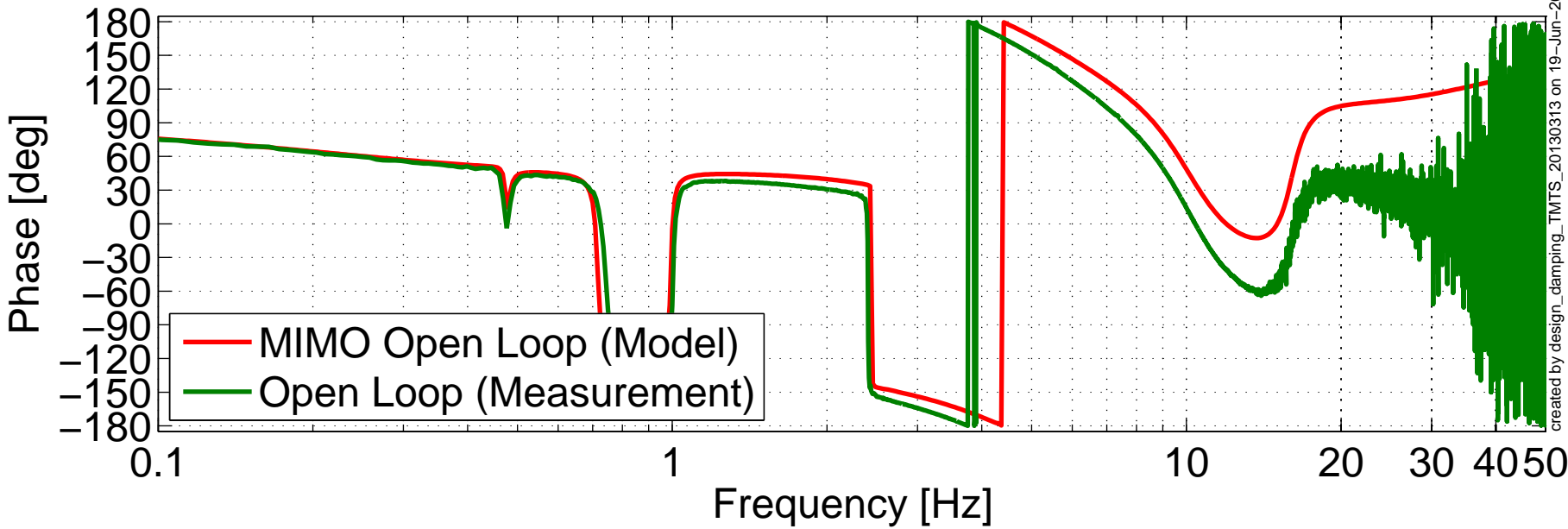
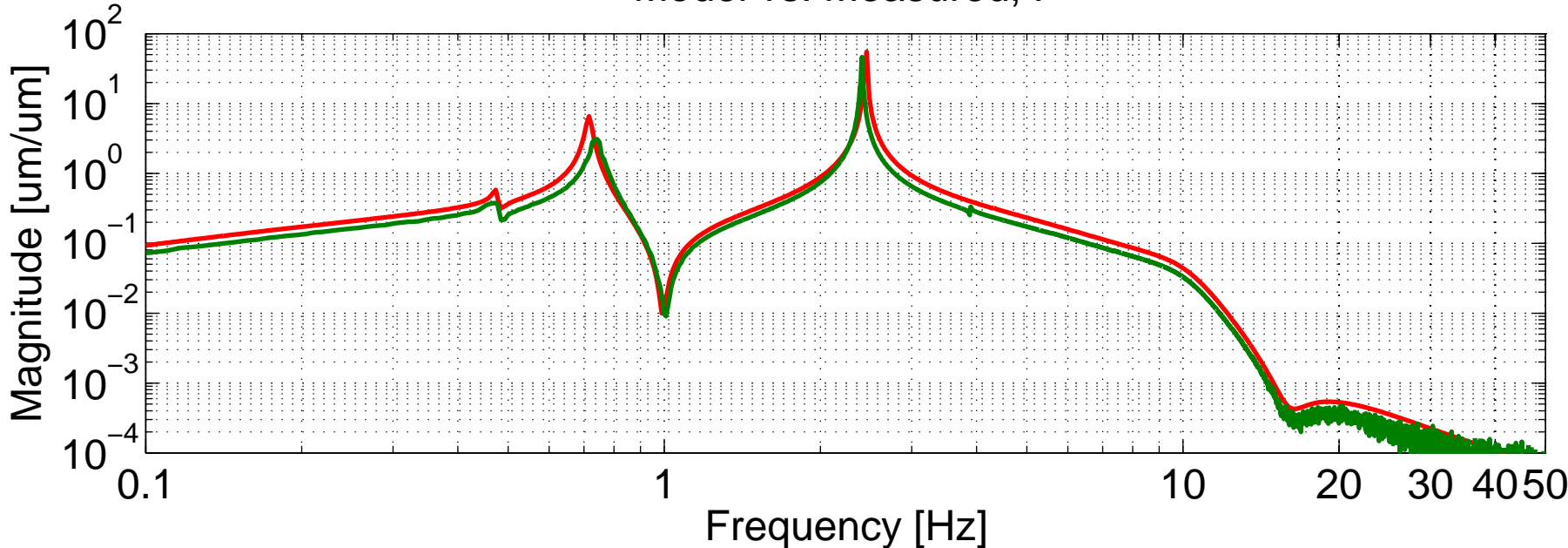
MIMO LUGF Phase Margins (red): [97 132] [deg]
MIMO UUGF Phase Margins (blue): [84.7 44.5] [deg]



H1:SUS-TMSY Open Loop Gain TF Model vs. Measured, L

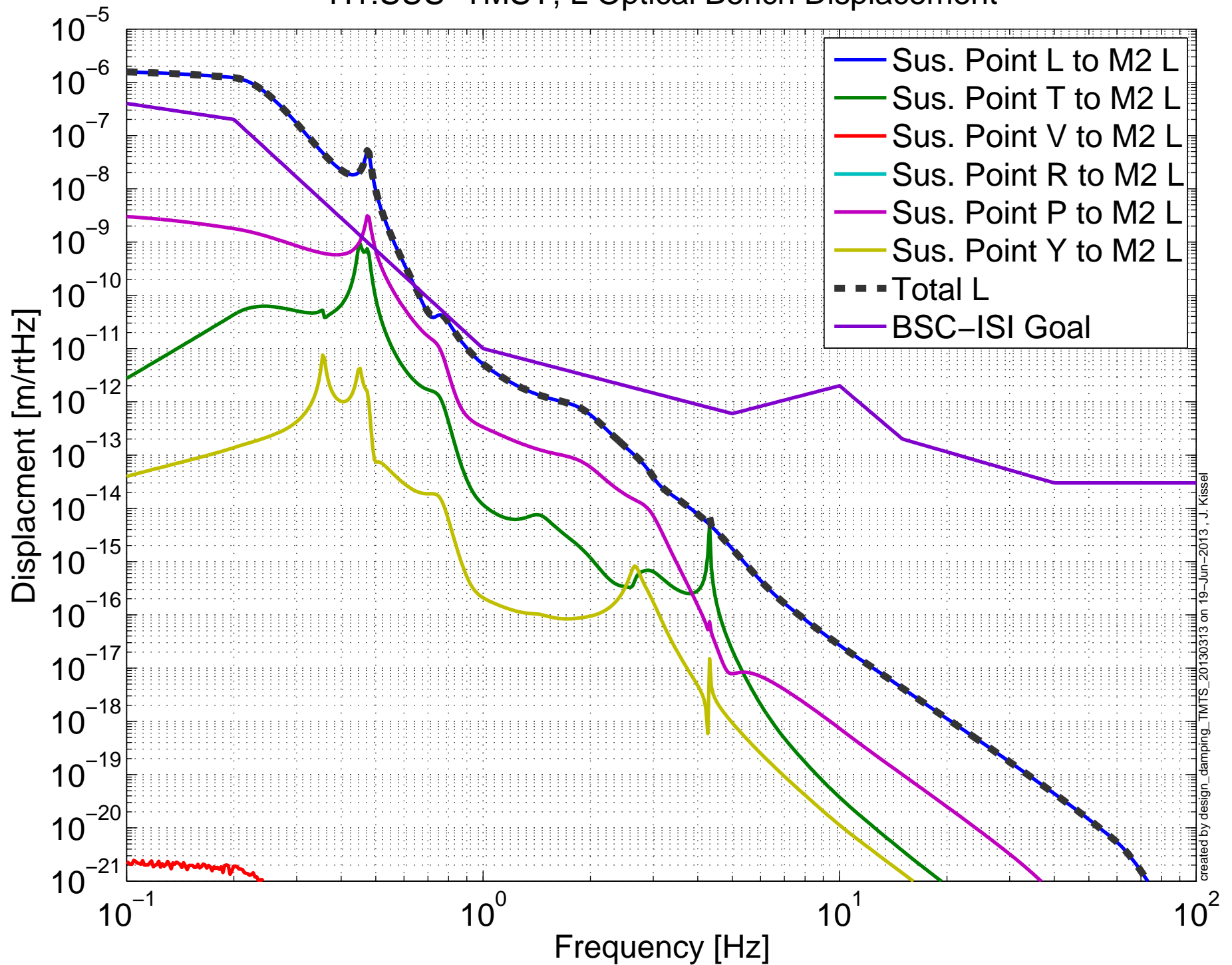


H1:SUS-TMSY Open Loop Gain TF Model vs. Measured, P



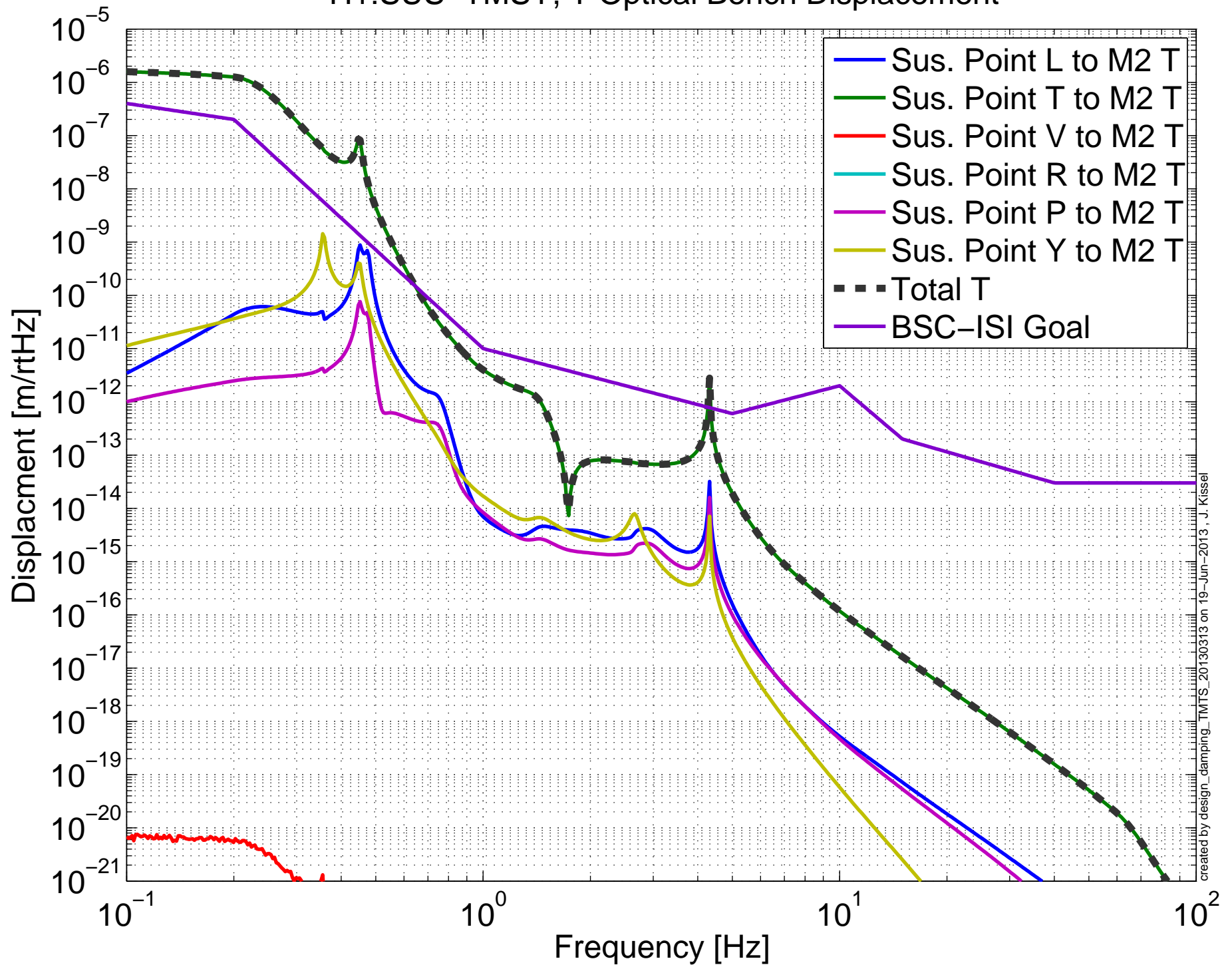
created by design_damping_TMTS_20130313 on 19-Jun-2013, J. Kissel

Projected Sus. Point > Optical Bench Seismic Noise Budget H1:SUS-TMSY, L Optical Bench Displacement



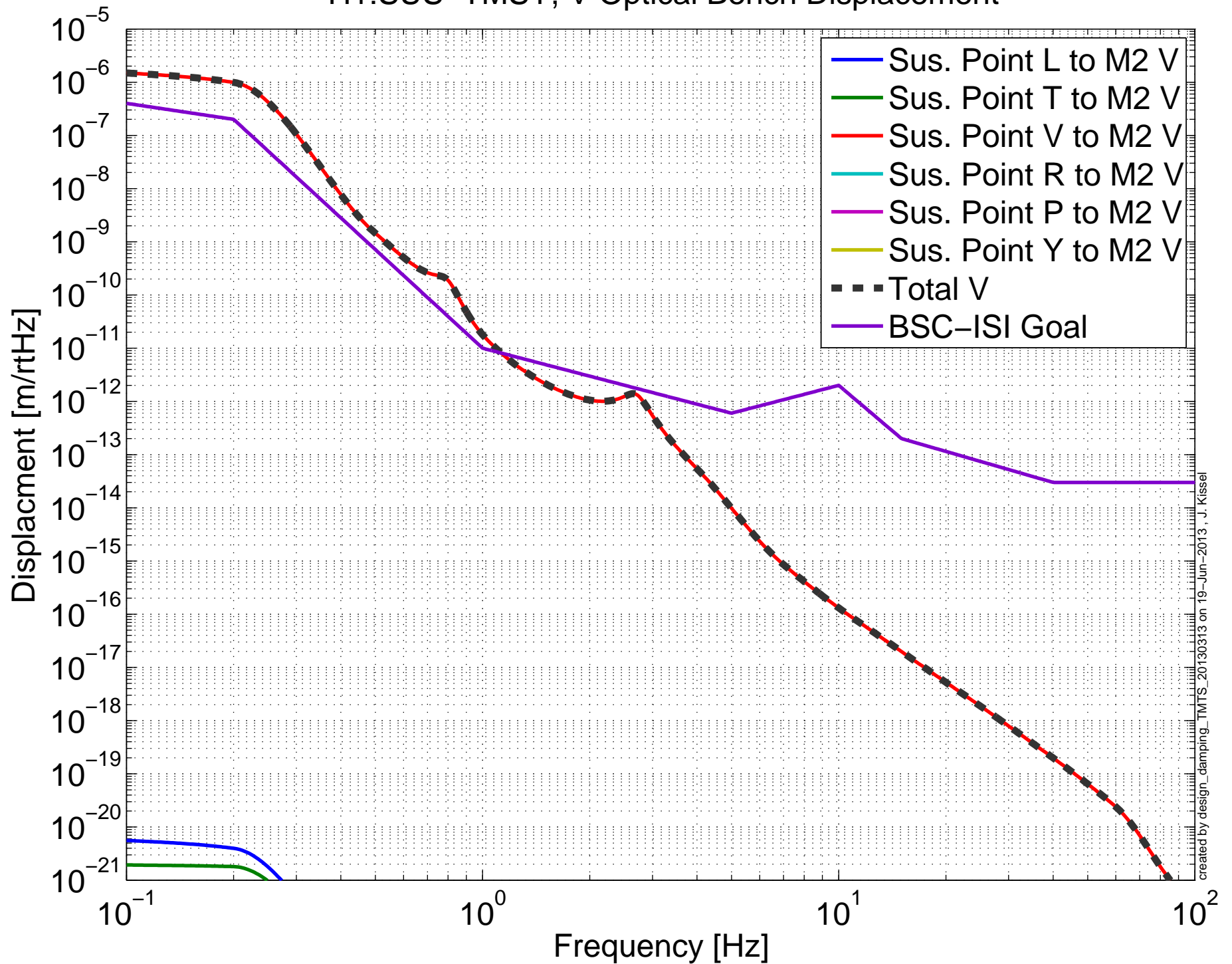
created by design_damping_TMTS_20130313 on 19-Jun-2013 - J. Kissel

Projected Sus. Point > Optical Bench Seismic Noise Budget H1:SUS-TMSY, T Optical Bench Displacement

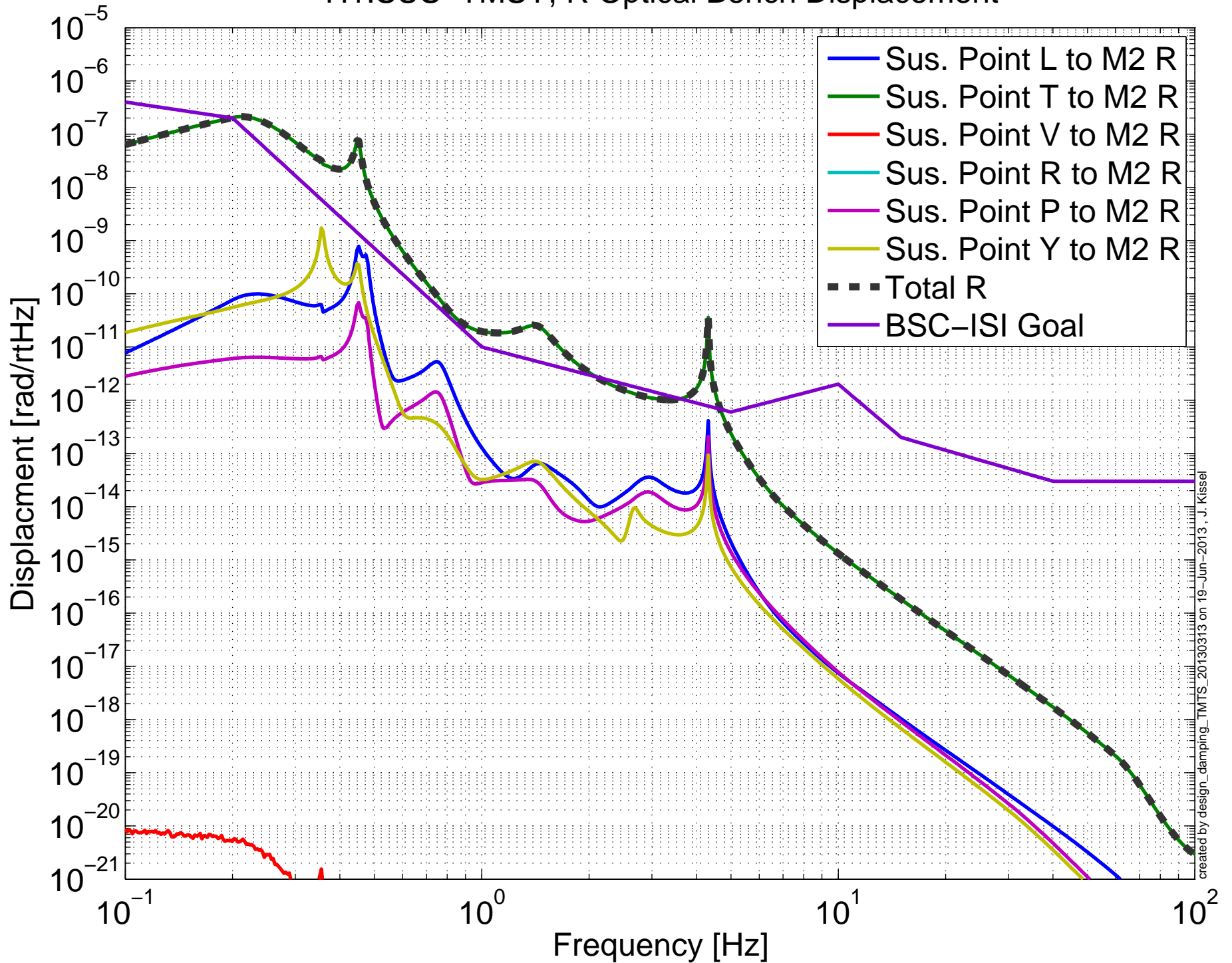


created by design_damping_TMTS_20130313 on 19-Jun-2013 - J. Kissel

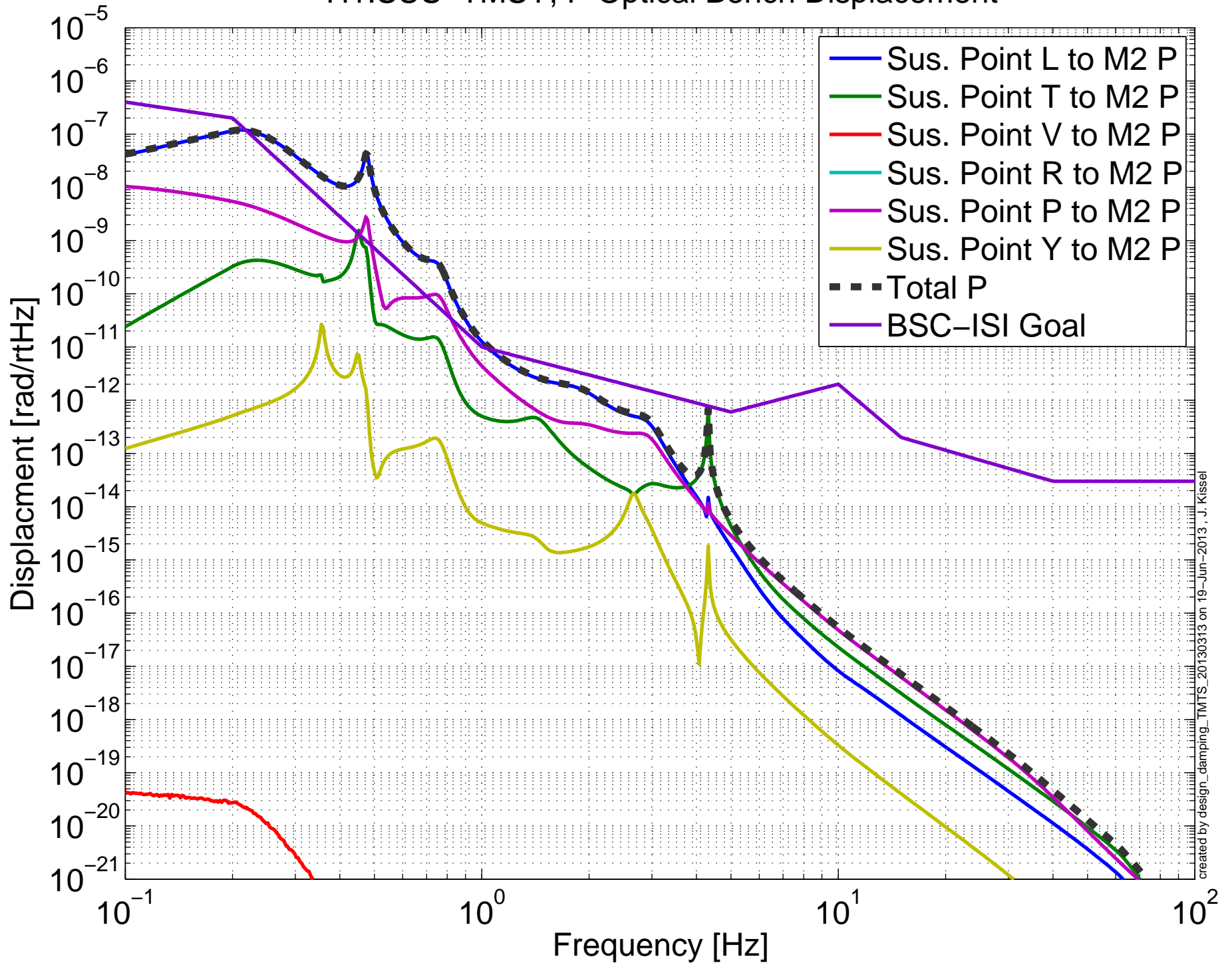
Projected Sus. Point > Optical Bench Seismic Noise Budget H1:SUS-TMSY, V Optical Bench Displacement



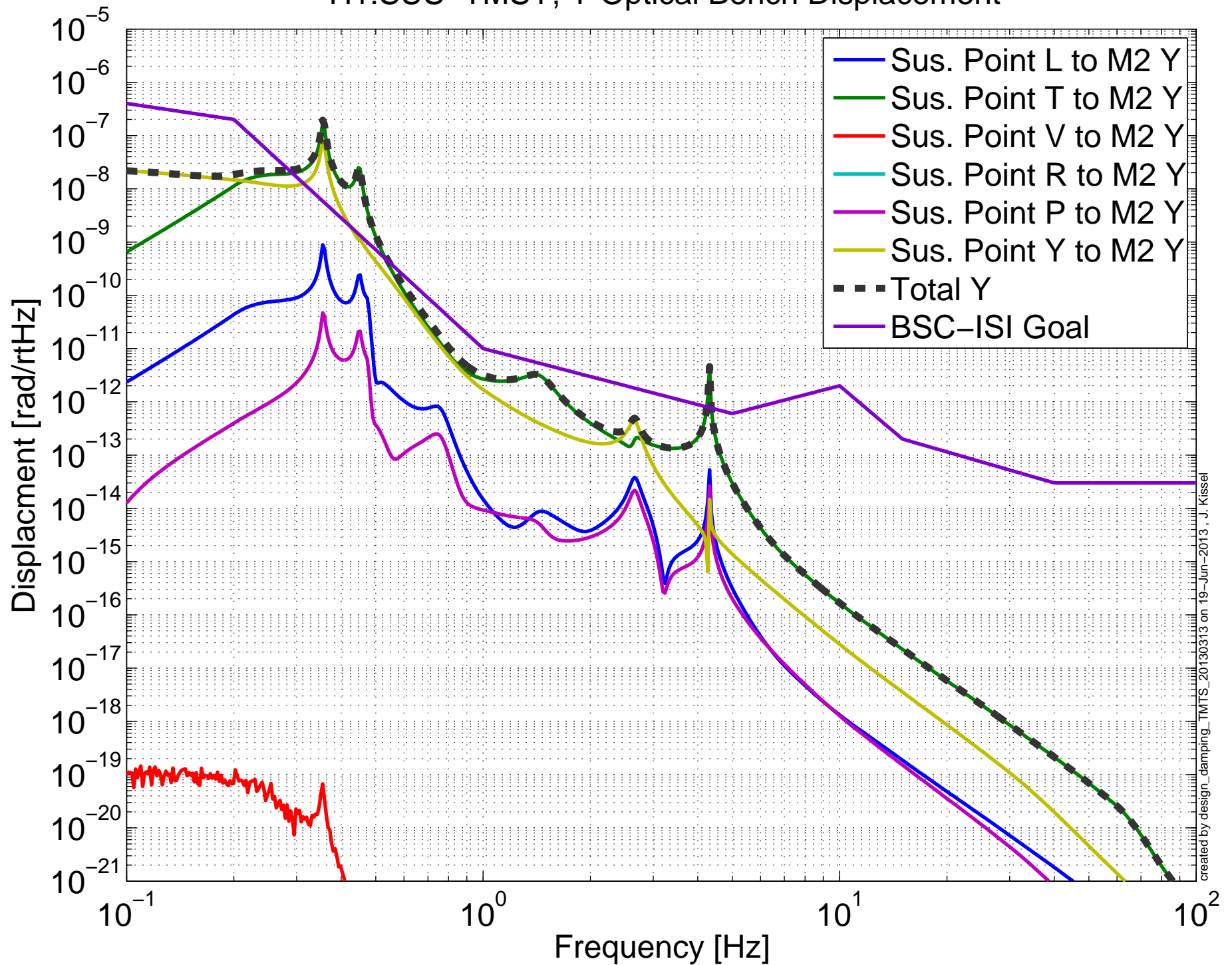
Projected Sus. Point > Optical Bench Seismic Noise Budget H1:SUS-TMSY, R Optical Bench Displacement



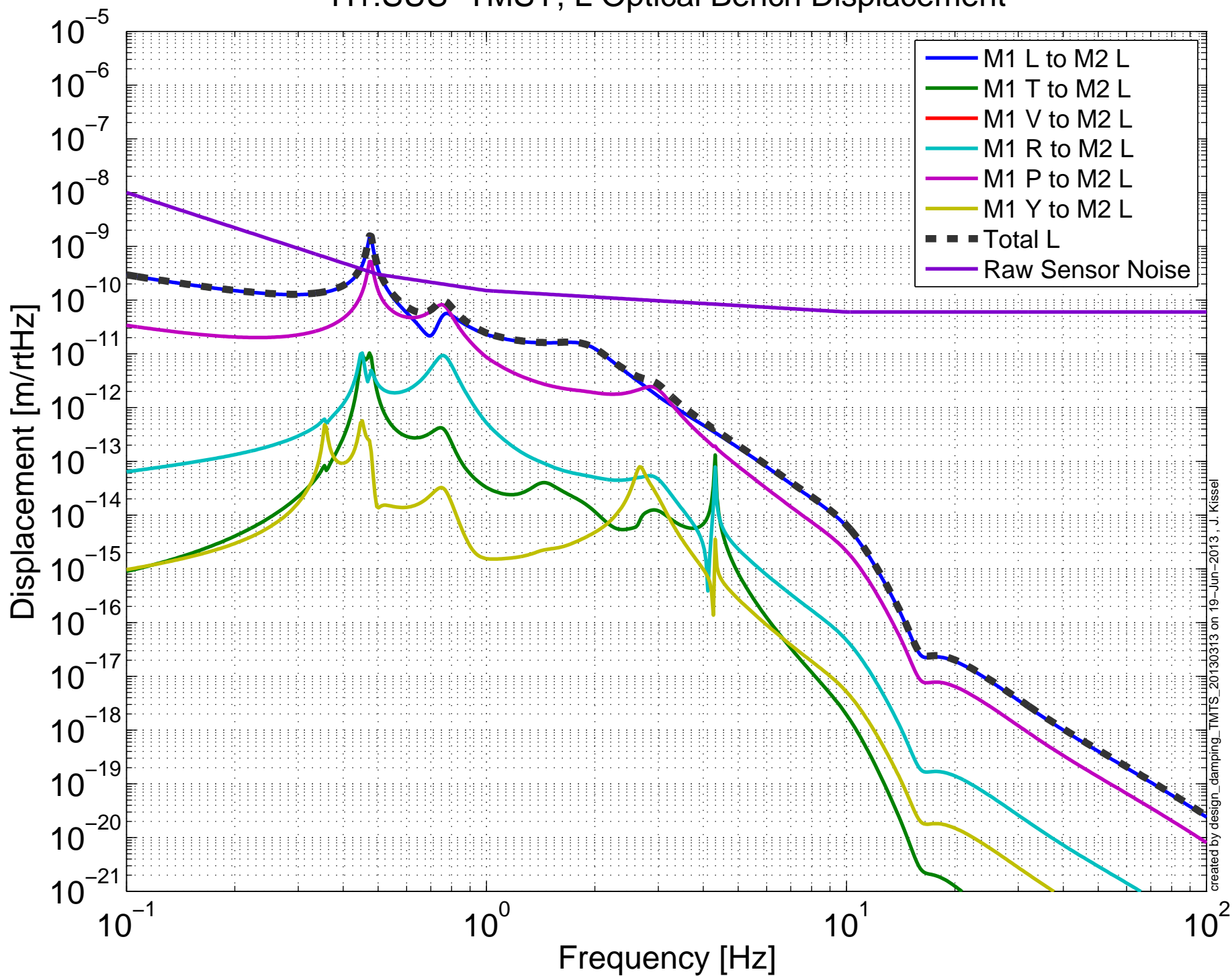
Projected Sus. Point > Optical Bench Seismic Noise Budget H1:SUS-TMSY, P Optical Bench Displacement



Projected Sus. Point > Optical Bench Seismic Noise Budget H1:SUS-TMSY, Y Optical Bench Displacement

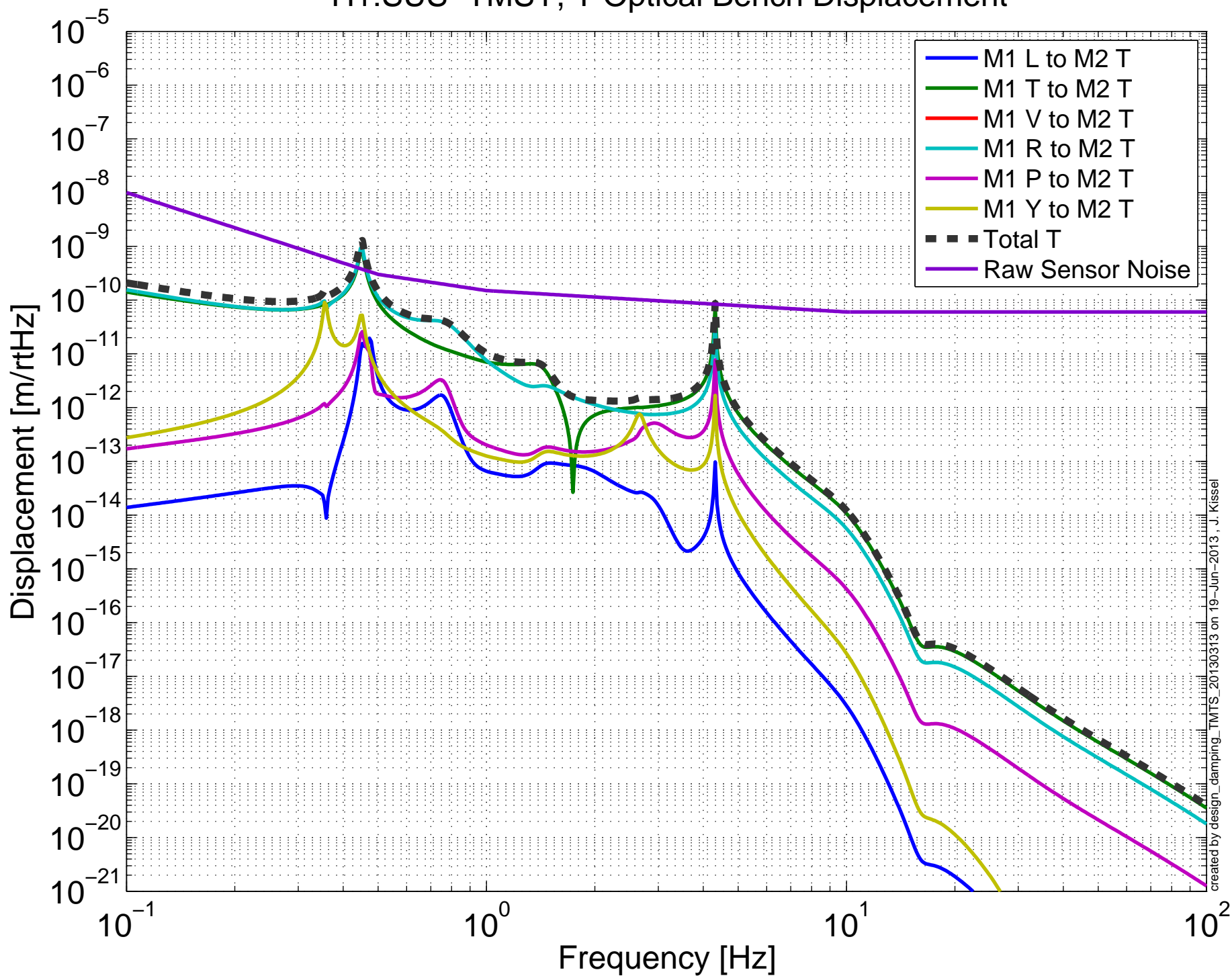


Projected Top Mass Sensor > Optical Bench Noise Budget H1:SUS-TMSY, L Optical Bench Displacement

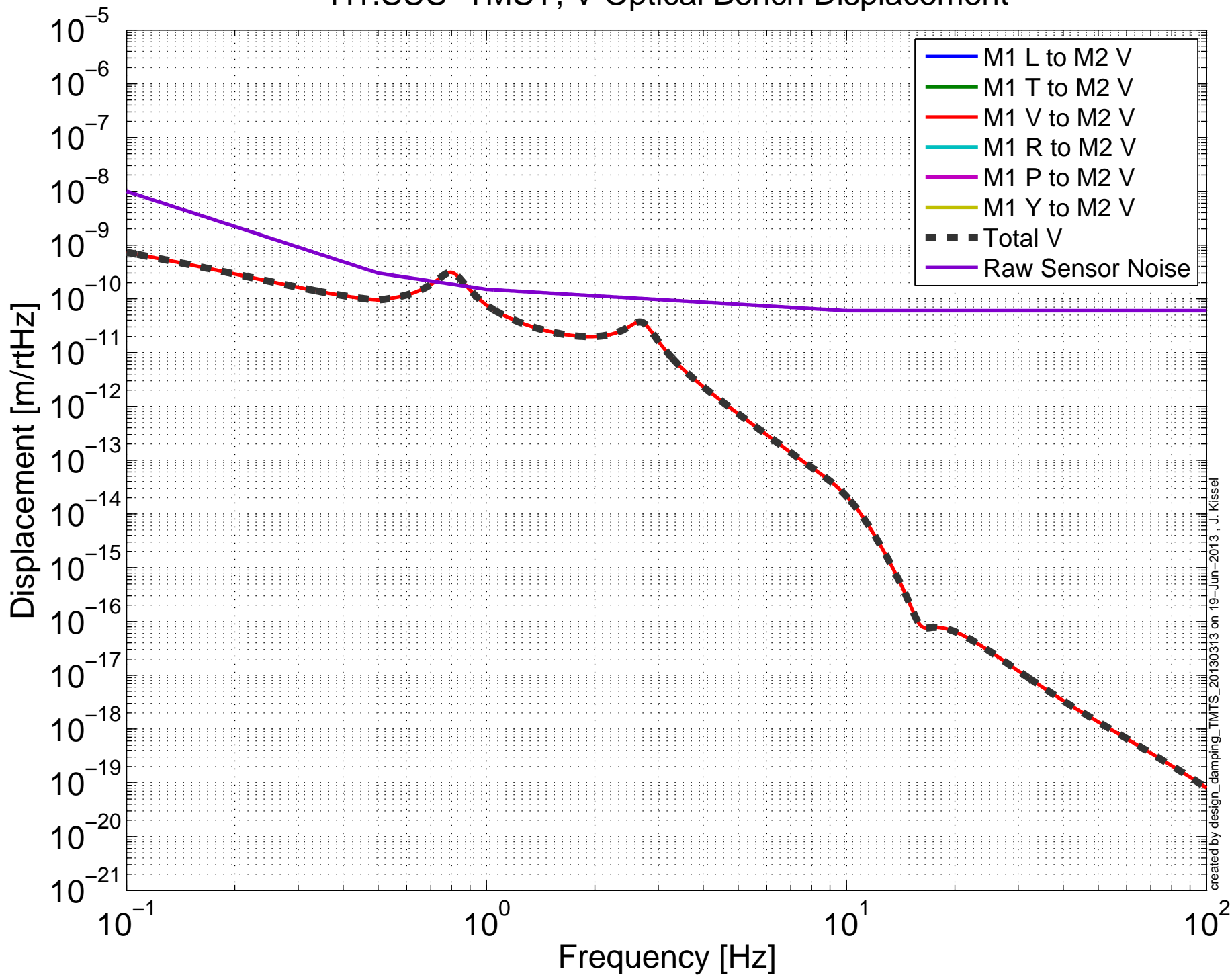


created by design_damping_TMFS_20130313 on 19-Jun-2013 - J. Kissel

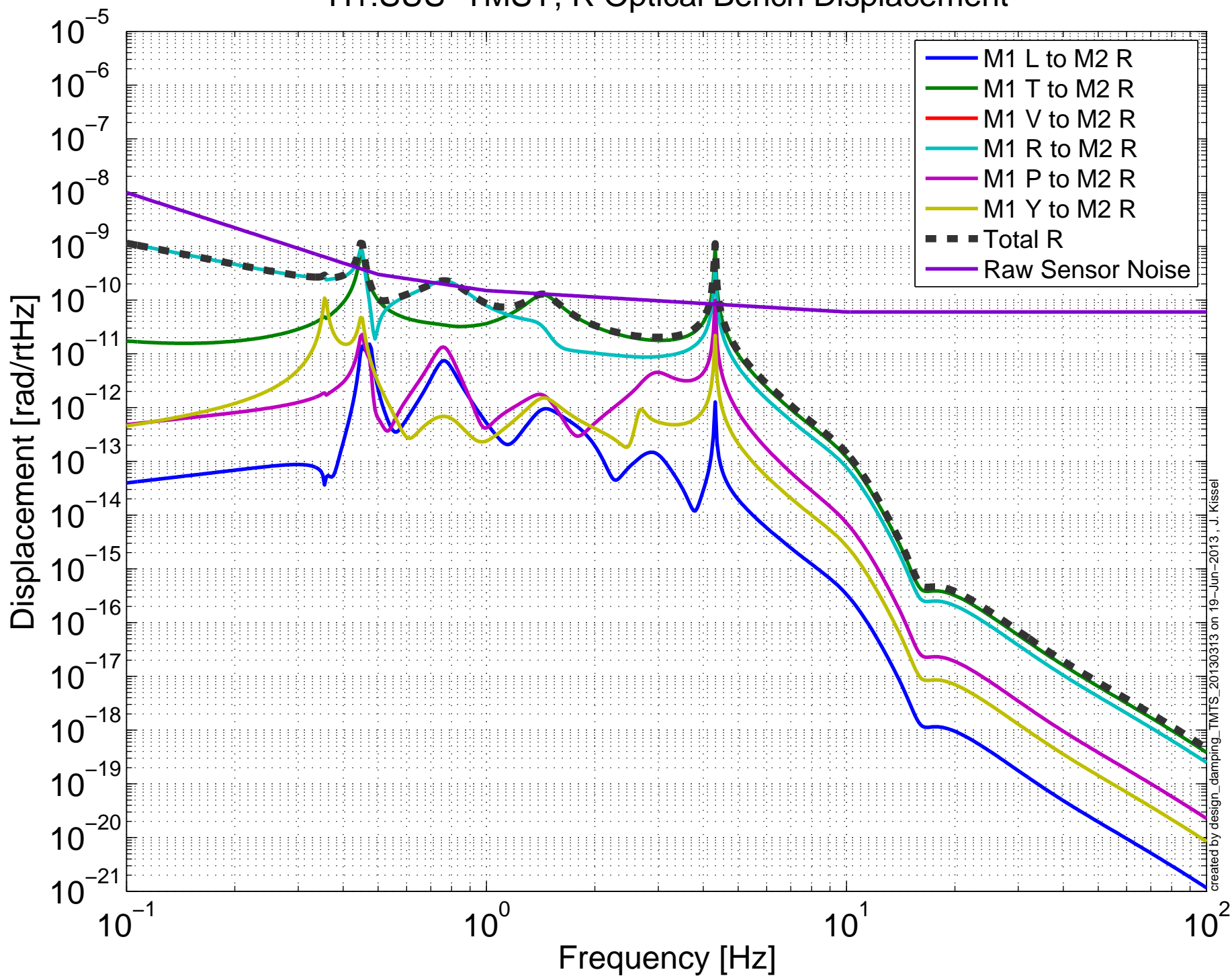
Projected Top Mass Sensor > Optical Bench Noise Budget H1:SUS-TMSY, T Optical Bench Displacement



Projected Top Mass Sensor > Optical Bench Noise Budget H1:SUS-TMSY, V Optical Bench Displacement

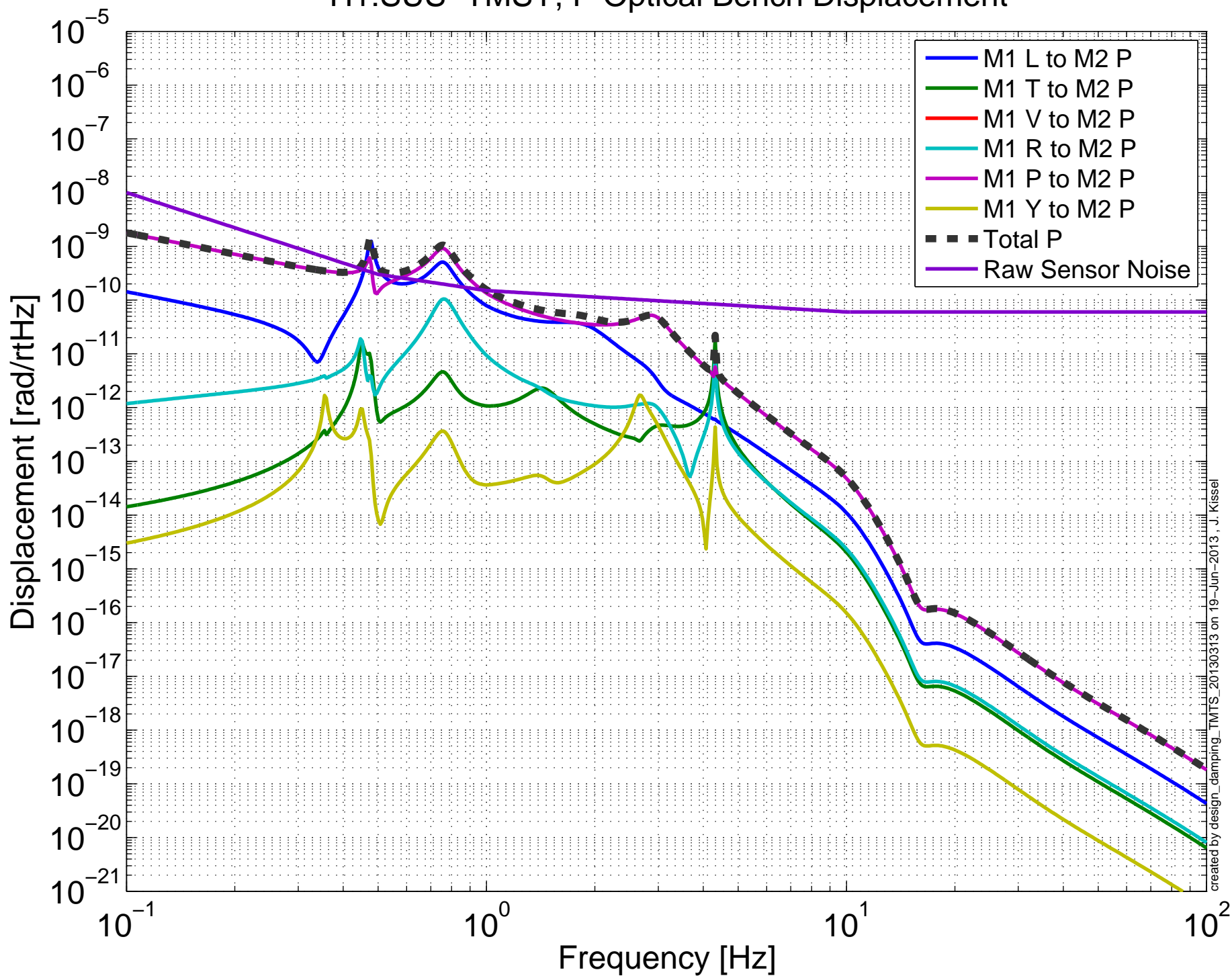


Projected Top Mass Sensor > Optical Bench Noise Budget H1:SUS-TMSY, R Optical Bench Displacement



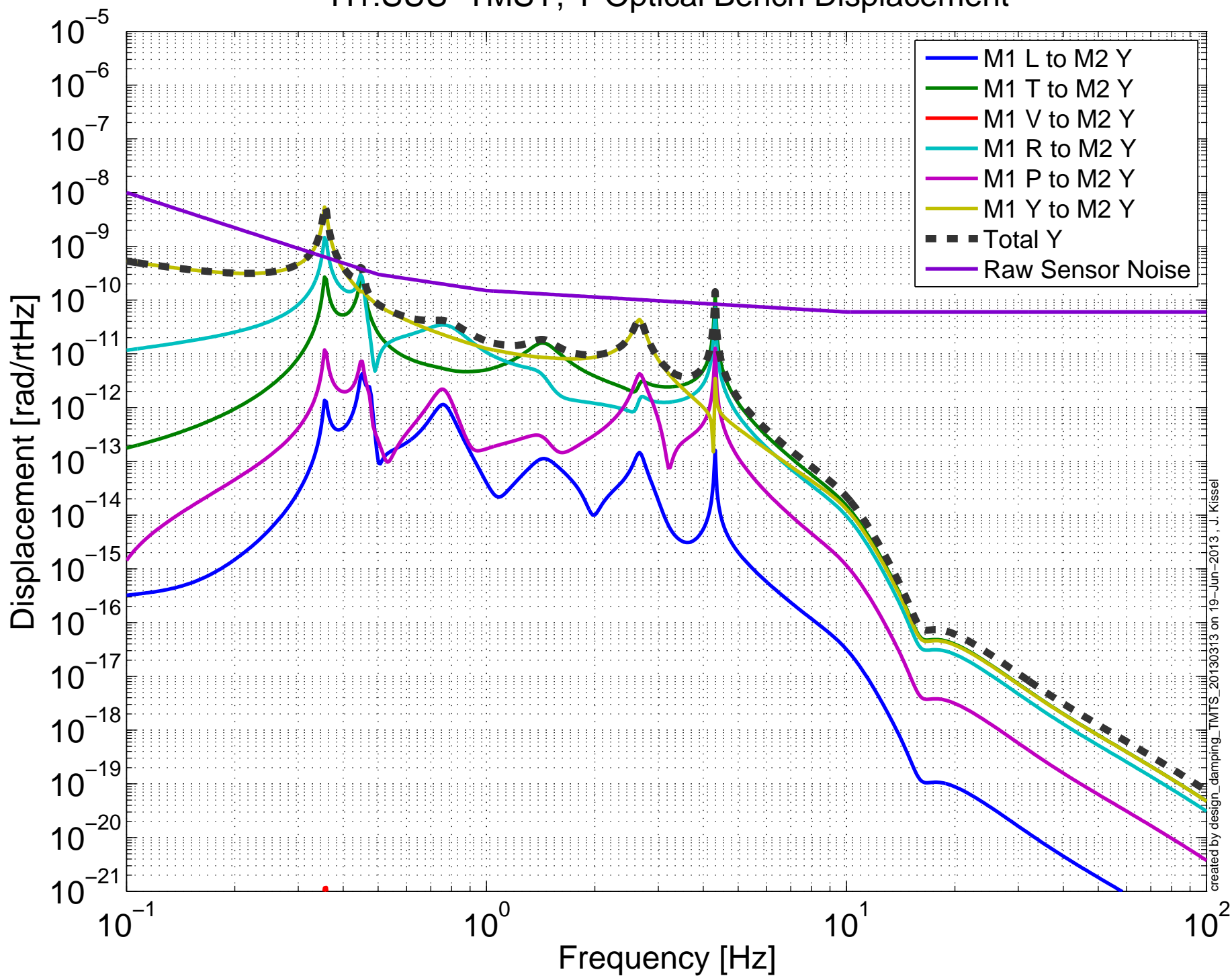
created by design_damping_TMFS_20130313 on 19-Jun-2013 - J. Kissel

Projected Top Mass Sensor > Optical Bench Noise Budget H1:SUS-TMSY, P Optical Bench Displacement

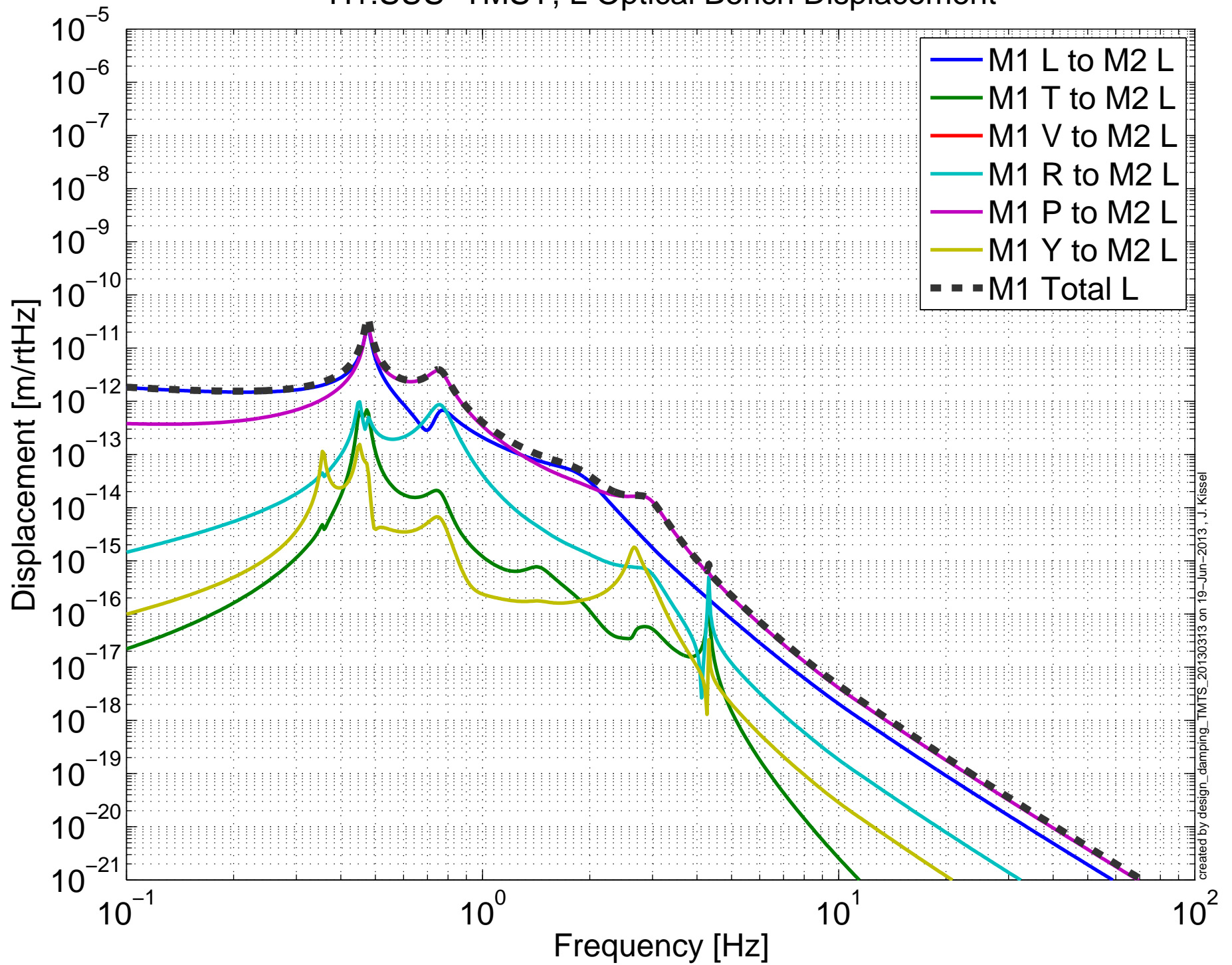


created by design_damping_TMFS_20130313 on 19-Jun-2013 - J. Kissel

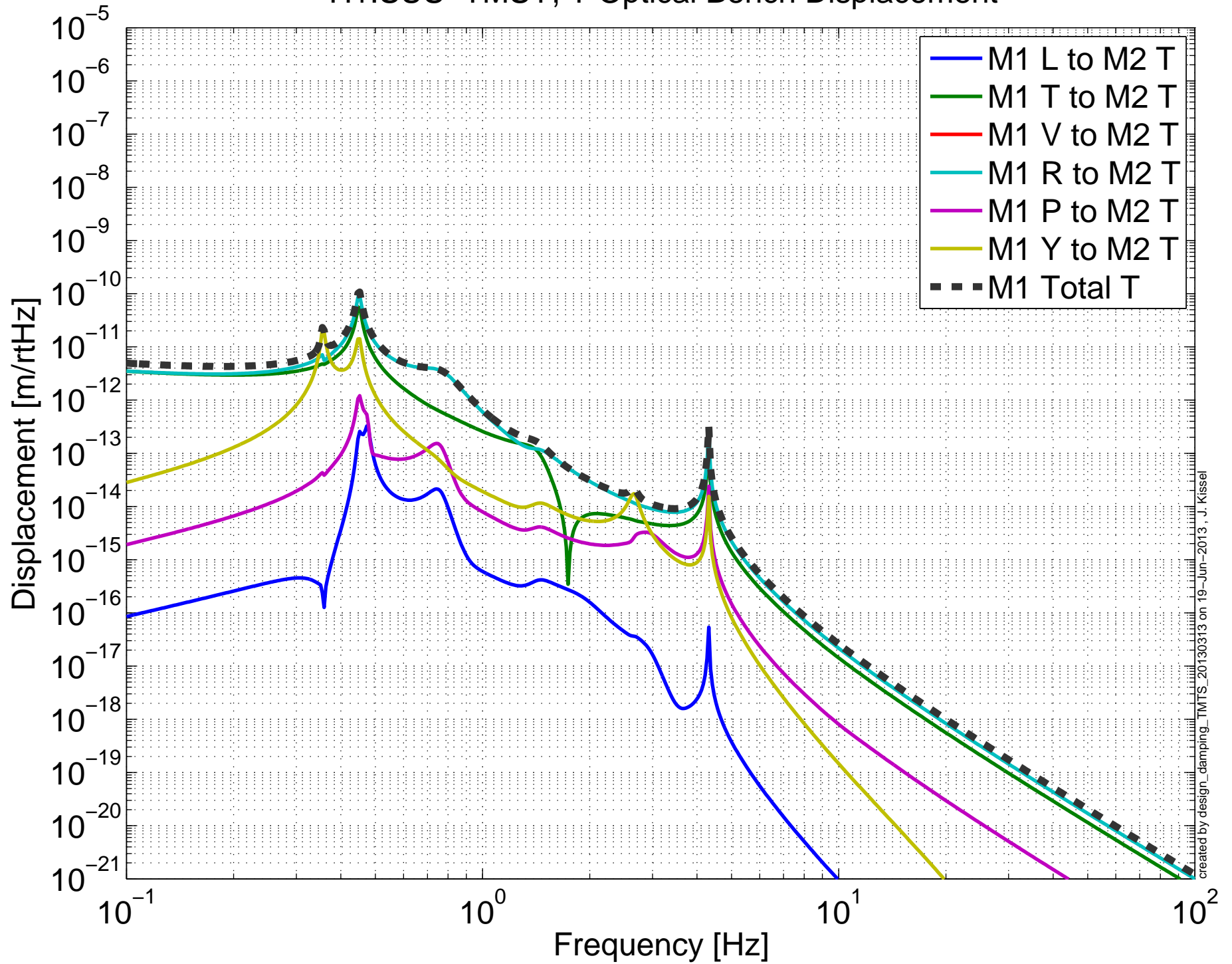
Projected Top Mass Sensor > Optical Bench Noise Budget H1:SUS-TMSY, Y Optical Bench Displacement



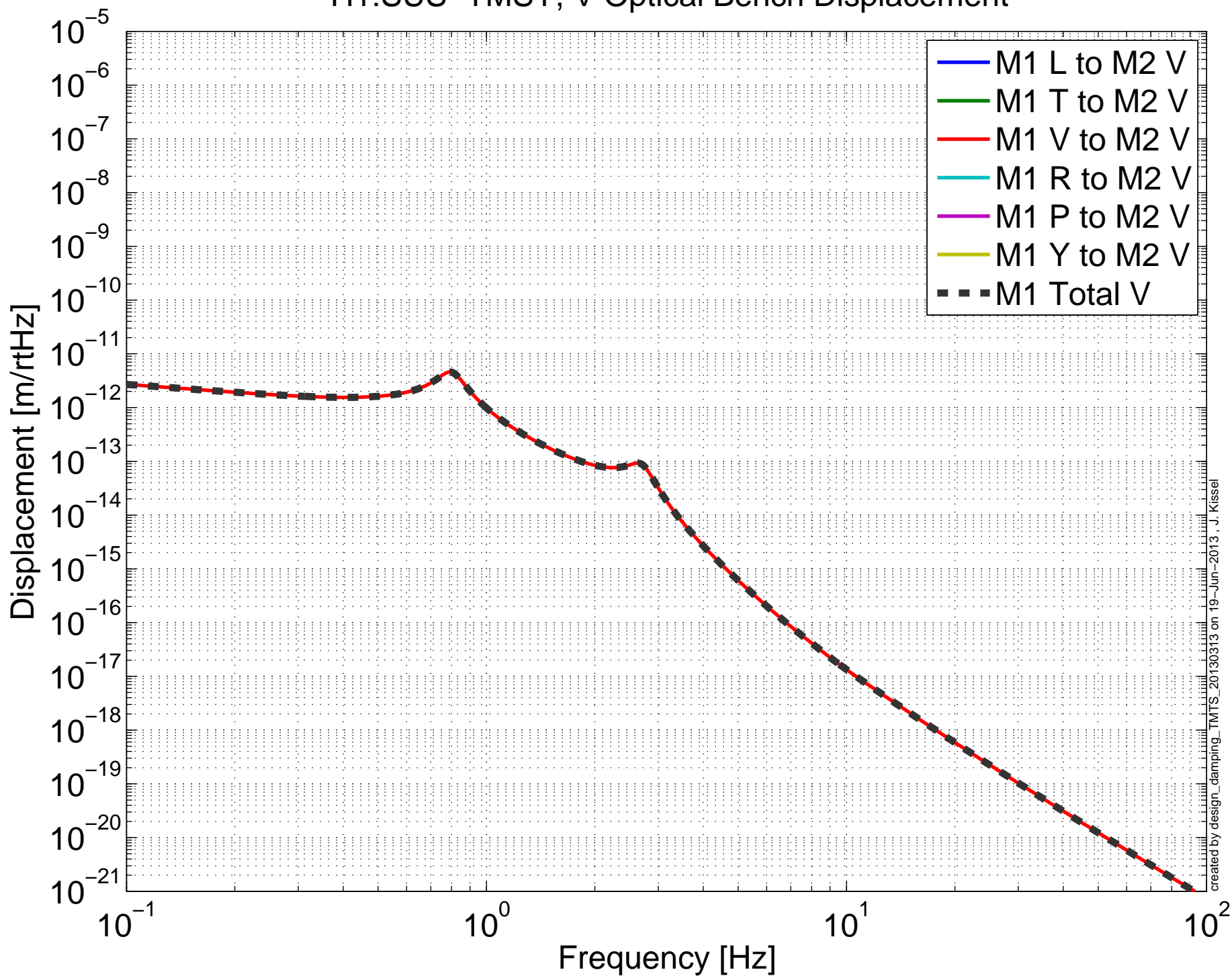
Projected M1 Mass Actuator > Optical Bench Noise Budget H1:SUS-TMSY, L Optical Bench Displacement



Projected M1 Mass Actuator > Optical Bench Noise Budget H1:SUS-TMSY, T Optical Bench Displacement

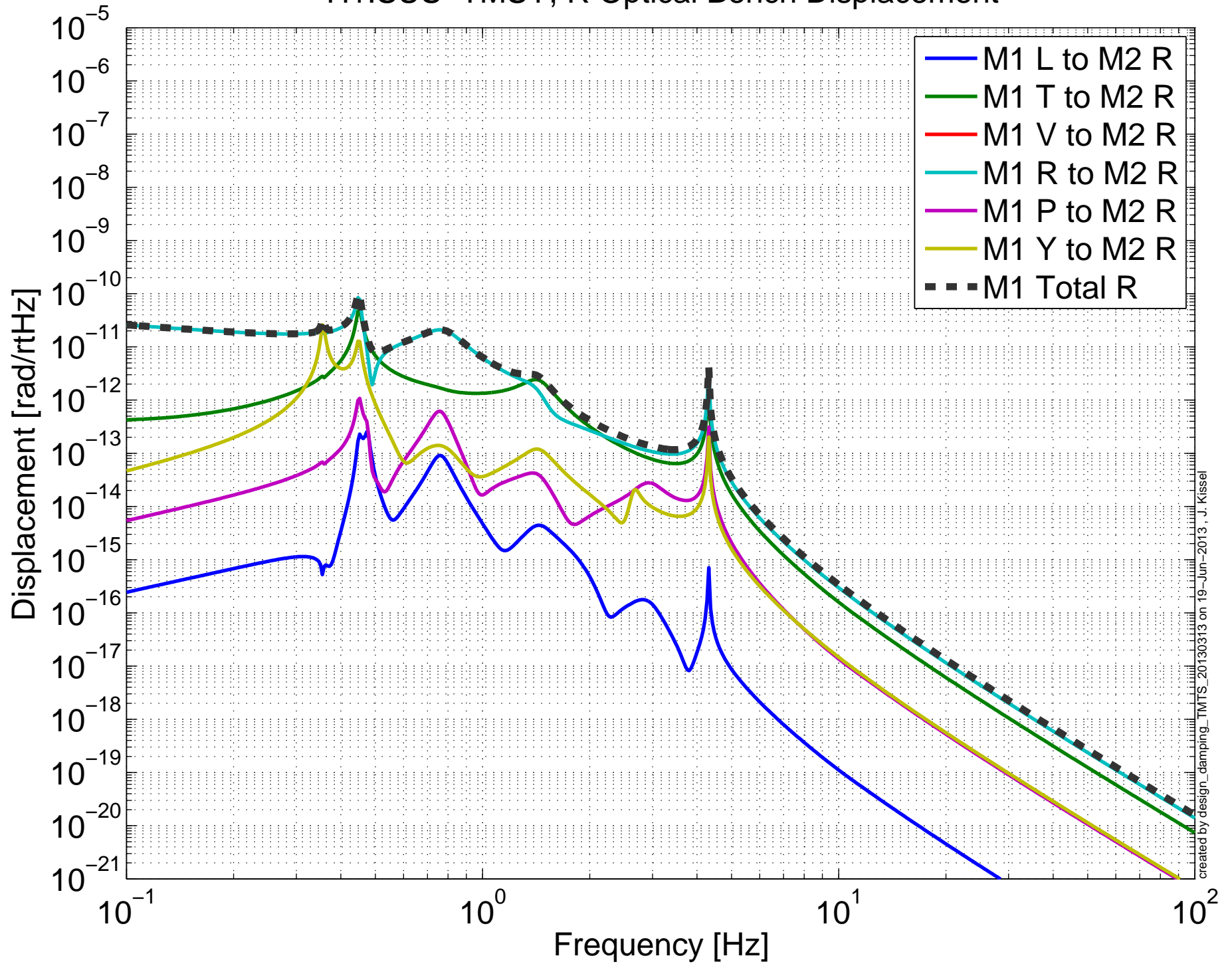


Projected M1 Mass Actuator > Optical Bench Noise Budget H1:SUS-TMSY, V Optical Bench Displacement

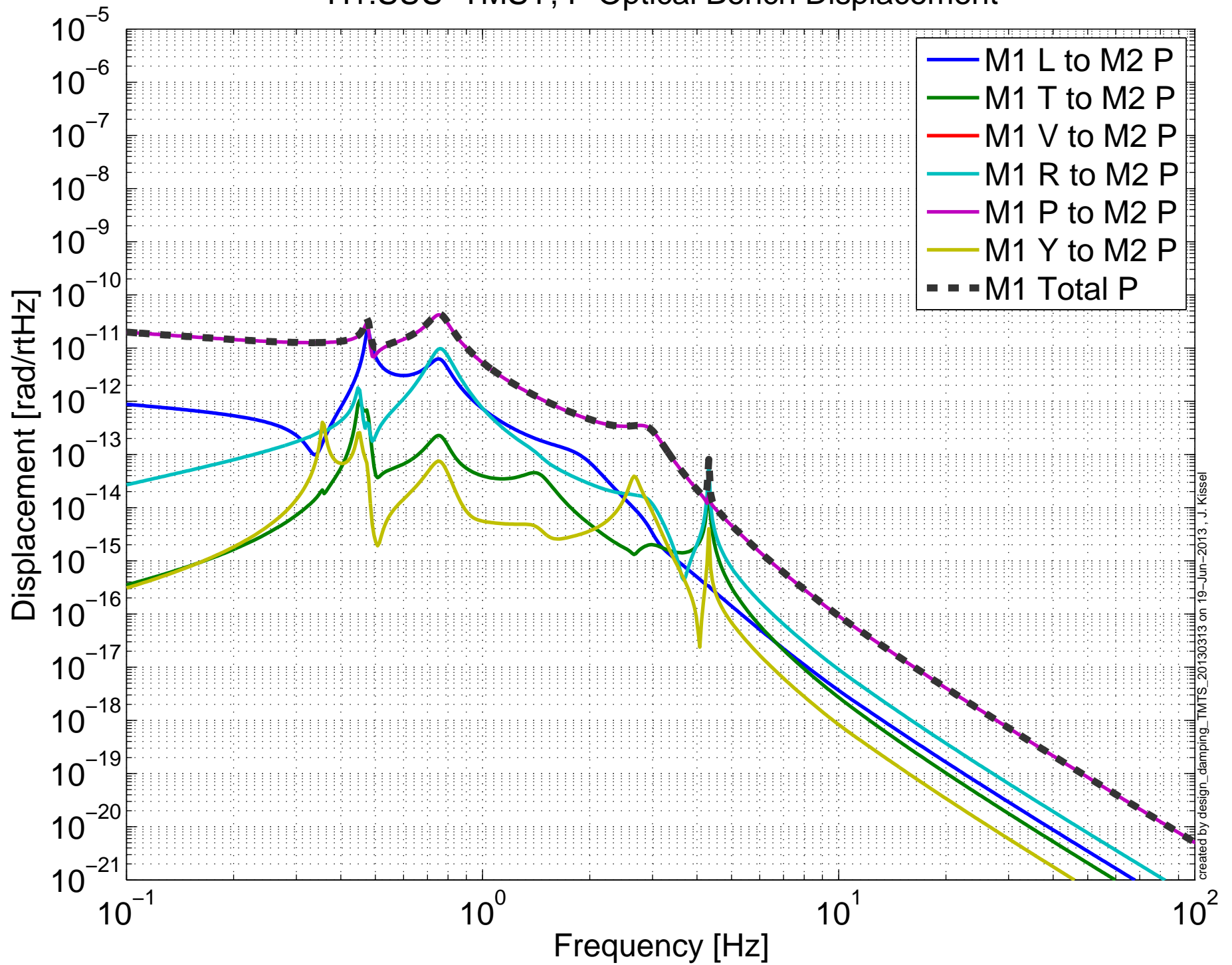


created by design_damping_TMTS_20130313 on 19-Jun-2013 - J. Kissel

Projected M1 Mass Actuator > Optical Bench Noise Budget H1:SUS-TMSY, R Optical Bench Displacement



Projected M1 Mass Actuator > Optical Bench Noise Budget H1:SUS-TMSY, P Optical Bench Displacement



Projected M1 Mass Actuator > Optical Bench Noise Budget H1:SUS-TMSY, Y Optical Bench Displacement

