Skimmed data check

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- Beam data is skimmed with
  - trigger status pre-selection
    - ~run380
      - # of track >=3 (trk3_ffs_t) &
        high energy ecl cluster (hie) &
        # of ecl cluster >3
      - .or. bhabha (csi_bhabha)
      - .or. cdc back to back (cdcbb)
    - run380~ (not confirmed)
      - .and. ΣE(ECL?) > 1 GeV
  - pre-selection by event classification
    - 2<= # of good track <=8
    - ΣPcm < 10 GeV/c, ΣE(ECL) < 10 GeV
    - Pt > 0.5 GeV/c for at least 1 track
    - Event vertex |r|<0.5cm, |z|<3cm

for run380~ (latest luminosity runs)

- Blib. b19990727_2107
- trouble of basf output
  - → Data for many runs are not skimmed completely.

- checked data of run381~450 roughly
- → Plots are here.

(Non-trigger-pre-selected dst will be produced and skimmed from 8/20)

Tau pair event search (run381-450　75110events)

- good charged track definition
  Pt >= 0.1 GeV/c
  |dr| < 0.5 cm, –1 < dz < 3 cm　(←shifted)
- good gamma definition
  Mdst_gamma.ecl().energy() > 0.1 GeV
- electron ID
  electron probability　eid.prob() > 0.9
- muon ID
  mu2 flag　Mdst_muid.muon() >= 2

→ Others are defined as pion.

- 1-1 topology
  - selection criteria
    # of good track = 2
    # of good gamma = 0
    ΣPcm < 9 GeV/c
    Pcm < 5 GeV/c
    P_{lab} > 1.2 GeV/c
    $-0.75 < \cos\theta_{lab} < 0.85$　(for muid)
  - result
    $e^+\mu^-$　30events　(expect. ~60)
    μ^+e^-　23events　(　　~60)
    ↑ L~10pb^{-1}

  → 2 track events were reduced
  by trigger pre-selection.

- 1-3 topology
  - selection criteria
    - # of good track = 4
    - # of good gamma = 0
    - net charge = 0
    - ΣPcm < 10 GeV/c
    - 1-prong ID
      - maximum Σangle(p_i,p_j)
    - 3-prong particles are consist with pion(hadron).
    - → Plots are here.
  - result
    - e - 3h 26events
    - μ - 3h 30events
    - π - 3h 90events (with continuum BG)
    - invariant mass for 2h,3h
      - → ρ , a_1
    - pseudo-mass (→Phys.Lett.B292(1992)221)
      - $m_\tau^{*2}=2(E_\tau-E_{3\pi})(E_{3\pi}-p_{3\pi})+m_{3\pi}^2$
      - (←kinematical limit is τ mass)

Plan

- use trigger simulator for MC study
- e - μ event study (T/CP)