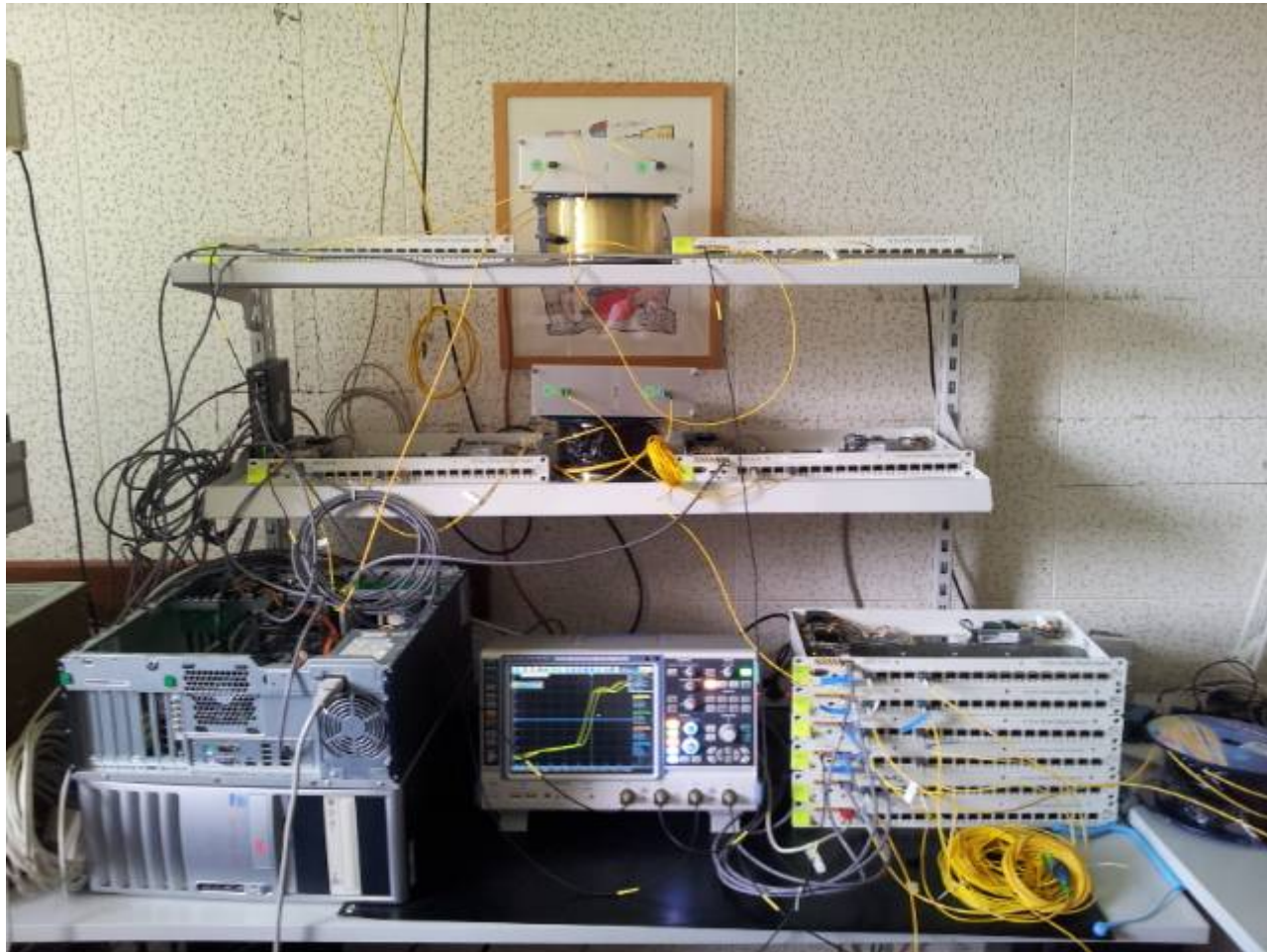
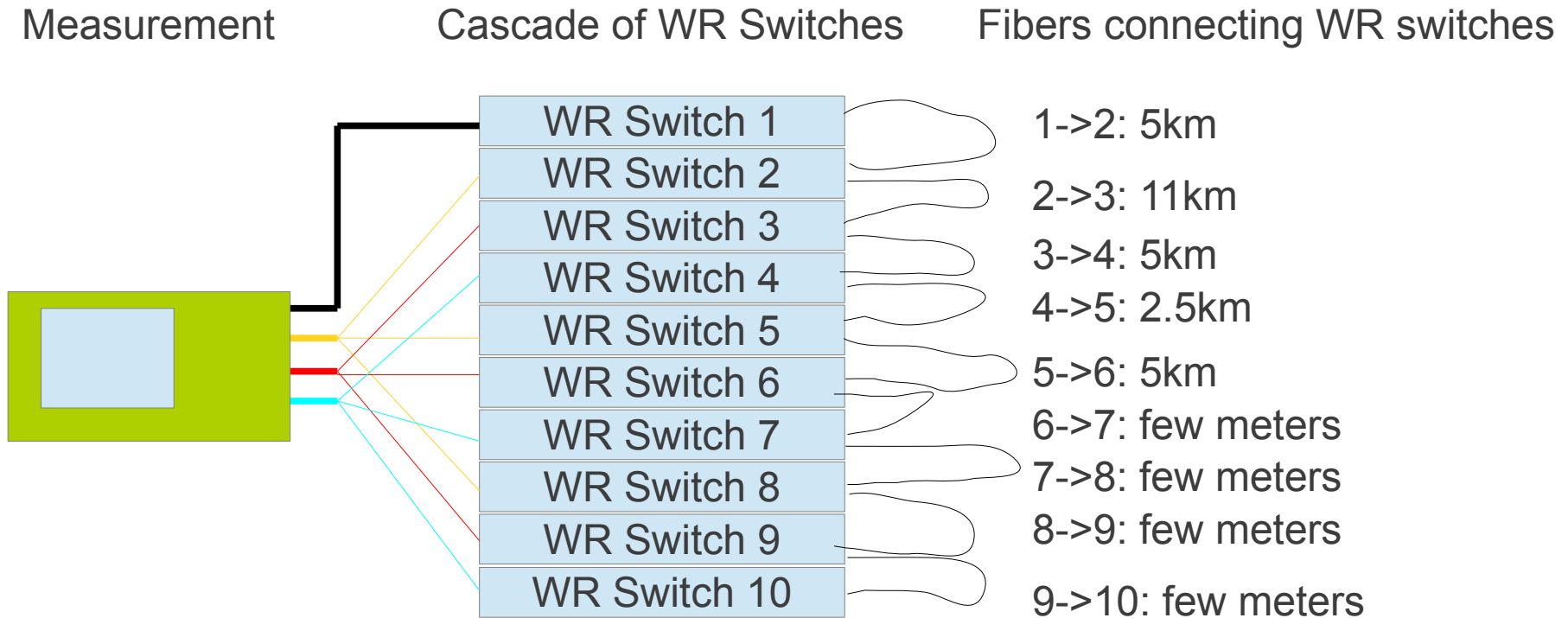


Measurement of synchronization performance in a long cascade of WR switches



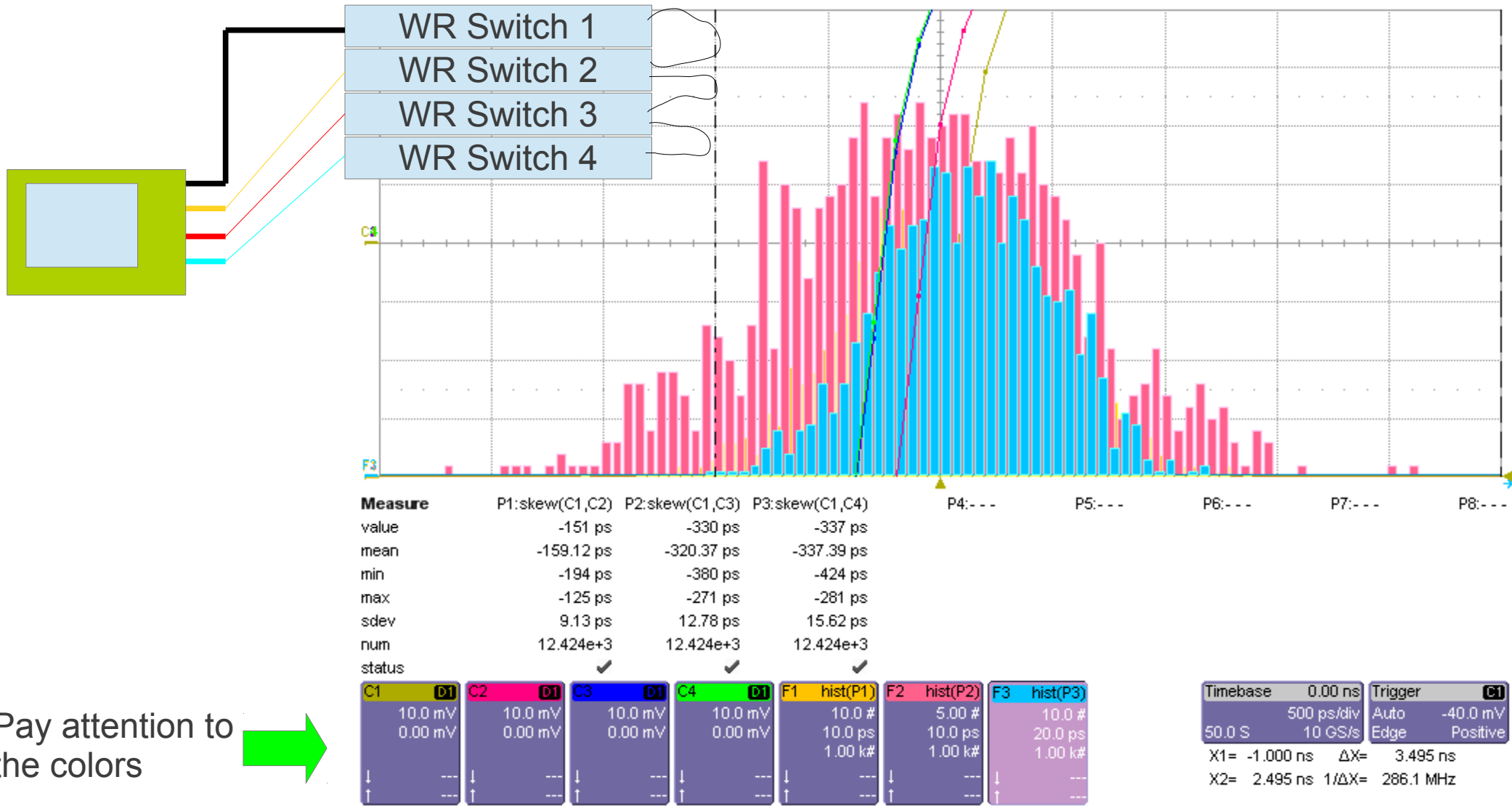
CERN, 18 September 2013

Test setup

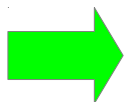


Measurement Results

Switches: 2,3,4 (short run: few minutes)

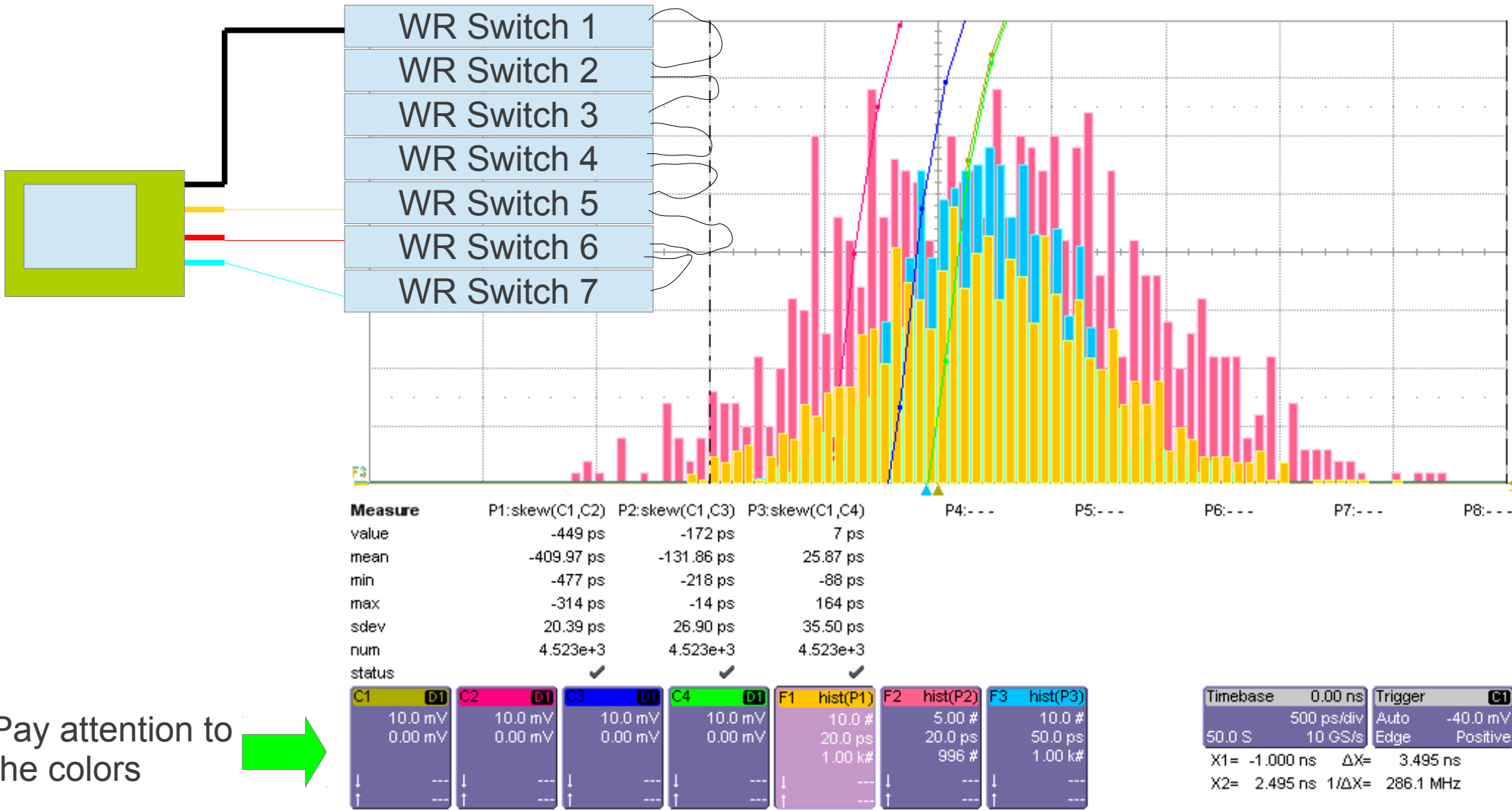


Pay attention to the colors

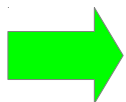


Measurement Results

Switches: 5,6,7 (short run: few minutes)

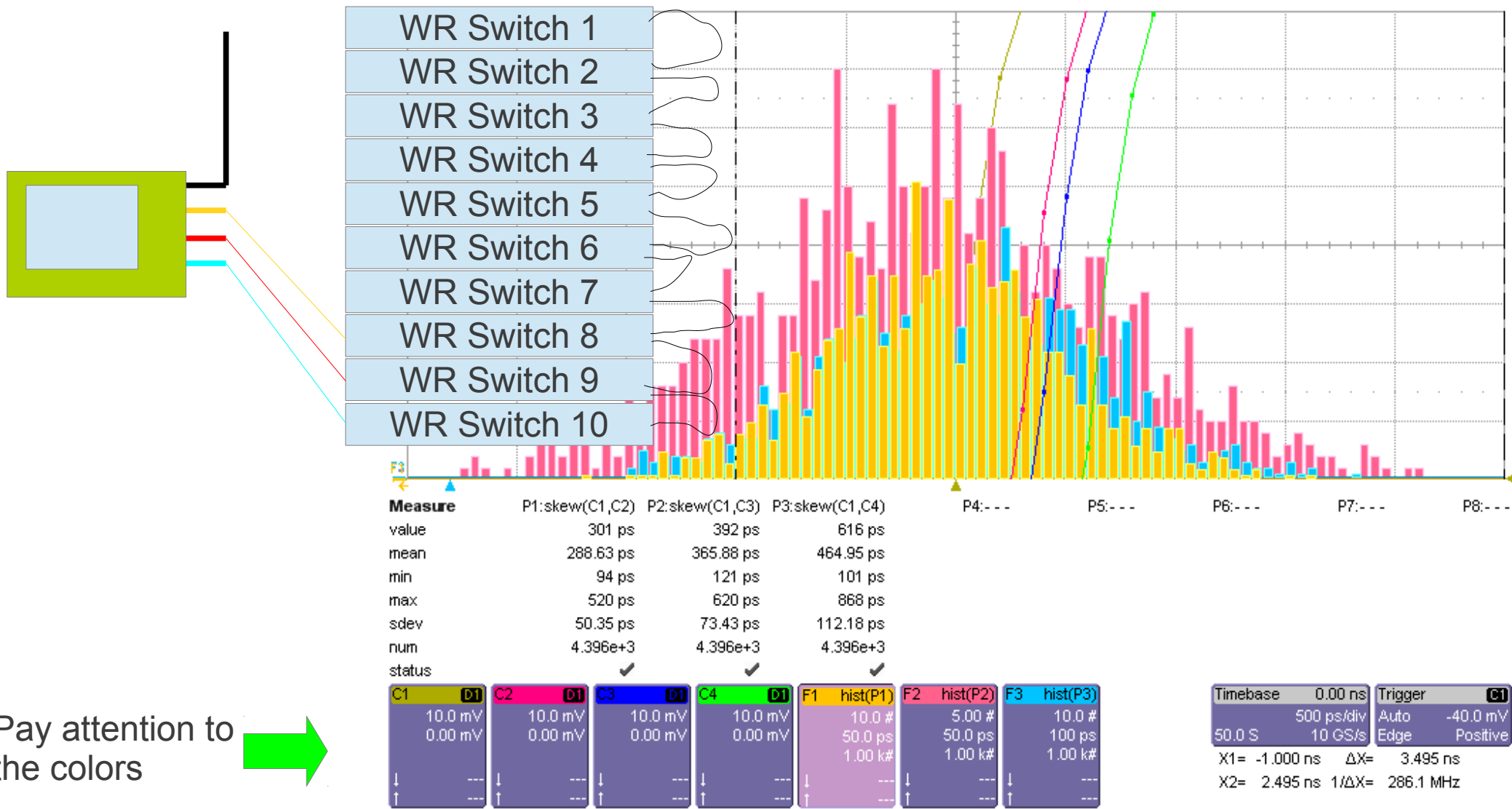


Pay attention to the colors



Measurement Results

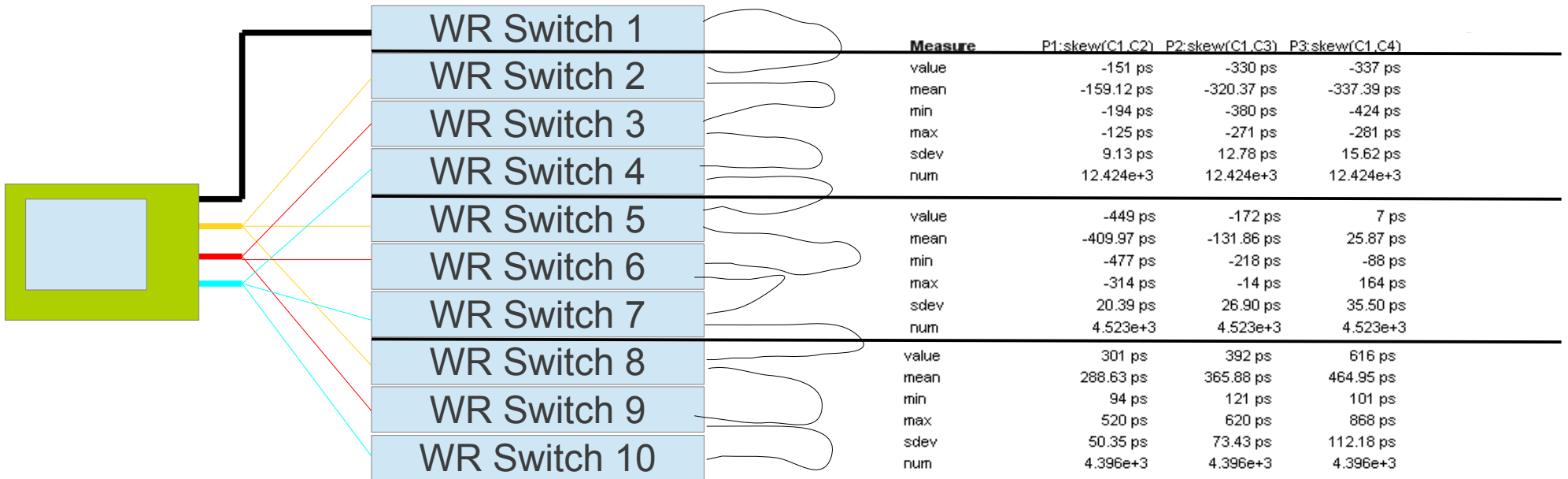
Switches: 8,9,10 (short run: few minutes)



Pay attention to the colors →

Measurement Results

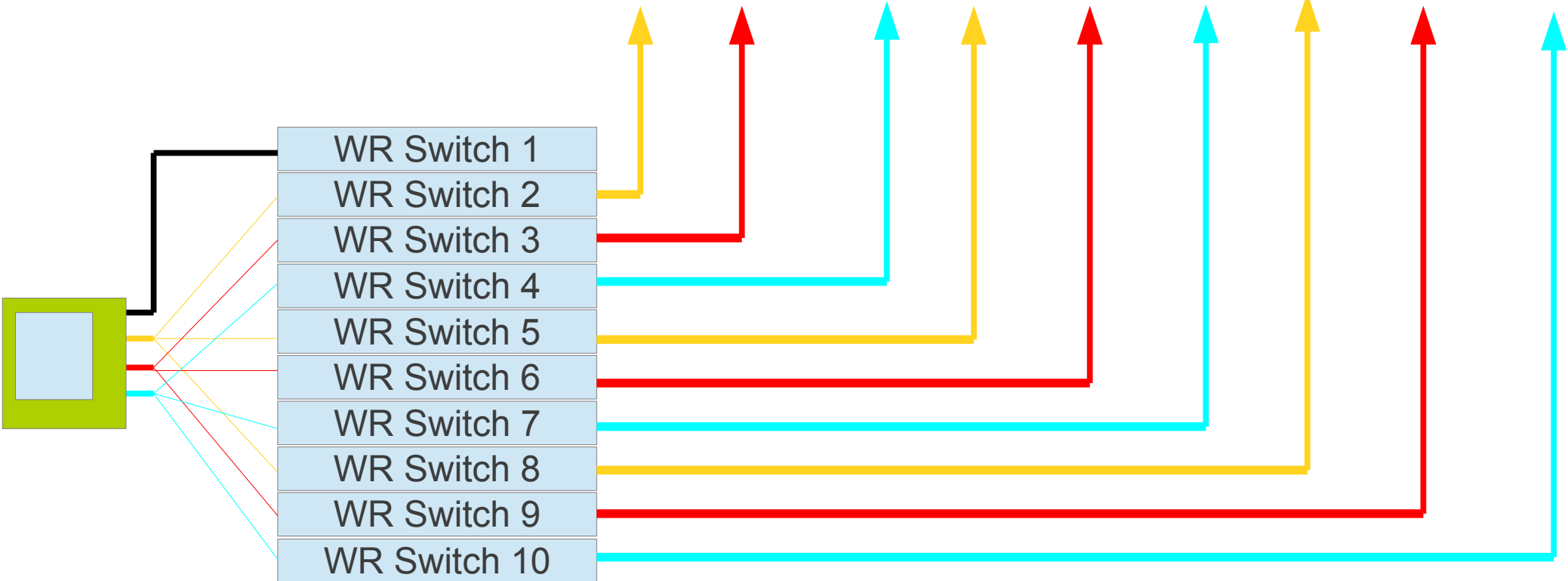
Summary (short run: few minutes)



Measurement Results

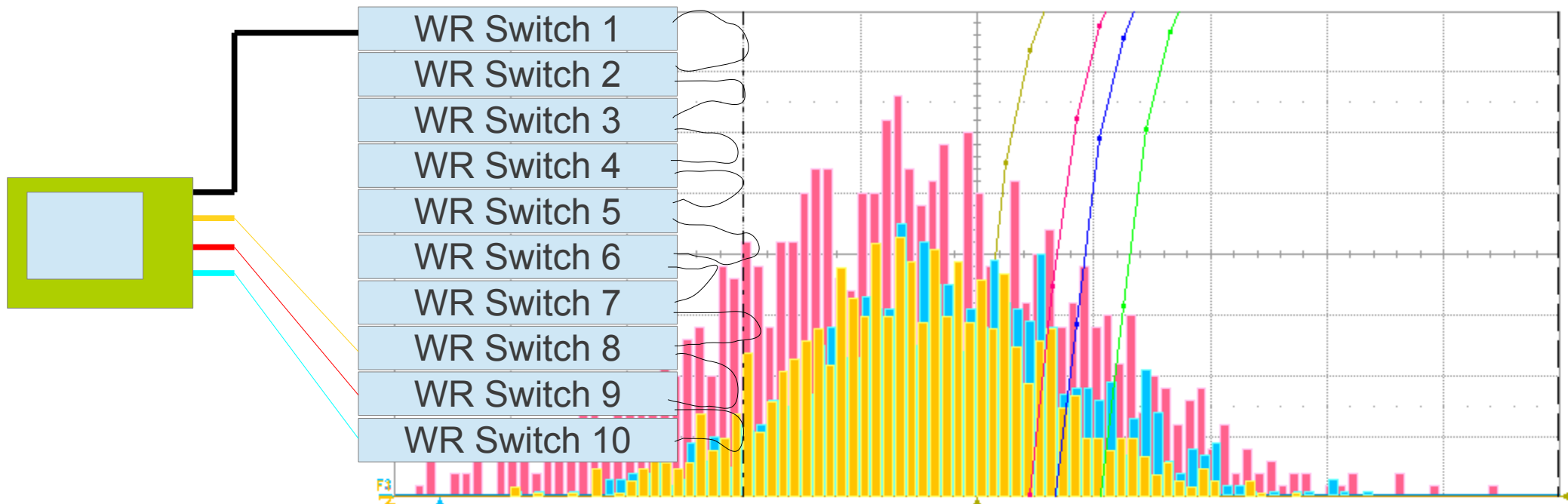
Summary (short run: few minutes)

Measure									
value	-151 ps	-330 ps	-337 ps	-449 ps	-172 ps	7 ps	301 ps	392 ps	616 ps
mean	-159.12 ps	-320.37 ps	-337.39 ps	-409.97 ps	-131.86 ps	25.87 ps	288.63 ps	365.88 ps	464.95 ps
min	-194 ps	-380 ps	-424 ps	-477 ps	-218 ps	-88 ps	94 ps	121 ps	101 ps
max	-125 ps	-271 ps	-281 ps	-314 ps	-14 ps	164 ps	520 ps	620 ps	868 ps
sdev	9.13 ps	12.78 ps	15.62 ps	20.39 ps	26.90 ps	35.50 ps	50.35 ps	73.43 ps	112.18 ps
num	12.424e+3	12.424e+3	12.424e+3	4.523e+3	4.523e+3	4.523e+3	4.396e+3	4.396e+3	4.396e+3



Measurement Results

Switches: 8,9,10 (long run, 6h)



Measure	P1:skew(C1,C2)	P2:skew(C1,C3)	P3:skew(C1,C4)	P4:---	P5:---	P6:---	P7:---	P8:---
value	264 ps	382 ps	573 ps					
mean	273.16 ps	351.32 ps	445.03 ps					
min	-41 ps	-78 ps	-106 ps					
max	528 ps	716 ps	1.085 ns					
sdev	54.26 ps	78.89 ps	119.85 ps					
num	529.406e+3	529.406e+3	529.406e+3					
status		✓	✓					

C1	C2	C3	C4	F1	F2	F3
10.0 mV	10.0 mV	10.0 mV	10.0 mV	10.0 #	5.00 #	10.0 #
0.00 mV	0.00 mV	0.00 mV	0.00 mV	50.0 ps	50.0 ps	100 ps
				1.00 k#	997 #	1.00 k#

Timebase	0.00 ns	Trigger	C1
	500 ps/div	Auto	-40.0 mV
50.0 S	10 GS/s	Edge	Positive
X1=	-1.000 ns	ΔX=	3.490 ns
X2=	2.490 ns	1/ΔX=	286.5 MHz

Pay attention to the colors →