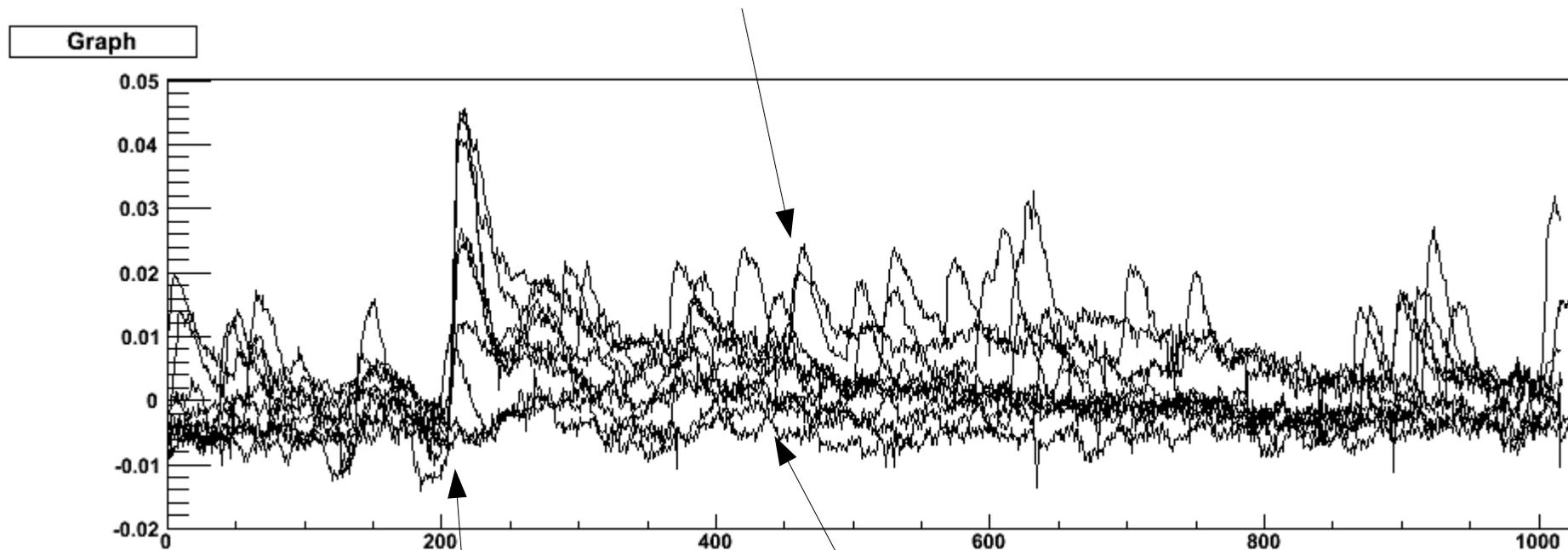

PD status report: Attività per LST

Noise & noise (28V, LED)

Misure: FBK NUV 3x3

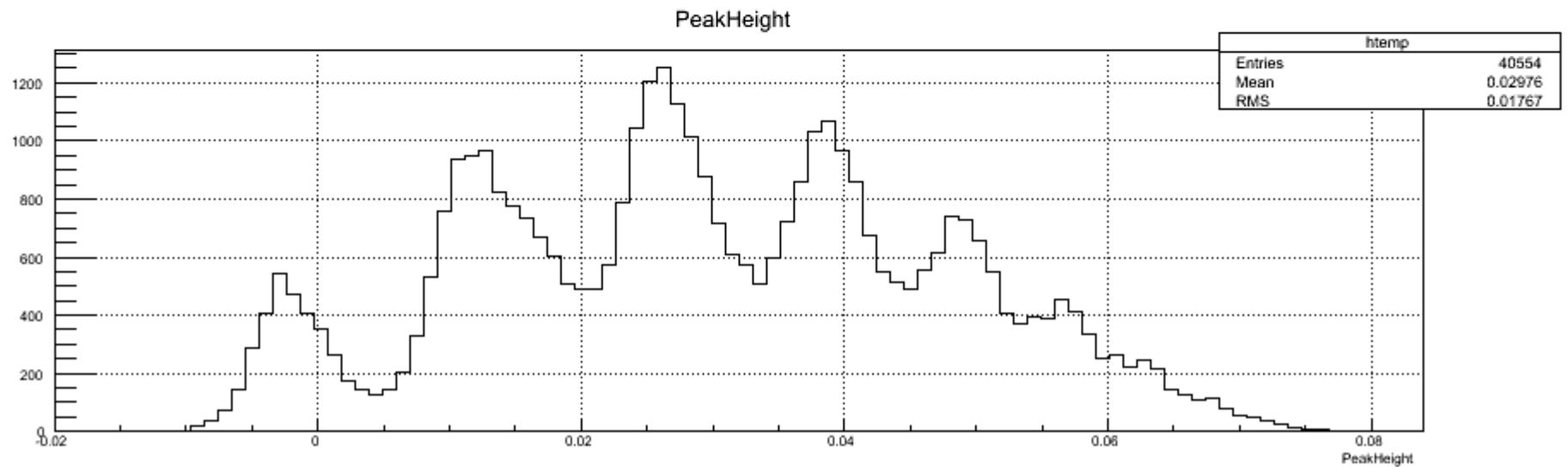
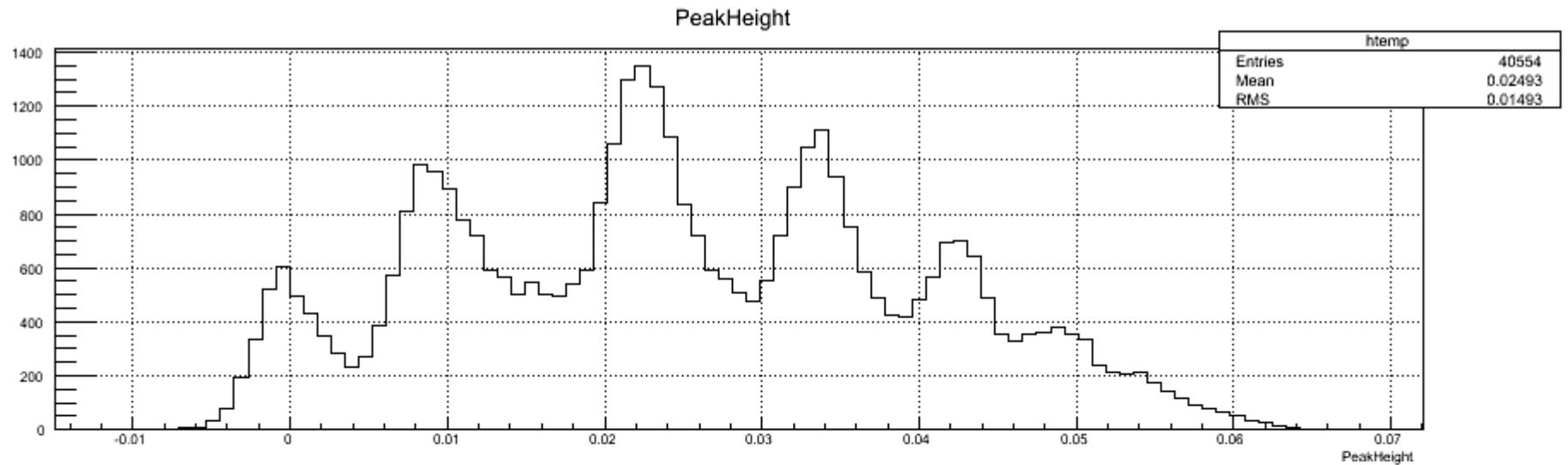
Attesi: $\sim 300 \text{ kHz/mm}^2$ (uncorrected) * $9 \text{ mm}^2 \sim 3 \text{ MHz}$
Osservati $\sim 9 \text{ MHz}$



Slow rise: 10X la vecchia C_{IN}

C_{IN} noise: 10X la vecchia C_{IN}

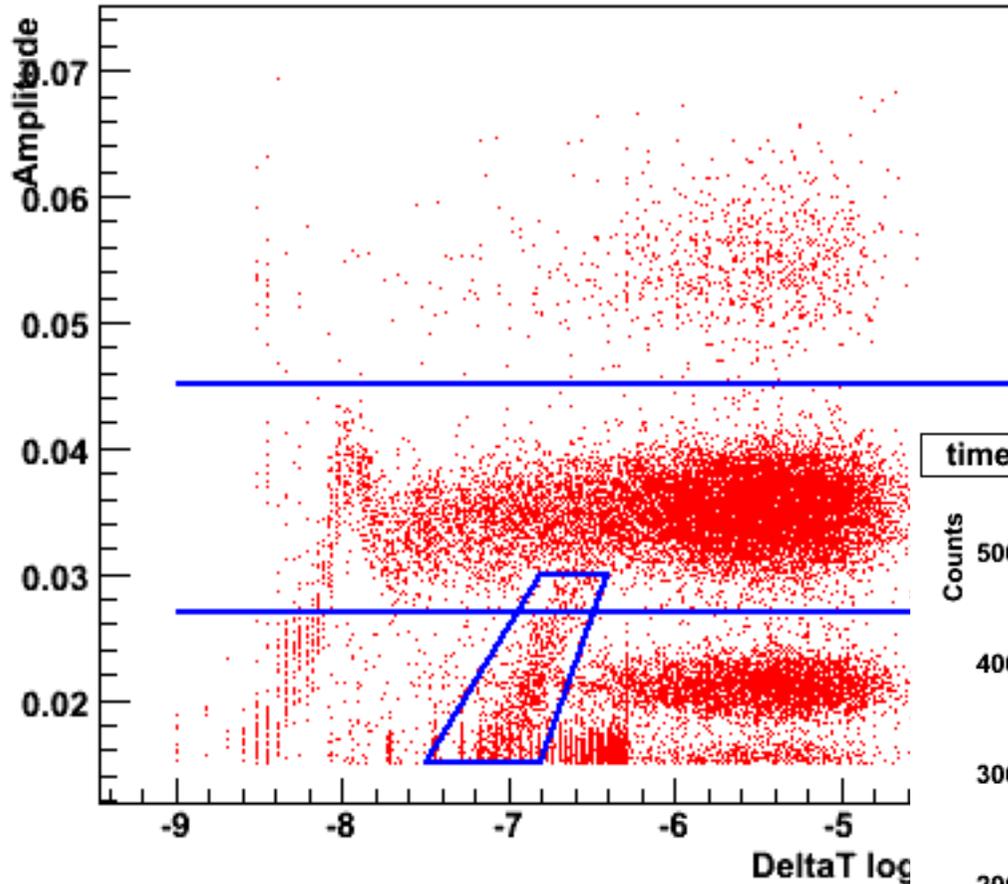
2 FBK SiPMs – 2 handmade preamp - 28V



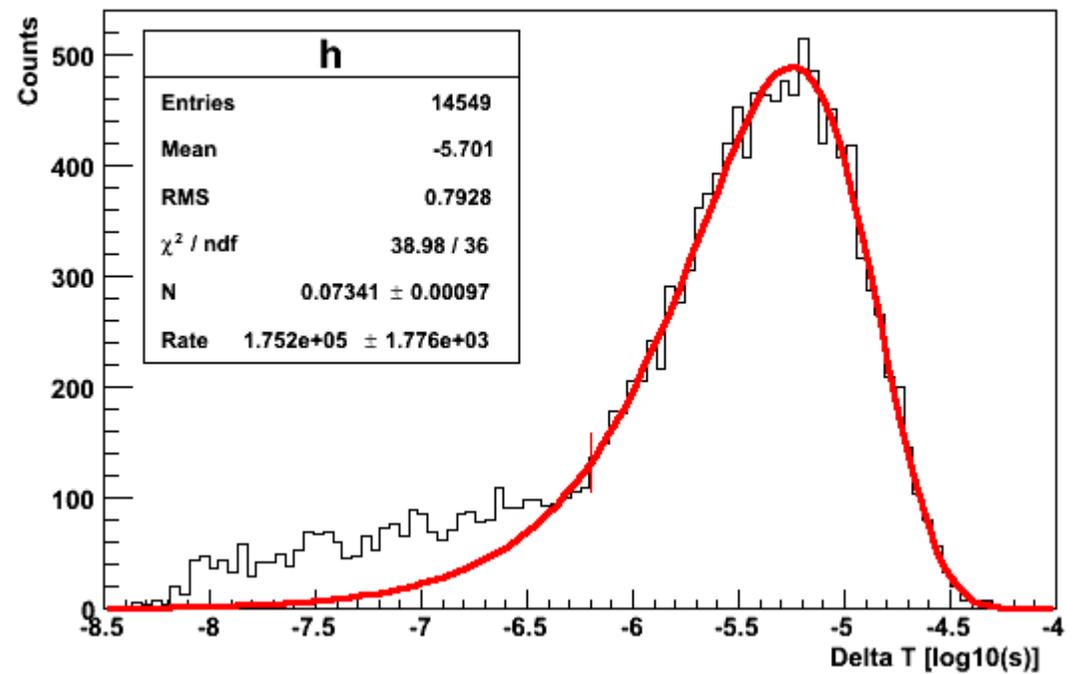
Stessa tensione, due distinti preamp (ma nominalmente uguali): gain diverso del 20%

Noise analysis: old SiPM (1x1 mm², 28V)

All peaks

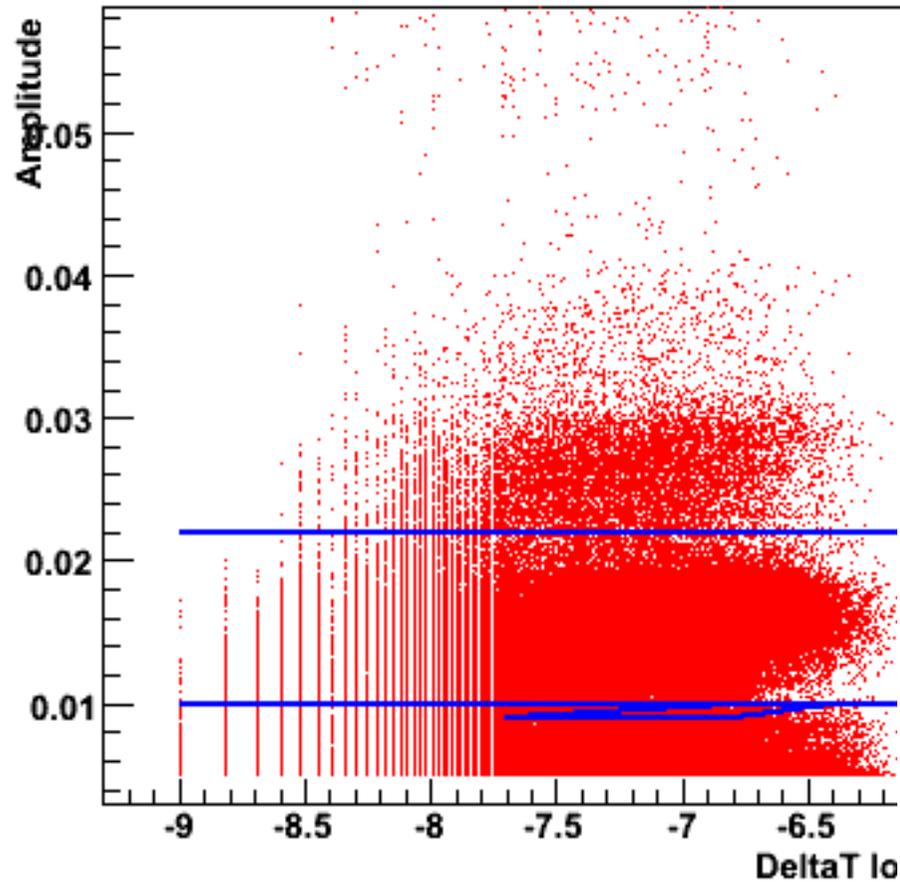


time delay, good events only



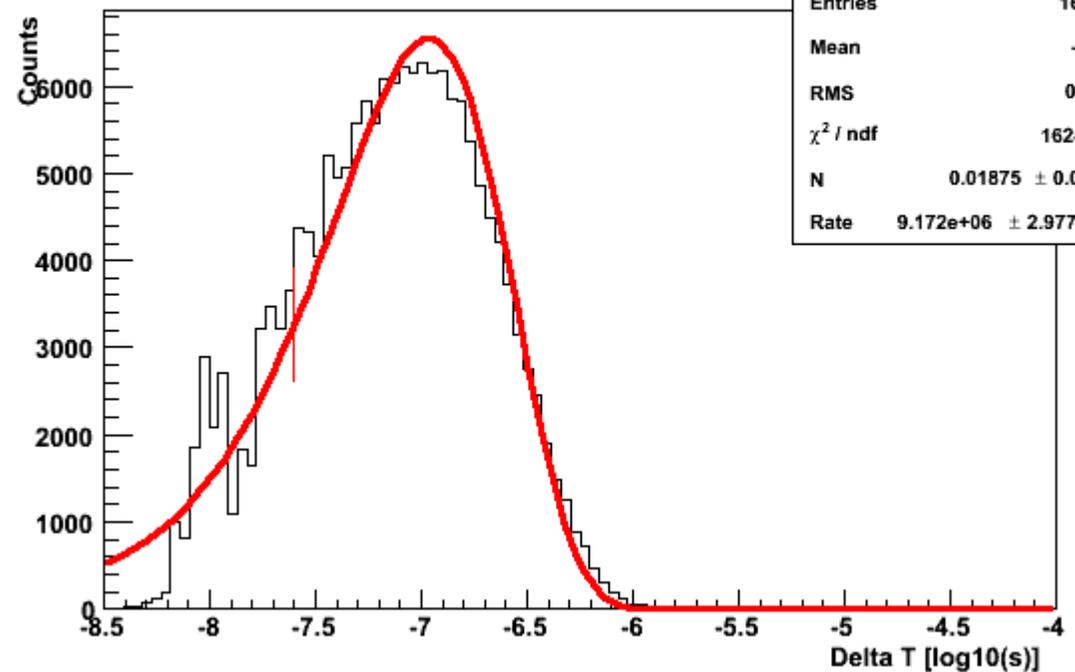
Noise analysis: new SiPM (3x3 mm², 28V)

All peaks



(Amplitude diversa in valore assoluto:
Ho allargato la finestra per la DLED per il rise time + lento)

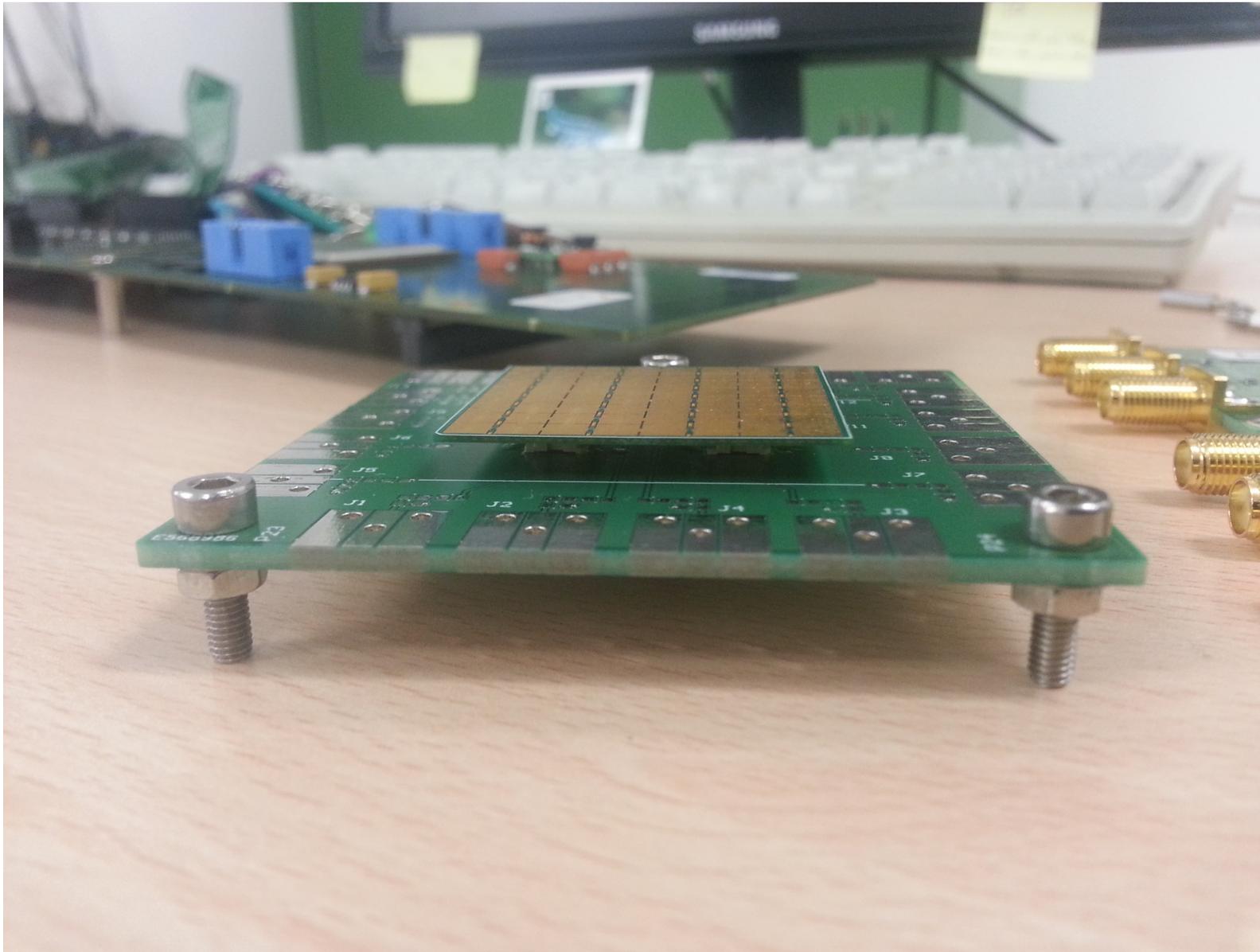
time delay, good events only



h	
Entries	168332
Mean	-7.155
RMS	0.4539
χ^2 / ndf	1624 / 38
N	0.01875 ± 0.00007
Rate	$9.172\text{e}+06 \pm 2.977\text{e}+04$

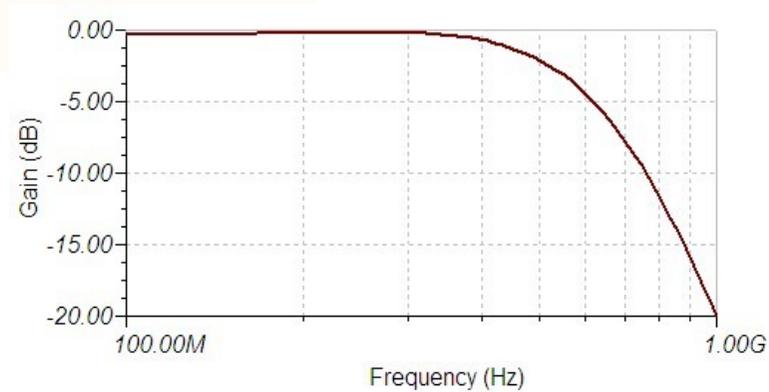
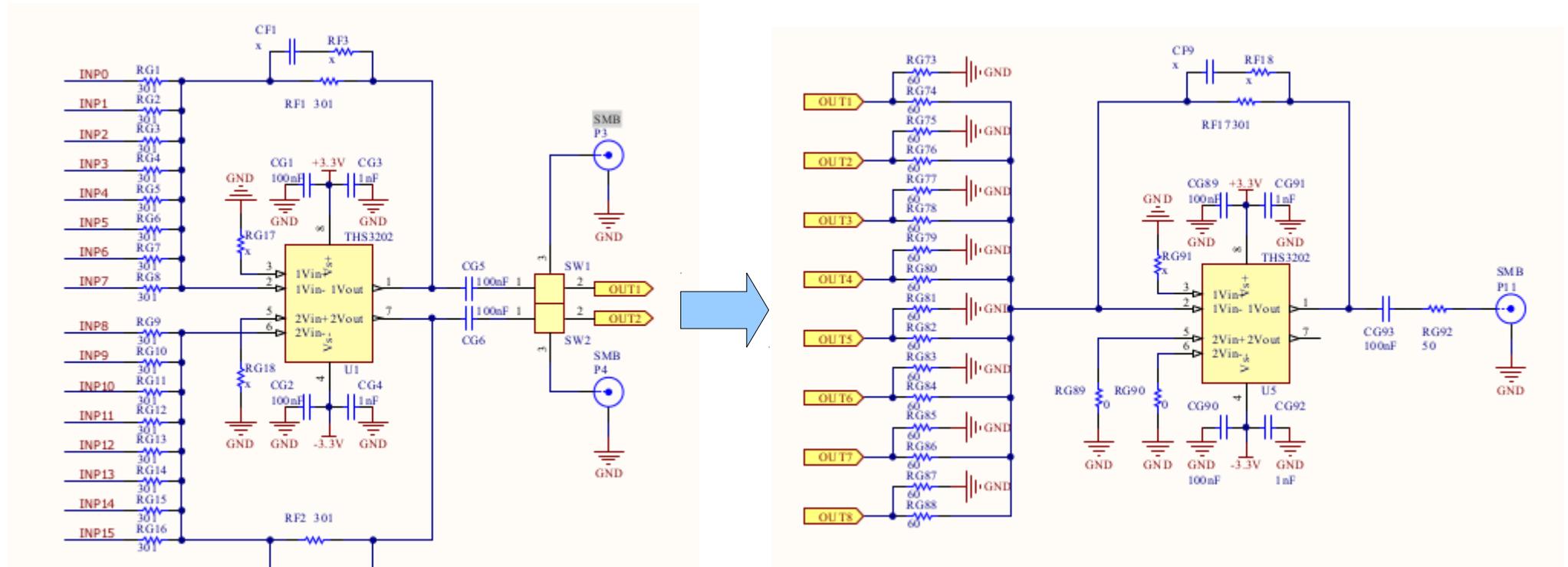
Sensor matrix

Design: R. Paoletti

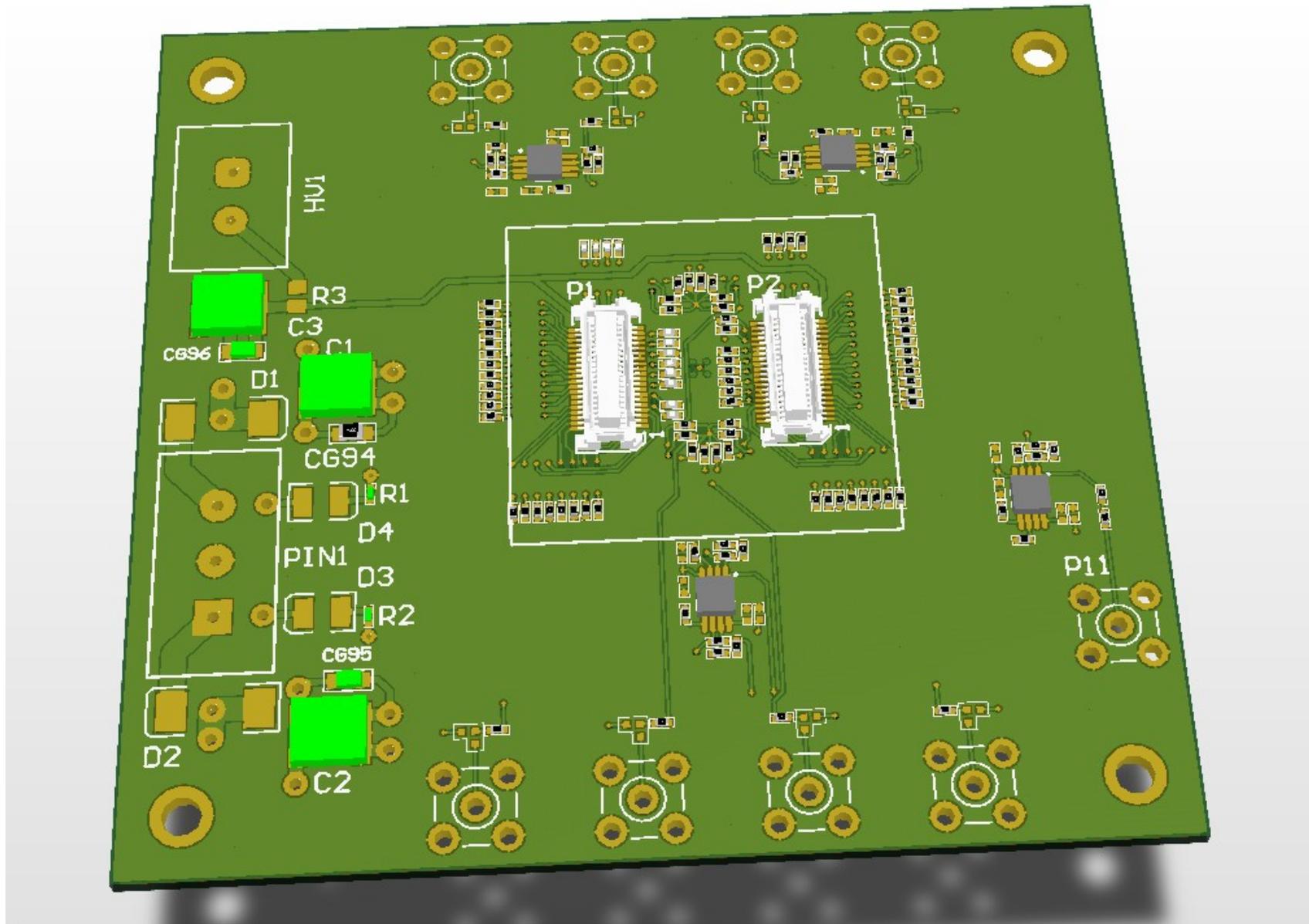


Analog sum

Da 64 SiPM (allo stato attuale) a 1 solo canale.
Design: D. Corti / R. Paoletti / M. Tessaro

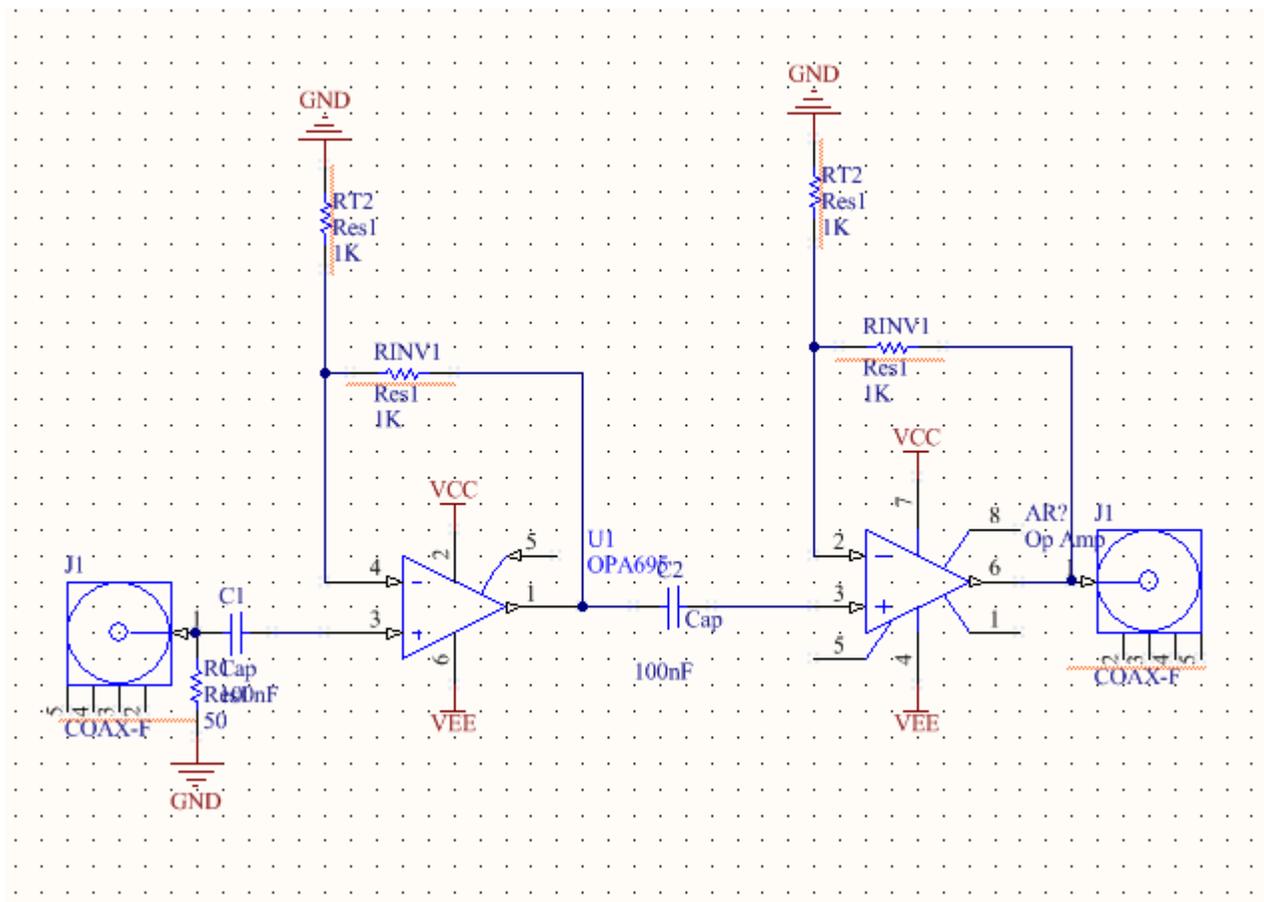


Analog sum: commissioned



Preamp

RiccardoP ce ne ha spedito uno "buono" (PCB)



Conclusioni

- Misure in pausa
- Ottica: nessuno al lavoro
- Matrice sensori: 2 prodotte?
- Sommatore in produzione: entro fine anno
- Nuovo preamp “serio” procurato (grazie RiccardoP)
- Readout board LST: no (ma readout “da laboratorio” per il proto)
- WC LST no, da procurare (ma finché nessuno lavora sull'ottica...)

- Alimentatore “low ripple” in fase di design (non indispensabile per il proto)

