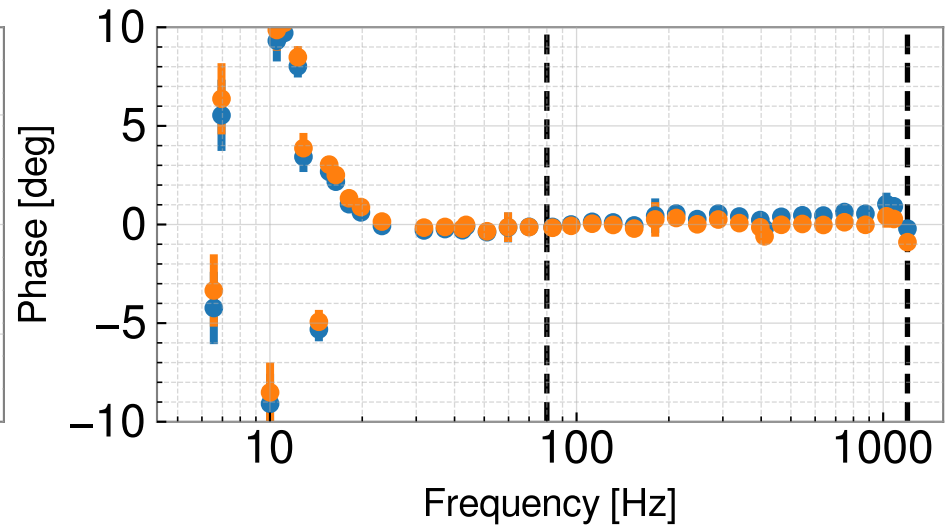
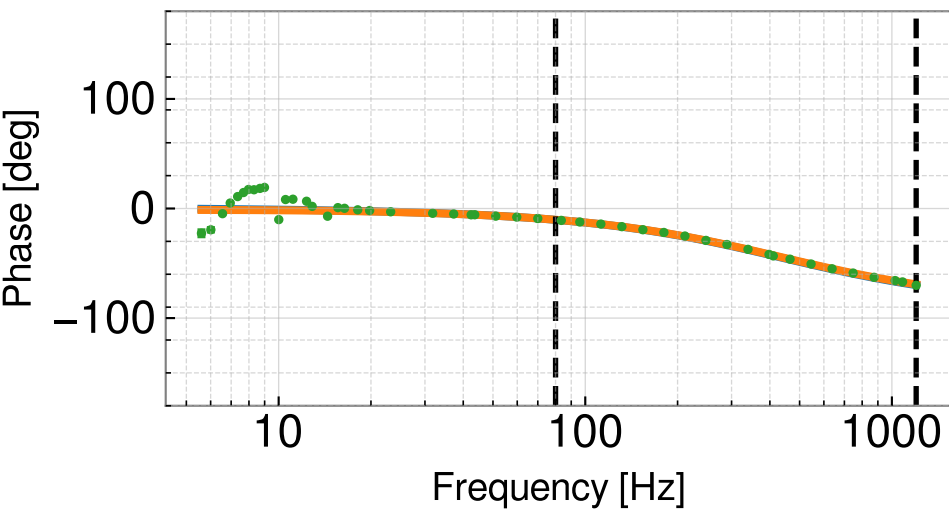
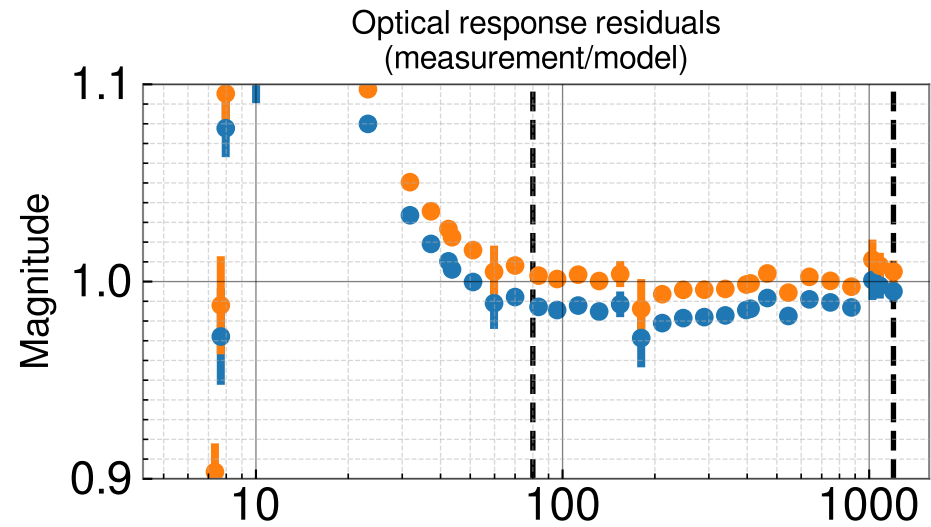
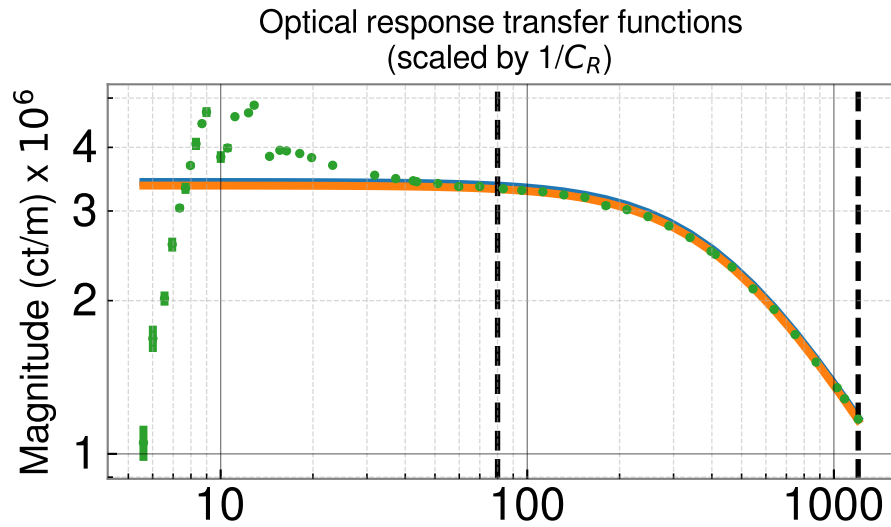
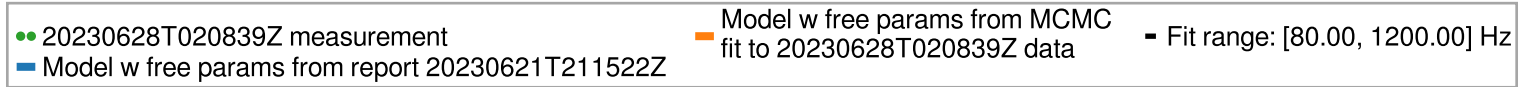


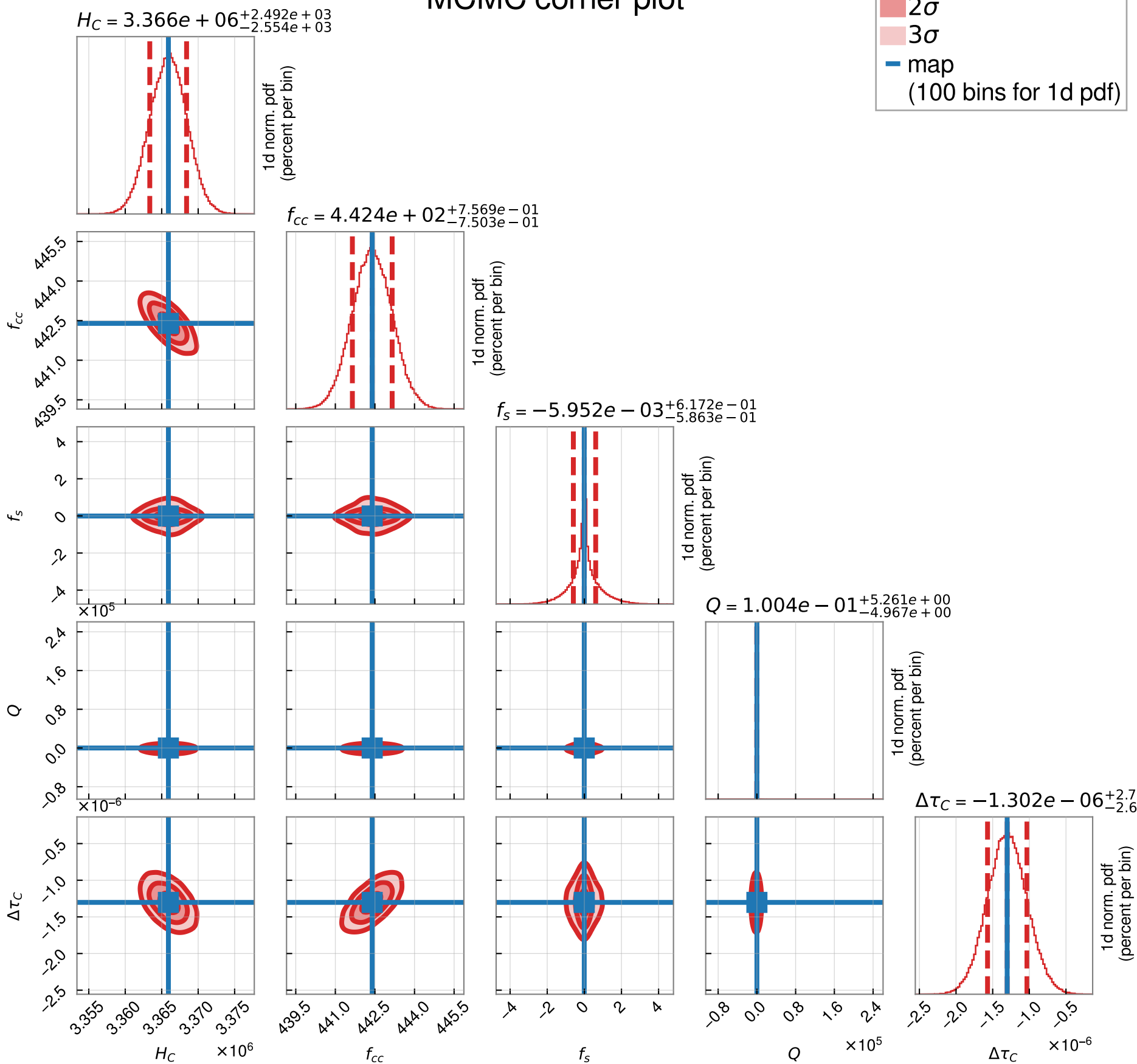
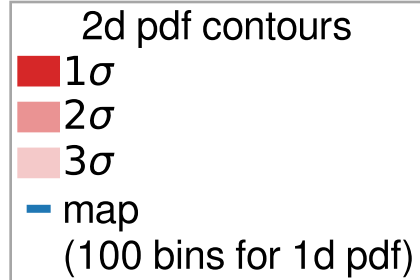
H1 sensing model MCMC summary

All fixed parameters drawn from /ligo/groups/cal/H1/reports/20230628T015112Z/pydarm_H1.ini



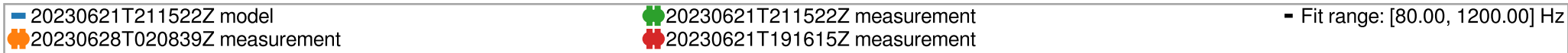
Parameter	(value +/-) value	+	-
Optical gain, H_c (ct/m)	3.366e+06	2492 (0.07%)	2554 (0.08%)
Cavity_pole, f_cc (Hz)	442.4	0.7569 (0.17%)	0.7503 (0.17%)
Detuned SRC spring frequency, f_s (Hz)	-0.005952	0.6172 (-10370.52%)	0.5863 (-9850.03%)
Detuned SRC spring quality factor, Q_s	0.1004	5.261 (5241.14%)	4.967 (4948.71%)
Residual time delay, tau_c (s)	-1.302e-06	2.7e-07 (-20.74%)	2.677e-07 (-20.56%)

20230628T020839Z sensing function MCMC corner plot

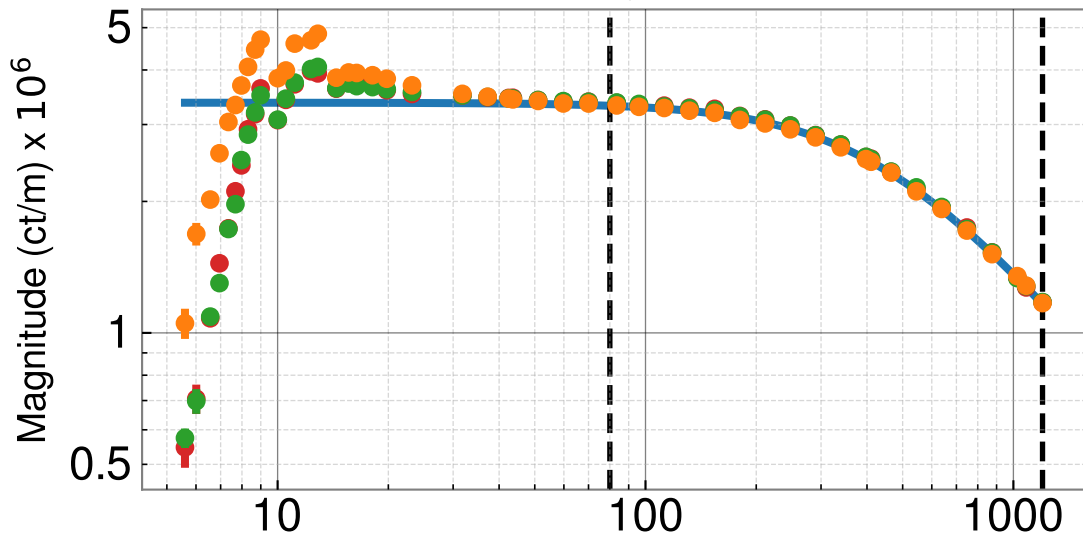


H1 sensing model history

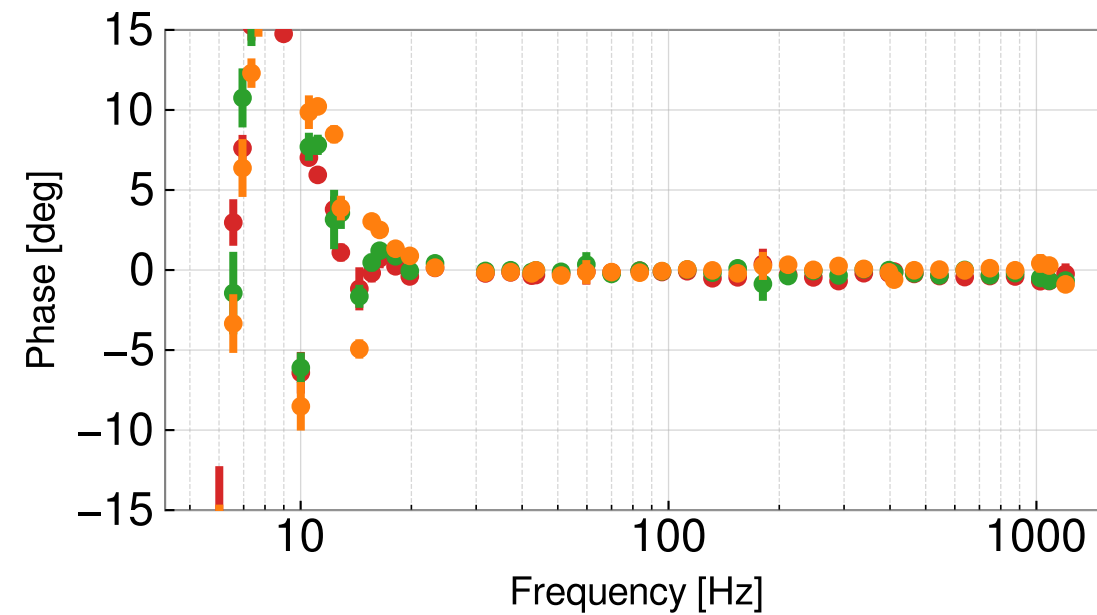
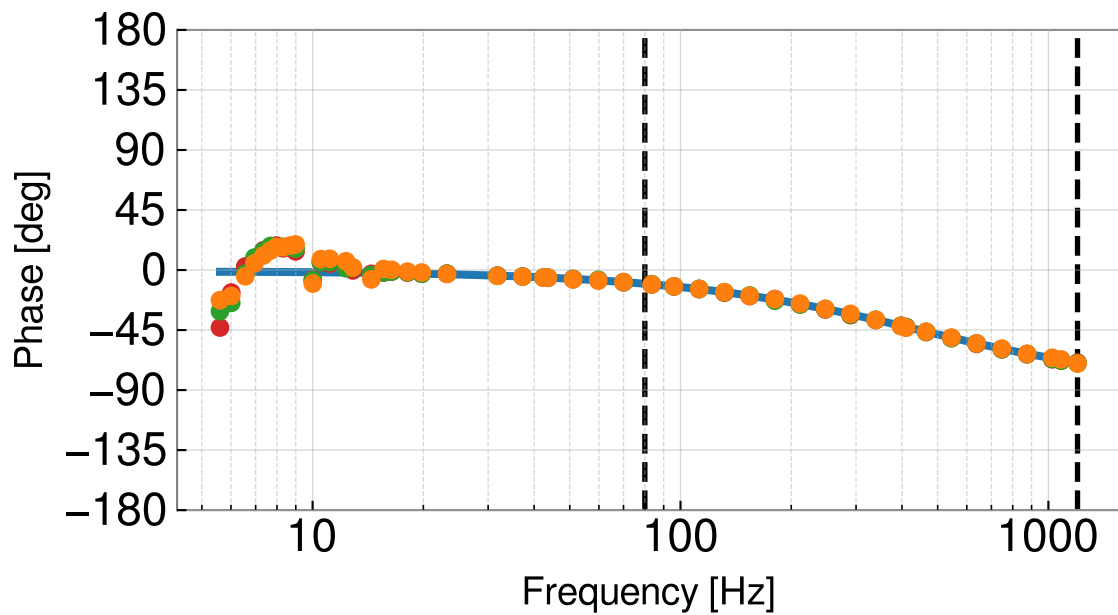
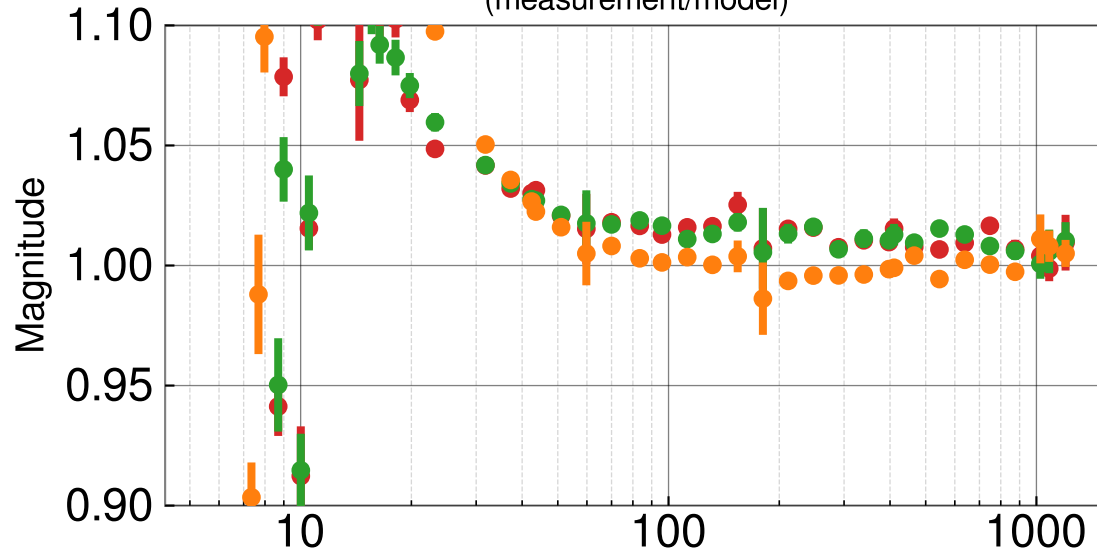
All fixed parameters drawn from `/ligo/groups/cal/H1/reports/20230628T015112Z/pydarm_H1.ini`



Optical response transfer functions
(scaled by $1/C_R$)

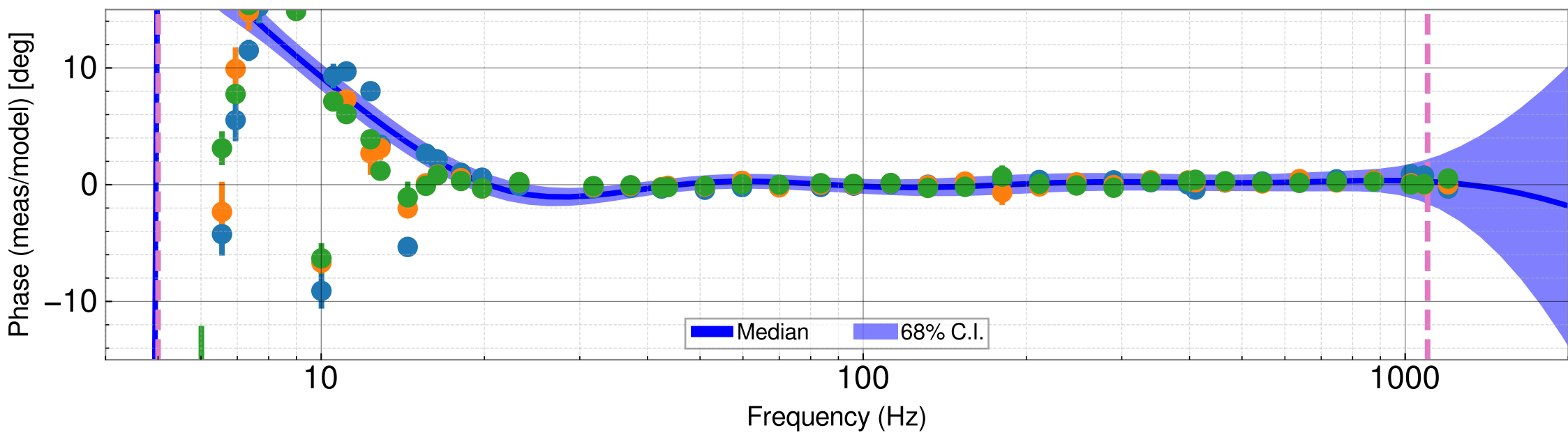
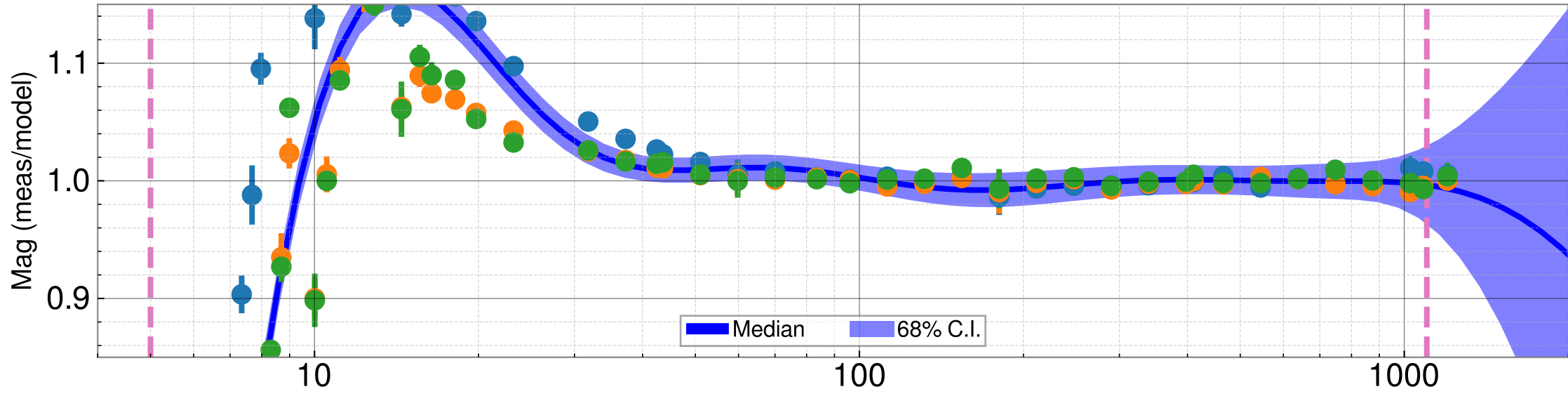


Optical response residuals
(measurement/model)



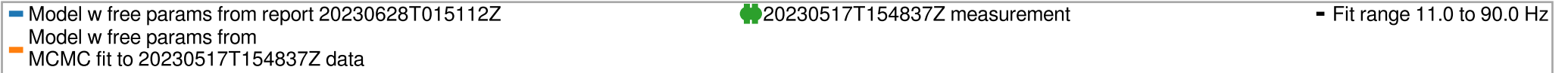
Sensing GPR

meas. 20230628T020839Z of report 20230628T015112Z meas. 20230621T213249Z of report 20230621T211522Z meas. 20230621T193342Z of report 20230621T191615Z

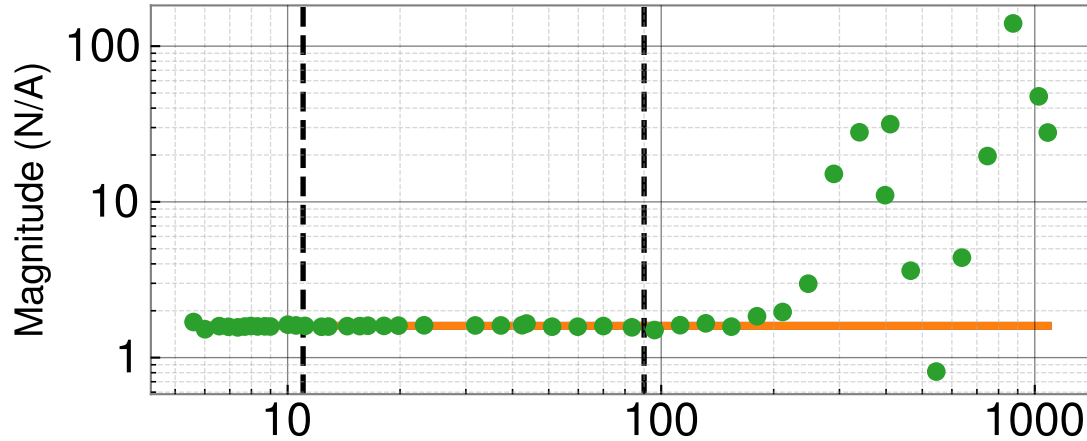


H1SUSEX L1 actuation model MCMC summary

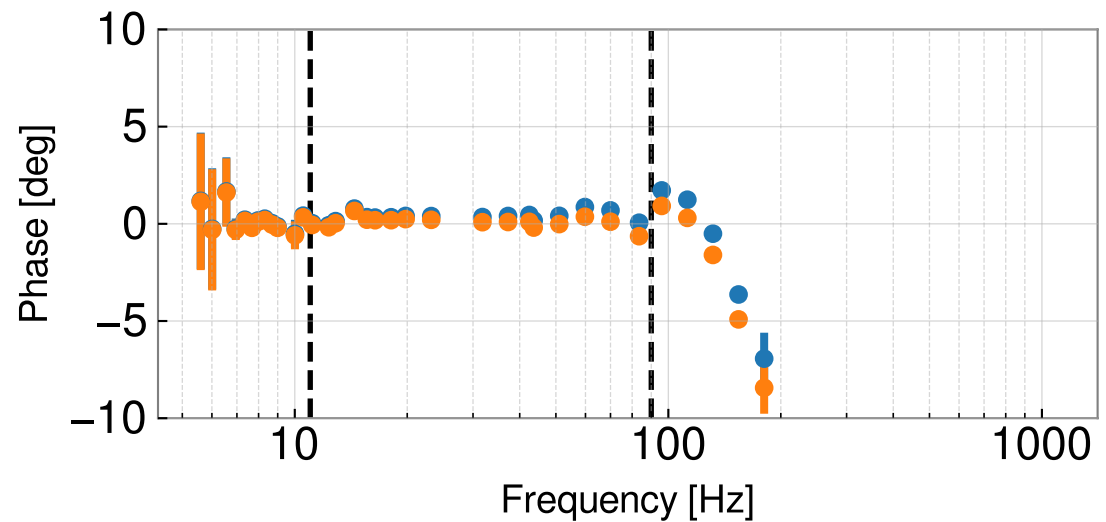
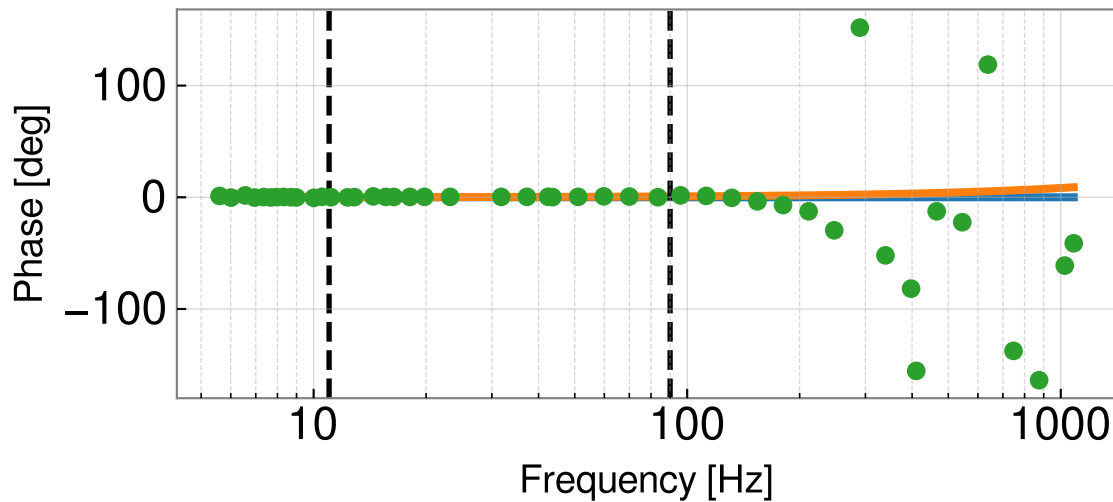
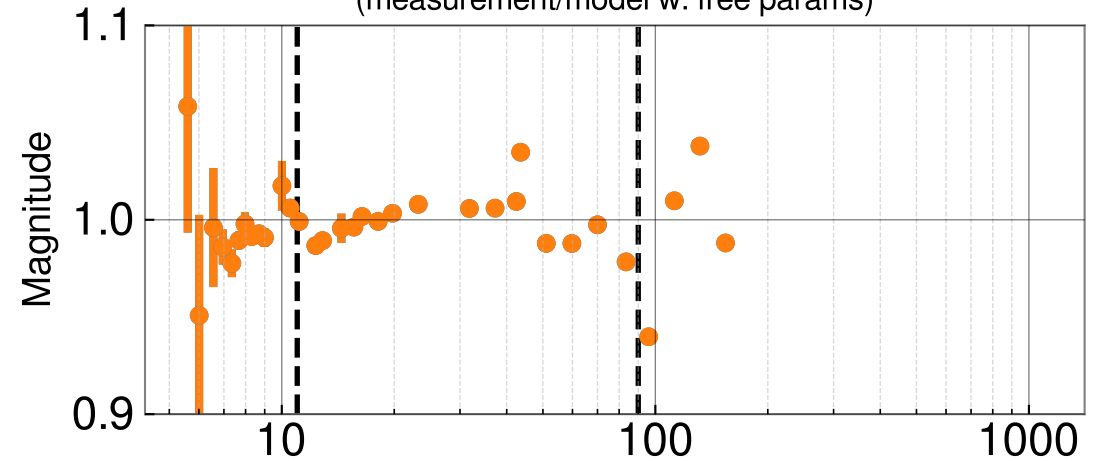
All fixed parameters drawn from /ligo/groups/cal/H1/reports/20230628T015112Z/pydarm_H1.ini



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

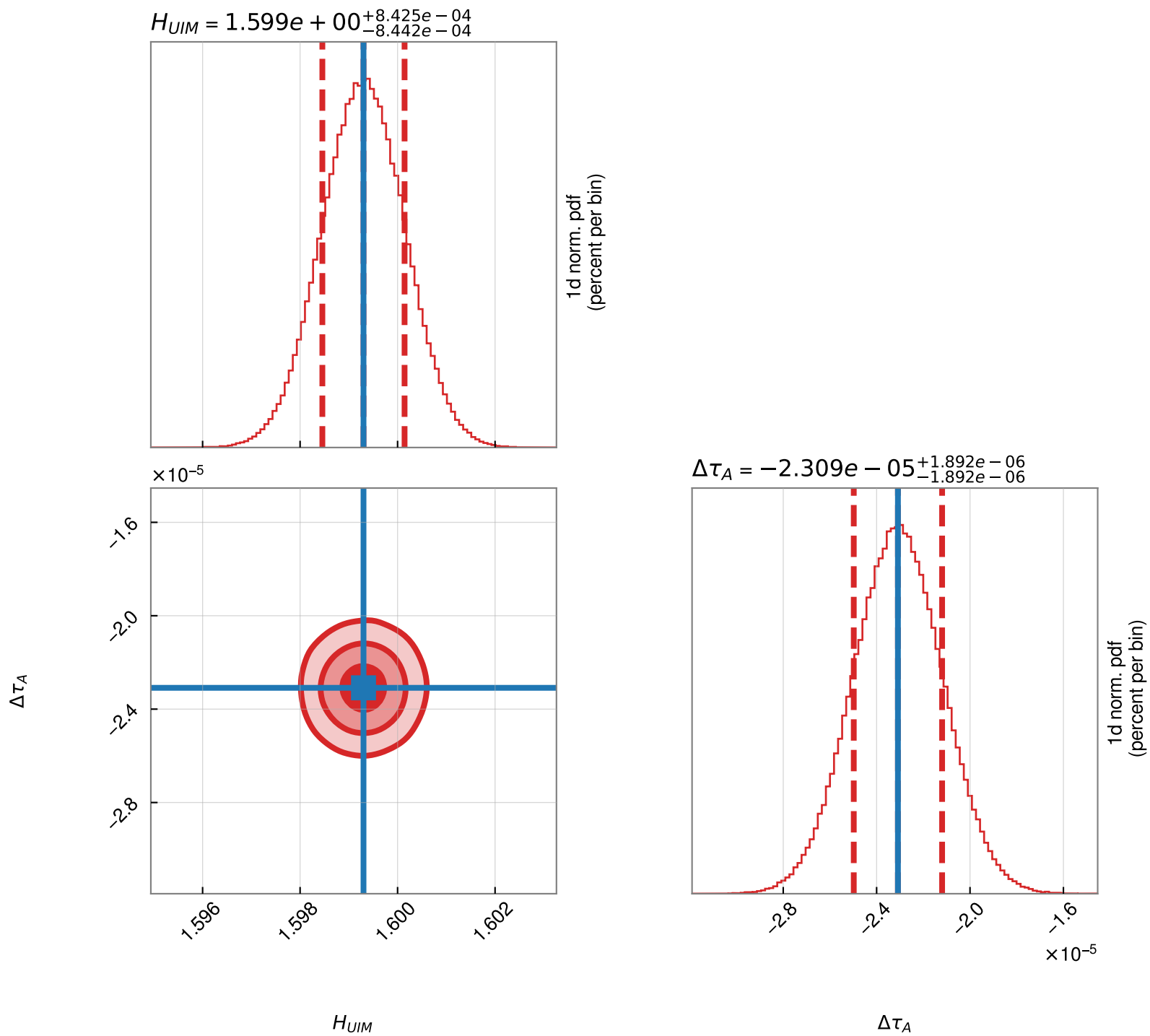
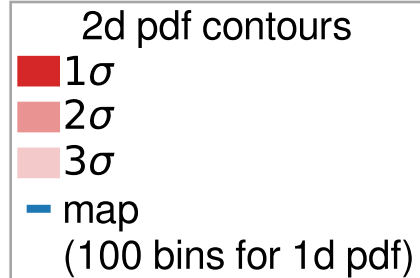


Actuation strength residuals
(measurement/model w. free params)



Parameter	(value +/-) value	+	-
Actuation Gain, Hau (N/A)	1.599	0.0008425 (0.05%)	0.0008442 (0.05%)
Residual time delay, tau_A (s)	-2.309e-05	1.892e-06 (-8.19%)	1.892e-06 (-8.19%)

20230517T154837Z EX L1 actuation MCMC corner plot

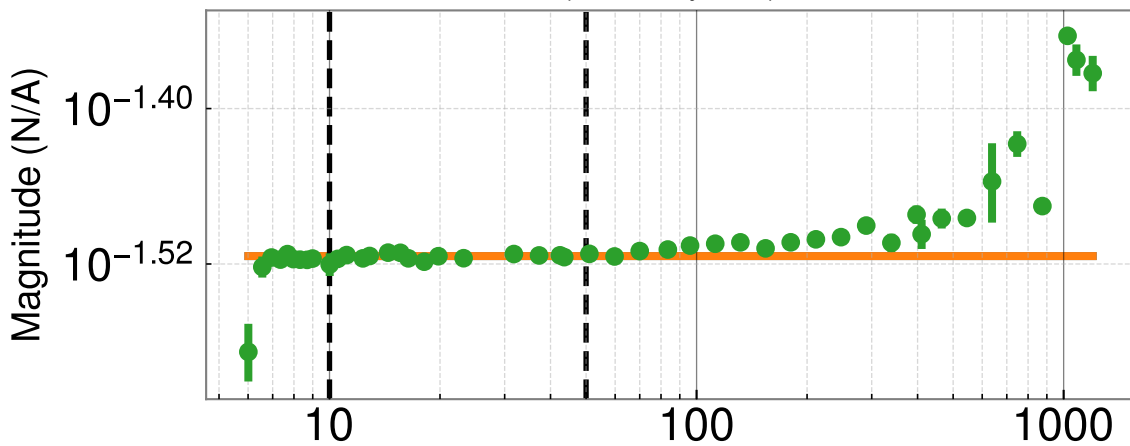


H1SUSEX L2 actuation model MCMC summary

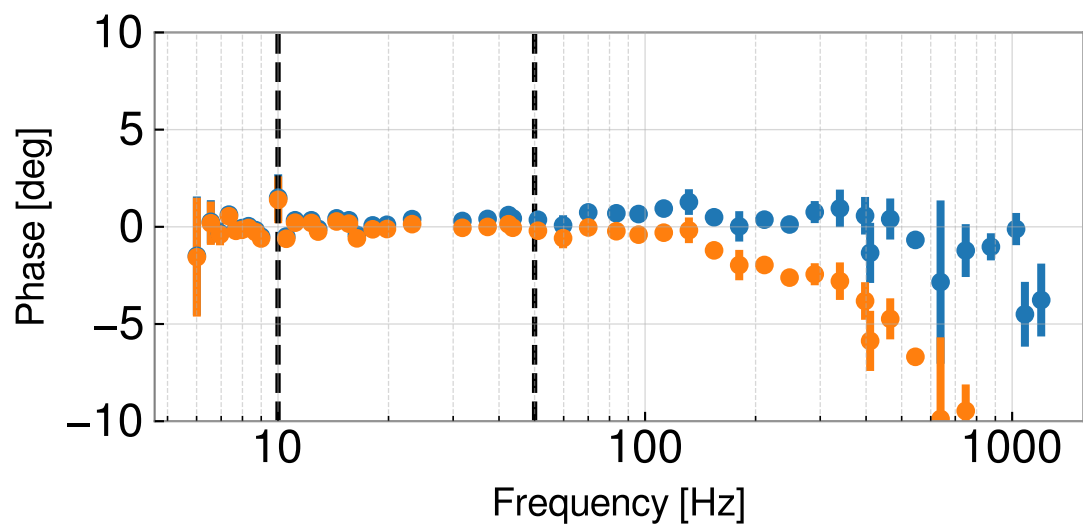
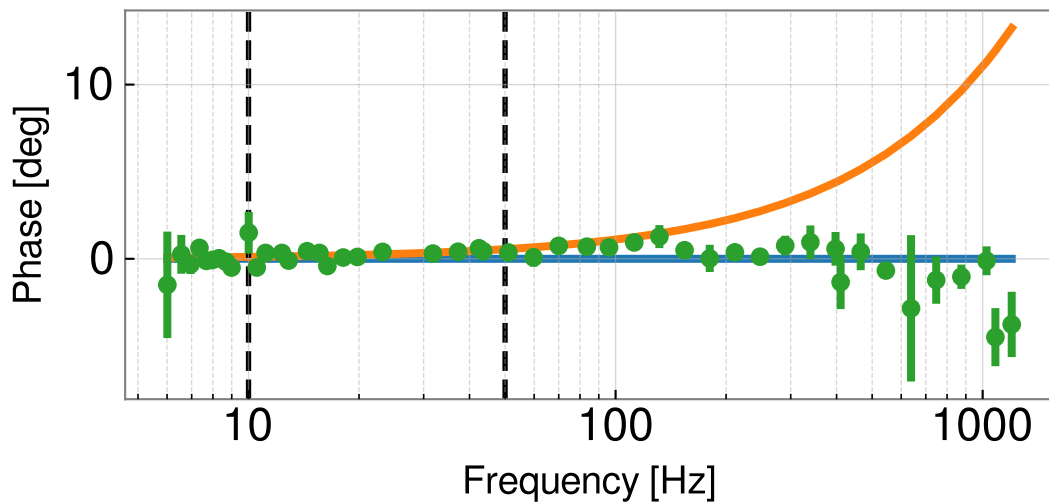
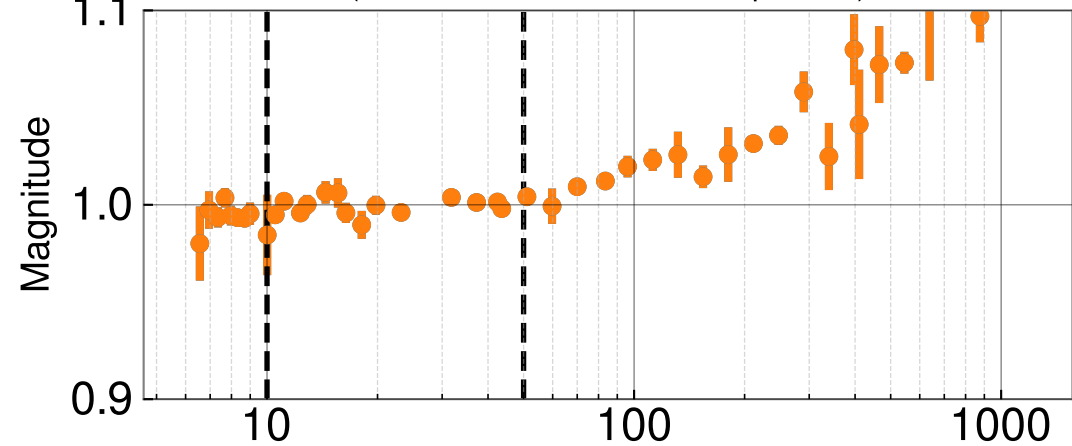
All fixed parameters drawn from /ligo/groups/cal/H1/reports/20230628T015112Z/pydarm_H1.ini



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

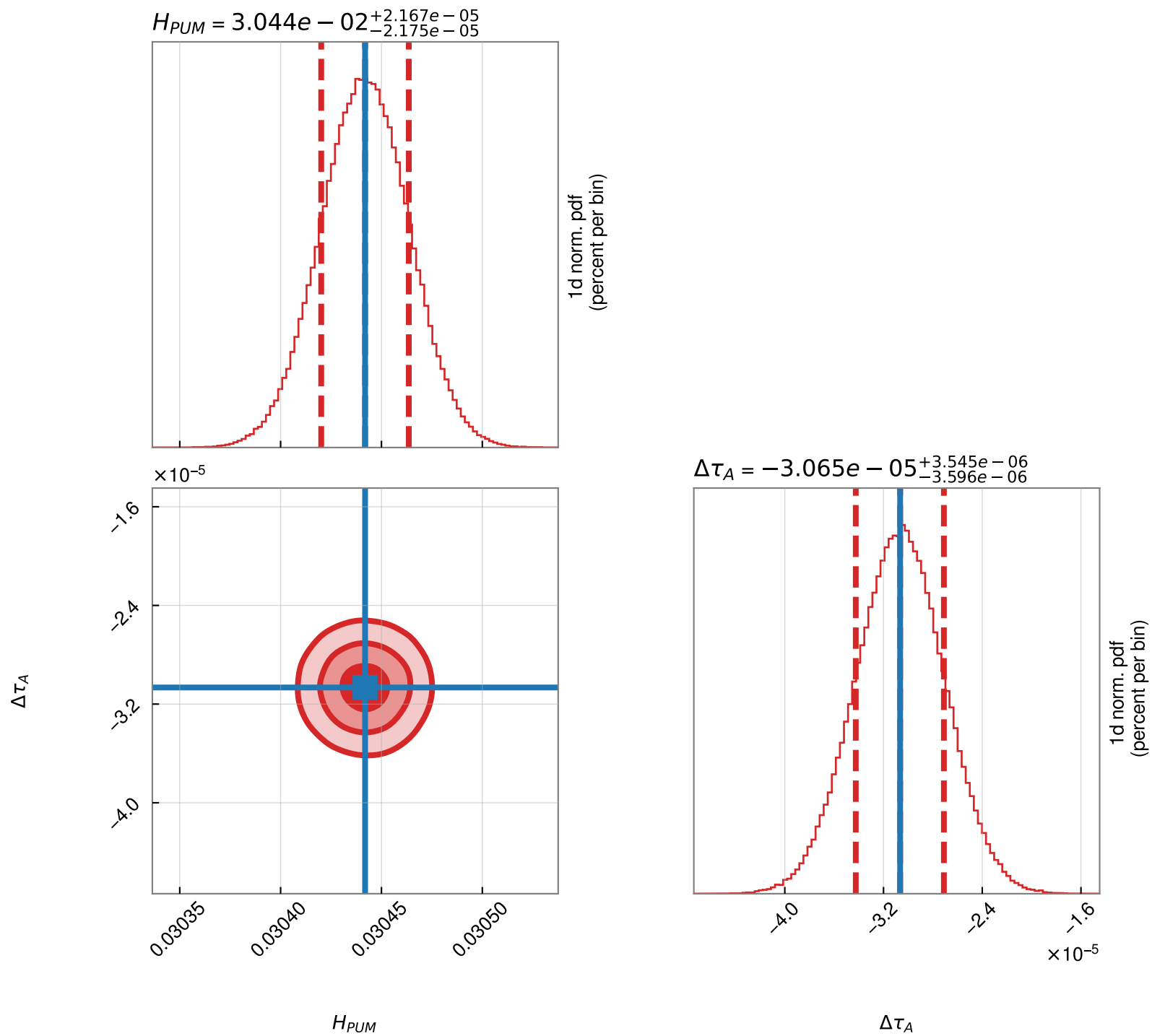
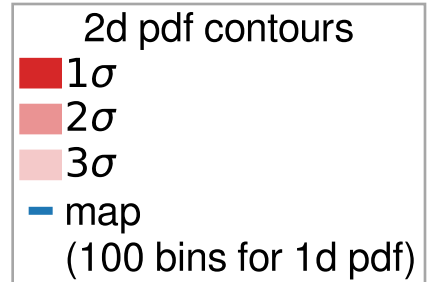


Actuation strength residuals
(measurement/model w. free params)



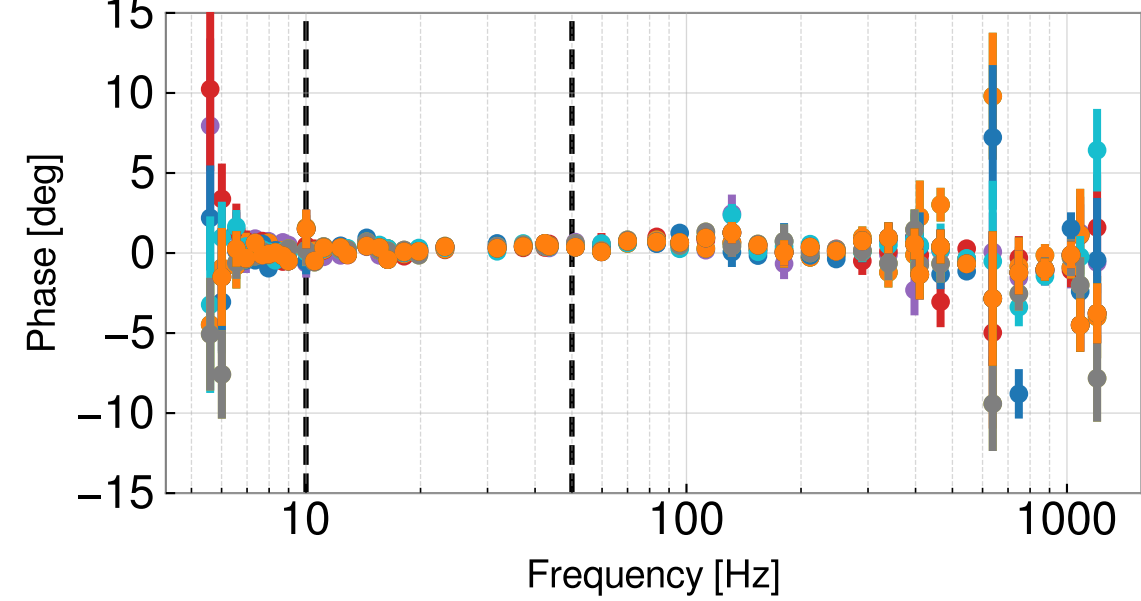
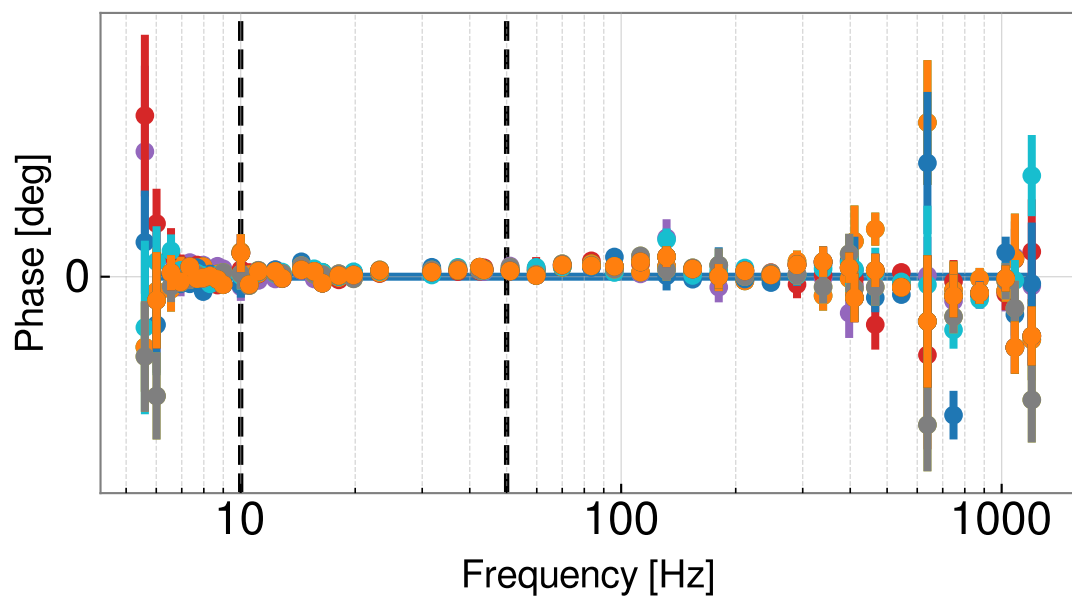
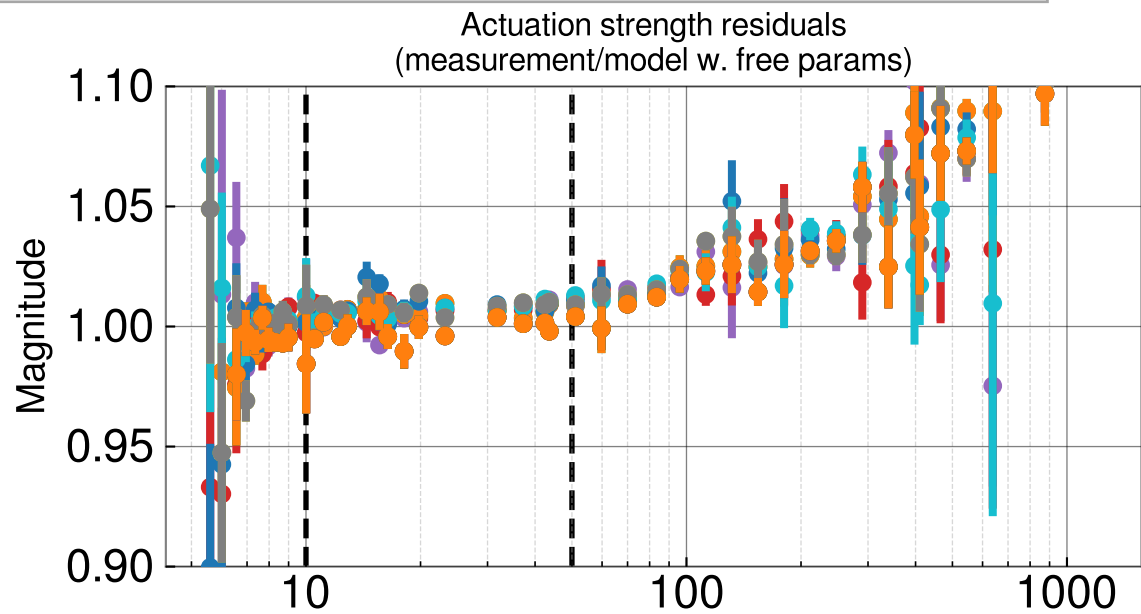
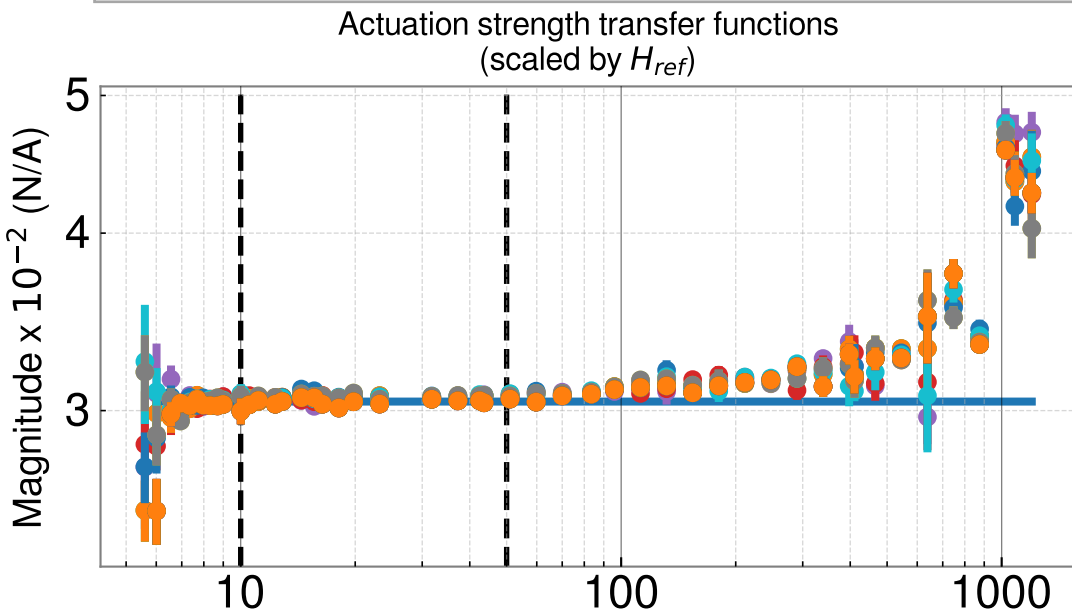
Parameter	(value +/-) value	+	-
Actuation Gain, Hap (N/A)	0.03044	2.167e-05 (0.07%)	2.175e-05 (0.07%)
Residual time delay, tau_A (s)	-3.065e-05	3.545e-06 (-11.57%)	3.596e-06 (-11.73%)

20230517T161131Z EX L2 actuation MCMC corner plot



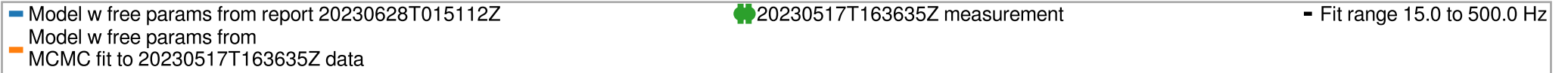
H1 SUSEX 1.2 actuation model history

- All fixed parameters drawn from https://dcc.ligo.org/lscg/doc/inspiral-reports/20230628T015112Z/pydarm_1.1.pdf
- 20230621T211522Z model
 - 20230517T161131Z measurement
 - 20230517T161131Z measurement
 - 20230517T161131Z measurement
 - 20230517T161131Z measurement
 - 20230517T161131Z measurement
 - 20230517T161131Z measurement
 - 20230517T161131Z measurement
 - 20230517T161131Z measurement
 - 20230505T172117Z measurement
 - 20230505T172117Z measurement
 - 20230505T010115Z measurement
 - 20230504T052558Z measurement
 - 20230509T064300Z measurement
 - 20230509T064300Z measurement
 - 20230508T173520Z measurement
 - 20230506T175709Z measurement
 - MCMC Fit Range: 10 Hz to 50 Hz

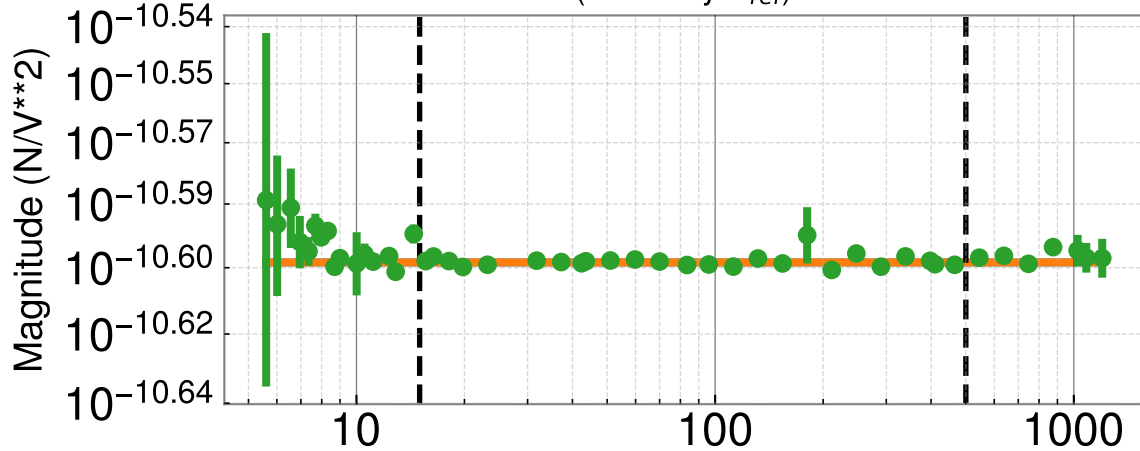


H1SUSEX L3 actuation model MCMC summary

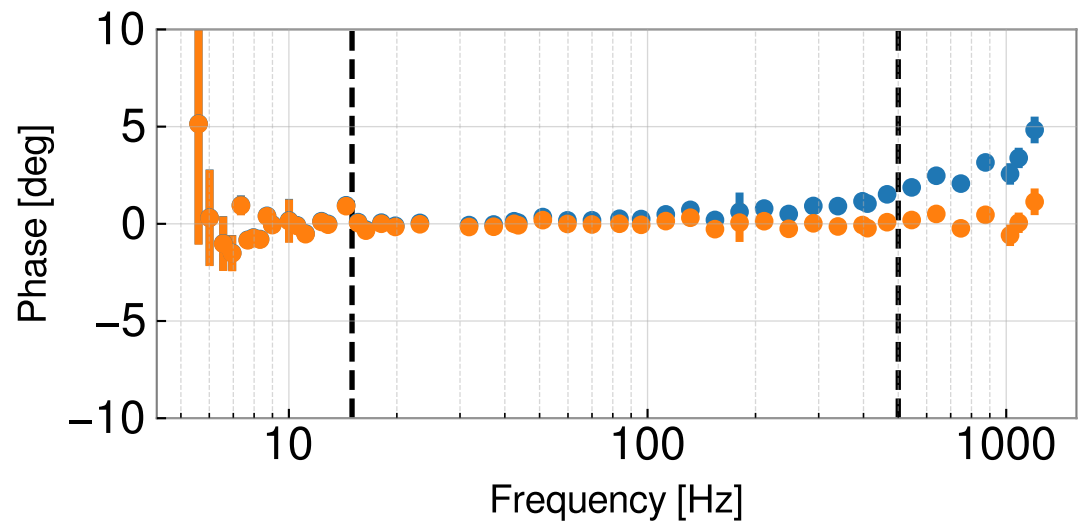
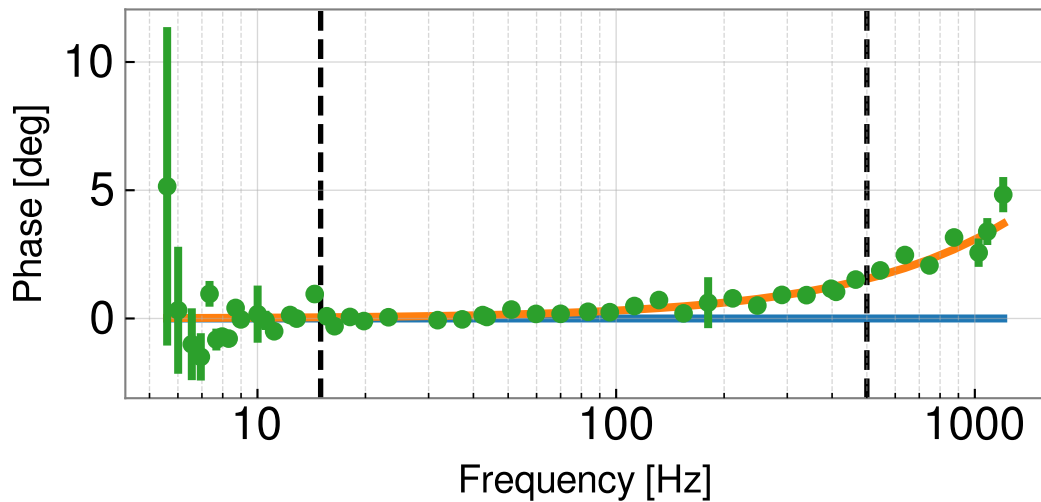
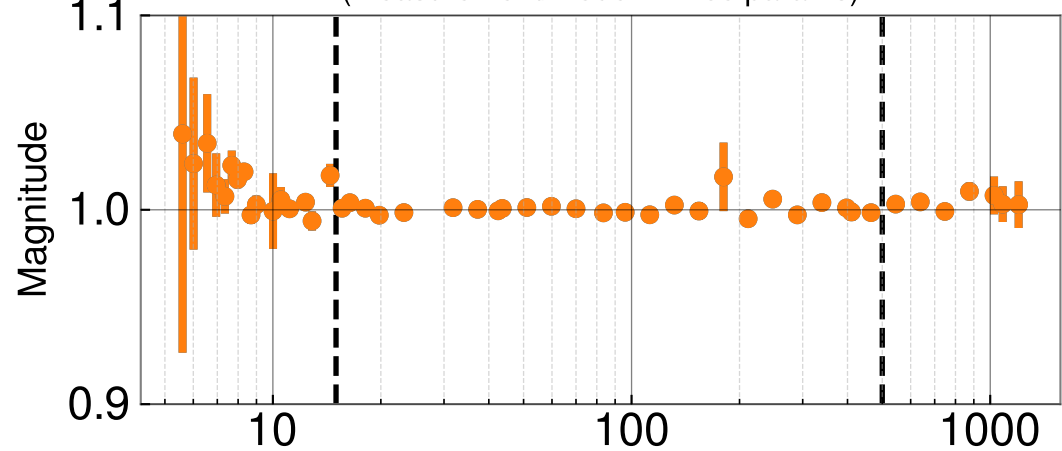
All fixed parameters drawn from /ligo/groups/cal/H1/reports/20230628T015112Z/pydarm_H1.ini



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

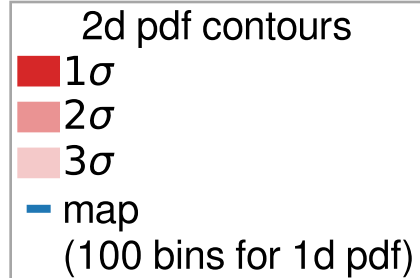


Actuation strength residuals
(measurement/model w. free params)

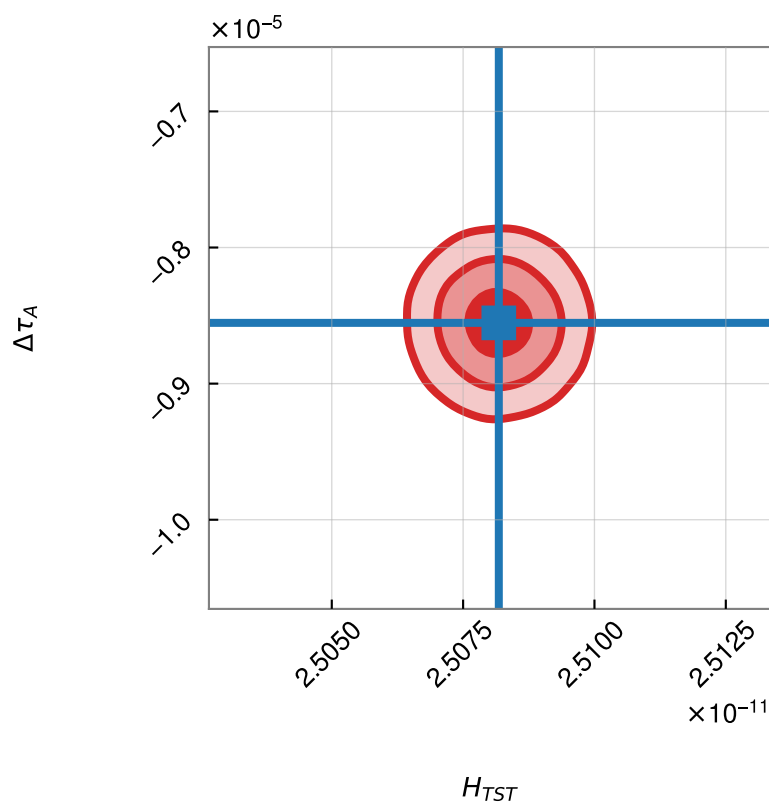
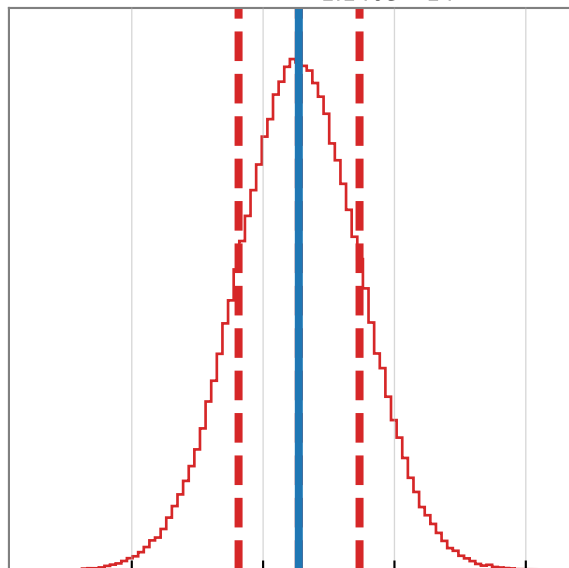


Parameter	(value +/-) value	+	-
Actuation Gain, Hat (N/V^{**2})	2.508e-11	1.156e-14 (0.05%)	1.146e-14 (0.05%)
Residual time delay, tau_A (s)	-8.554e-06	4.58e-07 (-5.35%)	4.6e-07 (-5.38%)

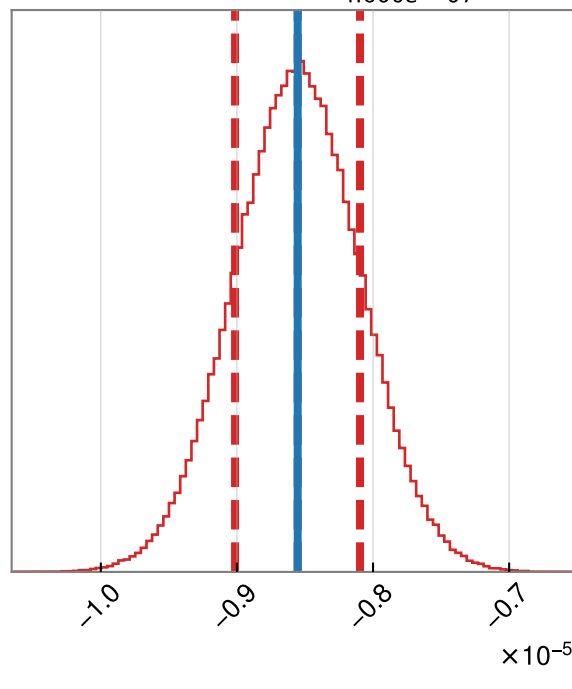
20230517T163635Z EX L3 actuation MCMC corner plot



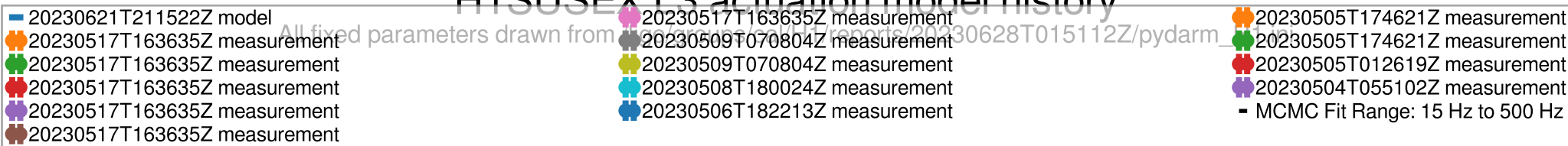
$$H_{TST} = 2.508e - 11^{+1.156e - 14}_{-1.146e - 14}$$



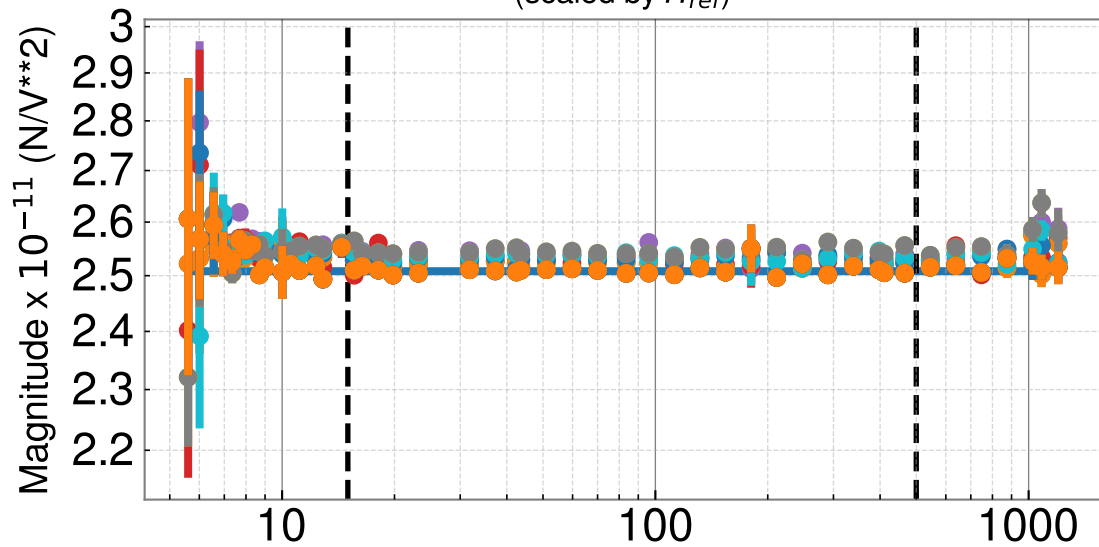
$$\Delta\tau_A = -8.554e - 06^{+4.580e - 07}_{-4.600e - 07}$$



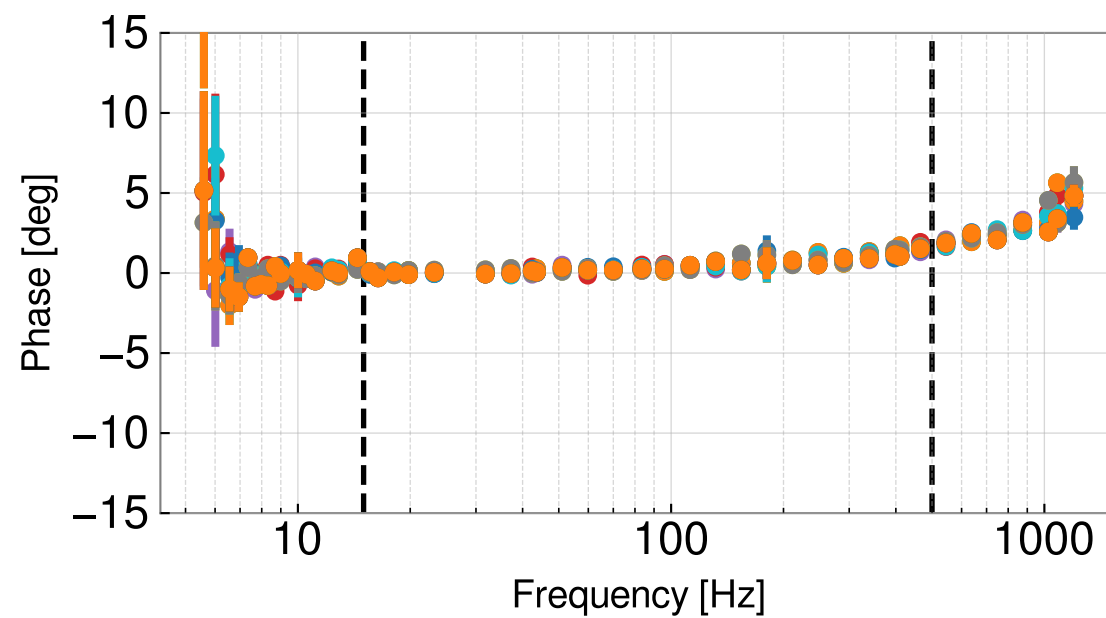
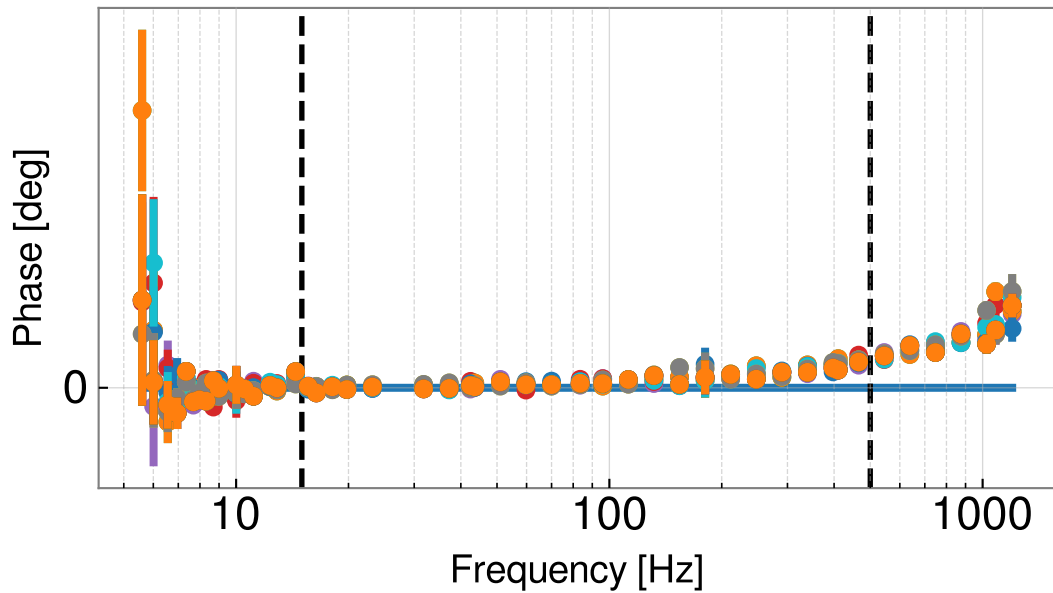
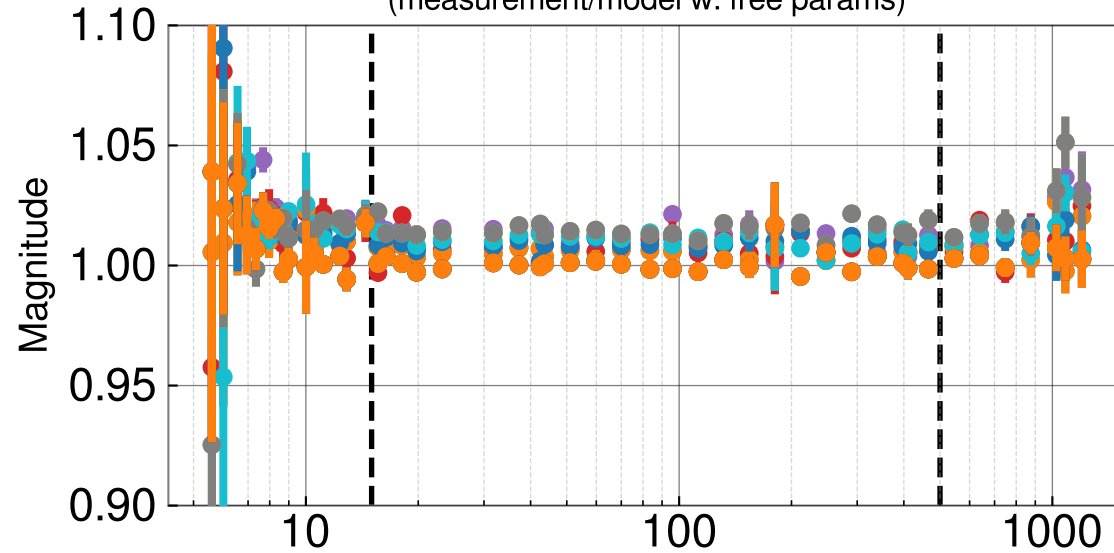
H1 SUSEX L3 actuation model history



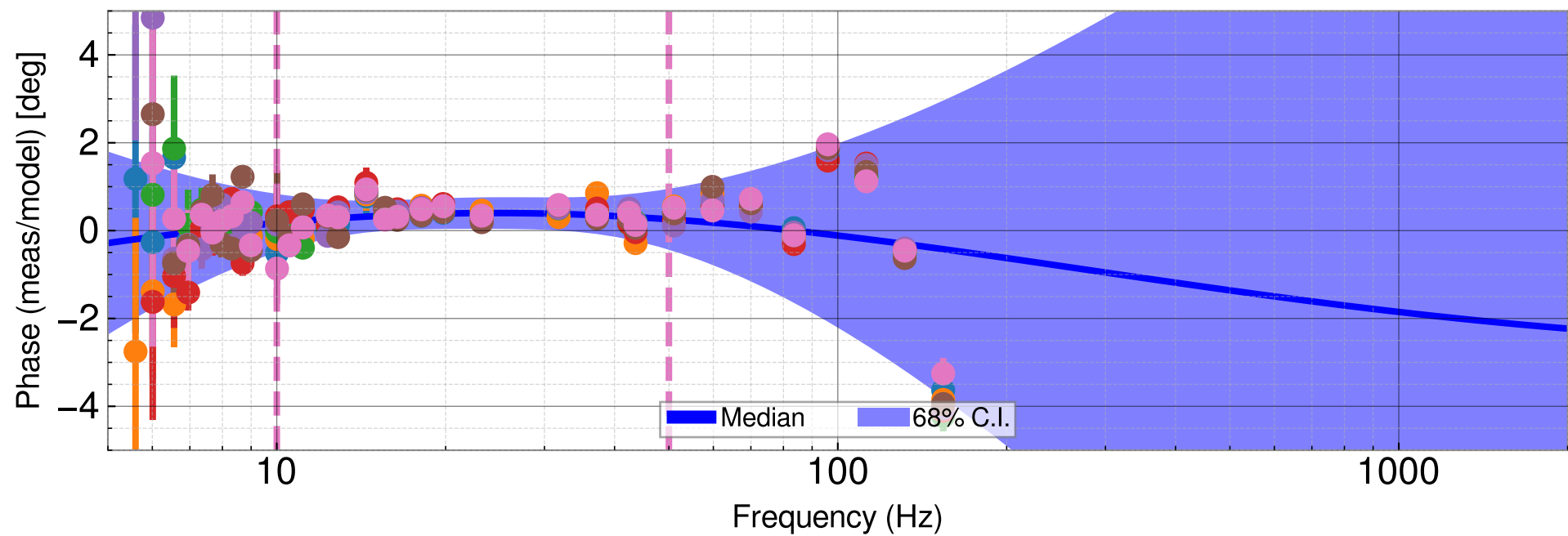
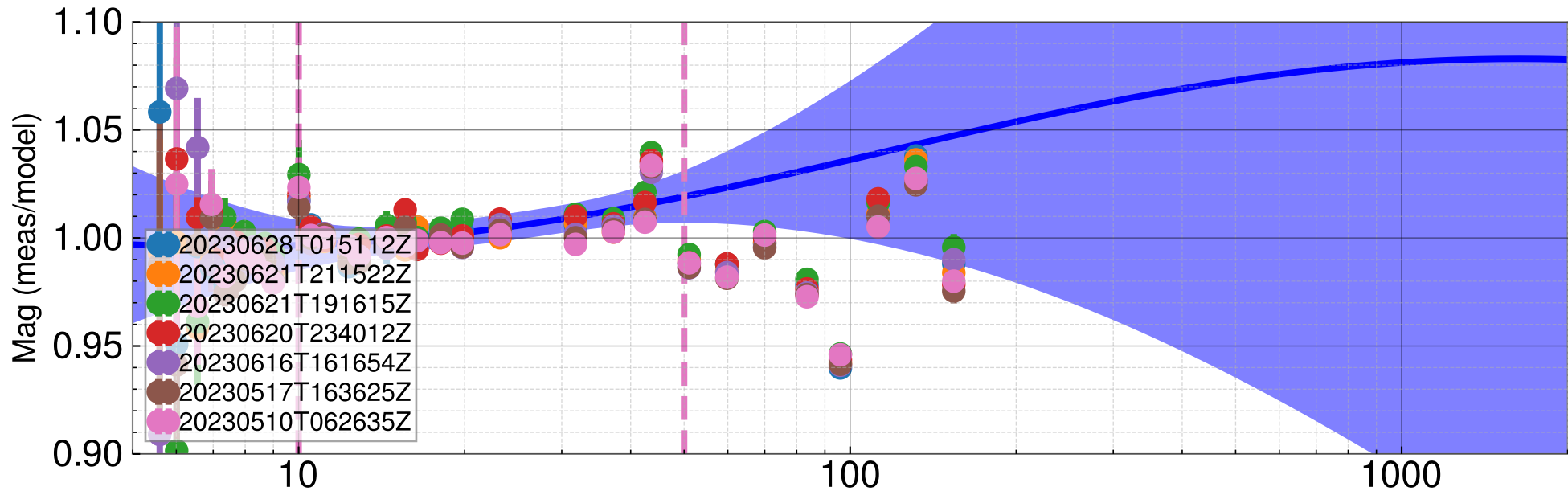
Actuation strength transfer functions
(scaled by H_{ref})



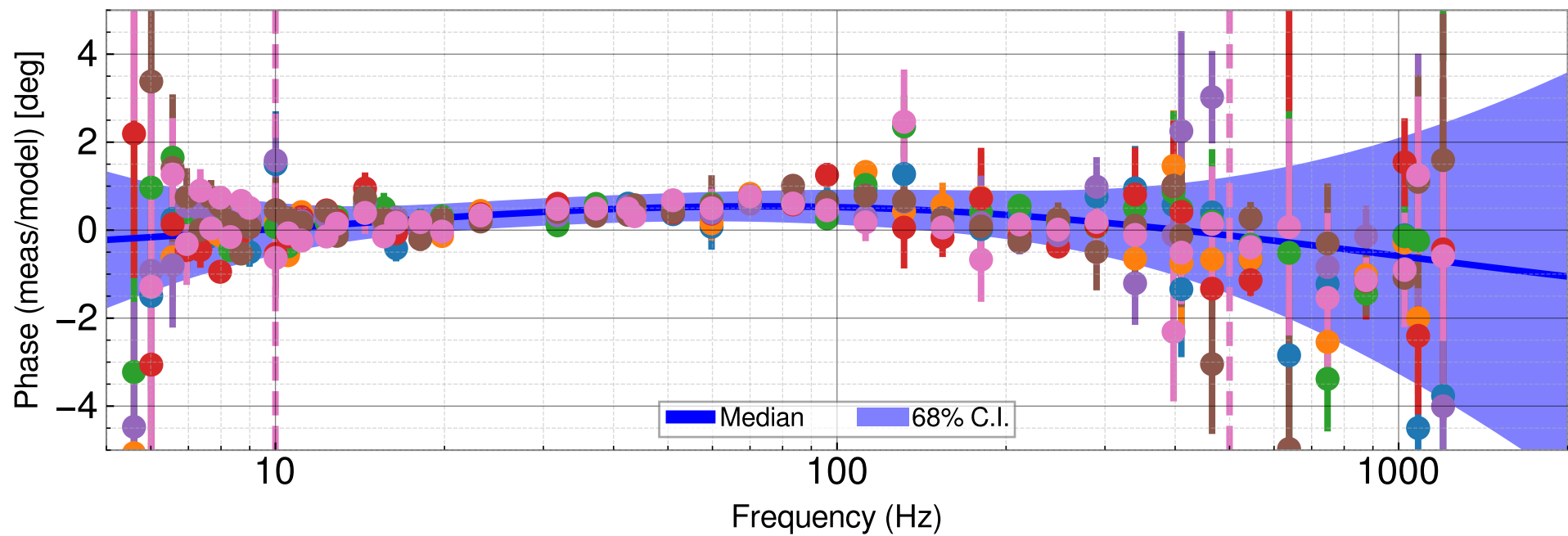
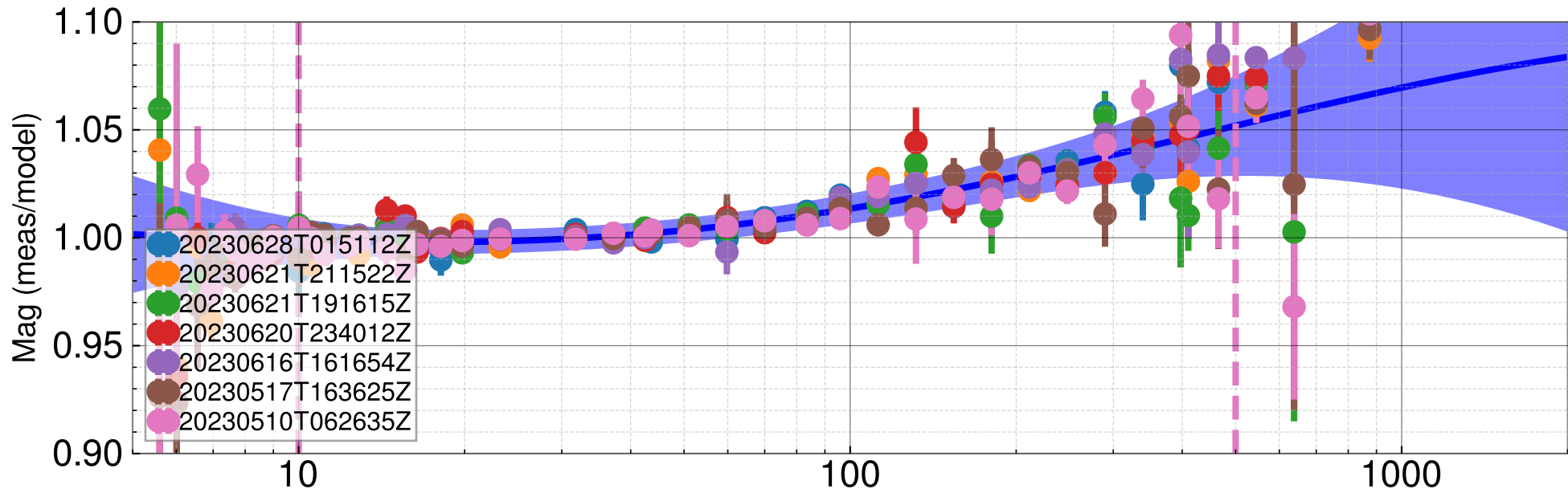
Actuation strength residuals
(measurement/model w. free params)



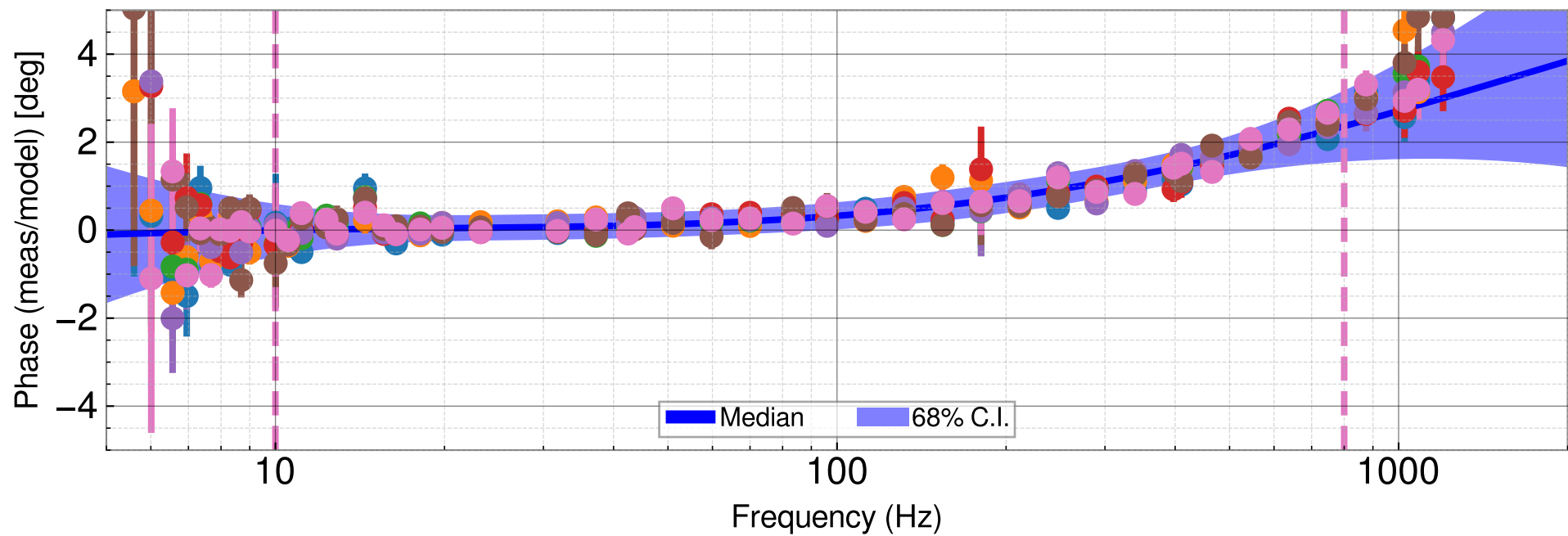
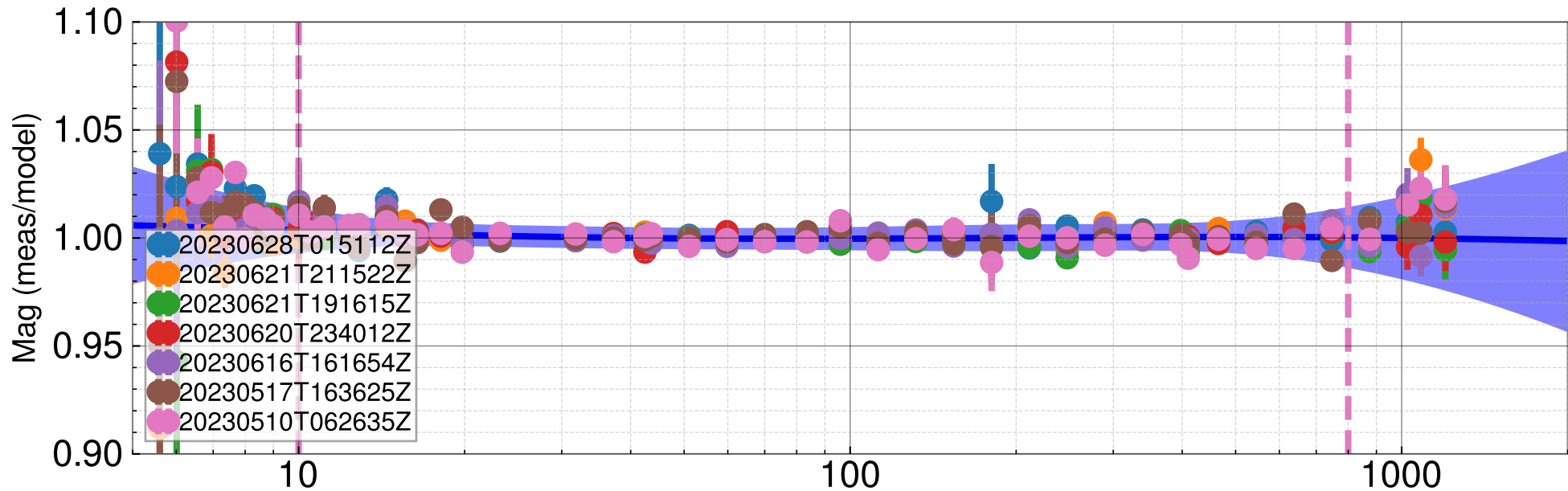
Actuation/L1/EX GPR



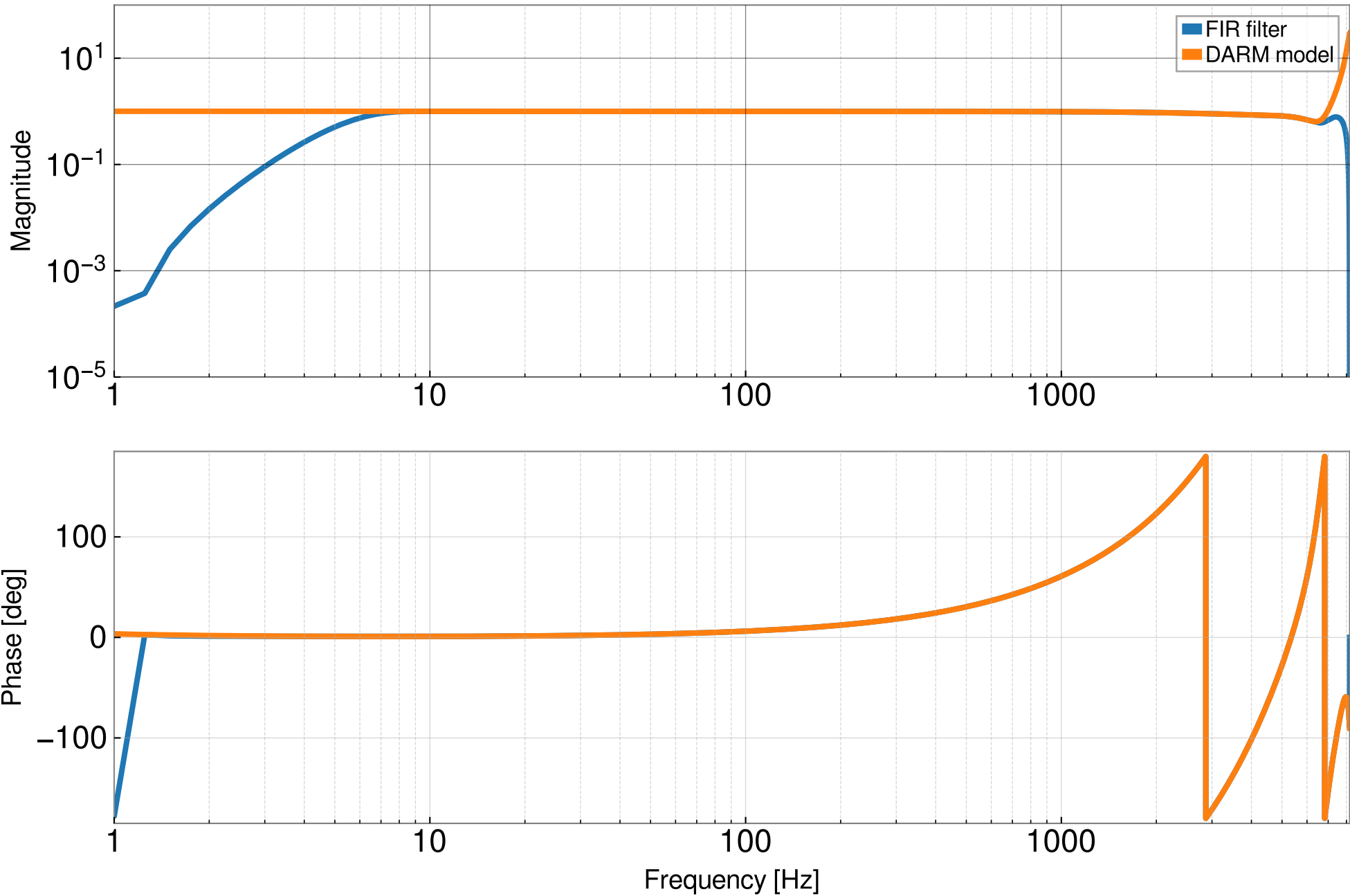
Actuation/L2/EX GPR



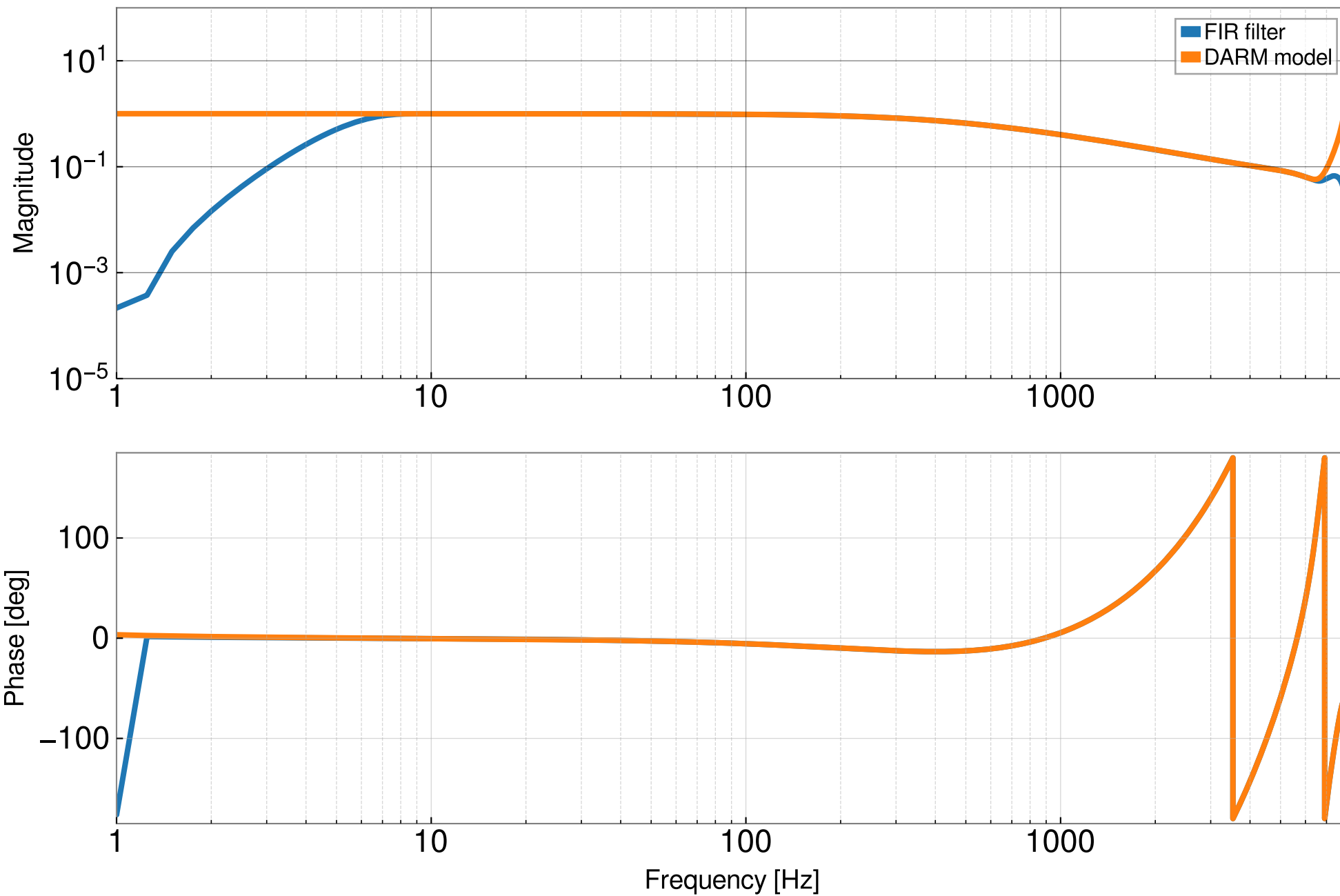
Actuation/L3/EX GPR



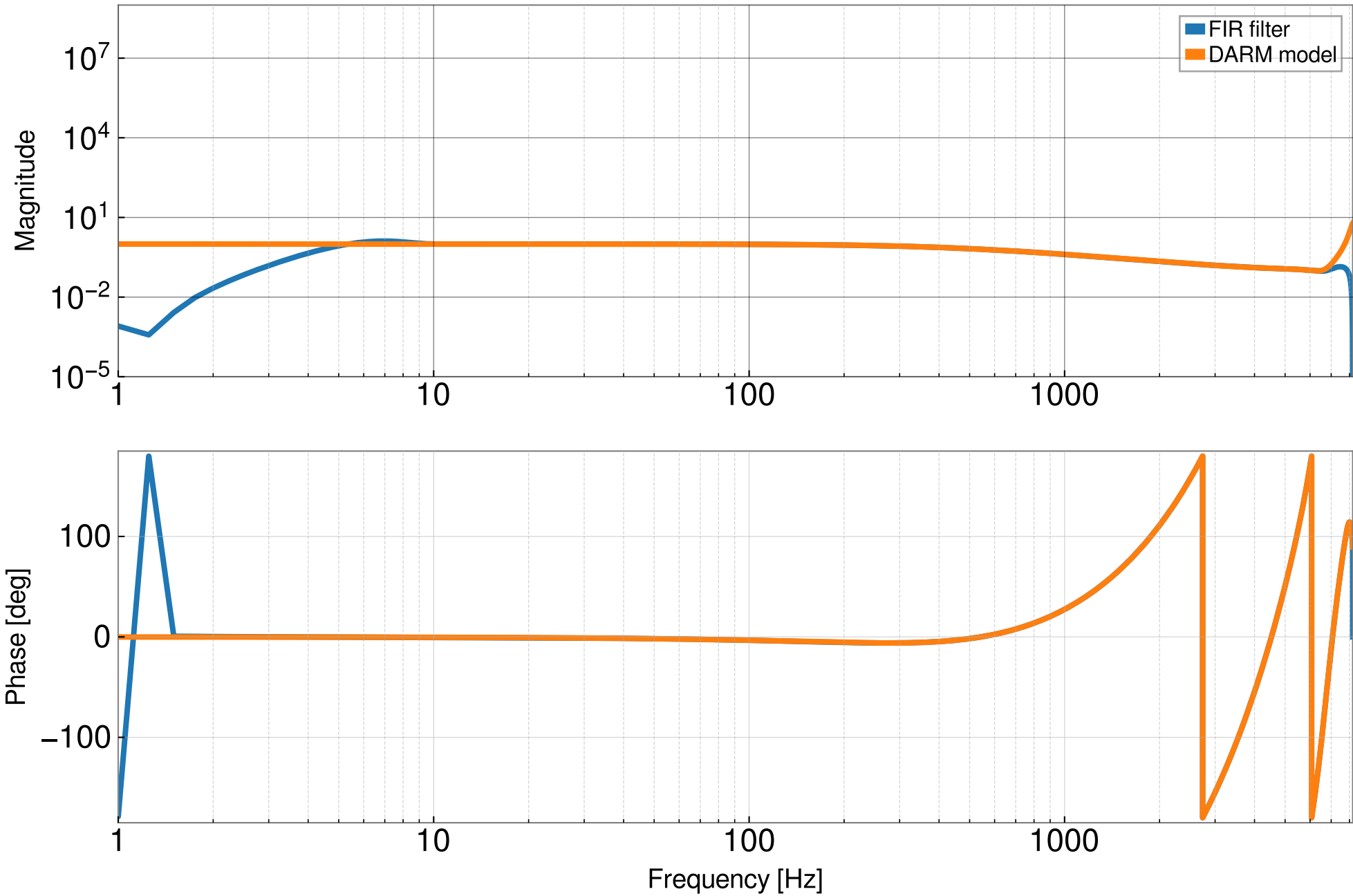
Residual corrections comparison (gstlal_compute_strain_C00_filters_H1)



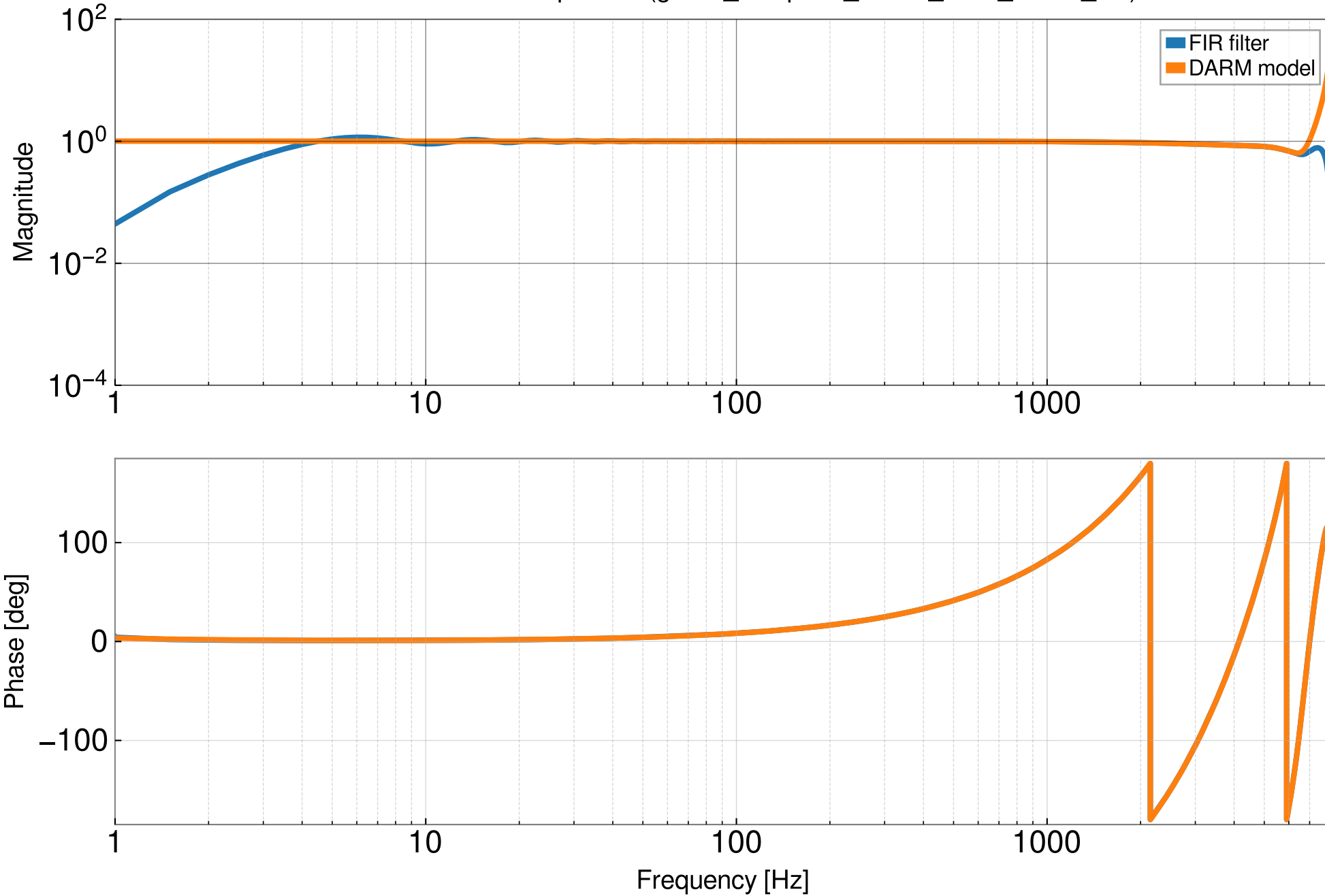
Res Corr No CC Pole comparison (gstlal_compute_strain_C00_filters_H1)



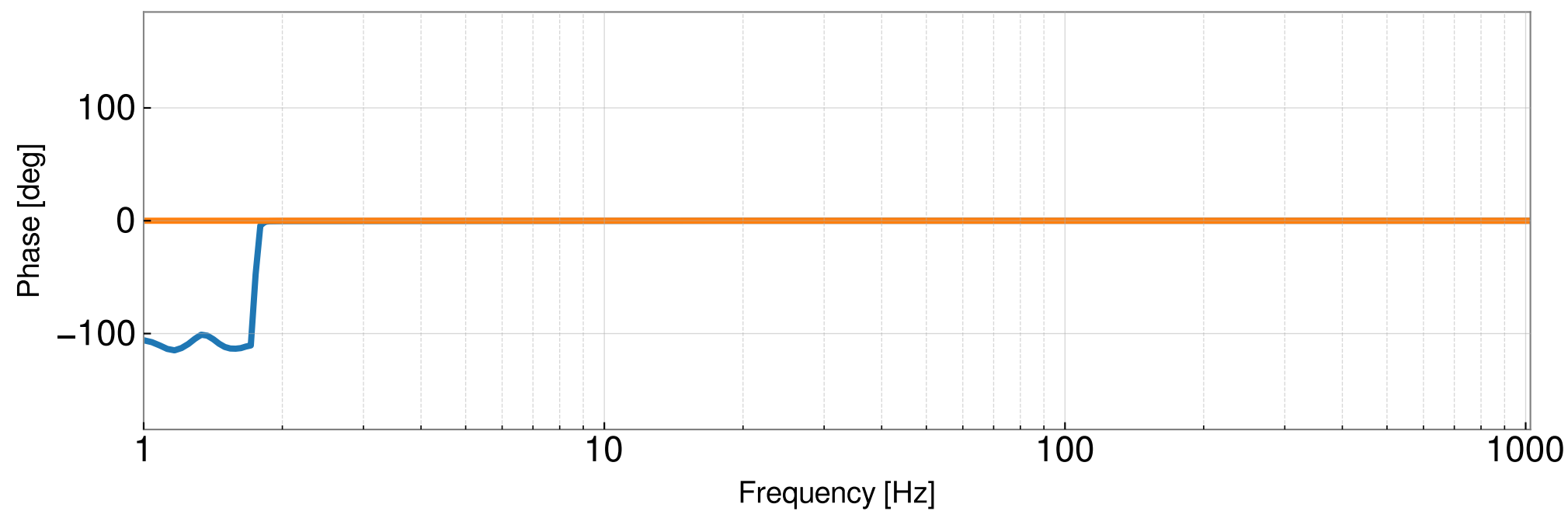
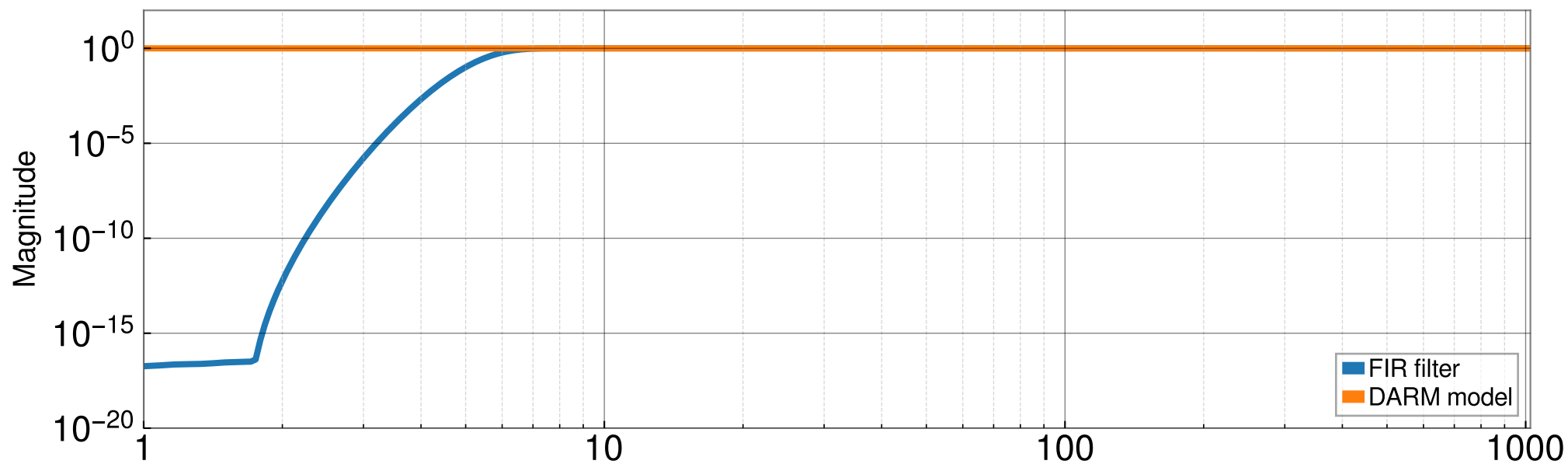
Res Corr No Pole comparison (gstlal_compute_strain_C00_filters_H1)



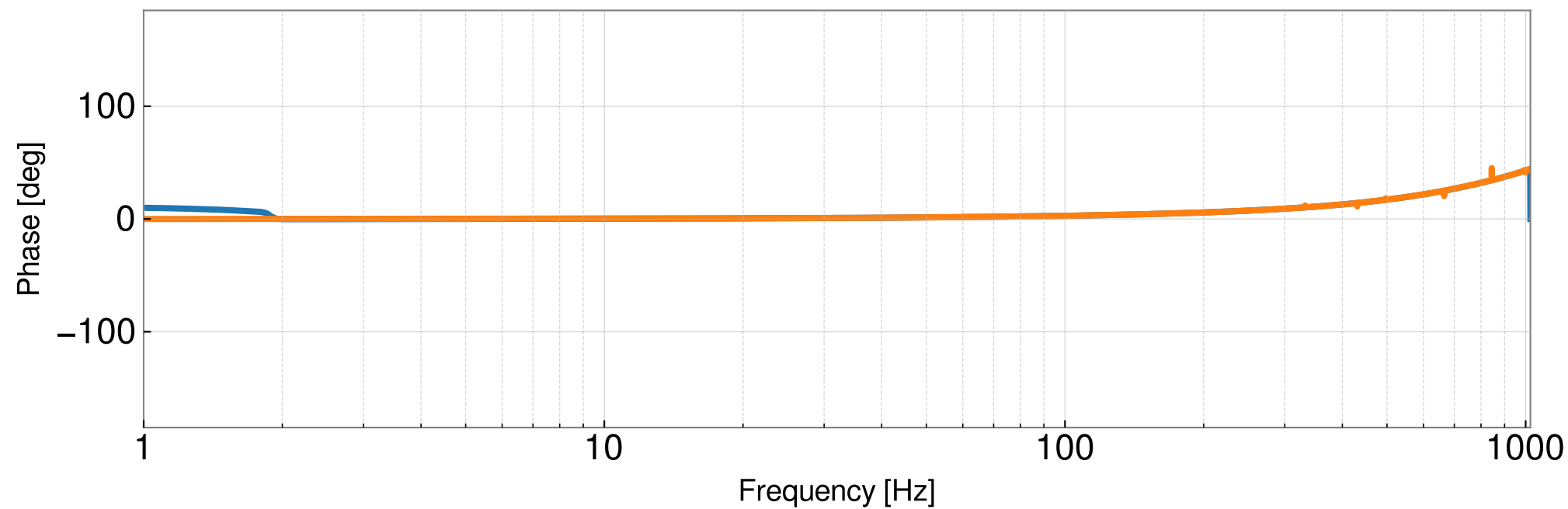
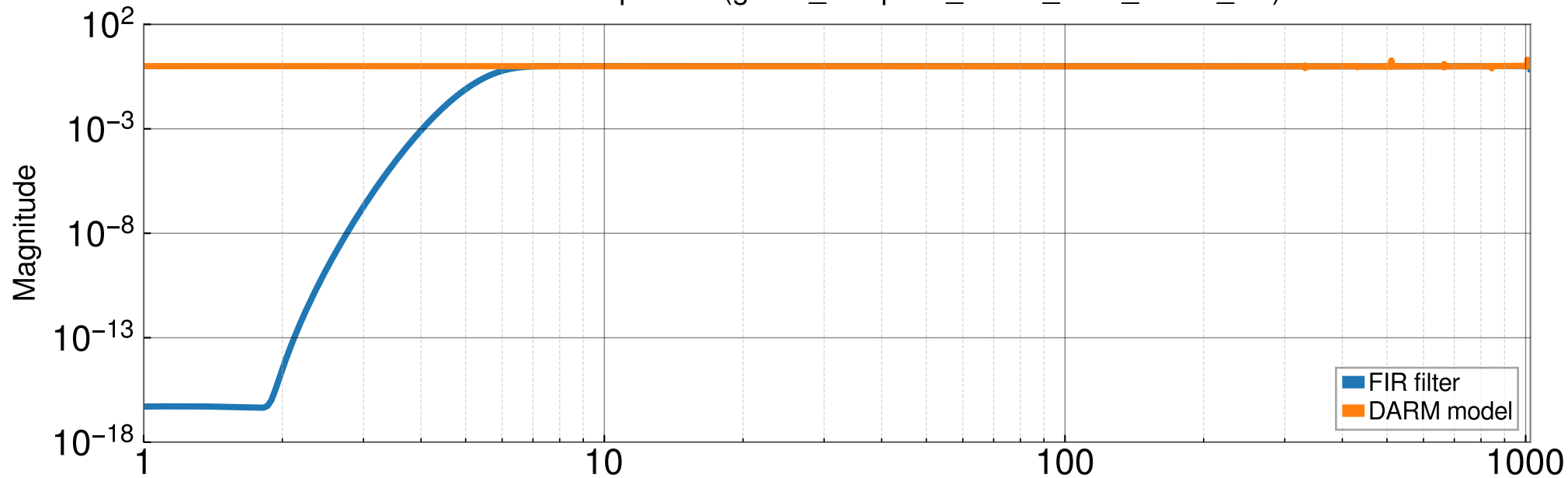
Nonsens corrections comparison (gstlal_compute_strain_C00_filters_H1)



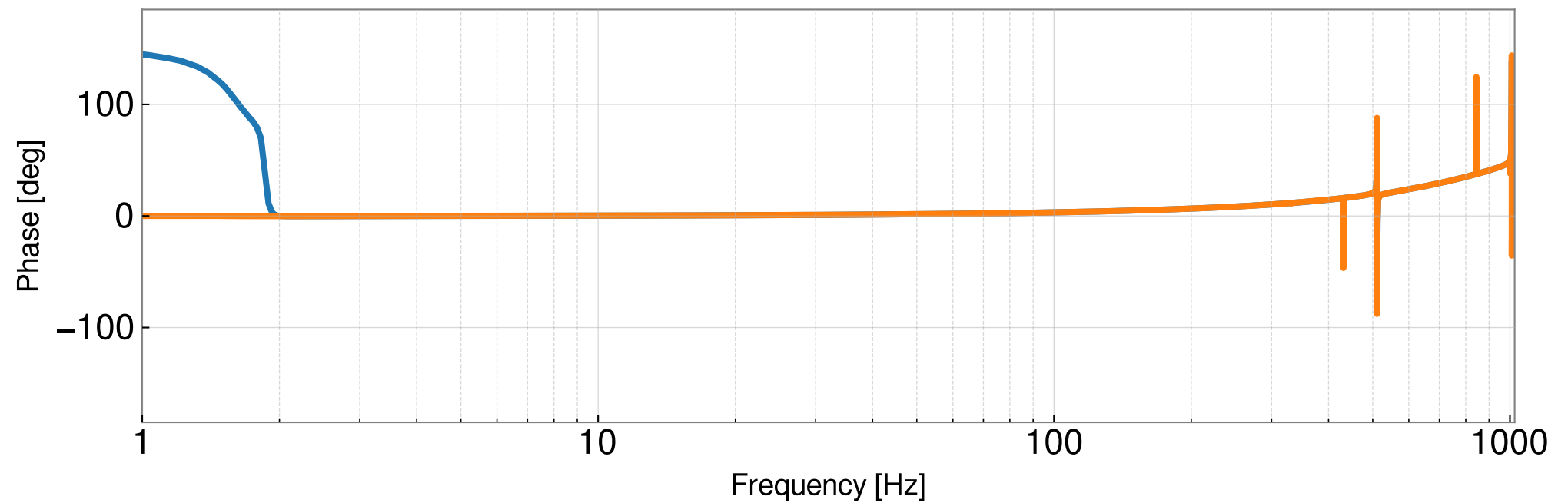
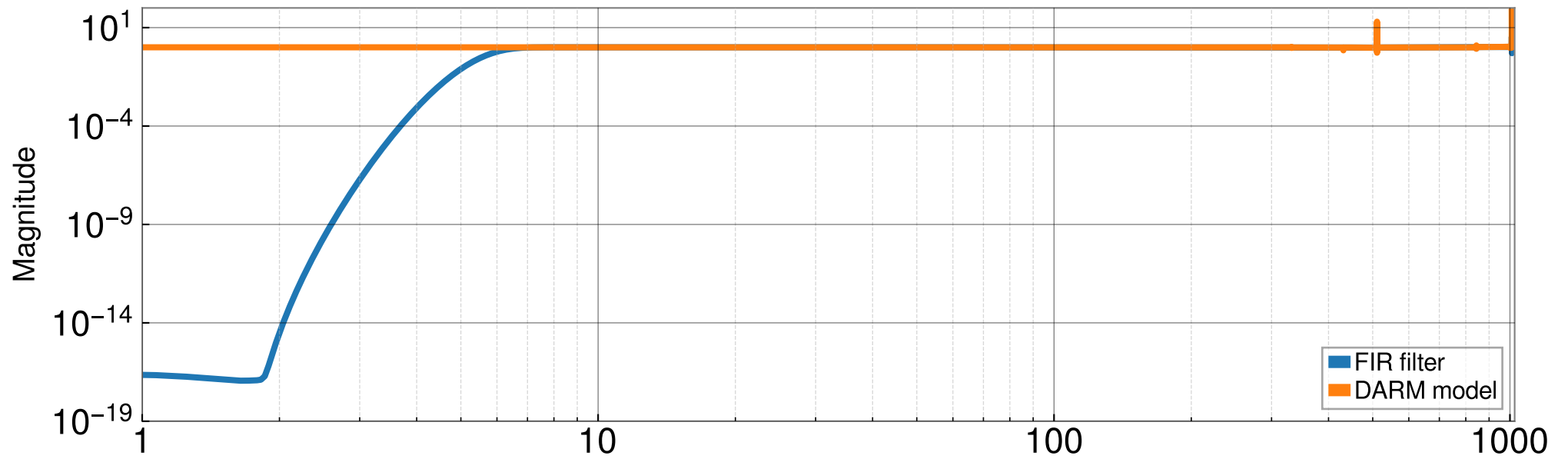
Residual corrections highpass comparison (gstlal_compute_strain_C00_filters_H1)



TST corrections comparison (gstlal_compute_strain_C00_filters_H1)



PUM corrections comparison (gstlal_compute_strain_C00_filters_H1)



UIM corrections comparison (gstlal_compute_strain_C00_filters_H1)

