Event pre-selection study

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- Definition

good track:
dr<1.0cm, |dz|<5.0cm, Pt>0.1GeV/c,
Confidence Level of track fitting>1e-25
good cluster:
E>0.1GeV, MDST quality flag=0

- Tau pair event pre-selection (proposal)

1. 2<= # of good track <=8

2. Σ Pcm < 10 GeV/c
   (Mass is assumed to pion mass.)
3. Σ E(ECL good cluster) < 10 GeV/c
   (for rejection of bhabha, mumu)

4. Pt > 0.5GeV/c for at least 1 trk.
5. 5° < θ of missing P < 175°
   (for rejection of 2 photon, beam bg.)

- efficiency

	efficiency	cross section	obserbed X-section
tau pair	78.3 %	1.23 nb	0.96 nb (19.2%)
mu mu	10.1	1.16	0.12 (2.4%)
bhabha	0.82	40 ?	0.33 (6.6%)
2 photon			
eeee	1.8	36.4	0.65 (13.0%)
eemumu	2.4	18.8	0.45 (9.0%)
hadrons			
bb	36.3	1.05	0.38 (7.6%)
continuum	62.3	3.39	2.11 (42.2%)
			5.00nb (100%)

- These are the results of Gsim study.
  belle_lib. b19990430_2246
  generators : qq98 or aafhb
  used MC events 100k for each
  (50k for continuum)

- can't reduce continuum event?
  No. of clusters ....
- This criteria is given using only MC simulation
  without beam background etc...
  We should modify using collision data.

- panther table [Evtcls_flag]
  Event classification flag
    flag(4) is prepared for tau-pair event.

		(proposal)
flag(4)=	20 : # of good charged track =	2
	30 :	3
	40 :	4
	50 :	5
	60 :	6
	70 :	7
	80 :	8
	(0 : not passed the pre-selection)	