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The R&D of the MCP based PMTs for High Energy Physics Detectors

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The Micro-Channel Plate (MCP) is a specially crafted microporous plate with millions of independent channels, which have secondary electron emission capability. The MCP could be used as the electronic multiplier amplifier in the PMTs. There are two types of MCP Photomultiplier tube (MCP-PMT). One is the large-area electrostatic focusing PMTs (LPMT) , which always used in the large scalar neutrino detector for it's large area efficiency photocathode. The small size proximity focusing PMTs (FPMT) is widely used in high energy physics for its fast time response. The MCP-PMT Collaboration Group in China has successfully research and developed the LPMT for JUNO in 2019, and plan to research a new type of FPMT with multi-anode readout (4X4, 8X8). The FPMT prototypes have been produced with 30 ps time resolution, and also the 8X8 readout anode for the position resolution. We will introduce both of two type of PMTs used in high energy physics detectors.

Alternate track

1. Technology Applications and Industrial Opportunities

I read the instructions above

Yes

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