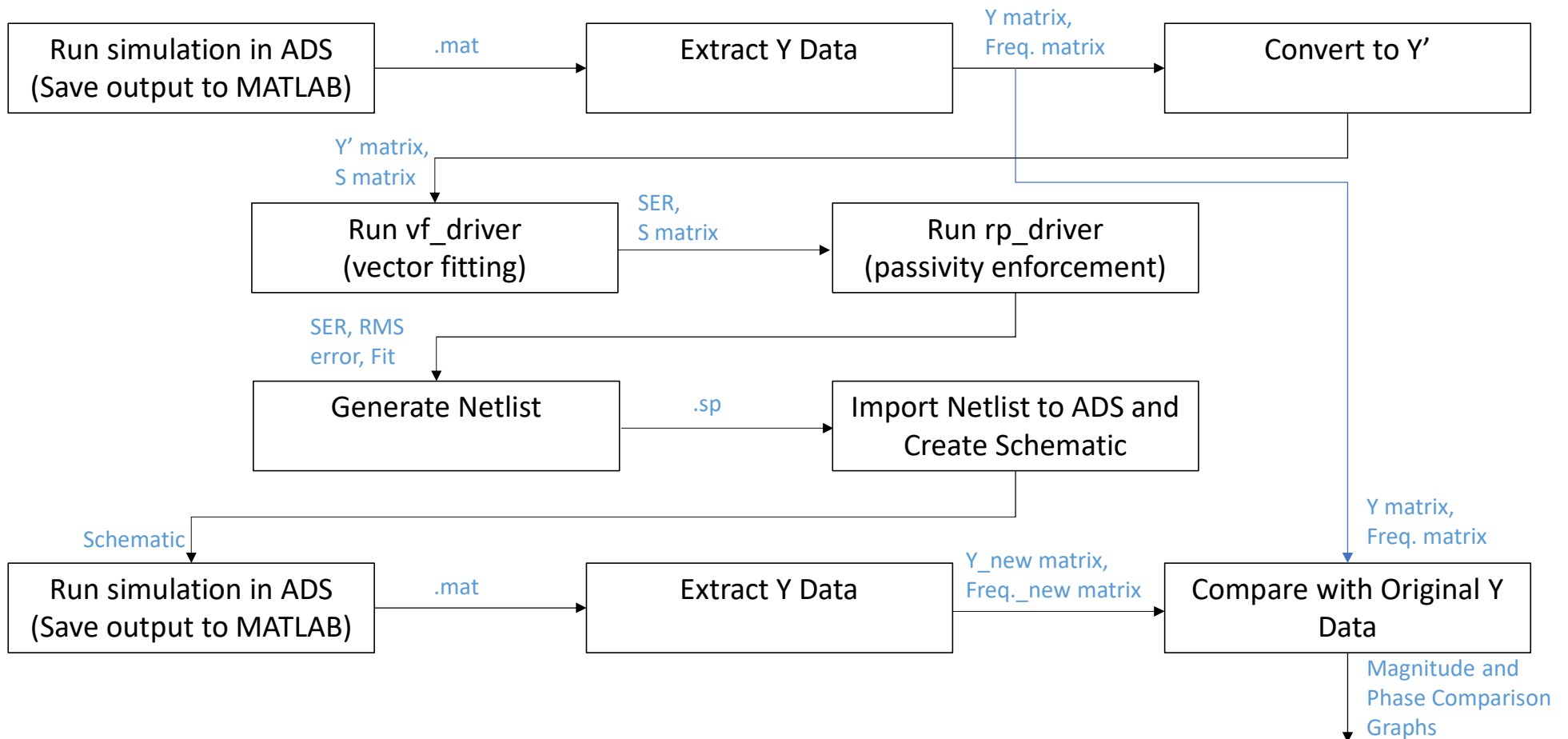
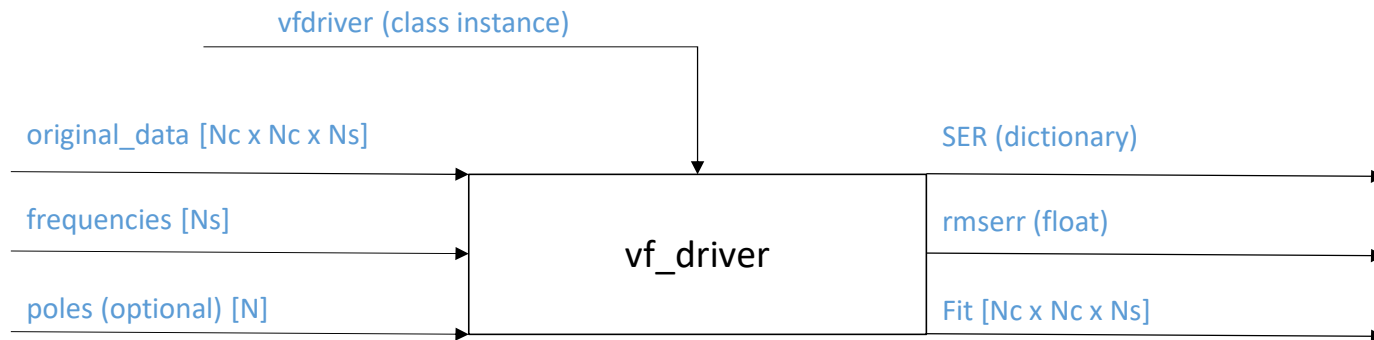


# General Flow Chart



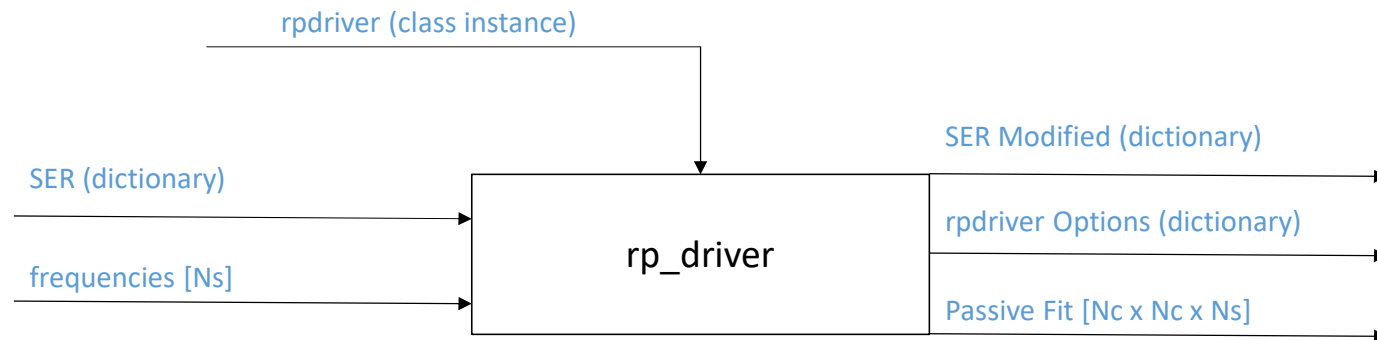
# Inputs/Outputs to Python Programs



SER Element	Size
A	$[(N_c * N) \times (N_c * N)]$
B	$[(N_c * N) \times N_c]$
C	$[N_c \times (N_c * N)]$
D	$[N_c \times N_c]$
E	$[N_c \times N_c]$
R	$[N_c \times N_c \times N]$
poles	$[N]$

Nc	Number of Ports
Ns	Number of Freq. Data Points
N	Number of Poles

# Inputs/Outputs to Python Programs



SER Element	Size
A	$[(N_c * N) \times (N_c * N)]$
B	$[(N_c * N) \times N_c]$
C	$[N_c \times (N_c * N)]$
D	$[N_c \times N_c]$
E	$[N_c \times N_c]$
R	$[N_c \times N_c \times N]$
poles	$[N]$

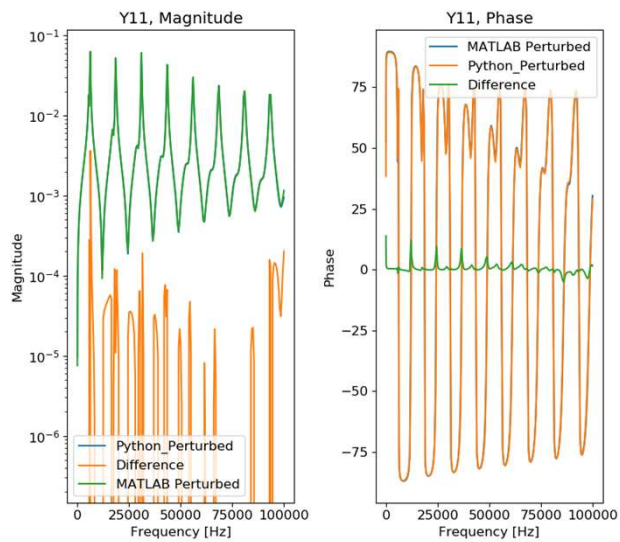
$N_c$	Number of Ports
$N_s$	Number of Freq. Data Points
$N$	Number of Poles

# 3 Port Python/MATLAB Results

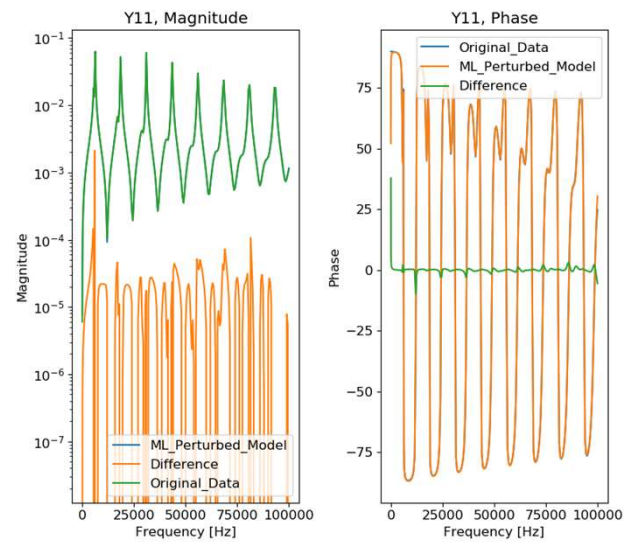
Element	RMS Error (Magnitude) – Python	RMS Error (Phase) - Python	RMS Error (Magnitude) – MATLAB	RMS Error (Phase) - MATLAB
Y11	5.91e-5	0.16	2.59e-4	0.11
Y12	6.64e-5	0.33	2.91e-4	0.23
Y13	7.25e-5	0.48	4.06e-4	0.44
Y21	6.64e-5	0.33	1.91e-4	0.23
Y22	6.28e-5	0.14	3.67e-4	0.21
Y23	6.64e-5	0.33	1.91e-4	0.23
Y31	7.25e-5	0.48	4.06e-4	0.44
Y32	6.64e-5	0.33	1.91e-4	0.23
Y33	5.91e-5	0.16	2.59e-4	0.11

# 3 Port Results

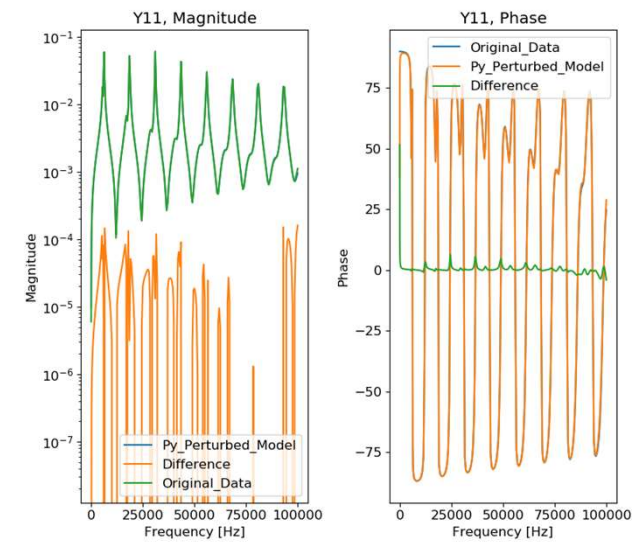
Python / MATLAB



MATLAB

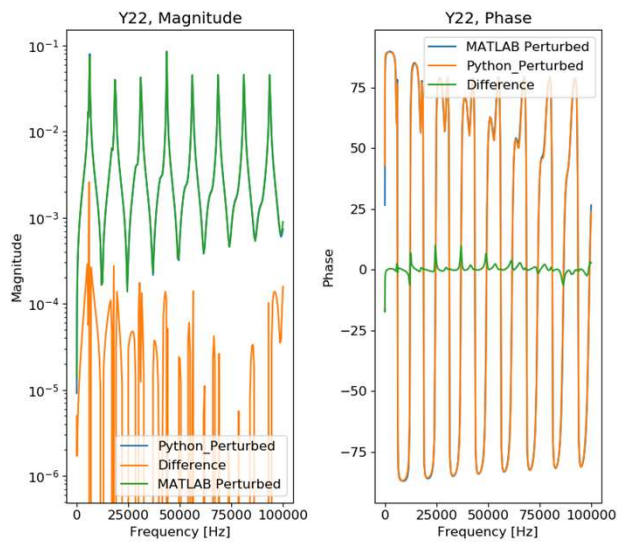


Python

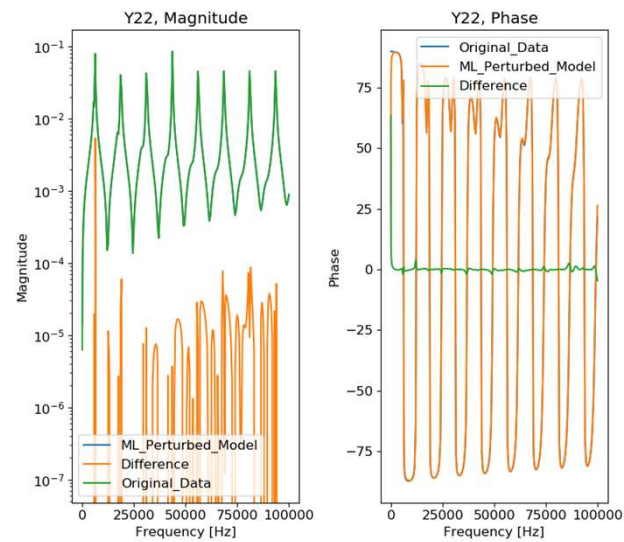


# 3 Port Results

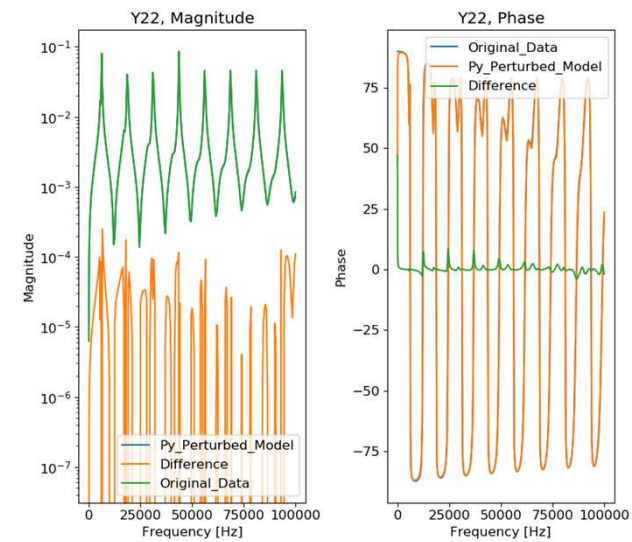
Python / MATLAB



MATLAB

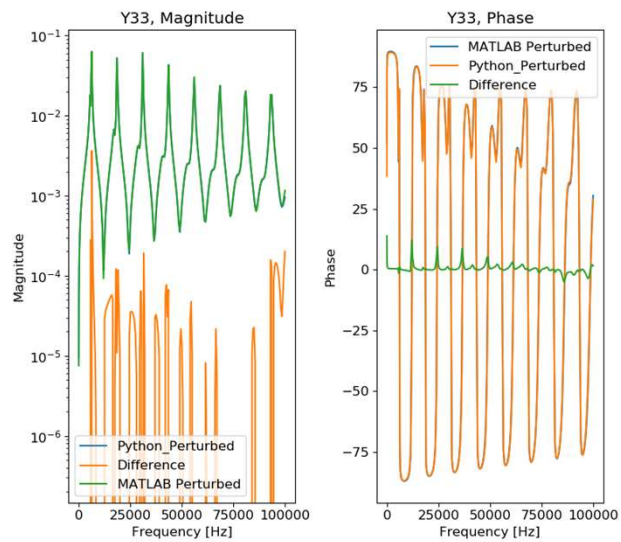


Python

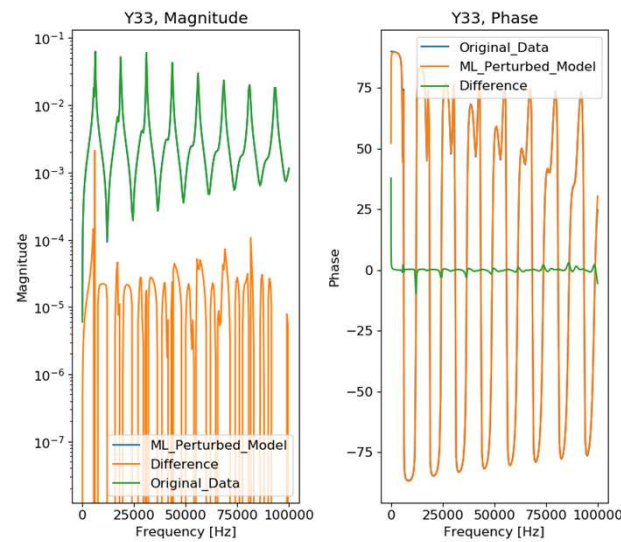


# 3 Port Results

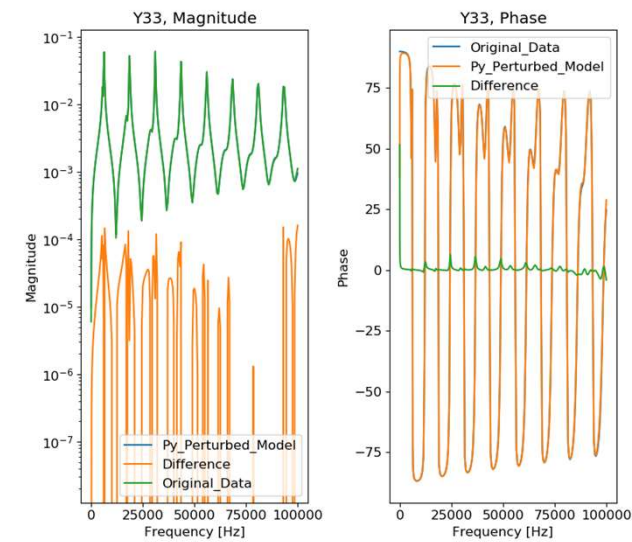
Python / MATLAB



MATLAB

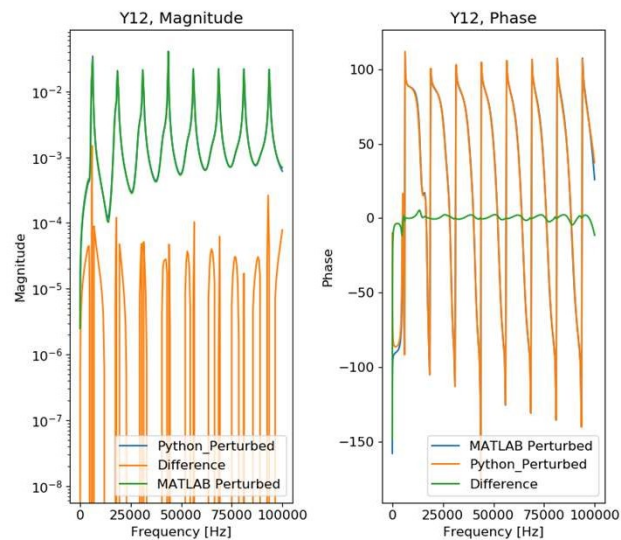


Python

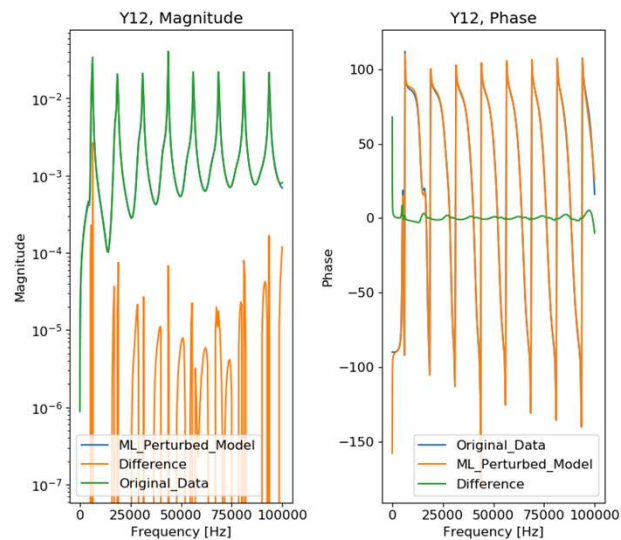


# 3 Port Results

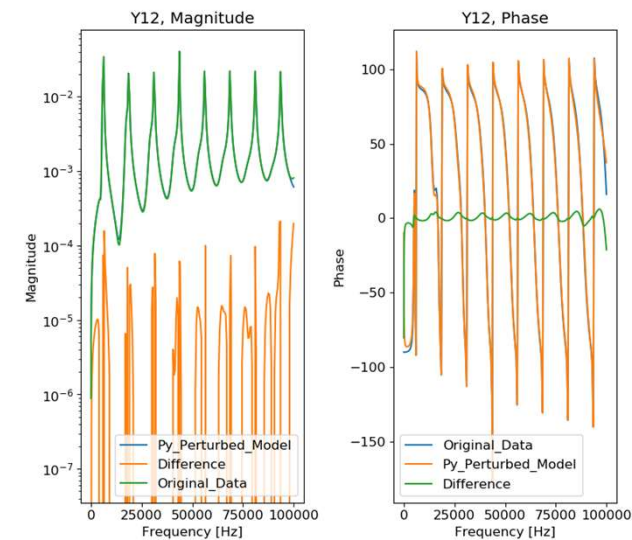
Python / MATLAB



MATLAB



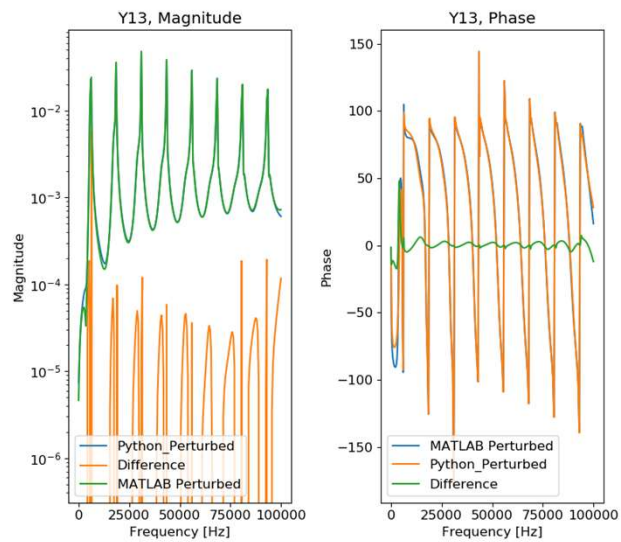
Python



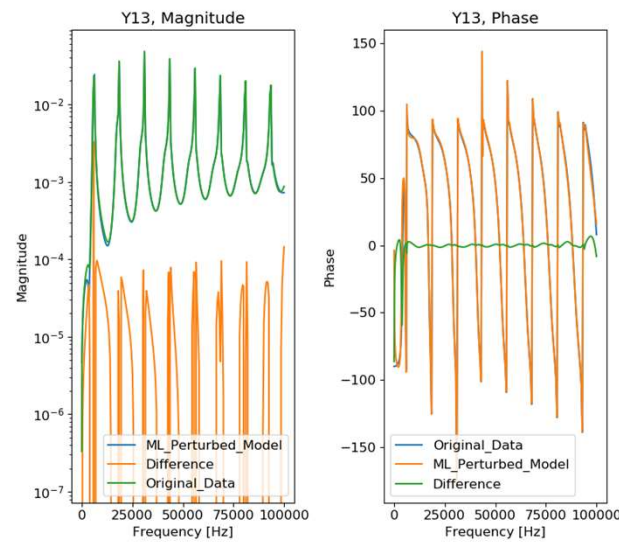


# 3 Port Results

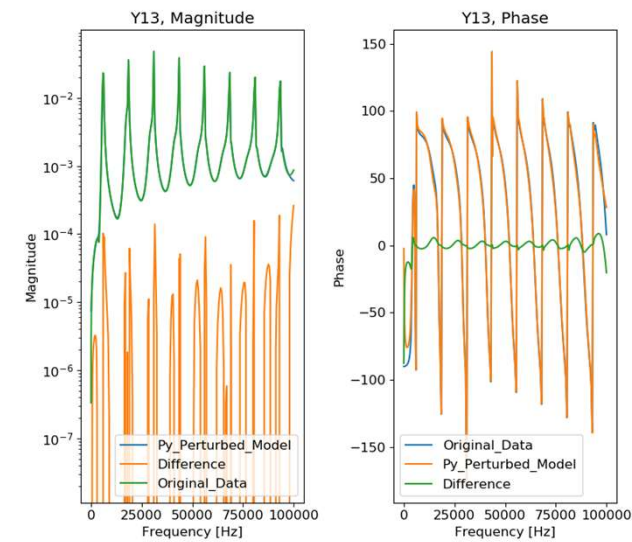
Python / MATLAB



MATLAB



Python



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