

Definitions

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 3.3) 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 KRIS (August 2005)

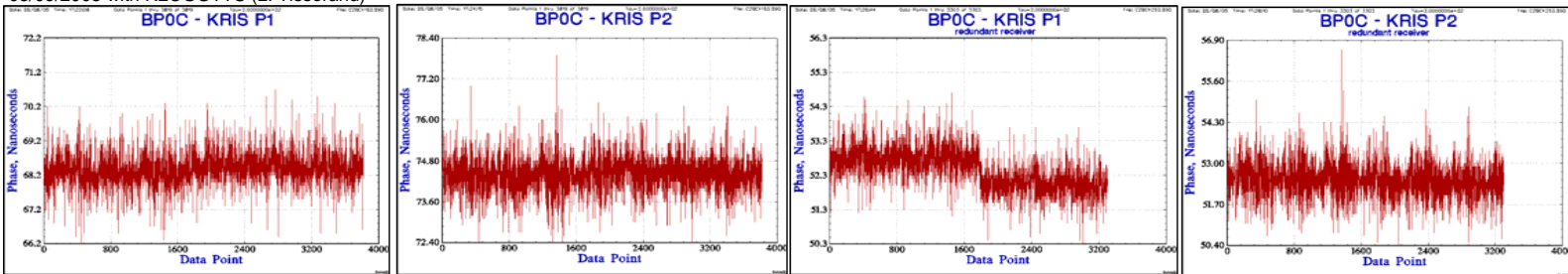
	ITRF			UTC(KRIS) to 1PPS in	Meas 3.3 / ns	Meas 3.2 / ns	Ant. Cable / ns
	X	Y	Z				
BIPC	-3120130.8	4085466.93	3763046.775	163.6 ns XP = 163.6 ns	17.2 ns Int ref - 1PPSin (XO) = 33.0 ns	35.3 ns	XC = 235.9 ns Short base: XC+XD = 235.9 ns
KRI1 (3103)	-3120128.66	4085468.56	3763046.781	160.6 ns XP = 160.6 ns	13.2 ns Int ref - 1PPSin (XO) = 29.0 ns	Not available	Short base: XC = 155.9 ns Short base: XC+XD = 155.9 ns
KRI2 (0201)	-3120127.71	4085467.3	3763048.88	162.9 ns XP = 162.9 ns	7.4 ns Int ref - 1PPSin (XO) = 23.2 ns	Not available	Short base: XC = 168.6 ns Short base: XC+XD = 168.6 ns

Observations

Short base: MJD 53588-53596 doy 218-226 (6-14 August 2005)

Measurement results

08/09/2005 with R2CGGTTs (L. Tisserand)



Delta (-XP-XO+XR1+XC+XD+XS1) (KRI1 - BIPC) = -68.3 ns

Delta (-XP-XO+XR2+XC+XD+XS2) (KRI1 - BIPC) = -74.4 ns

Delta (-XP-XO+XR1+XC+XD+XS1) (KRI2 - BIPC) = -52.5 ns

Delta (-XP-XO+XR2+XC+XD+XS2) (KRI2 - BIPC) = -52.5 ns

Calibration results

30/09/2005, revised 6/10/2005 (G. Petit)

Short base

BIPC: -XP-XO+XR1+XC+XD+XS1 = 344.9 ns

BIPC: -XP-XO+XR2+XC+XD+XS2 = 361.2 ns

KRI1: -XP-XO+XC+XD = -33.7 ns

Therefore

KRI1: XR1+XS1 = 310.3 ns

KRI1: XR2+XS2 = 320.5 ns

Short base

BIPC: -XP-XO+XR1+XC+XD+XS1 = 344.9 ns

BIPC: -XP-XO+XR2+XC+XD+XS2 = 361.2 ns

KRI2: -XP-XO+XC+XD = -16.5 ns

Therefore

KRI2: XR1+XS1 = 308.9 ns

KRI2: XR2+XS2 = 325.2 ns