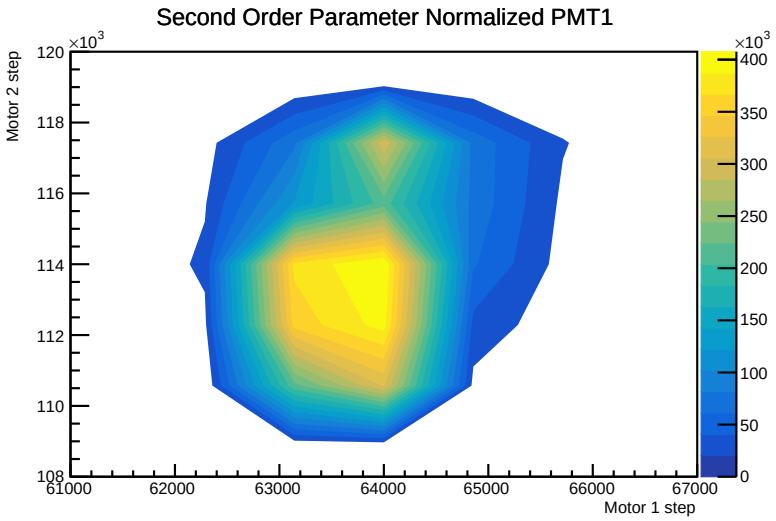
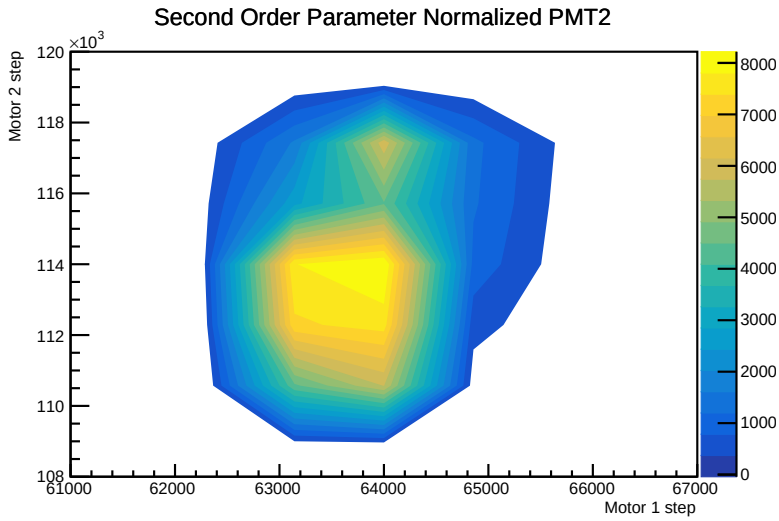
Topological evidence of beamstrahlung.

Presented here are averaged data taken during the period April 28-May 22, 2021. In a 84 point lattice, the fit for a beastrahlung signal is done for each point, and a signal strength heat map extracted. The beamstrahlung spot comes from a very small region, and passes through a vacuum mirror that produces square spots of sizes between 6.2 and 6.9 mm at the second collimator.

Only data for Electron UP are presented, because it had a non-saturated signal, and a 8 mm second collimator. Electron DOWN had a 19 mm collimator and no shape can be resolved. Positron UP had a 8mm collimator but its signal is saturated.


Second Order Parameter Normalized PMT1
Motor 2 step
Motor 1 step
×10^3
120
118
116
114
112
110
108
61000
62000
63000
64000
65000
66000
67000
400
350
300
250
200
150
100
50
0


Second Order Parameter Normalized PMT2
Motor 2 step
Motor 1 step
×10^3
120
118
116
114
112
110
108
61000
62000
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64000
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66000
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8000
7000
6000
5000
4000
3000
2000
1000
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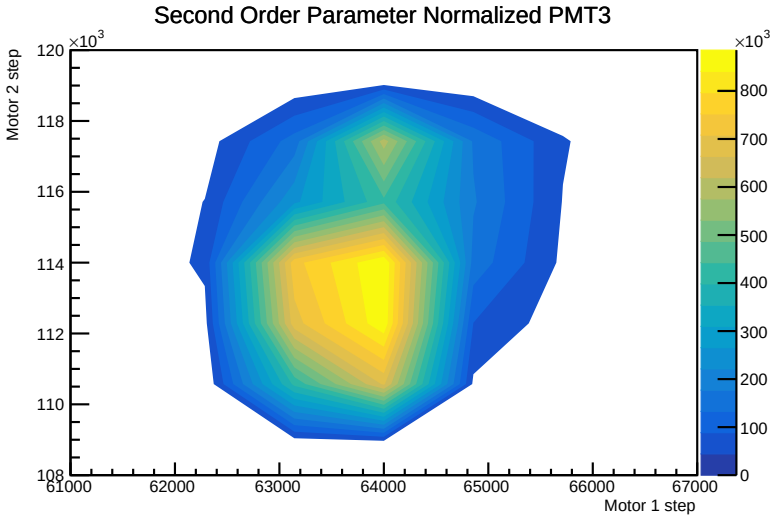
Second Order Parameter Normalized PMT3
Motor 2 step
Motor 1 step
×10^3
120
118
116
114
112
110
108
61000
62000
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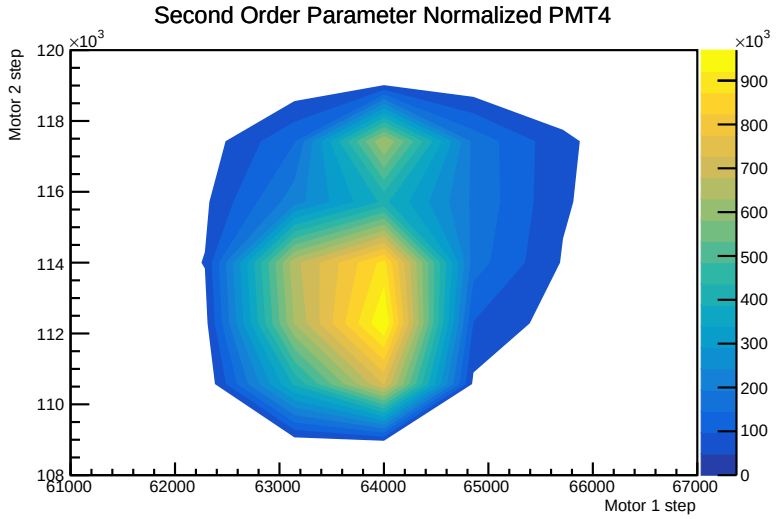
65000
66000
67000
800
700
600
500
400
300
200
100
0


Second Order Parameter Normalized PMT4
Motor 2 step
Motor 1 step
×10^3
120
118
116
114
112
110
108
61000
62000
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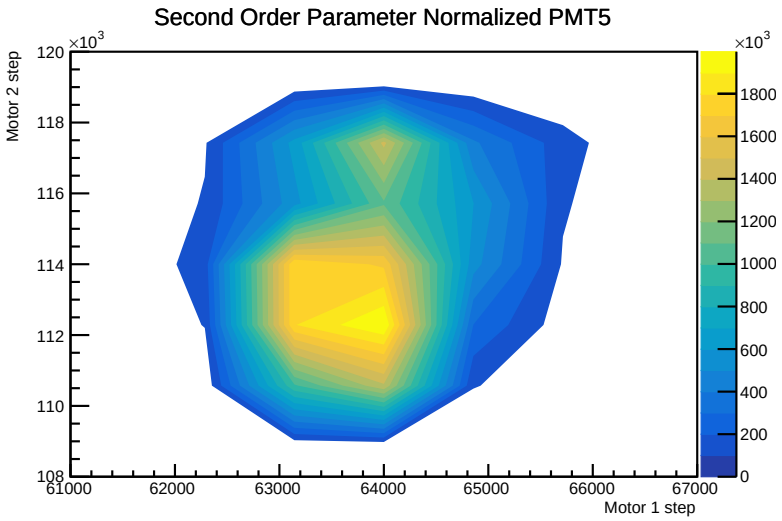
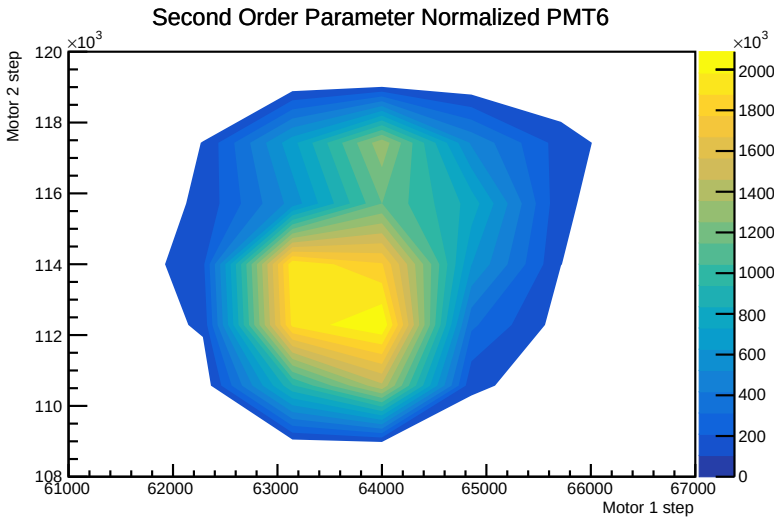
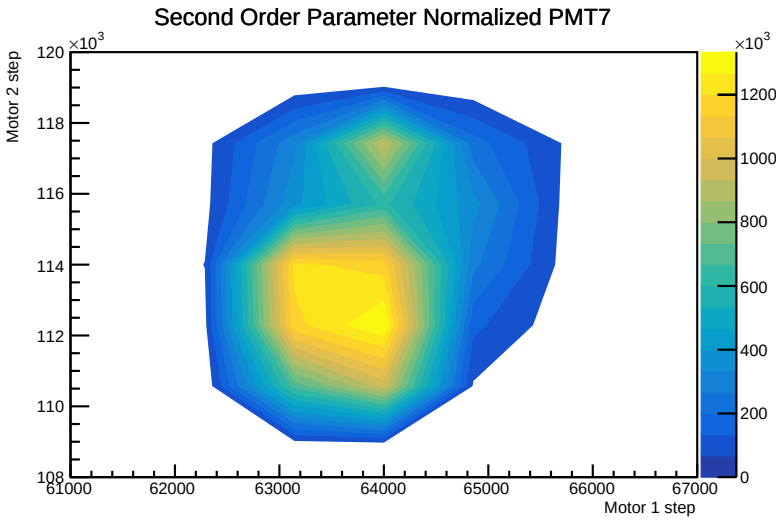
65000
66000
67000
900
800
700
600
500
400
300
200
100
0


Second Order Parameter Normalized PMT5
Motor 2 step
Motor 1 step
×10^3


Second Order Parameter Normalized PMT6
Motor 2 step
Motor 1 step
×10^3


Second Order Parameter Normalized PMT7
Motor 2 step
Motor 1 step
×10^3


Second Order Parameter Normalized PMT8
Motor 2 step
Motor 1 step
×10^3