

# EE laser power scans, Thurs 15 March, 2019

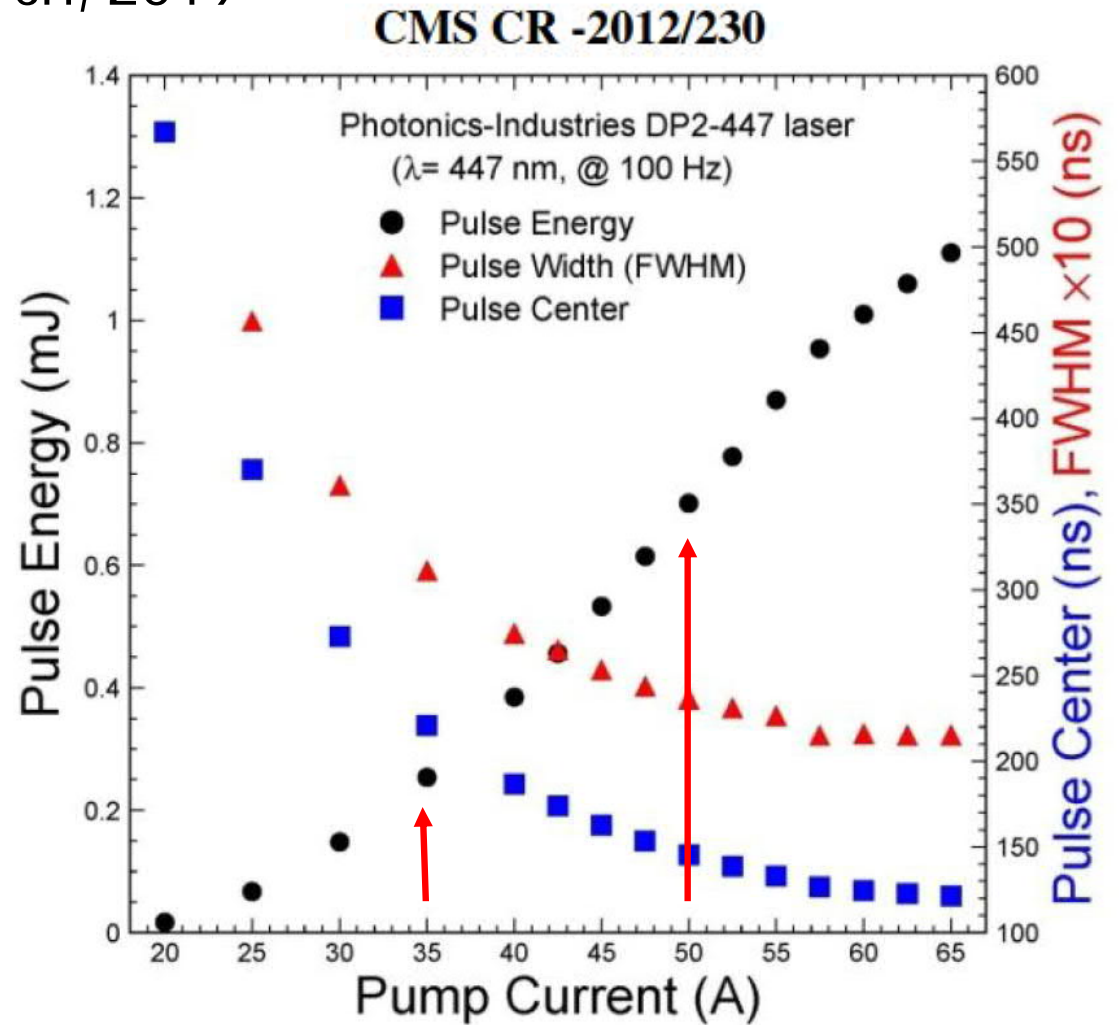
Laser power scan undertaken at 35 Amps, except for the single run at highest power, at 50 Amps.

Correct for the pulse energy non-linearity using Fig.7 of CR-2012/230.

Power at 35 A = 0.25 mJ

Power at 50 A = 0.7 mJ

⇒ Factor 2.8 more power “expected” at 50 A



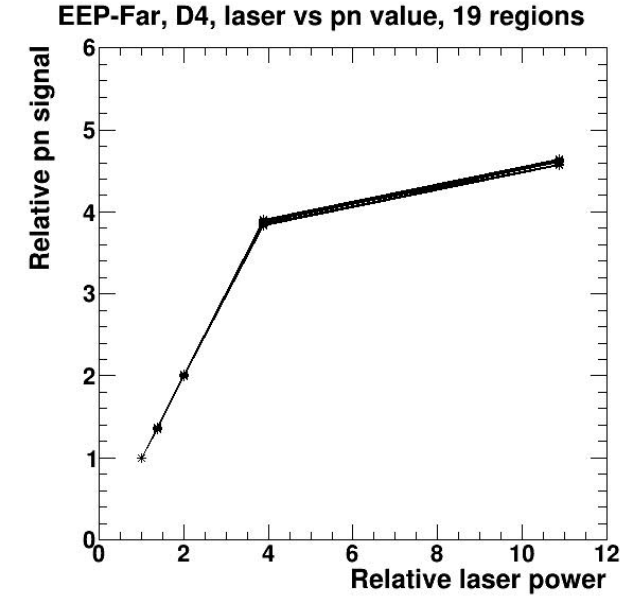
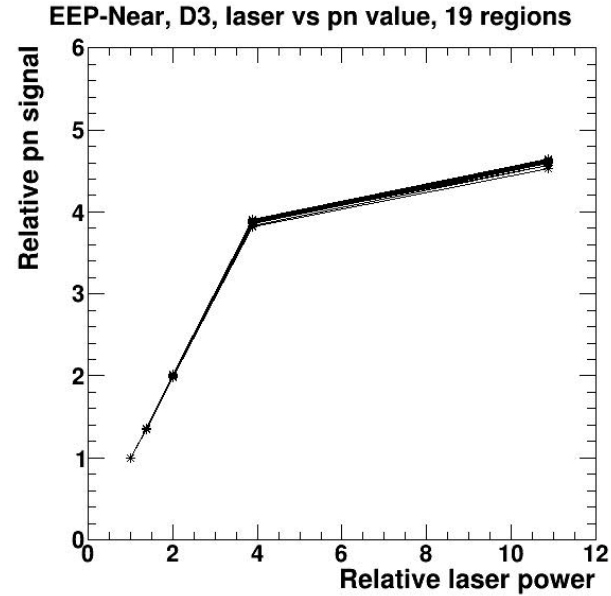
A Diode-Pumped DP2-447 Blue Laser for  
Monitoring CMS Lead Tungstate Crystals  
Calorimeter at the LHC

Liyuan Zhang for the CMS Collaboration

PN signal vs laser power

19 pn regions in each plot, D3 and D4

Relative values, wrt laser power = 1



DCC amplitude signal vs laser power

1 channel from each pn region

19 channels in each plot, D3 and D4

Relative values, wrt laser power = 1

For all plots, good correlation up to relative laser power = 3.9.

NOT a good correlation to laser power at 50 A, the last point.

