

Cold Electronics Response at 1us peaking



Magnitude of Fourier transform of response



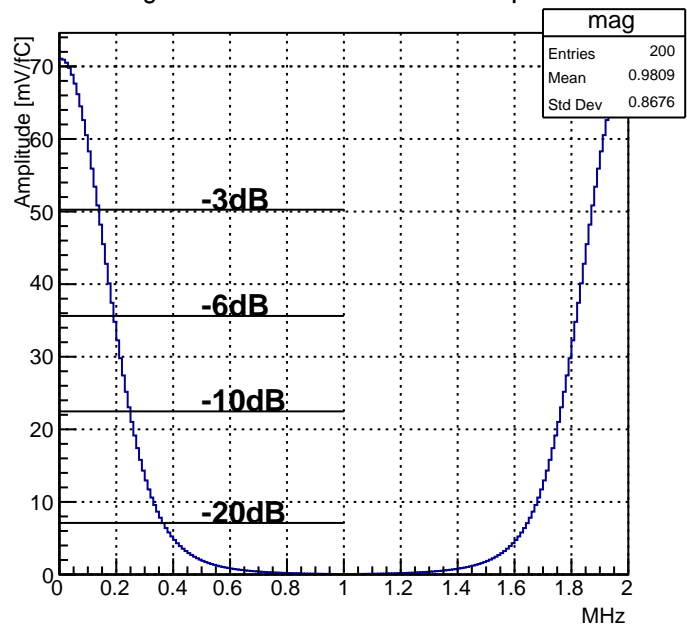
Phase of Fourier transform of response



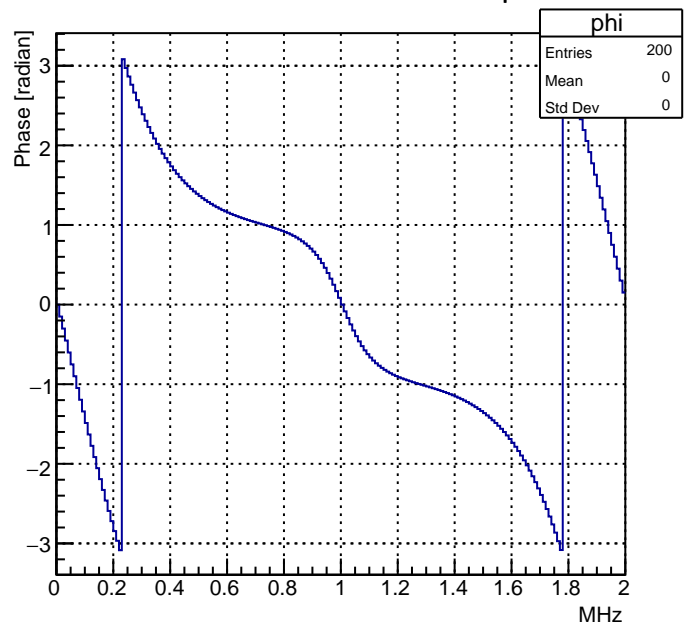
Cold Electronics Response at 2us peaking



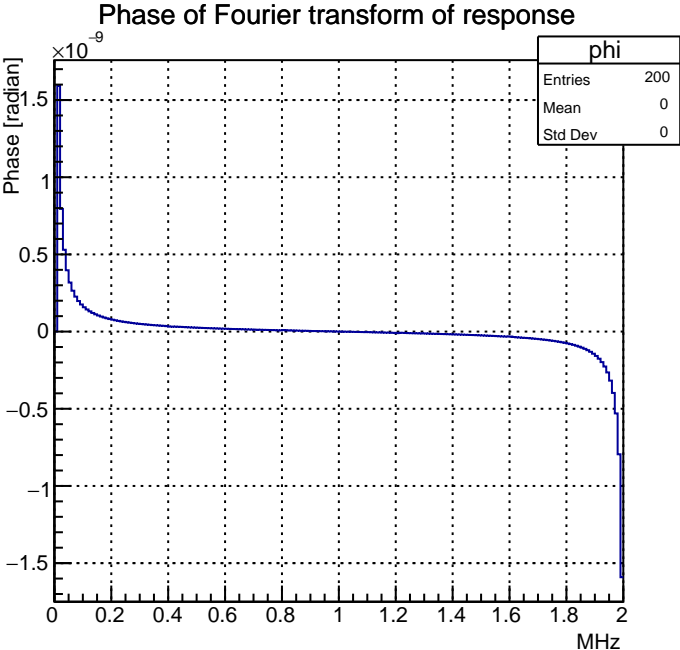
Magnitude of Fourier transform of response



Phase of Fourier transform of response



RC Response at 1ms time constant



RC Response at 1ms time constant (suppress delta)



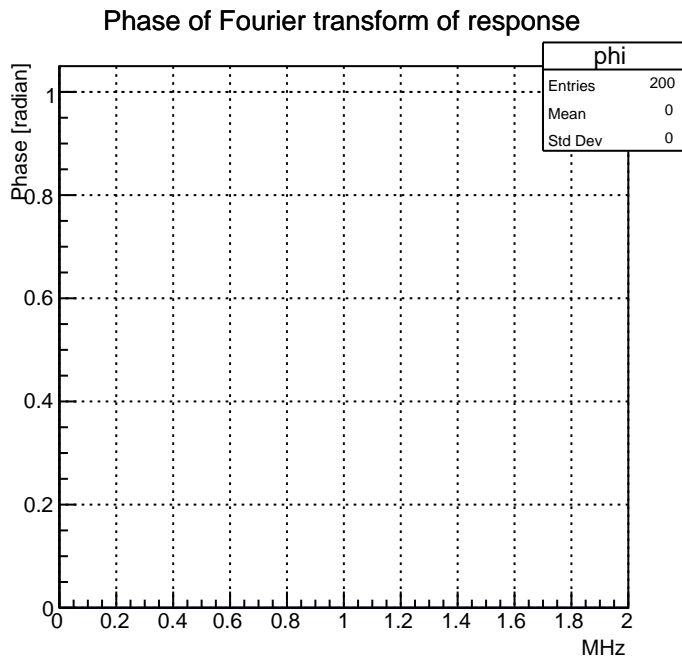
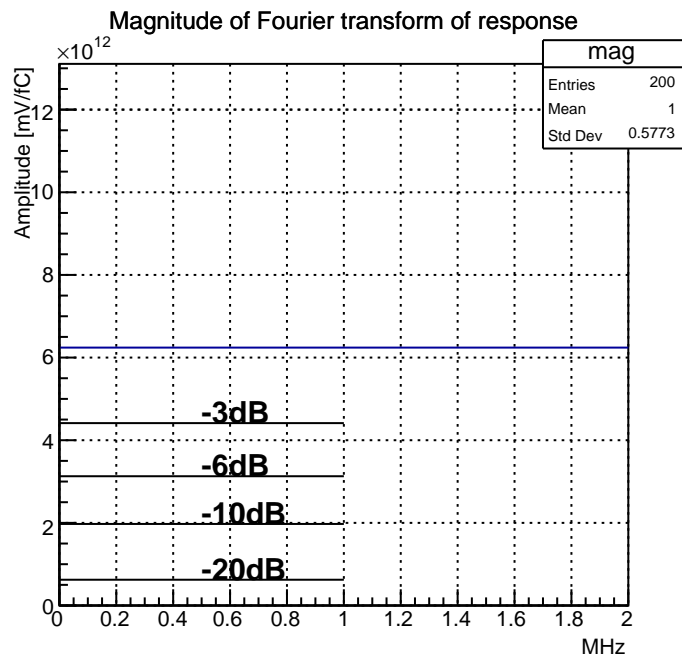
Magnitude of Fourier transform of response



Phase of Fourier transform of response



# Response Gaussian smear by default



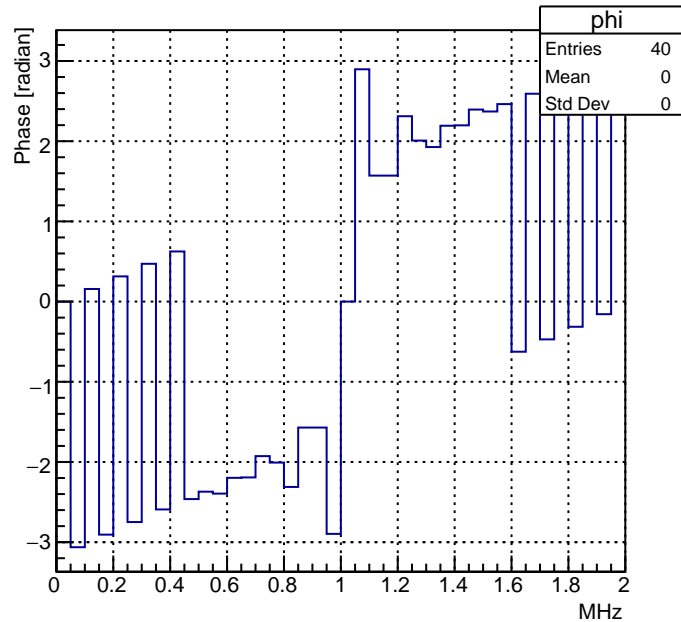
Response Gaussian 2 us smear



Magnitude of Fourier transform of response



Phase of Fourier transform of response



FWHM timing (absolute)

number of samples	time (ns) $\times 10^3$
128	128
256	256
400	400
512	512
800	800
960	960
1024	1024
1148	1148
2048	2048
2400	2400
3456	3456
4096	4096
6000	6000
8192	8192
8256	8256
9594	9594
9595	9595
9600	9600
10000	10000
10240	10240
16384	16384

The graph illustrates the time per sample (ns/sample) as a function of the number of samples (logarithmic scale) for three different methods. The x-axis ranges from  $10^2$  to  $10^4$  samples, and the y-axis ranges from 100 to 600 ns/sample. The solid line represents the highest time per sample, followed by the dashed line, and the dotted line represents the lowest time per sample. All methods show a general decrease in time per sample as the number of samples increases, with some fluctuations.

Number of samples	Solid line (ns/sample)	Dashed line (ns/sample)	Dotted line (ns/sample)
$10^2$	300	300	300
$2 \times 10^2$	550	450	450
$3 \times 10^2$	450	450	450
$4 \times 10^2$	420	420	420
$5 \times 10^2$	570	420	420
$6 \times 10^2$	420	420	420
$8 \times 10^2$	510	420	420
$10^3$	320	320	320
$1.2 \times 10^3$	570	420	420
$2 \times 10^3$	240	240	240
$2.5 \times 10^3$	220	220	220
$3 \times 10^3$	160	160	160
$4 \times 10^3$	190	190	190
$5 \times 10^3$	150	150	150
$7 \times 10^3$	170	170	170
$10^4$	140	140	140
$1.1 \times 10^4$	410	410	410
$1.2 \times 10^4$	130	130	130
$1.5 \times 10^4$	130	130	130