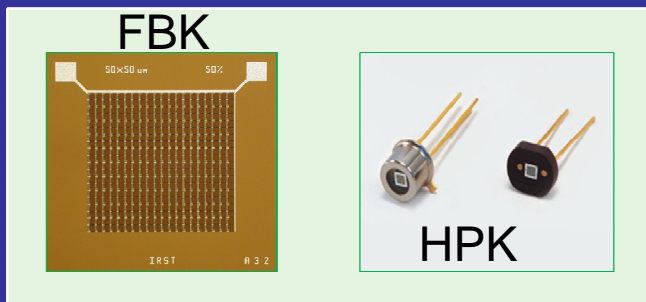




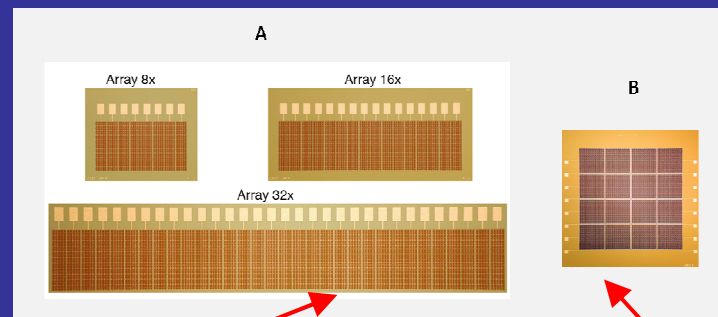
Time Resolving Characteristics of HPK and FBK Silicon Photomultipliers for TOF and PET Applications



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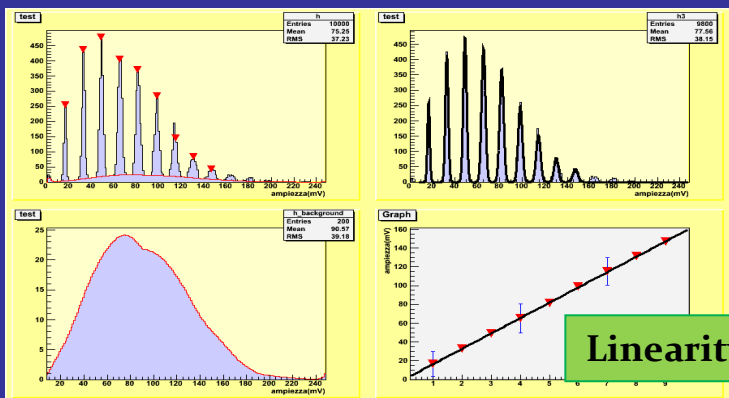


Single SiPM $1\text{mm} \times 1\text{mm}$ –
 $50\ \mu\text{m} \times 50\ \mu\text{m}$ pixel sizes

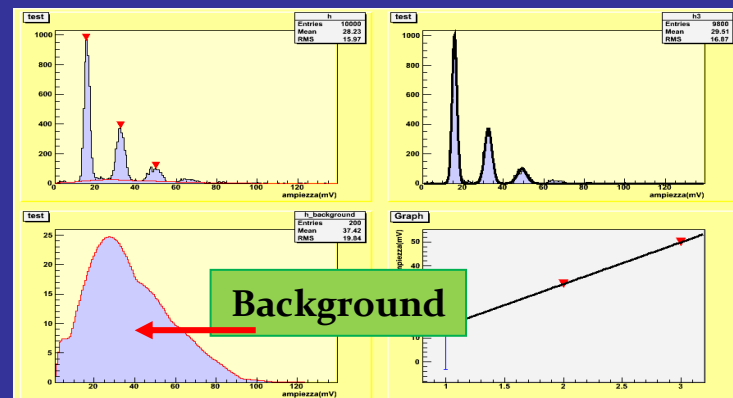


SiPM arrays x TOF

SiPM matrix x PET



Single Photon spectra HPK
SiPM $BV=76,2\text{V}$, $\Delta V=1.2\text{V}$



Single Photon spectra FBK
SiPM $BV=30,6\text{V}$, $\Delta V=2.3\text{V}$



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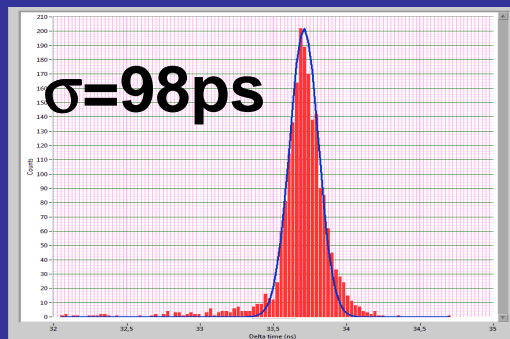
11° Pisa Meeting, La Biodola ITA, May 2009



Time resolution measurements on HPK and FBK Silicon Photomultipliers for comparison with fully depleted PIN Photodiodes

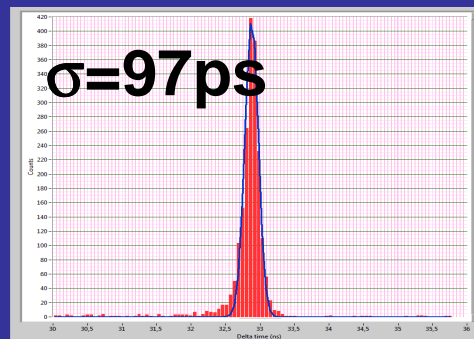
- trigger signal: Synchronization output of Laser Driver

HPK SiPM 1x1mm
(407nm laser)



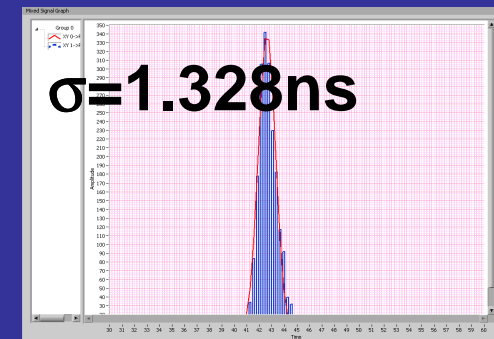
HPK SiPM $\Delta V = 1.2 \text{ V}$

FBK SiPM 1x1mm
(407nm laser)



FBK SiPM $\Delta V = 2.3 \text{ V}$

FBK PIN Diode
1x1mm (783nm laser)



FBK PIN $V_{\text{depl}} = 30 \text{ V}$