Shower separation studies

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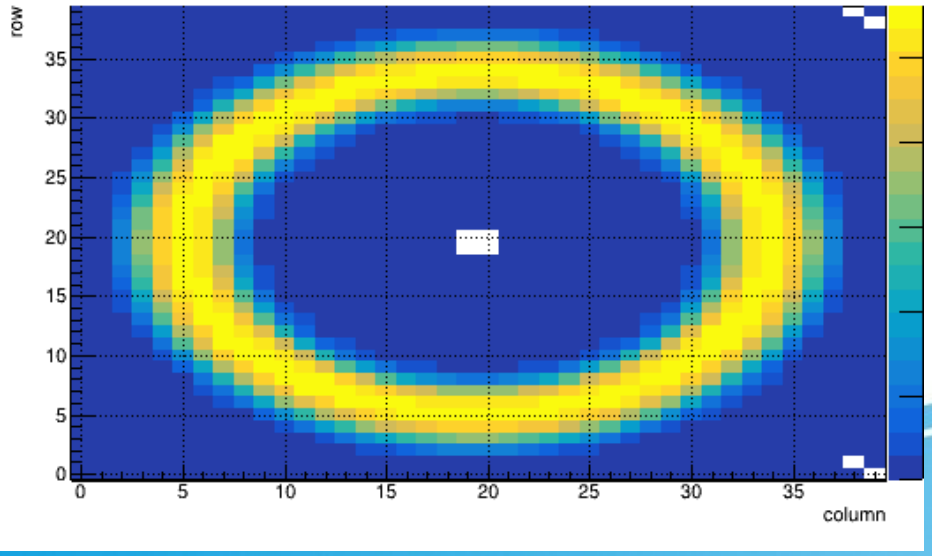
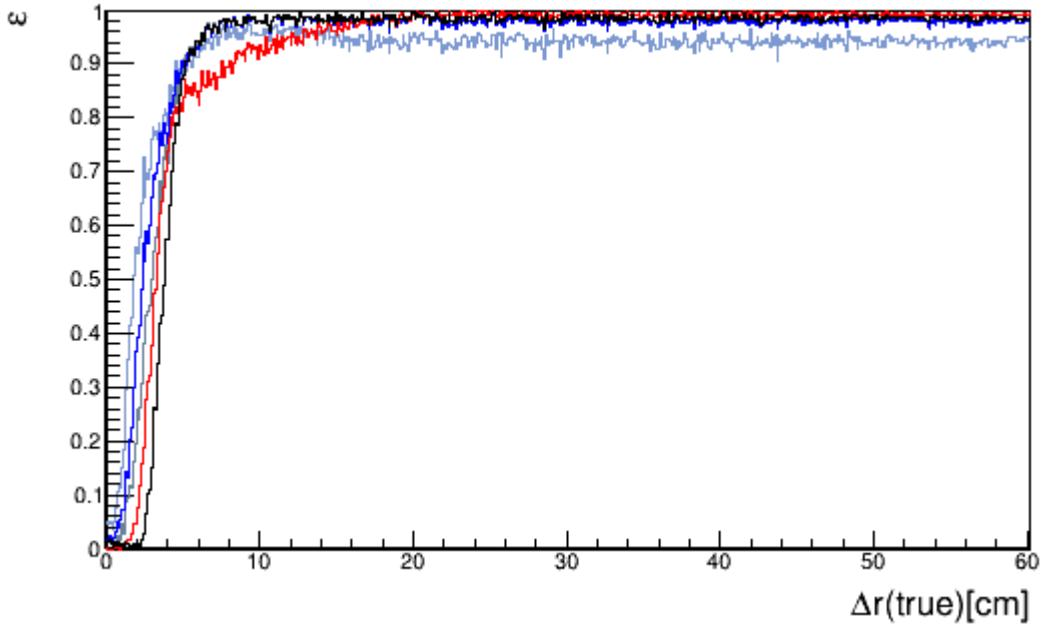
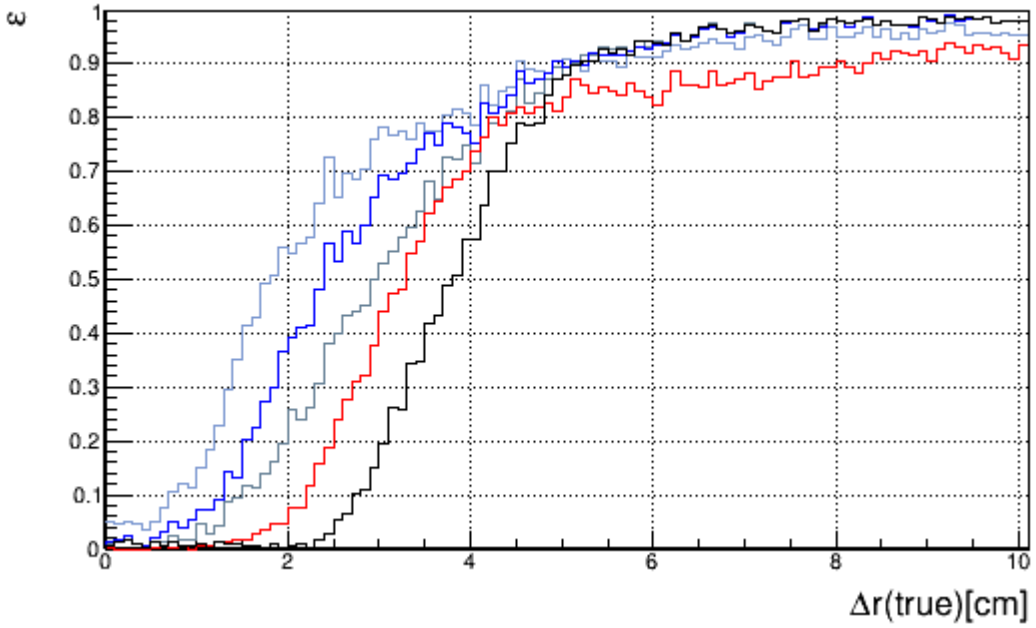
- Generated 2 photons E_1,E_2 = {0, 10} GeV, E_1+E_2=10 GeV
  - Lead tungstate region: θ=3°
  - Lead glass region: θ=8°
- Removed all detectors except for BCAL and FCAL, replaced air with vacuum

PWO channels



Two shower separation in ECAL

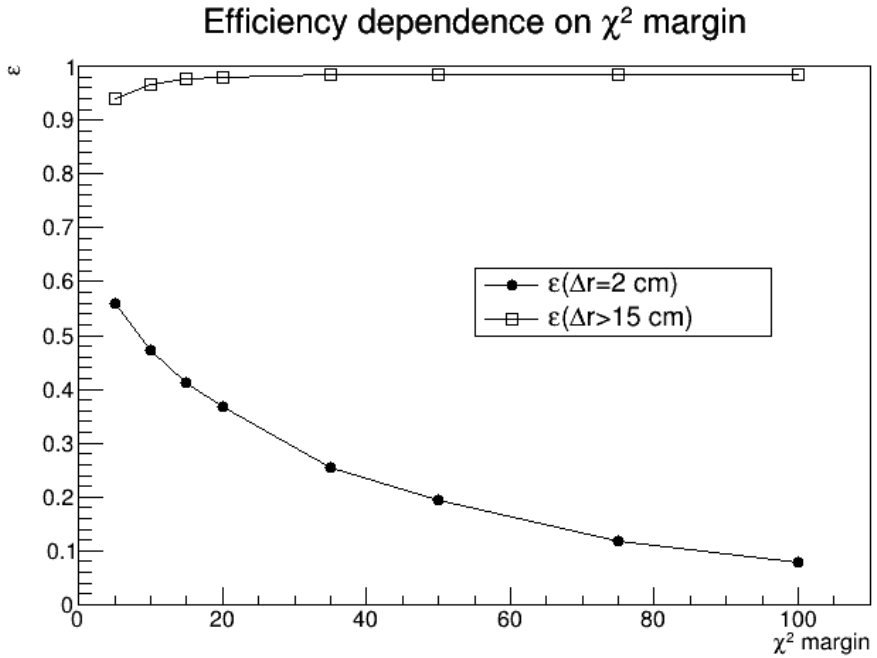


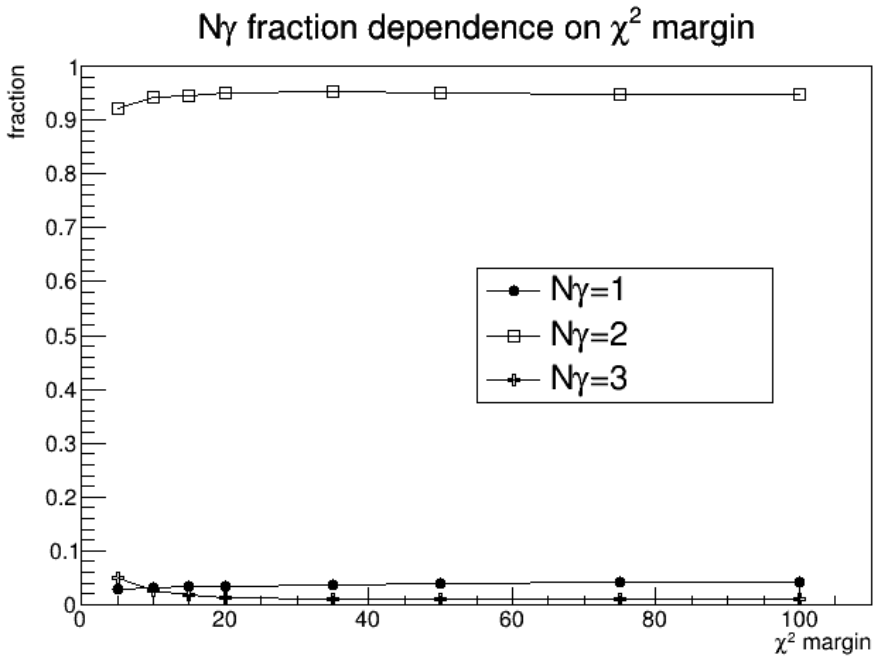


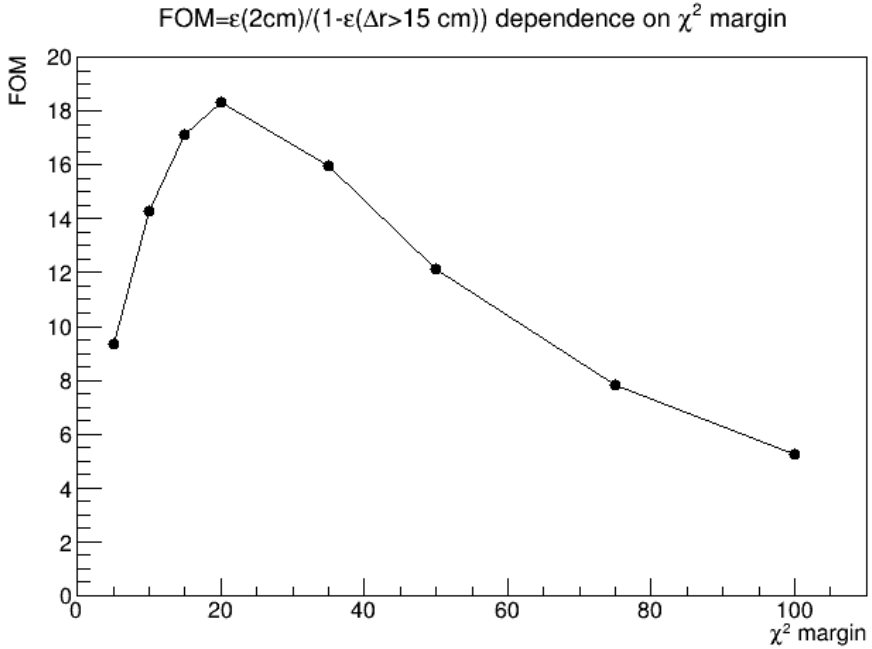
DA = Default Algorithm
IA = Island Algorithm

IA χ^2 margin=5
IA χ^2 margin=20
IA χ^2 margin=50
IA no splitting
DA

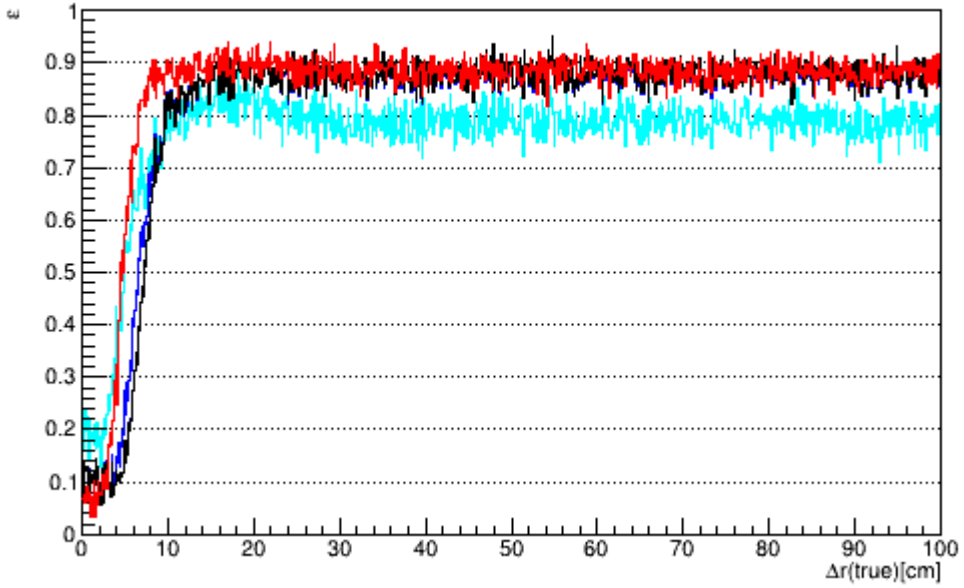
Two photon separation, continued

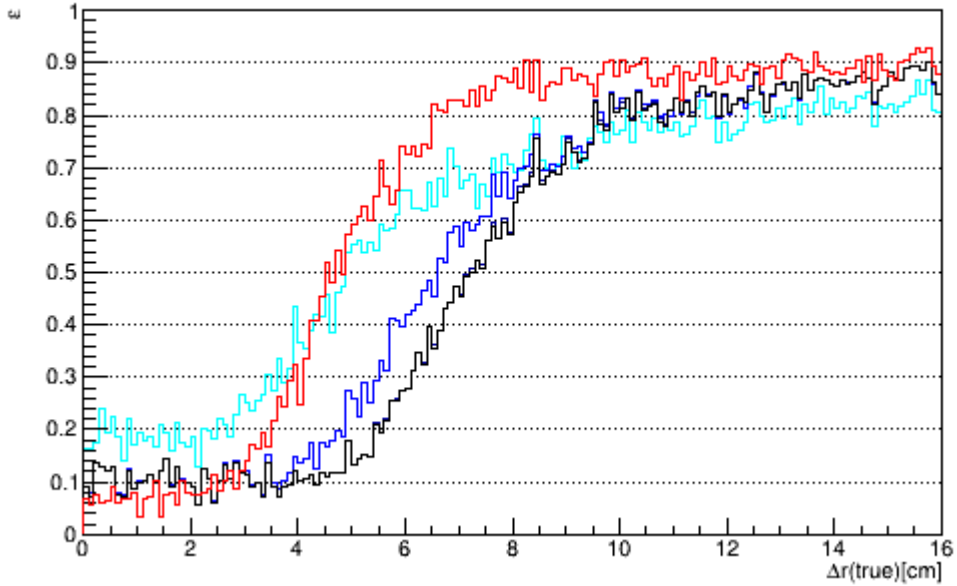






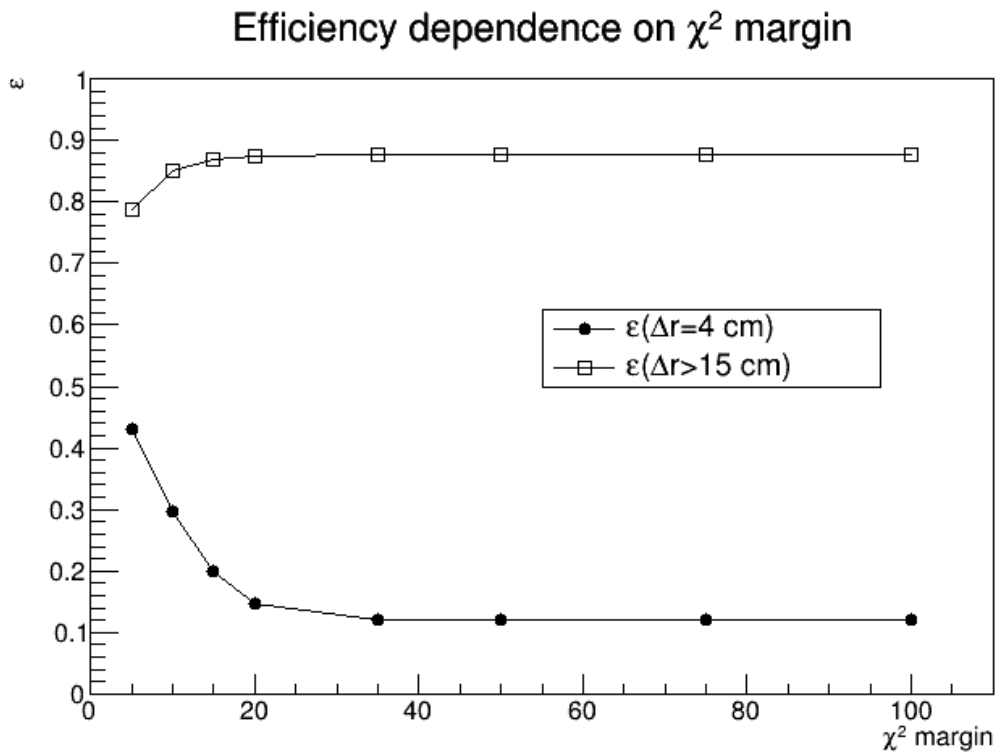
Two shower separation in LG

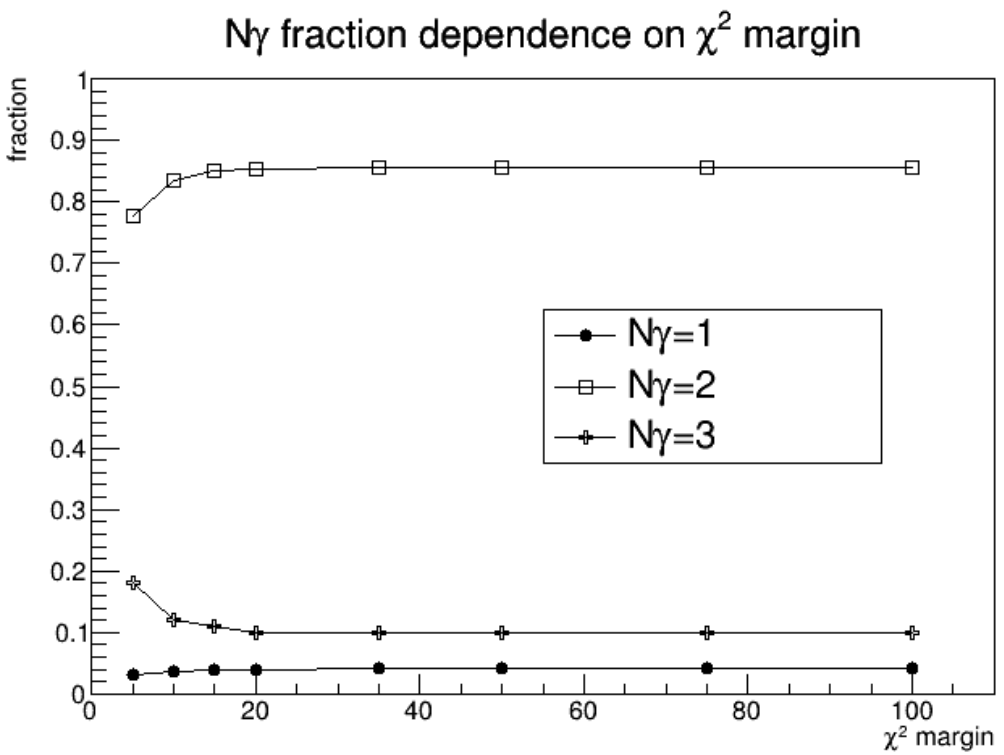


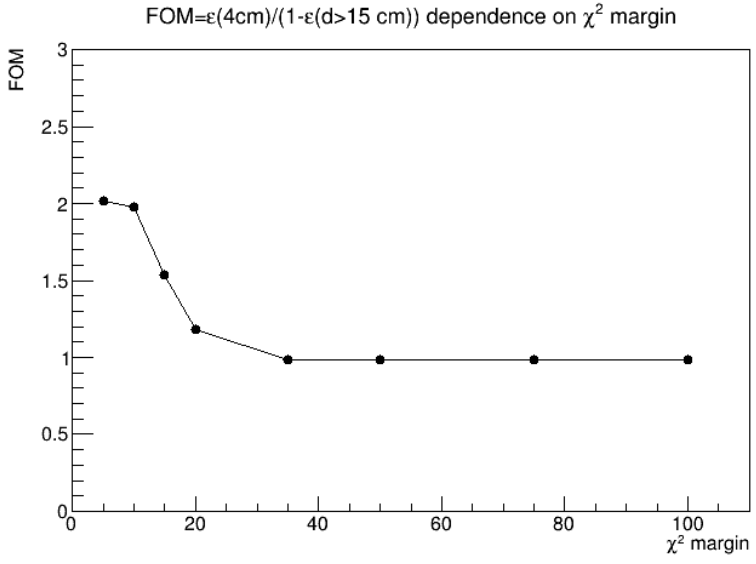


IA χ^2 margin=5
IA χ^2 margin=20
IA no splitting
DA

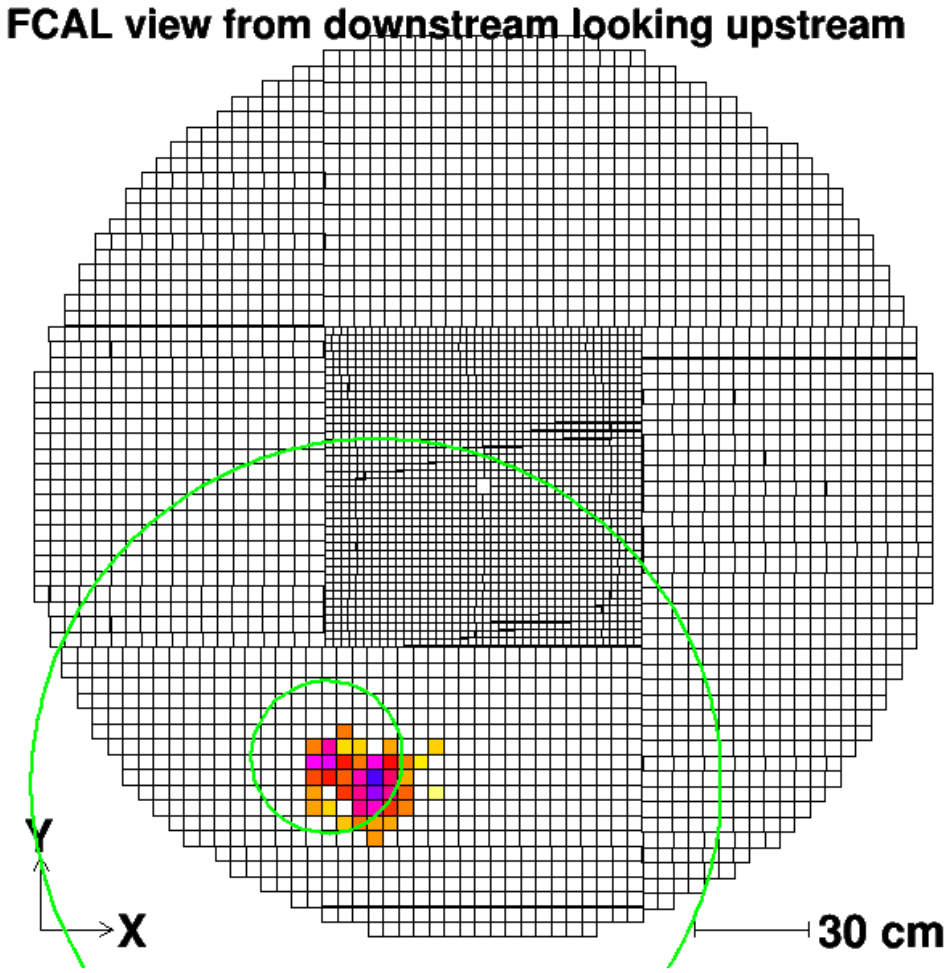
Two photon separation, continued

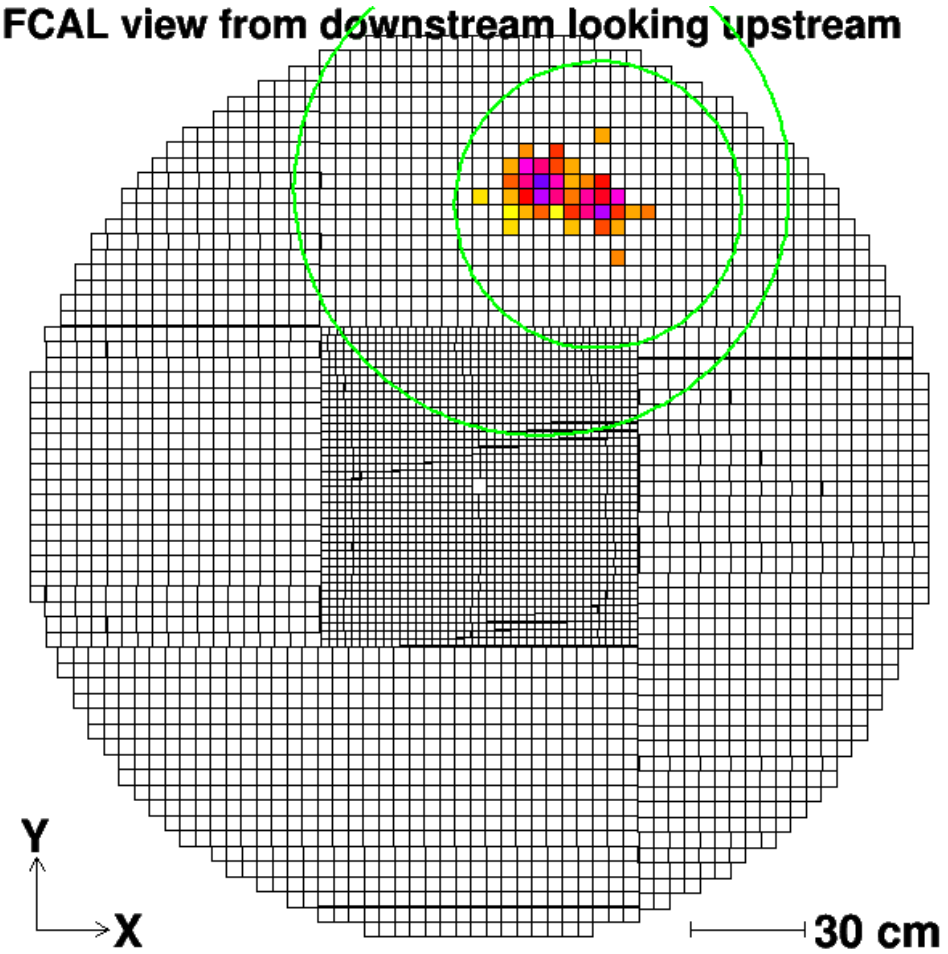






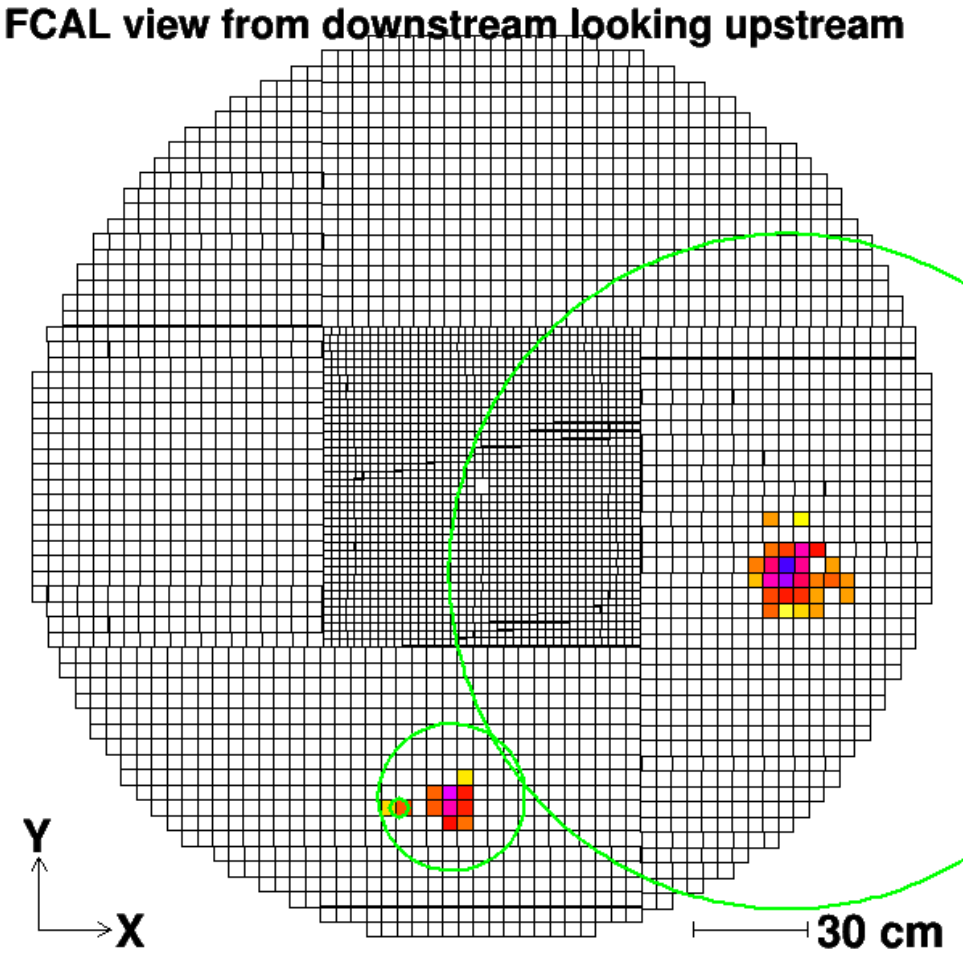
Examples of true separation

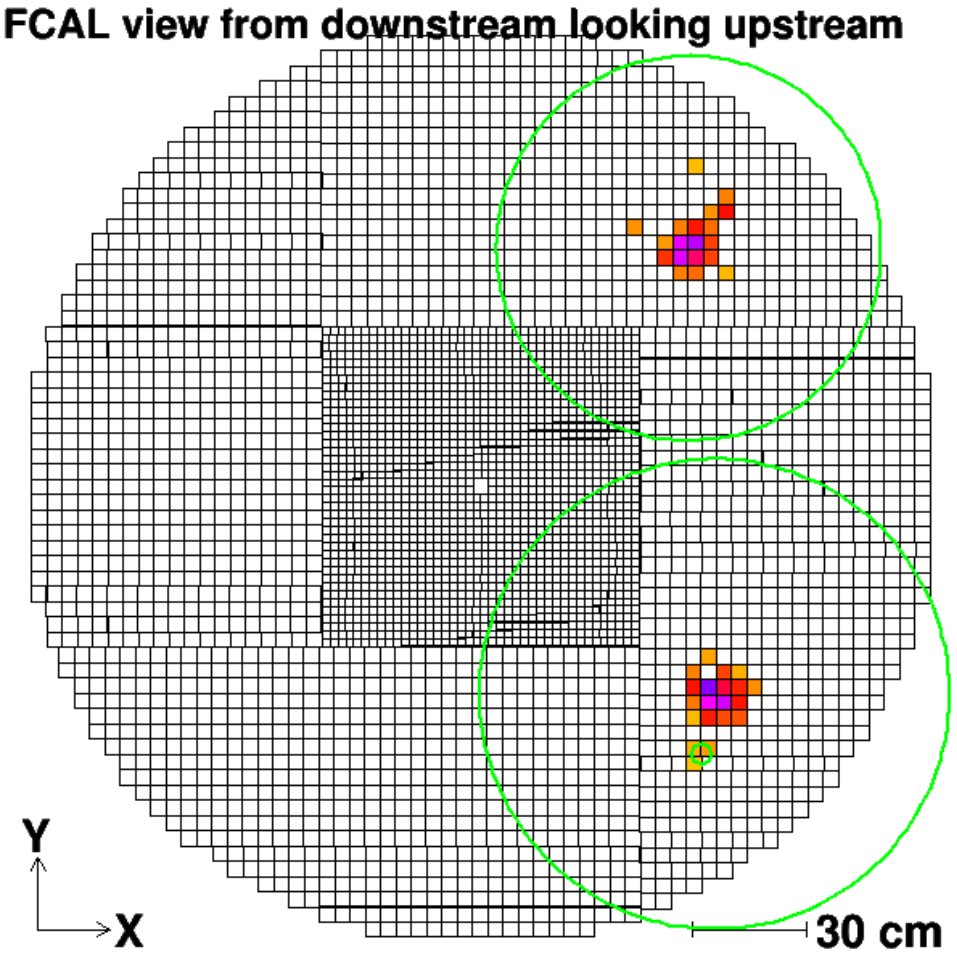




IA, χ^2 margin=20

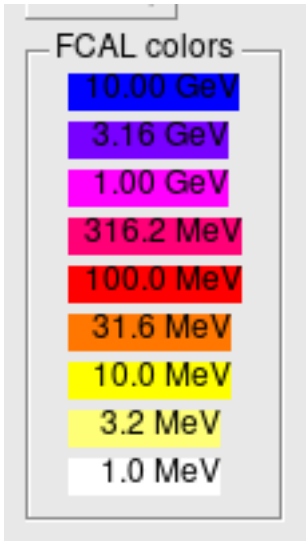
Examples of true split-offs

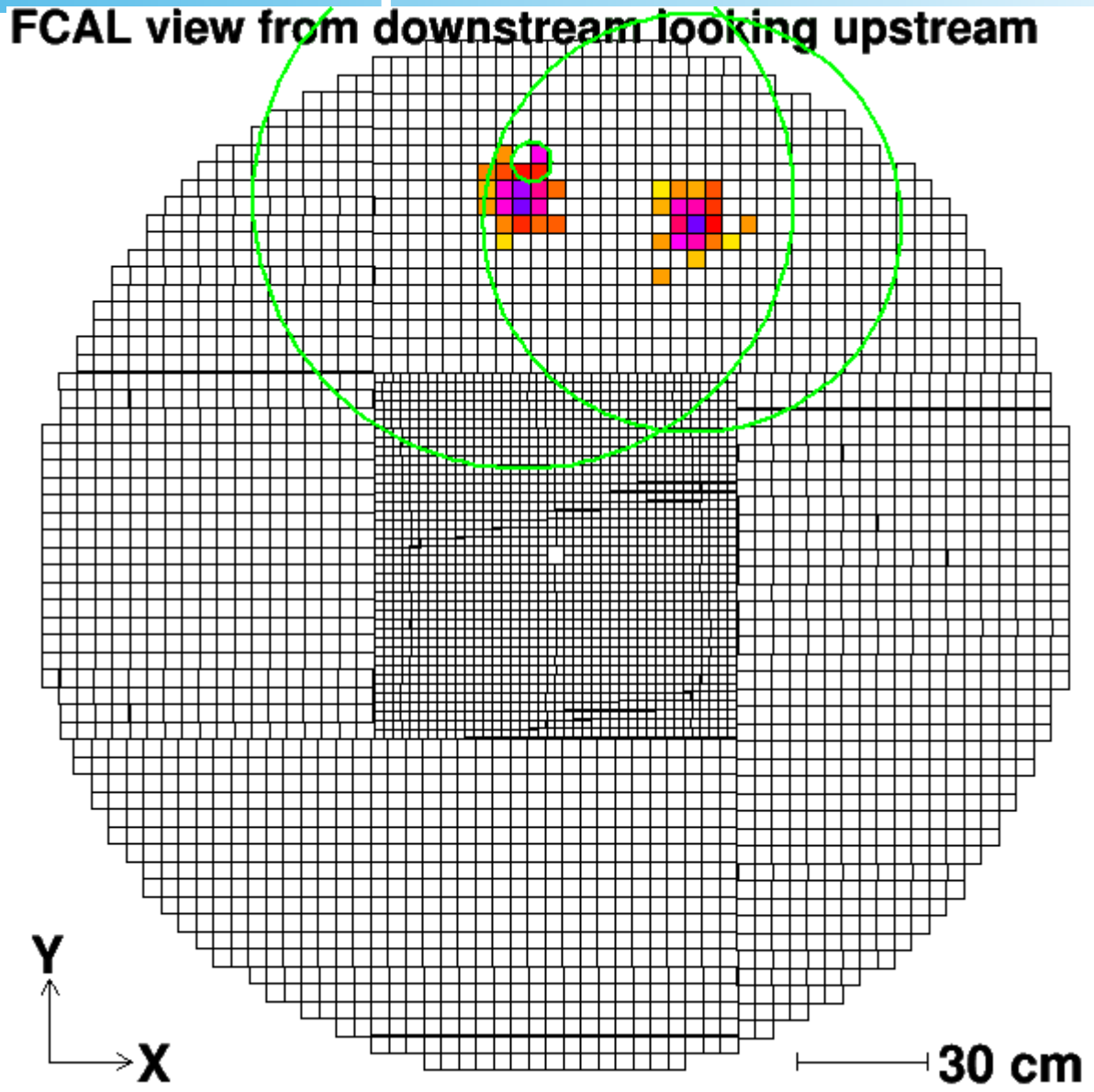




IA, χ^2 margin=20

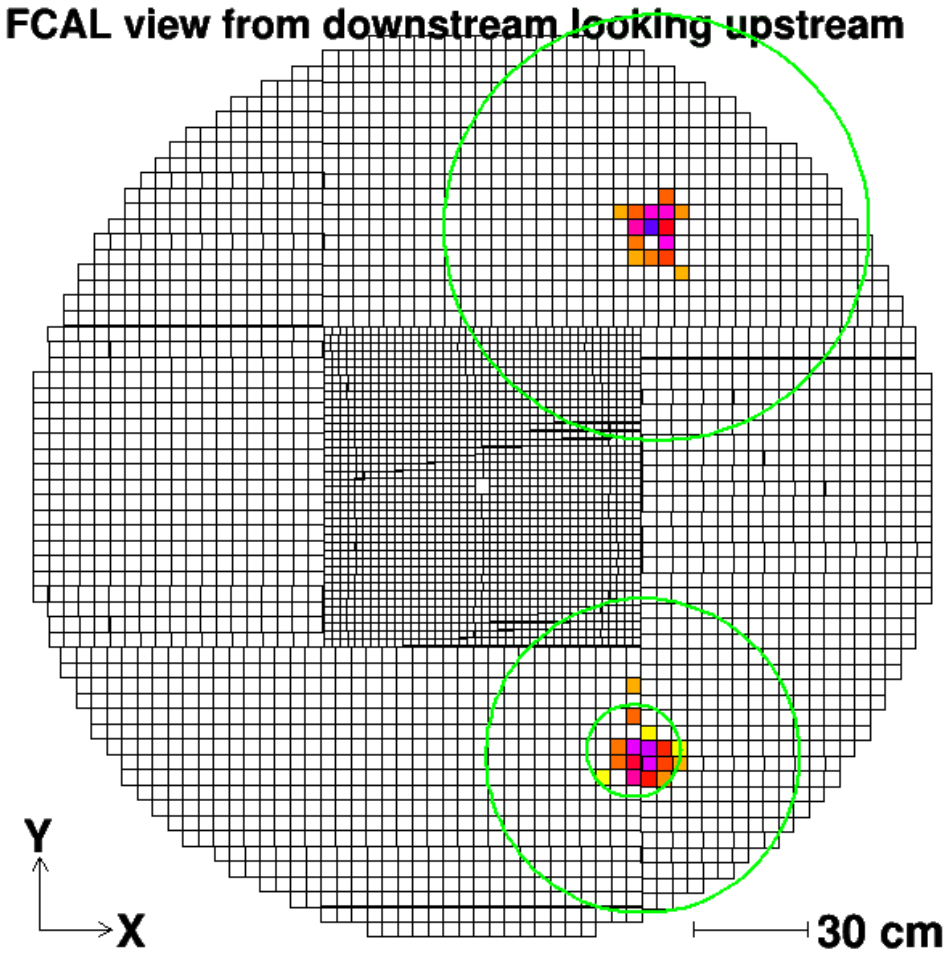
Possible true split-off

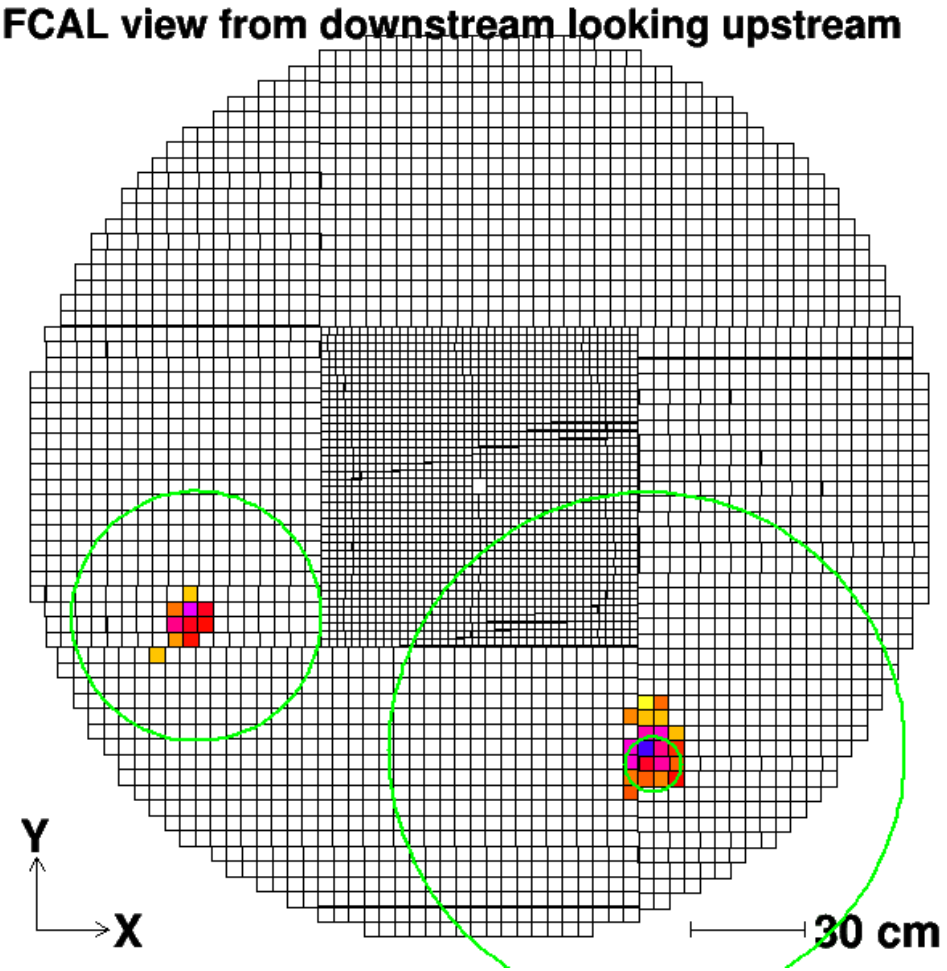




IA, χ^2 margin=20

Examples of false spit-offs





IA, χ^2 margin=20