

the forward photon detector system

Borysova Maryna (KINR)

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LUXE weekly technical meetings

The logo for the LUXE experiment, featuring the word "LUXE" in a bold, blue, sans-serif font. The letter "X" is stylized with a white star-like symbol in the center.

Compton rates

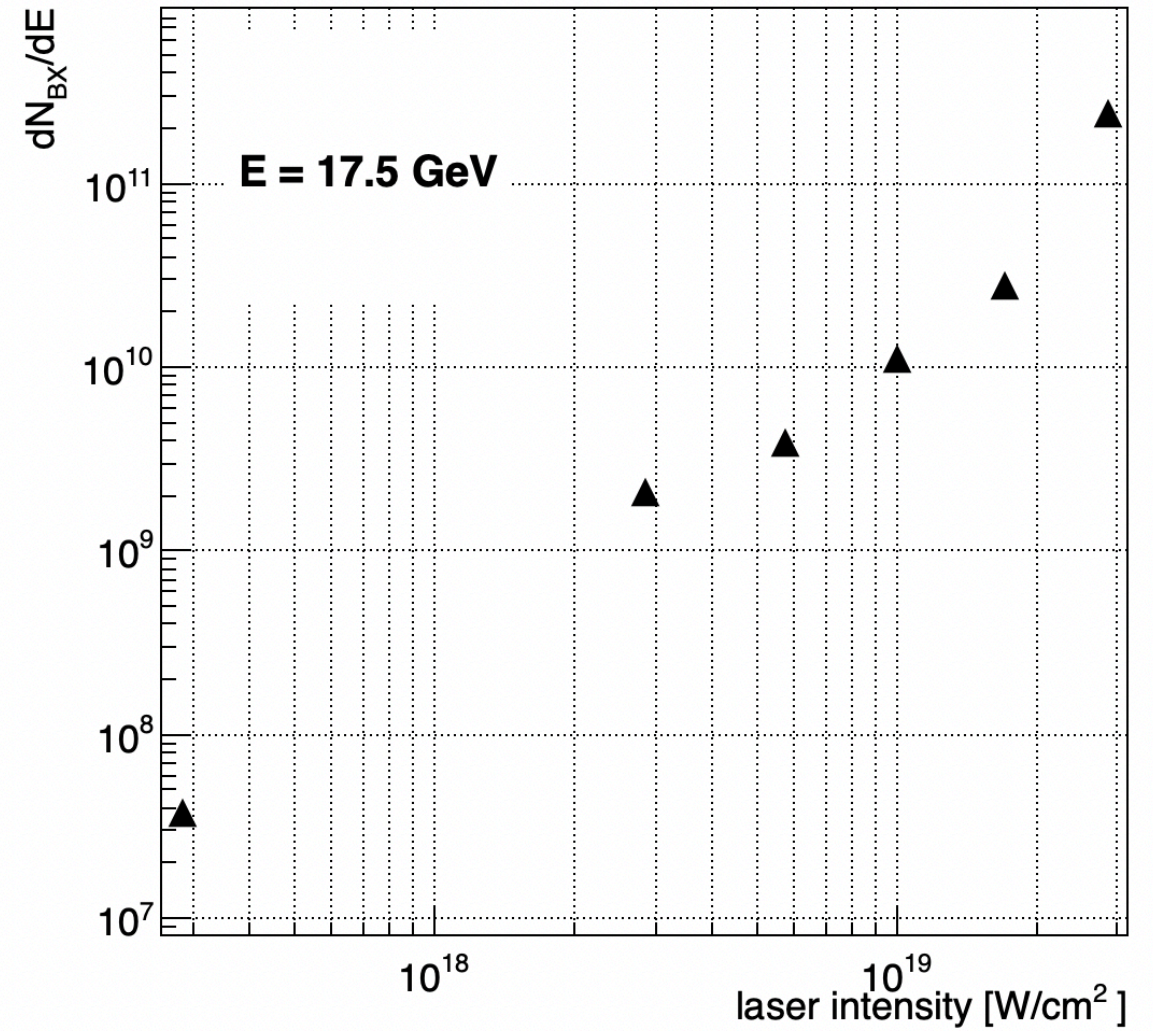
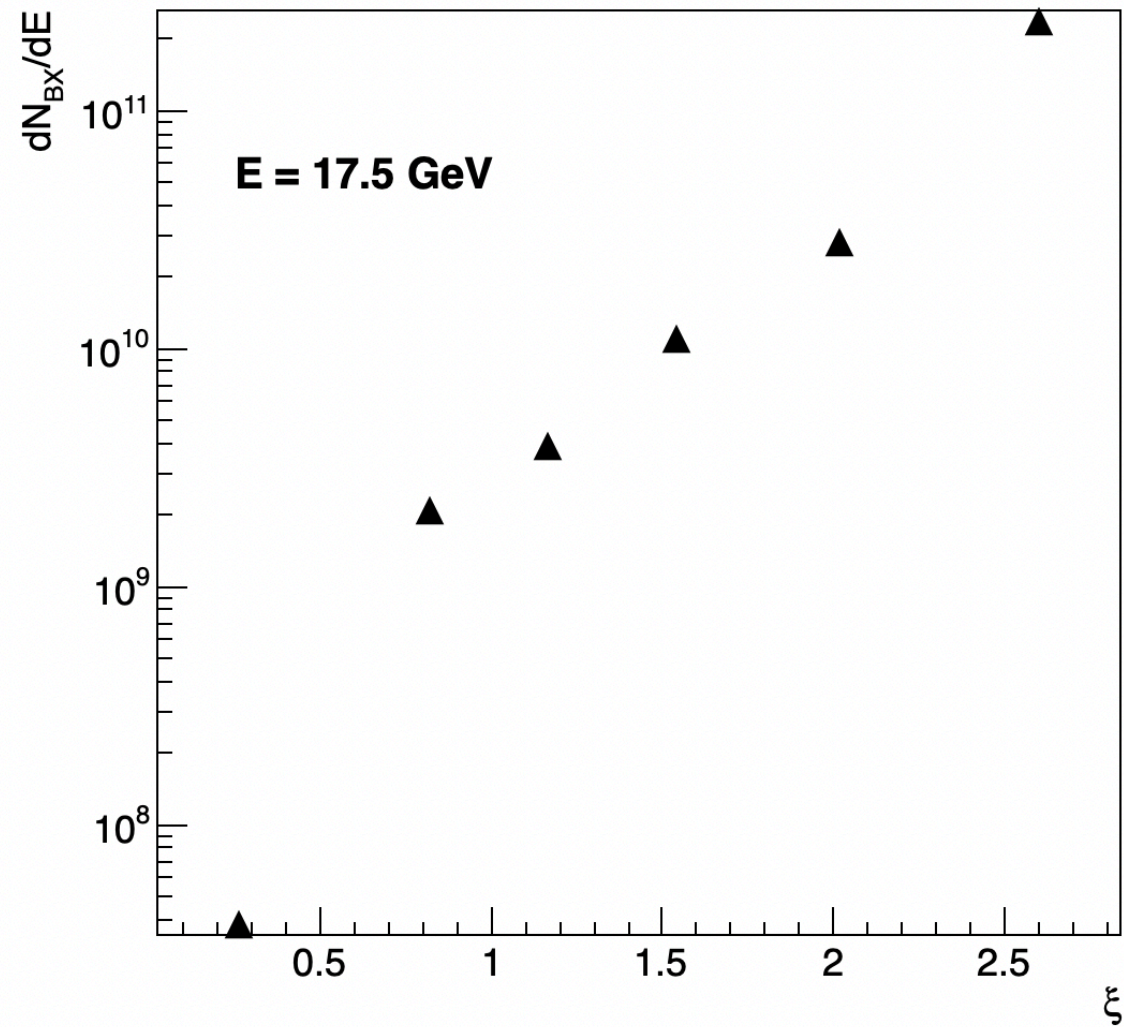
Pulse peak E, J	xi	N of photons in 10000 BX	weight	rate per BX
0.01	0.26	63753	$6.0 \cdot 10^6$	$3.8 \cdot 10^7$

Pulse peak E, J	xi	N of photons in 1000 BX	weight	rate per BX
0.1	0.82	348682	$6.0 \cdot 10^6$	$2.1 \cdot 10^9$
0.2	1.16	643596	$6.0 \cdot 10^6$	$3.9 \cdot 10^9$
0.35	1.54	1881691	$6.0 \cdot 10^6$	$1.12 \cdot 10^{10}$

xi, J / Pulse peak RMS	N of photons in 1000 BX	weight	rate per BX
0.6 / 2.02	389938	$6.0 \cdot 10^6$ && 0.1	$2.8 \cdot 10^{10}$
0.6	126674	0.1	12.67
0.6	4737459	$6.0 \cdot 10^6$	$2.8 \cdot 10^{10}$

xi, J / Pulse peak RMS	N of photons in 100 BX	weight	rate per BX
1.0 / 2.6	4334574	$6.0 \cdot 10^6$ && 1.00	$2.4 \cdot 10^{11}$
1.0	321775	1.00	3217.8
1.0	4012799	$6.0 \cdot 10^6$	$2.4 \cdot 10^{11}$

Number of photons vs ξ



Back up

Trident rates

xi, J	N of positrons in 1000 BX	weight	rate per BX
0.1	0		0
0.2	4	0.01	$4 \cdot 10^{-5}$
0.2	42	0.001	$4.2 \cdot 10^{-5}$
0.35	621	0.01	$0.6 \cdot 10^{-2}$
0.6	4582	0.1	0.46

xi, J	N of positrons in 100 BX	weight	rate per BX
1.0	6107	1.0	61.07