

# Allan Deviation $\sigma_y(\tau)$

Avg. Time (s)	Allan Deviation $\sigma_y(\tau)$	Noise Floor
1	$7.712 \times 10^{-12}$	$4.57403 \times 10^{-14}$
2	$6.582 \times 10^{-12}$	$3.39129 \times 10^{-14}$
4	$4.767 \times 10^{-12}$	$2.09639 \times 10^{-14}$
10	$3.090 \times 10^{-12}$	$1.26405 \times 10^{-14}$
20	$2.212 \times 10^{-12}$	$9.80157 \times 10^{-15}$
40	$1.550 \times 10^{-12}$	$7.85680 \times 10^{-15}$
100	$9.68 \times 10^{-13}$	$5.34042 \times 10^{-15}$
200	$7.29 \times 10^{-13}$	$4.04441 \times 10^{-15}$
400	$5.01 \times 10^{-13}$	$4.03632 \times 10^{-15}$
1000	$4.4 \times 10^{-13}$	$4.50842 \times 10^{-15}$
2000	$3.5 \times 10^{-13}$	$3.07614 \times 10^{-15}$
4000	$4.9 \times 10^{-13}$	
10000	$9.7 \times 10^{-13}$	
20000	$3.3 \times 10^{-13}$	

$\tau_0 = 1 \text{ s}$       NEQ BW = 0.5 Hz

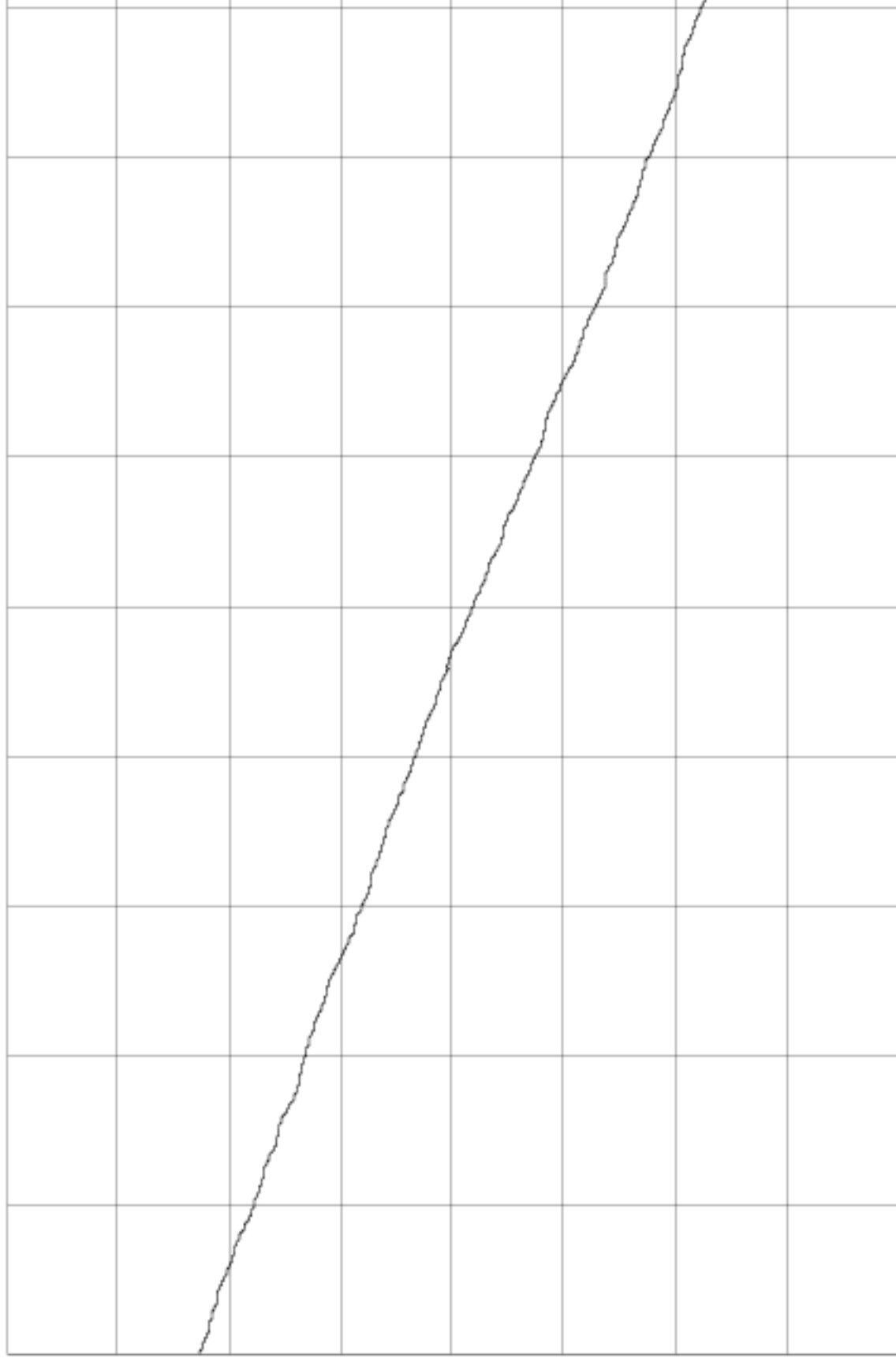
05/02/2012 11:23:40  
15h 0m

TSC 5120A

# Phase Difference

2.0x10<sup>-09</sup> s/div

Center: -9.2874x10<sup>-07</sup> s



60s/div

Input 10.0 MHz 7 dBm

Reference 5.0 MHz 14 dBm

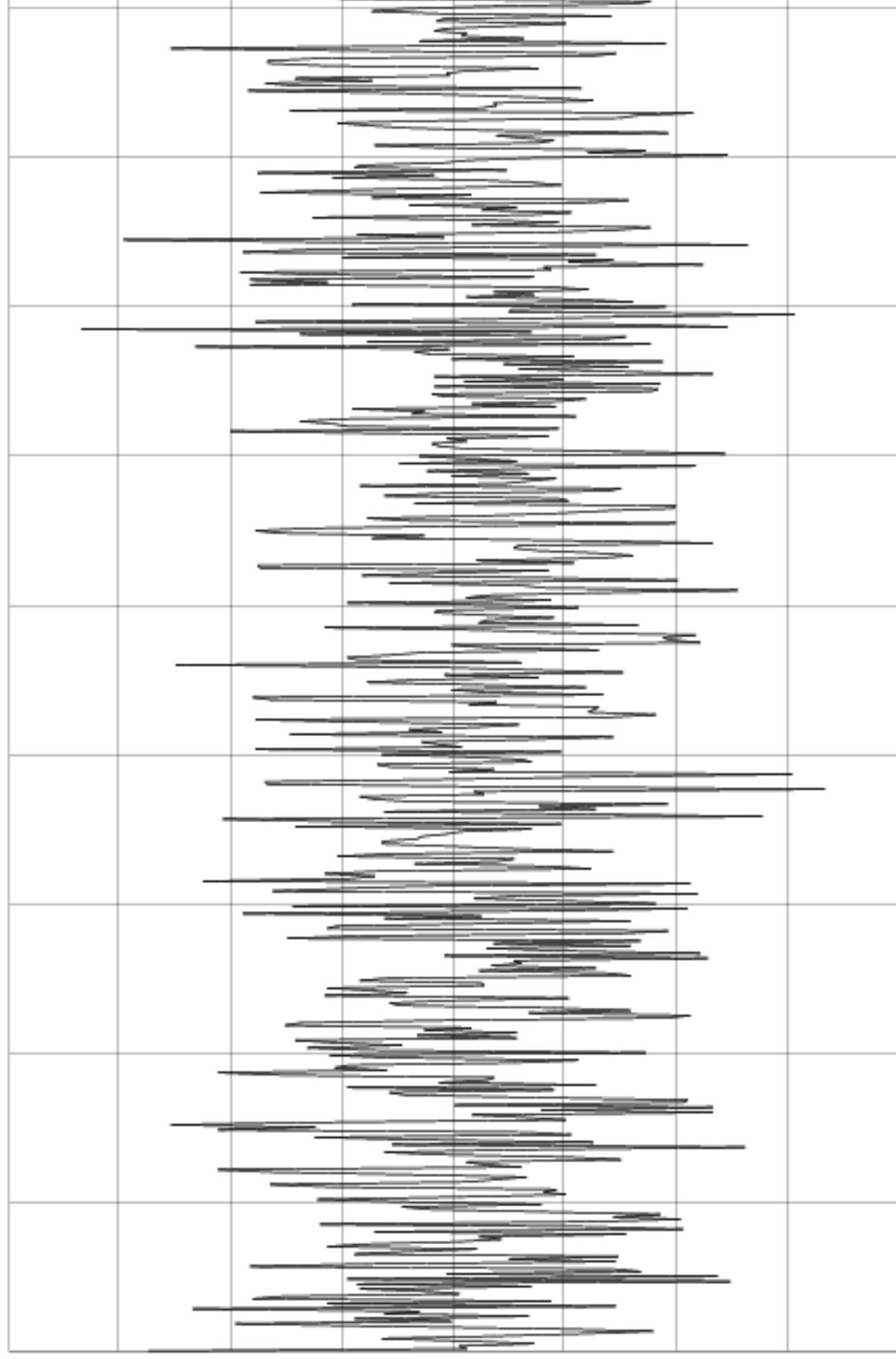
05/02/2012 11:23:40  
15h 0m

TSC 5120A

# Frequency Difference

$8.0 \times 10^{-12}$  /div

Center:  $-1.498 \times 10^{-11}$



60s/div

Input 10.0 MHz 7 dBm

Reference 5.0 MHz 14 dBm

# Frequency Counter

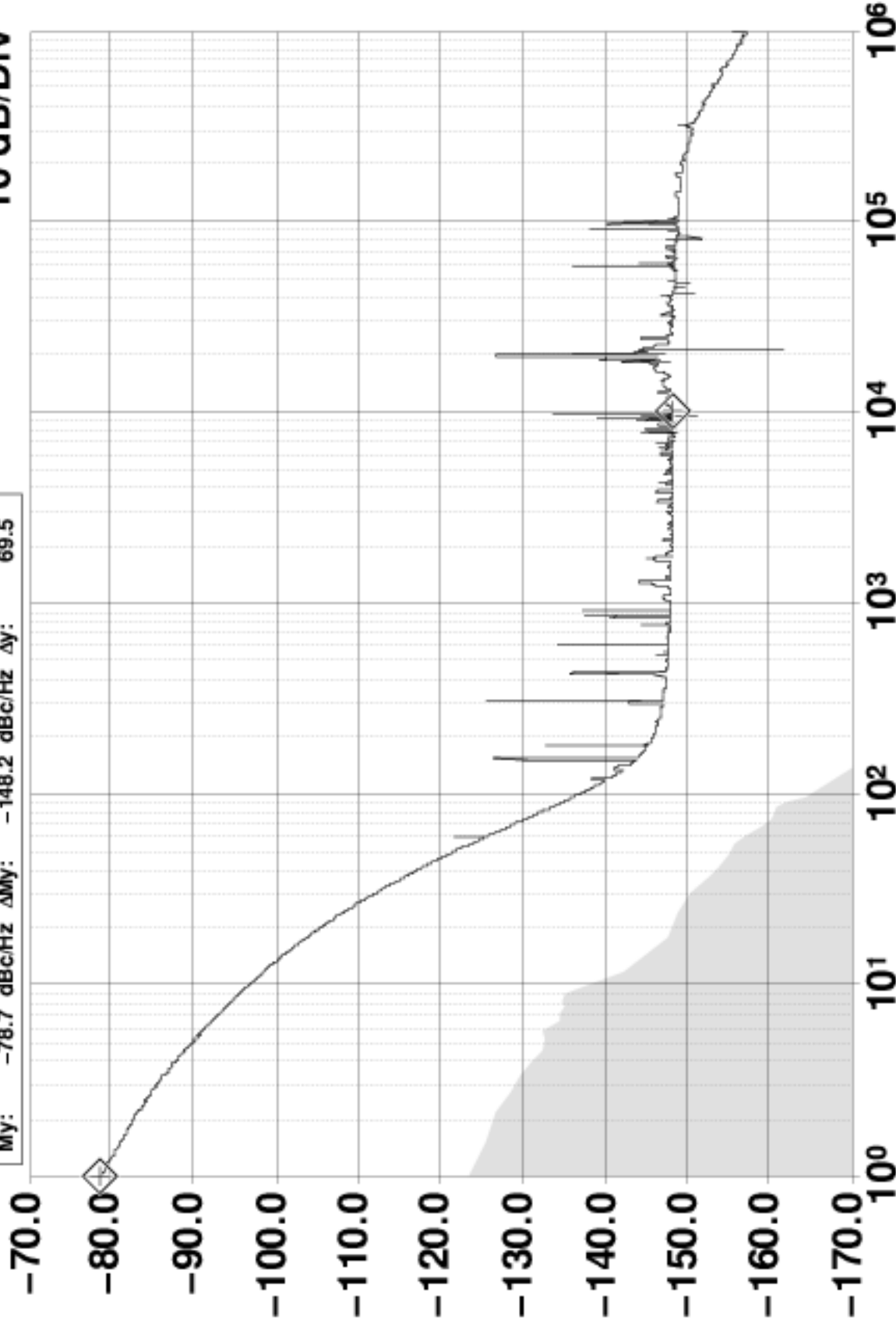
Sample Time (s)	Frequency (MHz)
1	10.0000000044591
10	10.00000000461419
100	10.000000004598744
1000	10.000000004601654

Reference Frequency: 5.0 MHz (auto)

# $\mathcal{L}(f)$ Phase Noise at 10.0 MHz (dBc/Hz)

Mx: 1.000977 Hz  $\Delta$ Mx: 10009.77 Hz  $\Delta$ x: -10008.8  
 My: -78.7 dBc/Hz  $\Delta$ My: -148.2 dBc/Hz  $\Delta$ y: 69.5

10 dB/Div



Offset Frequency (Hz)

Time Constant:  $\infty$

Input 10.0 MHz 7 dBm

Reference 5.0 MHz 14 dBm