

## Definitions

XP: From external reference to 1PPS in

Z12T: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)

PolaRx2 XO: From 1PPS in to internal reference (i.e. 1PPS out (Meas 3.4) delayed by 8.7 ns)

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

**Reference values for BP0U (provisional August 2010): XR1+XS1 = -7.6 ns XR2+XS2 = -2.7 ns**

## Set-up at TCC January 2011

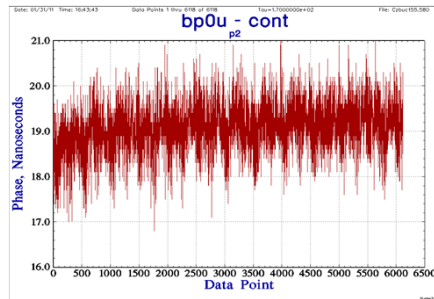
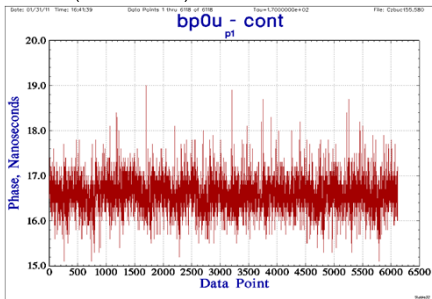
	X	y	Z	Ref - PPSin / ns	Meas 3.1 (3.3) / ns	Meas 3.2 / ns	Ant. Cable / ns
<b>BP0U (GTR50)</b>					N/A		XC = 182.0 ns
<b>INT_DLY0 = -99.07 ns</b>				XP = 30.9 ns	Int ref - 1PPSin (XO) = N/A ns		XC+XD = 182.0 ns
					<b>REF DLY = 30.8 ns</b>		<b>CAB DLY = 128.5 ns</b>
<b>CONT (PolaRx2 S/N)</b>				<b>31.9 ns</b>	233.2 / (before/after)		XC = 88.2 ns; XD = N/A
				XP = 31.9 ns	Int ref - 1PPSin (XO) = 241.9 ns		Short baseline: XC+XD = 88.2 ns

## Observations

Short baseline: 55579-55591, doy 18-30 (18-30 January 2011).

## Measurement results

31/01/2011 (L. Tisserand)



CONT Short baseline:

Delta (-XP-XO+XR1+XC+XD+XS1) (CONT - BP0U) = -16.6 ns

Delta (-XP-XO+XR2+XC+XD+XS2) (CONT - BP0U) = -19.1 ns

## Calibration results

31/01/2011 (G. Petit)

BP0U: -XP-XO+XR1+XC+XD+XS1 = 45.8 ns

BP0U: -XP-XO+XR2+XC+XD+XS2 = 50.7 ns

CONT: -XP-XO+XC+XD = -185.6 ns

**Therefore**

**CONT: XR1+XS1 = 214.8 ns**

**CONT: XR2+XS2 = 217.2 ns**

**For BP0U, XC+XD-XP-XO is the difference between the actual value (182.0-30.9 = 151.1 ns) and the value entered in the receiver (128.5-30.8 = 97.7 ns)**