

## 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 3.1) 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 SP January-February 2009

ITRF 2005 (epoch 2008.67)

	X	Y	Z	UTC(SP) to 1PPS in	Meas 3.1 (3.3) / ns	Meas 3.2 / ns	Ant. Cable / ns
BP0C				193.3 ns XP = 193.3 ns	2.4 (2.8) Int ref - 1PPSin (XO) = 18.6 ns (using 3.3)	23.2	XC = 235.9 ns; XD = 0 Short base: XC+XD = 235.9 ns
SP01 (Javad)				XP = 0.0 ns	137.6 Int ref - 1PPSin (XO) = 137.6 ns	1PPSin to out = -12.2 ns	Short base: XC+XD = 0.0 ns <b>Antenna cable included in the results</b>

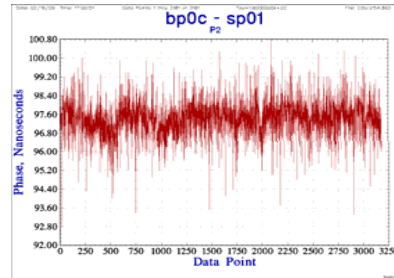
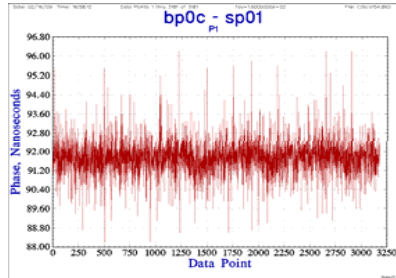
## Observations

Short baseline: doy 30-35 (30 January-4 February 2009, MJD 54861.6-54866)

**Earlier measurements not considered due to insufficient 1PPS-in amplitude**

## Measurement results

16/02/2009 (L. Tisserand) via R2CGTTS



Short baseline: MJD 54861.6-54866

Delta (-XP-XO+XR1+XC+XD+XS1) (SP01 - BP0C) = -91.8 ns

Delta (-XP-XO+XR2+XC+XD+XS2) (SP01 - BP0C) = -97.4 ns

## Calibration results

05/03/2009 (G. Petit) (Provisional)

Short baseline

BP0C: -XP-XO+XR1+XC+XD+XS1 = 329.6 ns

**assuming measurement 3.3**

BP0C: -XP-XO+XR2+XC+XD+XS2 = 345.9 ns

SP01: -XP-XO+XC+XD = -137.6 ns

**Therefore**

**SP01: XR1+XS1 = 375.4 ns**

**SP01: XR2+XS2 = 386.1 ns**

**Antenna cable included in the results**