Event location

K.Okada NAGOYA.

- data flow
  - net scan data taking

    min 5.8x5.8 x 10 mm

↓

  - plate connection
  - vertex cand making

↓

  - fiber matching

↓

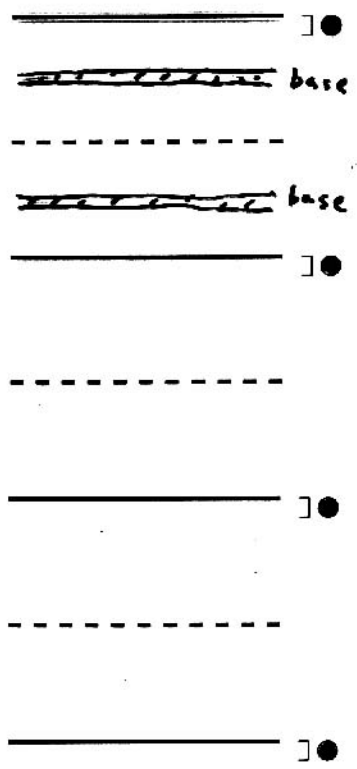
  - (em check)

location data taking

B4. E/B 1. 2. 3. a

BULK

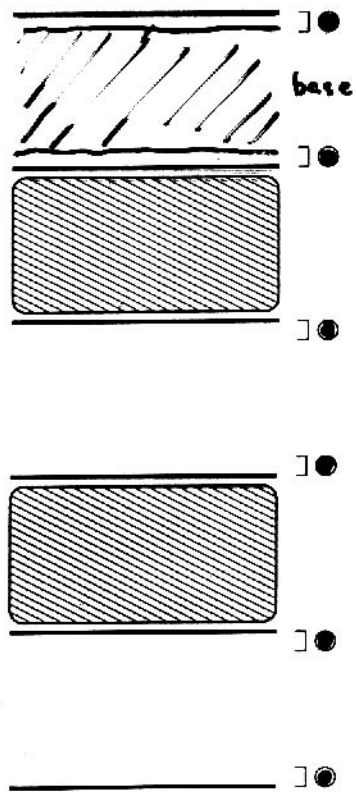
~ 1600 μm



E/B 1. 2. 3. 4

ECC(800)

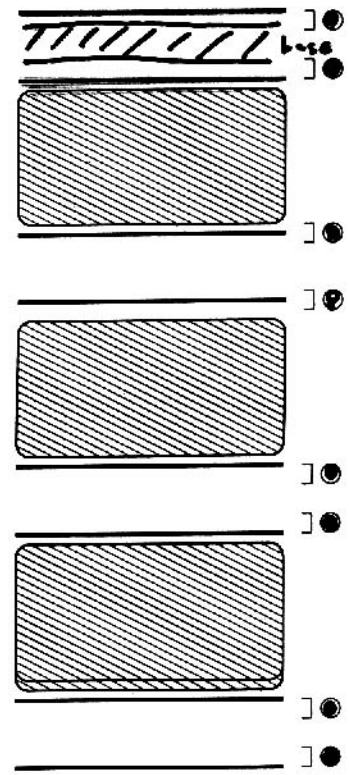
~ 1000 μm



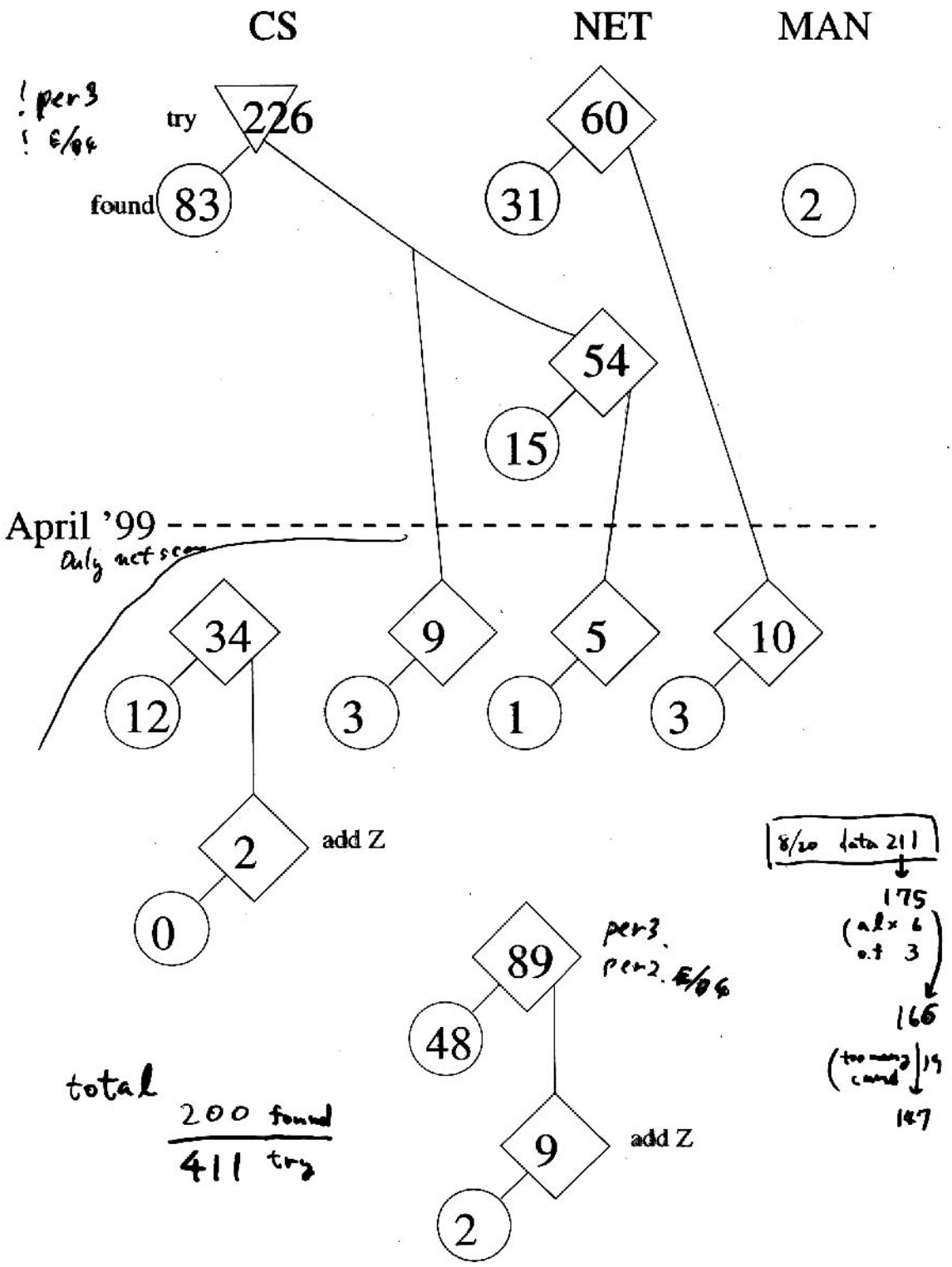
ECC 1. 3

ECC(200)

max 1000 μm



current status (8/22)



total

200 found

411 try

8/20 data 211

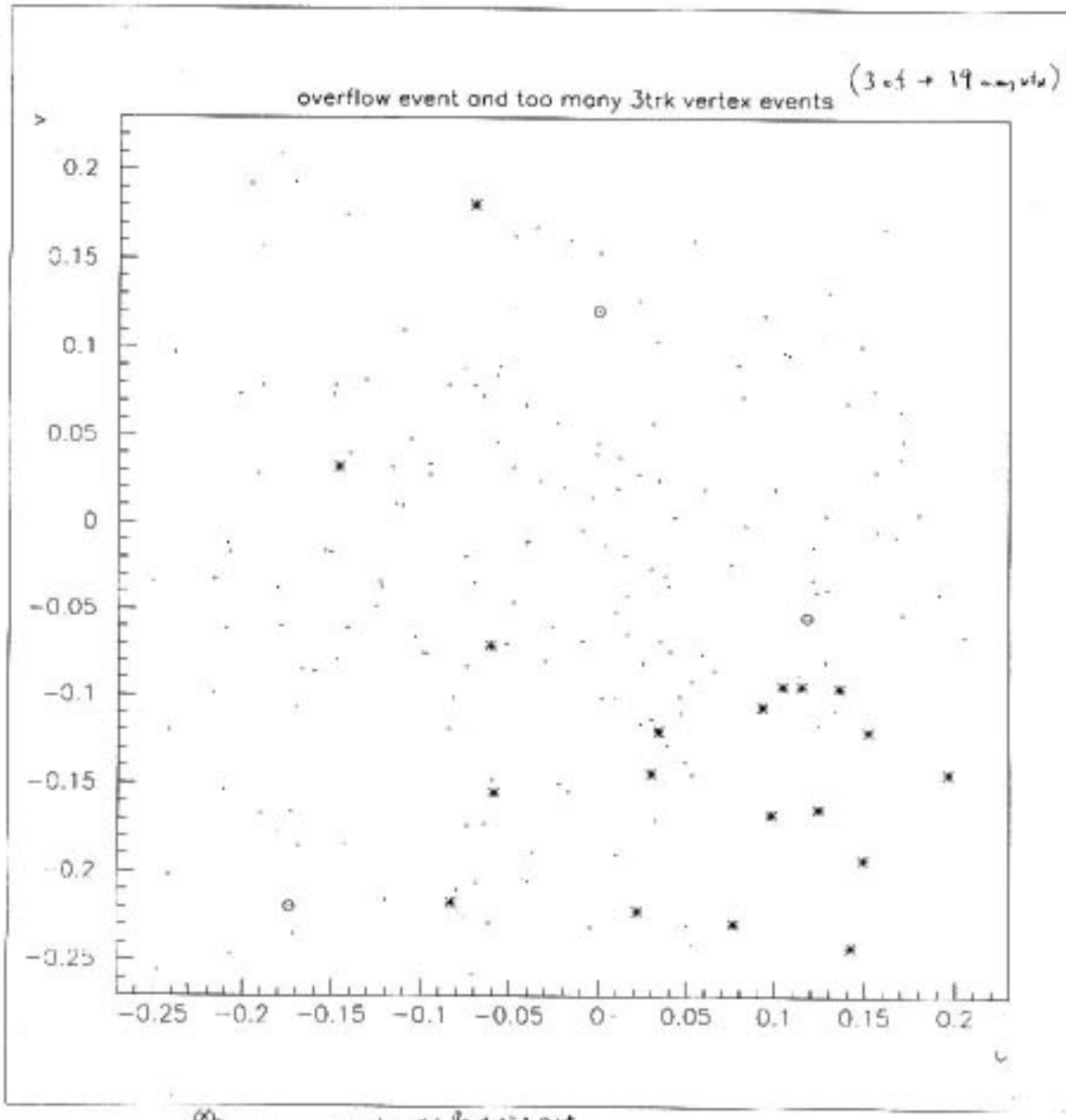
175

(alx 6
o.t 3)

166

(too many cand) 19

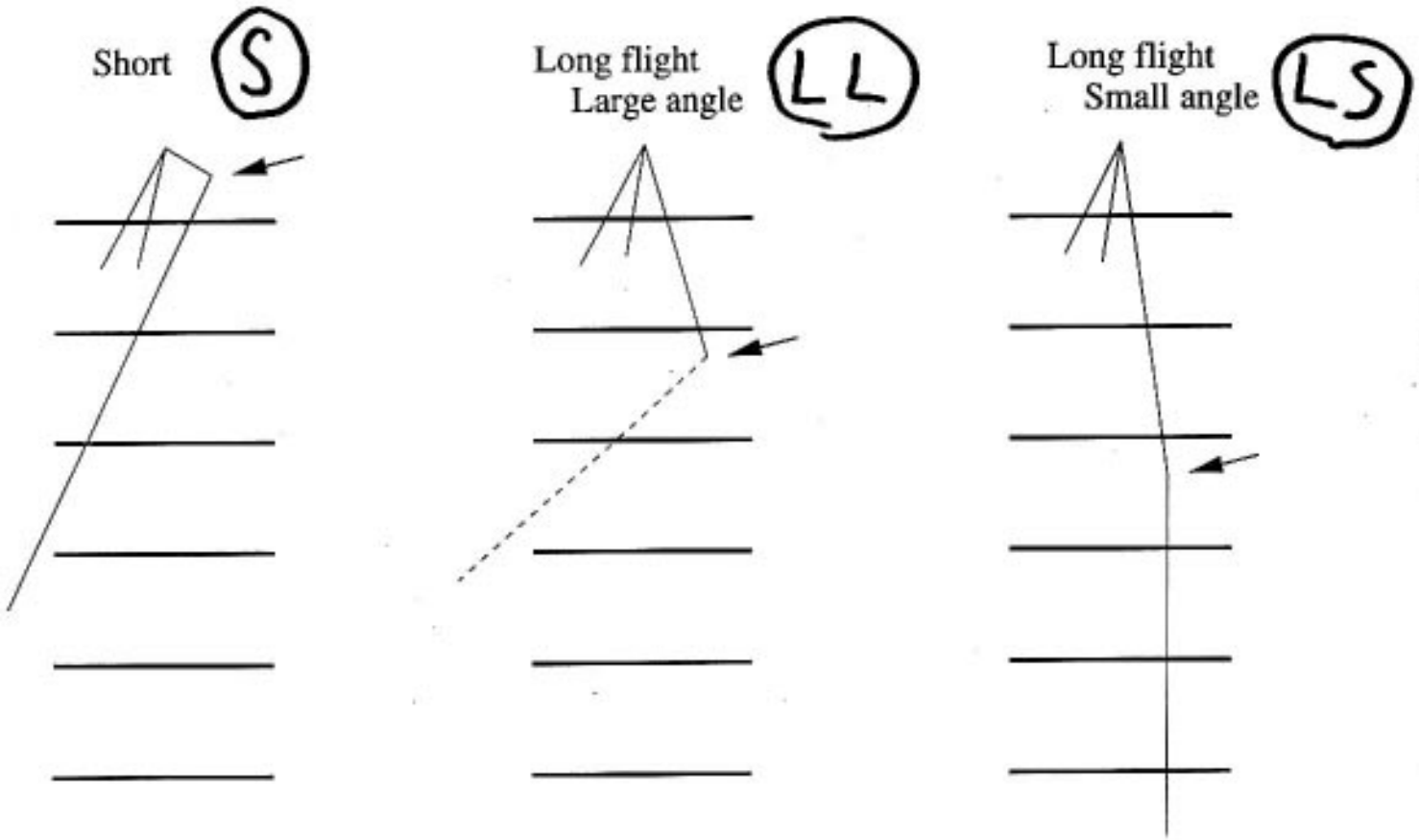
147

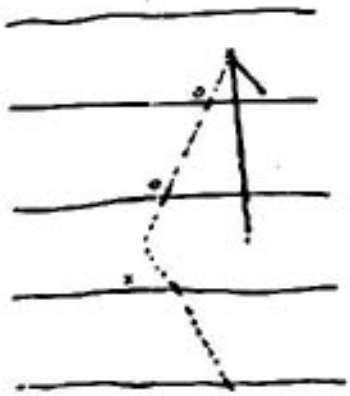


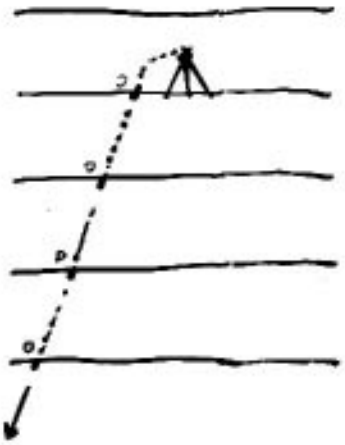
vertex が多すぎるのは
log density が主原因.

Decay search analysis K. Okada Nagoya

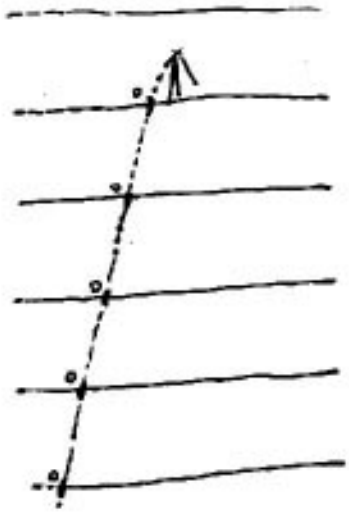
charged decay type

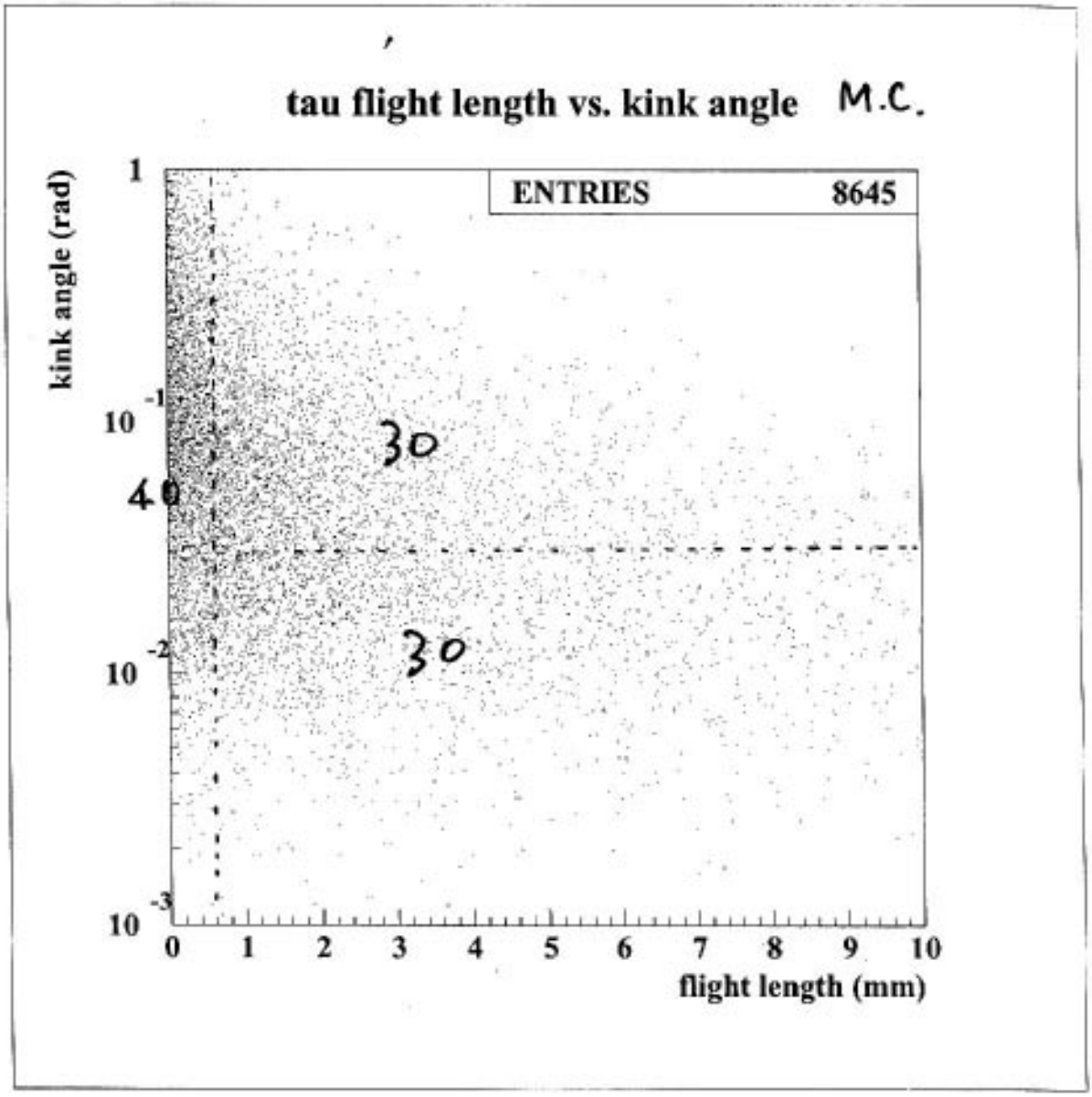


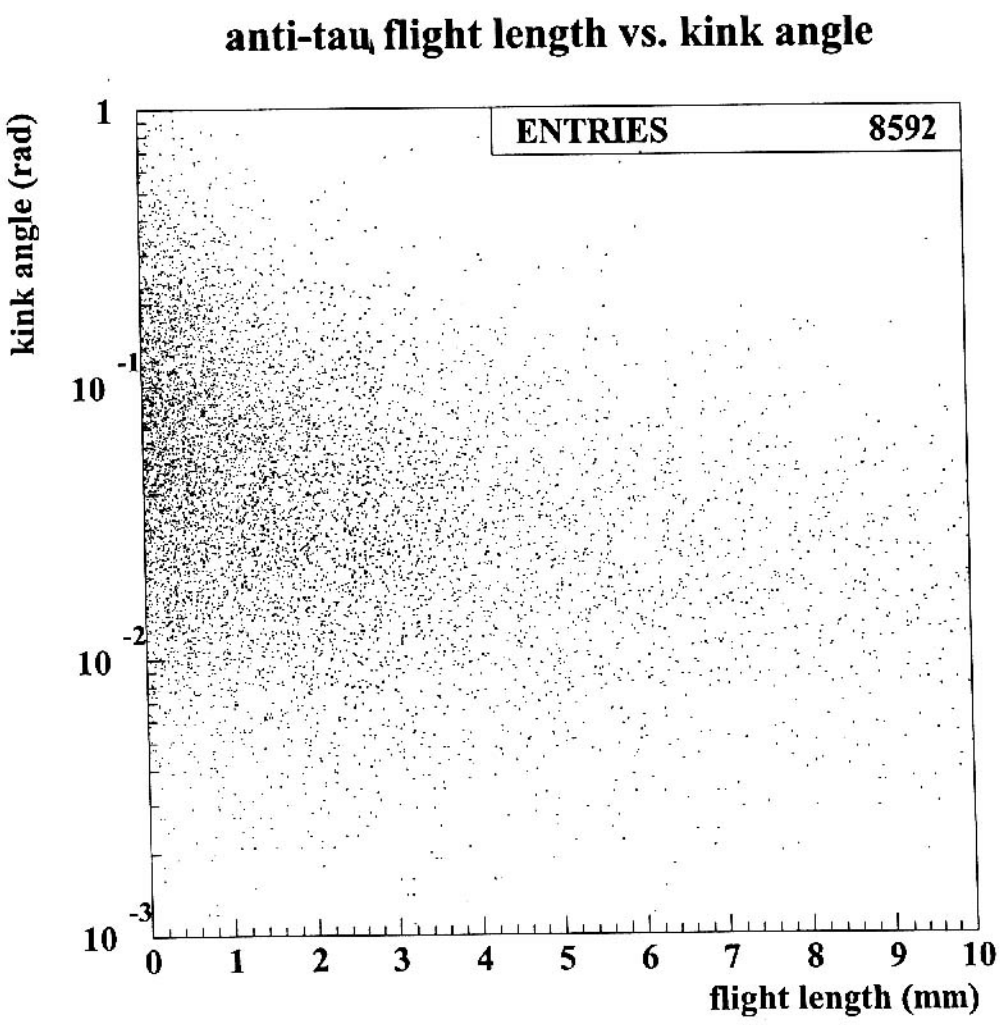


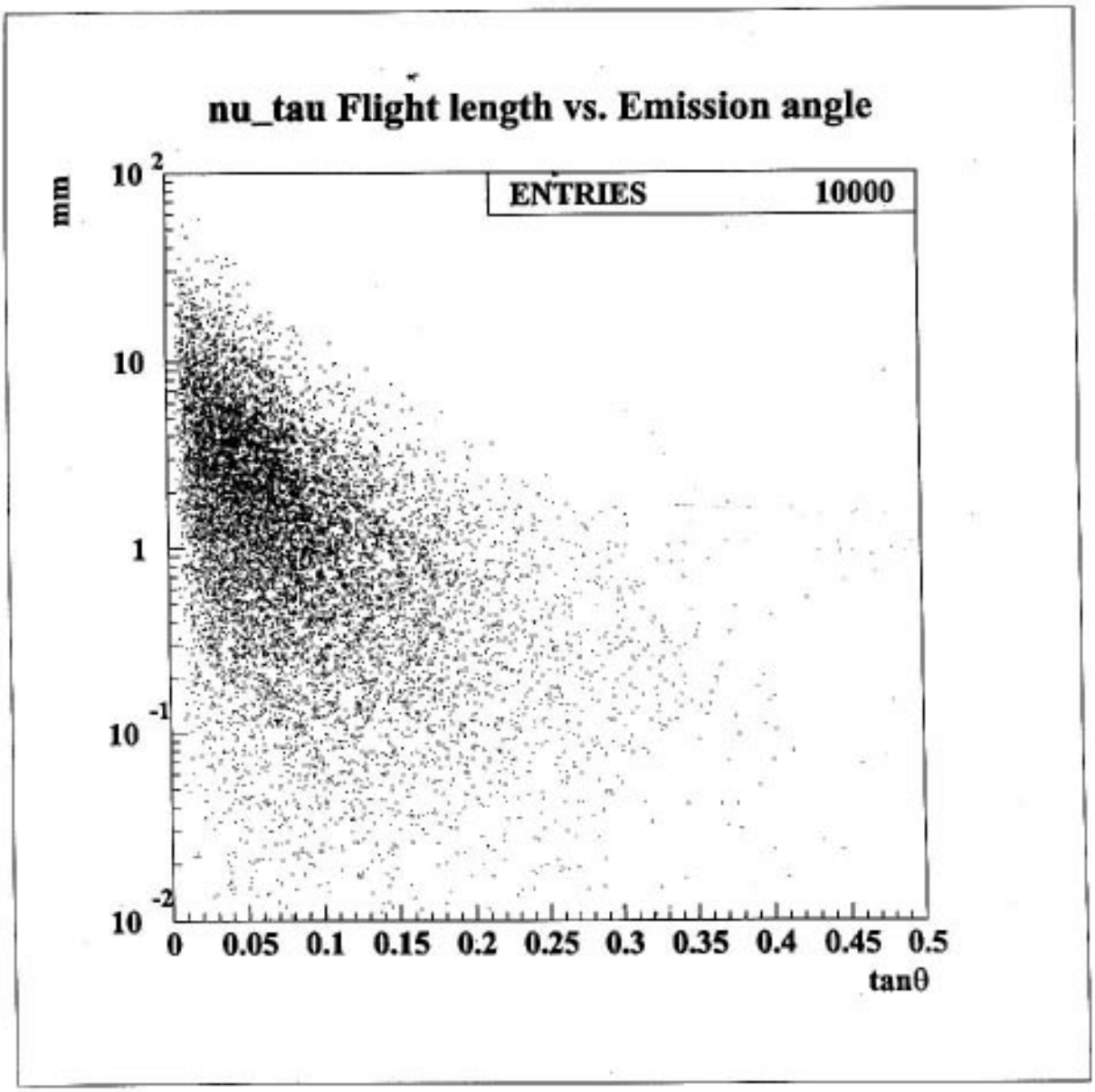


f.b



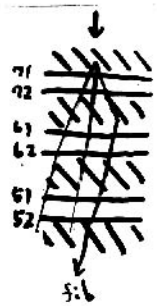

tau flight length vs. kink angle
M.C.
ENTRIES 8645
kink angle (rad)
1
10^-1
10^-2
10^-3
30
40
30
0 1 2 3 4 5 6 7 8 9 10
flight length (mm)


anti-tau flight length vs. kink angle
ENTRIES 8592
kink angle (rad)
1
10^-1
10^-2
10^-3
0
1
2
3
4
5
6
7
8
9
10
flight length (mm)


nu_tau Flight length vs. Emission angle
ENTRIES 10000
mm
10 2
10
1
10 -1
10 -2
0 0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5
tanθ

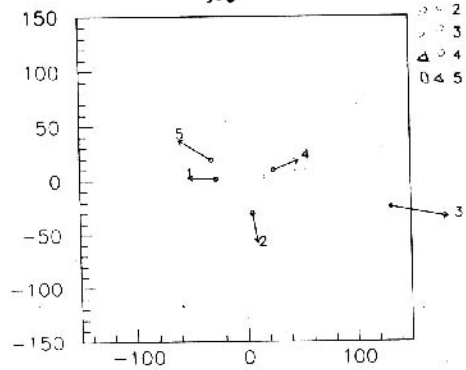
decay search method

	→ fld type	analized events/loc
~Jun '98		
PASS 0	manual follow down	32/34
~April '99		
PASS 1	net scan follow down (1×1 mm)	90/97
April '99 ~		
PASS 2	net scan follow down (2×2 mm)	~60/~69



3067−14134 mod 1

1	71 33633	12 140075	−0.126	0.006	217	3.2
2	71 33415	10 140072	0.024	−0.139	217	3.7
3	72 41884	6 130070	0.259	−0.049	508	1.8
4	71 33683	2 150098	0.115	0.045	217	1.9
5	71 33766	2 130042	−0.145	0.089	217	5.8



• LL cand

71 - 33415

72 - 42[illegible]

71 - 33633

[illegible] - 86[illegible]

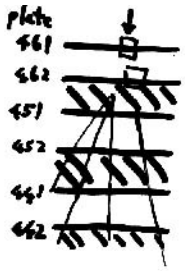
#39 #38 (24, 11)

#13 #13

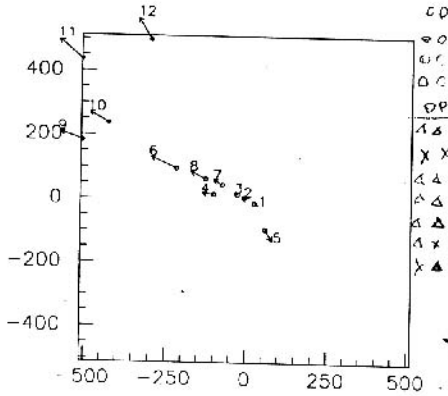
orcade

#611 #610 (23, 11)

#625 #584



3223-41138 mod 7



1	451 7548	12	130075	0.048	-0.023	549	0.4				
2	451 7640	11	150142	-0.011	0.012	549	1.0				
3	451 7697	12	160149	-0.049	0.029	549	1.4				
4	451 7694	8	140074	-0.183	0.029	549	1.6				
5	451 7177	7	140062	0.108	-0.171	549	1.2				
6	451 8078	1	120048	-0.394	0.177	549	0.8				
7	451 7188	7	140068	-0.134	0.084	549	198.8				
8	451 7746	4	90006	-0.230	0.117	549	81.7				
9	452 6156	3	110031	-0.347	0.125	1462	97.1				
10	452 6048	3	130105	-0.292	0.162	1462	178.8				
11	452 7199	3	110009	-0.350	0.298	1462	180.7				
12	452 7349	2	100009	-0.204	0.341	1462	173.6				

★ 1's short cand.

441 △

442 ○

7/6/99

area 4 / area 4 & 2 #1 & 3.

#672 #671 (25,20)

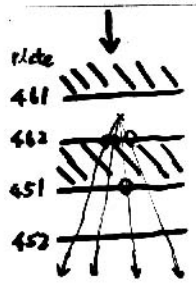
#646 #645

area 3

#100 #99 (22,20)

#74 #73

LL and BL



1seg stop.

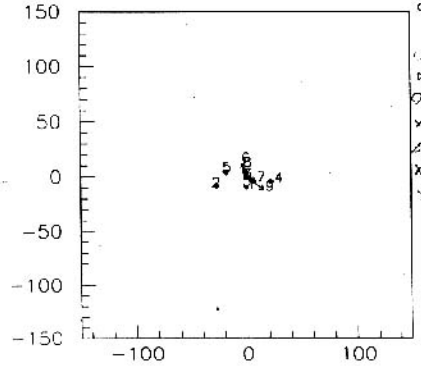
trk9 ?

1seg [illegible]

3335−02658 mod 2 [illegible]

		1st seg number		θ_u	θ_v		IP
1	451	1836	11 110024	−0.000	−0.008	1215	1.3
2	451	1841	11 110018	−0.022	−0.007	1215	0.3
3	462	1351	12 160174	−0.010	−0.004	95	0.5
4	451	1834	11 140064	0.018	−0.003	1215	1.0
5	451	1840	11 150083	−0.015	0.003	1215	2.0
6	462	1355	12 130055	−0.015	0.042	95	0.6
7	462	1356	8 160121	0.029	−0.014	95	0.6
8	462	1366	1 120011	−0.010	0.029	95	7.4
9	462	1365	1 130030	0.053	−0.040	95	4.6
10	451	2618	2 160279	0.100	−0.395	1215	177.7

ns = 8



area 4

#510 #510 (19.15)

#485 #484

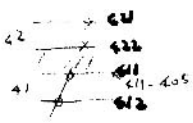
LL [illegible]

462 − 1356

422 − 168

ΔE = 163

[illegible] (−53, 126)



trk9

[illegible] (8/24/91)

[illegible]

Special event list PASS 0.1

mod	run	ev	topology (<θ mrad)	<θ/θ	FL (mm)	lepton	Pt (GeV)		判定
1	3024	30175	kink (90)	大	4.5	なし	0.2~0.6	強 e	τ
7	3232	18635	kink (80)	大	0.4	e? →	·		τ/charm
3	3021	24125	kink (15)	小	6	→	→		τ
3	2987	839	kink (34)	小	5	→	→	en damage	
7	3259	10573	kink (15)	小	4	→	→		τ
1	2929	18912	3prong		6	なし? →	·		τ/2ry
2	3245	22786	3prong		0.4	μ	0.2	強 μ	charm
1	2919	3157	kink (>9)		<0.6	μ	·	強 e	charm
2	3351	10406	kink (>30)		<0.8	μ	·		2ry/c
1	2884	18223	kink (57)	小	8	μ	→		c/2ry
8	3230	13227	Vee ?		0.3	→	·		charm
2	3248	1045	2ry int		3.5	·	·	強なし	2ry

τ cand なし ≳0.2 or 強 μ.e

charm μ.e ≳0.2 or 強 μ.e.

2ry — — 強 μ.e でないこと

run ev mod (.ecc (.brk


```
[illegible]
3047 [illegible] 1 1 [illegible] 28802.6 18852.5 231   e 5 0 0 |
3041 [illegible] 1 1 -16014.2 -152913.7 40808.6 71   e 5 0 1 | skink(10/141),3p32,kink(1137/
2)
3029 [illegible] 1 1 42974.7 2947.5 44140.8 41
3026 [illegible] 1 1 [illegible] -30310.5 38929.9 81   e 6 0 0 | $trk_stop_between_=(26)
3026 [illegible] 1 1 [illegible] 28158.9 -8278.3 441   e 3 0 1 | lang(247)
3026 [illegible] 1 1 [illegible] -218124.2 33243.1 121   e 6 0 1 | lang(214)
3026 [illegible] 1 1 [illegible] -120764.8 17778.6 241   e 5 0 1 | lseq_!(276)
3301 [illegible] 1 1 [illegible] 168348.9 39788.7 92
3165 [illegible] 1 1 [illegible] 22351.6 -6803.5 421   e 5 0 2 | lseq_io=p(242)
3174 [illegible] 1 1 [illegible] -116039.7 3345.0 352   e 3 0 2 | lang(313),lang(251)
3174 [illegible] 1 1 [illegible] -83832.3 16571.8 251   e 6 0 1 | lang(8/351)
3164 [illegible] 1 1 [illegible] 97295.9 39333.9 81   e 5 0 2 | fjbmat(169),fibmat(29)
3165 [illegible] 2 1 56285.4 15860.4 30941.9 161   e 7 0 1 | lang(6/316),otosh(16)
3140 [illegible] 3 1 41456.6 -73339.9 40411.8 71   o 6 0 0 |
3140 [illegible] 2 1 126653.0 -78521.4 21907.6 221   e 4 0 2 | abort_*(88),fibmat(71),fibmat(
6229)
3184 [illegible] 3 | -108848.4 10108.6 11828.0 281   e 7 0 0 |

3058 [illegible] 1 2 131338.5 -14061.3 317814.5 221   b 4 0 0 |
3067 [illegible] 1 2 23537.2 127044.6 318992.1 211   b 4 0 0 |
3072 [illegible] 1 2 -345/2.4 -189699.6 273536.4 561   e 8 0 3 | lseq_!(221),lseq_!(186),stop
_!(30)
3142 [illegible] 1 2 37980.3 -138351.4 384364.0 401
3187 24318 1 2 -106778.9 48328.3 277068.0 561   e 5 0 0 |
3113 [illegible] 1 2 -114864.6 32261.5 310296.9 321   b 7 1 0 | otosh(247),abort(10=17)
3130 [illegible] 2 2 171917.5 -51284.5 283395.1 511   e 6 0 2 | fibmat(331),fibmat(40)
3131 13759 1 2 -206538.8 -244002.0 275834. 551   e 4 0 1 | lseq_!(173)
3186 14847 1 2 -178406.8 -60319.0 284525.3 511   e 5 0 0 |
3202 [illegible] 1 2 130871.8 131345.6 286074.0 502   e 7 0 0 | base_int
3202 [illegible] 1 2 -210932.5 -154623.4 317451.2 231   b 6 0 0 | stop_rev
3159 [illegible] 1 2 -139867.9 39767.1 274818 551   e 3 0 1 | [illegible]
3242 [illegible] 1 2 -56782.6 83884.7 313033.8 281   b 4 0 0 | stop_rev
3245 [illegible] 1 2 -99897.6 -34939.8 289125.9 481   e 6 0 0 | stop_rev,stop_*(84)
3287 [illegible] 2 2 -39690.8 -148439.9 291626.4 471   e 4 0 0 |
3297 [illegible] 1 2 34538.1 -69931.5 283820.6 581
3335 [illegible] 1 2 [illegible] -113233.7 294703.4 630   e 8 0 1 | lseq_*(16),stop_klak(32)

3062 11565 1 4 -109946.9 -107244.4 906473.9 151   b 9 0 0 |
3065 13126 1 4 23079.0 -169466.1 907382.0 141   b 8 0 0 |
3067 28156 1 4 -3259.9 -231675.4 871480.3 541   e 3 0 2 | stop_!(135),stop_gom(192)
3118 29133 1 4 -182339.1 -37470.3 879632.6 481   e 3 0 0 |
3118 29587 1 4 156526.3 -4848.4 869612.5 551   e 4 0 0 |
3136 05769 1 4 180069.4 19350.9 861187.5 591   e 3 0 0 |
[illegible] 1 4 [illegible] 175362.3 879521.9 481   e 4 0 2 | fjbmat(206),stop_!(158)
3176 08811 1 4 -84056.0 -118148.8 908762.2 131   b 4 0 0 |
3183 11996 1 4 -152831.8 -15447.5 871688.4 541   e 6 0 2 | lang(283),lseq_!(186)
3195 30608 3 4 -886.6 48086.2 896972.7 431   b 4 0 0 |
3133 22299 1 5 160591.0 -6319.0 879446.5 481   e 1 0 0 |
3194 [illegible] 1 5 65911.4 -84990.1 857036.3 611   e 6 0 0 |

3229 [illegible] 1 5 -113741.5 111141.2 22952.9 332   e 4 0 0 | base_int
3240 [illegible] 2 5 83210.2 -126.9 -13624 511   e 3 0 0 |
3240 [illegible] 1 5 125483.1 -48351.9 -13717.5 511

3096 [illegible] 1 7 12248.3 37418.4 575323.4 481   e 3 0 0 |
3096 [illegible] 1 7 2197.2 -101131.9 612953.1 211   b 5 0 1 | stop_!(1183)
3132 [illegible] 1 7 122303.7 -40144.9 570349.5 501   e 4 1 0 | furafara?
3136 02059 1 7 -22906.3 -151038.5 596699.7 382   e 6 0 3 | base_int o=kink(4/194),lseq
(3451,abor_fee_grain
3138 04139 1 7 [illegible] -31818.7 60/297.8 291   b 4 0 1 | lseq_!(224)
3140 [illegible] 1 7 -147563.7 -28085.9 601561.0 351   e 3 0 1 | stop_!(1183)
3170 [illegible] 1 7 -282910.9 72831.7 580954.4 451   e 6 0 1 | m=kink(4/300)
3192 [illegible] 1 7 -210138.3 -61698.5 593332.9 261
```



```
3207 08232 1 7 -30558.4 -80518.9 613413.1 211   b 3 0 1 | stop_!(1198),lseq_!(203)
3273 41138 1 7 -23310.4 -60694.5 581004.9 451   e 5 0 0 | lseq(360)
3301 11419 1 7 -123608.1 -34858.8 696566.0 291   b 3 0 0 |
3317 00693 1 7 48167.3 -228273.3 614519.6 191   b 4 0 0 | +furafara,+lang(357)
3330 19742 1 7 30639.3 53637.7 599588.5 261   e 3 0 0 |
3331 04888 1 7 49494.5 -137563.3 595037.4 481   e 4 0 0 |

3223 46726 1 8 58261.4 -78080.7 871071.3 641   b 5 0 0 |
3231 80433 1 8 15091.4 -18400.7 873938.7 631   b 6 0 0 | miss connection 2rr_int
3250 80479 1 8 -96656.5 36523.8 815025.7 581   b 4 0 0 | +lib(863)
3276 83366 1 8 -192519.4 27797.8 879970.2 511   b 3 0 0 |
```

Conclusions of decay search

- Charged decay is categorized to 3 types (S, LL, LS)
- track connection is not perfect for now.

  → need to check emulsion manually.

Next

- Neutral charm search.
- LL → (!) → LS establish

  manual check
  ↓
  can't see large kink.

-