

All results using the "3.1" oscilloscope measurements+A1

XP: From external reference to 1PPS in

XO: From 1PPS in to internal reference (i.e. 20 MHz in inverted, delayed by 15.8 ns (Meas 3.1) or 20 MHz out advanced by 2.4 ns (Meas 3.2), first positive zero crossing)

XC, XD: Cables etc... from antenna to receiver (typically XC is long cable, XD is short cable(s) + splitter if needed)

XR: receiver internal delay; XS antenna delay

BIPC values (TM116: June 2002): XR1=281.1 ns; XR2=295.4 ns; XR1+XS1=305.6 ns; XR2+XS2=321.9 ns)

Set-up at LPTF March 2001

	ITRF 97						
	X	y	Z	Maser-1PPS	Meas 3.1 / ns	Meas 3.2 / ns	Ant. Cable / ns
BIPC	4202781.970	171364.125	4778658.526	56 XP = 56.0 ns	11.5 Int ref - 1PPSin (XO) = 27.6 ns +/- 0.x ns	30.4	XC = 200.6; XD = 5.1 (Short baseline: XC+XD = 200.6 ns Zero baseline: XC+XD = 205.7 ns)
LPTF	4202778.024	171367.605	4778660.511	54 +/- 0.3 XP = 54.0 ns	12.2 Int ref - 1PPSin (XO) = 28.7 ns +/- 0.x ns	31.8	151.0 +/- 0.3 (Short baseline: XC+XD = 151.0 ns Zero baseline: XC+XD = 205.5 ns (incl. 4.2 ns C1 cable and 0.7 ns splitter)

Observations

Short baseline: 51983-51989 (gap 51987) doy 74-80 (15-21 Mar. 2001)

Zero baseline: 51990-51998 doy 81-89 (22-30 Mar. 2001); only doy 86-88 completely usable

Measurement results

Preliminary: 21/03/2001 (Z. Jiang)

Short baseline: from Doy 76

Delta (-XP-XO+XR1+XC+XD+XS1) (LPTF - BIPC) = -43.8 ns

Delta (-XP-XO+XR2+XC+XD+XS2) (LPTF - BIPC) = -48.5 ns

Zero baseline: from Doy 86-88

Delta (-XP-XO+XR1+XC+XD) (NPLD - BIPC) = 0.2 ns

Delta (-XP-XO+XR2+XC+XD) (NPLD - BIPC) = -1.6 ns

Calibration results

Preliminary: 03/2003 (GP), corrected 16/06/2004 (GP)

Short baseline

BIPC: -XP-XO+XR1+XC+XD+XS1 = 422.6 ns

BIPC: -XP-XO+XR2+XC+XD+XS2 = 438.9 ns

LPTF: -XP-XO+XC+XD = 68.3 ns

Therefore

LPTF: XR1+XS1 = 310.5 ns

LPTF: XR2+XS2 = 322.1 ns

Zero baseline

BIPC: -XP-XO+XR1+XC+XD = 403.2 ns

BIPC: -XP-XO+XR2+XC+XD = 417.5 ns

LPTF: -XP-XO+XC+XD = 122.8 ns

Therefore

LPTF: XR1 = 280.6 ns

LPTF: XR2 = 293.1 ns

Therefore

LPTF: XS1 = 29.9 ns

LPTF: XS2 = 29.0 ns