Anode pad

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1   Abstract

Microchannel-plate photomultipliers (MCP-PMT) are specialized vacuum pho-
todetectors typically consisting of a photocathode, an amplification section con-
sisting of several planes of glass micropores, and a segmented anode from which
the amplified pulses are detected.
The spatial and temporal resolutions are determined by the conversion of the
electron cascade pulse at the anode plane into a measurable signal, and also by
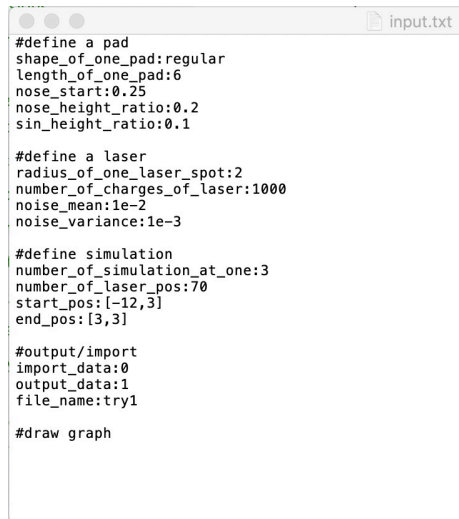the transport of that signal throughthe package wall to the diitizing electronics.

2   Introduction

2.1   cross-talk

3   some figs (draft)

4   a. "parameters"

The shape of one pad: regular/nose
The length of one pad:6 mm
radius of one laser spot:2
number of charges of one laser:1000
noise mean:1e-2 (Note: mean = 1e-2 * 1000 = 10)
noise variance:1e-3
number of simulation at one laser spot:3
number of laser pos:70
start pos:[-12,3]
end pos:[3,3]
(nose start:0.25
nose height ratio:0.2 sin height ratio:0.1)

```
                                         input.txt
#define a pad
shape_of_one_pad:regular
length_of_one_pad:6
nose_start:0.25
nose_height_ratio:0.2
sin_height_ratio:0.1

#define a laser
radius_of_one_laser_spot:2
number_of_charges_of_laser:1000
noise_mean:1e-2
noise_variance:1e-3

#define simulation
number_of_simulation_at_one:3
number_of_laser_pos:70
start_pos:[-12,3]
end_pos:[3,3]

#output/import
import_data:0
output_data:1
file_name:try1

#draw graph
```

Figure 1: this is the input.txt file, input parameters before running simulations

5 b. pad pattern
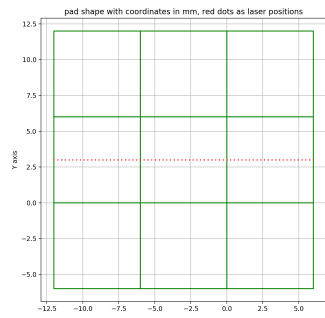
6 c.

rpad.png

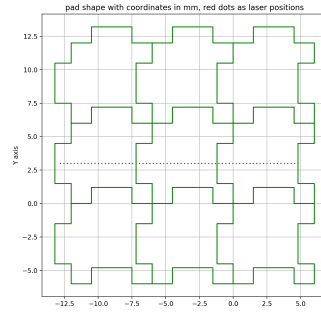
Figure 2: 9 square pads with width 6mm

Figure 3: 9 modified pads with width 6mm. extra rectangle is 3mm height, 1.2mm width
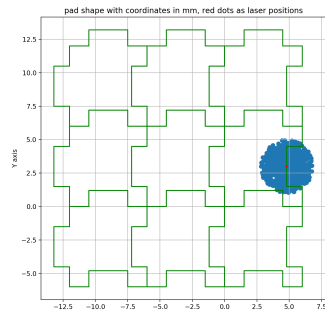

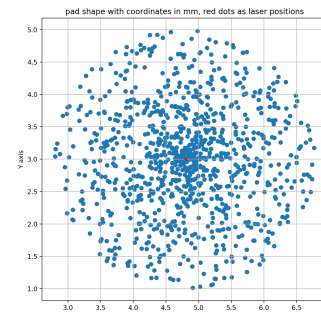
Figure 4: 9 square pads with width 6mm

Figure 5: 9 modified pads with width 6mm. extra rectangle is 3mm height, 1.2mm width
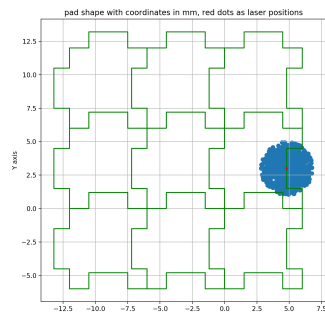
3

pad shape with coordinates in mm, red dots as laser positions

Figure 6: 9 square pads with width 6mm

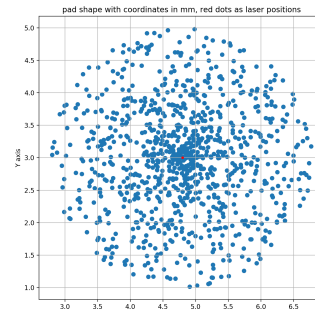pad shape with coordinates in mm, red dots as laser positions

Figure 7: 9 modified pads with width 6mm. extra rectangle is 3mm height, 1.2mm width