Contribution ID: **12** Type: **Oral/Presentation**

Remote: Study on the limited time performance of FPMT and SiPM under femtosecond laser

Thursday 21 November 2024 09:00 (18 minutes)

Photomultiplier tubes (PMTs) and silicon photomultiplier tubes (SiPMs) are advancing towards ultra-fast time resolution, high gain, and low noise, becoming highly sought-after photodetectors in the fields of medical imaging, bio-detection, and nuclear detection. To unveil the potential time resolution limits of ultra-fast PMTs(FPMT) and SiPMs, we will use a femtosecond laser as the light source to minimize the impact of pulse width on the time resolution of FPMT and SiPM, aiming to enhance the accuracy and precision of the experiments. Preliminary test results show that the ultimate time resolution of FPMT is less than 1 ps, which is an exciting result that will drive us to explore their time performance under extreme conditions, providing important insights for their applications in ultrafast optics, laser particle accelerators, biomedical imaging, and other fields.

Do you need a VISA letter for traveling to Canada ?

Yes

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Session Classification: Timing (Chair: Paolo Organtini, Maria Adriana Sabia)

Track Classification: Detectors: Timing