

PRad HyCal Calibration Update

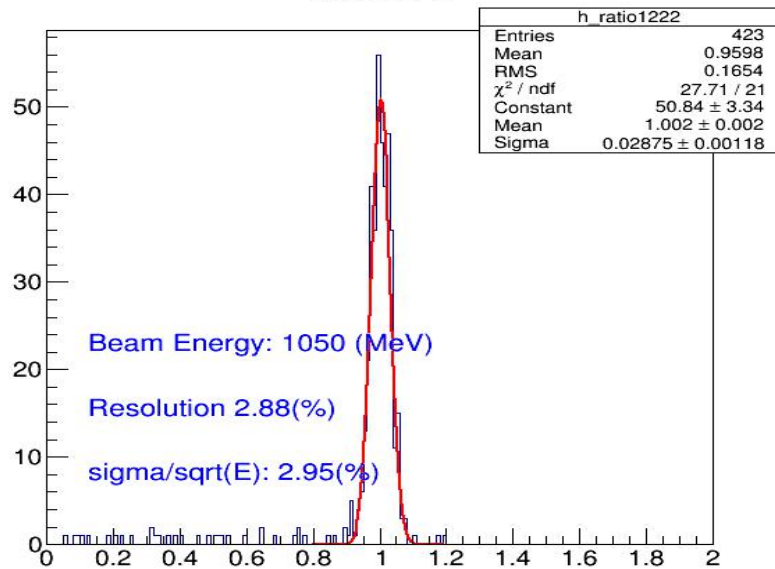
PRad weekly meeting

Li Ye

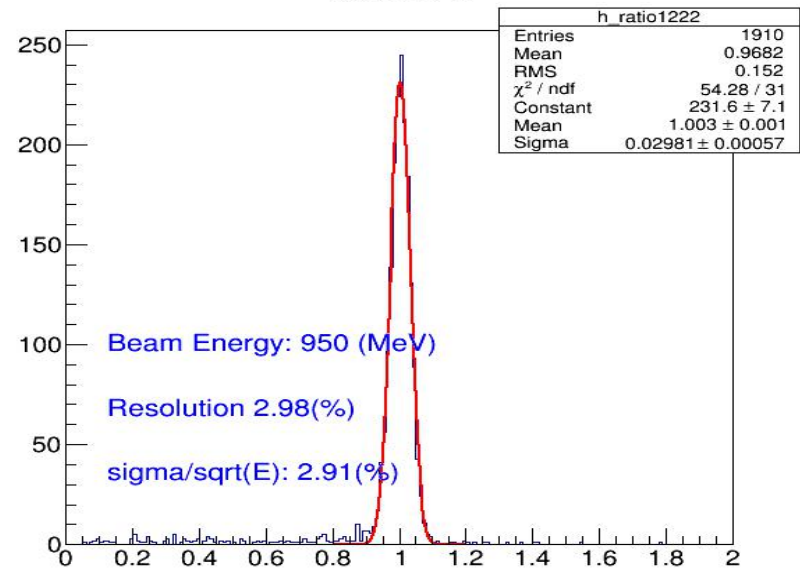
Mississippi State University

2016-09-23

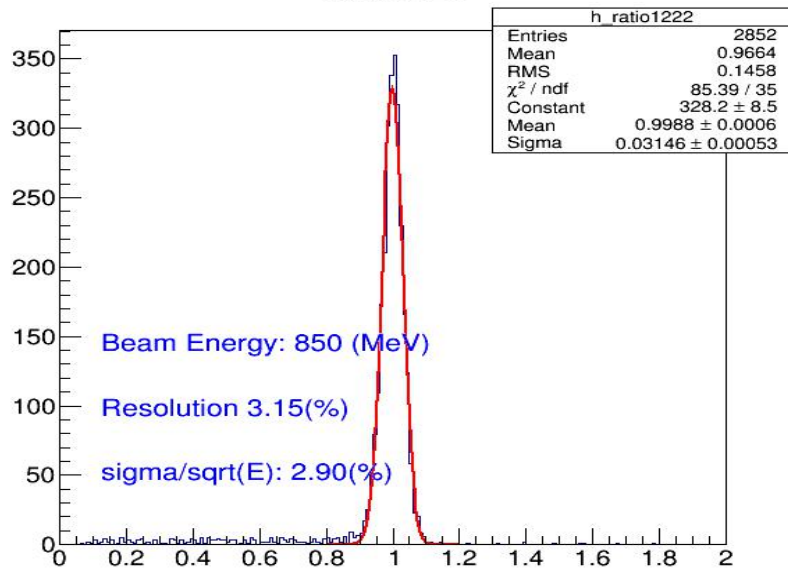
ratio1222



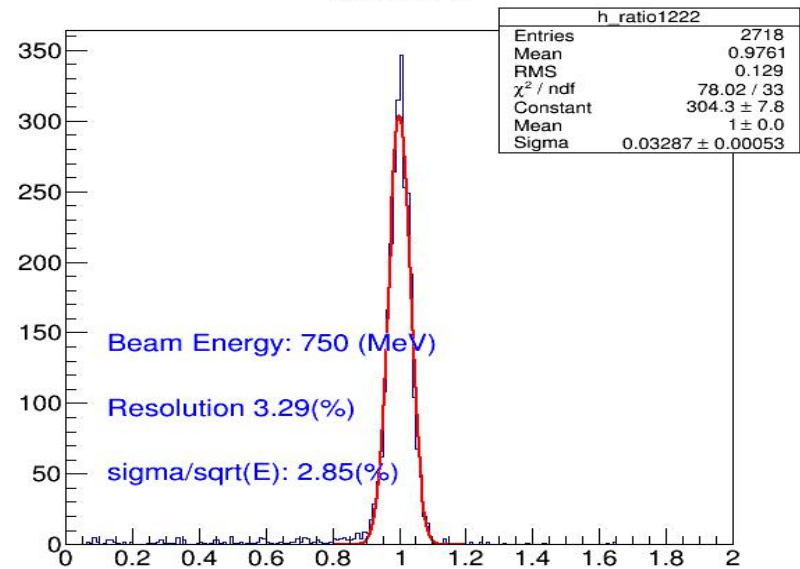
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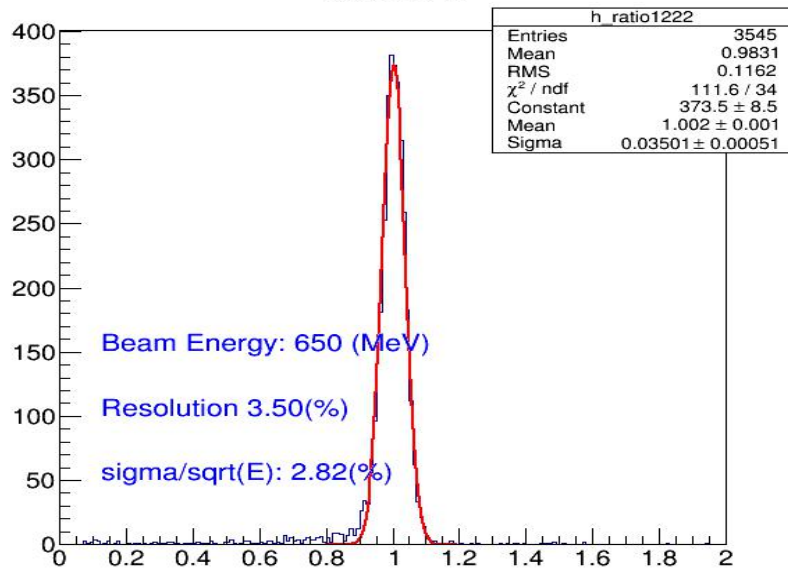
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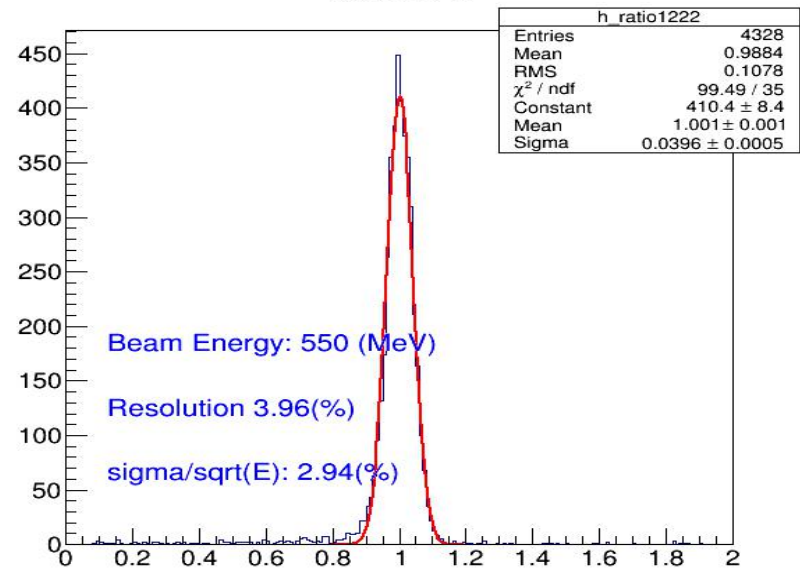
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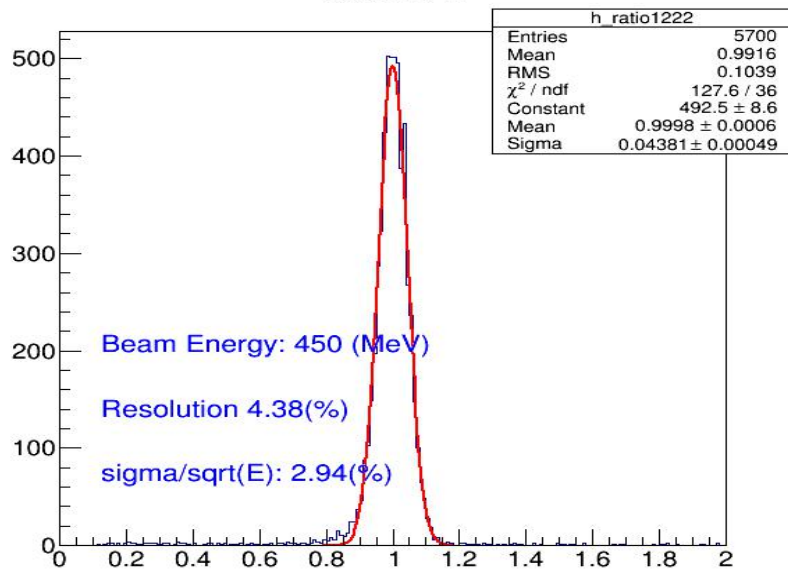
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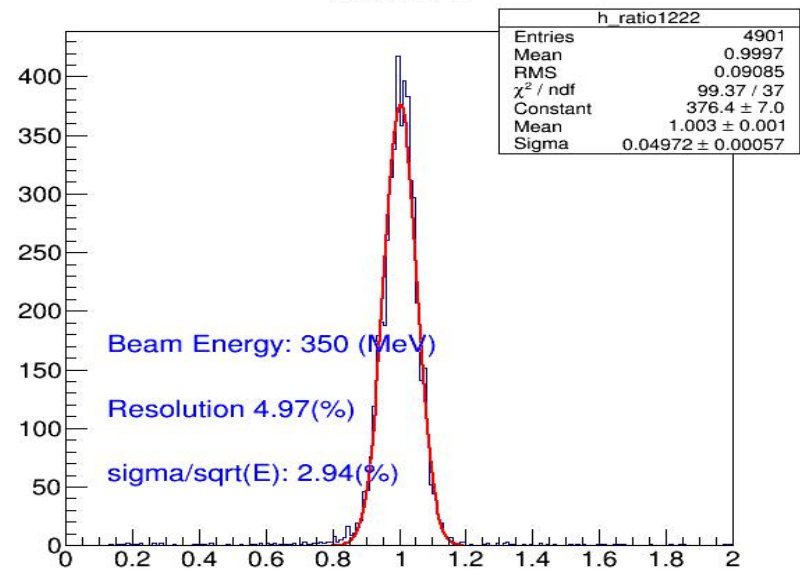
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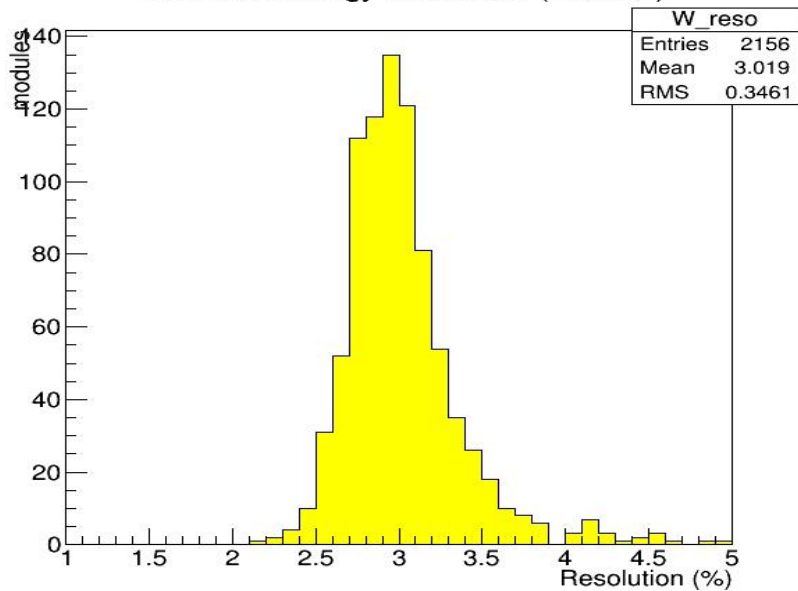
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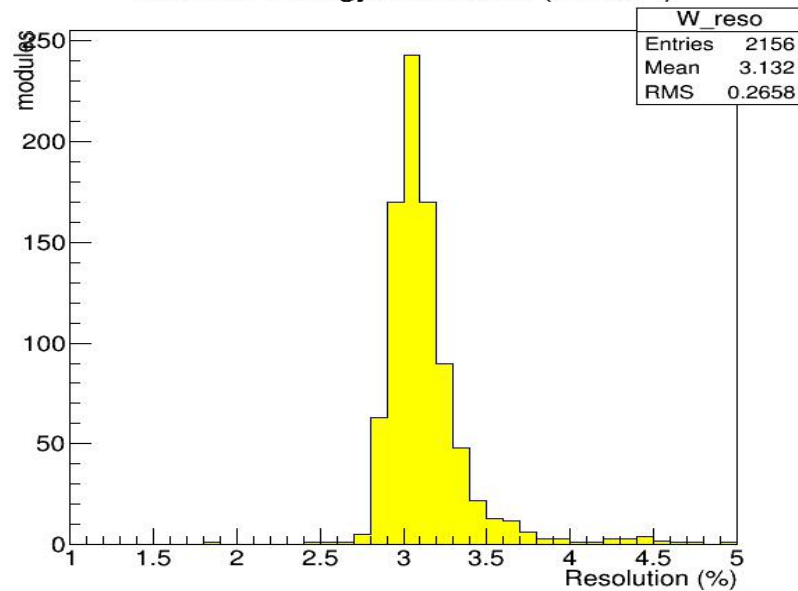
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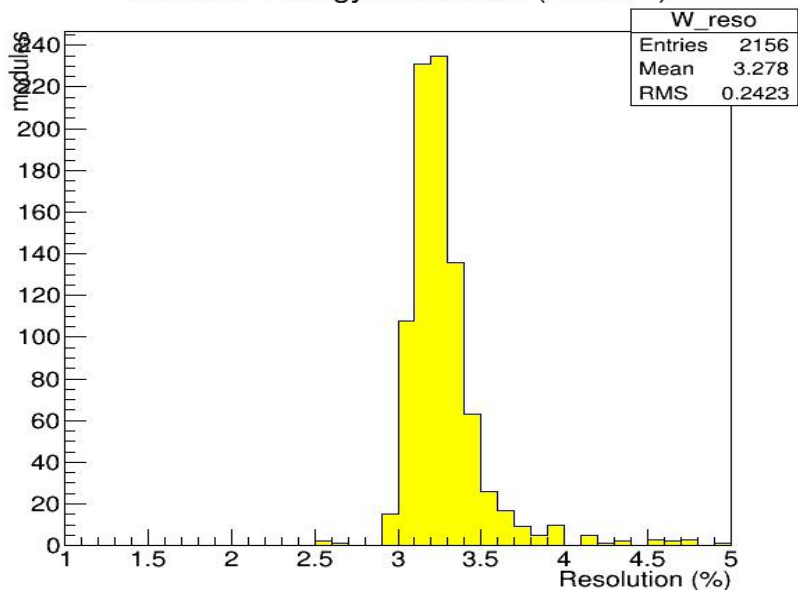
1050 MeV Energy Resolution (PbWO4)



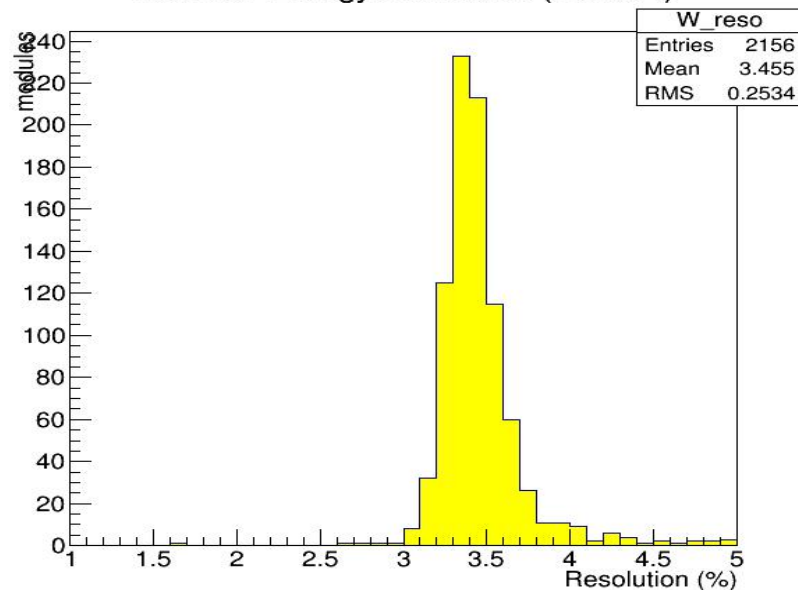
950 MeV Energy Resolution (PbWO4)



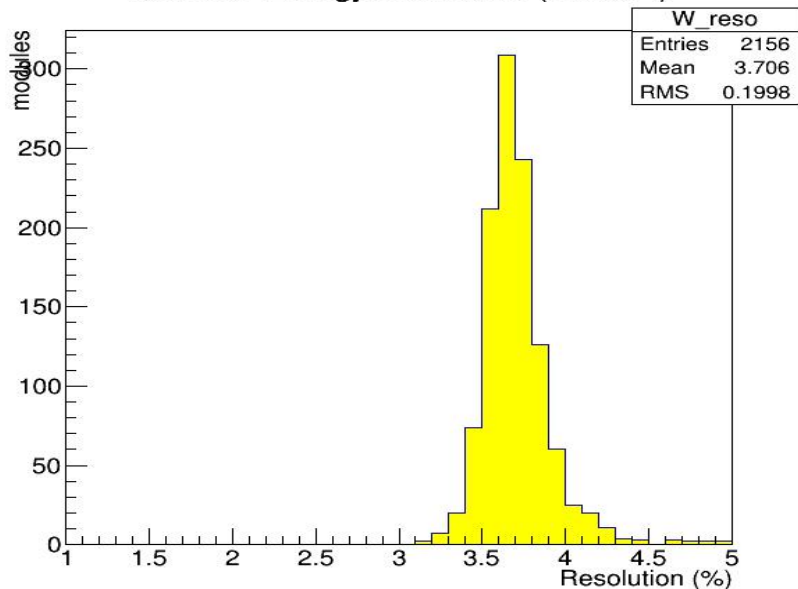
850 MeV Energy Resolution (PbWO4)



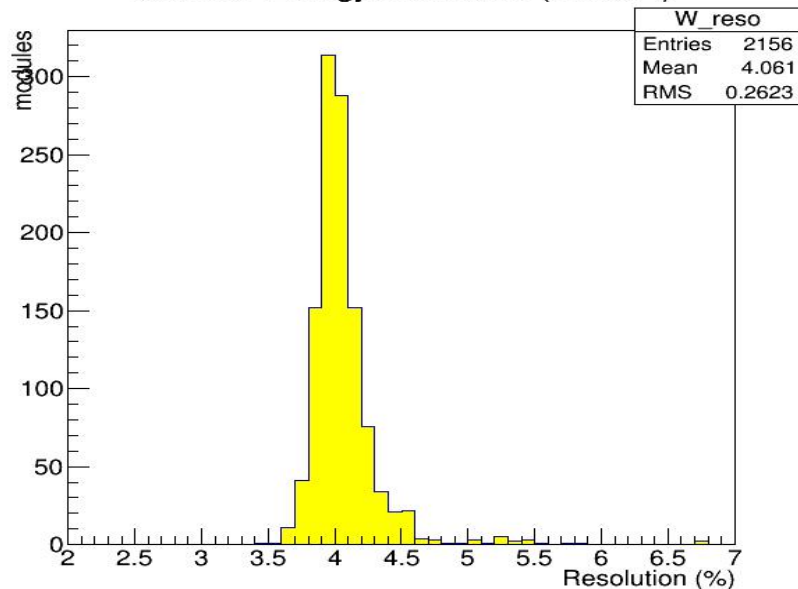
750 MeV Energy Resolution (PbWO4)



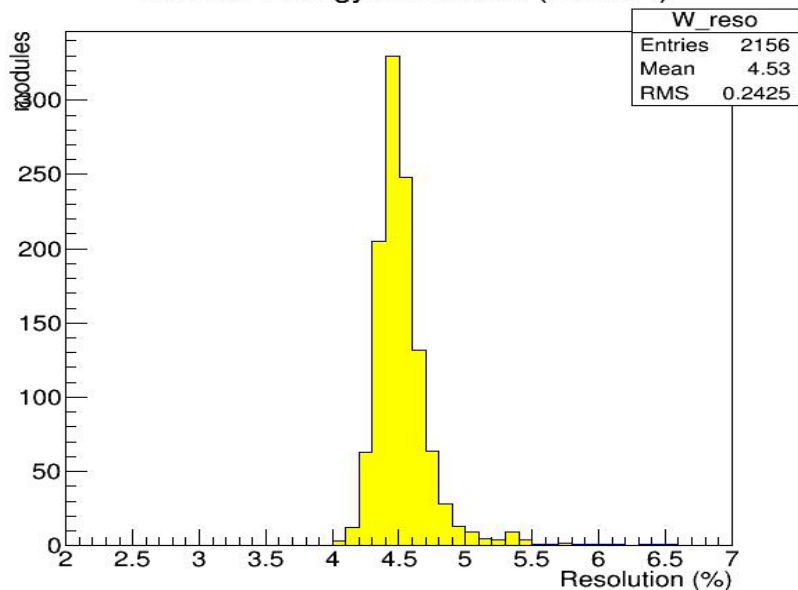
650 MeV Energy Resolution (PbWO4)



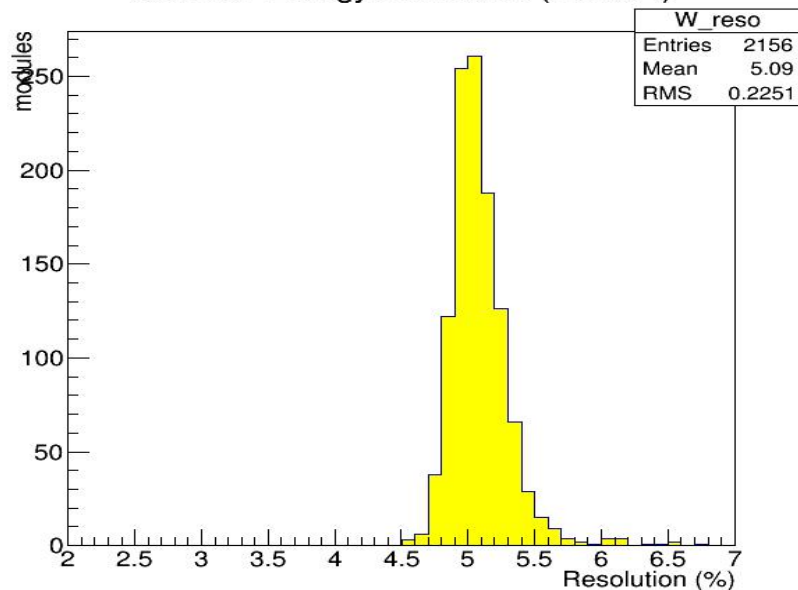
550 MeV Energy Resolution (PbWO4)



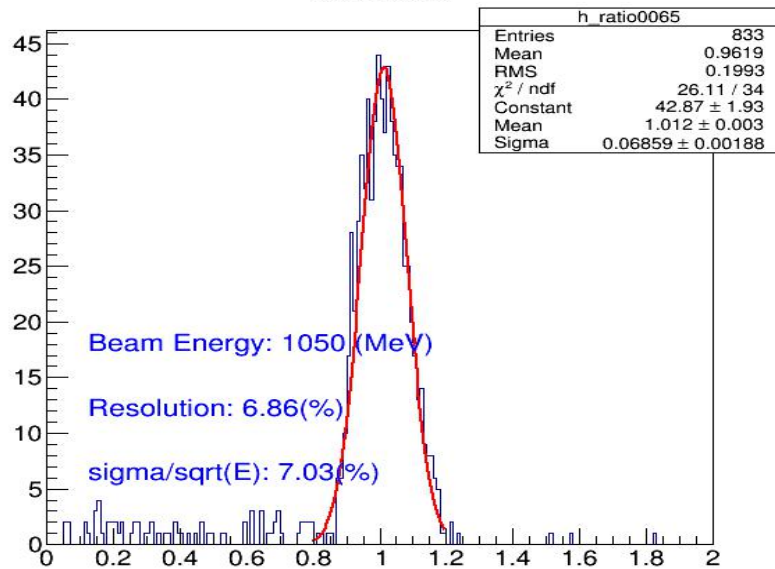
450 MeV Energy Resolution (PbWO4)



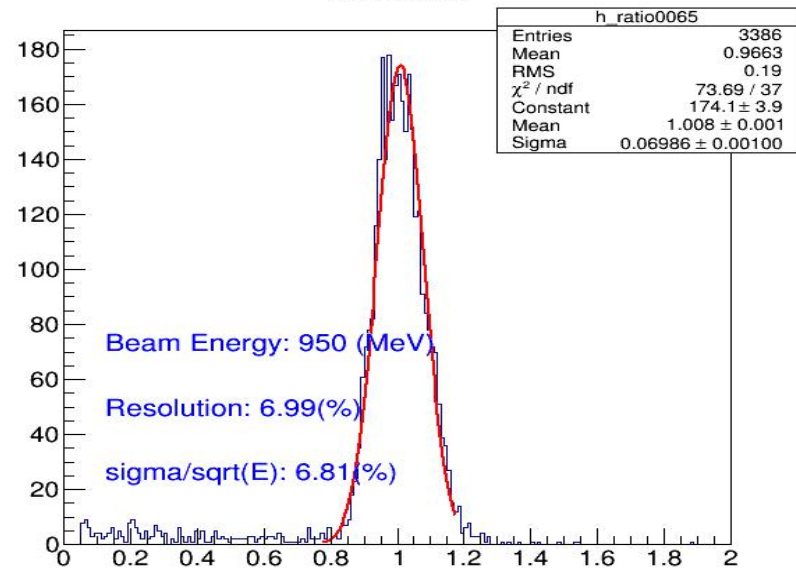
350 MeV Energy Resolution (PbWO4)



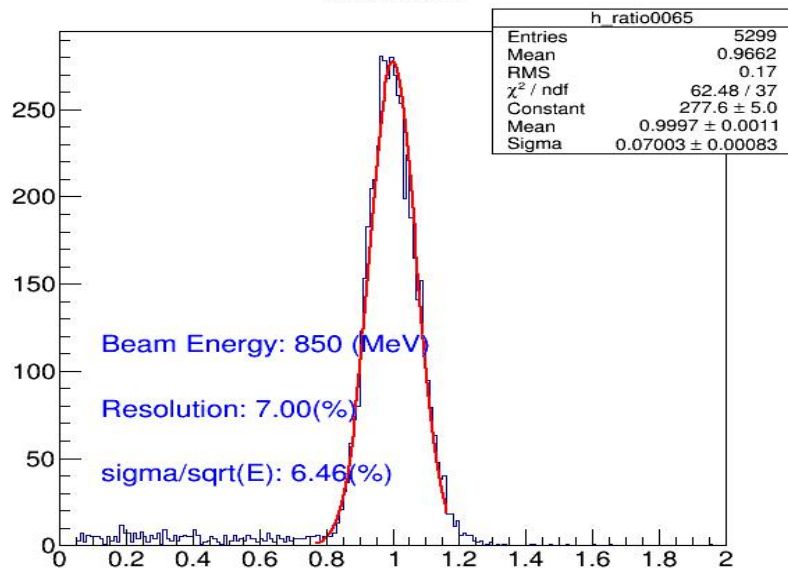
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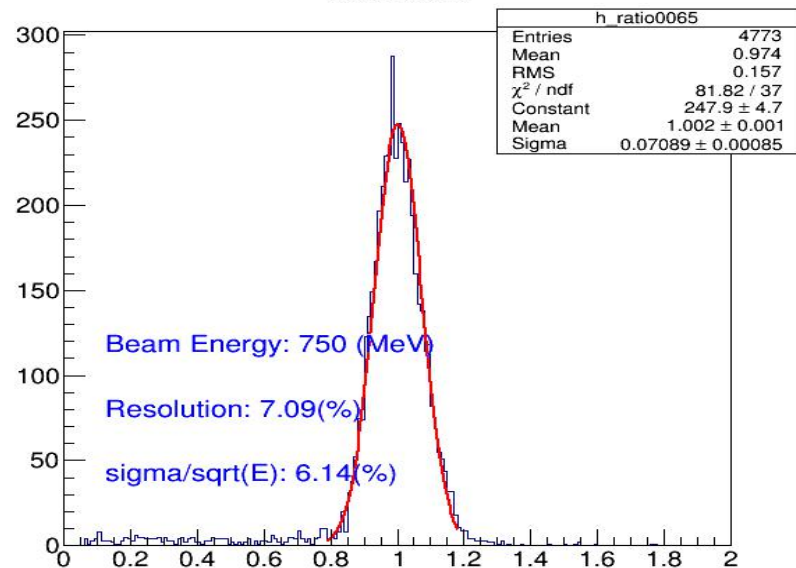
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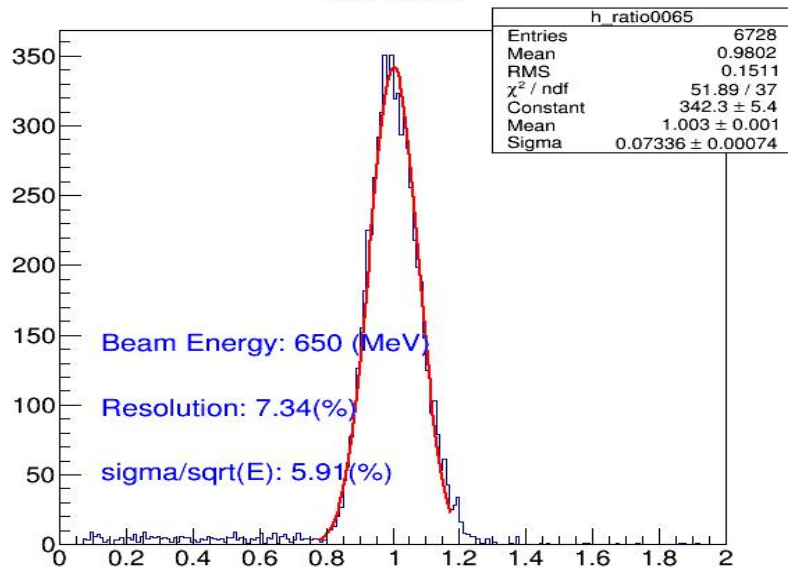
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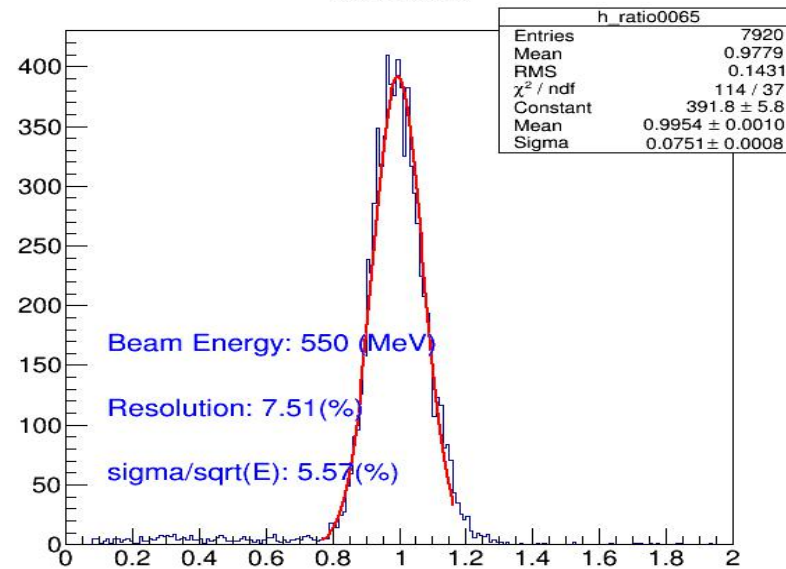
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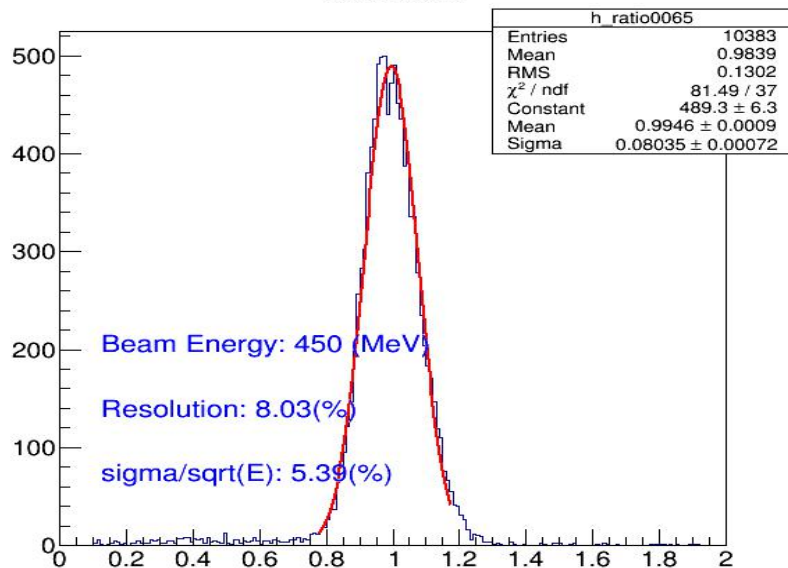
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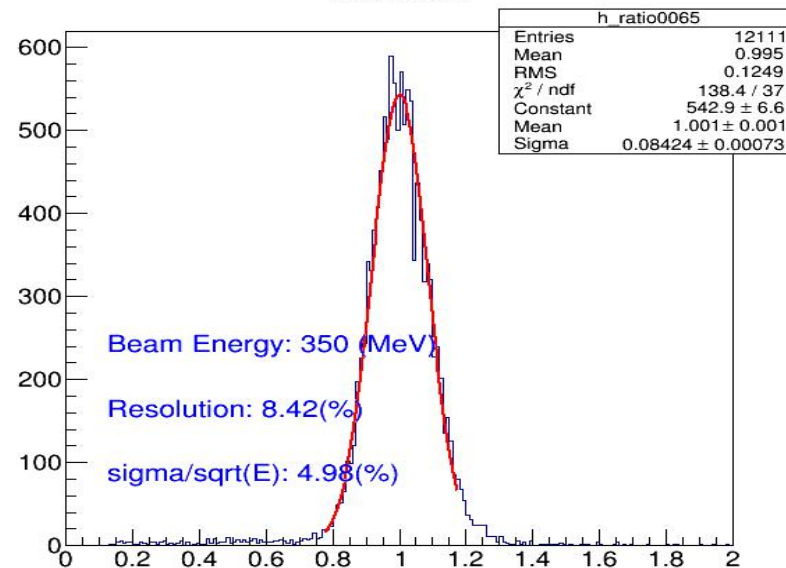
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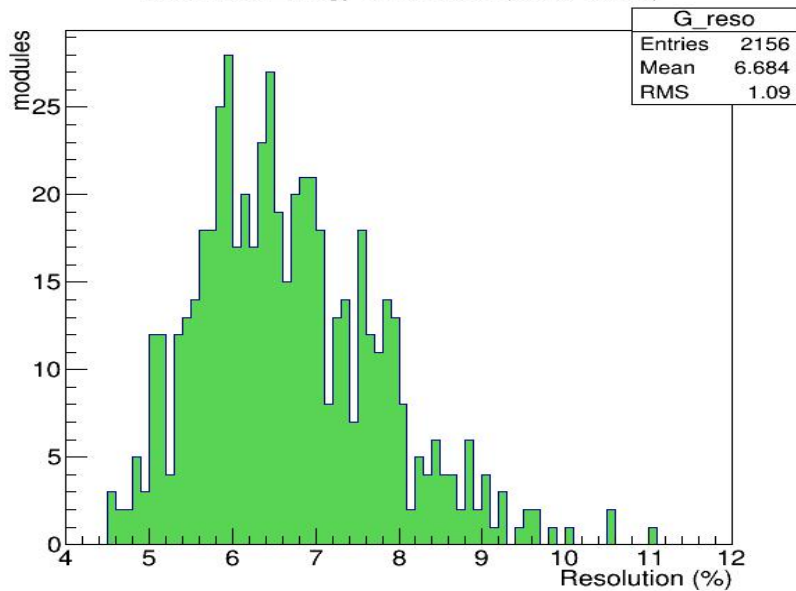
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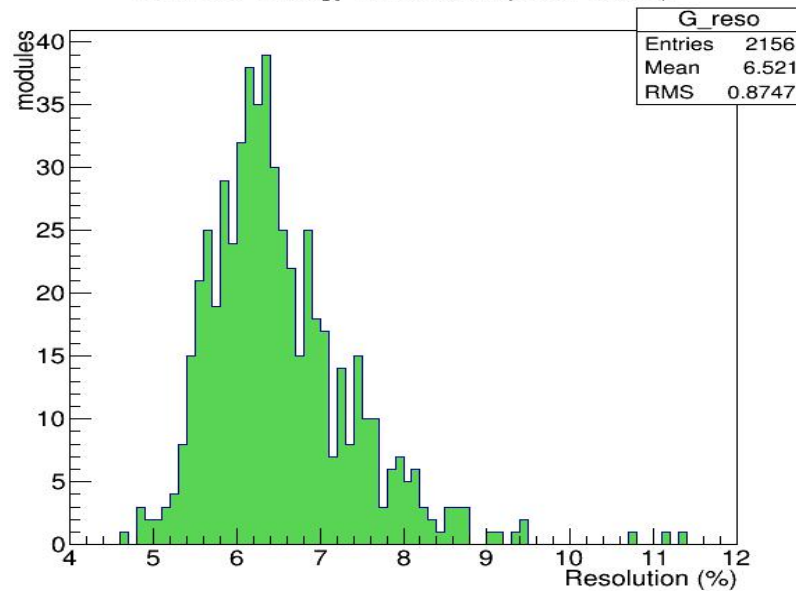
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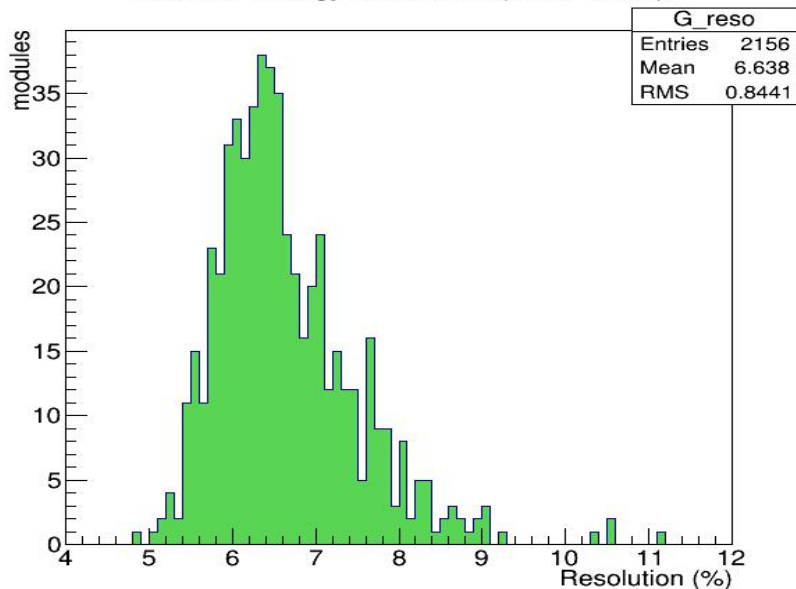
1050 Mev Energy Resolution (Lead Glass)



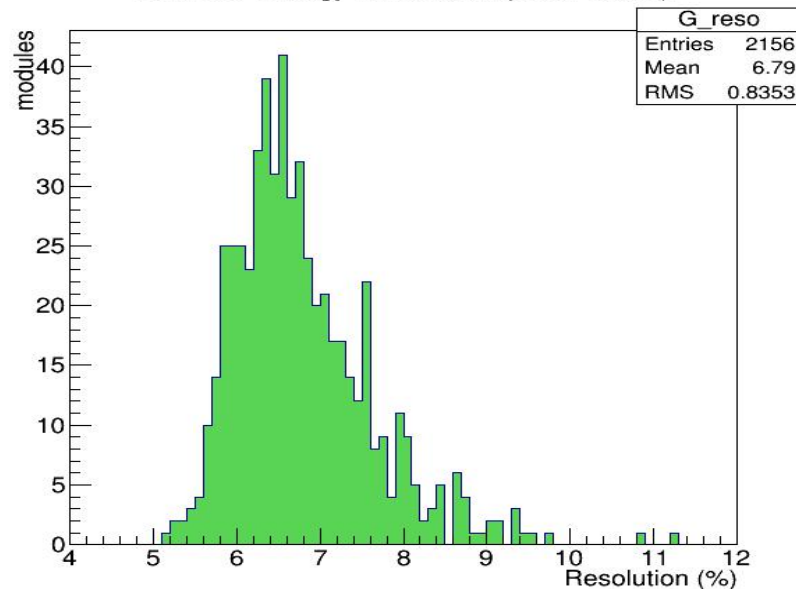
950 Mev Energy Resolution (Lead Glass)



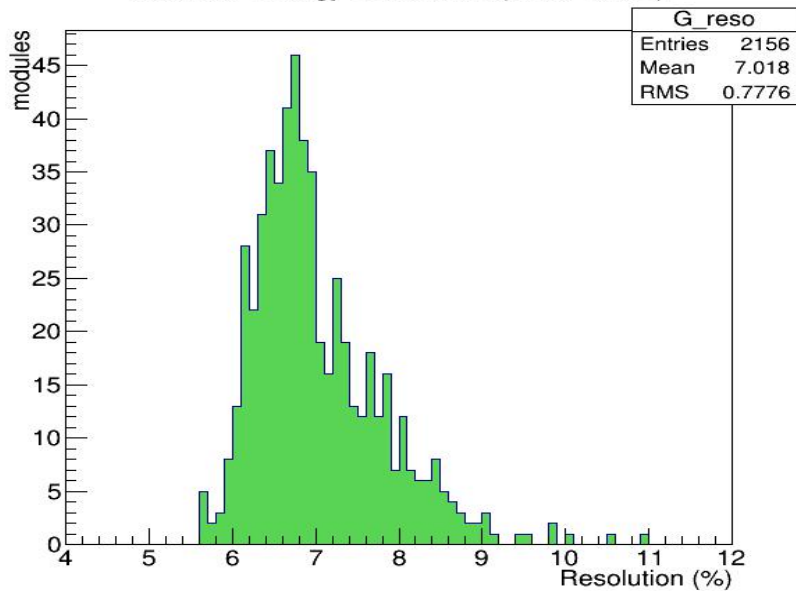
850 Mev Energy Resolution (Lead Glass)



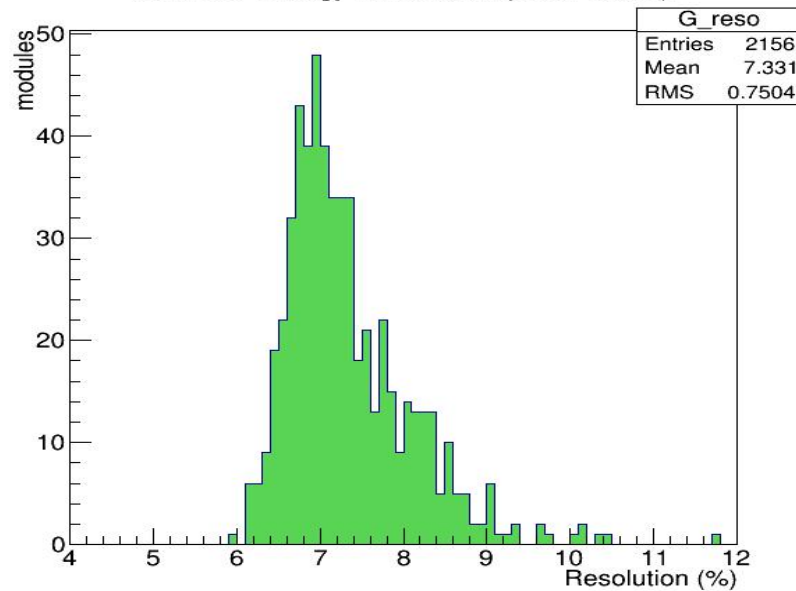
750 Mev Energy Resolution (Lead Glass)



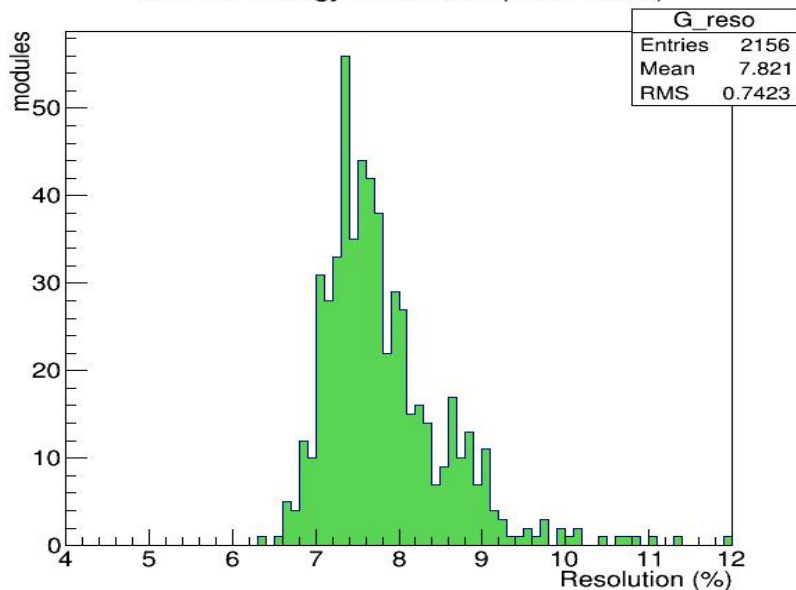
650 Mev Energy Resolution (Lead Glass)



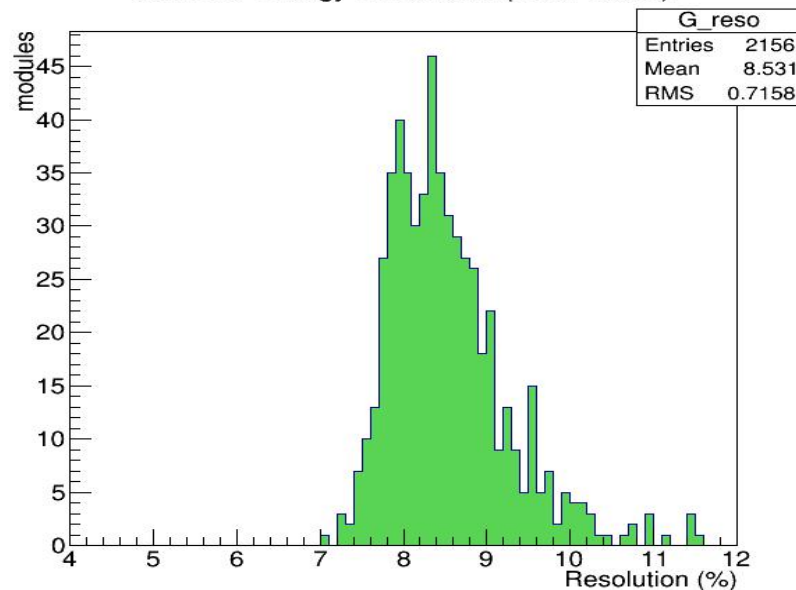
550 Mev Energy Resolution (Lead Glass)



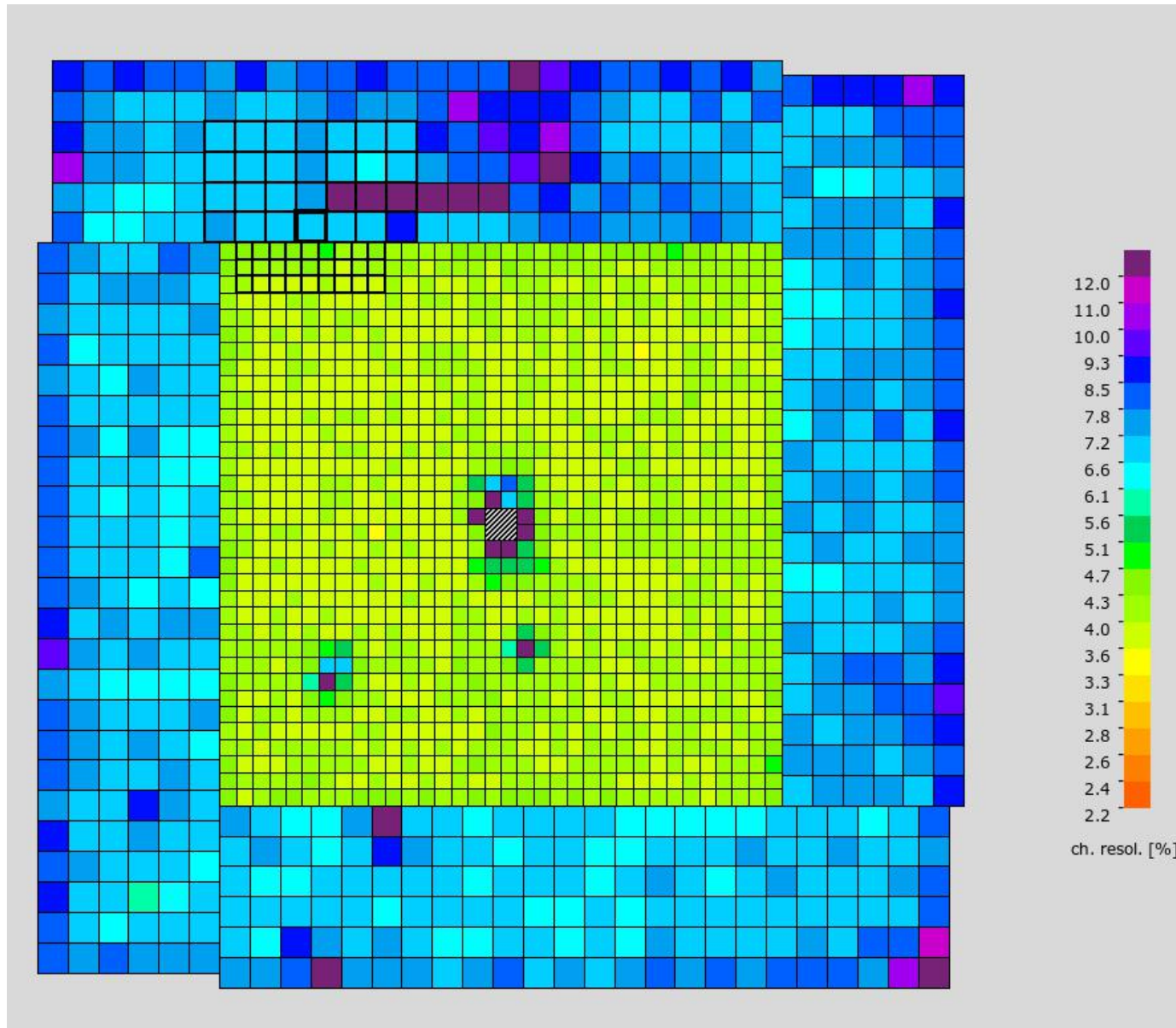
450 Mev Energy Resolution (Lead Glass)



350 Mev Energy Resolution (Lead Glass)

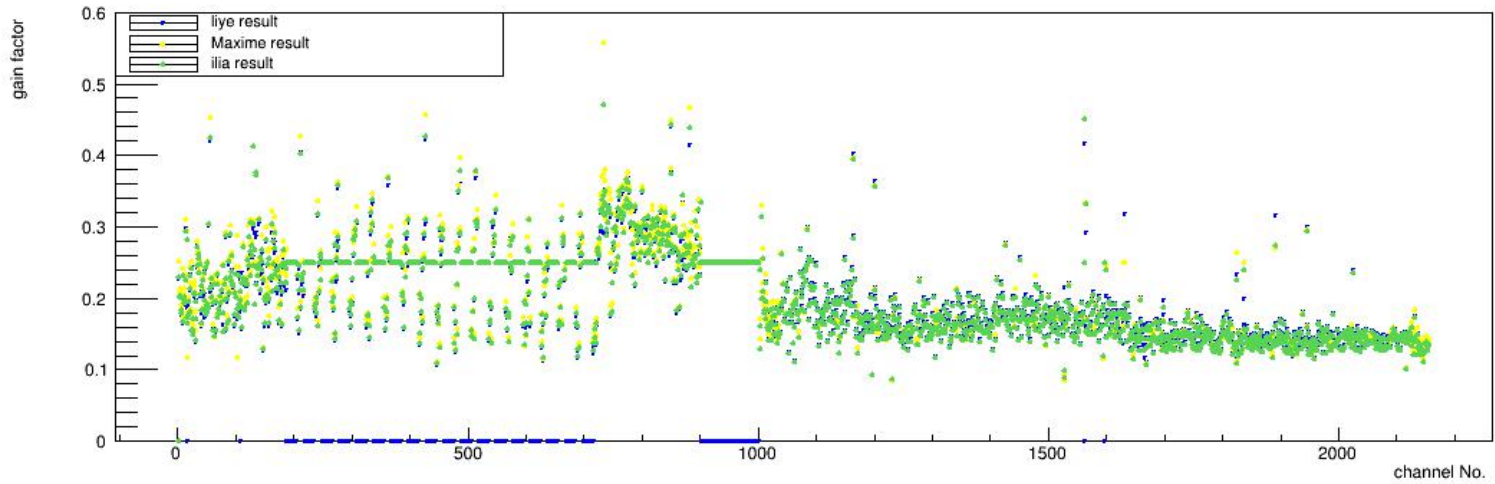


Energy Resolution Map @550MeV

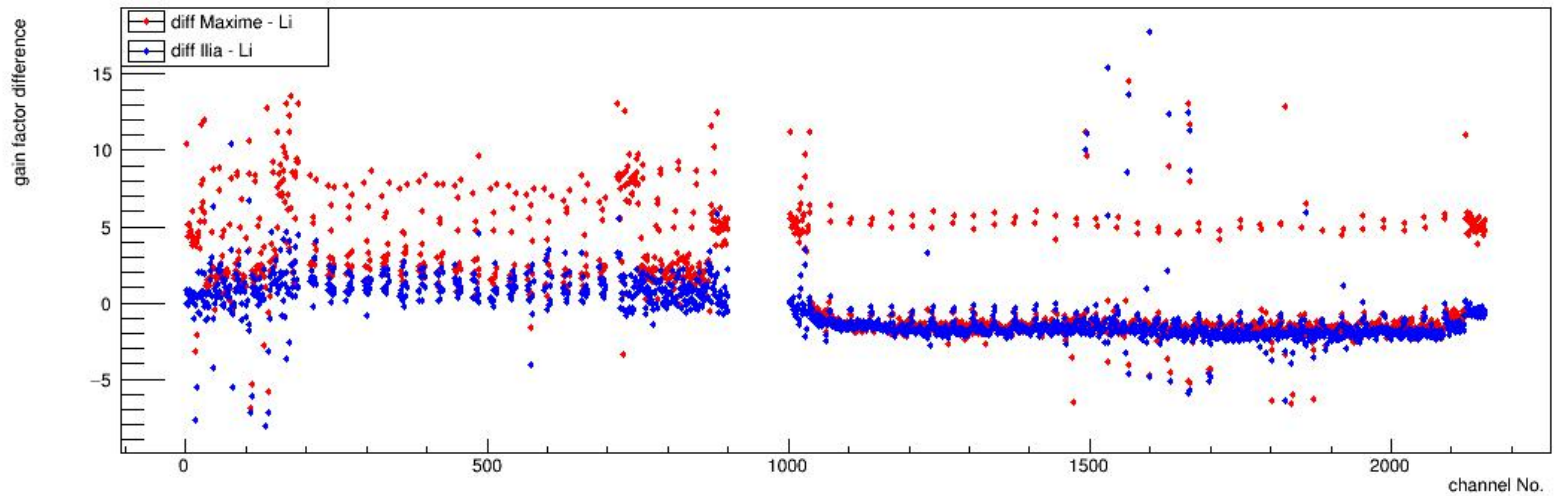


gain factor results

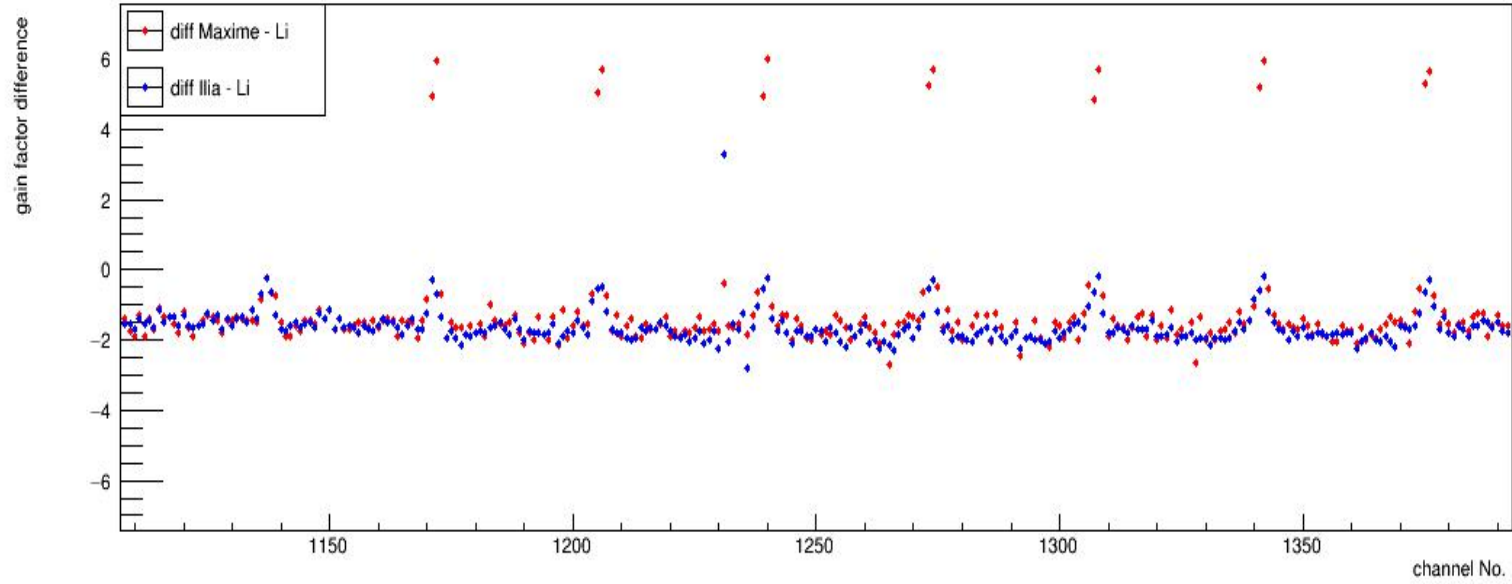
gain factors for snake run

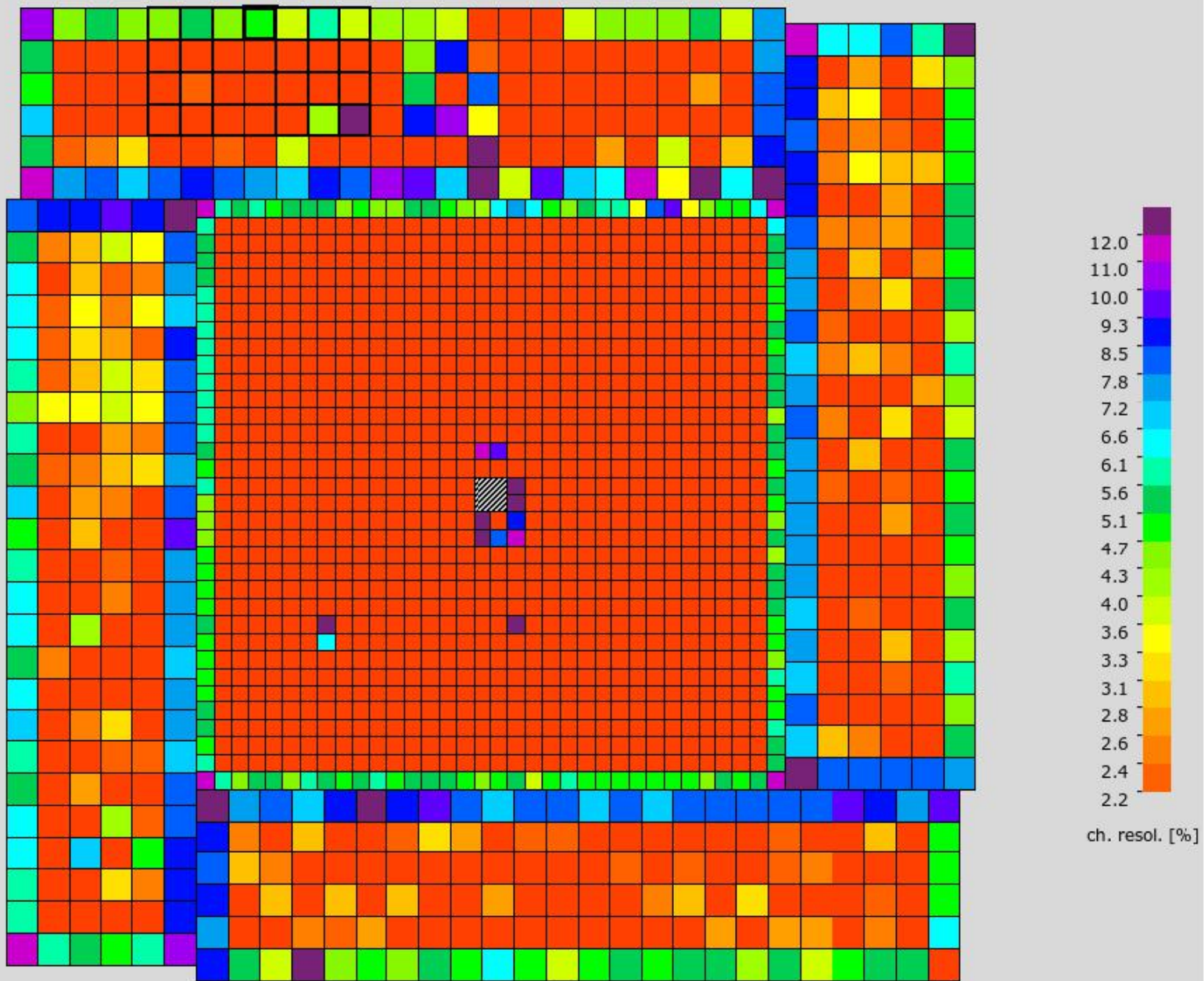


$$\text{diff} = 100 * (\text{Maxime}(\text{Ilia}) - \text{Li}) / \text{Li}$$



$$\text{diff} = 100 * (\text{Maxime}(\text{I}ia) - \text{Li}) / \text{Li}$$





- ✓ Maxime and ilia results agree with each other very well except transition region and edge region.
- ✓ Li result have average 1.5% difference, due to the 10MeV digitization (ilia using 0.1MeV)

✓