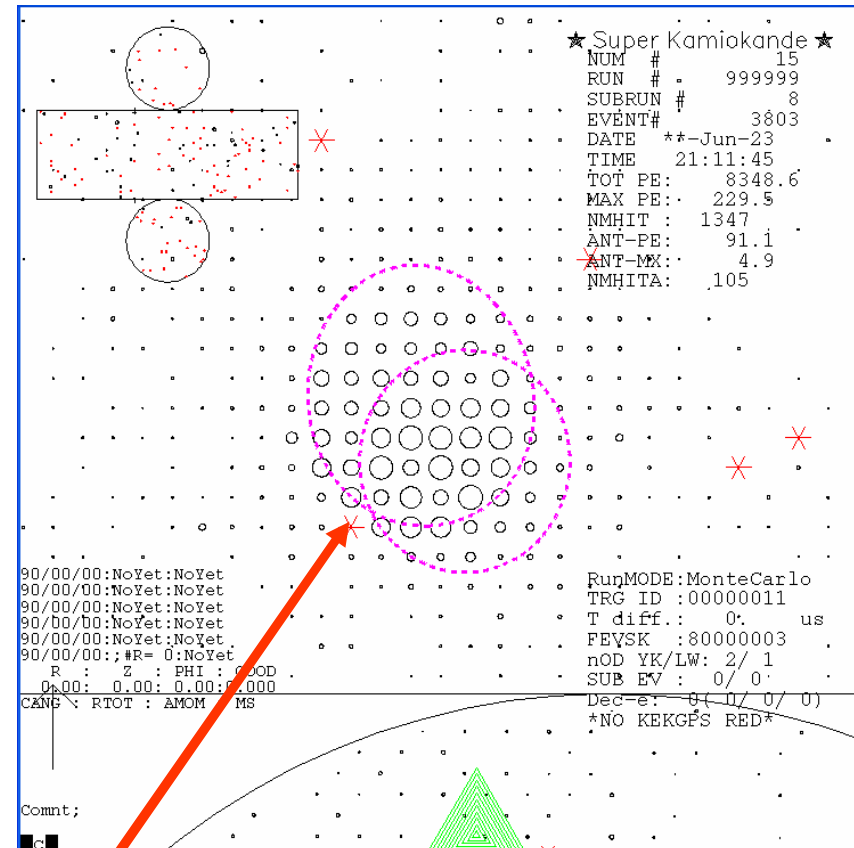
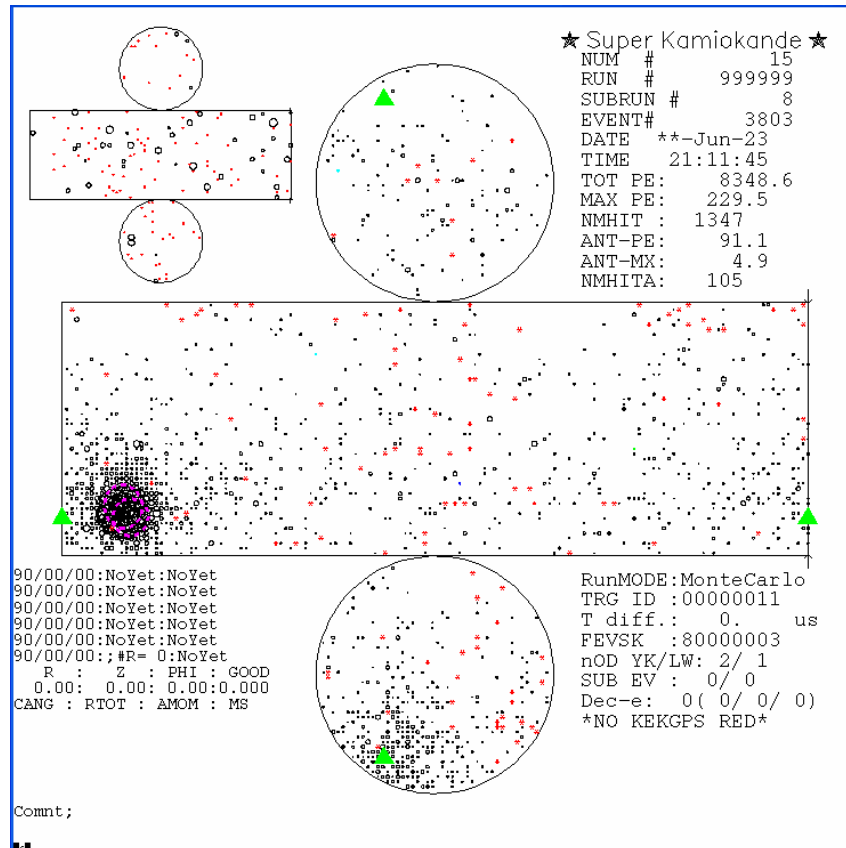


# BG scanning & classification

(BG events have been scanned by Kaneyuki, Miura, Shiozawa)

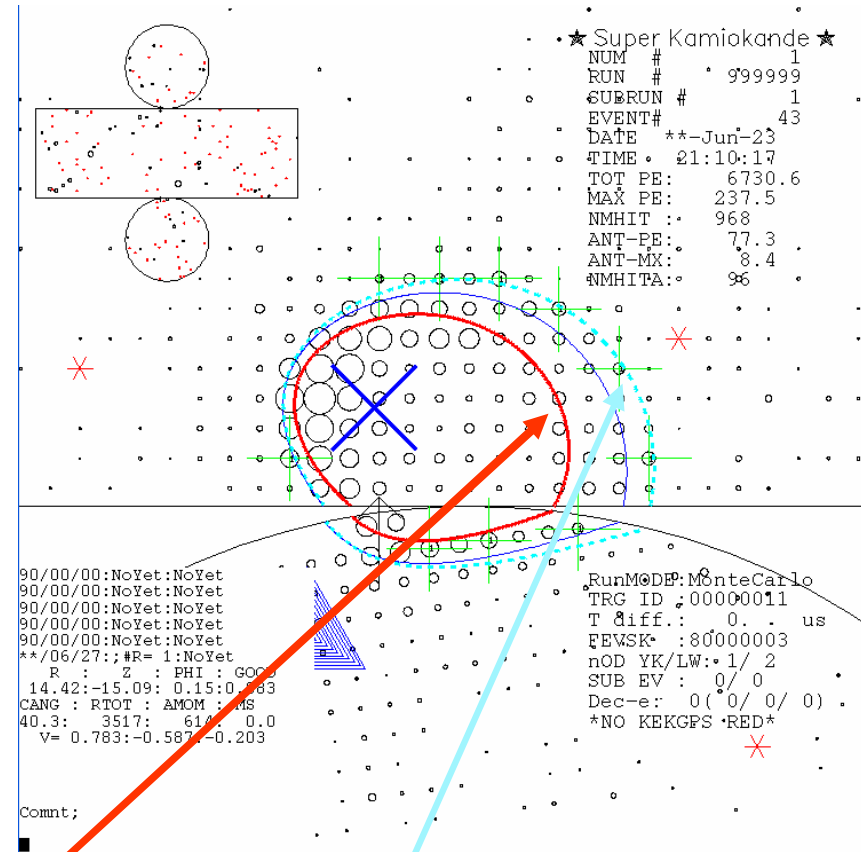
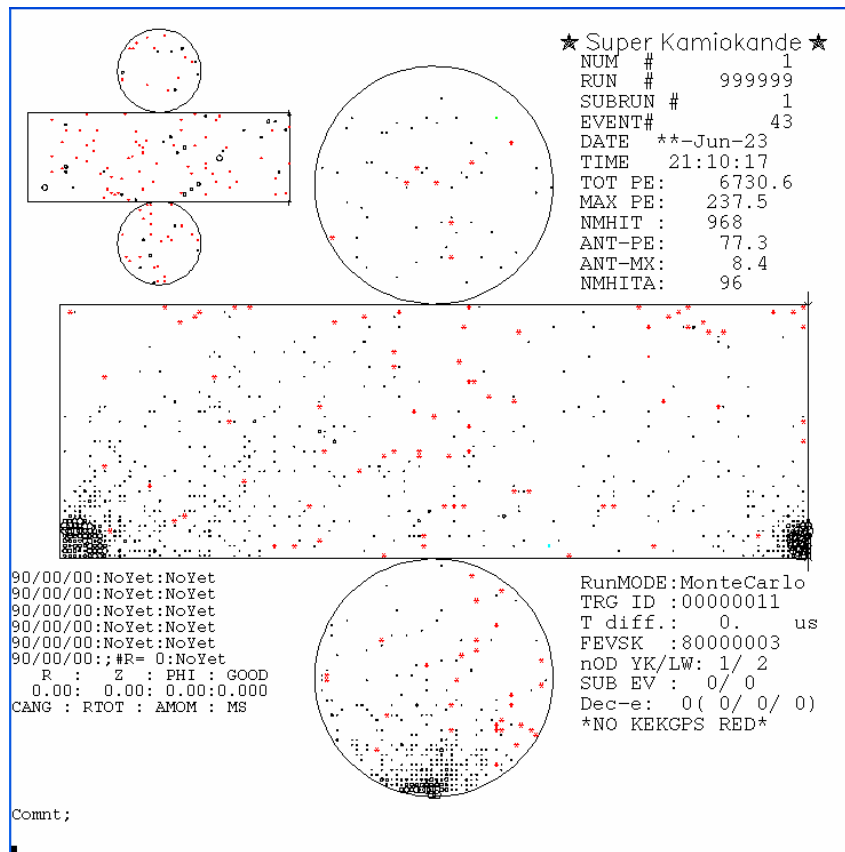
- 18 remaining BG after all selection criteria
  - asymmetric  $\pi^0$  decay ( $E < 70 \text{ MeV}$  gammas) 15 (~80%)
  - mis-ID muon (single ring) 2 (~10%)
  - overlapping gammas 1 (~5%)
- possible further rejection by improvements of the reconstruction ???
  - 2 mis-ID muon
  - 2<sup>nd</sup> ring is tagged
    - 1 event by 3 scanner
    - 1 event by 2.5 scanner
    - 2 events by 1.5 scanner
  - In 18 BG, further reduction may be possible  
4ev(20%) to 6(30%)

# Overlapping gammas



$\pi^0 \rightarrow 2\text{gamma}(578+271\text{MeV})$   
 reconstructed as a 1-ring event

# Mis-ID muon (1)

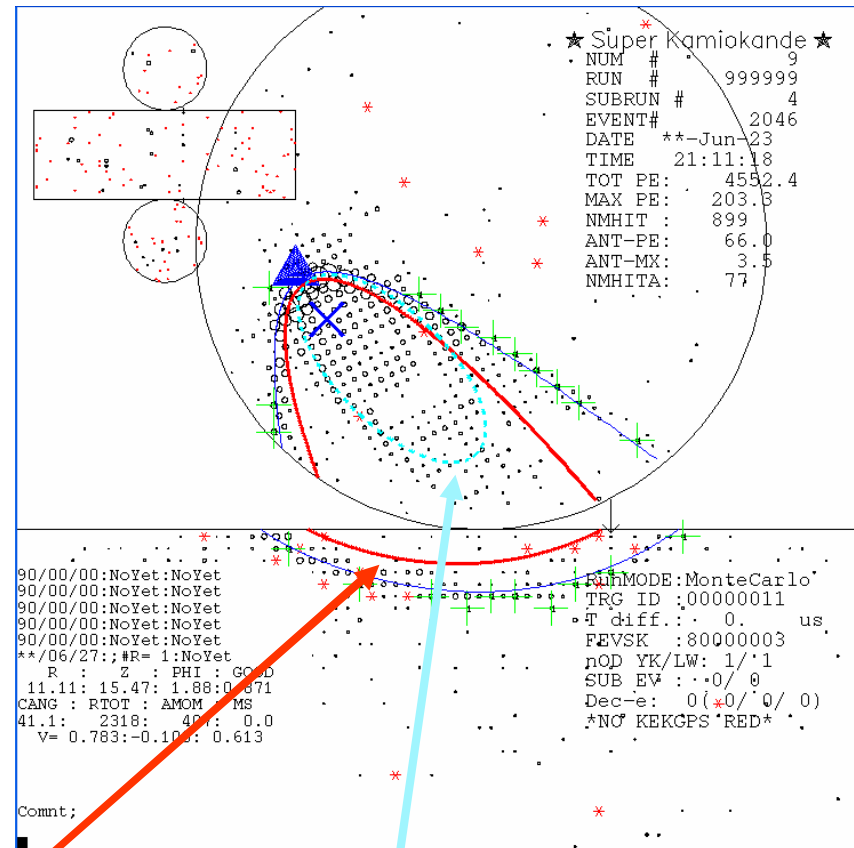
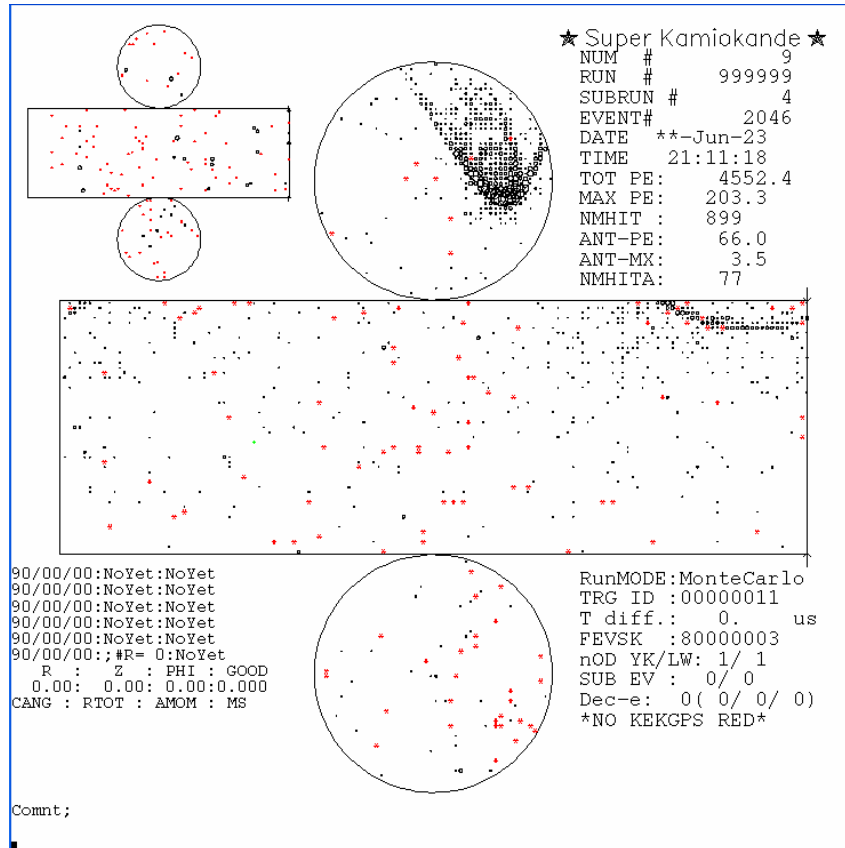


e-like fit

mu-like fit

e-like by pattern likelihood

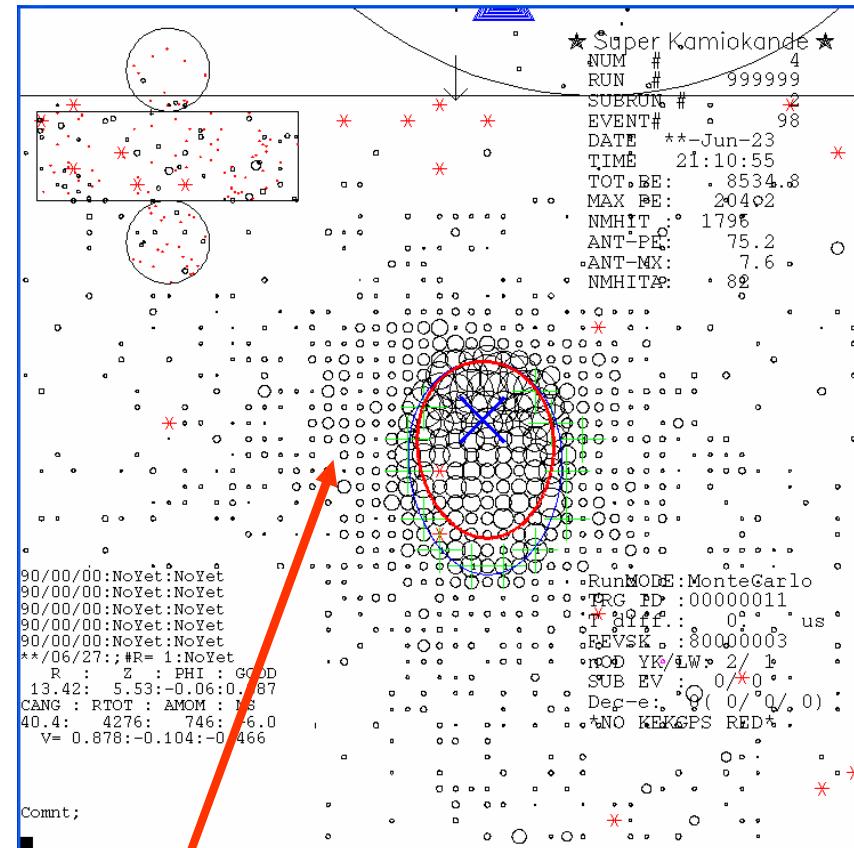
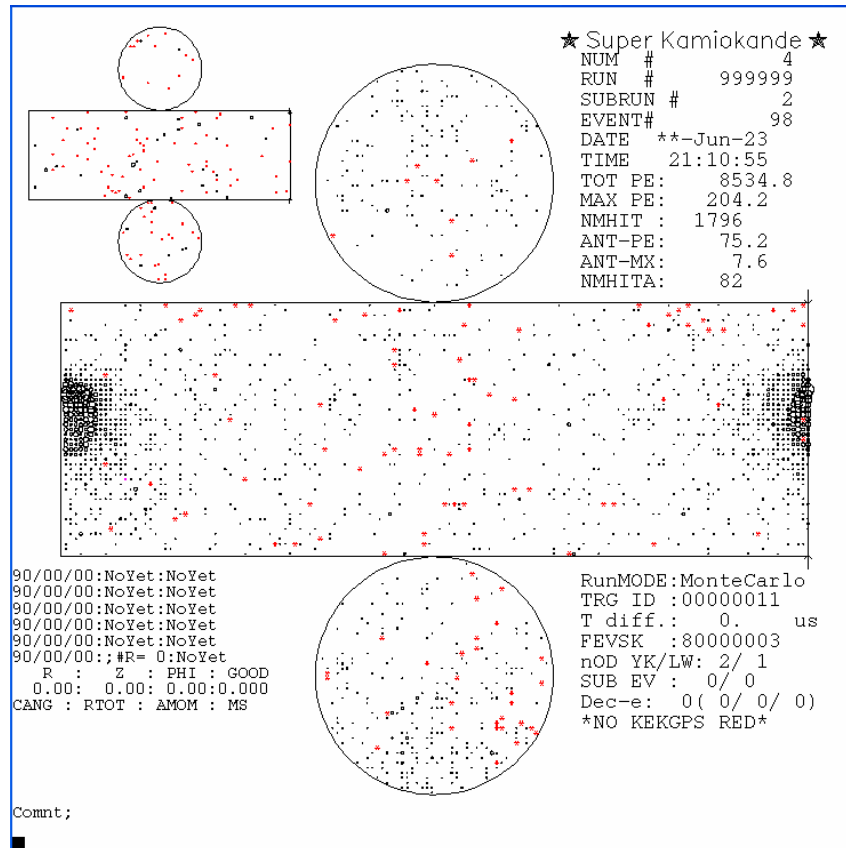
# Mis-ID muon (2)



e-like fit                      mu-like fit  
 e-like by angle likelihood

# missing ring (1)

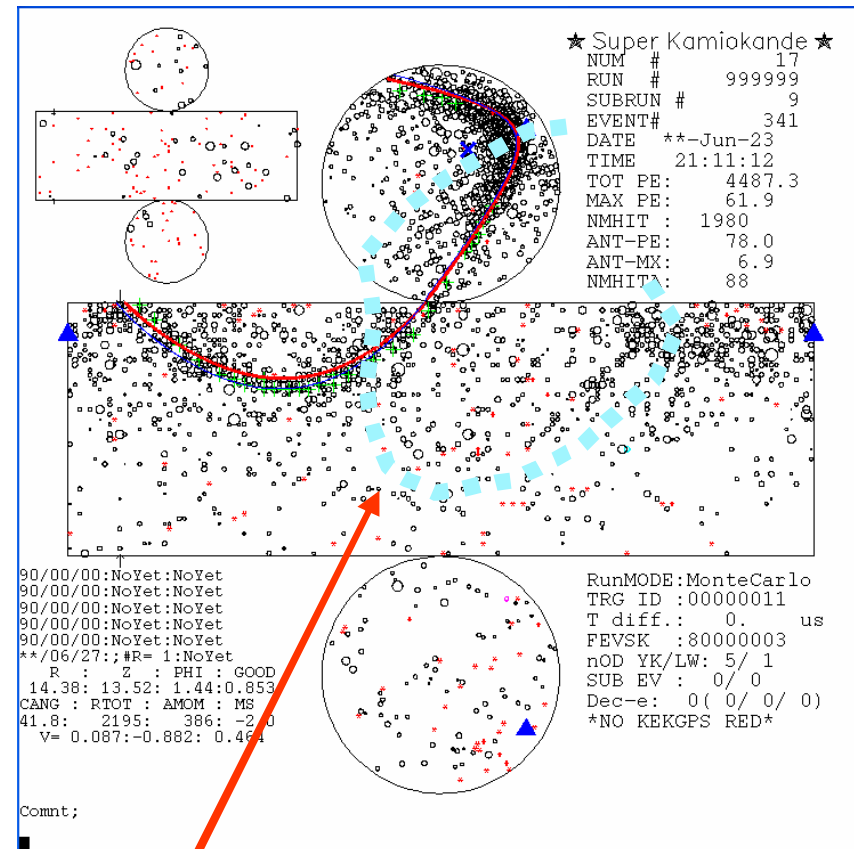
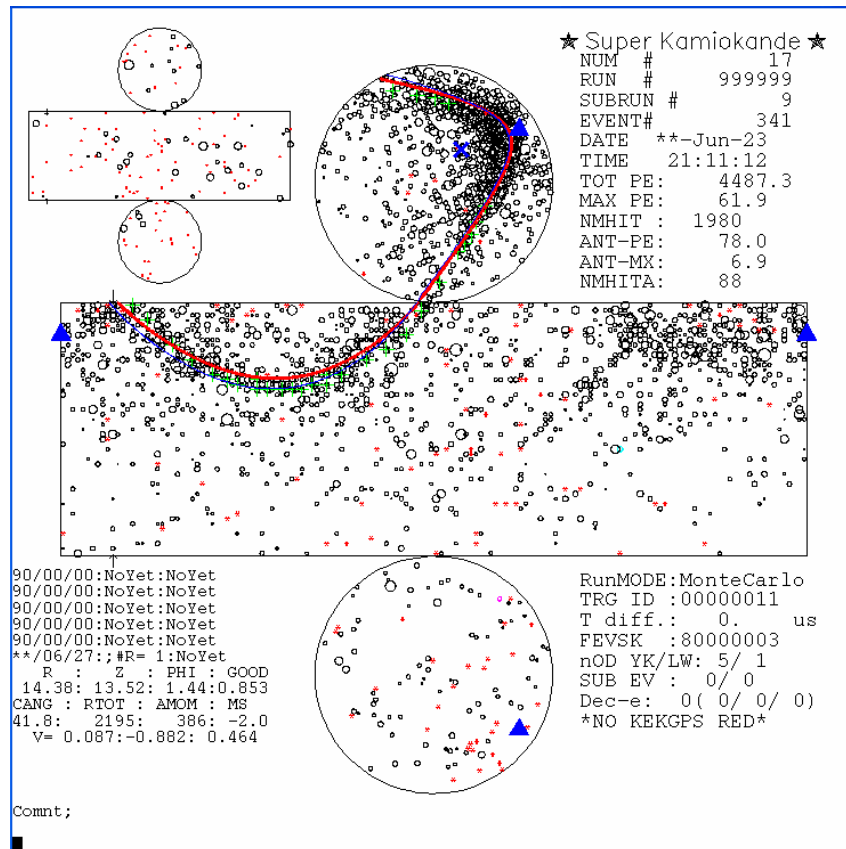
3/3 scanners categorized as 2-ring events



2<sup>nd</sup> ring is not reconstructed.  
 787MeV+73MeV

# missing ring (2)

2.5/3 scanners categorized as 2-ring events



2<sup>nd</sup> ring is not reconstructed.  
 385MeV+42MeV