

# Event Classification

*examine events and classify events prior to new  
vertex predictions*

1) Not-in-Fiducial Set ✓

2) Messy Set ✓

3) Not Located Set ✓

## 1) Not-in-Fiducial Set

Class	N
Reject: SFT	26
Reject: OFV	30
Reject: OE	32
Accept	14
Total	102

**Table 1.** The reason for event rejection is given for the set of 102 “Not-in-fiducial” events: *SFT* means SFT or T1,2 interaction, *OFV* means : “out-of-fiducial volume” but within emulsion volume, *OE* means : “out-of-emulsion”

Run	Event	Class	Lepton
3061	03991	CS1	muon
3061	08752	NET	elec
3067	17379	CS1	elec
3117	23319	CS1	-
3118	25726	CS2	elec
3139	22722	CS2	-
3193	10591	CS2	-
3231	14647	CS2	muon
3232	00433	CS3	elec
3244	19011	CS2	elec
3248	19471	CS3	muon
3294	04129	CS3	-
3331	19358	CS1	elec
3339	10790	CS2	-

**Table 2.** List of 14 events accepted for scanning. The classification is the method of vertex prediction: *NET means* : Net scan, *CSn means*: Changeable sheet scan-back using  $n$  tracks (estimated)

## 2) Messy Set

Class	N
Reject: OE	4
Reject: OFV	1
Reject: M1	12
Reject: M2	10
Reject: M3	5
Accept: M1	3
Accept: M0	8
Total	40

**Table 3.** The reason for event rejection is given for the set of 40 “Messy” events: *M0* means: “some good SFT tracks”, *M1* means : “some possible SFT tracks”, *M2* means: “possible use of shower pointing”, *M3* means: “profoundly messy”, *OFV* means: “out of fiducial volume”, *OE* means : “out-of-emulsion”

Run	Event	Class	Lepton
Class M0			
2846	09042	CS2	muon
2928	26134	CS2	muon
3008	17248	CS2	elec
3113	07743	CS1	muon
3118	26855	CS1	elec
3131	27620	CS2	elec
3137	03482	Net	-
3147	08486	Net	muon
Class M1			
2999	15251	CS1	muon
3075	18823	CS2	-
3298	16186	CS2	elec

**Table 4.** List of 11 events accepted for scanning. The classification is the method of vertex prediction: *NET means* : Net scan, *CSn means*: Changeable sheet scan-back using  $n$  tracks (estimated). The Messy class 1 events are a test set with lower priority for scanning.

### 3) Not Located Set (*subset*)

Priority	N	N(muons)	N(elec)	N(unkwn)	1 space tk	>1 space tk
1	25	18	2	5	8	17
2	29	11	13	5	18	11
3	32	5	13	14	4	28
Not in emul	5					
Total	91	34	28	24	30	56

**Table 5.** Classification of events in the “Not Located” category (subset, ~40% of total). The priority rating is : 1 = clear space track(s), 2 = probable ambiguity, 3 = too many 2-D lines. Predictions will be made for all priority = 1 events.