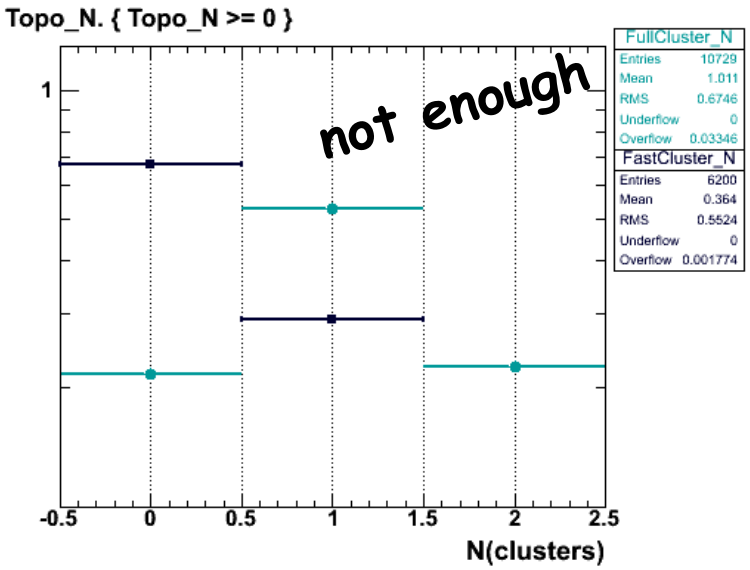
Questions from Wednesday

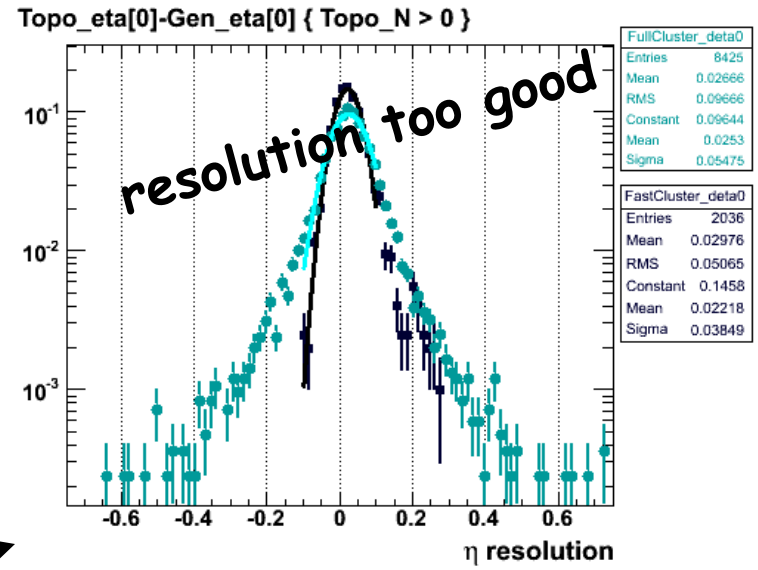
What's the max ηxφ size of a cluster?	✓ bigger than 5x5 (up to 55 cells/cluster in EM front)
Why does AF2 lose more clusters in 'good' events?	… see next slides…

Where does GEANT "stop"?	`g=EnvelopeGeometryManager::GetGeometryManager();`
	`m_idR = g->IdetOuterRadius();`
	`m_idZ = g->IdetMaxZ();`

What CALO geometry is used?	approximate, cuboid (expected to fail @ calo boundaries)
How are non-projective incidence angles treated?	**Ignored for total E/sampling** (uses average from primaries with default zvtx distribution). "**extrapolation**" from ID boundary to **each layer center** used in shape, filling cells

What's wrong with TopoClusters?





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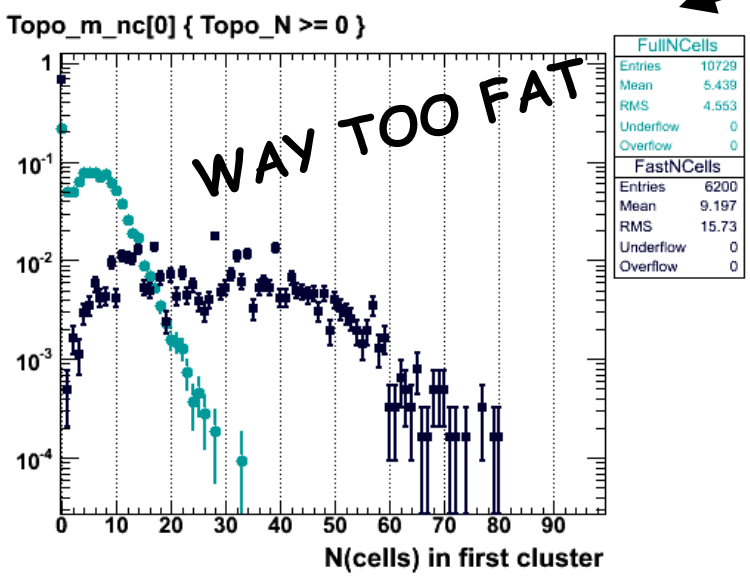
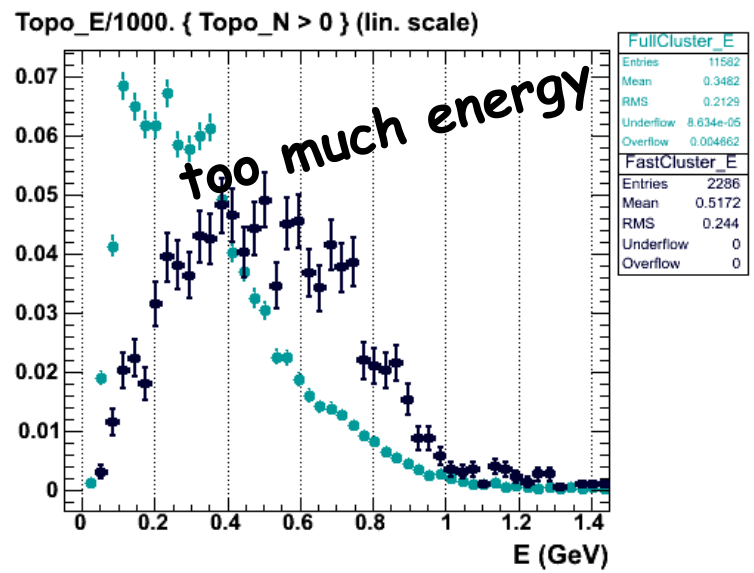
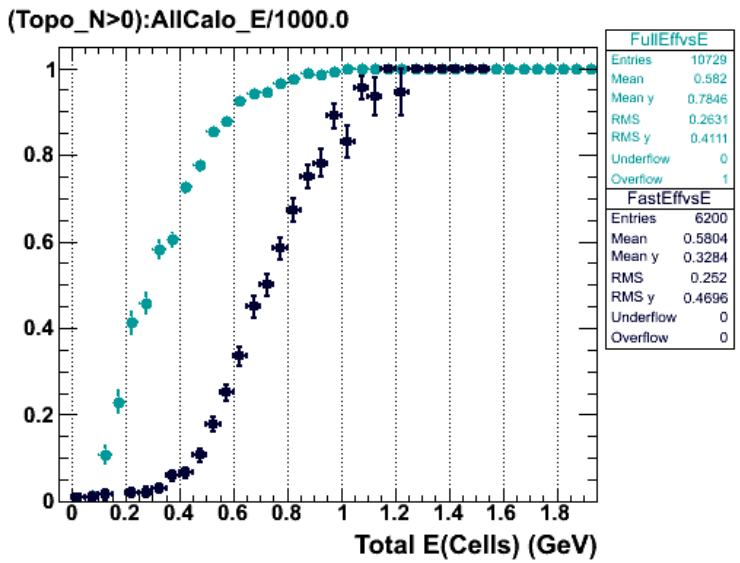


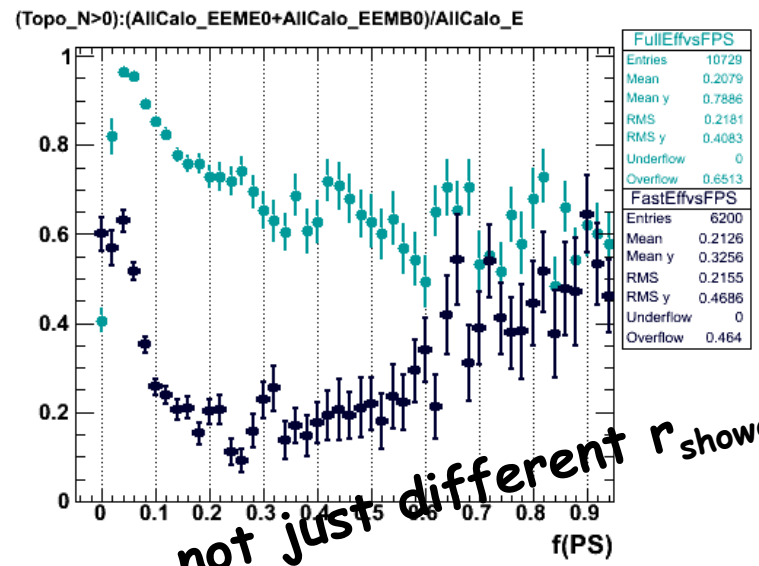


Possible problems?

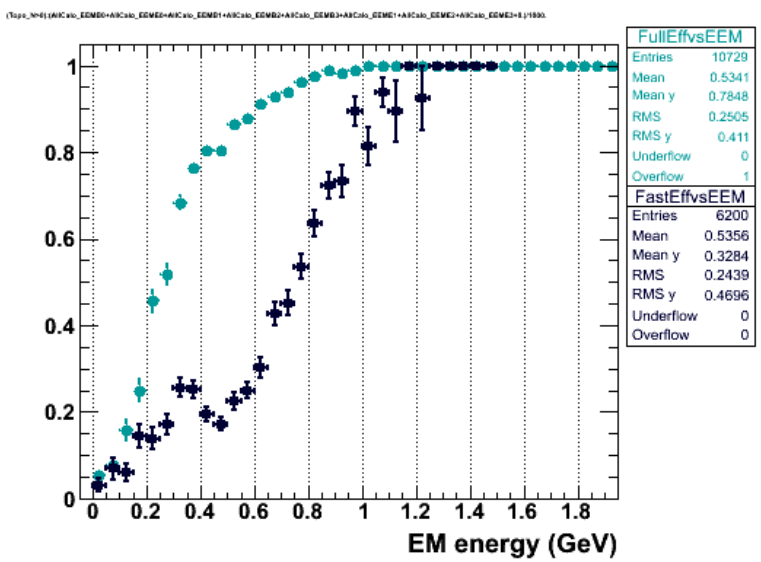
1. AF2 clusters can't be split by TopoCluster alg.
   - Fullsim can make 2 contiguous clusters
   - Fastsim: only **one maximum** from shape splines
   - *can explain: fatness, good resolution, too much energy*
   - noise *might* reduce this discrepancy
2. Matti's shape parameterizations may be too wide:
   - *can explain: inefficiency, fatness, too much energy*
   - They haven't touched this yet, right?
   - plot efficiency vs. AllCalo energy
3. The actual thresholds might be different (remember, gain was hacked)
   - *can explain: inefficiency, too much energy*
   - check thresholds in ESD
   - Note: #2 and #3 would look very alike in efficiency plot

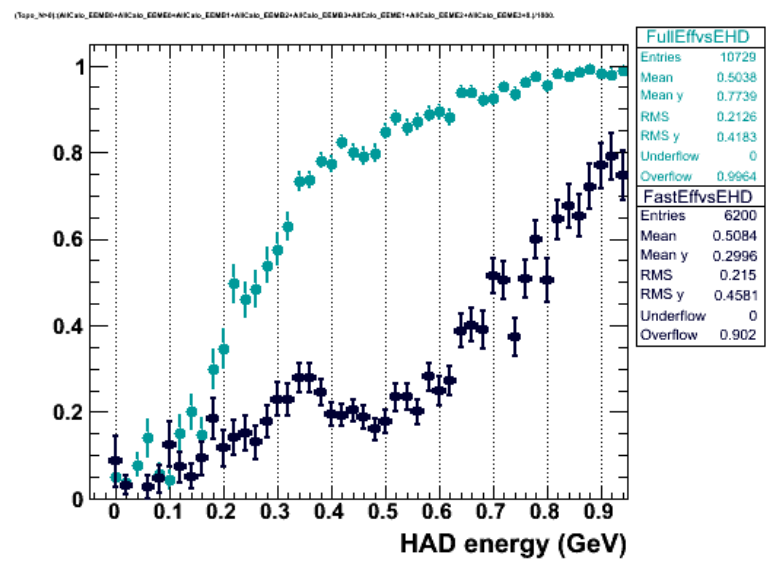
effective thresholds





not just different r_{shower}





What is this bump??