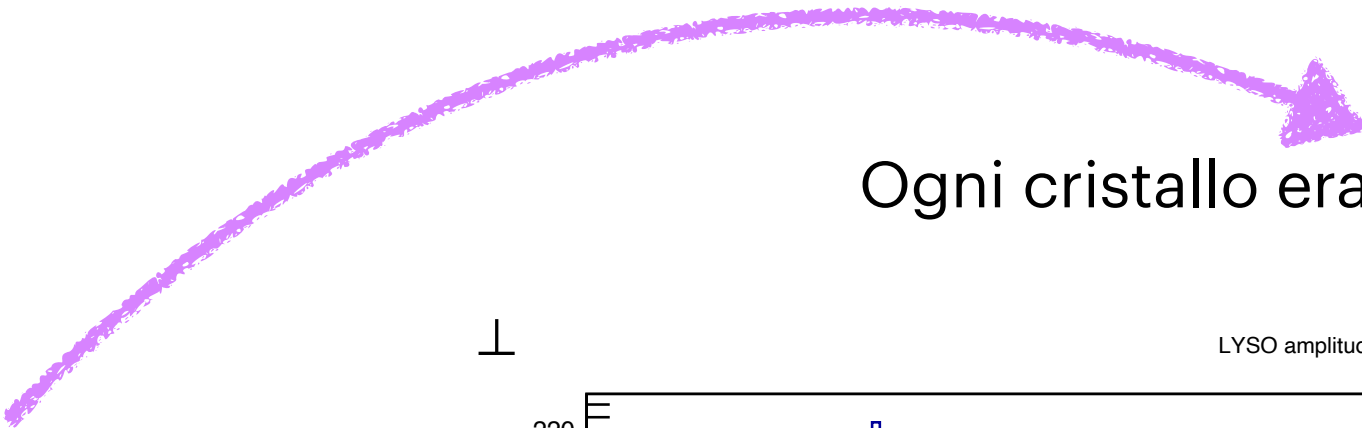
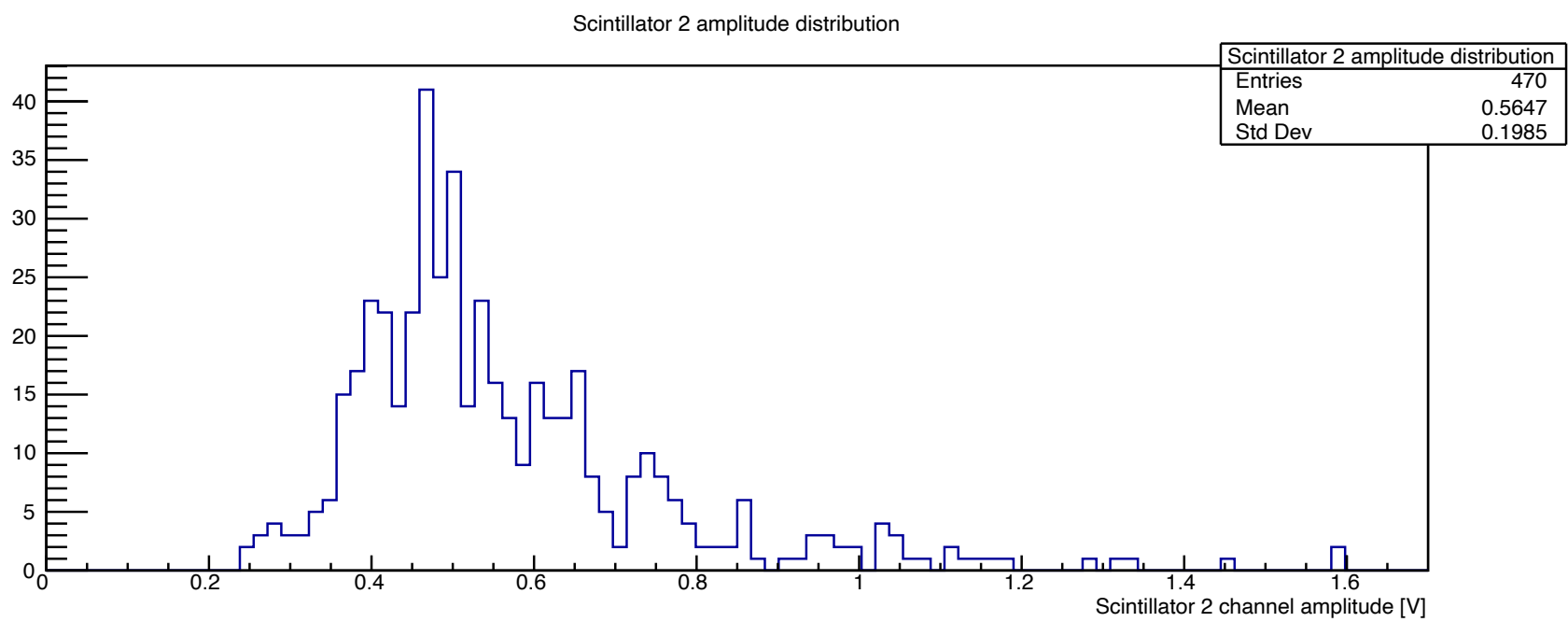
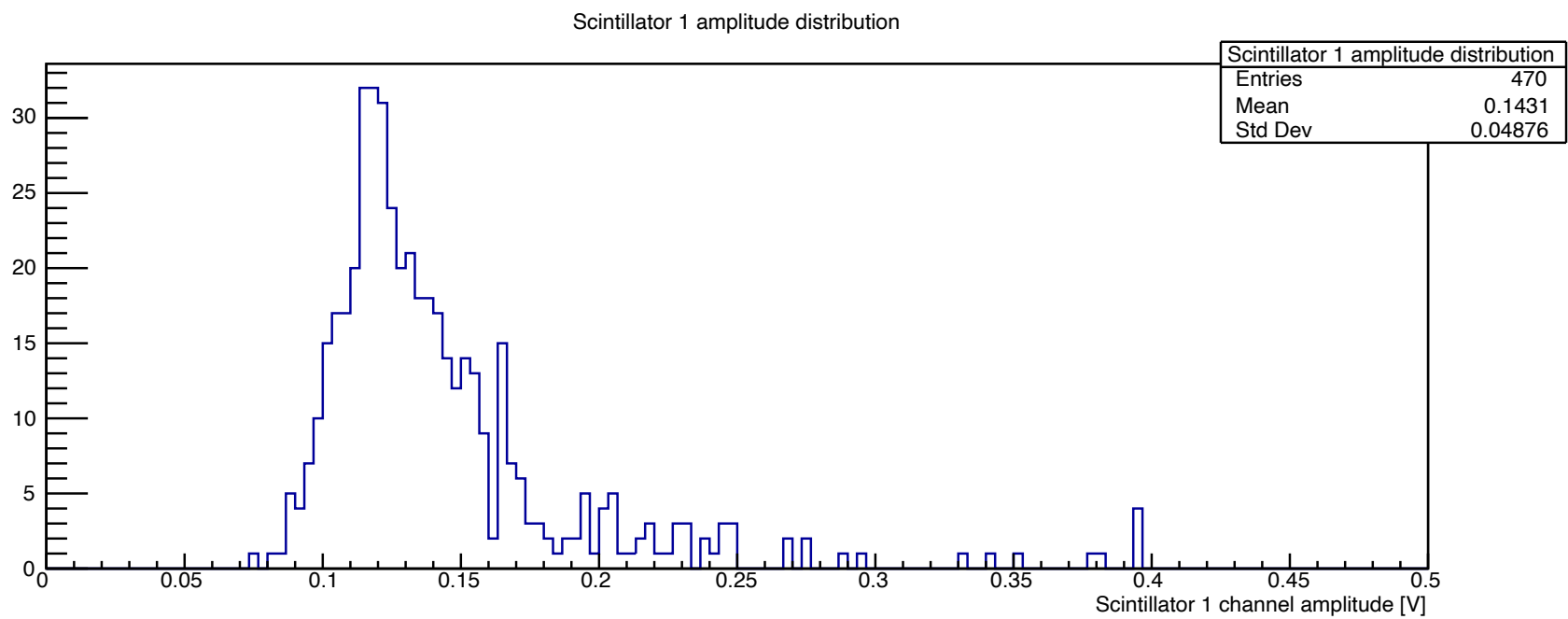
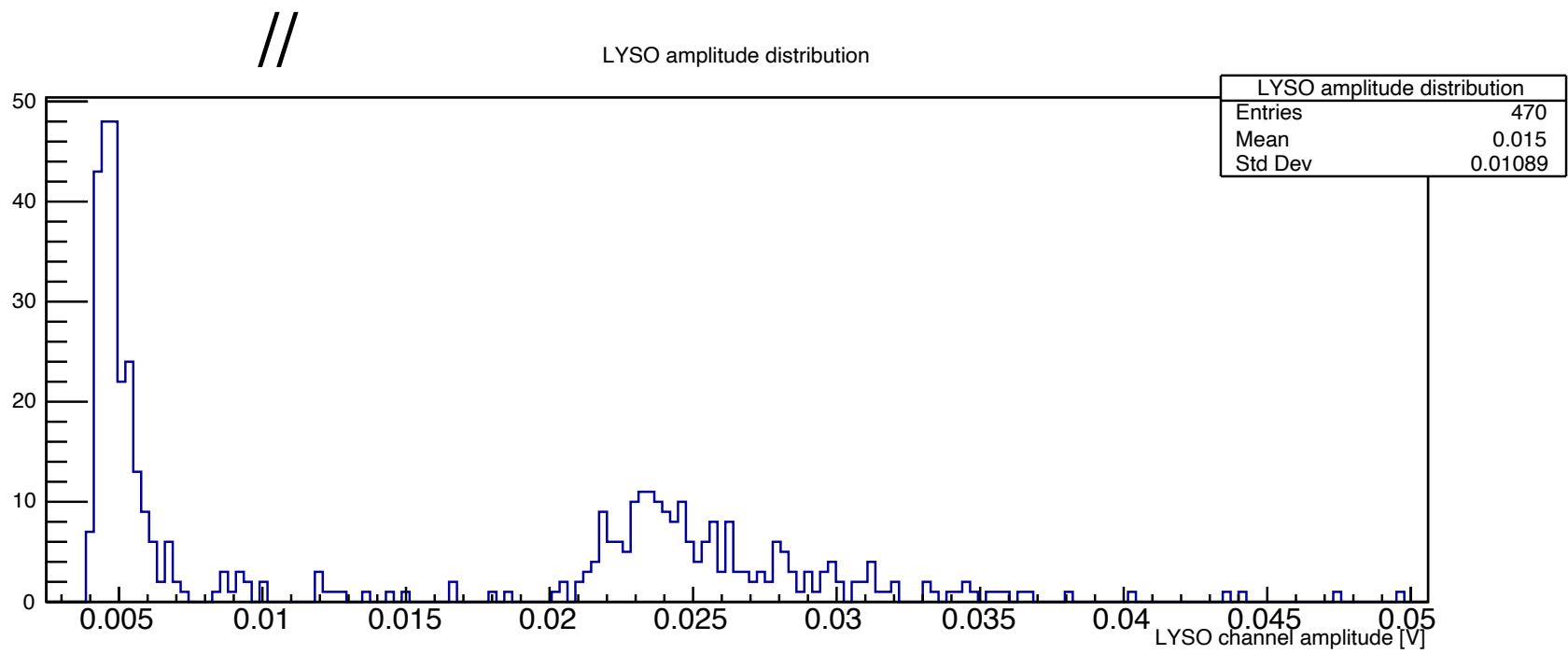


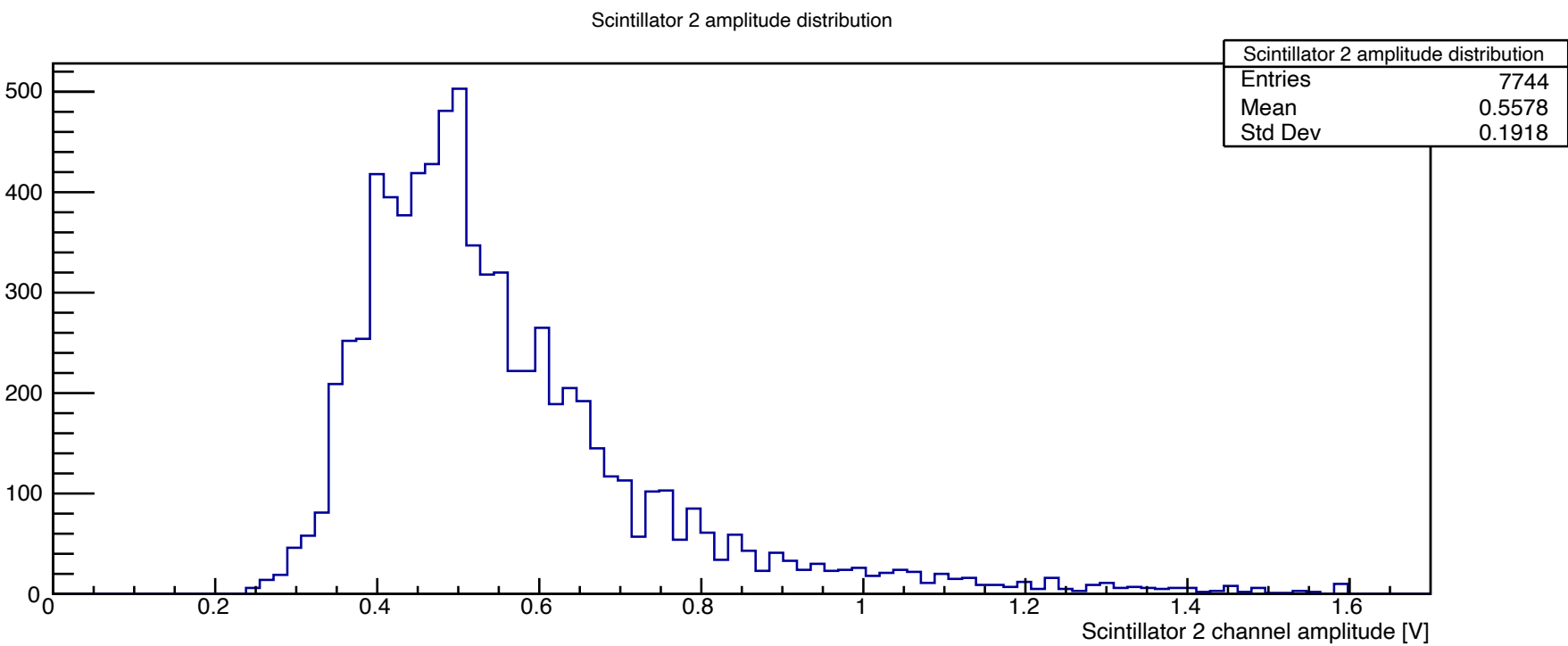
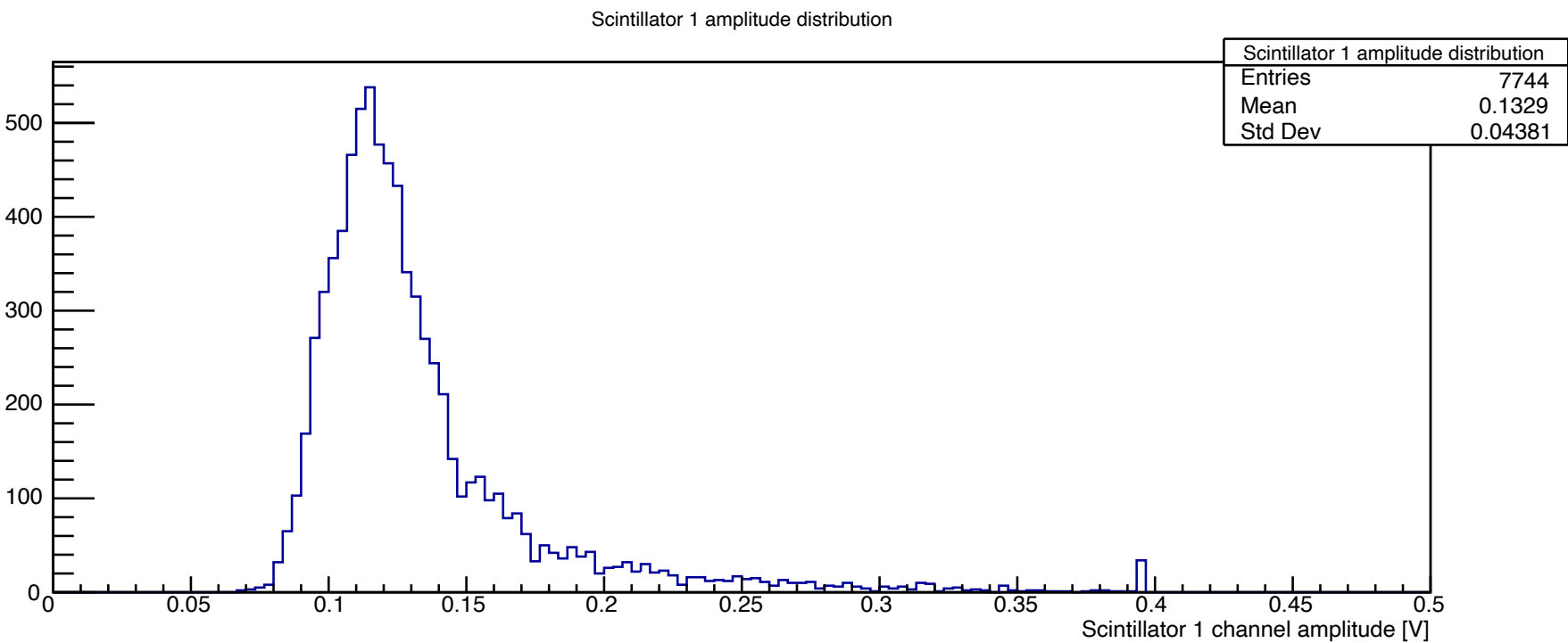
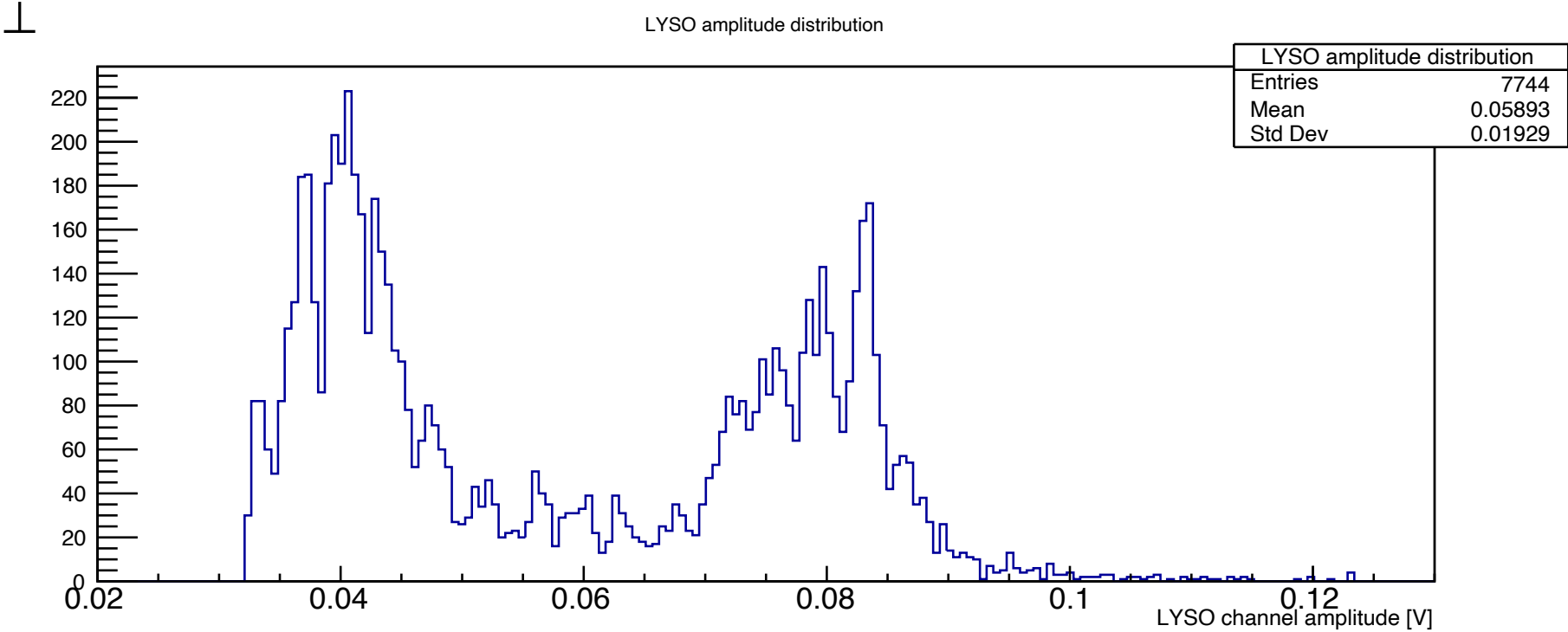
LYSO analysis

05/09/2023

Distribuzioni ampiezza



Ogni cristallo era fasciato singolarmente!

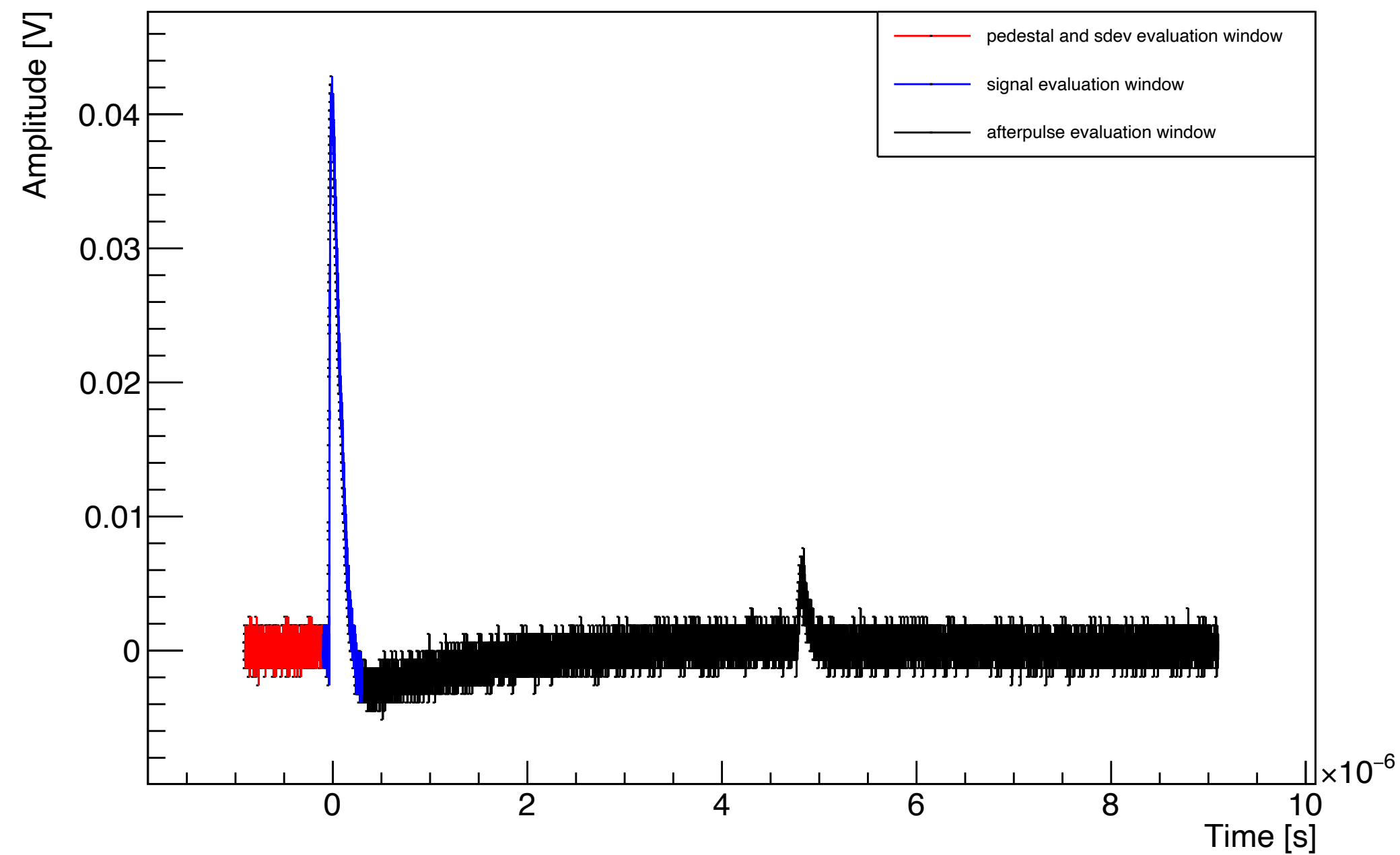


Ricerca afterpulse

OLD

Condizione:

Almeno due punti consecutivi che eccedano di 5σ il valore del piedistallo nella regione nera (selezionata a mano)

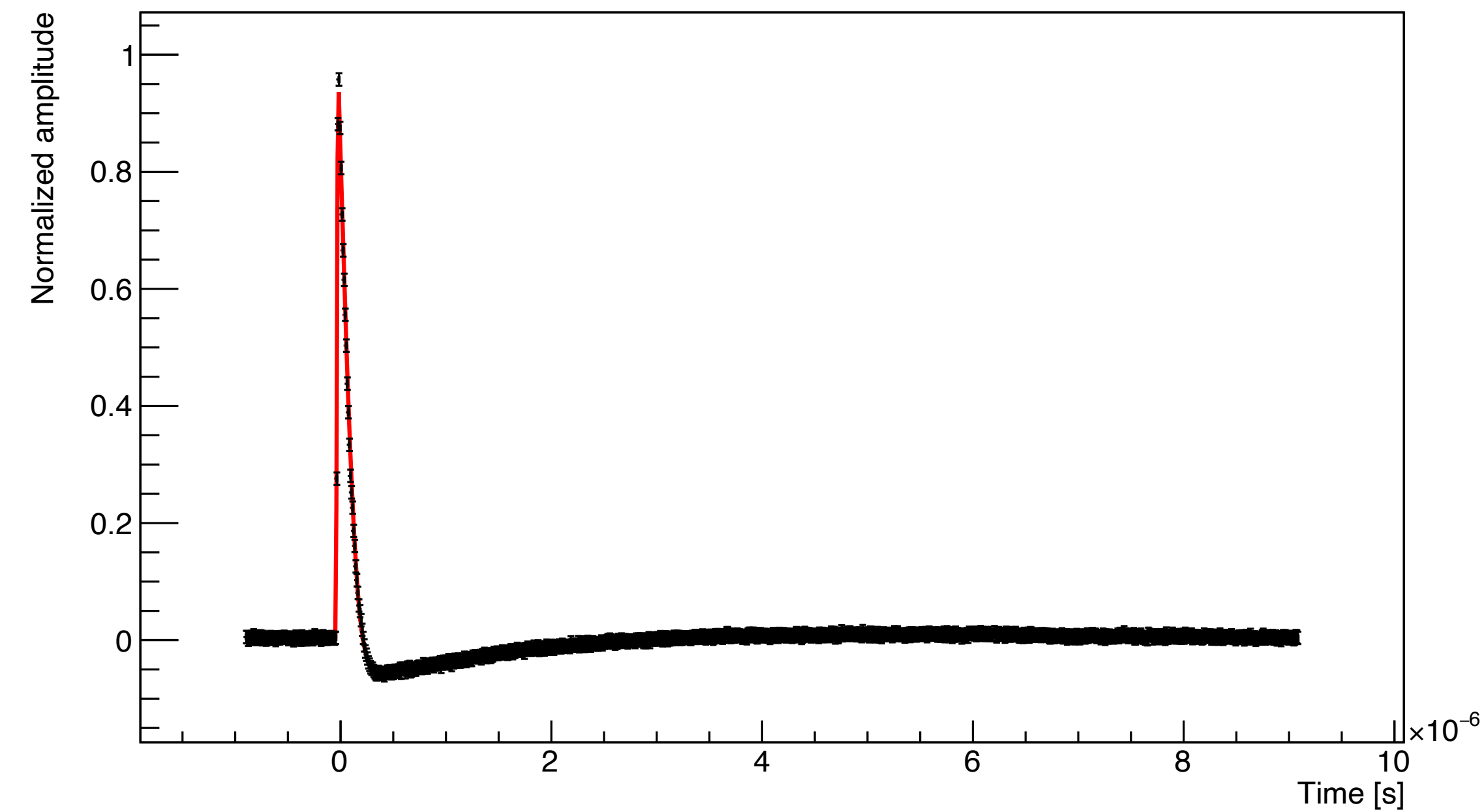


NEW

Condizione:

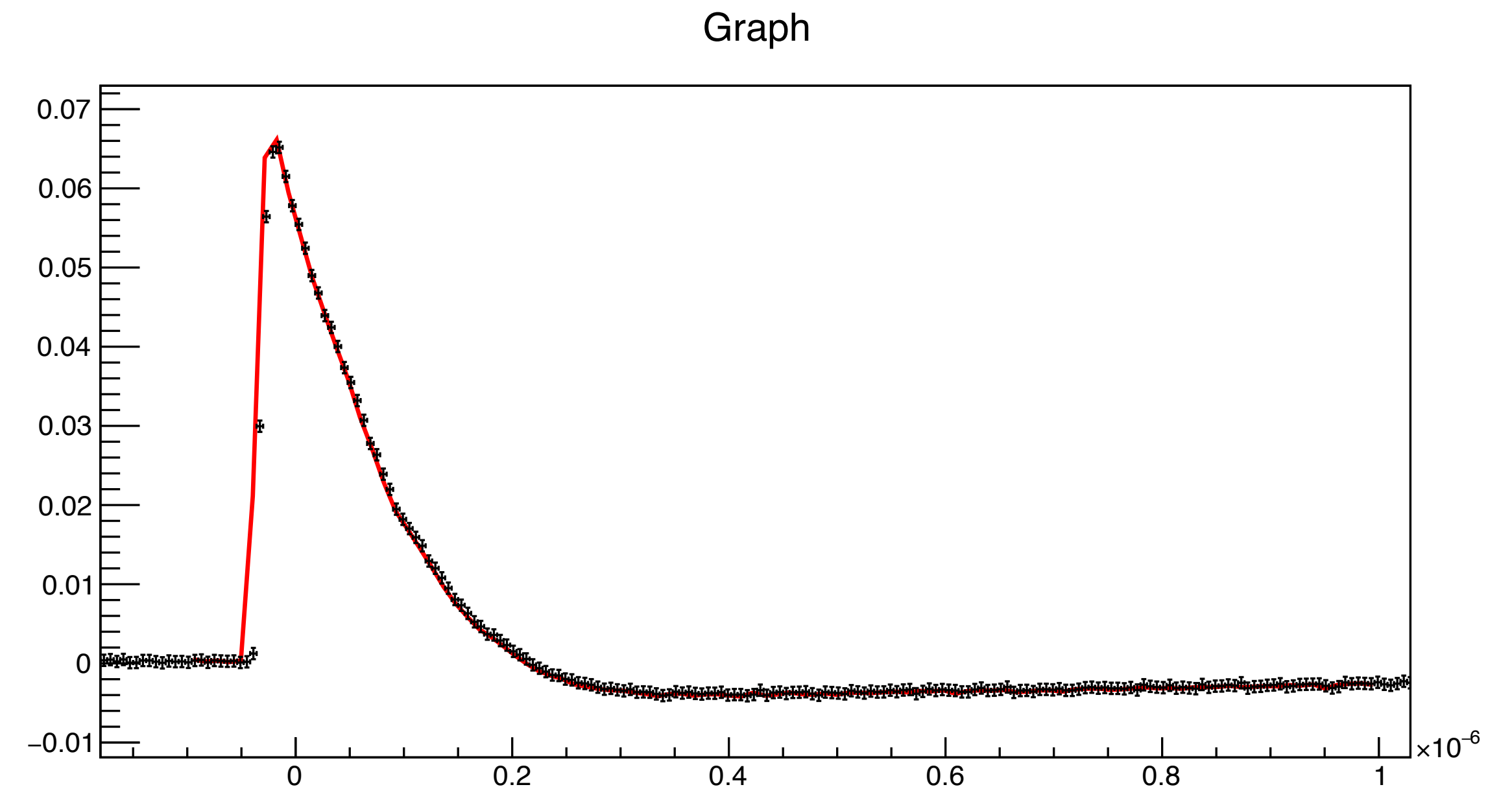
In ogni punto calcolo lo scarto tra il TGraphError e la funzione fit.
Richiedo due punti consecutivi il cui scarto ecceda $n\sigma$ ($1 \leq n \leq 3$).
Range: da 300 ns dopo il picco in poi.

Graph



Ricerca afterpulse

- Uso 10 waveform come riferimento da usare come funzione di fit (gSample)
- Tutti i TGraph vengono campionati e trasformati in TGraphErrors
- Funzione di fit definita come:
`par[0] * gSampling->Eval(par[1]*(x[0]-par[2]))`
- Il fit converge solo se almeno due parametri sono fissati



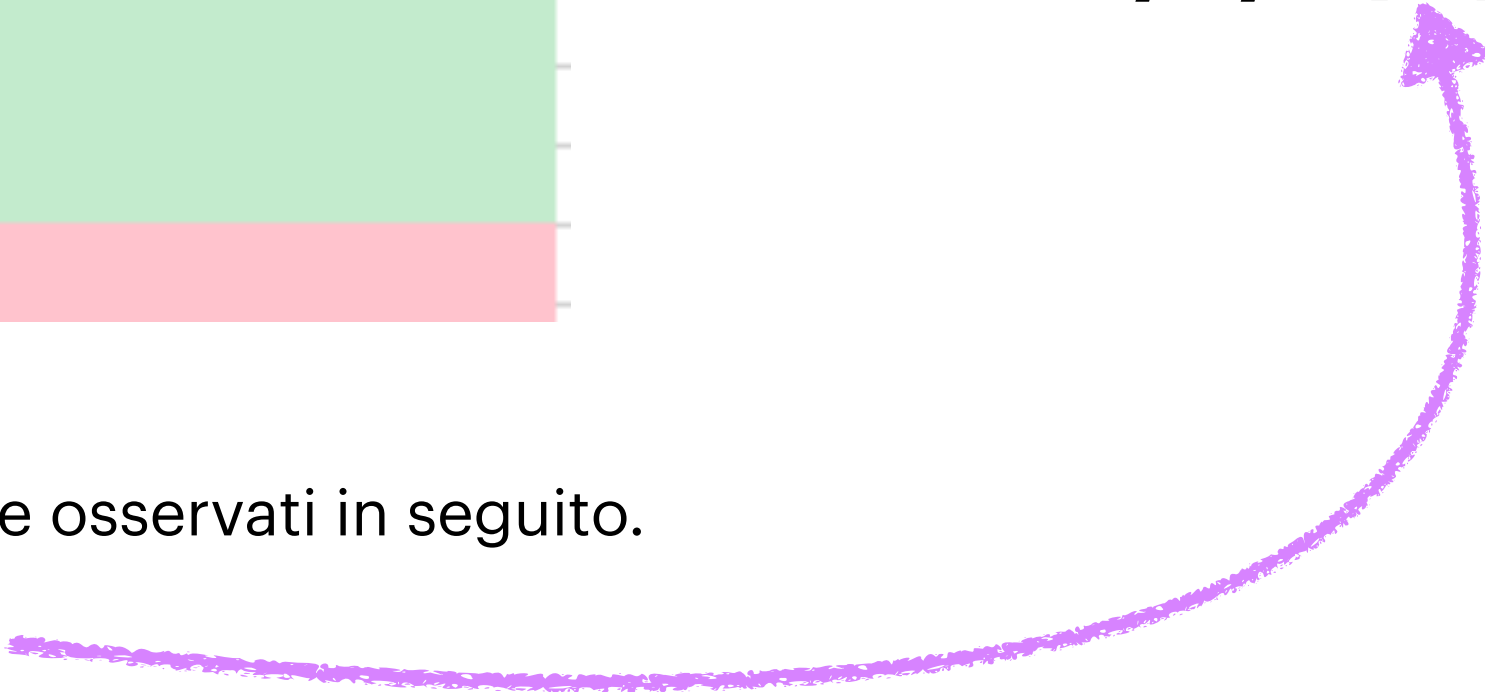
Risultati



Measure 3					
Files	Old Algorithm	New algorithm 1 σ	New algorithm 2 σ	New algorithm 3 σ	Is there an afterpulse event?
	270	270	270	absent	Yes
	509	509	509	509	
	1521	1521	1521	1521	
	2196	absent	absent	absent	No
	3564	3564	3564	3564	Yes
	6084	6084	6084	6084	Yes
	6211	absent	absent	absent	No
	7583	absent	absent	absent	No
		505	505	505	Yes
		2353	2353	2353	Yes
		6332	6332	absent	Yes
		6664	6664	absent	Yes
		4199	absent	absent	Yes?
		5005	absent	absent	Yes?
		7672	absent	absent	Yes?
		1600	1600	absent	No

13

7744



I fit che non convergono vengono salvati in un rootfile a parte e osservati in seguito.
Trovato un solo evento di afterpulse

Distribuzione in tempo

