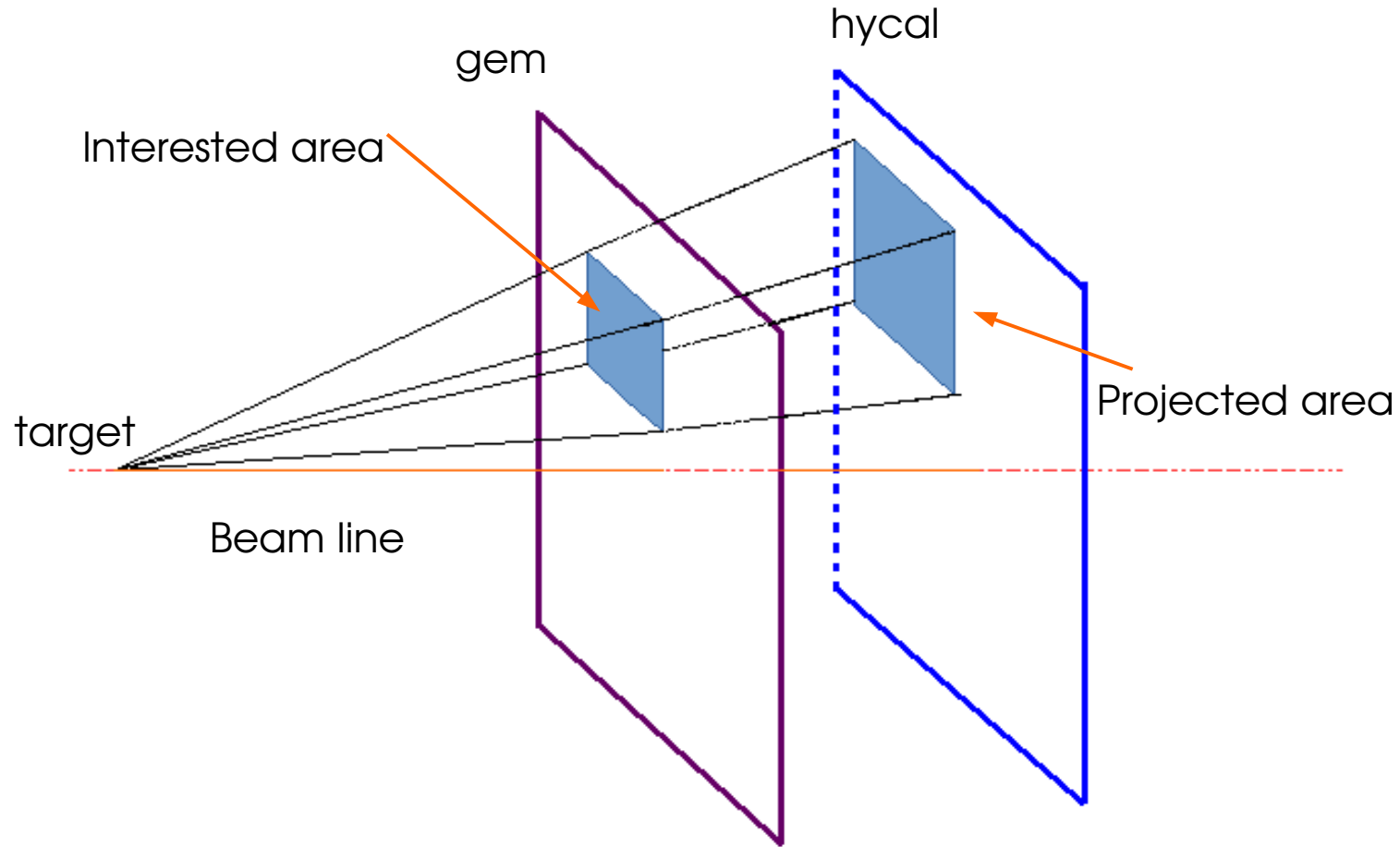


Short Check of Matching
between HyCal and GEM

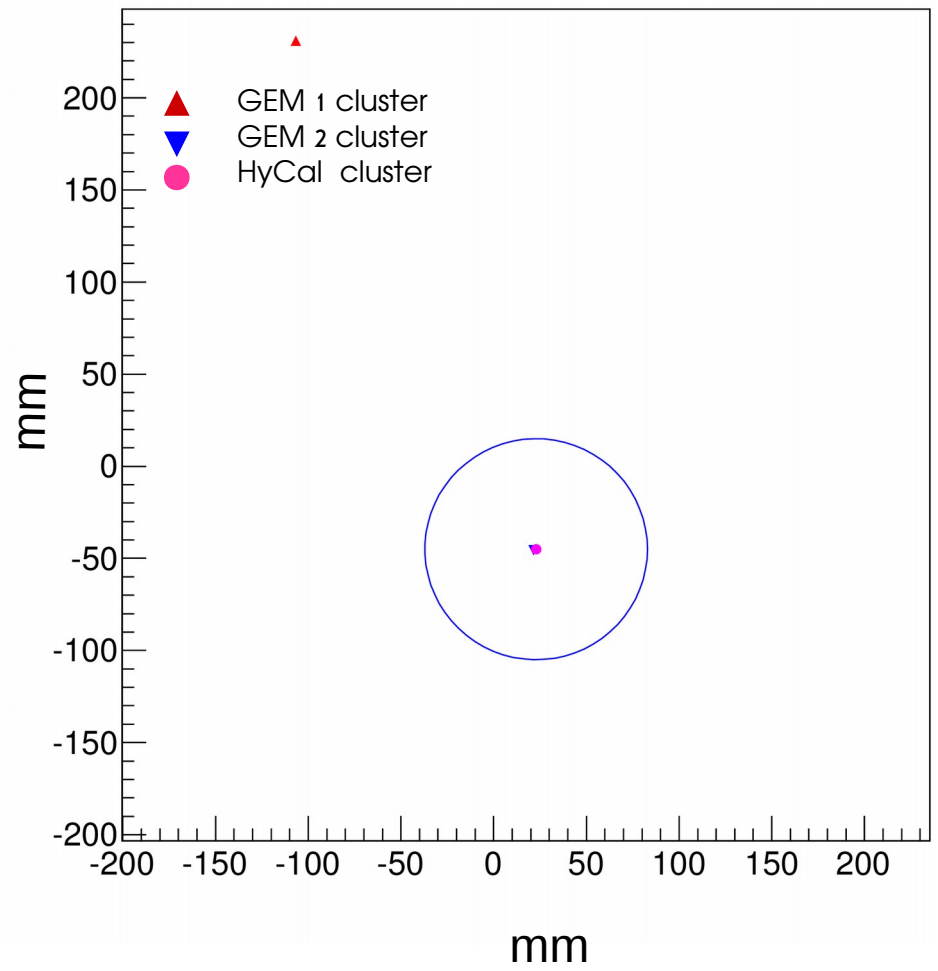
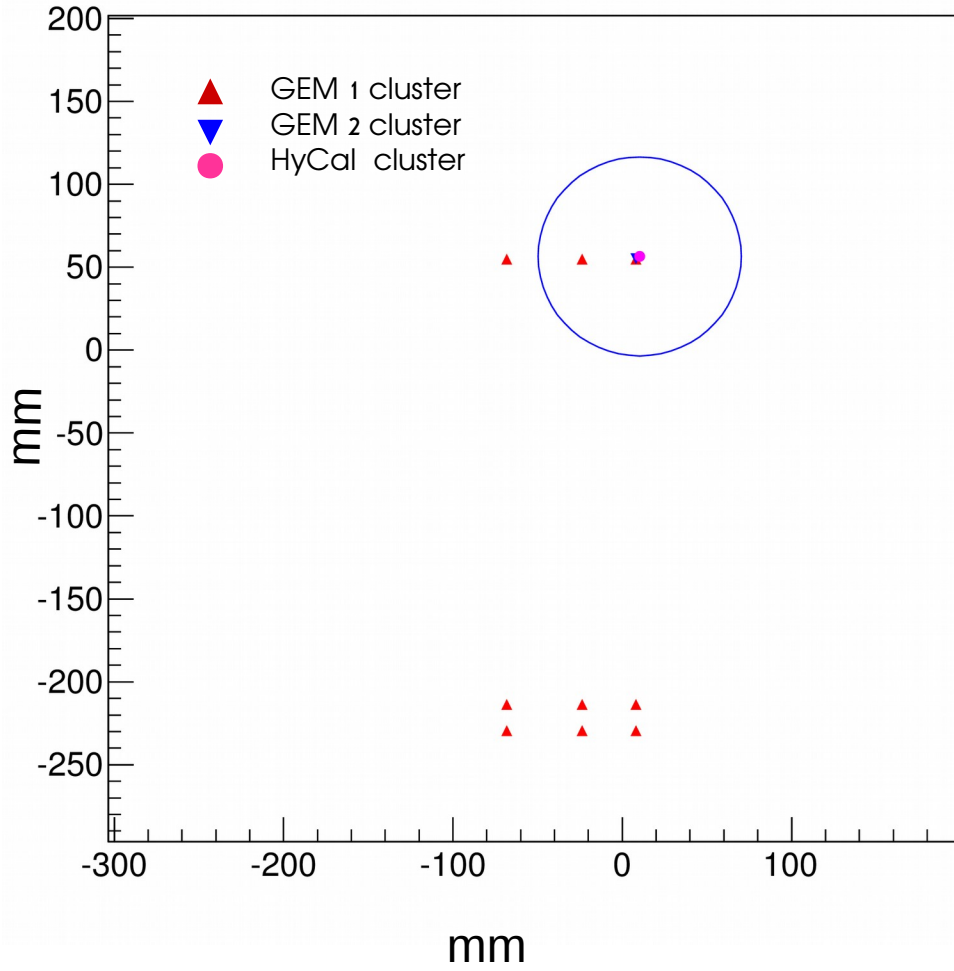
Method to calculate local area gem efficiency



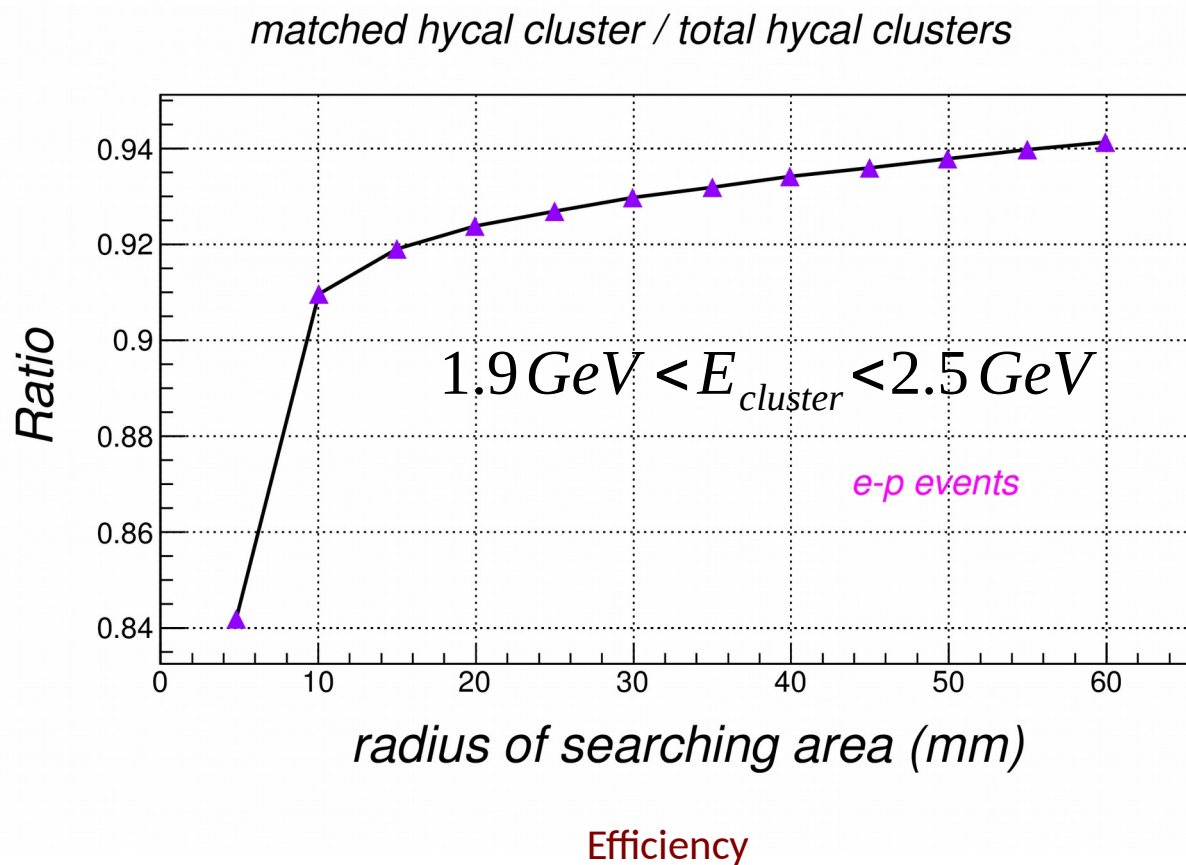
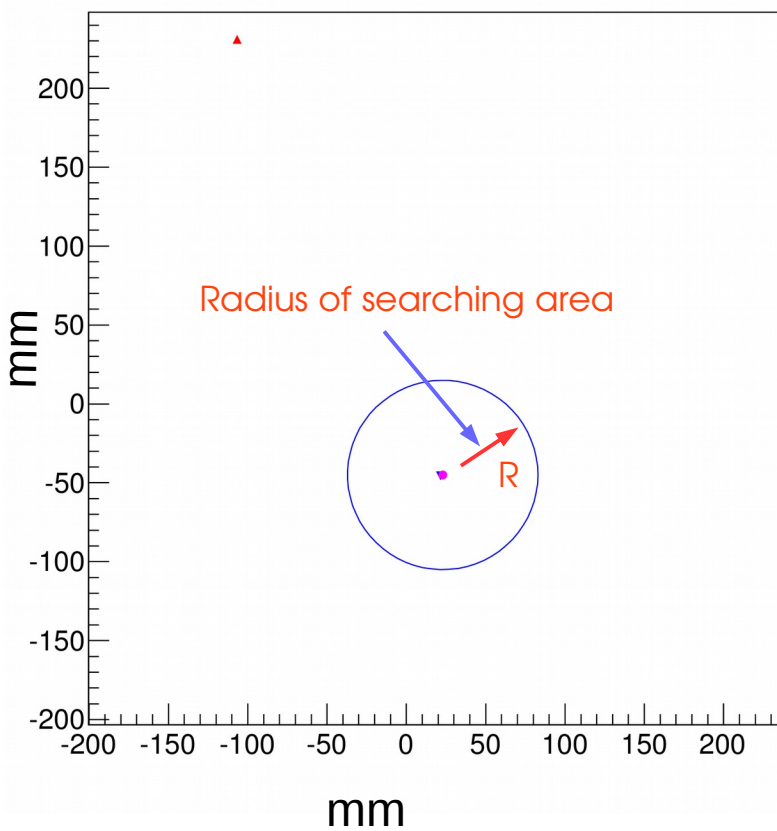
Compute gem efficiency for a specific area:

- 1), Project Hycal cluster back to GEM.
- 2), See if projected point is in this local area.

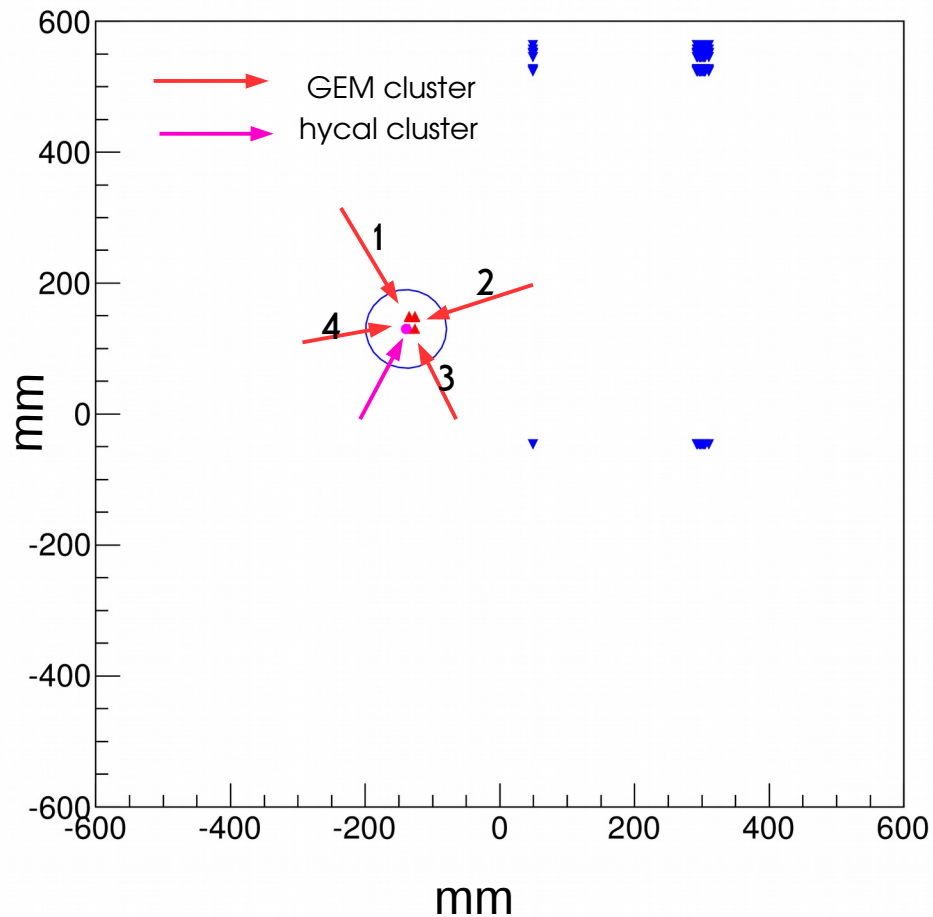
Success Matching



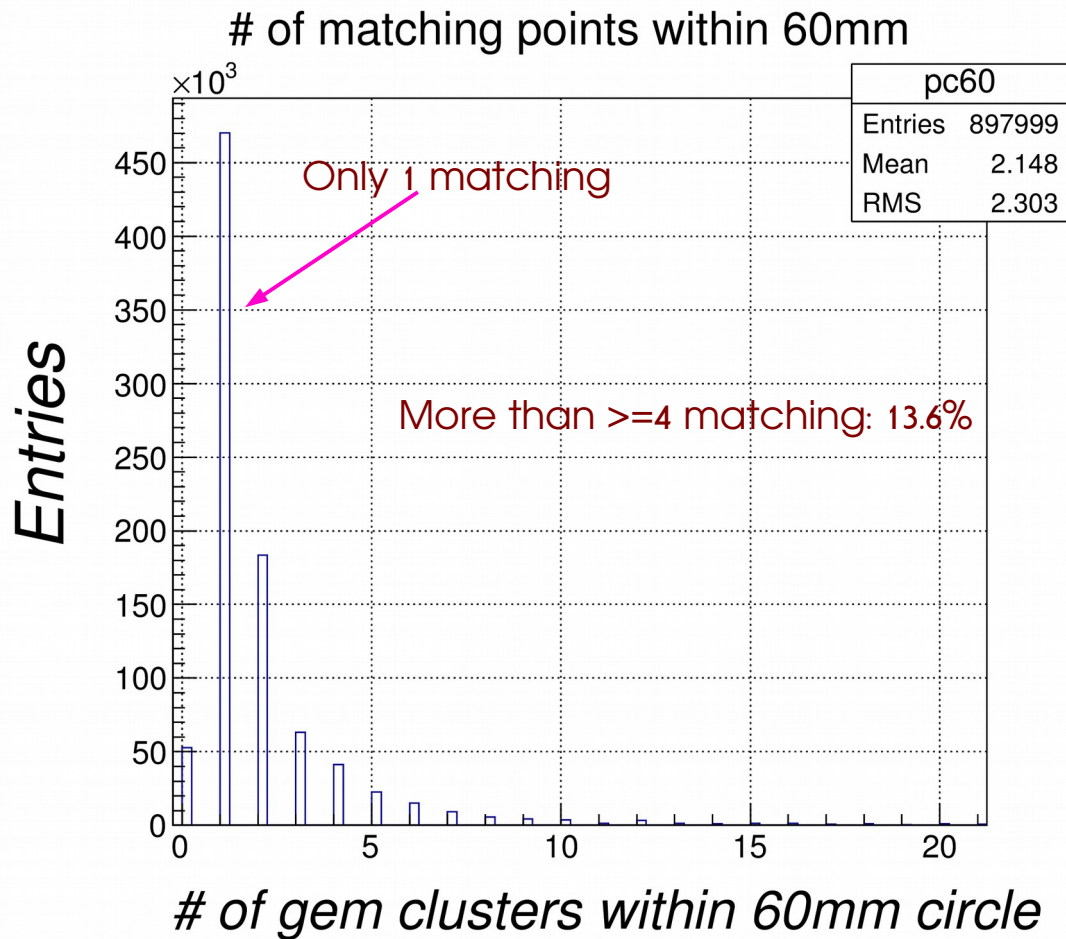
$$\text{ratio} = \frac{\text{number of hycal clusters that found matching gem cluster}}{\text{total number of hycal cluster}}$$



Ambiguity



- 1), cluster 4 is the closest point, next closest is cluster 3.
- 2), cluster #4 was chosen.
- 3), Four clusters may come from (1, 3) or (2, 4).
- 4), cluster 4 or cluster 3?



most of the matching seems correct.

