

PORTABLE PICO EVENT TIMER 2k

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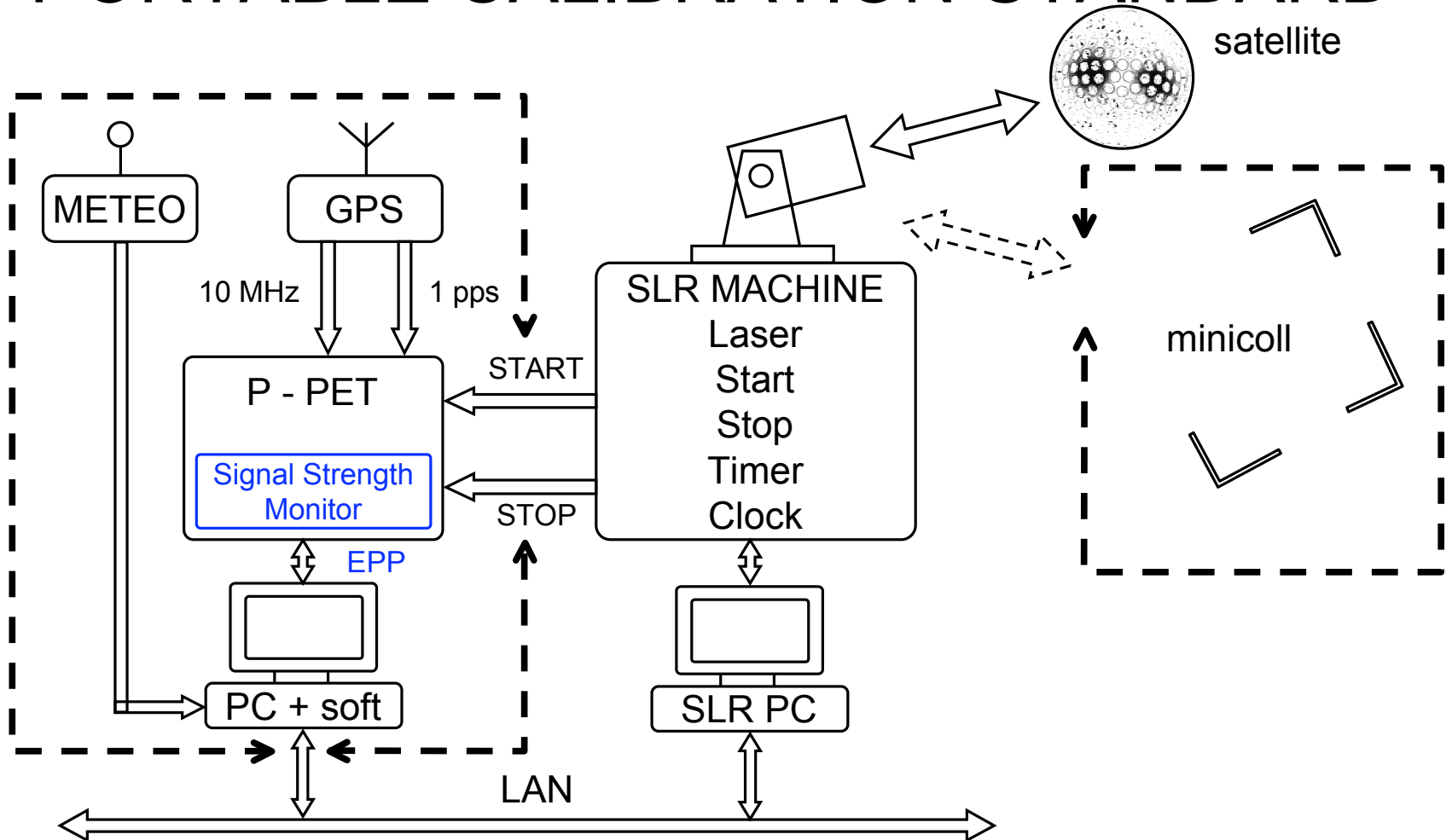
PORTABLE PICO EVENT TIMER 2k

GOALS

- Portable Pico Event Timer 2kHz
- Signal Strength Monitor Built in
- Dedicated for Portable Calibration Standard 2k

PORTABLE PICO EVENT TIMER 2k

PORTABLE CALIBRATION STANDARD



K. Hamal et al, EGS-AGU-EUG Joint Assembly, Nice, April 2003

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PRAGUE INDOOR TESTS, JUNE 2004



PPET2k

notebook

Hamamatsu
diode laser
32 ps@778nm

C-SPAD

P-PET PARAMETERS

Upgrade Summary

London '97 => Wash 2002 => **San Fernando**

- timing resolution 1.2 ps
- timing jitter / channel 5 ps 2.5 ps
- non-linearity / channel < 5 ps (spec) < 2.5 ps (meas)
- temperature drift < 0.7 ps/K < 0.53 ps/K
- adjustment NO
- temporal stability ± 1.0 ps/hr ± 0.45 ps/hr
- max. repetition rate 30 Hz 100 Hz **2 kHz**
- no. of channels 2(4)
- interface RS232 **EPP**
- mass transport 32 kg
- **Signal Strength Monitor** **built-in**

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ILRS NETWORK TIME OF FLIGHT DEVICES

Van Husson, Loyal Stuart, 13th WLR, Washington, Nov. 2002

Manufacturer	Curent Model	Year	Approach	Resolution (ps)	Jitter (ps)	Linearity (ps)	Stability [ps/K]	Stability [ps/hour]	Max. repetition rate	Max. TOF (Secs)
SR	620	1988	Interval	4	22	50	5		100	1000
HP	5370B	1982	Interval	20	35	20			10	10
Latvian Univ.	A013a	2002	Interval	10	20	2		2	80	0.209
Ortec	TD811	<1980	Event	100			40			N.A.
PESO Cons.	PET4/TIGO	1999	Event	1.2	3.5	3	<0.3	<0.5	>100	N.A.
EOS	MRC5 V.4	1998	Event	2	10	1		1	1000	N.A.
HTSI	MLRO	1998	Event	0.5	<2			0.5	2000	N.A.
PESO Cons.	P-PET 2k	2004	Event	1.2	2.5	3	<0.3	<0.5	2000	N.A.

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CONCLUSION

- Portable Pico Event Timer
- Signal Strength Monitor
next paper
- Dedicated for Portable Calibration Standard 2k

1997	20 Hz
1998	100 Hz
2004	2000 Hz