Shashlyk module test correction and scintillator plating test

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Error statement: double light yield for all shashlyk test showed before

I'm sorry for my mistake, for all shashlyk test showed in the meeting two weeks ago and Wuhan meeting, I used wrong script to calculate the photon number, in which the gain is set to 10^7, not the real gain 5*10^6, and the real light yield should be double. It just influence shashlyk test, the others' result is correct. Calculation equation:

number[i]=(compensation*LSB_v965_high_range[channel]*(data_channel[i]-pedestal))/(1.6*Gain)



Corrected vertical test result for two modules:

Horizontal test result correction





Shashlyk test result update

module	Vertical (resolution)	Horizontal	Horizontal(without Tyvek)
New	426.5(10.25%)	83	
Previous	223.6(12.28%)	50	38.6
RATE	1.907	1.66	

• Supplyment: attenuation on delay cable

With 63.5ns Delay cable, the attenuation is around 3% comparing with no delay cable.

Scintillator plating material test



Surface plated by ZnO



Frosted surface

The edge of scintillator plated by ZnO is not good





Plating surface test result



The Distribution of Photoelectron

Both signal are very low, the result ned to confirm especially the ZnO plating which should not be so bad.

The fitting of the Pedestal and SPE

Back up: resolution

$$resolution = \frac{1}{\sqrt{N}} \cap \frac{\sqrt{\sigma}}{\sqrt{N}} \cap a$$





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