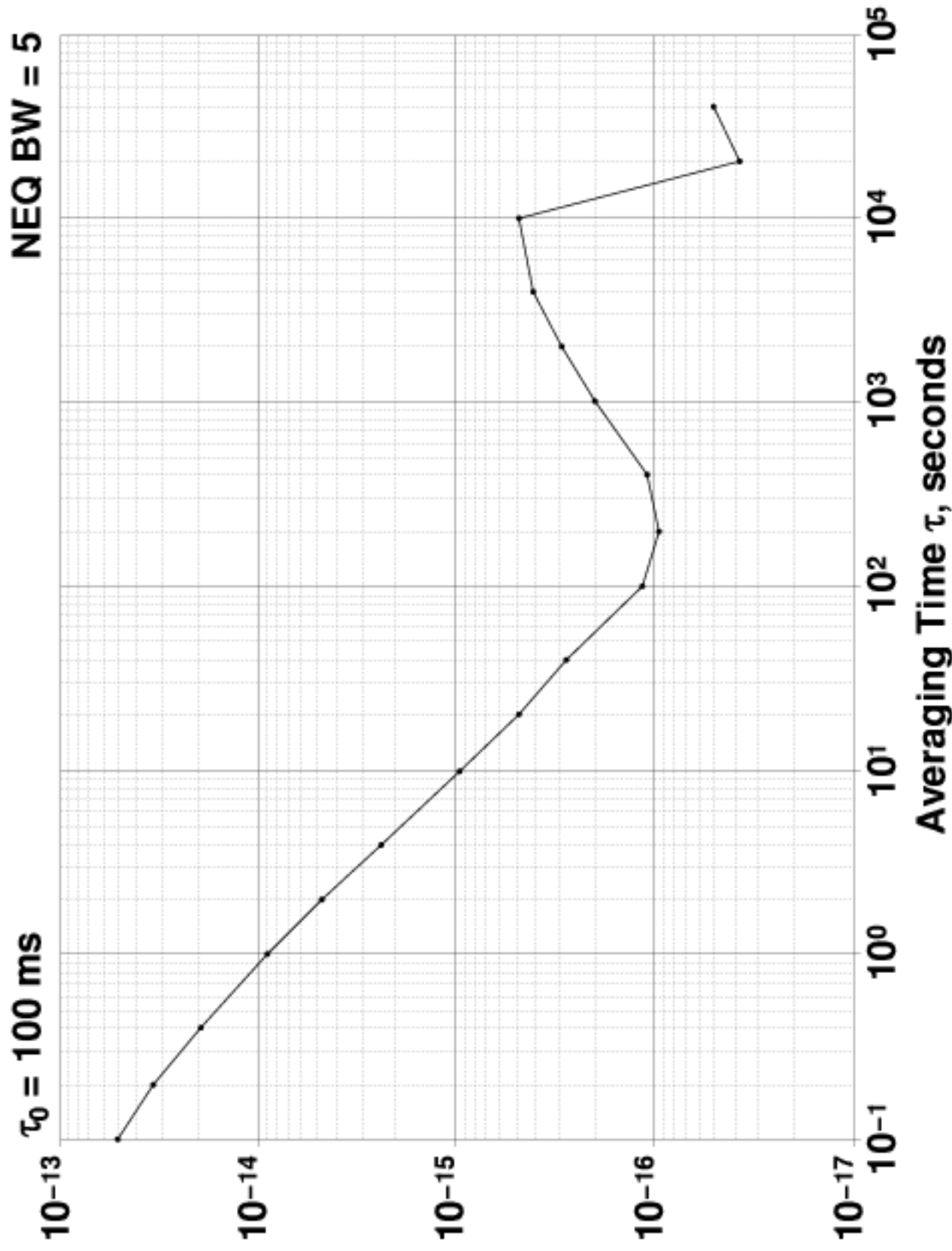


# Allan Deviation $\sigma_y(\tau)$



Input 5.0 MHz 11 dBm

# Allan Deviation $\sigma_y(\tau)$

| $\tau_0 = 100 \text{ ms}$ | Avg. Time (s) | Allan Deviation $\sigma_y(\tau)$ | NEQ BW = 5 |
|---------------------------|---------------|----------------------------------|------------|
|                           |               |                                  |            |
|                           | 0.1           | $5.094 \times 10^{-14}$          |            |
|                           | 0.2           | $3.3119 \times 10^{-14}$         |            |
|                           | 0.4           | $1.9243 \times 10^{-14}$         |            |
|                           | 1             | $8.792 \times 10^{-15}$          |            |
|                           | 2             | $4.680 \times 10^{-15}$          |            |
|                           | 4             | $2.348 \times 10^{-15}$          |            |
|                           | 10            | $9.66 \times 10^{-16}$           |            |
|                           | 20            | $4.86 \times 10^{-16}$           |            |
|                           | 40            | $2.77 \times 10^{-16}$           |            |
|                           | 100           | $1.166 \times 10^{-16}$          |            |
|                           | 200           | $9.51 \times 10^{-17}$           |            |
|                           | 400           | $1.11 \times 10^{-16}$           |            |
|                           | 1000          | $2.02 \times 10^{-16}$           |            |
|                           | 2000          | $2.96 \times 10^{-16}$           |            |
|                           | 4000          | $4.0 \times 10^{-16}$            |            |
|                           | 10000         | $4.8 \times 10^{-16}$            |            |
|                           | 20000         | $3.8 \times 10^{-17}$            |            |
|                           | 40000         | $5.0 \times 10^{-17}$            |            |

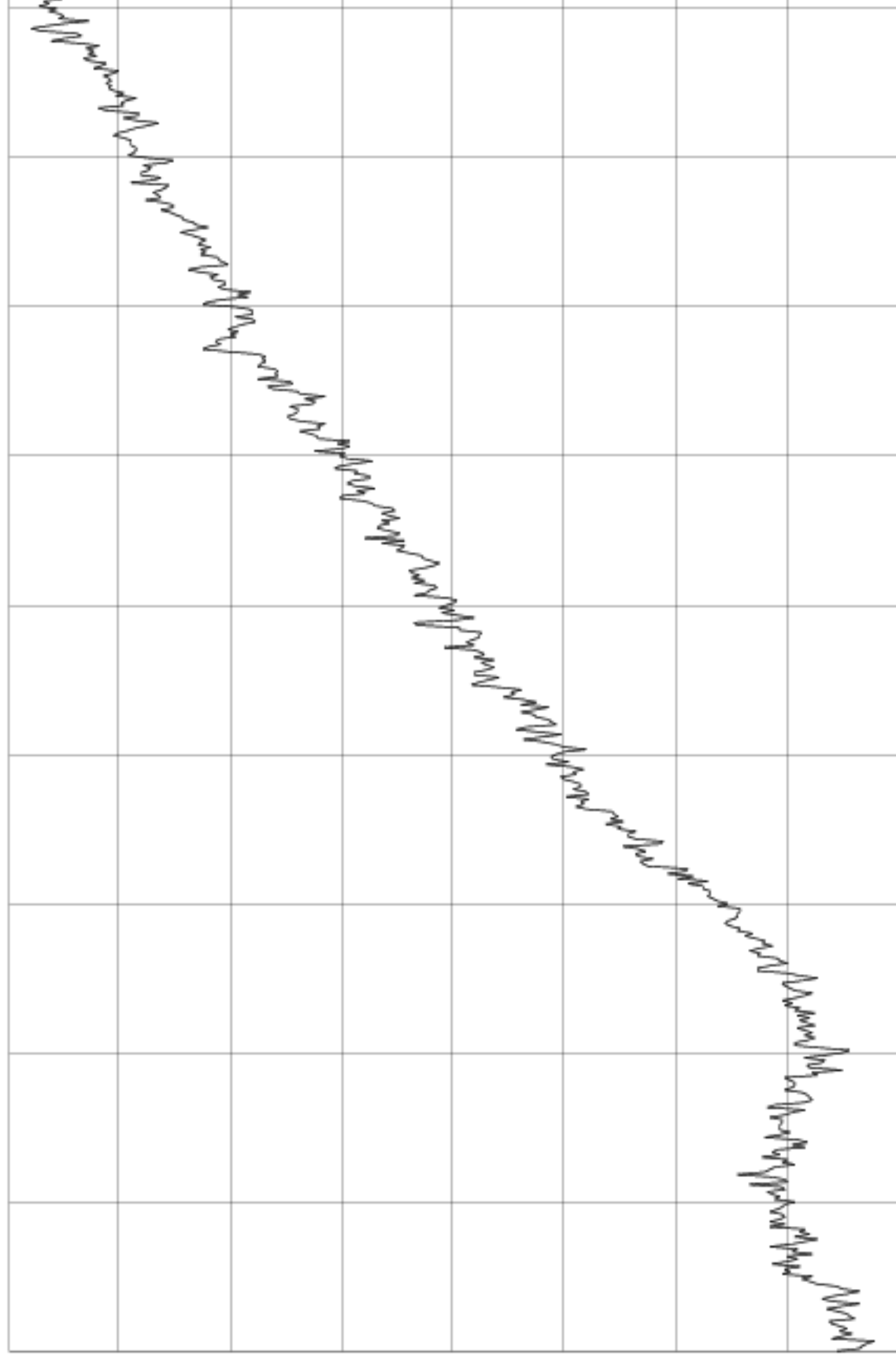
14/06/2007 22:35:51  
1d 0h

TSC 5120A

# Phase Difference

5.0x10<sup>-14</sup> s/div

Center: -2.1792x10<sup>-12</sup> s



60s/div

Input 5.0 MHz 11 dBm

Reference 5.0 MHz 11 dBm

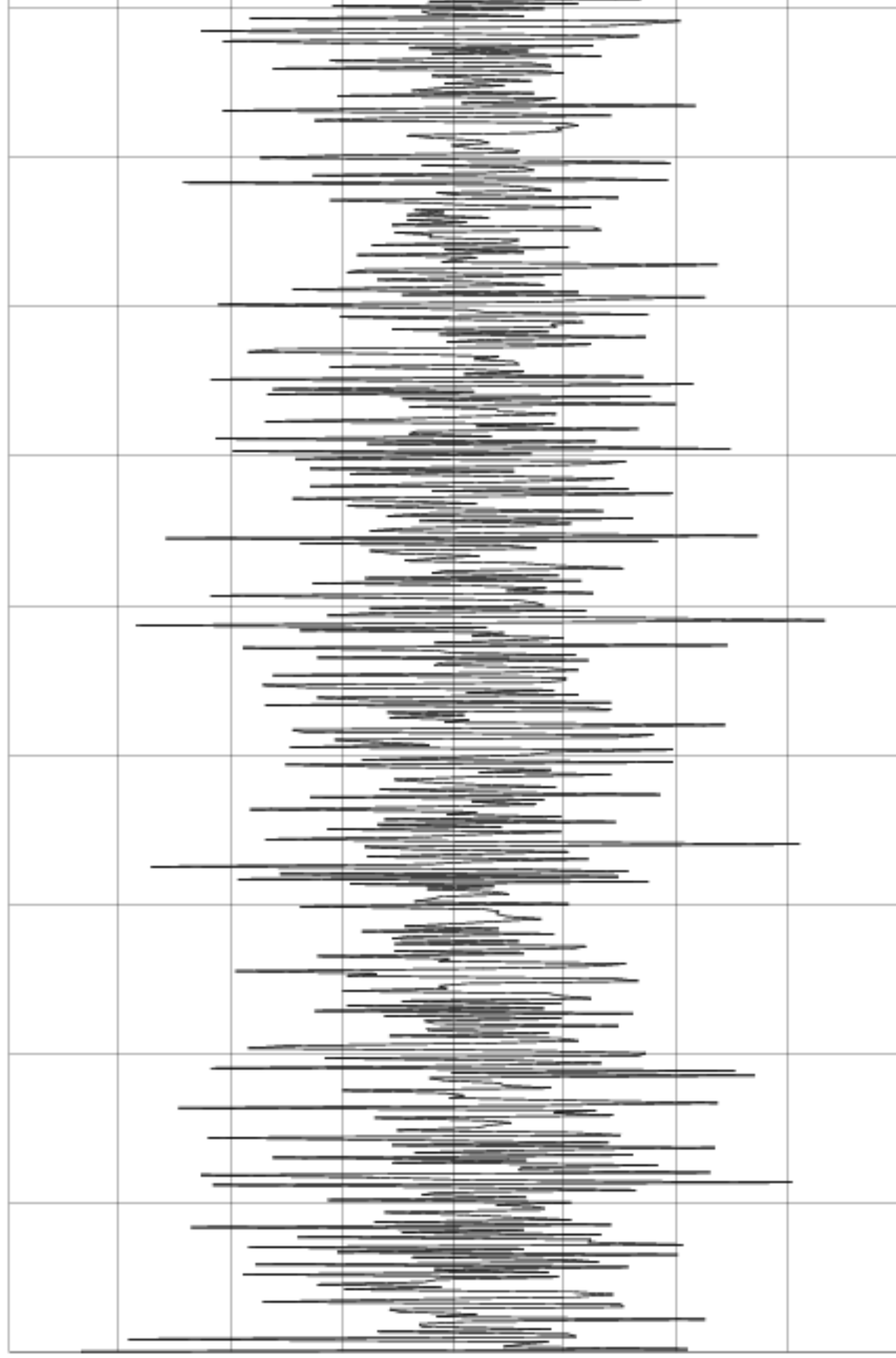
14/06/2007 22:35:51  
1d 0h

TSC 5120A

# Frequency Difference

$6.0 \times 10^{-15}$  /div

Center:  $1.770 \times 10^{-15}$



60s/div

Input 5.0 MHz 11 dBm

Reference 5.0 MHz 11 dBm

# Frequency Counter

| Sample Time (s) | Frequency (MHz)   |
|-----------------|-------------------|
| 1               | 5.00000000000000  |
| 10              | 5.00000000000000  |
| 100             | 4.999999999999996 |
| 1000            | 4.999999999999997 |

Reference Frequency: 5.0 MHz (auto)

# $\mathcal{L}(f)$ Phase Noise at 5.0 MHz (dBc/Hz)

Mx: 0.976562 Hz  $\Delta$ Mx: 99975.59 Hz  $\Delta$ x: -99974.6  
 My: -144.3 dBc/Hz  $\Delta$ My: -172.4 dBc/Hz  $\Delta$ y: 28.1

15 dB/Div

