

## 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 ROA August 2006

### ITRF 2000 (estimated with PPP)

	X	Y	Z	UTC(ROA) to 1PPS in	Meas 3.1 (3.3) / ns	Meas 3.2 / ns	Ant. Cable / ns
BIPC	5105510.590	-555191.010	3769794.25	81.8 ns XP = 81.8 ns	18.5 +/- 0.2 (18.0 +/- 0.2) Int ref - 1PPSin (XO) = 34.3 ns	41.2 +/- 0.6	XC = 235.9 ns; XD = 0 Short base: XC+XD = 235.9 ns
ROAH (Sep)	5105510.810	-555191.510	3769793.79	-24.5 ns (ave of 2 meas) XP = -24.5 ns	219.6 +/- 2 Int ref - 1PPSin (XO) = 228.3 ns		XC = 0 ns; XD = 0 Short base: XC+XD = 0.0 ns Values included in receiver calibration
ROAG (GTF)	5105510.610	-555191.120	3769790.87	REF DLY = 106.4 ns	Int ref - 1PPSin (XO) = ns		CAB DLY = 127.5 ns; XD = 0 Short base: XC+XD = 127.5 ns

## Observations

Short baseline: doy 214-227 (2-15 August 2006)

## Measurement results

17/08/2006 (L. Tisserand) via R2CGGTTS

Short baseline: Doy 214-227

Delta (-XP-XO+XR1+XC+XD+XS1) (ROAH - BIPC) = -305.4 ns

Delta (-XP-XO+XR2+XC+XD+XS2) (ROAH - BIPC) = -331.7 ns

## Calibration results

04/09/2006 (G. Petit) (Provisional)

Short baseline

BIPC: -XP-XO+XR1+XC+XD+XS1 = 425.4 ns

BIPC: -XP-XO+XR2+XC+XD+XS2 = 441.7 ns

ROAH: -XP-XO+XC+XD = -203.7 ns

Therefore (results include antenna cable delay)

ROAH: XR1+XS1 = 323.7 ns

ROAH: XR2+XS2 = 313.7 ns

