Contribution ID: **422** Type: **Poster**

Study on the properties of a multi-anode MCP-PMT and cross-talk suppression

Tuesday 25 May 2021 05:12 (18 minutes)

We studied the performance of a MCP-PMT with 2×2 matrix anode pixels fabricated by Xi'an Institute of optics and precision mechanics of CAS. The test result shows that the gain of the MCP-PMT remains stable up to 1×10^7. And the time resolution of single photoelectron (SPE) is better than 60ps (σ). The Cross-talk phenomenon among adjacent pixels which deteriorates the high time performance was also studied. We have developed an electronic model to explain its generation mechanism and suppress the crosstalk-over-signal amplitude ratio from 20% to lower than 5%. Furthermore, this mechanism has a universality that can also be applied in other multi-anode MCP-PMT Hamamatsu R10754.

TIPP2020 abstract resubmission?

No, this is an entirely new submission.

Funding information

Authors: Dr LI, Ziwei (USTC); Prof. SHAO, Ming (Univ. of Sci. and Tech. of China); Dr LI, Xin (University of Science and Technology of China (CN)); Dr CHEN, Ping (Xi'an Institute of Optics and Precision Mechanics)

Presenter: Dr LI, Ziwei (USTC)

Session Classification: Sensor Posters: Photodetectors

Track Classification: Sensors: Sensors: Photo-detectors