

CCTF Working Group on TWSTFT
BIPM, October 5-6, 2000

Station Report
National Institute of Standards and Technology

No major changes have been made in the NIST two-way hardware, although a number of small improvements have been made over the last few years.

- The 70 MHz IF cables were replaced with low loss, temperature stable cables and the impedance matching was improved to reduce timing errors cause by reflected signals.
- The temperature stability in the two-way control room has been improved.
- The short-term stability of the reference clock, UTC(NIST), used for two-way has been improved with the use of an AOG and new distribution amplifiers.
- The data files are now posted to the FTP site within a few minutes of the end of the session.
- Will begin phasing in temperature control of the electronics in the hub in the next year.
- Will begin using two-way as our main link to TAI as soon as some reliability issues are resolved.
- Continue to carry out two-way exchanges with USNO, JPL and NRC once a week.
- Continue to carry out C-band two-way exchanges between Fort Collins and NML in Australia.

NIST - PTB

MJD'S 51514 - 51724

$\text{su}(\omega)x_Q$

10

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10

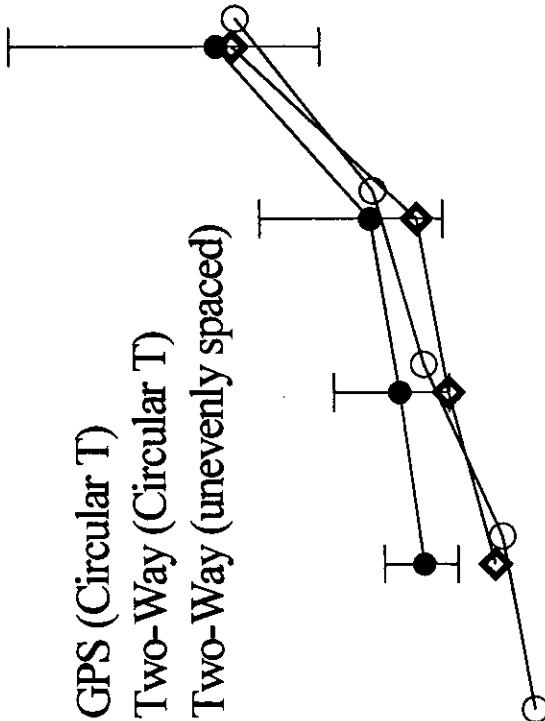
100

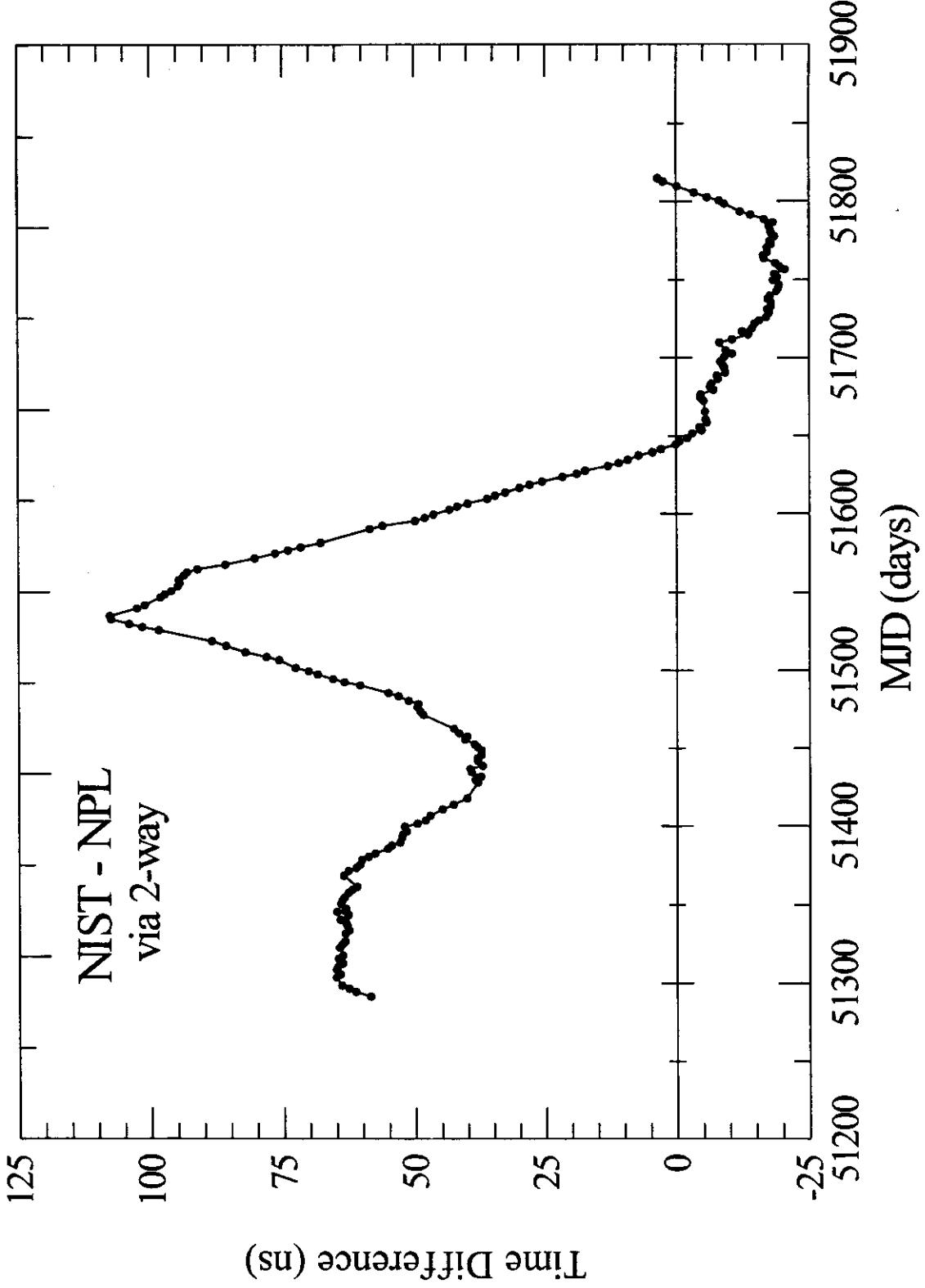
τ (days)

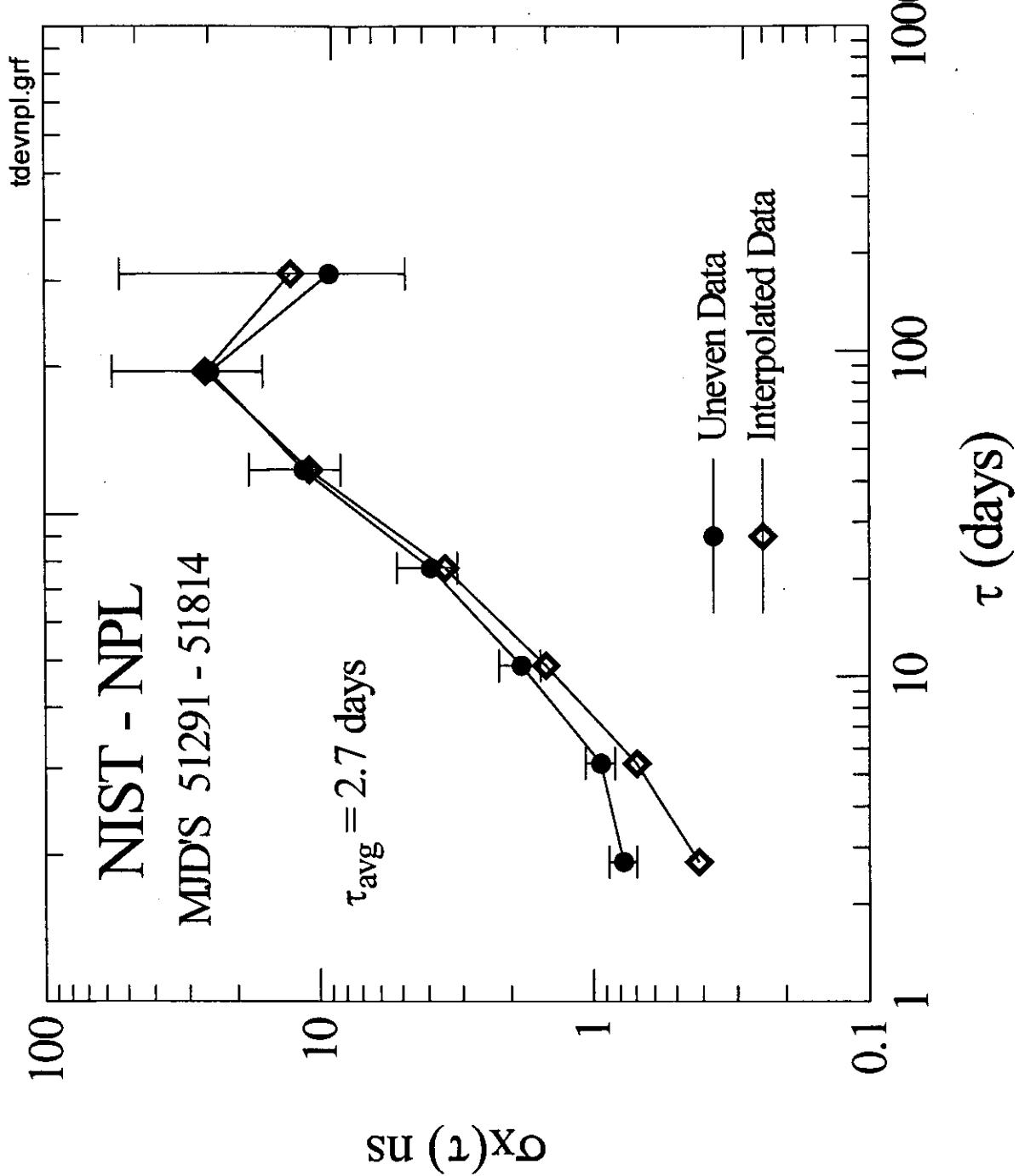
GPS (Circular T)

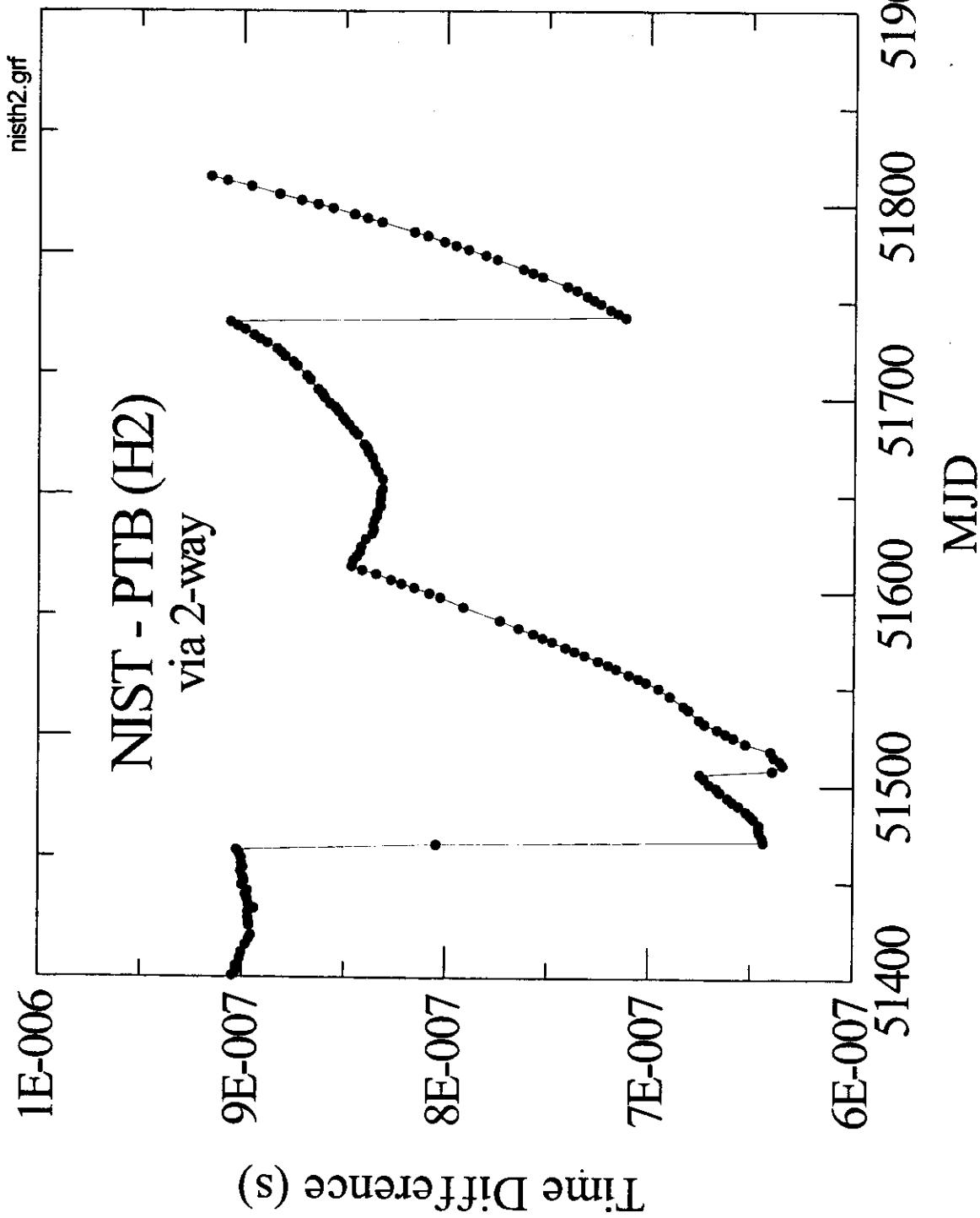
Two-Way (Circular T)

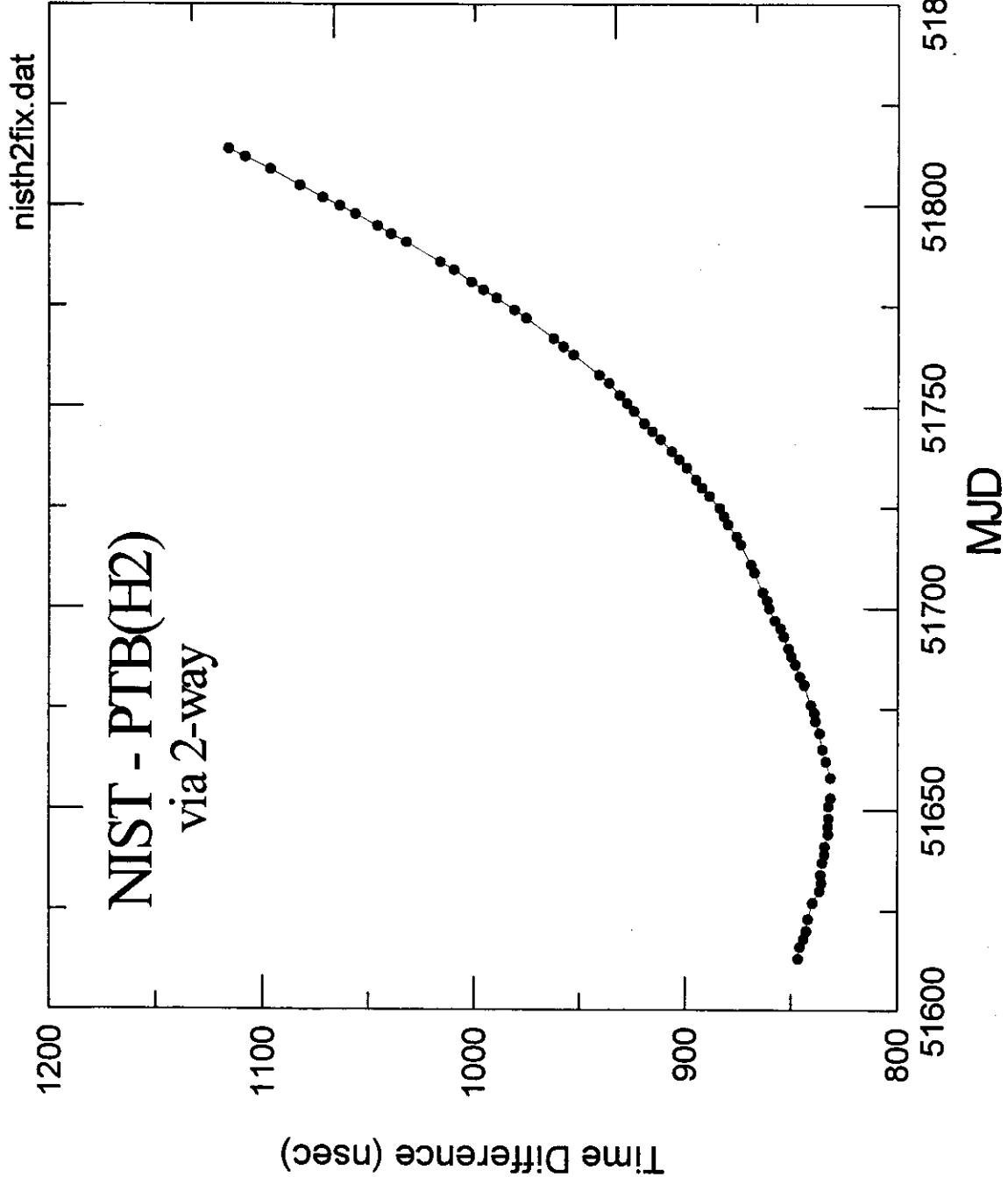
Two-Way (unevenly spaced)

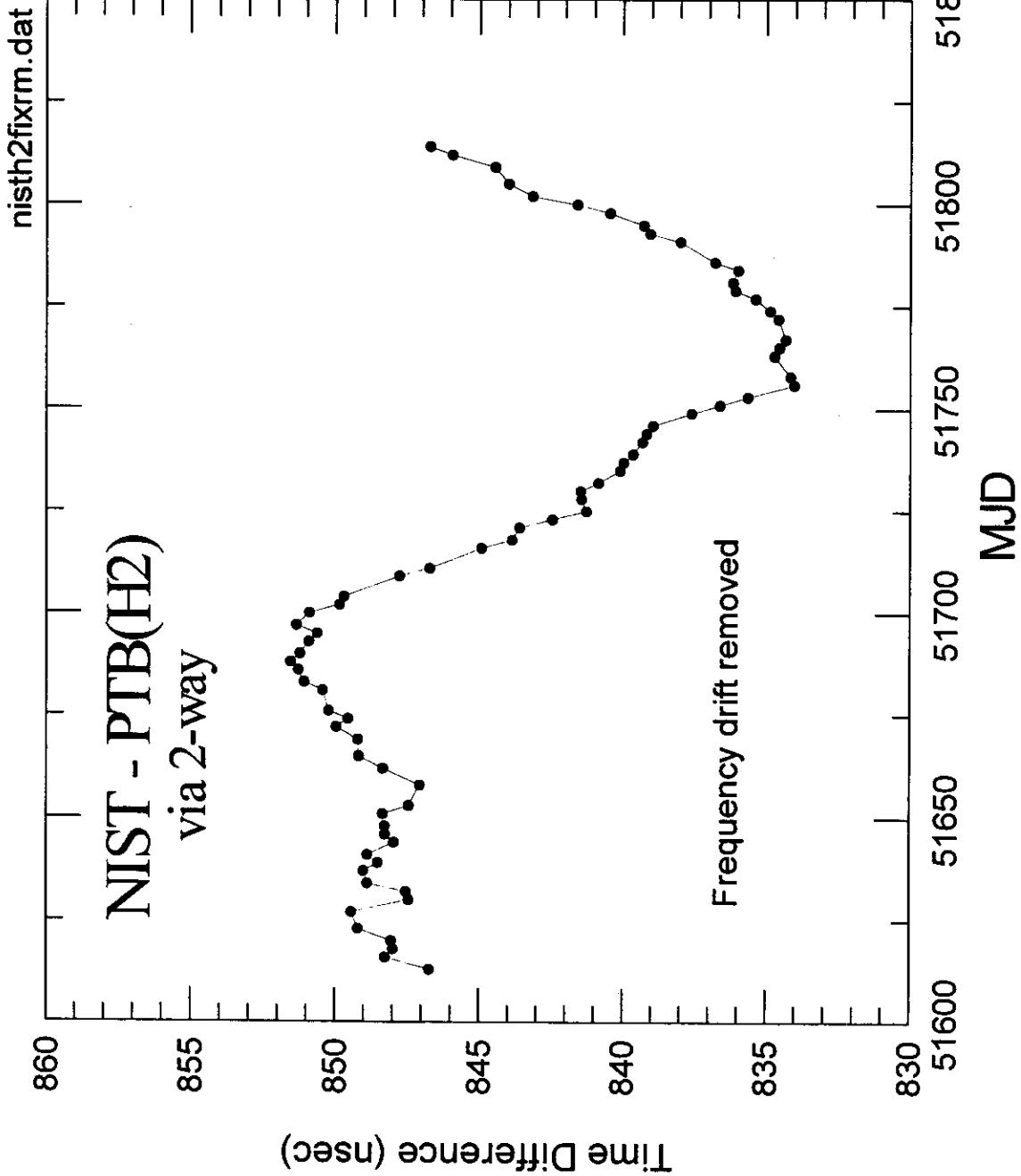


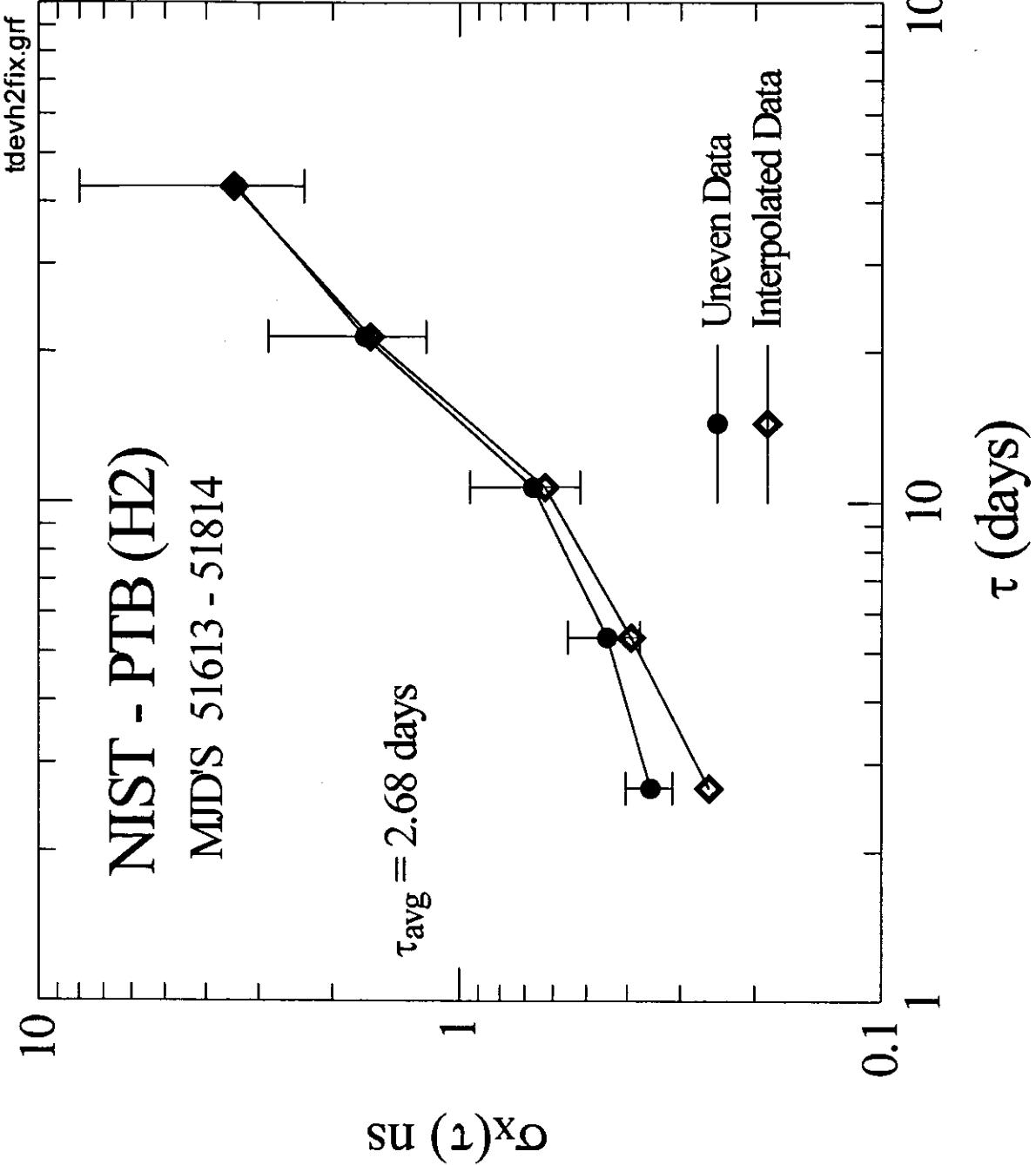












$NIST - PTB(HZ)$

TWSTT - Carrier Phase GPS

51579-51609

1.E-09

Time Deviation, $\sigma_x(t)$

1.E-10

1.E+04

1.E+05

1.E+06

Averaging Time, τ , s

◆ TWSTT-A ▲ TWSTT-B

