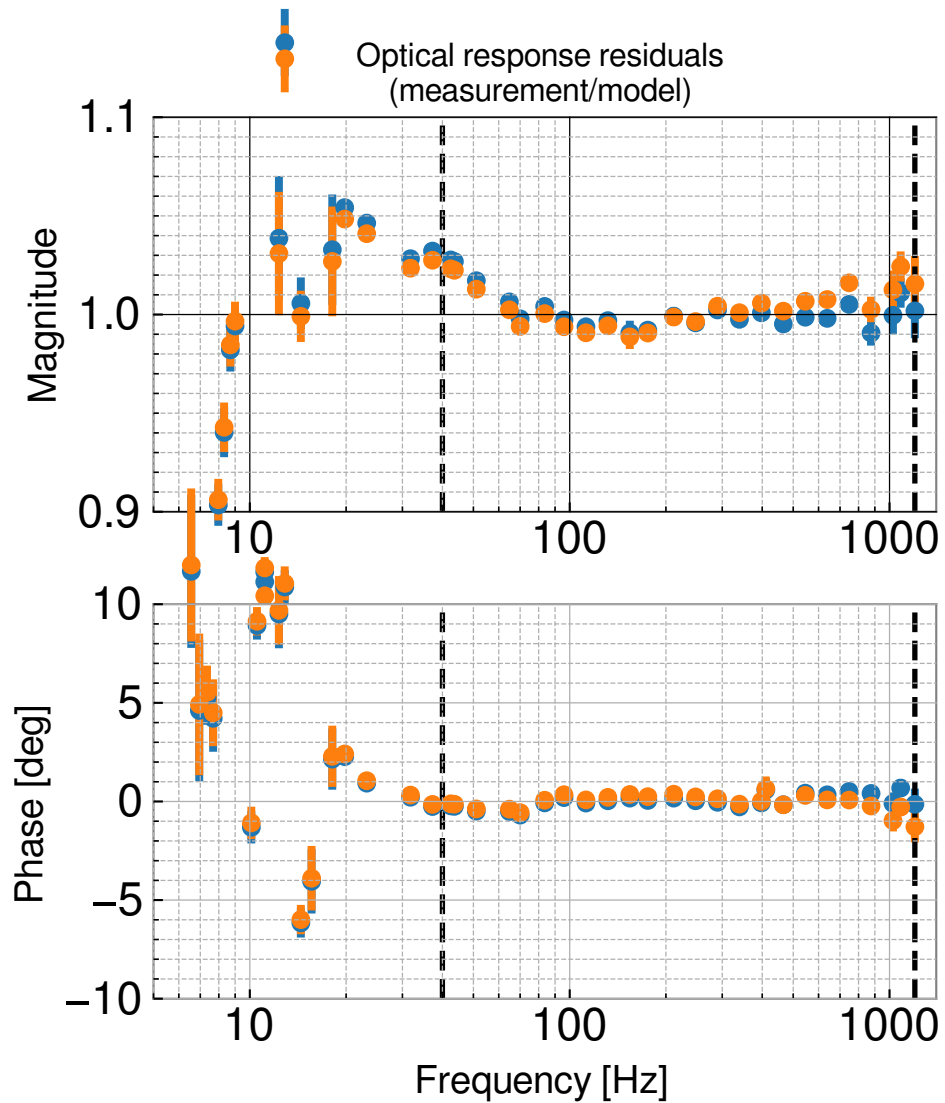
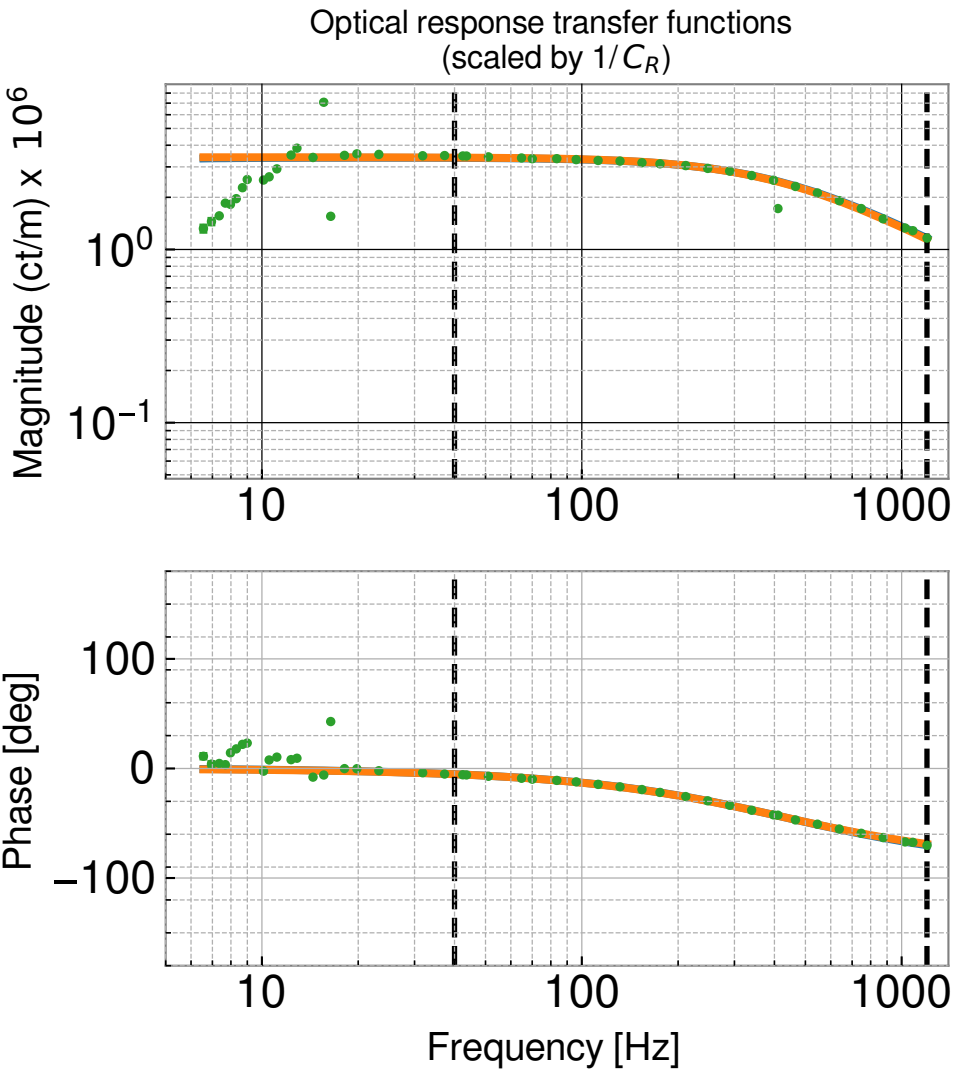
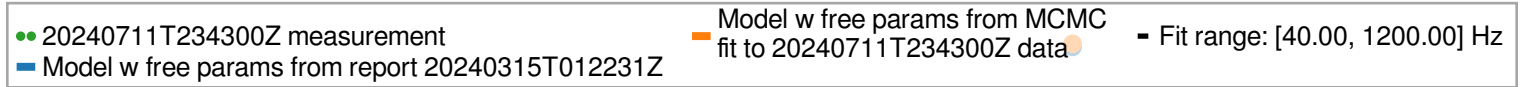


# H1 sensing model MCMC summary

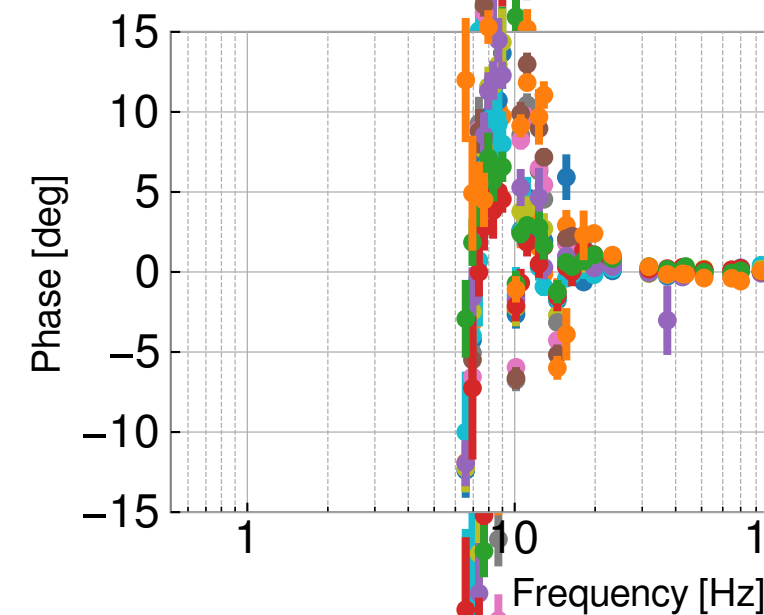
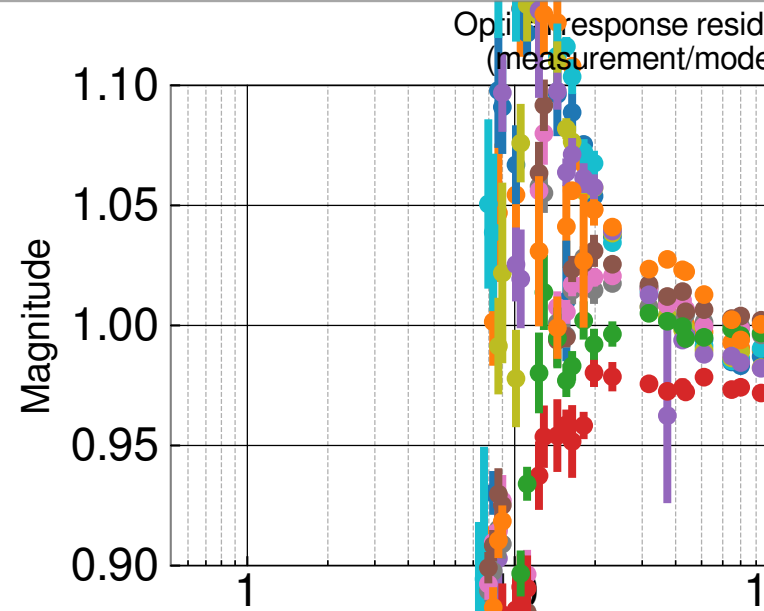
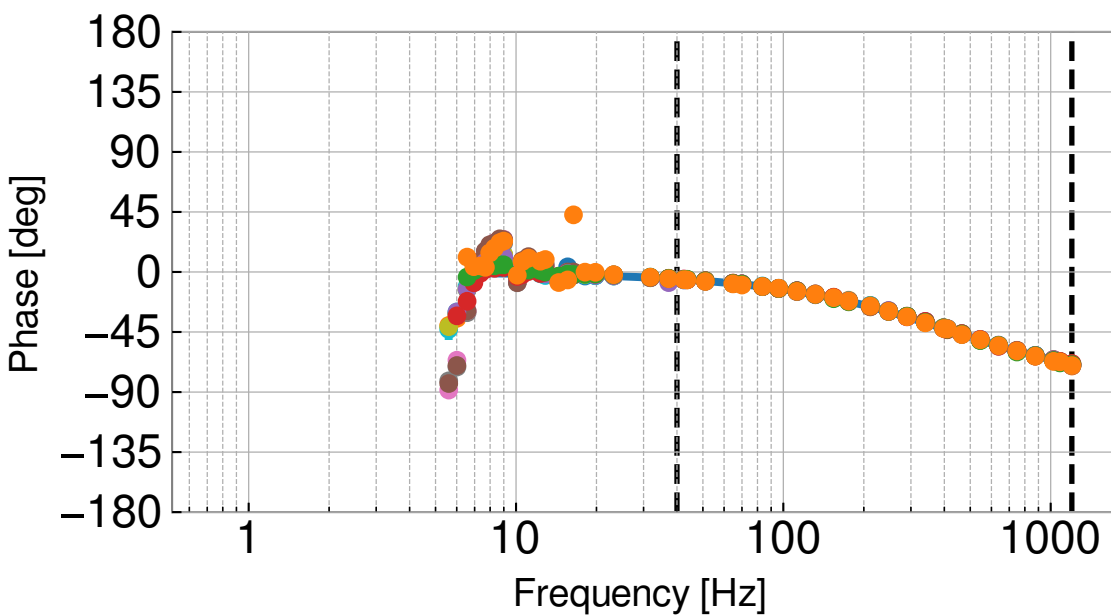
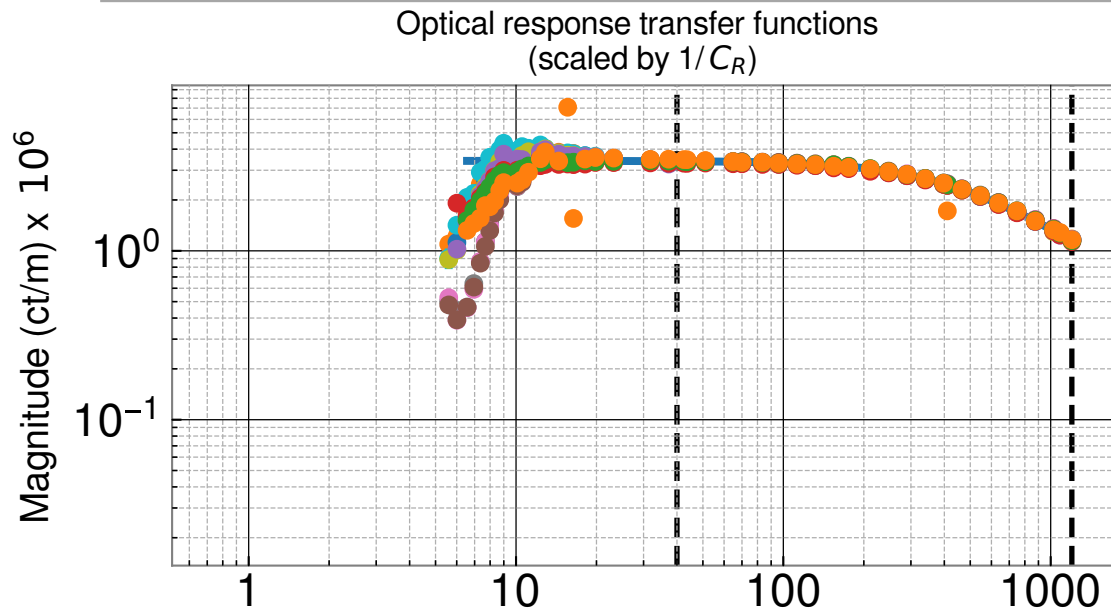
All fixed parameters drawn from /ligo/groups/cal/H1/reports/20240711T234232Z/pydarm\_H1.ini



Parameter	(value +/-)	value	+	-
Optical gain, H_c (ct/m)	3.409e+06		2327 (0.07%)	2298 (0.07%)
Cavity_pole, f_cc (Hz)	428.7		0.9296 (0.22%)	0.9152 (0.21%)
Detuned SRC spring frequency, f_s (Hz)	0.06333		0.1887 (297.99%)	0.05181 (81.81%)
Detuned SRC spring quality factor, Q_s	9.985		26.49 (265.32%)	7.628 (76.40%)
Residual time delay, tau_c (s)	-3.495e-06		4.498e-07 (-12.87%)	4.468e-07 (-12.78%)

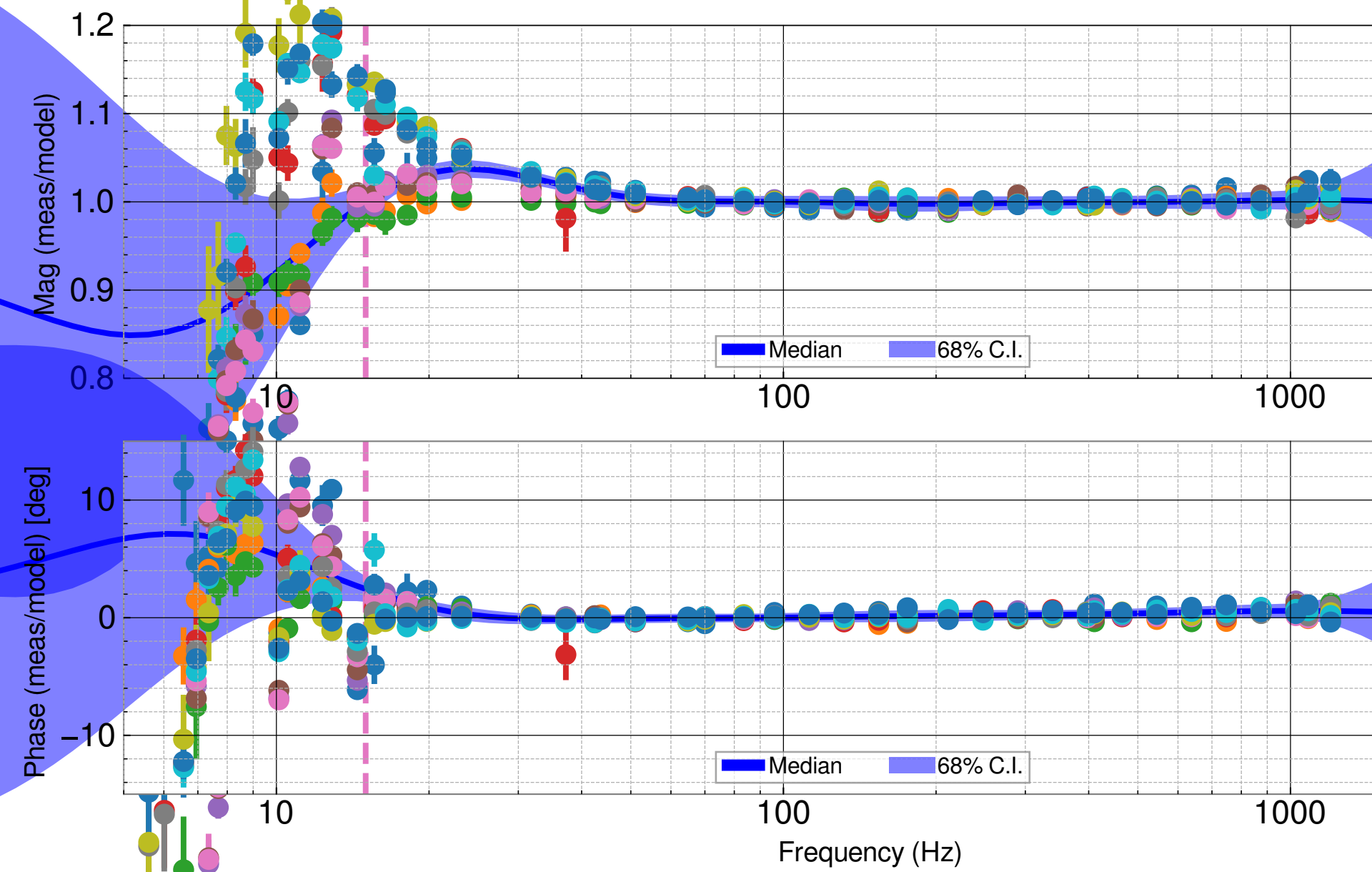


# H1 sensing model history



# Sensing GPR

- meas. 20240711T234300Z of report 20240711T234232Z
- meas. 20240315T012251Z of report 20240315T012231Z
- meas. 20240311T214051Z of report 20240311T214031Z
- meas. 20230928T193629Z of report 20230928T193609Z
- meas. 20230913T183710Z of report 20230913T183650Z
- meas. 20230906T220910Z of report 20230906T220850Z
- meas. 20230830T213712Z of report 20230830T213653Z
- meas. 20230823T214018Z of report 20230823T213958Z
- meas. 20230817T214308Z of report 20230817T214248Z
- meas. 20230802T000832Z of report 20230802T000812Z
- meas. 20230727T162132Z of report 20230727T162112Z

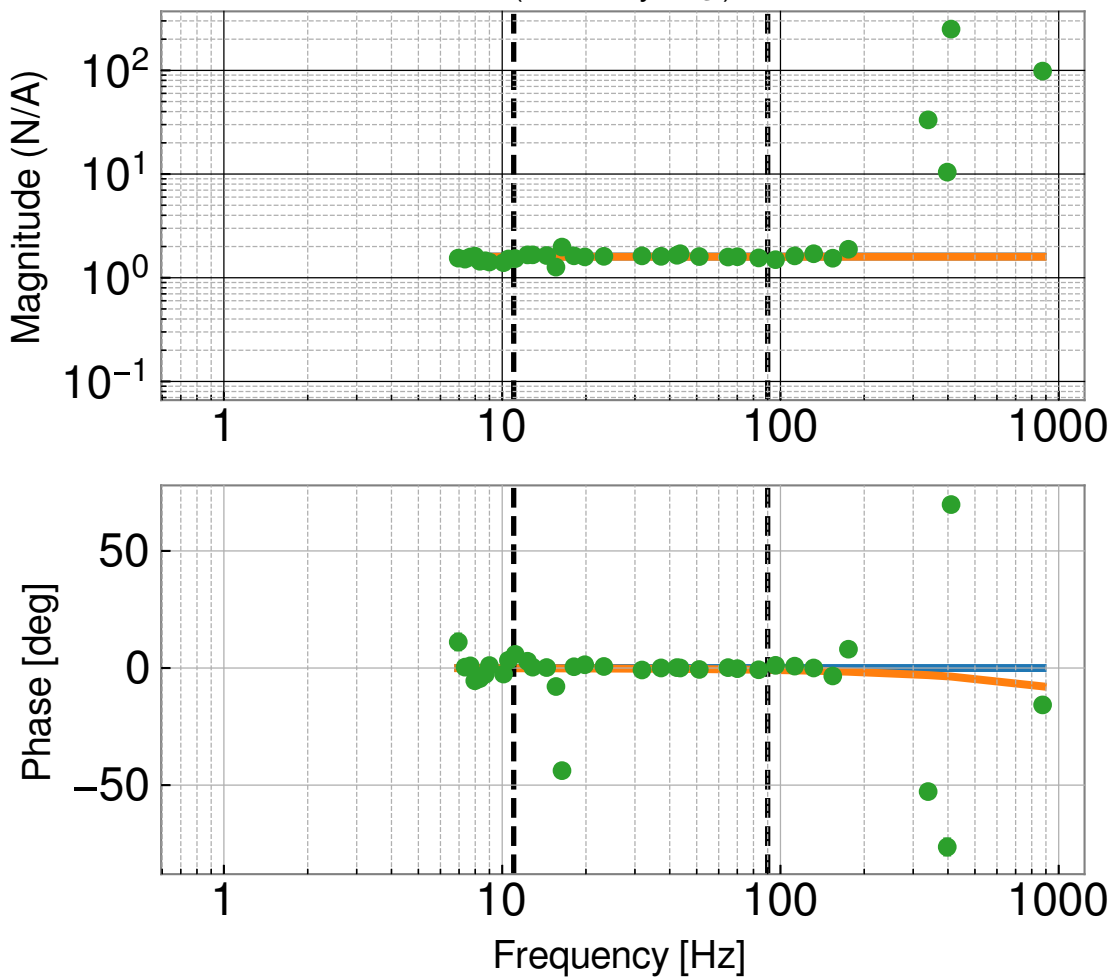


# H1SUSEX L1 actuation model MCMC summary

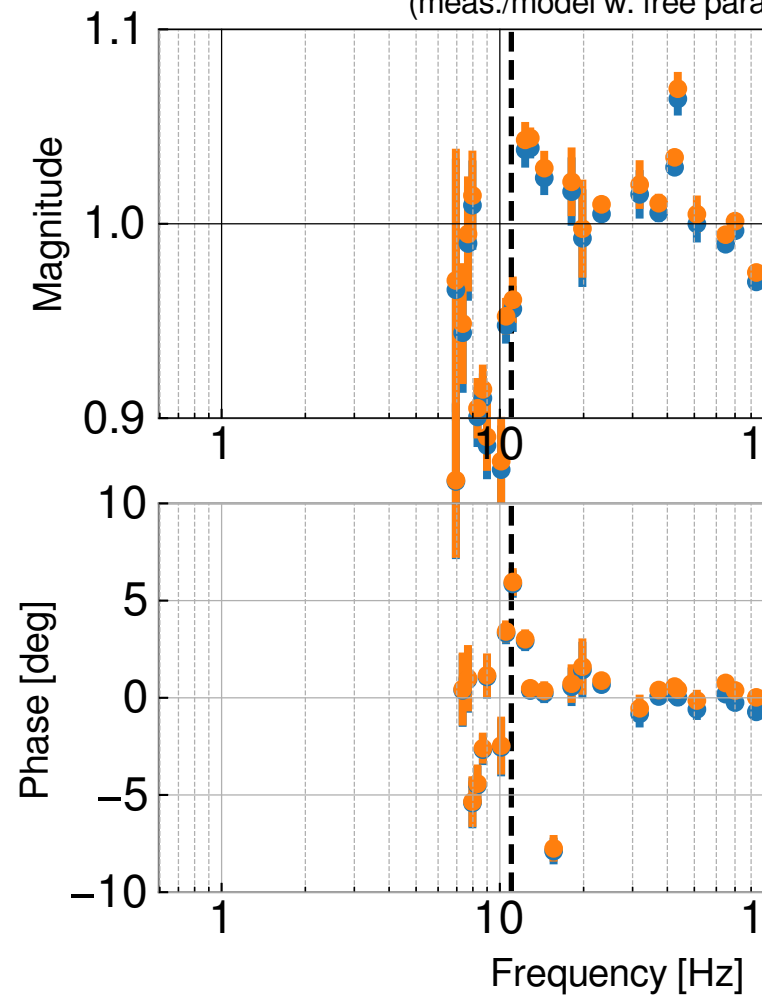
All fixed parameters drawn from /ligo/groups/cal/H1/reports/20240711T234232Z/pydarm\_H1.ini



Actuation strength transfer functions  
(scaled by  $H_{ref}$ )

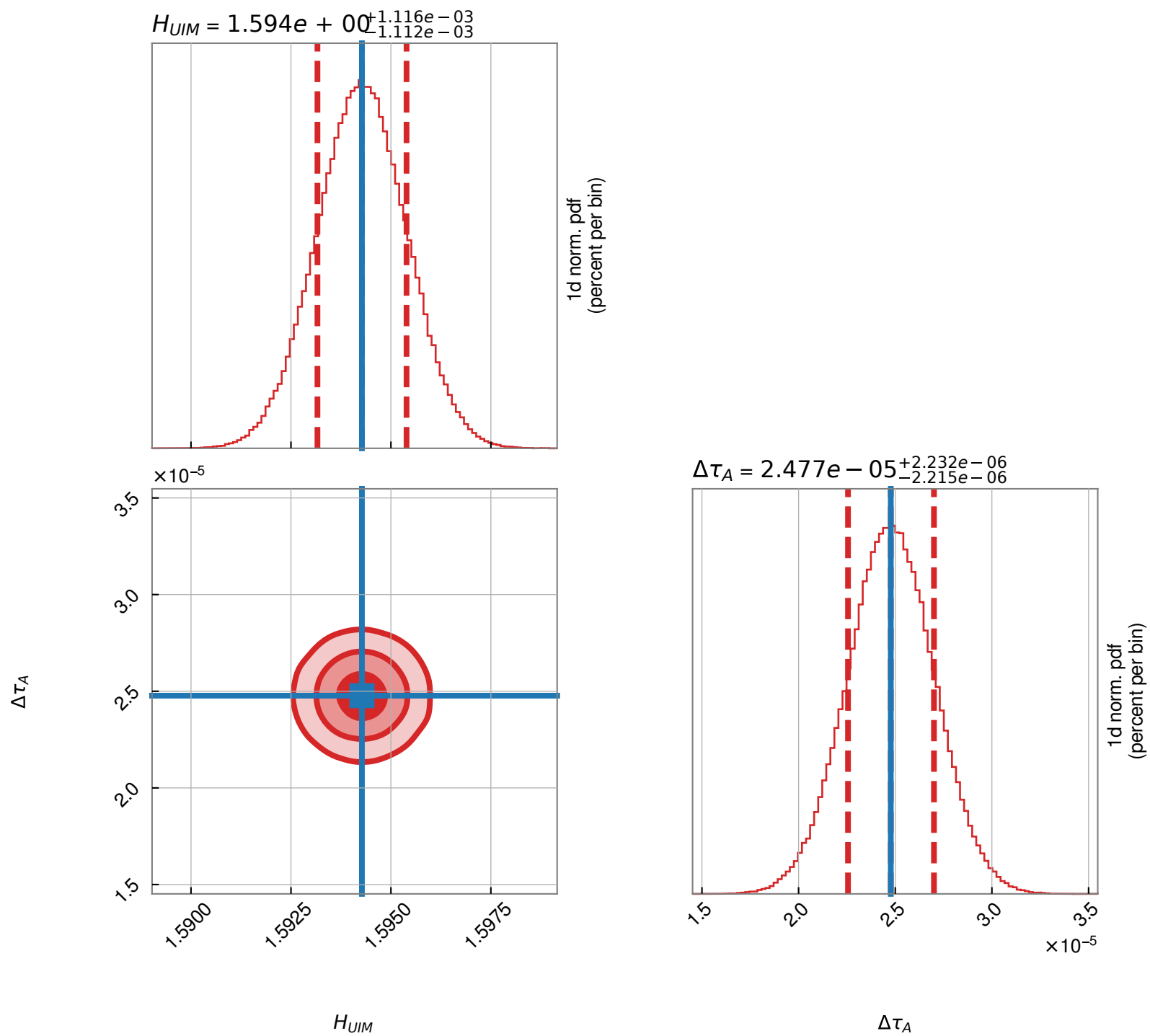
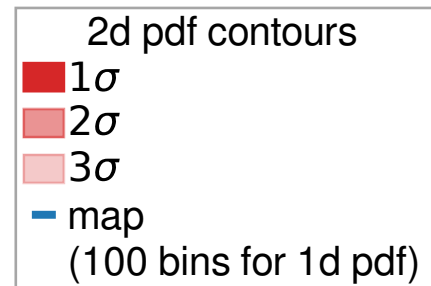


Actuation strength residuals  
(meas./model w. free para)



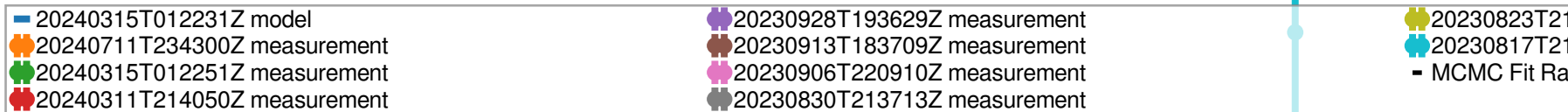
Parameter	(value +/-)   value	+	-
Actuation Gain, Hau (N/A)	1.594	0.001116 (0.07%)	0.001112 (0.07%)
Residual time delay, tau_A (s)	2.477e-05	2.232e-06 (9.01%)	2.215e-06 (8.94%)

# 20240711T234300Z EX L1 actuation MCMC corner plot

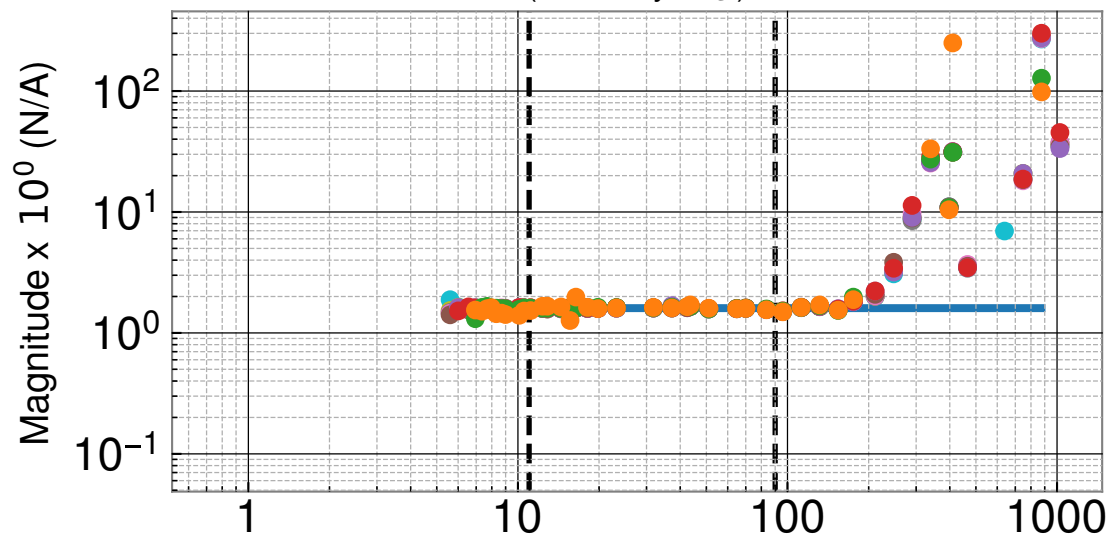


# H1SUSEX L1 actuation model history

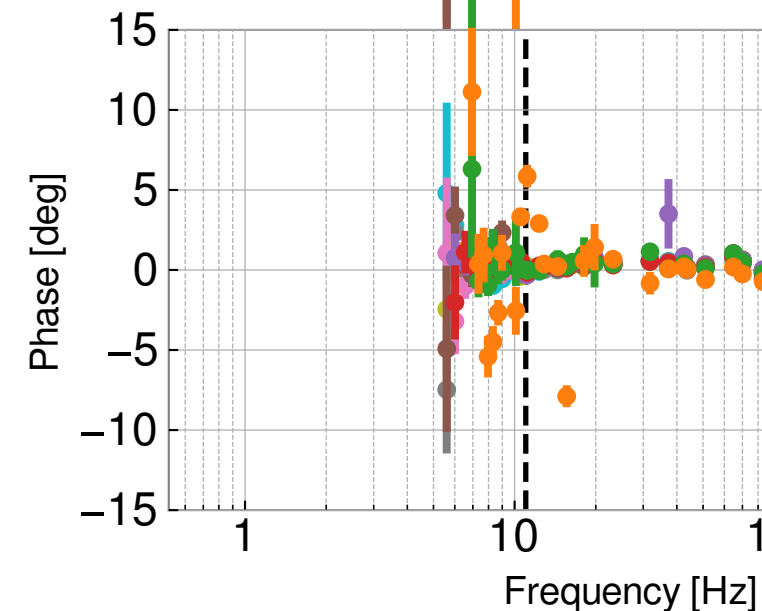
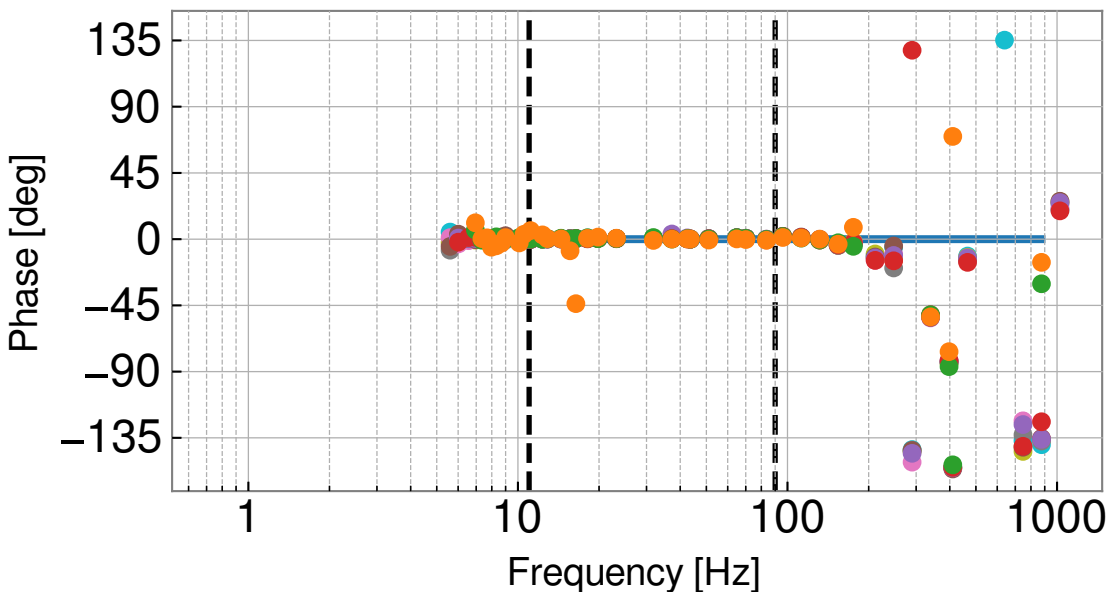
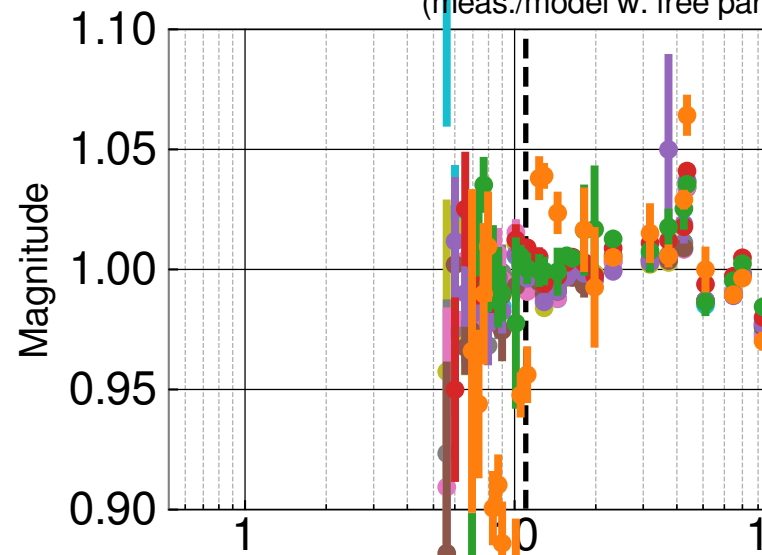
All fixed parameters drawn from /ligo/groups/cal/H1/reports/20240711T234232Z/pydarm\_H1.ini



Actuation strength transfer functions  
(scaled by  $H_{ref}$ )

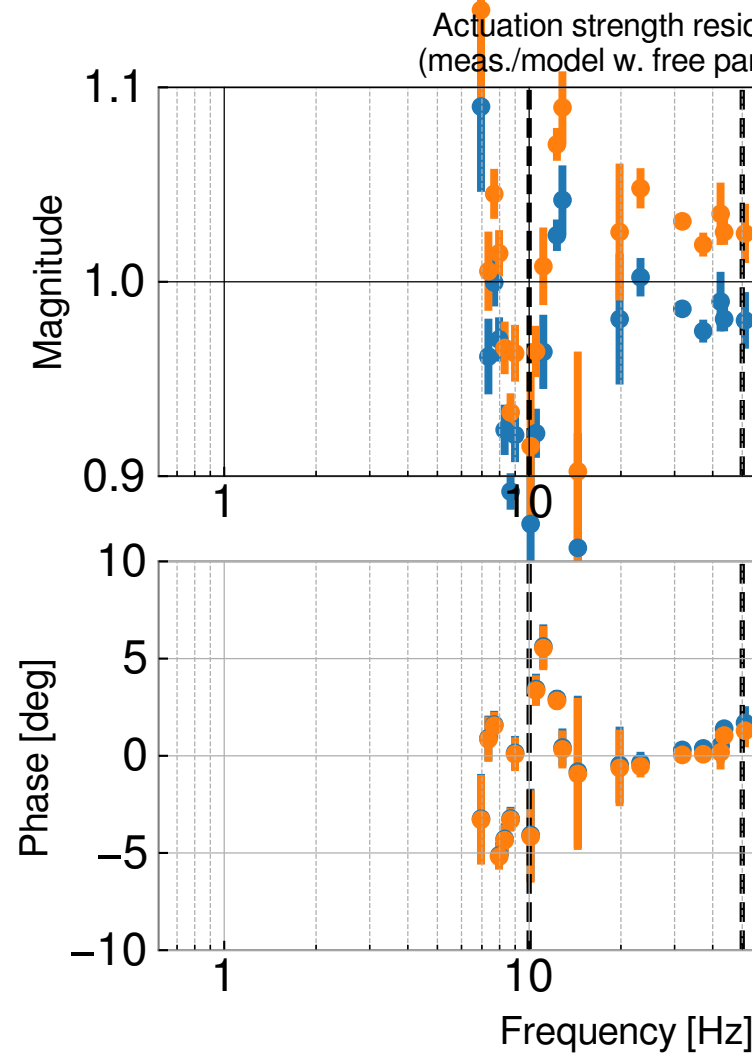
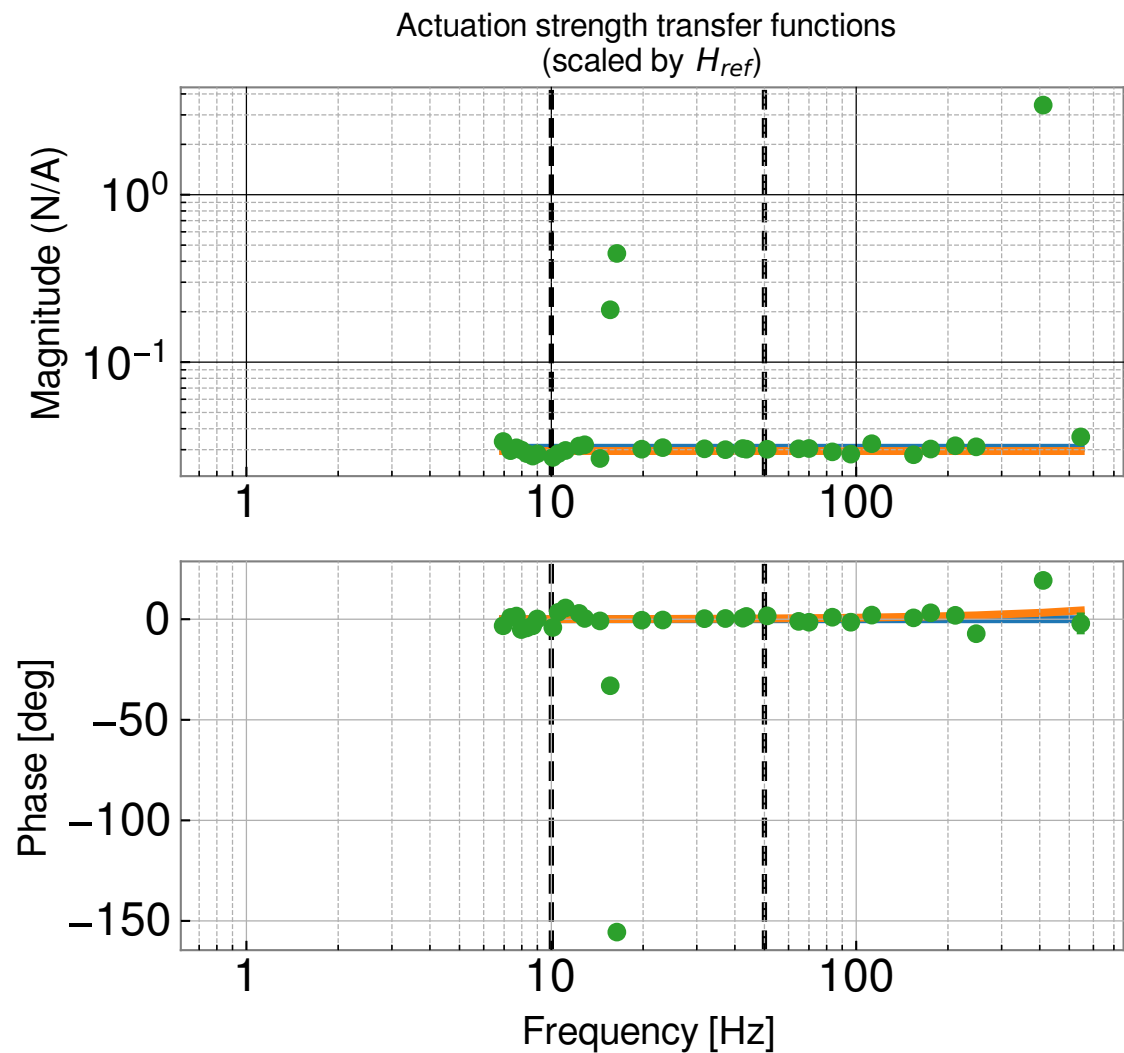


Actuation strength residuals  
(meas./model w. free par)



# H1 SUSEX L2 actuation model MCMC summary

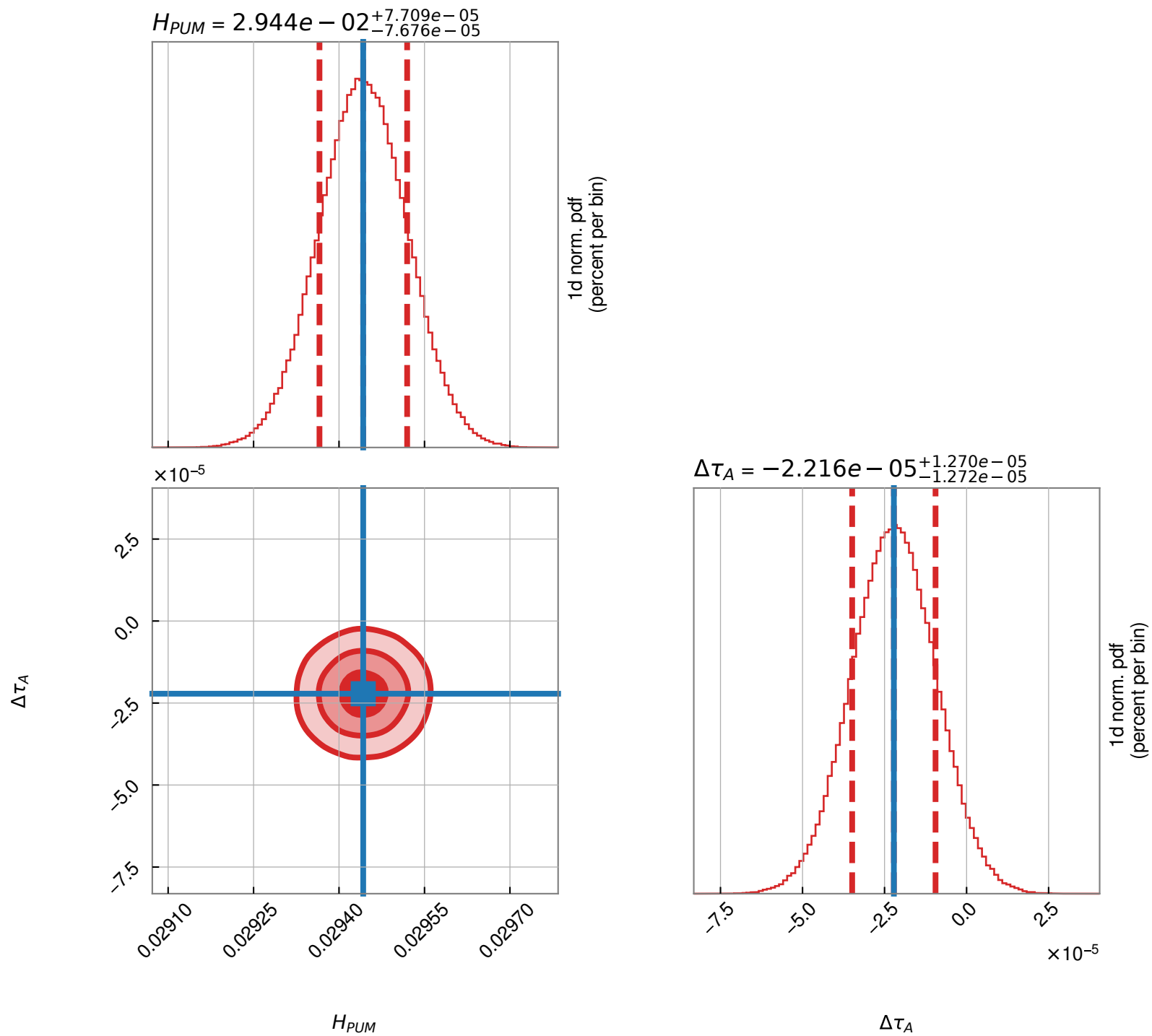
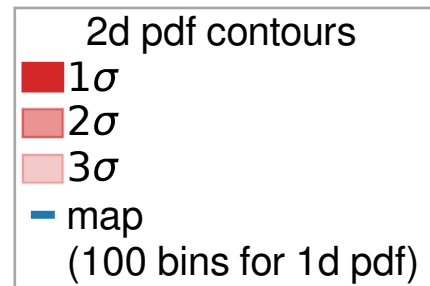
All fixed parameters drawn from /ligo/groups/cal/H1/reports/20240711T234232Z/pydarm\_H1.ini



Parameter	(value +/-)   value	+	-
Actuation Gain, Hap (N/A)	0.02944	7.709e-05 (0.26%)	7.676e-05 (0.26%)
Residual time delay, tau_A (s)	-2.216e-05	1.27e-05 (-57.31%)	1.272e-05 (-57.38%)

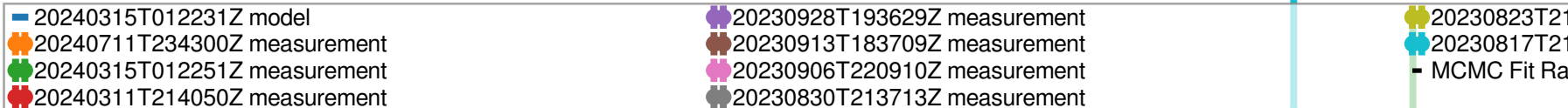


# 20240711T234300Z EX L2 actuation MCMC corner plot

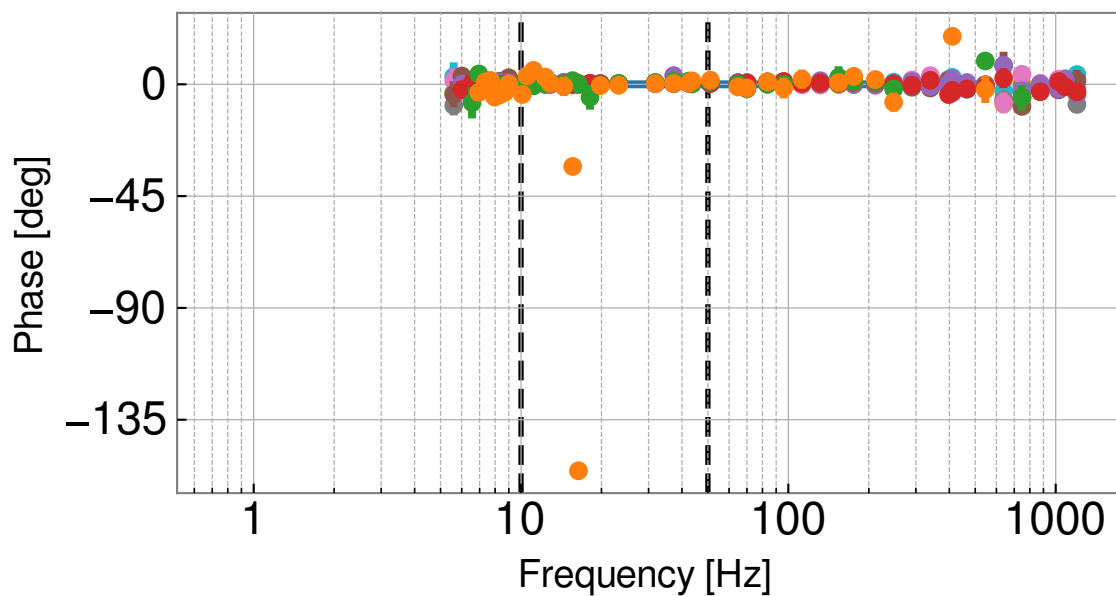
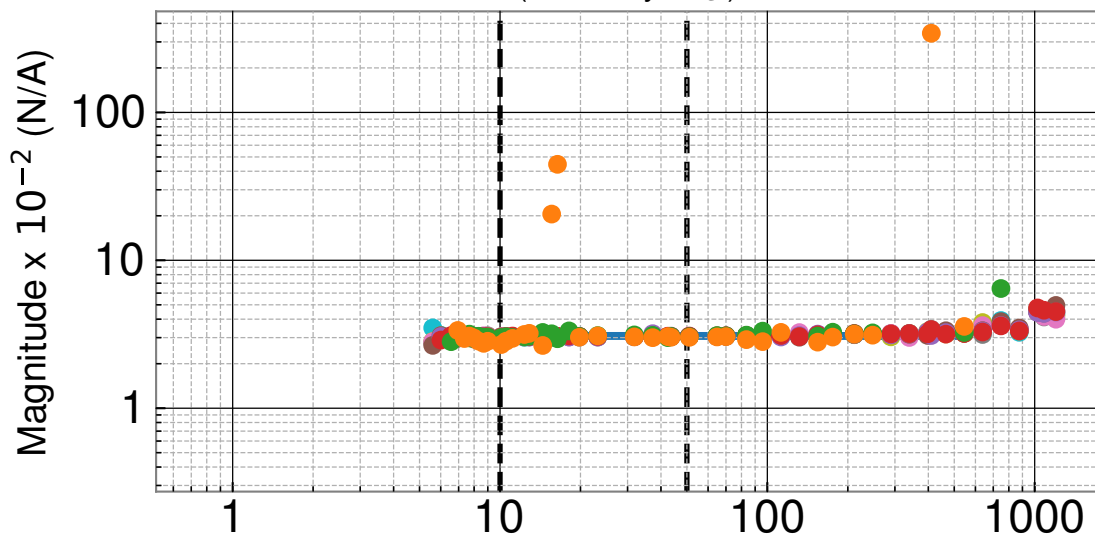


# H1SUSEX L2 actuation model history

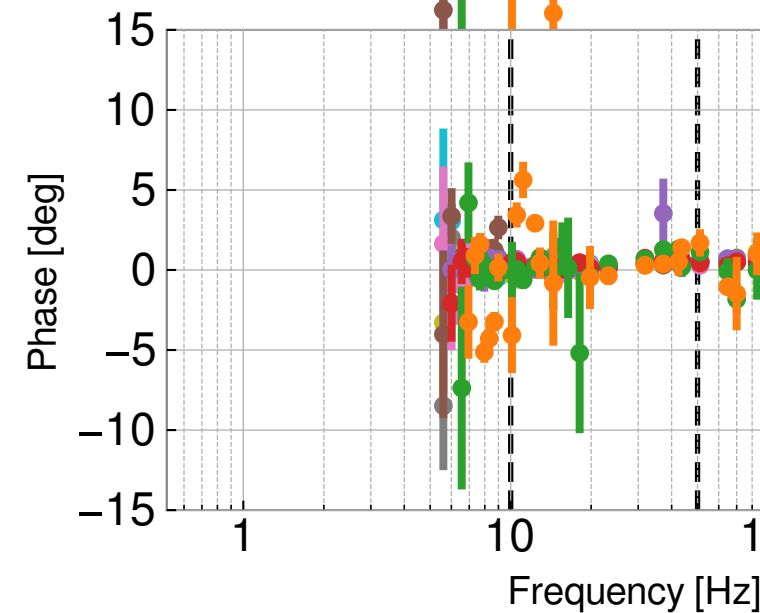
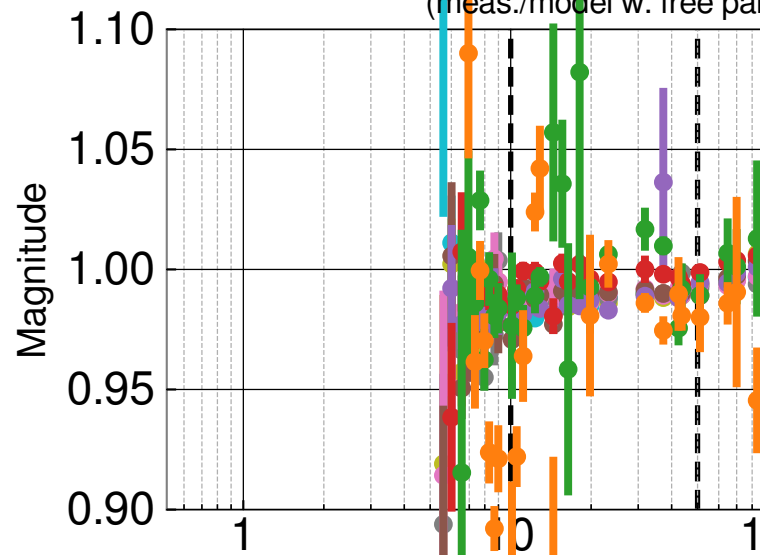
All fixed parameters drawn from /ligo/groups/cal/H1/reports/20240711T234232Z/pydarm\_H1.ini



Actuation strength transfer functions  
(scaled by  $H_{ref}$ )

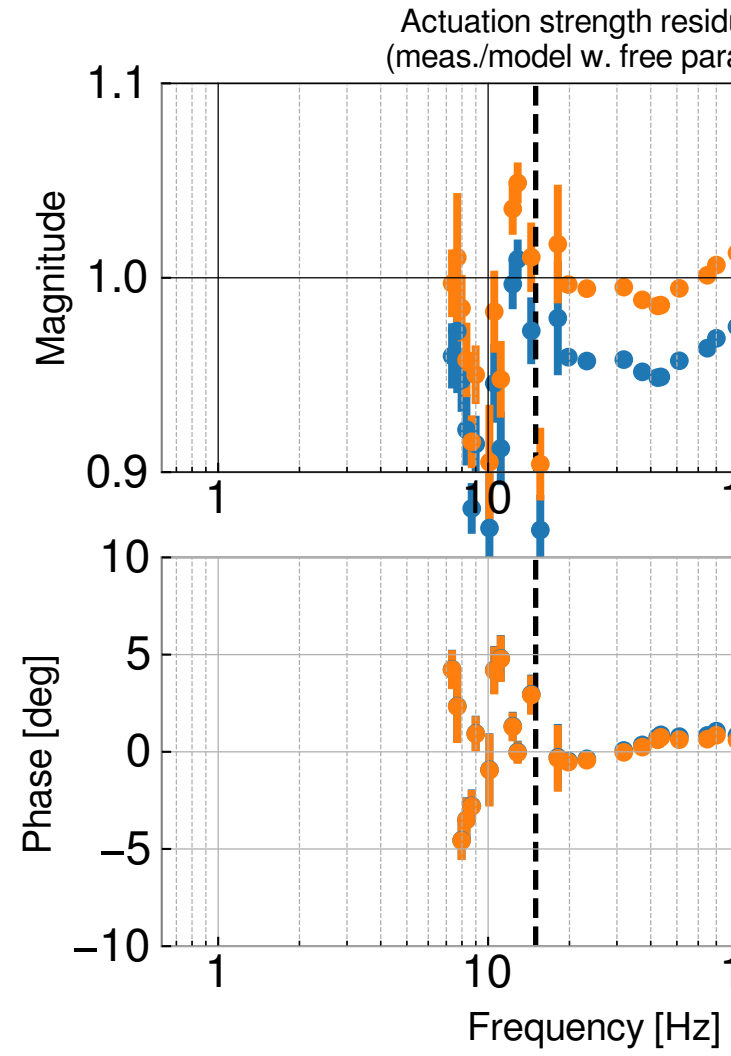
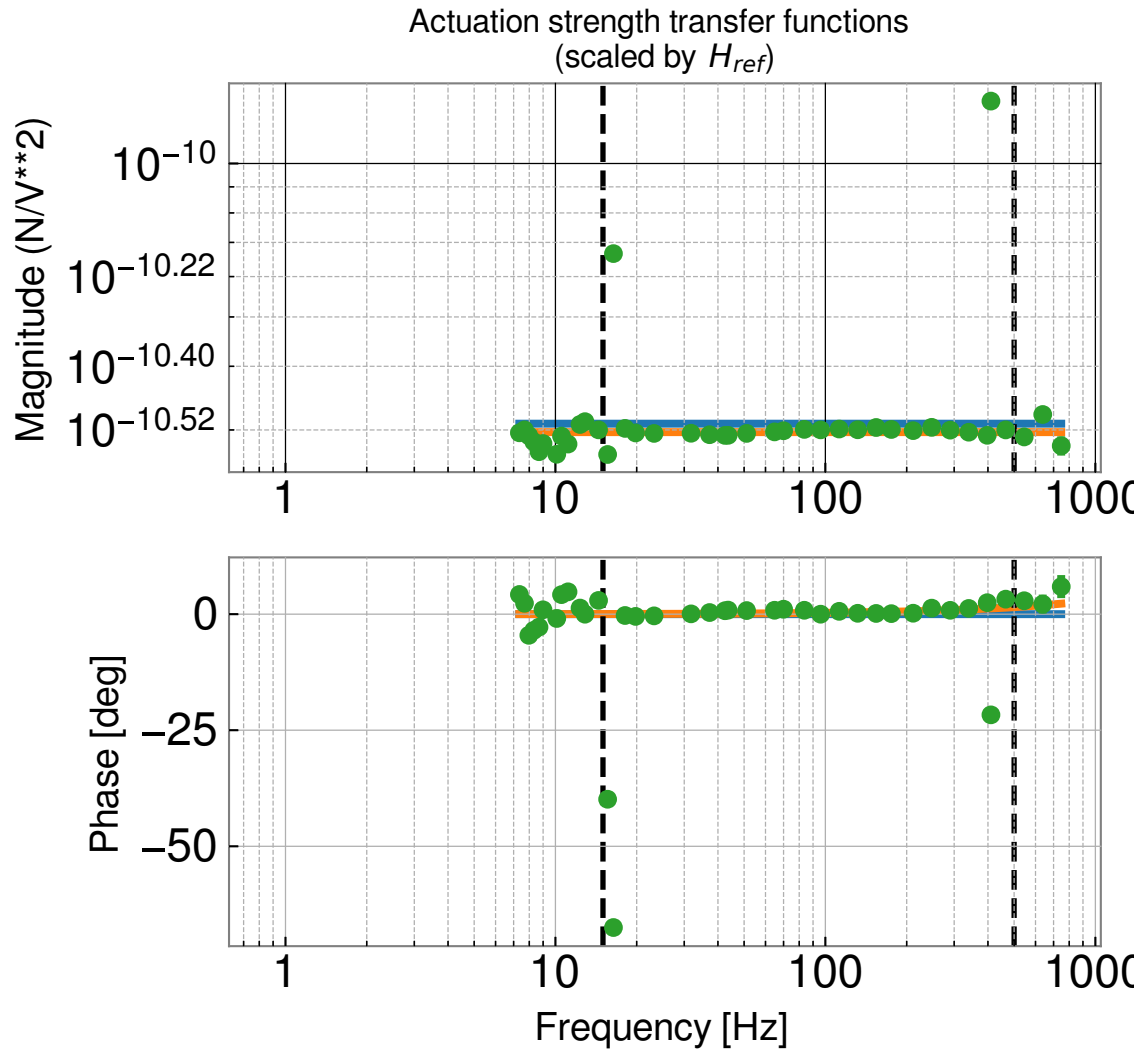


Actuation strength residuals  
(meas./model w. free parameters)



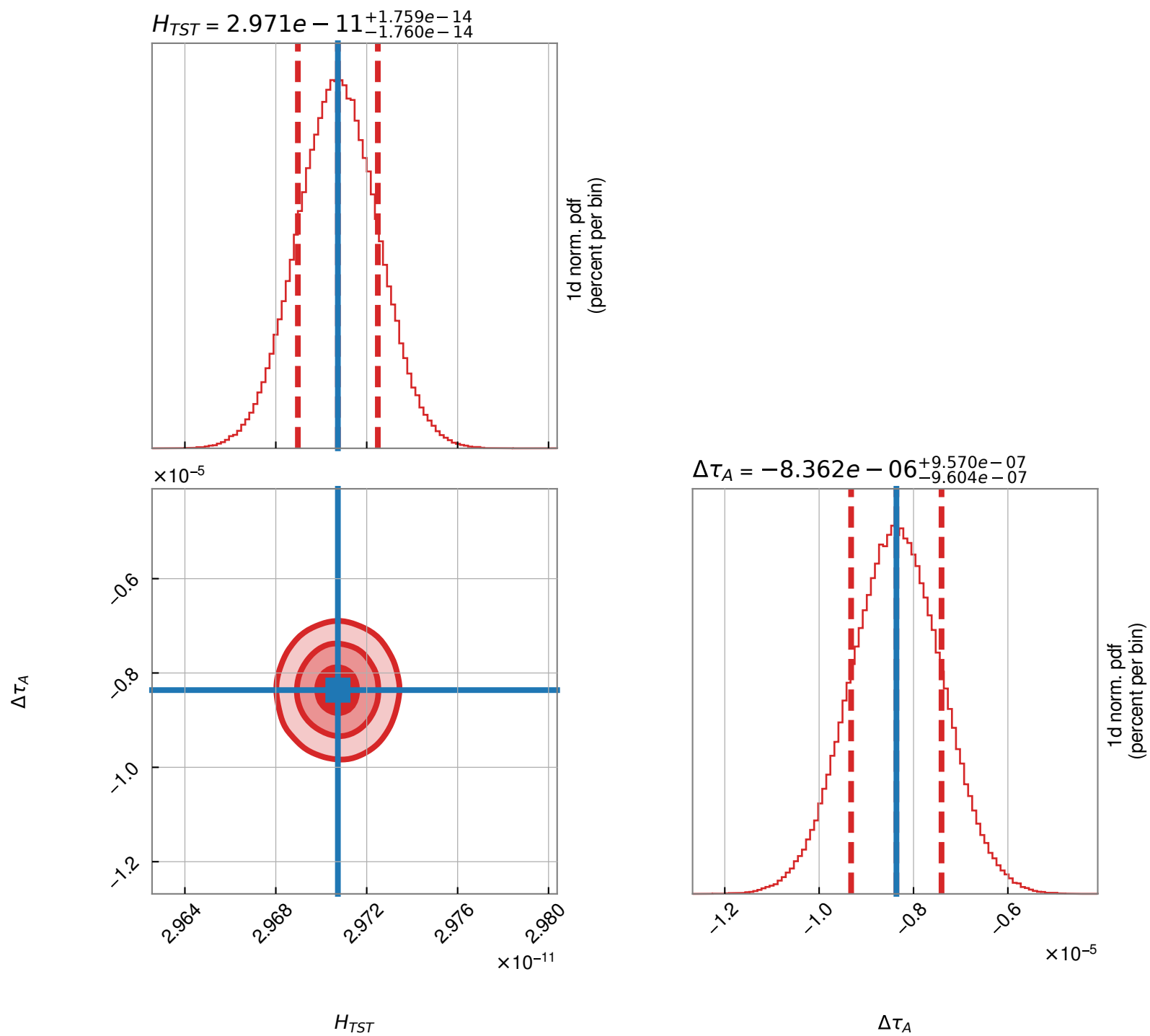
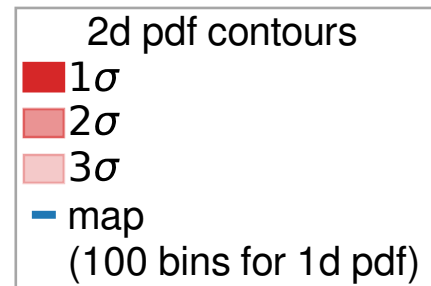
# H1 SUSEX L3 actuation model MCMC summary

All fixed parameters drawn from /ligo/groups/cal/H1/reports/20240711T234232Z/pydarm\_H1.ini



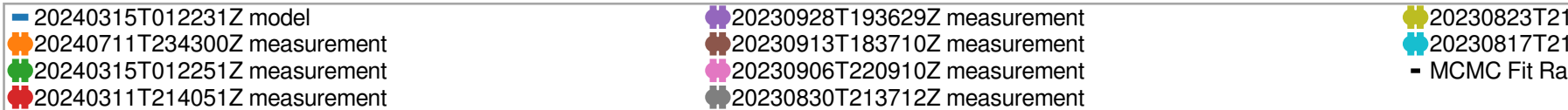
Parameter	(value +/-)   value	+	-
Actuation Gain, Hat ( $N/V^{**2}$ )	2.971e-11	1.759e-14 (0.06%)	1.76e-14 (0.06%)
Residual time delay, tau_A (s)	-8.362e-06	9.57e-07 (-11.44%)	9.604e-07 (-11.49%)

# 20240711T234300Z EX L3 actuation MCMC corner plot

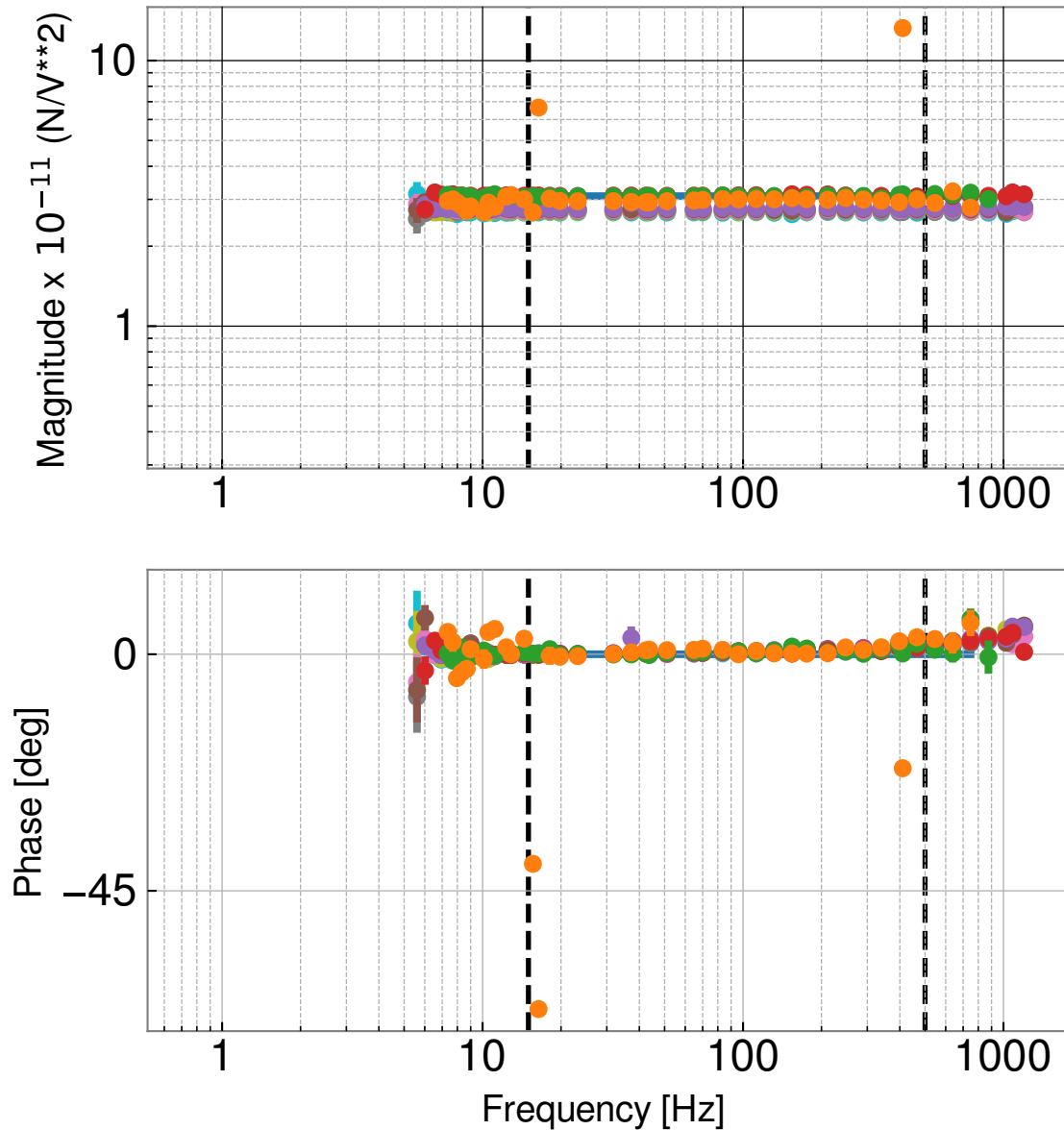


# H1SUSEX L3 actuation model history

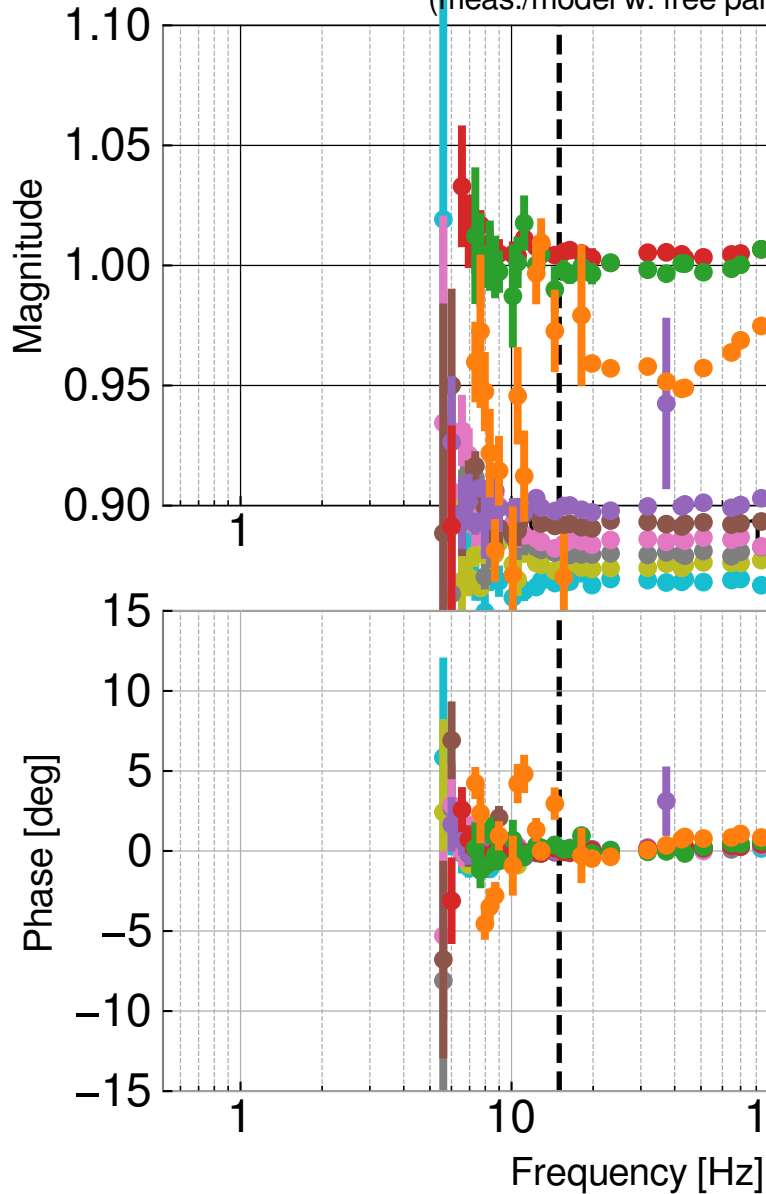
All fixed parameters drawn from /ligo/groups/cal/H1/reports/20240711T234232Z/pydarm\_H1.ini



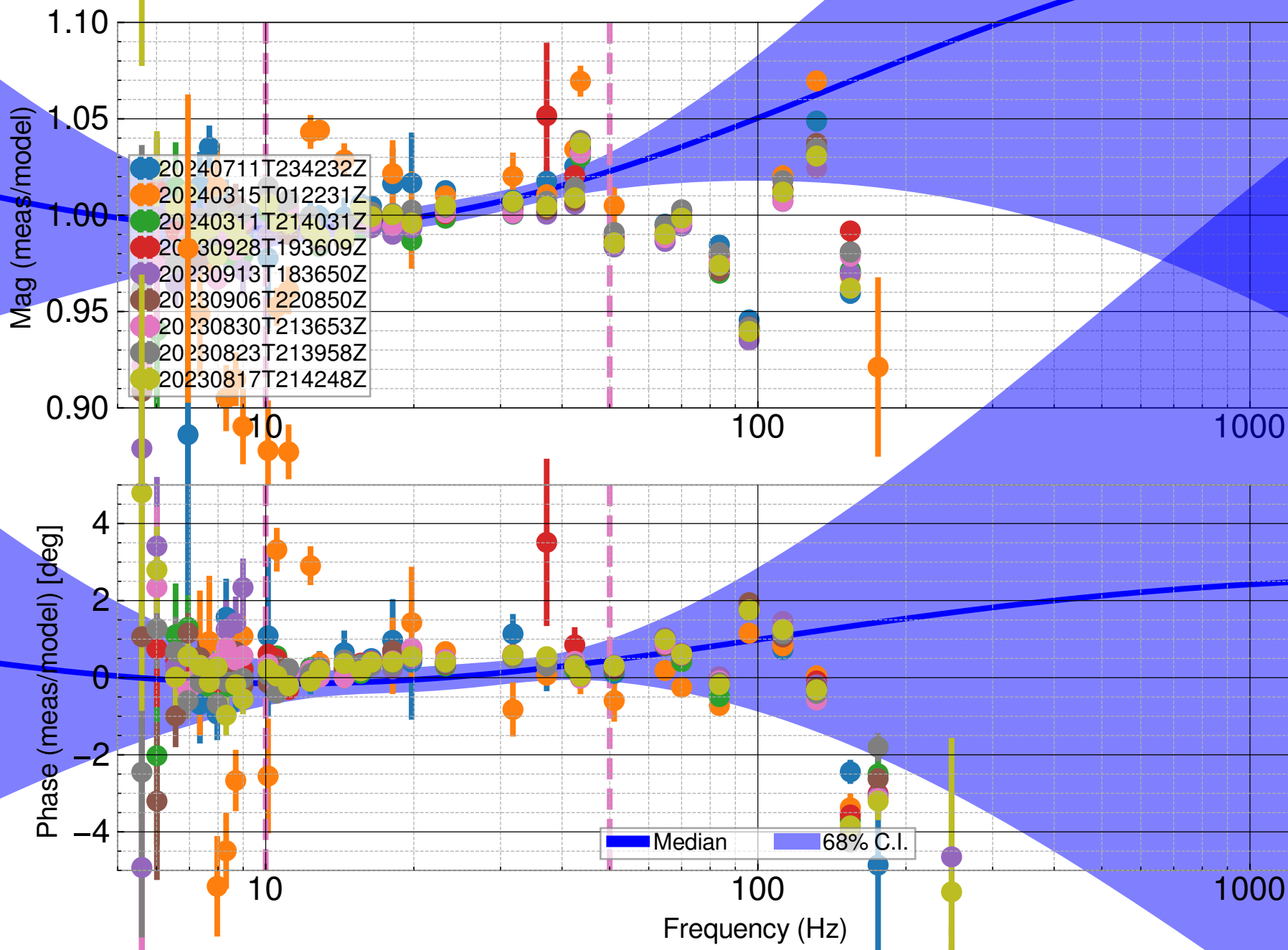
Actuation strength transfer functions  
(scaled by  $H_{ref}$ )



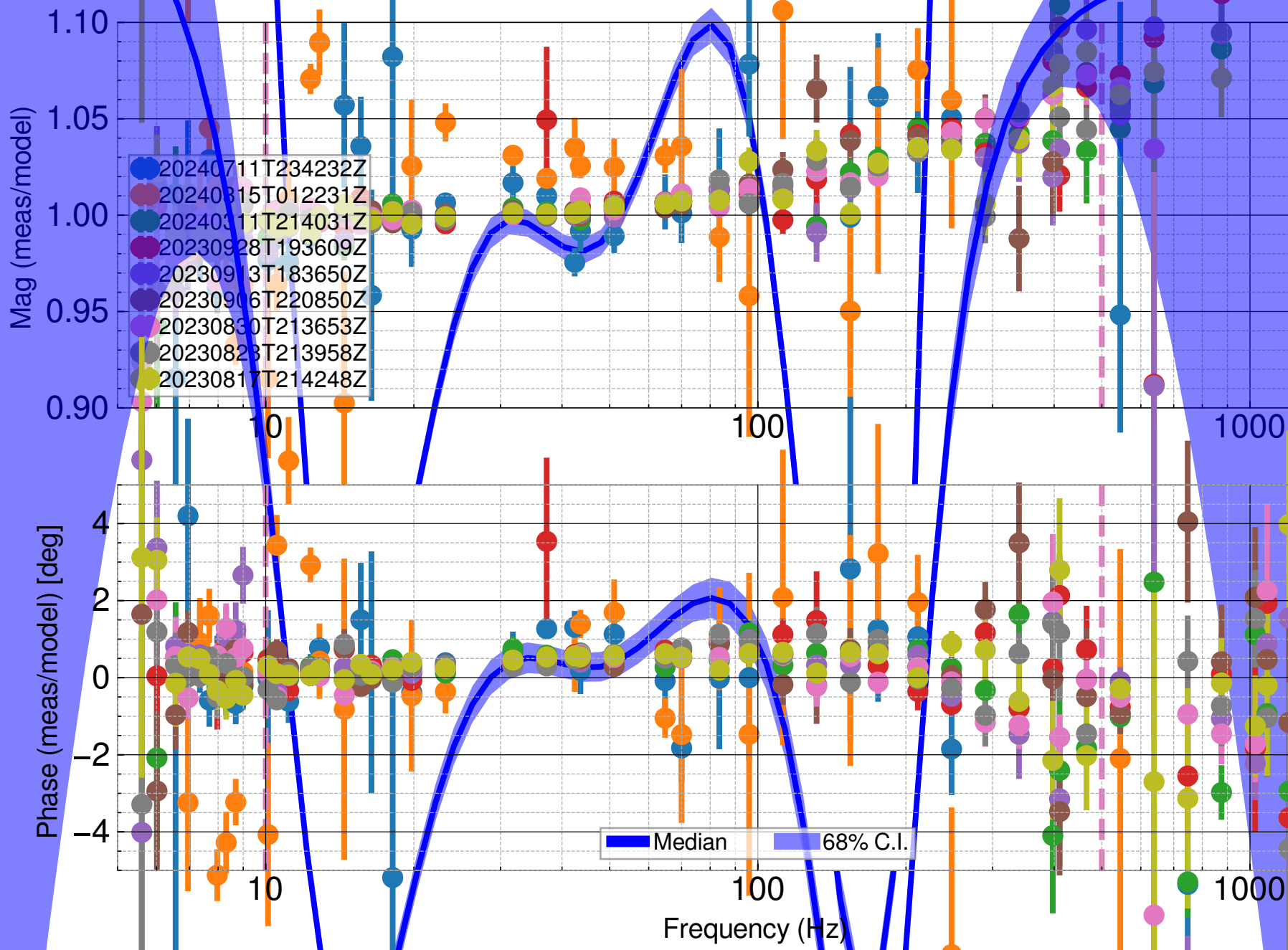
Actuation strength residuals  
(meas./model w. free parameters)



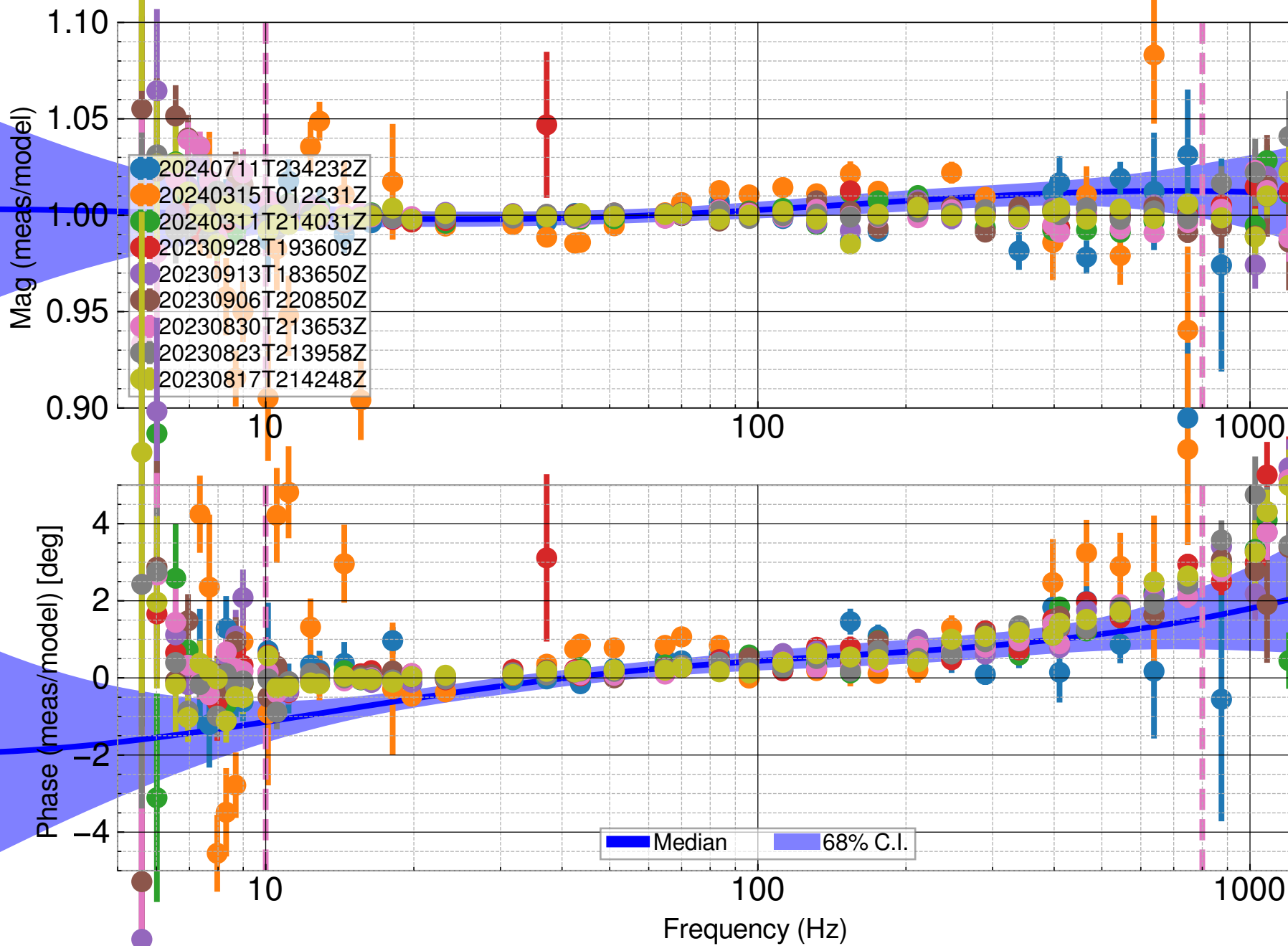
Actuation/L1/EX GPR



# Actuation/L2/EX GPR

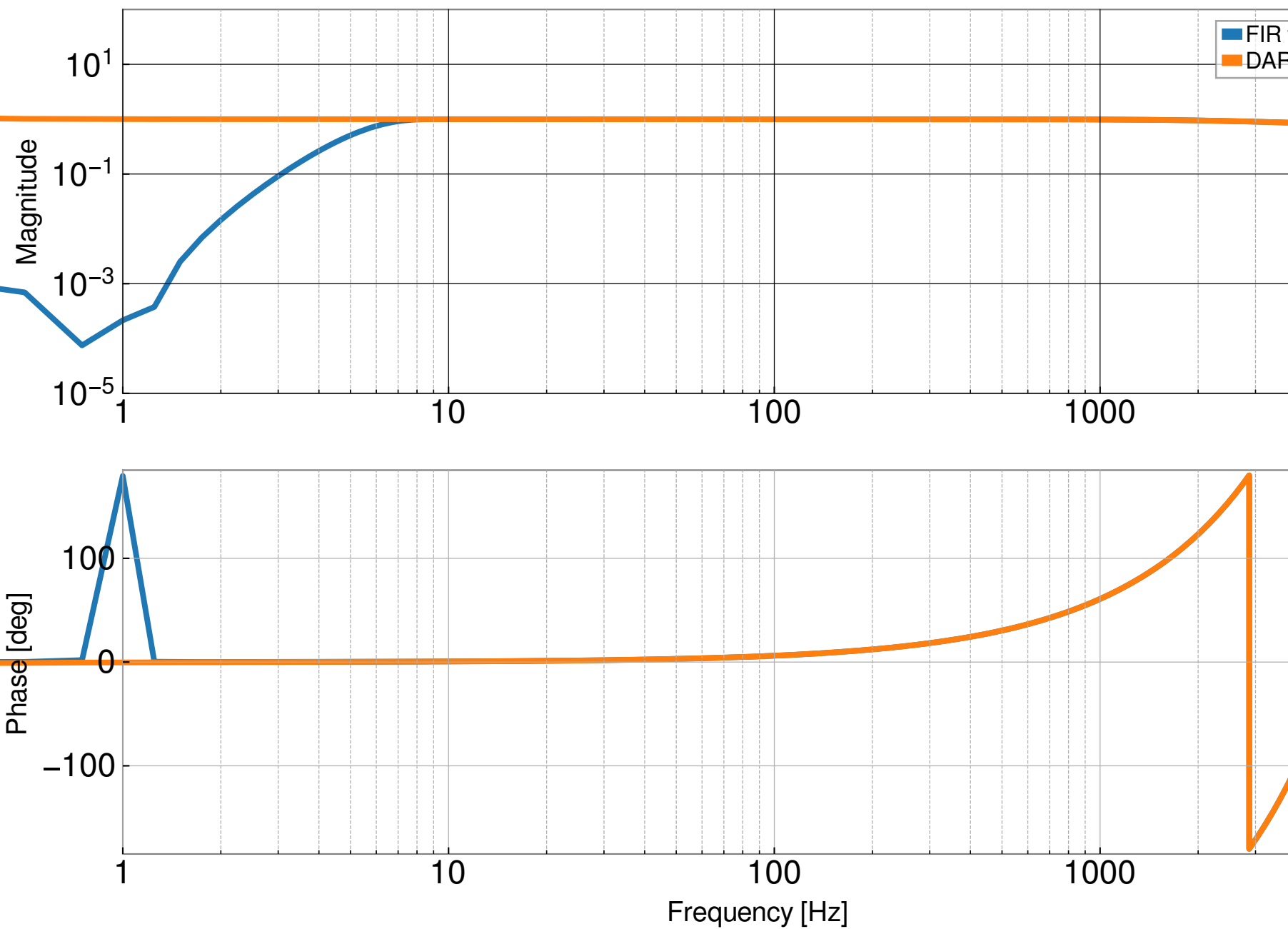


# Actuation/L3/EX GPR

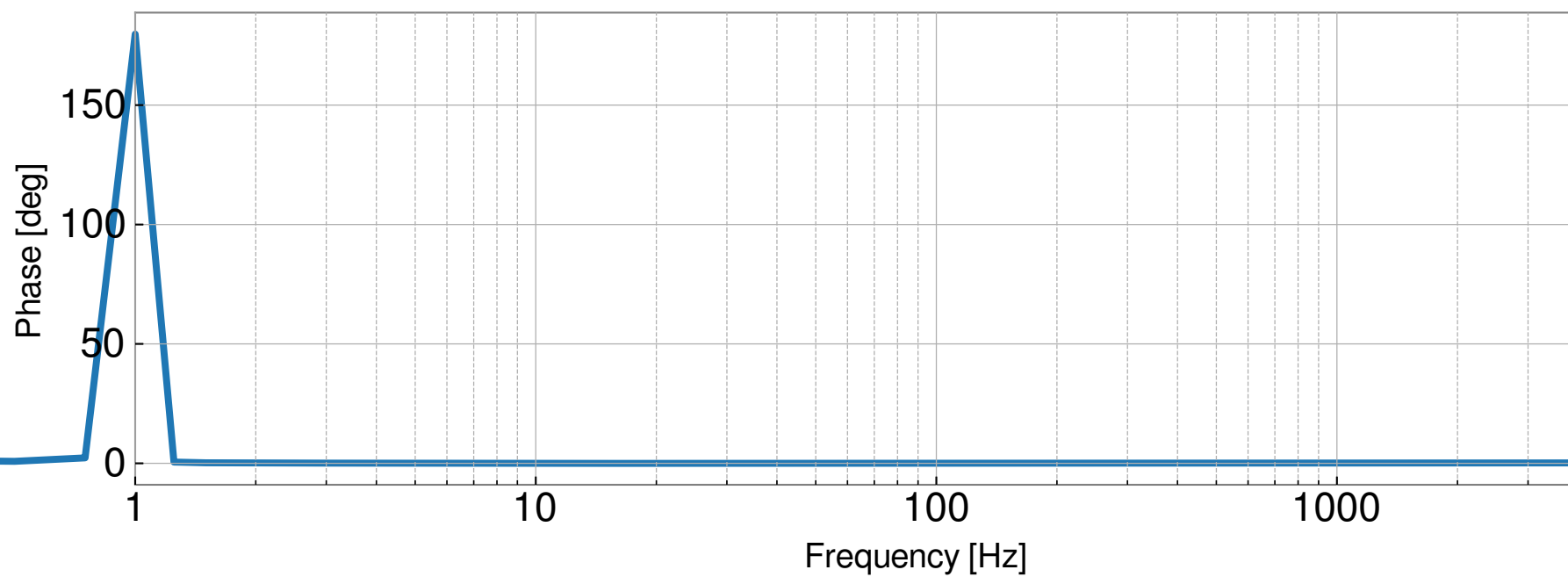
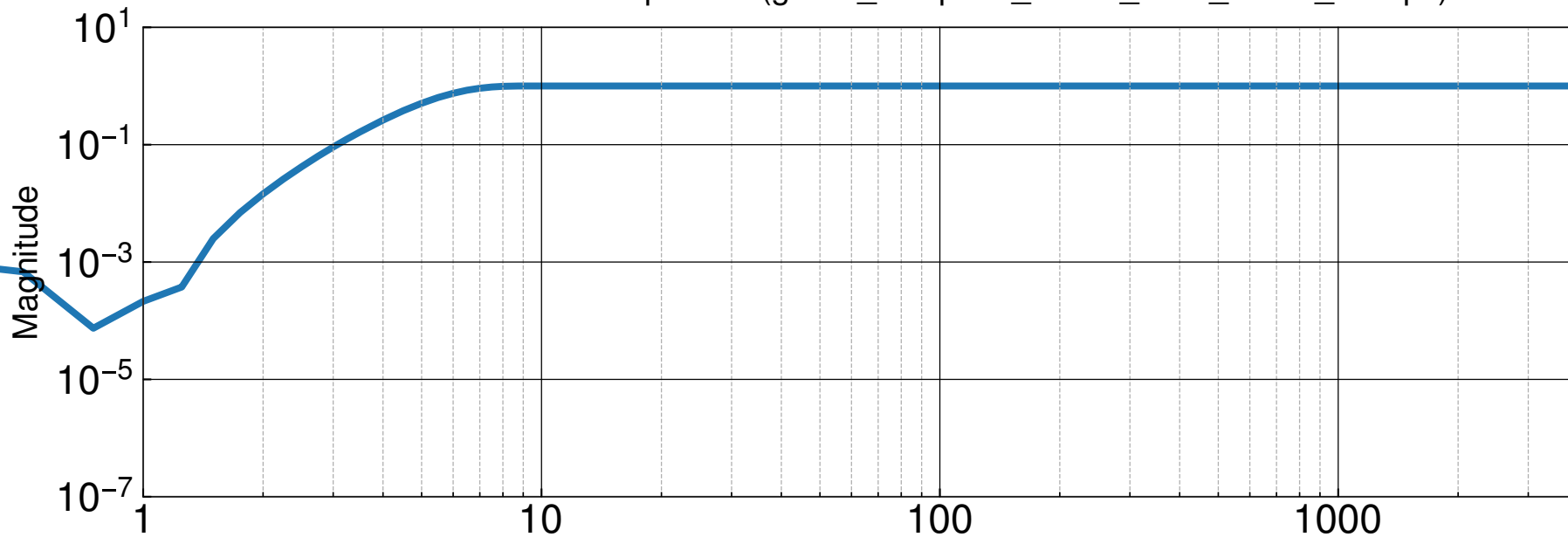




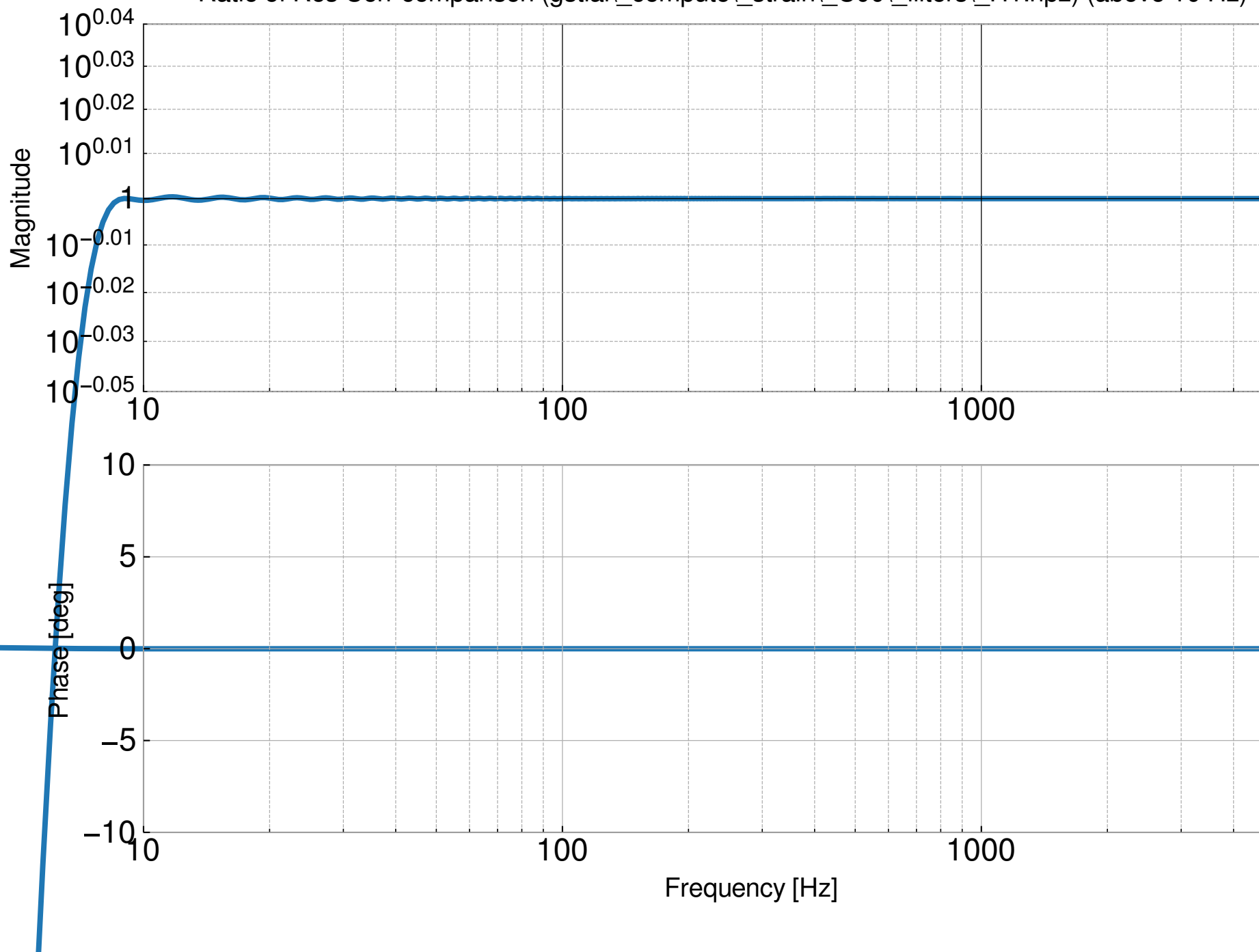
Res Corr comparison (gstlal\\_compute\\_strain\\_C00\\_filters\\_H1.npz)



Ratio of Res Corr comparison (gstla\compute\_strain\_C00\_filters\_H1.npz)

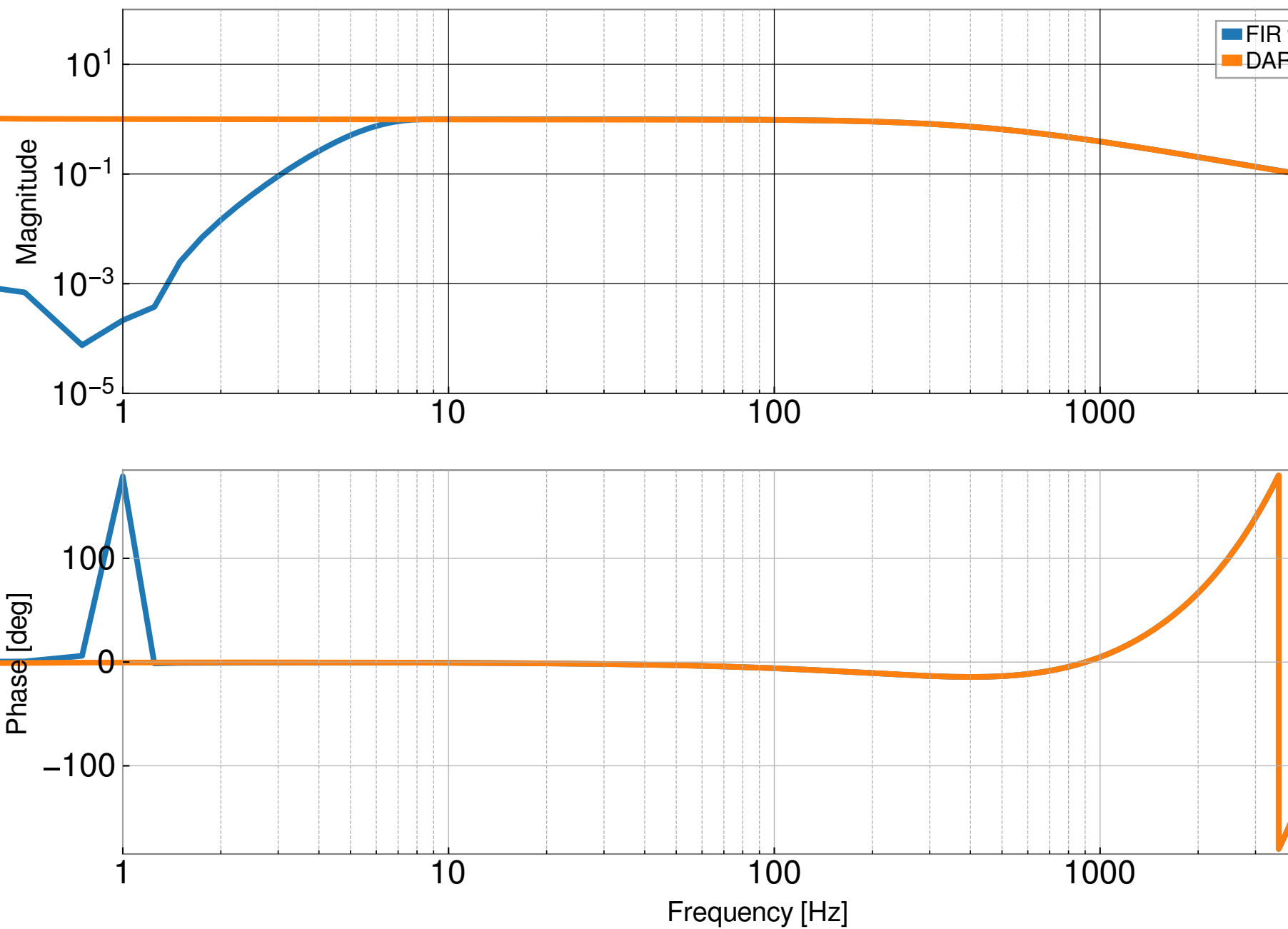


Ratio of Res Corr comparison (gstlal\\_compute\\_strain\\_C00\\_filters\\_H1.npz) (above 10 Hz)



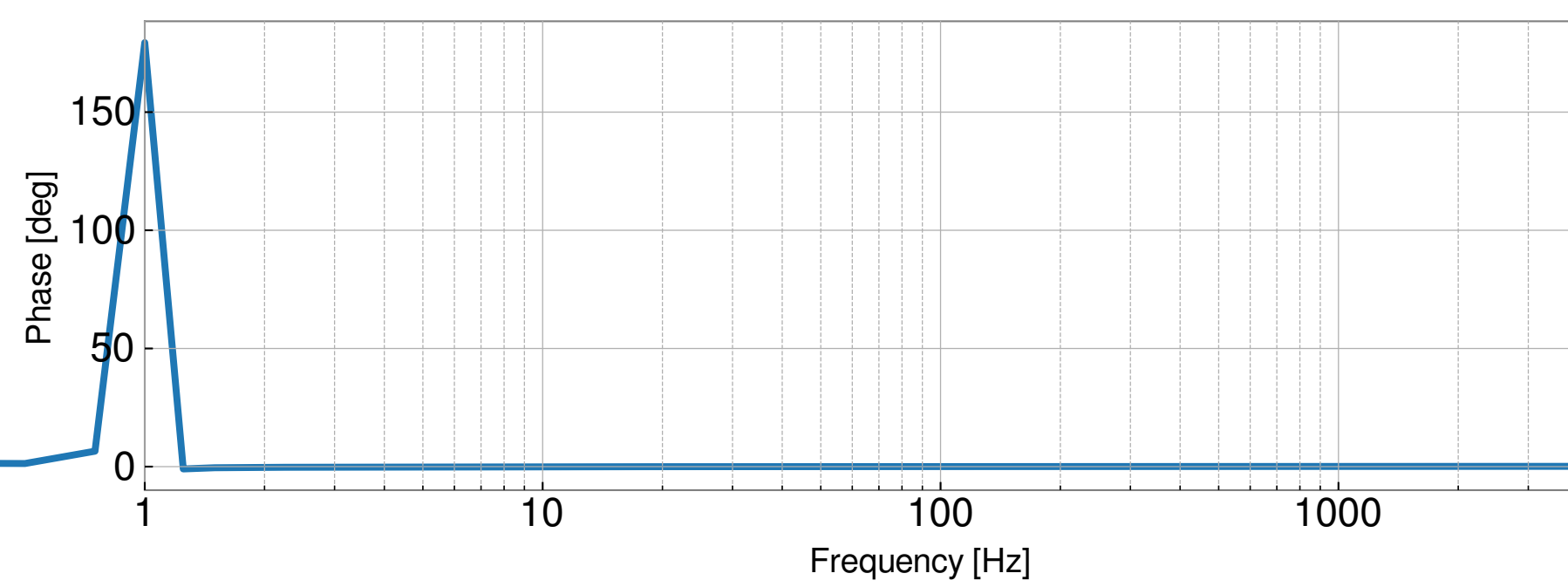
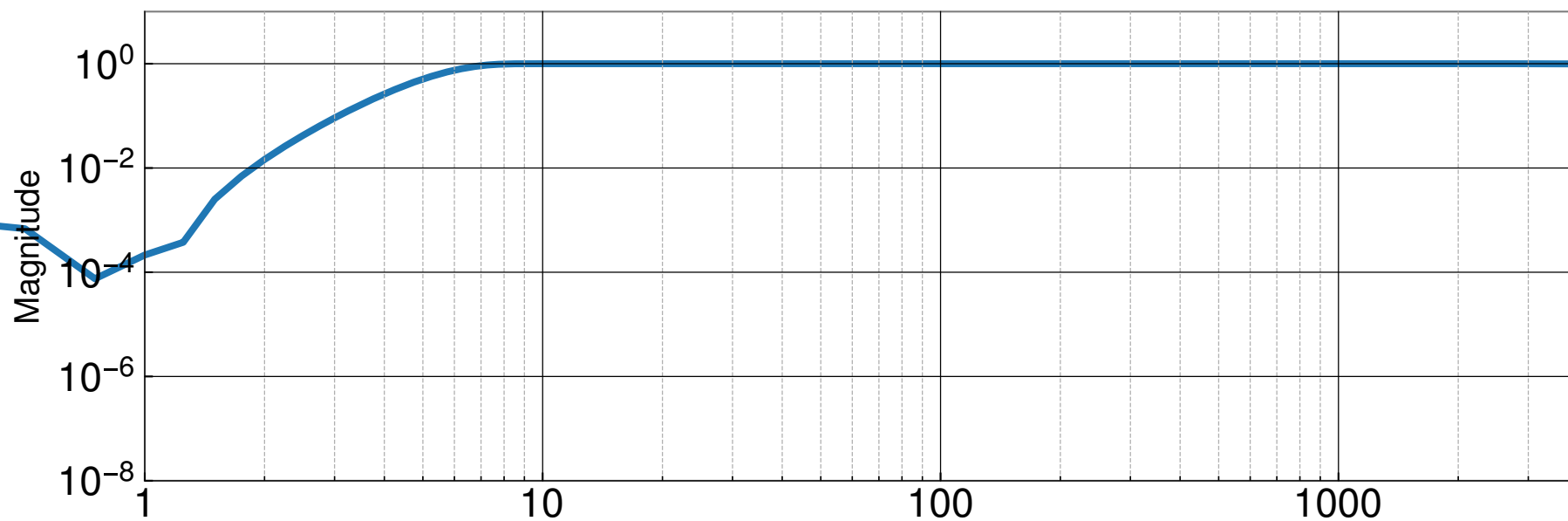
Res Corr No CC Pole comparison

(gstla\compute\strain\_C00\_filters\F



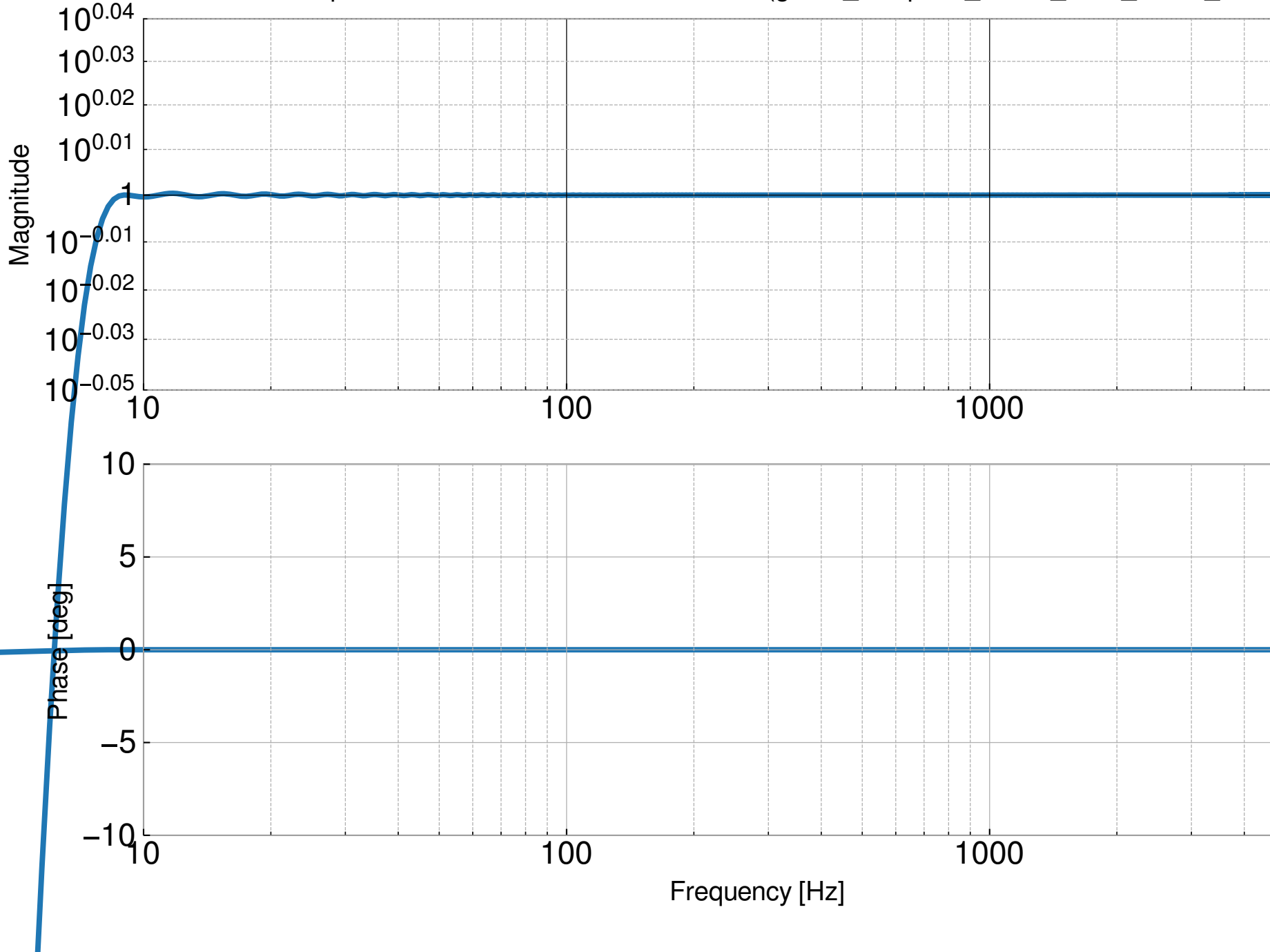
Ratio of Res Corr No CC Pole comparison

(gstlal\\_compute\\_strain\\_C00\\_filter



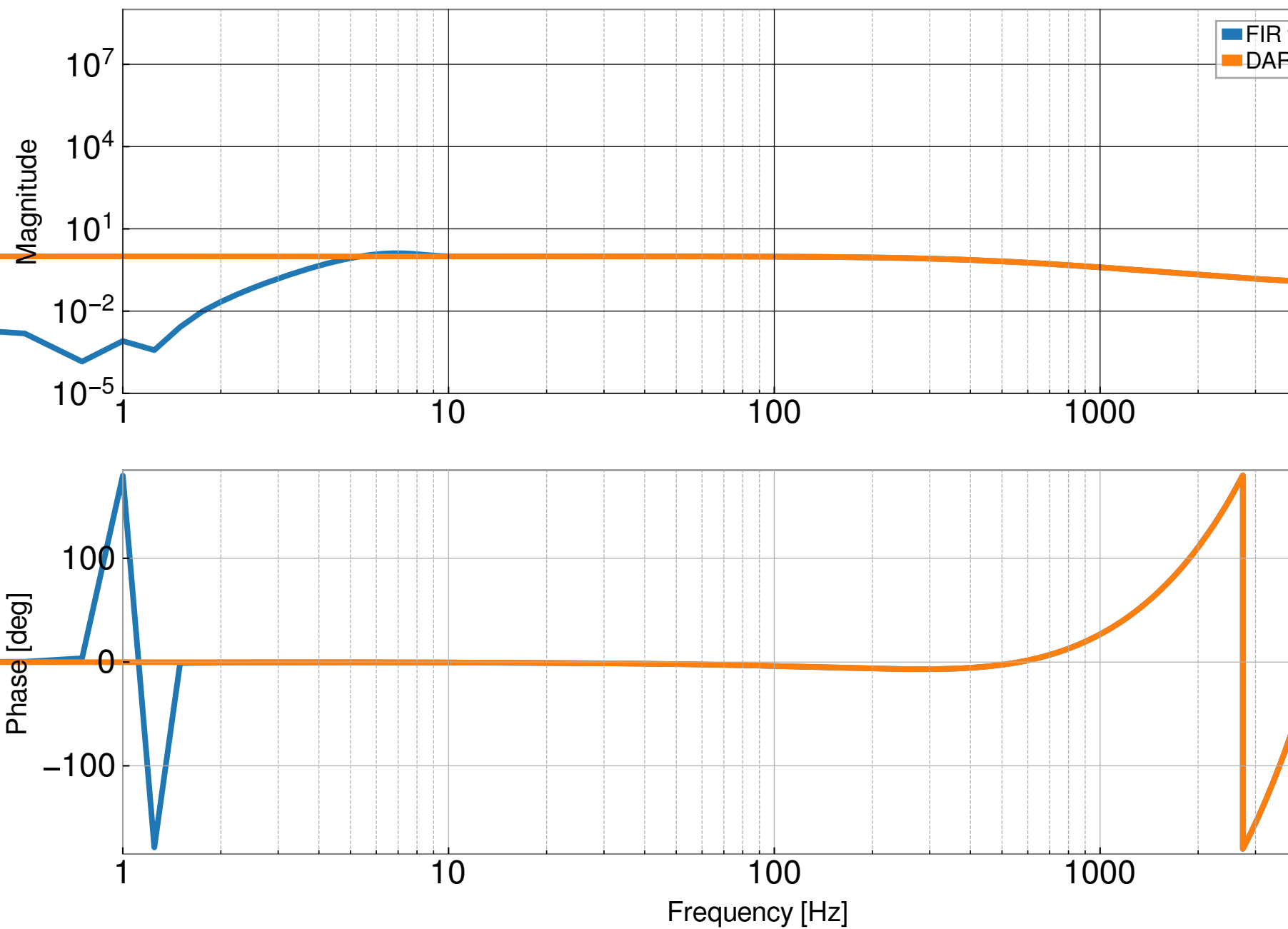
Ratio of Res Corr No CC Pole comparison

(gstlal\\_compute\\_strain\\_C00\\_filters\\_H1.r



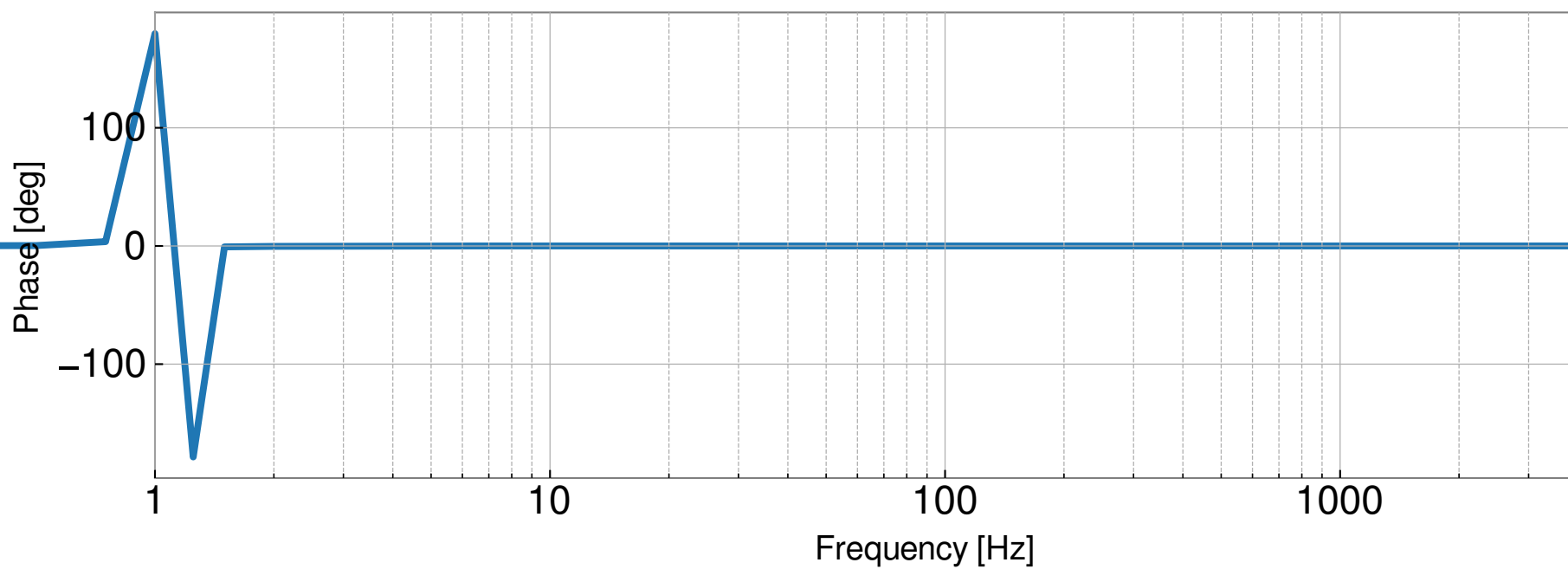
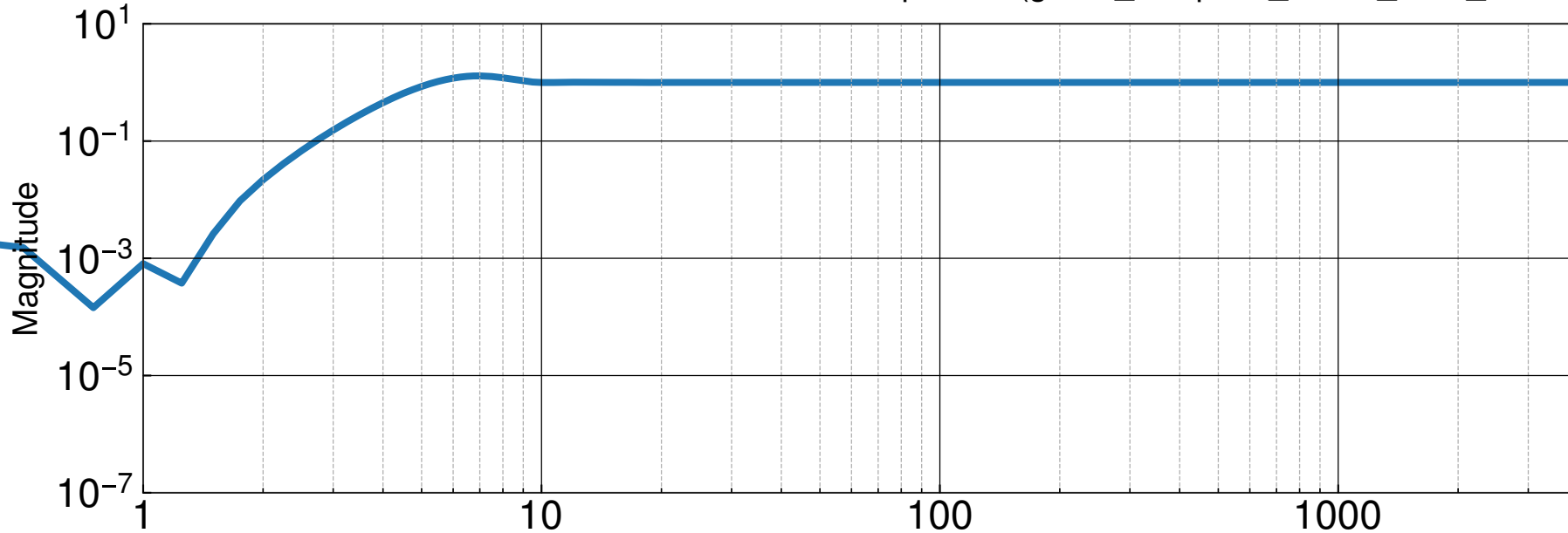
Res Corr No Pole

comparison (gstlal\compute\strain\_C00\_filters\_H1



Ratio of Res Corr No Pole

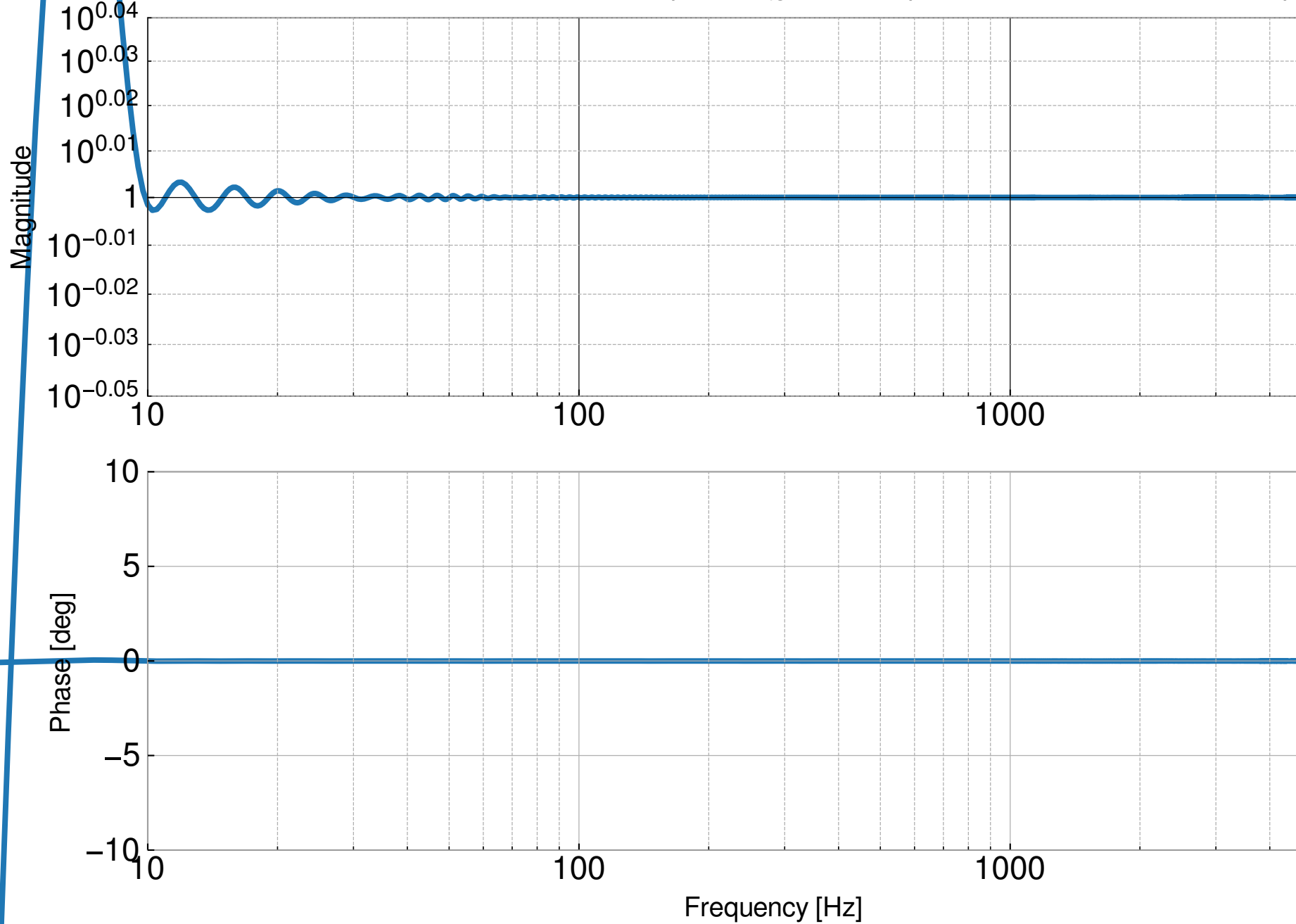
comparison (gstlal\\_compute\\_strain\\_C00\\_filters)



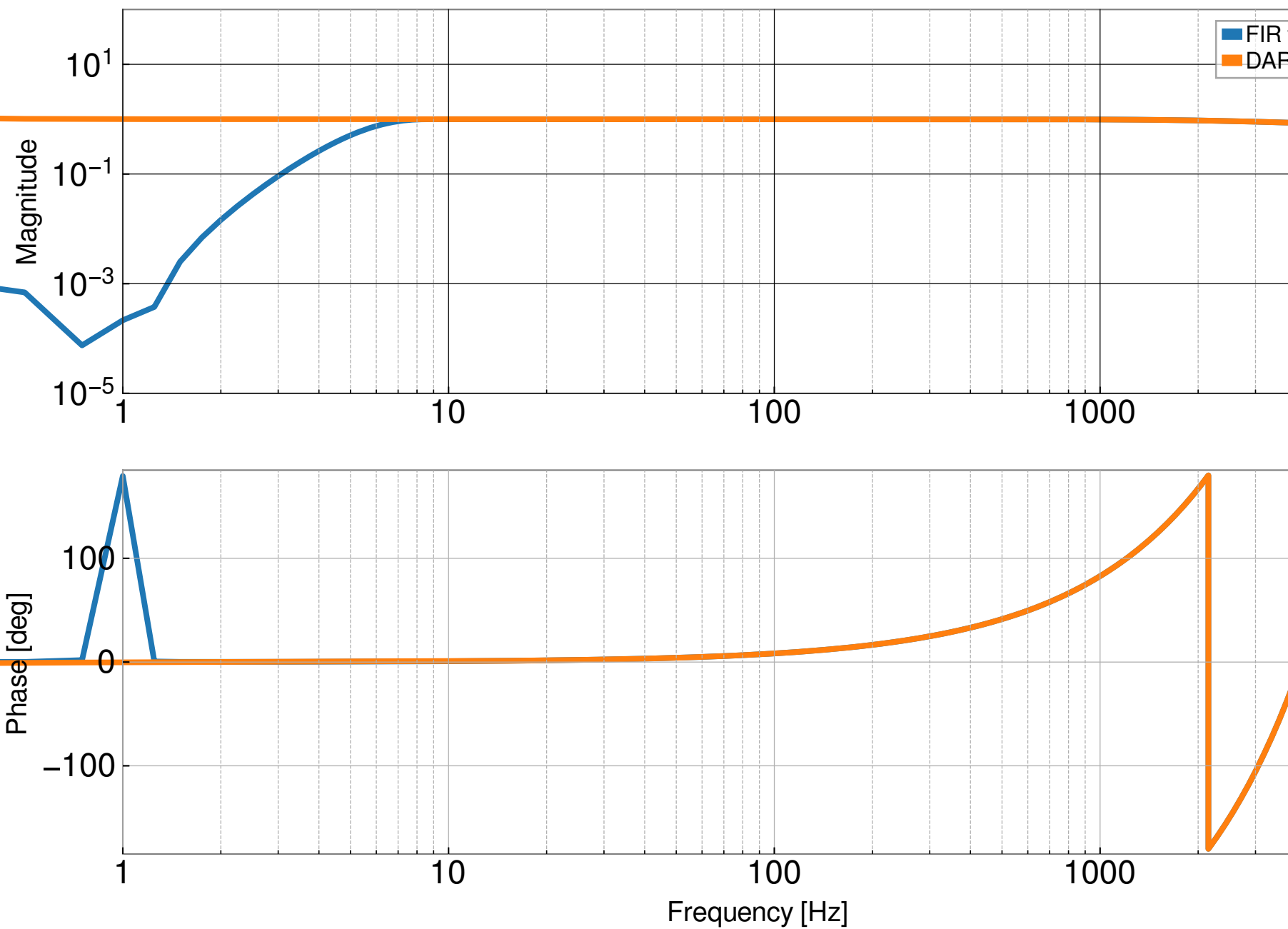


Ratio of Res Corr No Pole

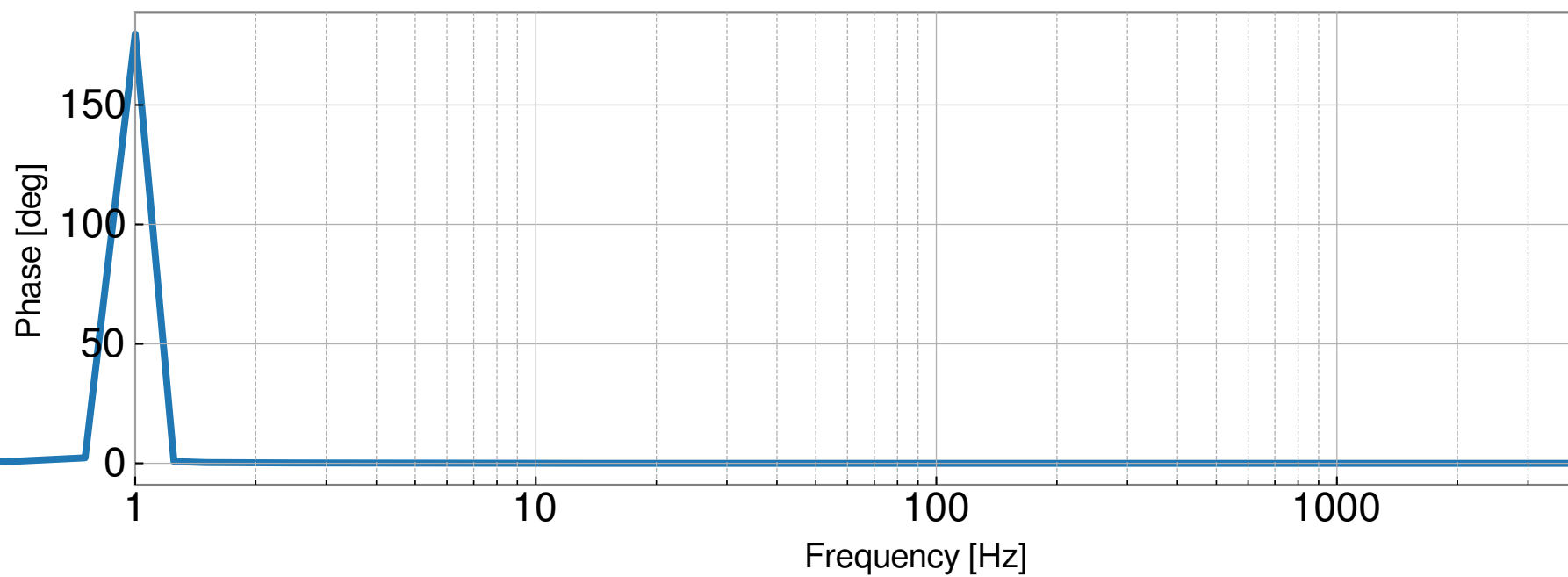
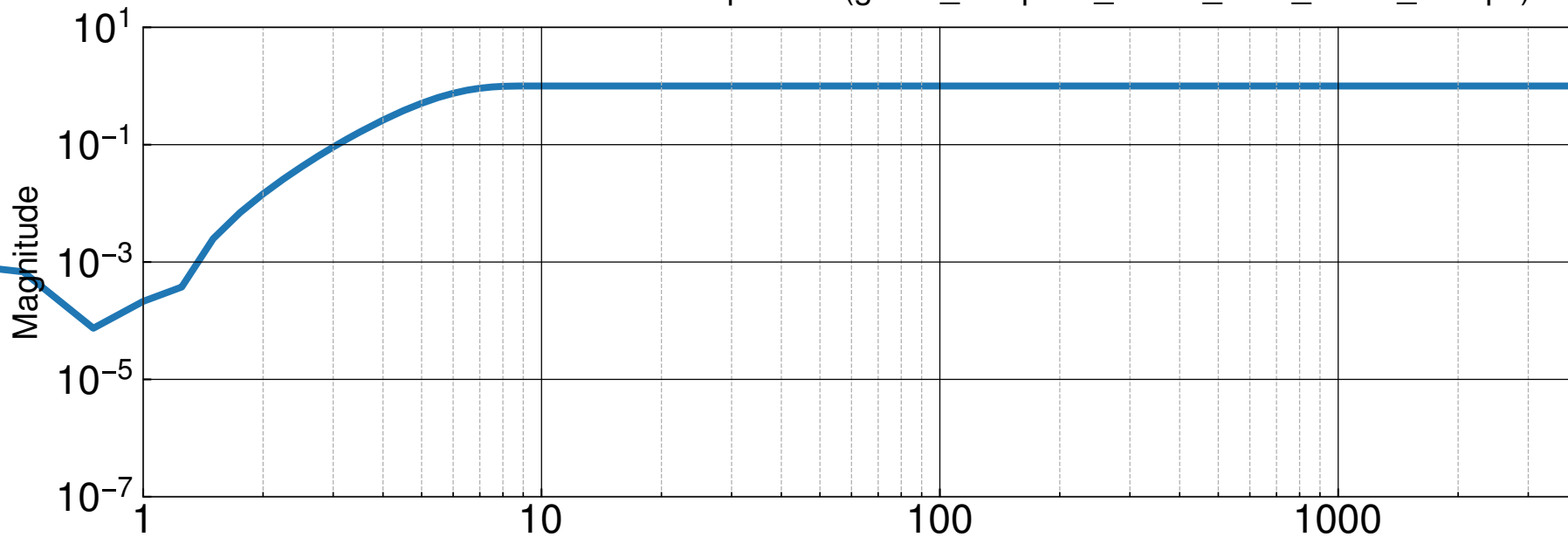
comparison (gstlal\\_compute\\_strain\\_C00\\_filters\\_H1.np



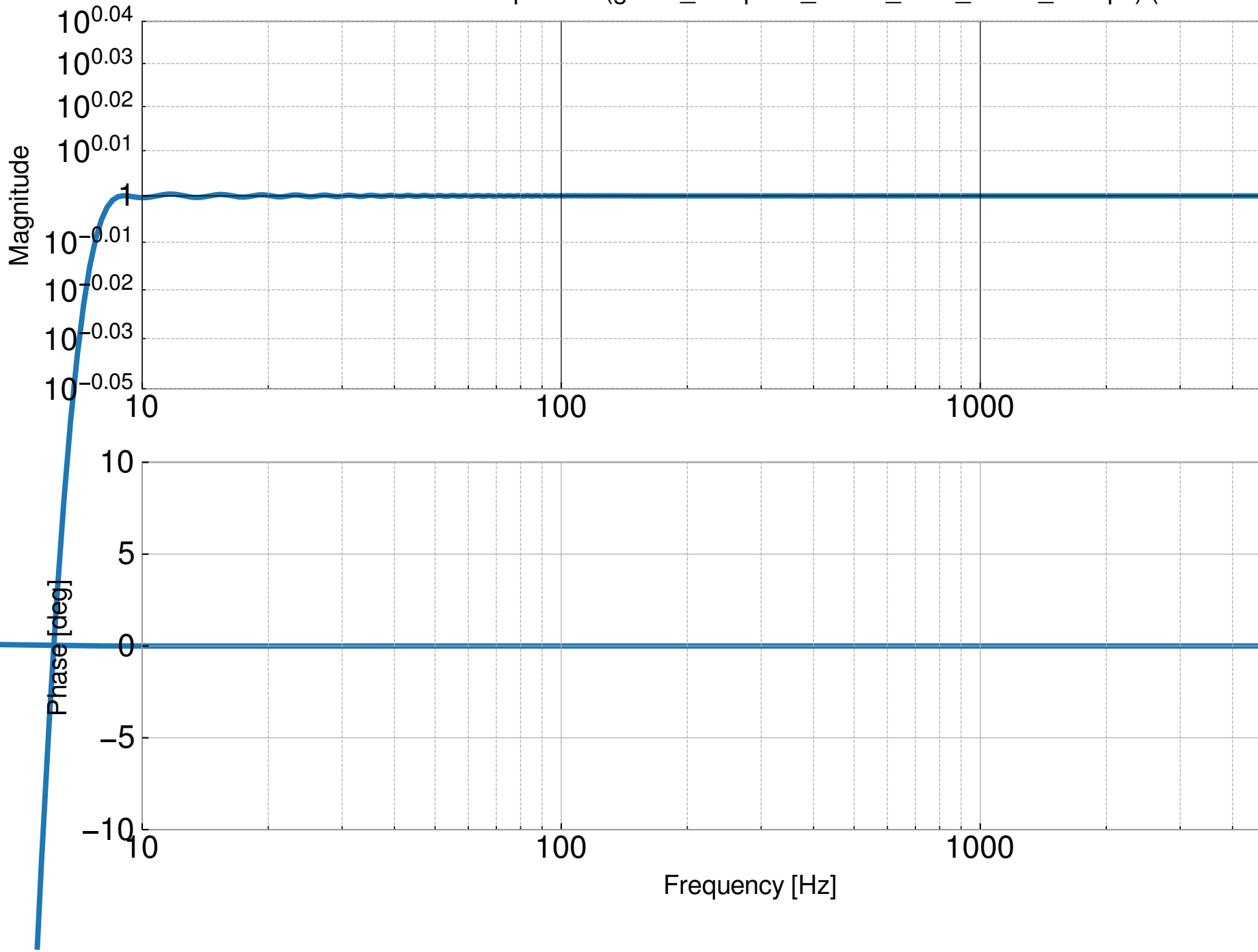
Nonsens corrections comparison (gstlal\\_compute\\_strain\\_C00\\_filters\\_H1.npz)



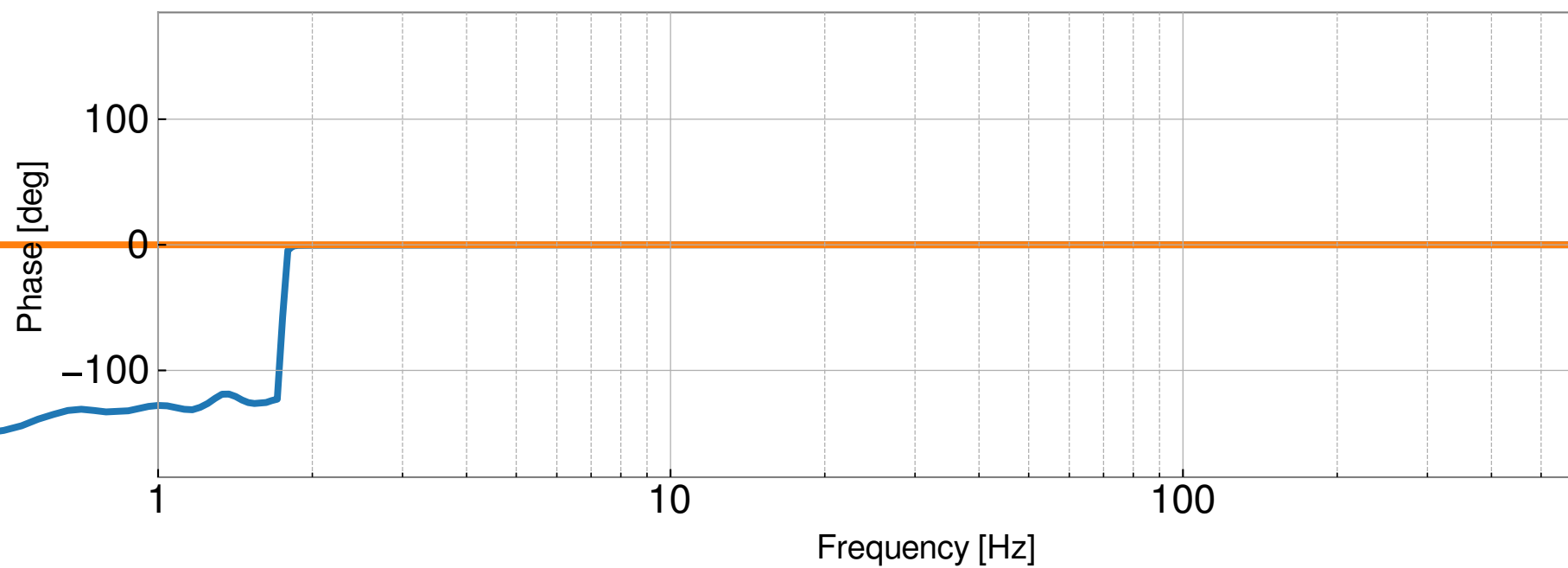
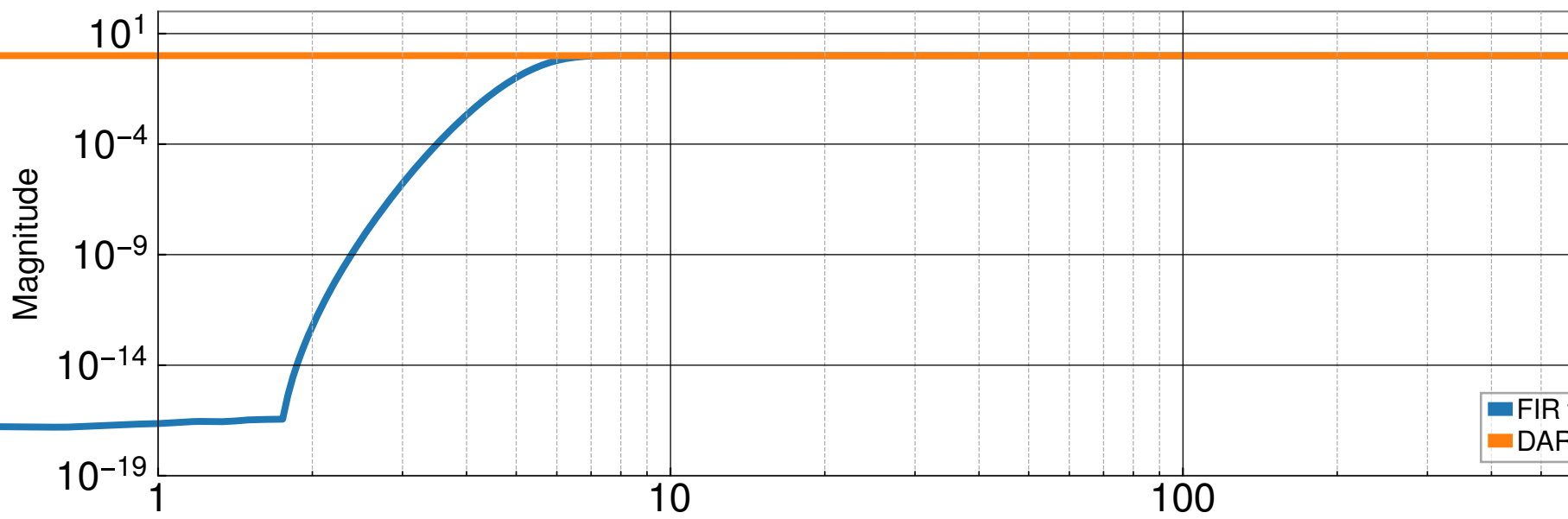
Ratio of Nonsens corrections comparison (gstlal\\_compute\\_strain\\_C00\\_filters\\_H1.npz)



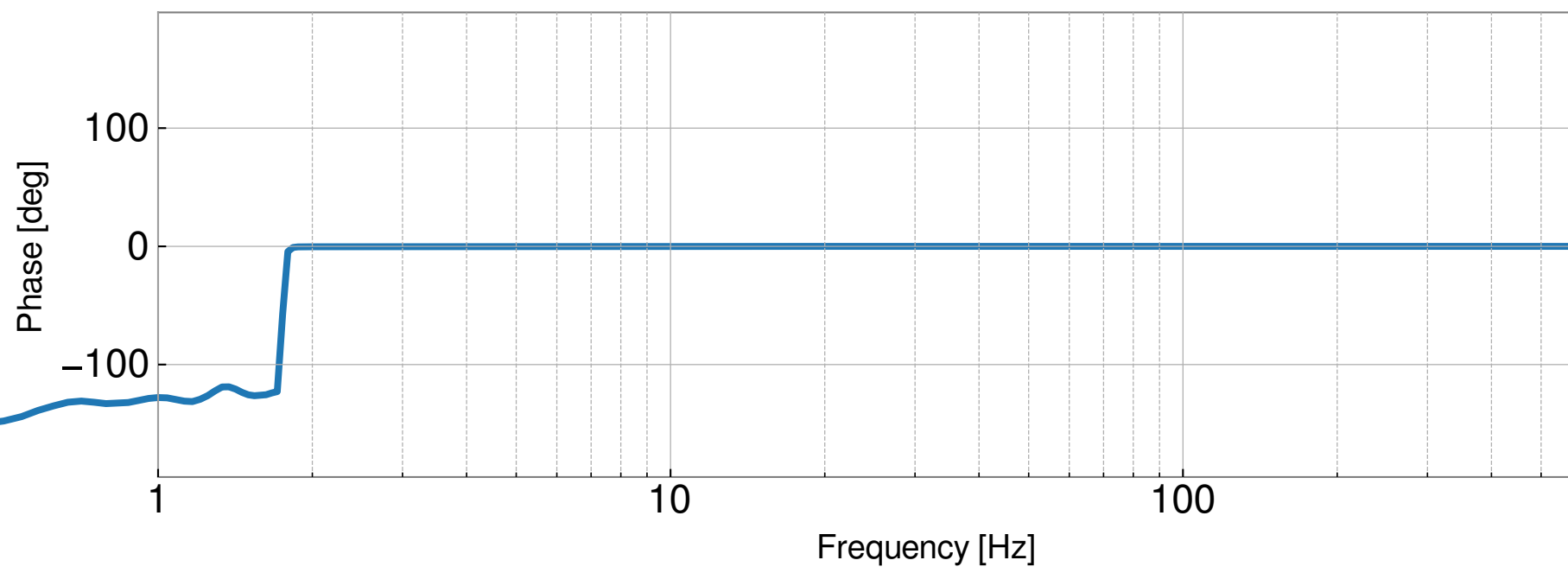
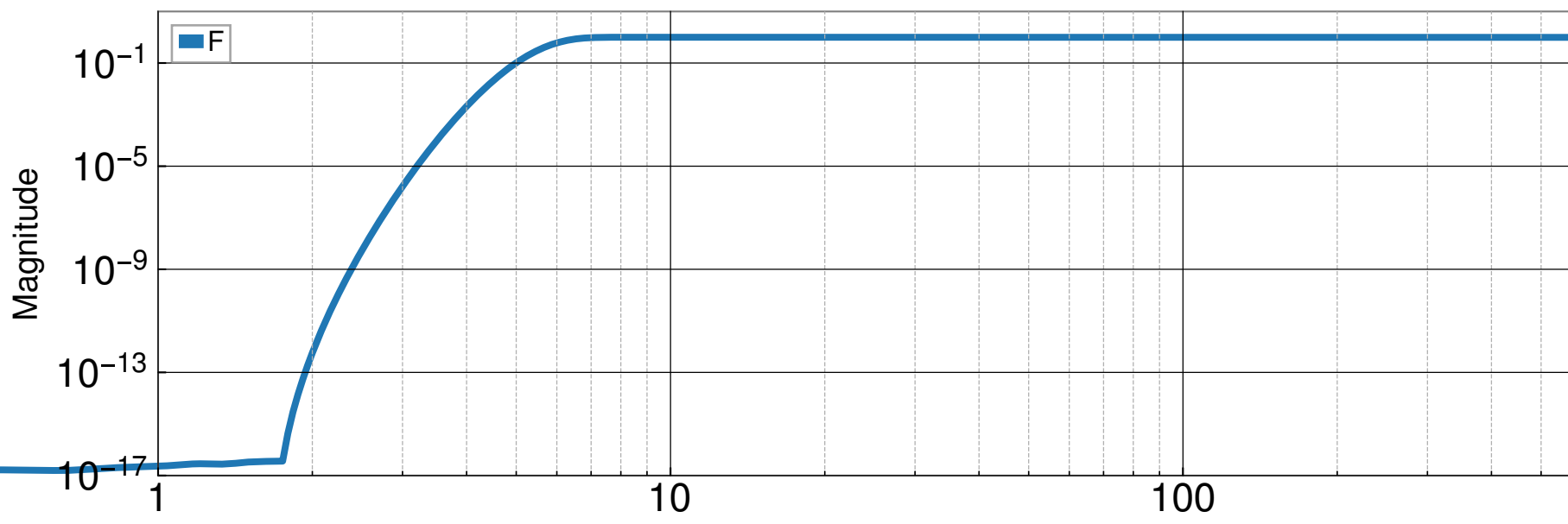
Ratio of Nonsens corrections comparison (gstlal\\_compute\\_strain\\_C00\\_filters\\_H1.npz) (above 10



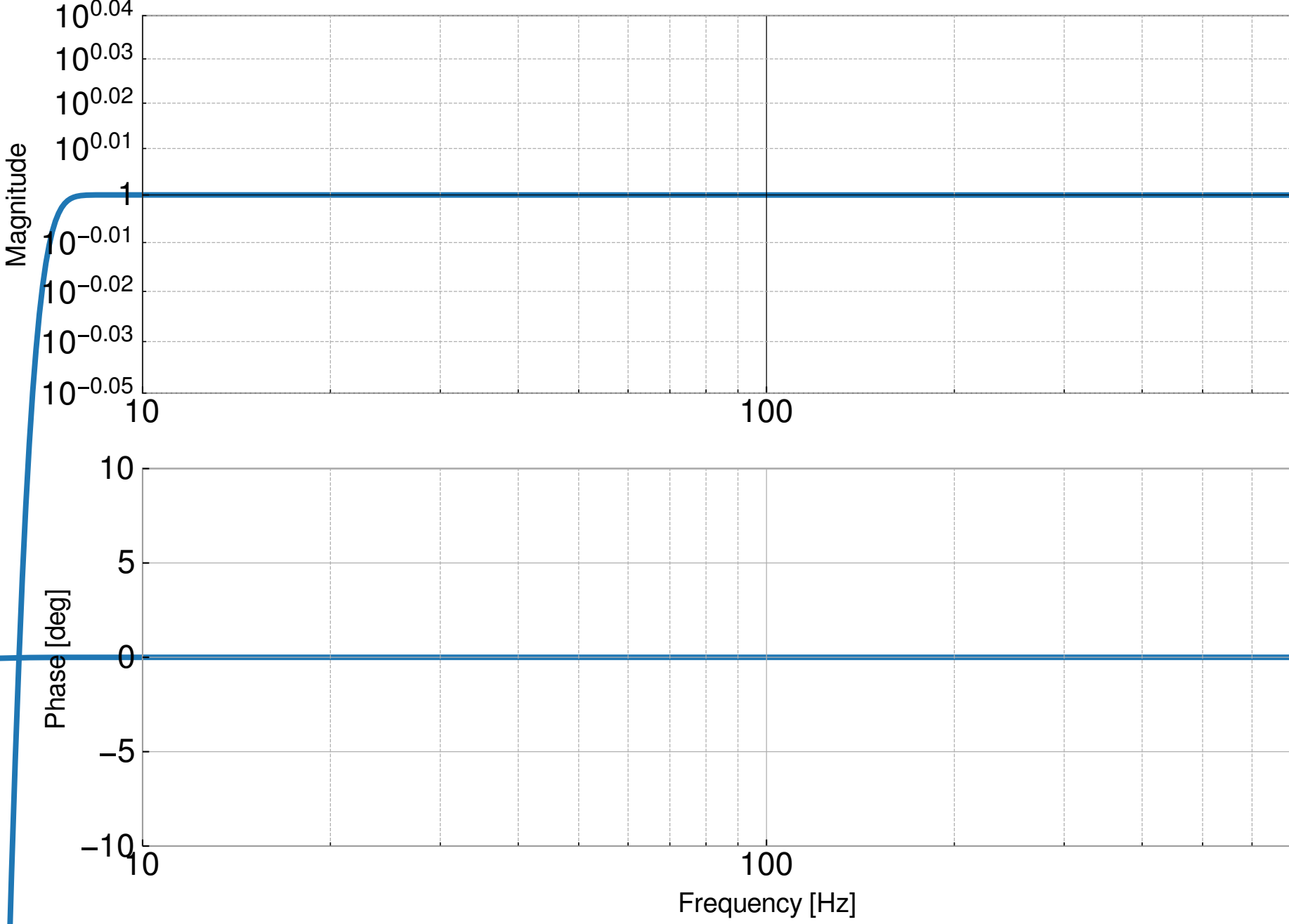
Residual corrections highpass comparison (gstlal\\_compute\\_strain\\_C00\\_filters\\_H1.npz)



Ratio of Residual corrections highpass comparison (gstlal\\_compute\\_strain\\_C00\\_filters\\_H1.np

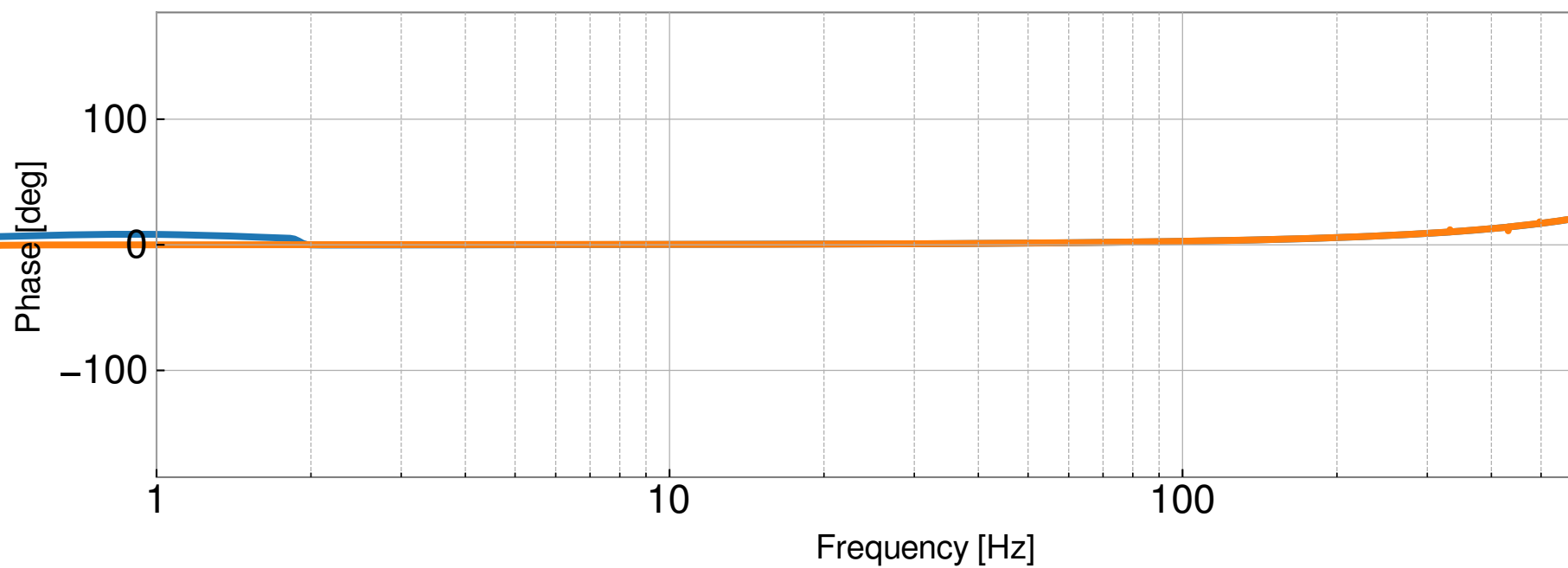
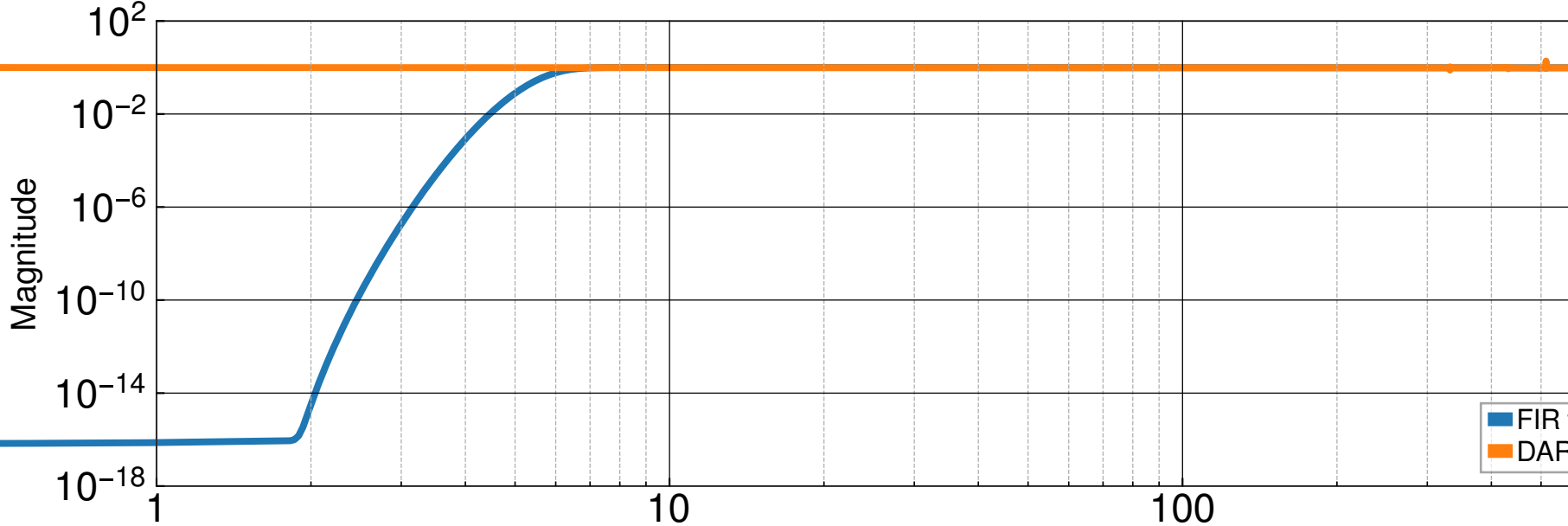


Ratio of Residual corrections highpass comparison (gstlal\\_compute\\_strain\\_C00\\_filters\\_H1.npz) (above)



# TST corrections comparison

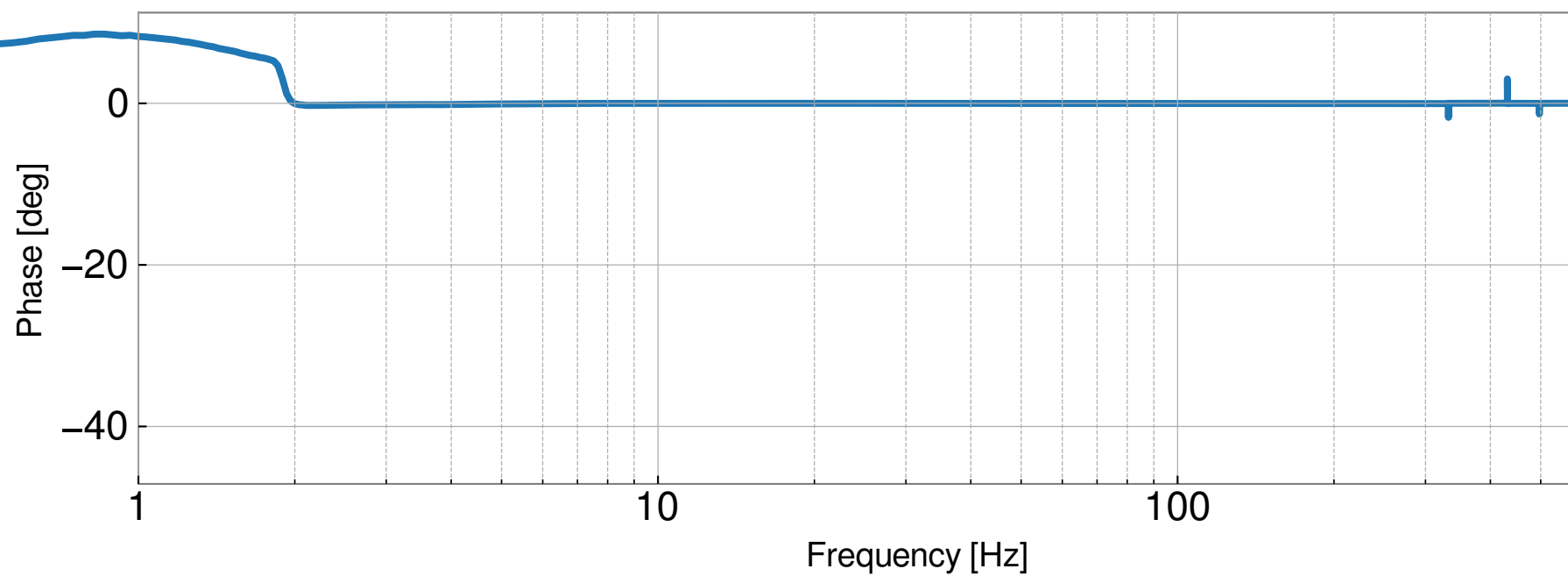
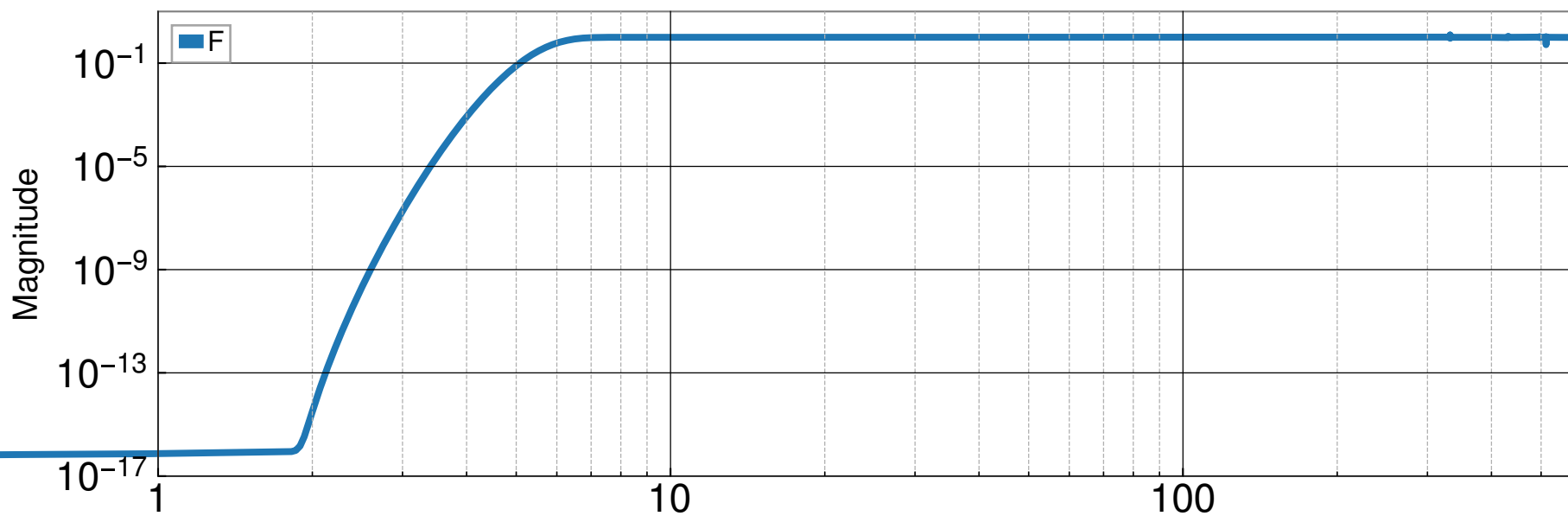
(gstlal\\_compute\\_strain\\_C00\\_filters\\_H1)





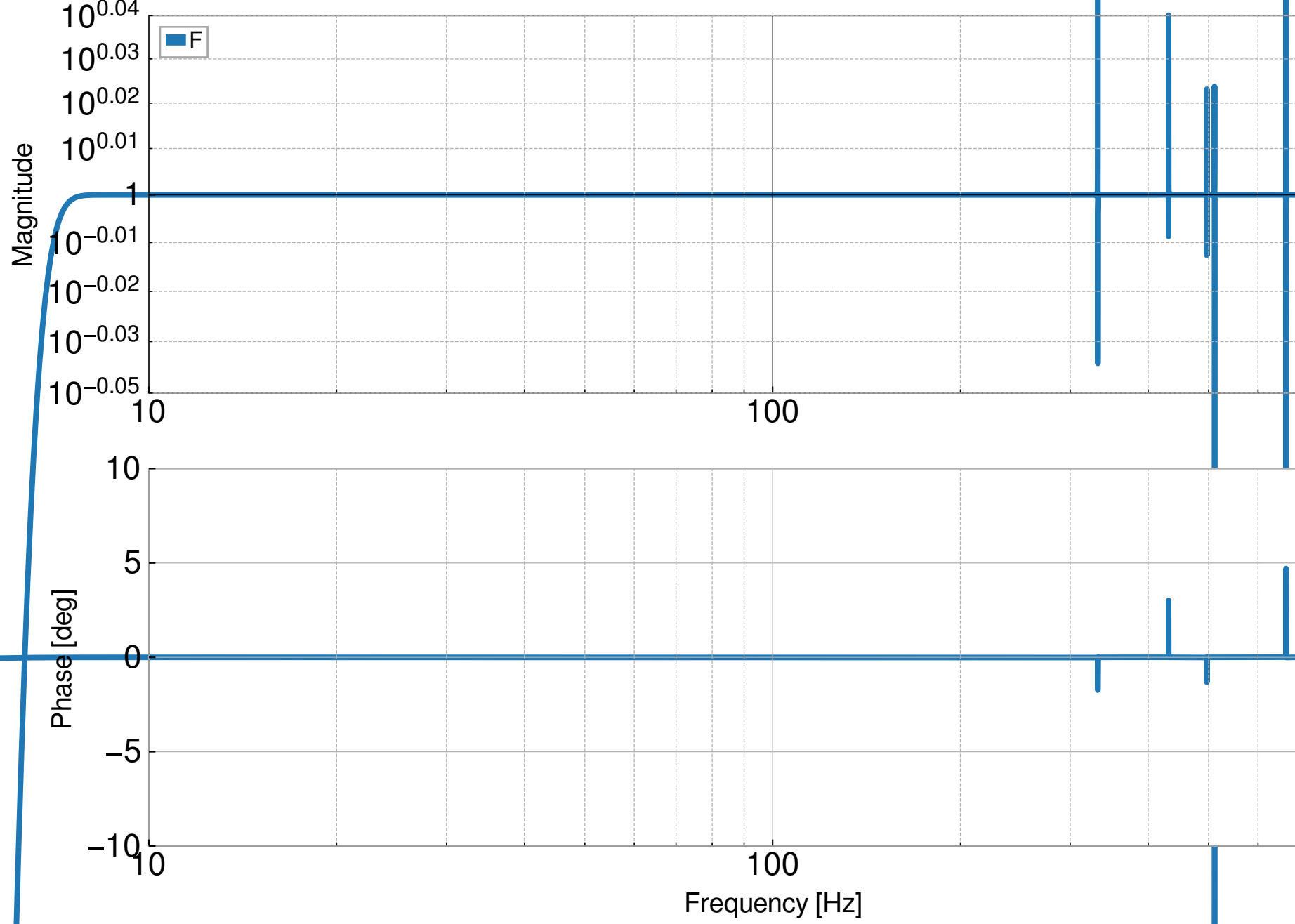
Ratio of TST corrections comparison

(gstlal\\_compute\\_strain\\_C00\\_filters)



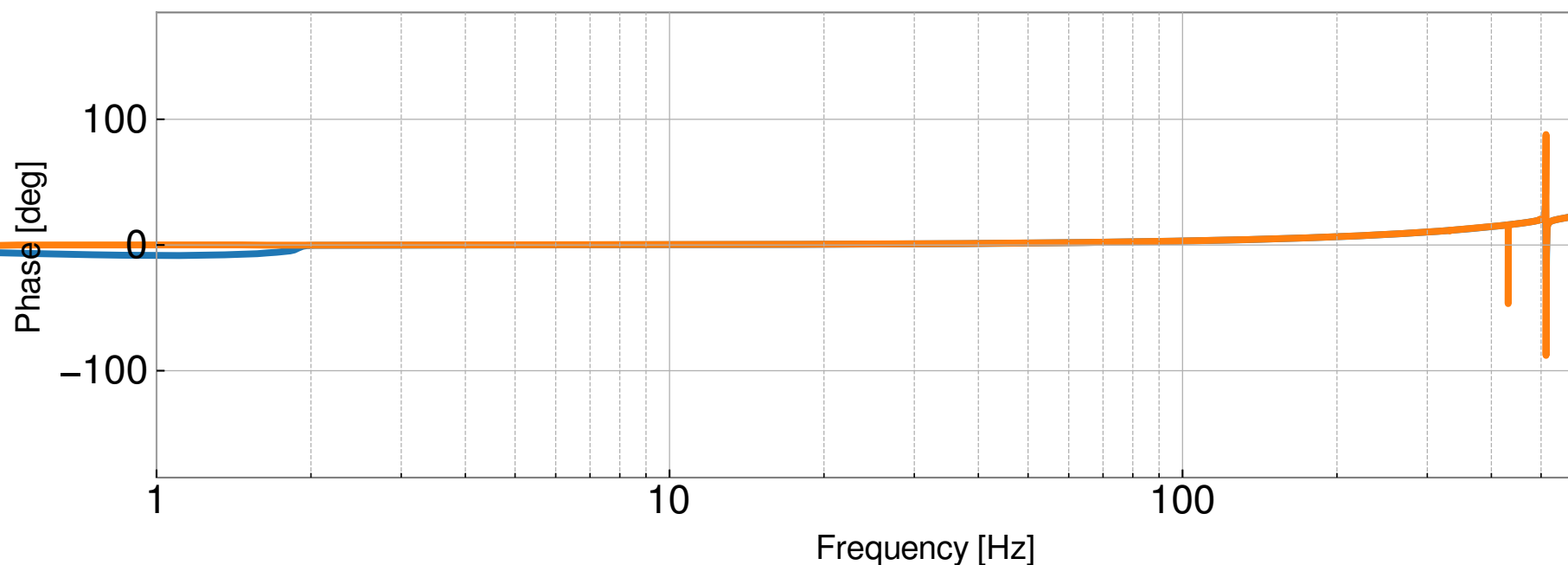
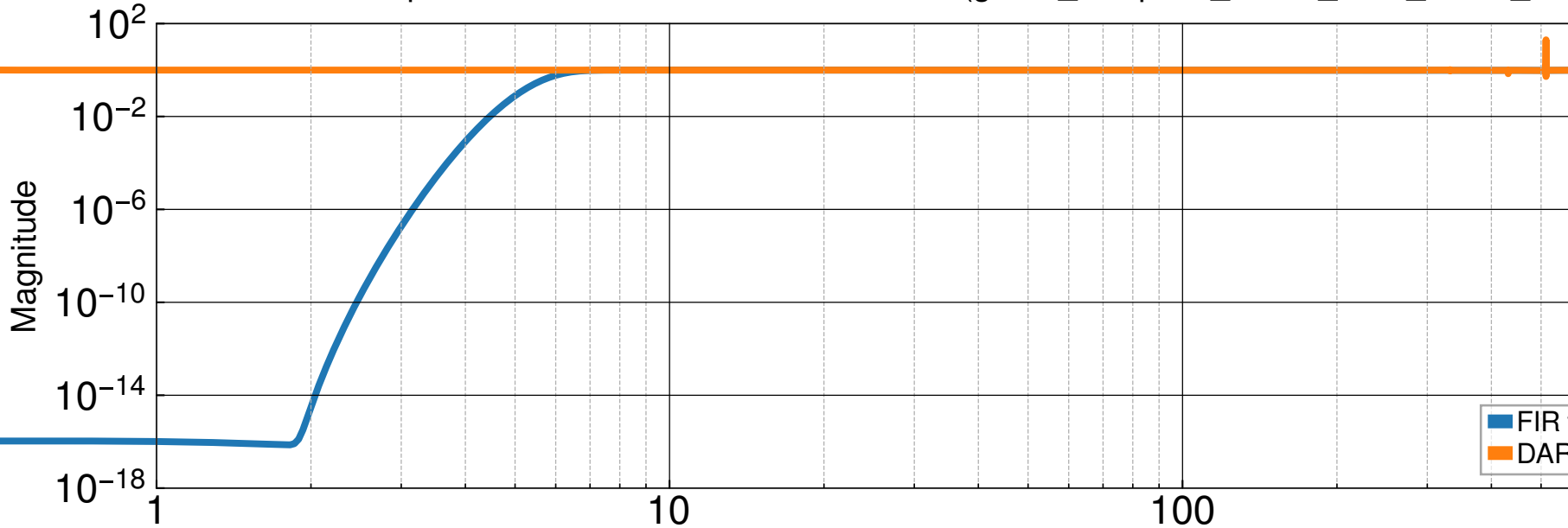
Ratio of TST corrections comparison

(gstlal\\_compute\\_strain\\_C00\\_filters\\_H1.np



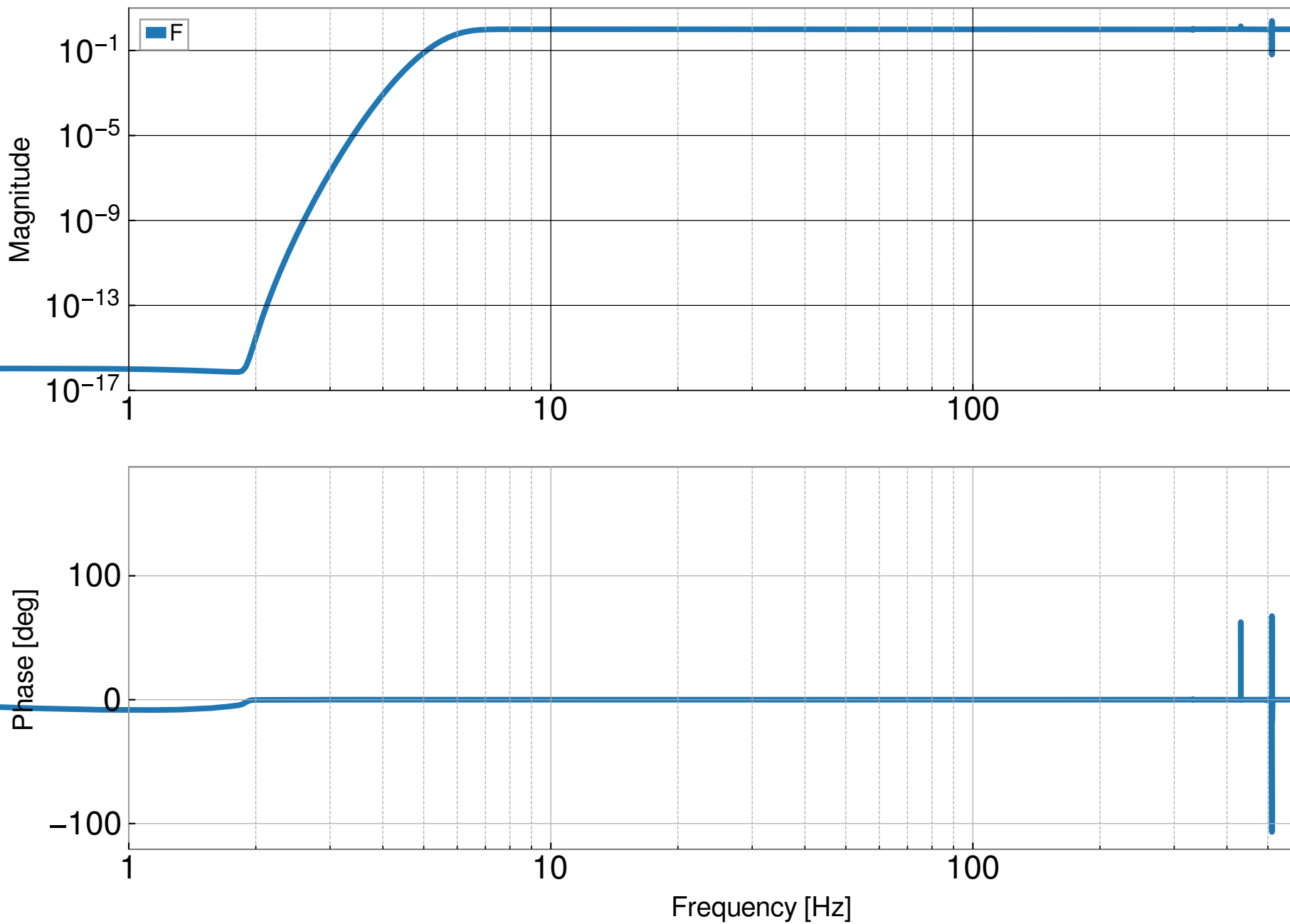
PUM corrections comparison

(gstlal\\_compute\\_strain\\_C00\\_filters\\_H1



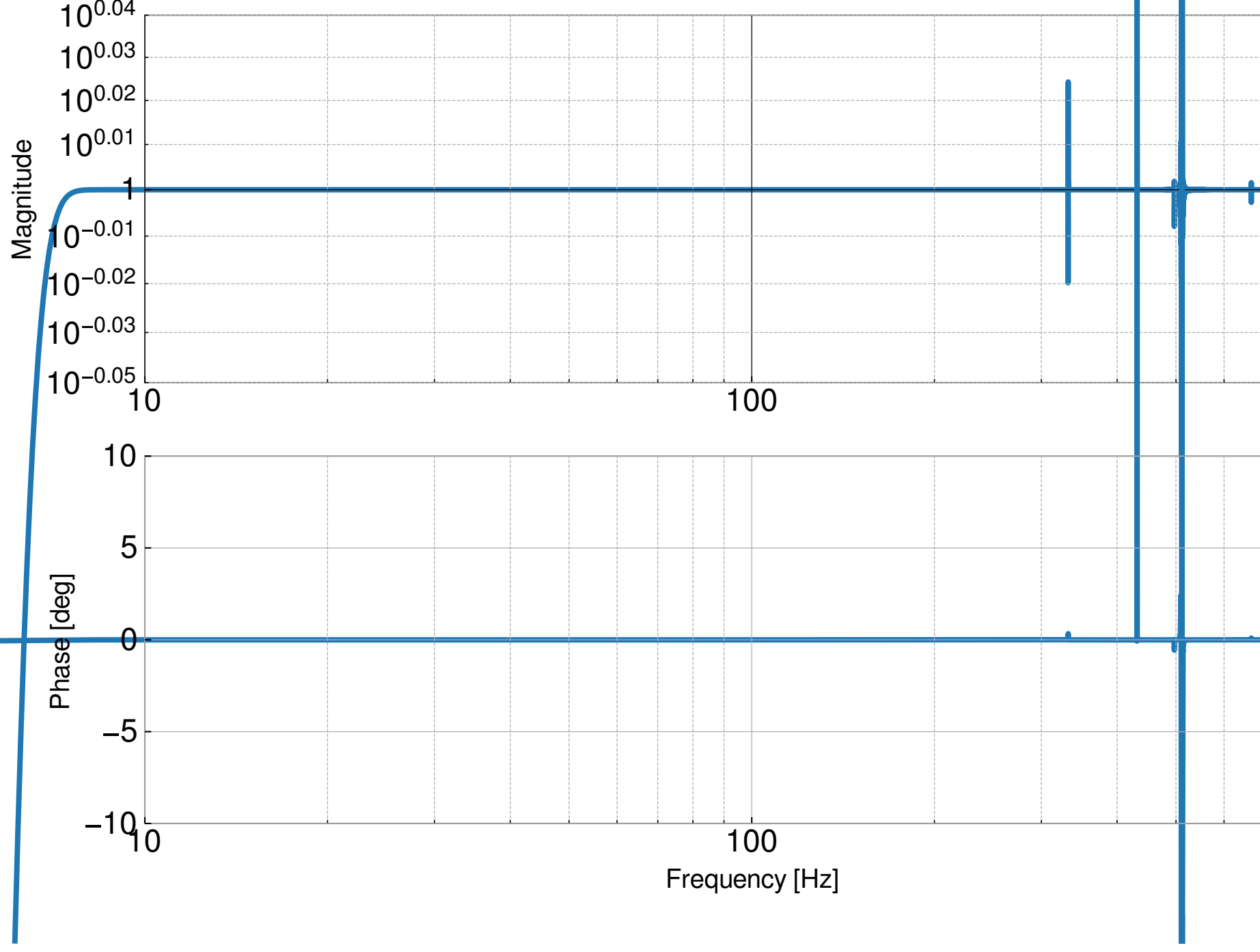
# Ratio of PUM corrections comparison

(gstlal\\_compute\\_strain\\_C00\\_filters)



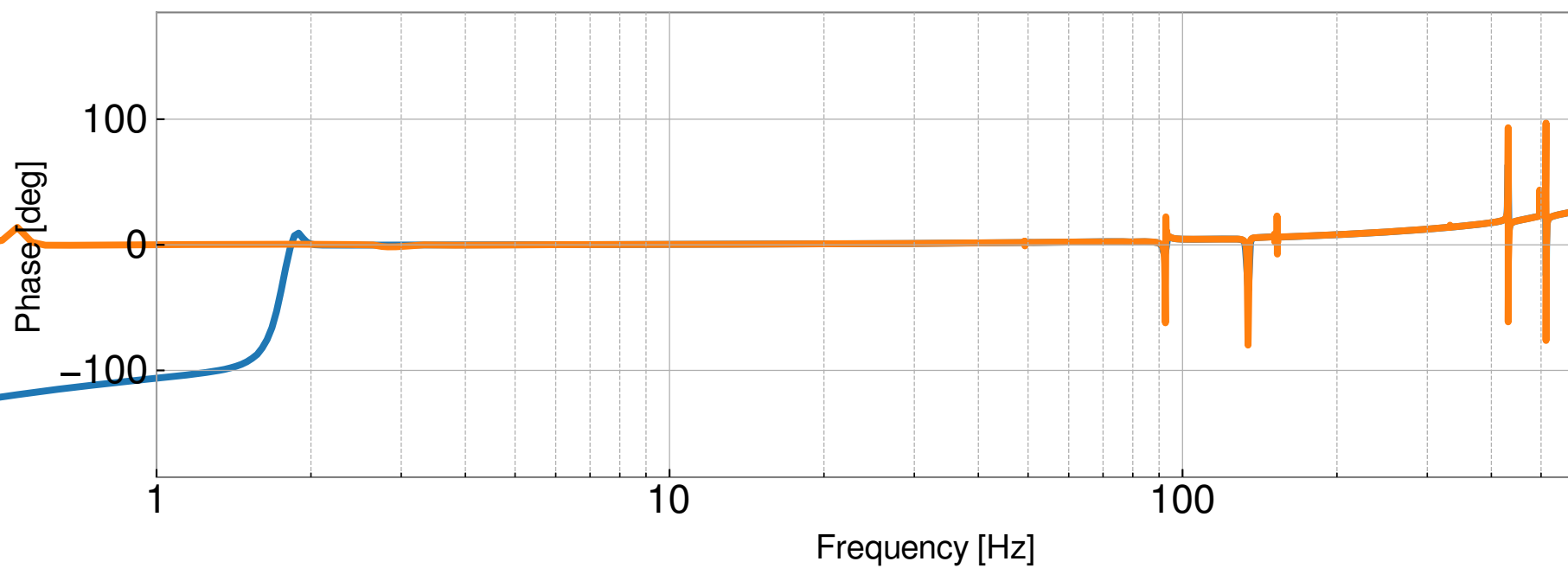
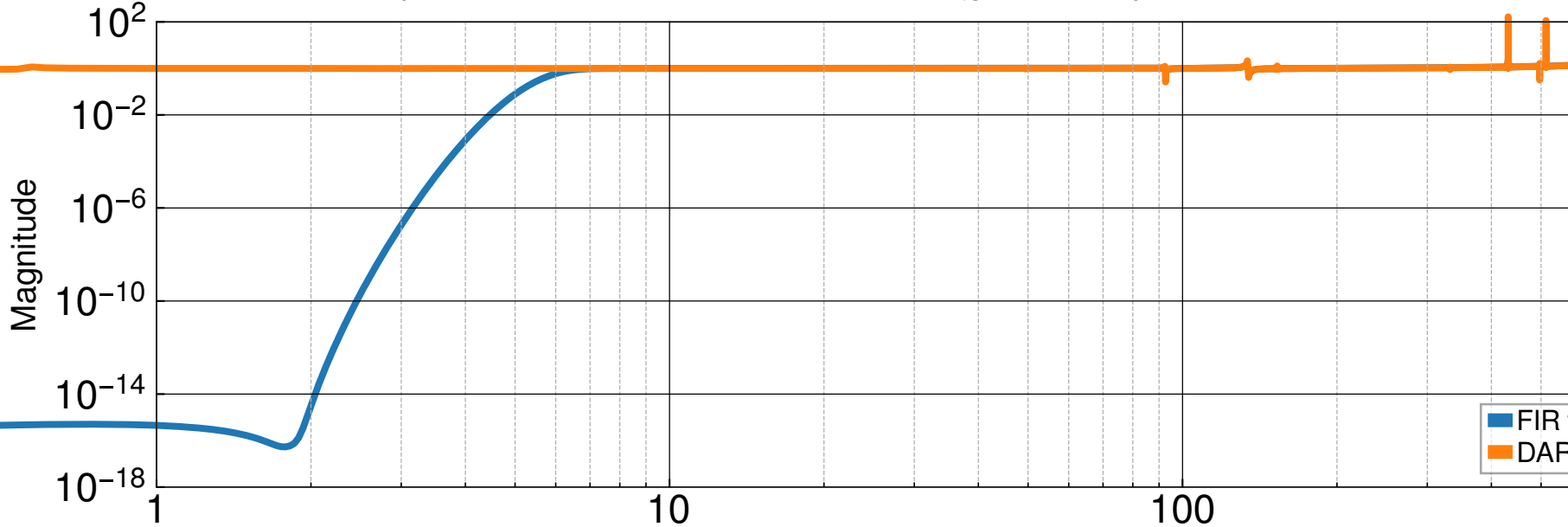
Ratio of PUM corrections comparison

(gstlal\\_compute\\_strain\\_C00\\_filters\\_H1.np



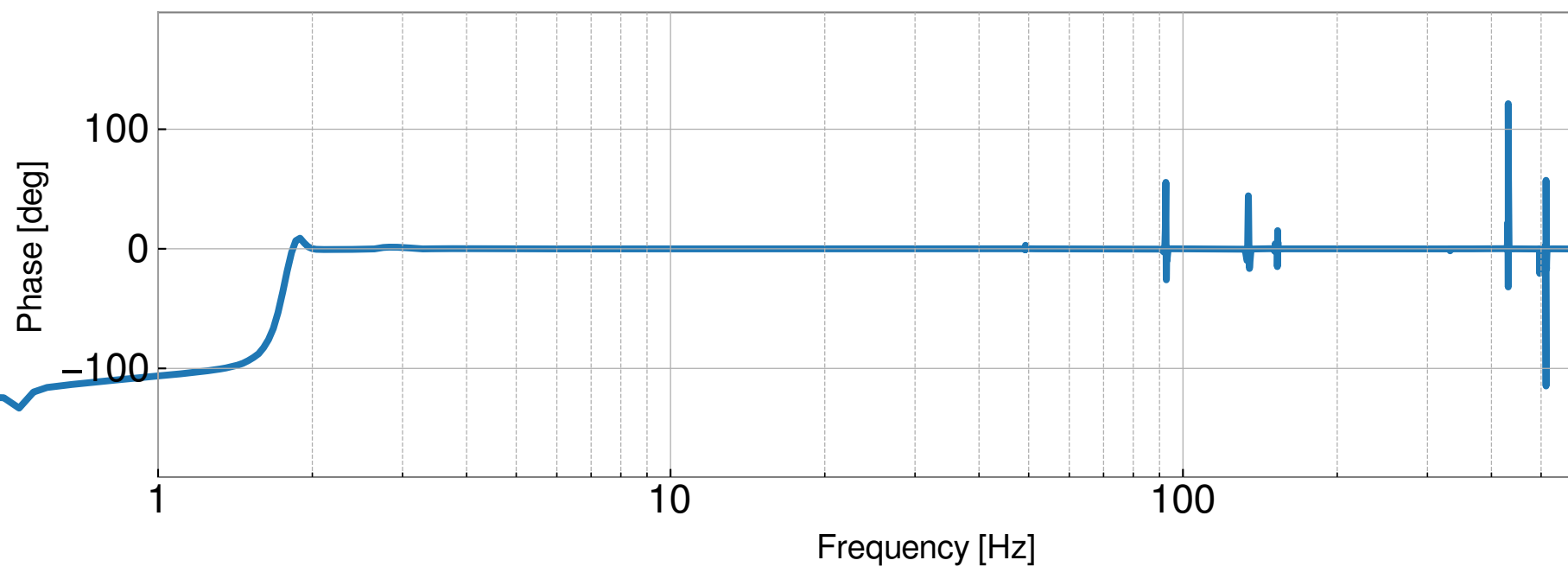
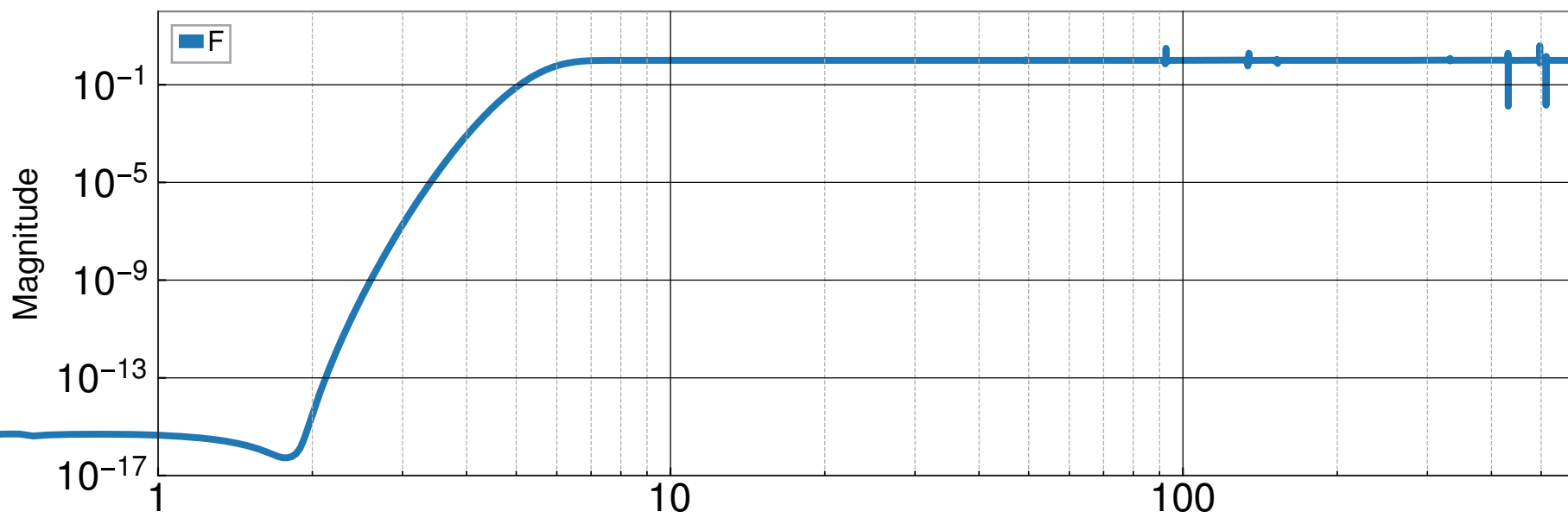
# UIM corrections comparison

(gstlal\\_compute\\_strain\\_C00\\_filters\\_H1



# Ratio of UIM corrections comparison

(gstlal\\_compute\\_strain\\_C00\\_filters\)



Ratio of UIM corrections comparison

(gstla\compute\strain\C00\_filters\H1.npz)

