

HTPD 2018



Contribution ID : 224

Type : not specified

4.43 Fielding the Pulse-Dilation Photomultiplier Tube onto the Gas Cherenkov Detector at NIF WellIDIM3.9m

Monday, 16 April 2018 20:31 (120)

The third generation Gas Cherenkov Detector has helped characterize gamma reaction history, but the output signal has been restricted to ~ 100 ps by the temporal resolution of existing photomultiplier tube (PMT) technology. Replacing the existing photomultiplier tube with a newly fielded pulse-dilation photomultiplier tube (PD-PMT) has made it possible for the detector to further characterize implosion bang time and burn width given a refined resolution of ~ 10 ps. The mechanical design of the Phase II Gas Cherenkov Detector has integrated these modern photomultiplier tube capabilities with the original detector to reveal gamma reaction history features that have not been available in the past. This poster/paper will highlight the design challenges, methodologies, and solutions developed to implement this new technology onto the existing detector at NIF. LA-UR-18-20252

Primary author(s) : PEDERSON, Benjamin (Los Alamos National Laboratory)

Presenter(s) : PEDERSON, Benjamin (Los Alamos National Laboratory)

Session Classification : Session #4, Monday Night Poster Session