

XP: From external reference to 1PPS in

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

Javad Euro GGD: XO From 1PPS-in to 1PPS-out (taken as "internal reference")

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 NMIA October 2010

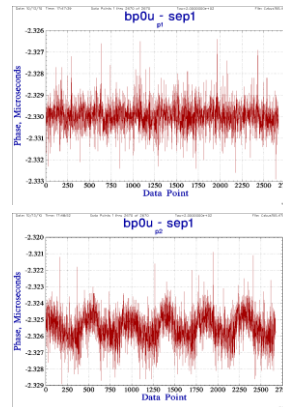
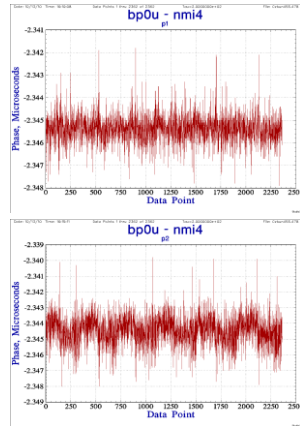
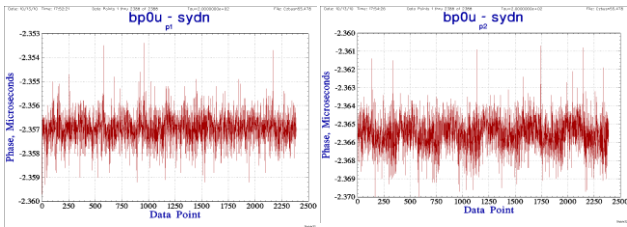
	x	y	z	Ref - PPSin / ns	Meas 3.1 (3.3) / ns	Meas 3.2 / ns	Ant. Cable / ns
BP0U (GTR50)				95.7	N/A		XC = 182.0 ns XC+XD = 182.0 ns CAB DLY = 128.5 ns
INT_DLY0 = -99.07 ns				XP = 95.7 ns	Int ref - 1PPSIn (XO) = N/A ns REF DLY = 95.7 ns		
SYDN (Euro GGD S/N AGE3M)				90.1	-7.4 / -7.3 (before/after)		XC = 2474.9 ns; XD = 15.1 ns Short baseline: XC+XD = 2490.0 ns
				XP = 90.1 ns	Int ref - 1PPSIn (XO) = -7.3 ns		
NMI4 (EURO GGD S/N AGGT)				99.1	-2.1 / -2.3 (before/after)		XC = 2474.9 ns; XD = 15.5 ns Short baseline: XC+XD = 2490.4 ns
				XP = 99.1 ns	Int ref - 1PPSIn (XO) = -2.2 ns		
SEP1 (PolaRx2 S/N 3252)				80.0	237.5 / 236.8 (before/after)		XC = 2474.9 ns; XD = 5.7 ns Short baseline: XC+XD = 2480.6 ns
				XP = 80.0 ns	Int ref - 1PPSIn (XO) = 245.8 ns		

Observations

Short baseline: 55476-55482, doy 280-286 (7-13 October 2010).

Measurement results

13/10/2010 (L. Tisserand)



SYDN Short baseline:

Delta (-XP-XO+XR1+XC+XD+XS1) (SYDN - BP0U) = 2357.3 ns (NMI4-BP0U) = 2345.2 ns
Delta (-XP-XO+XR2+XC+XD+XS2) (SYDN - BP0U) = 2366.1 ns (NMI4-BP0U) = 2344.4 ns

NMI4 Short baseline:

SEP1 Short baseline:

(SEP1-BP0U) = 2329.8 ns
(SEP1-BP0U) = 2326.0 ns

Calibration results

03/03/2011 (G. Petit)

BP0U: -XP-XO+XR1+XC+XD+XS1 = 45.9 ns
BP0U: -XP-XO+XR2+XC+XD+XS2 = 50.8 ns
SYDN: -XP-XO+XC+XD = 2407.2 ns

For BP0U, XC+XD-XP-XO is the difference between the actual value (86.3 ns) and the value entered in the receiver (128.5-95.7 = 32.8 ns)

NMI4: -XP-XO+XC+XD = 2393.5 ns

SEP1: -XP-XO+XC+XD = 2154.8 ns

Therefore

SYDN: XR1+XS1 = -4.0 ns
SYDN: XR2+XS2 = 9.7 ns

NMI4: XR1+XS1 = -2.4 ns
NMI4: XR2+XS2 = 1.7 ns

SEP1: XR1+XS1 = 220.9 ns
SEP1: XR2+XS2 = 222.0 ns