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First test of coaxial calbe.

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Micro coaxial cable.

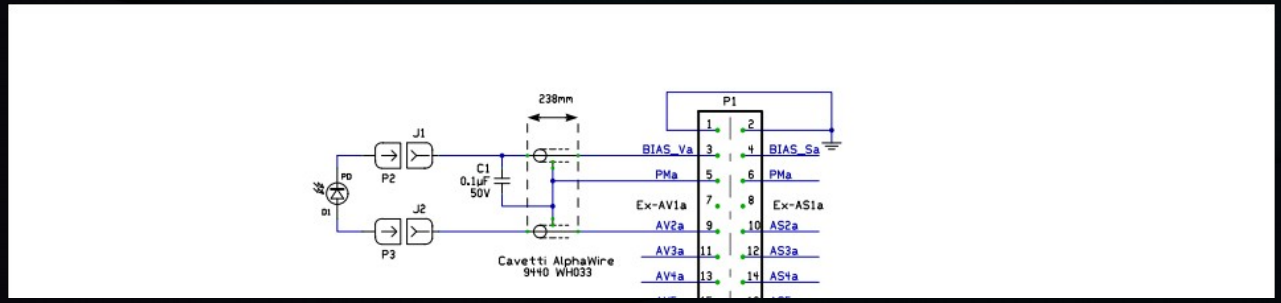
- Selected cable: Alpha Wire 9448

				Diameters (In)	
1) Component 1		1 X 1 COAX			
a) Conductor		40 (7/48) AWG Tinned Copper Alloy		0.0035 89 um	
b) Insulation		0.0028" Wall, Nom. PFA		0.0091 230 um	
(1) Color(s)					
Cond	Color	Cond	Color	Cond	Color
1	BLACK TINT				
2) Shield		Tinned Copper Alloy SPIRAL Shield,90% Coverage, Min.			
3) Jacket		0.0012" Wall, Nom.,PFA		0.0134	
a) Color(s)		WHITE			

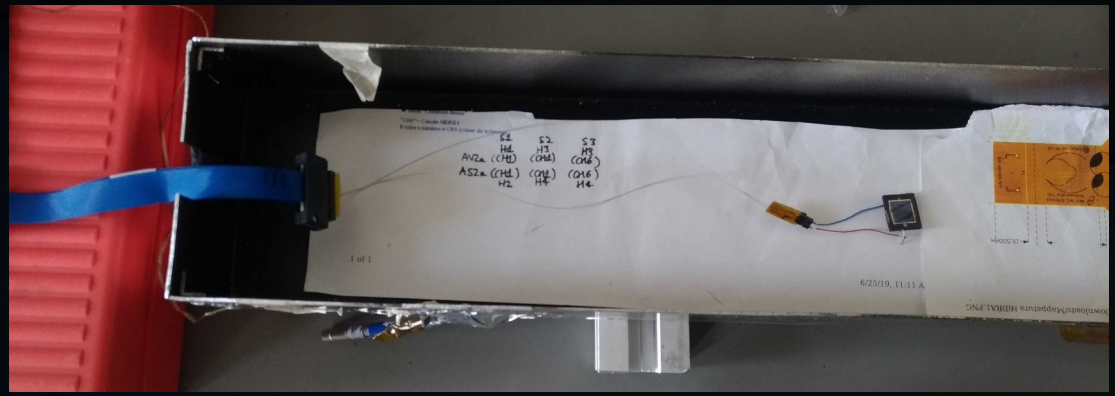
Physical & Mechanical Properties	
1) Temperature Range	-70 to 150°C
2) Bend Radius	10X Cable Diameter
Electrical Properties	(For Engineering purposes only)
1) Voltage Rating	30 V_{RMS}
2) Characteristic Impedance	50 Ω +/- 5
3) Ground Capacitance	33.6 pF/ft @1 kHz, Nominal
4) Velocity of Propagation	69 %
5) Conductor DCR	1524 Ω/1000ft @20°C, Max
6) Attenuation, Max dB/100ft	13.7 @ 10 MHz

Test schemes

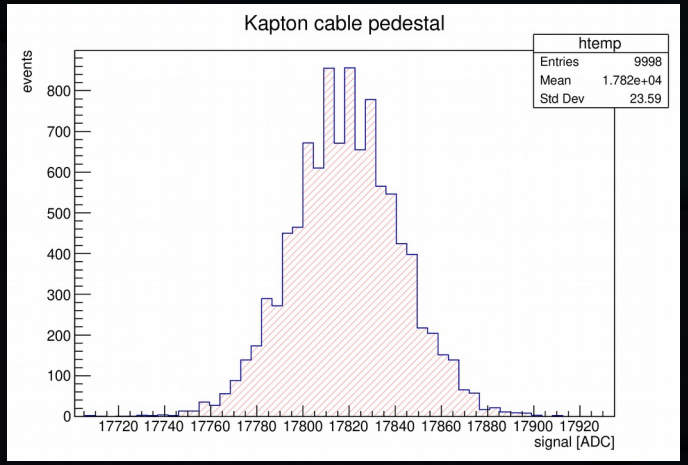
- Circuit used to connect the PD to HIDRA with coaxial cables (Seba).

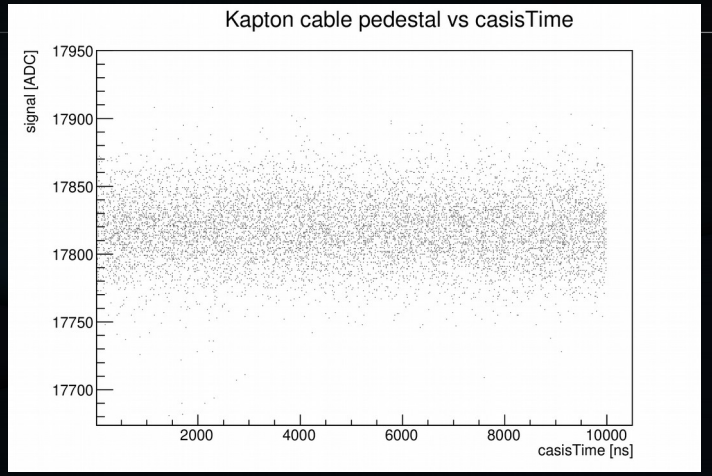


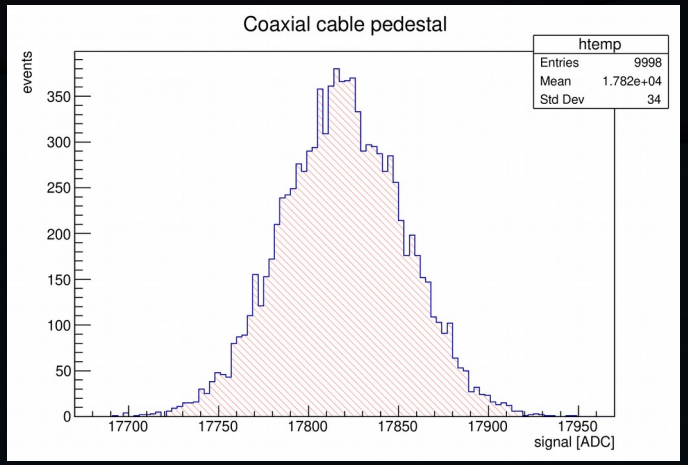
- Using the same metal box for coaxial cable and kapton cable test:

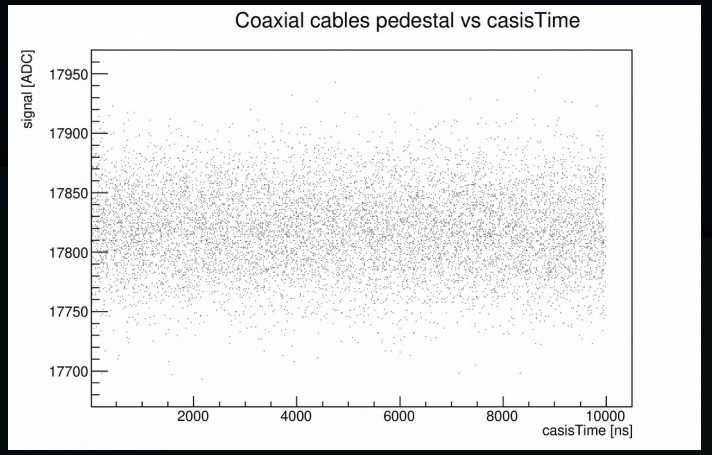


Pedestal distributions









Discussion

- First test of micro coaxial cable result:
  - The noise increases of $\sim 30\%$
- Future tests:
  - Add filters for the PD bias nearby the connector in order to obtain the same configuration of the kapton cable.
  - Connect more than one PD to evaluate the channel by channel coupling (common noise) with respect to the kapton cable.