

# L00: Total Chip Hits

## L00 M99 Number of Chips & Notation:

L00: Number of Chips							
Radius	Forward	Middle	Central	Central	Middle	Forward	sum
inner	6	6	6	6	6	6	36
outer	12	12	12	12	12	12	72
sum	18	18	18	18	18	18	108

10,000 DiJet Events (PTjet >10 GeV) at 2 TeV with Pile-up (<3>, 30cm) Nover = 7

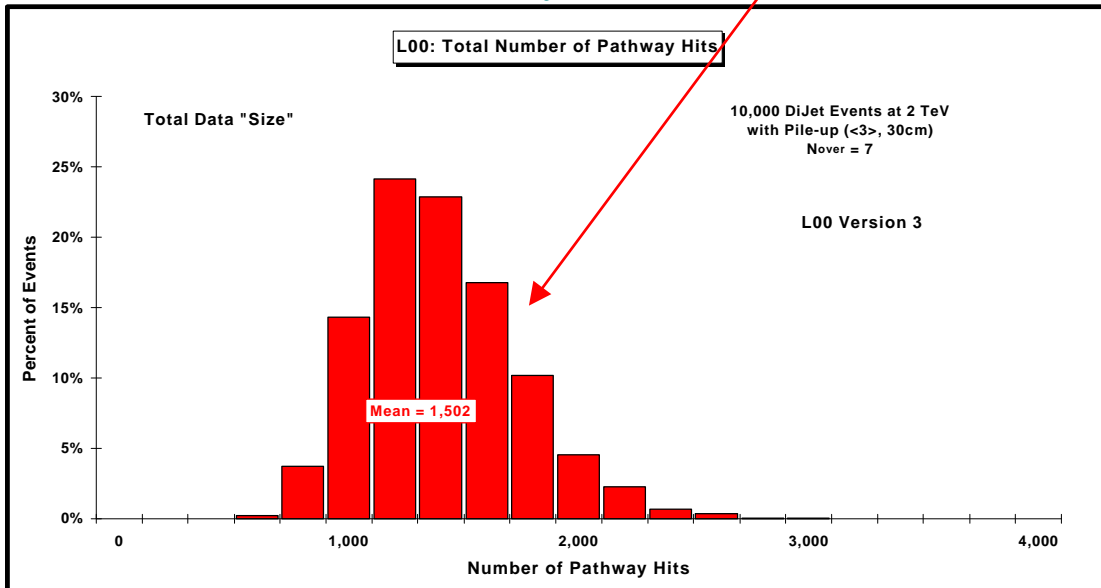
## L00 M99 Total Chip Hits and Average Hits per Chip:

L00: Average Total Chip Hits							
Radius	Forward	Middle	Central	Central	Middle	Forward	sum
inner	74	88	99	100	89	73	523
outer	141	165	184	185	166	139	979
sum	214	253	283	284	255	212	1,502

L00: Average Hits/Chip							
Radius	Forward	Middle	Central	Central	Middle	Forward	all
inner	12	15	17	17	15	12	15
outer	12	14	15	15	14	12	14
all	12	14	16	16	14	12	14

## L00 M99 Total Number of Pathway Hits (total data "size"):



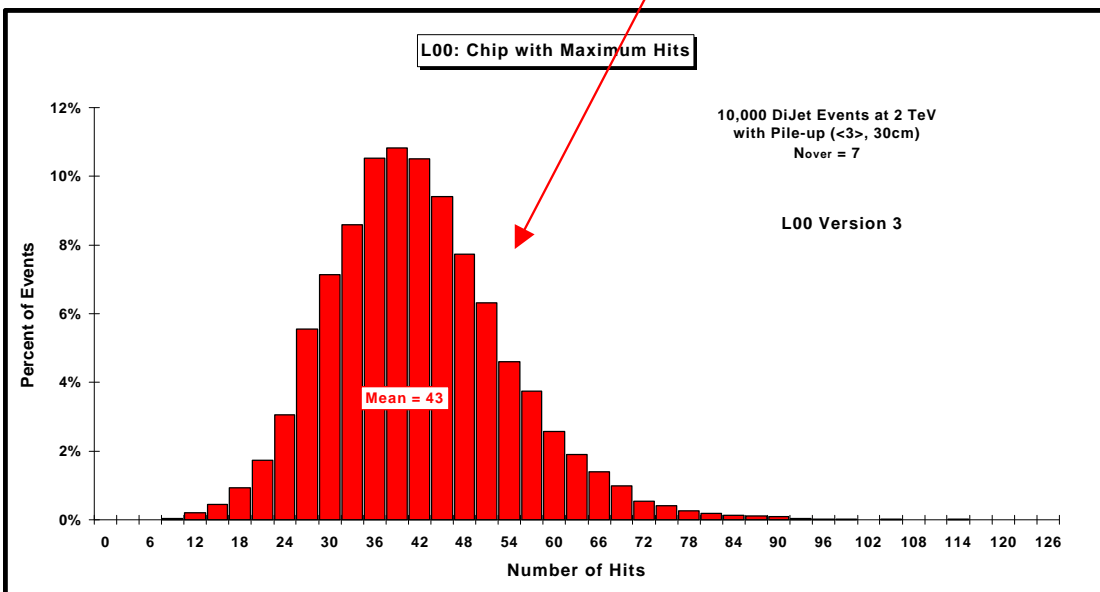
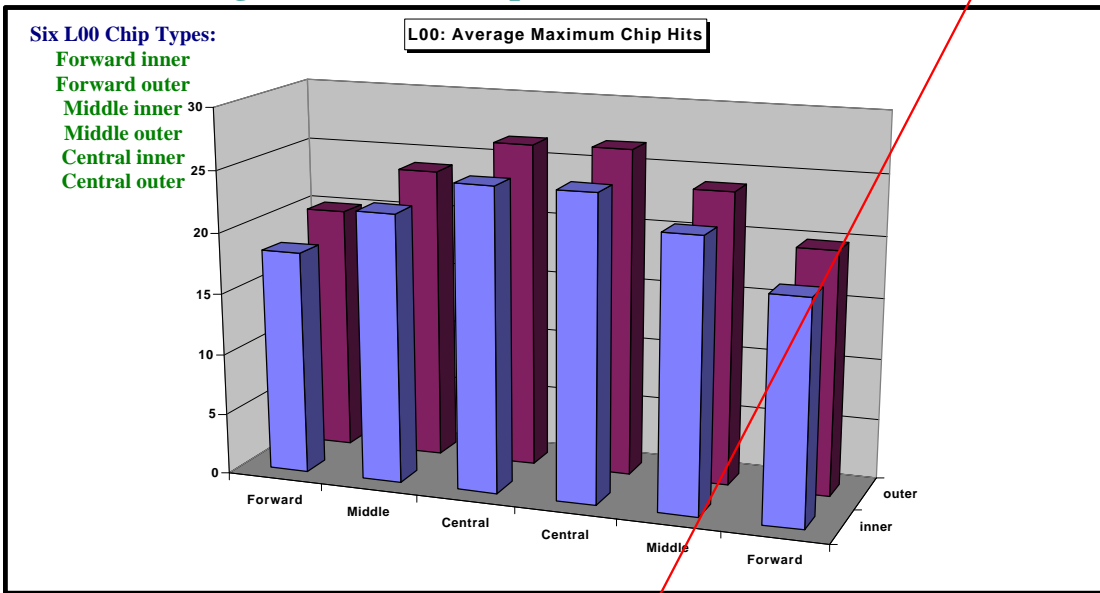
# L00: Chip with Maximum Hits

10,000 DiJet Events ( $PT_{jet} > 10 \text{ GeV}$ ) at 2 TeV with Pile-up ( $<3>$ , 30cm) Nover = 7  
**L00 M99 Chip with Maximum Hits:**

L00: Average Maximum Chip Hits							
Radius	Forward	Middle	Central	Central	Middle	Forward	all
inner	18	22	25	25	22	18	
outer	20	24	27	27	24	20	
all							43

Read time of 1.7 ms

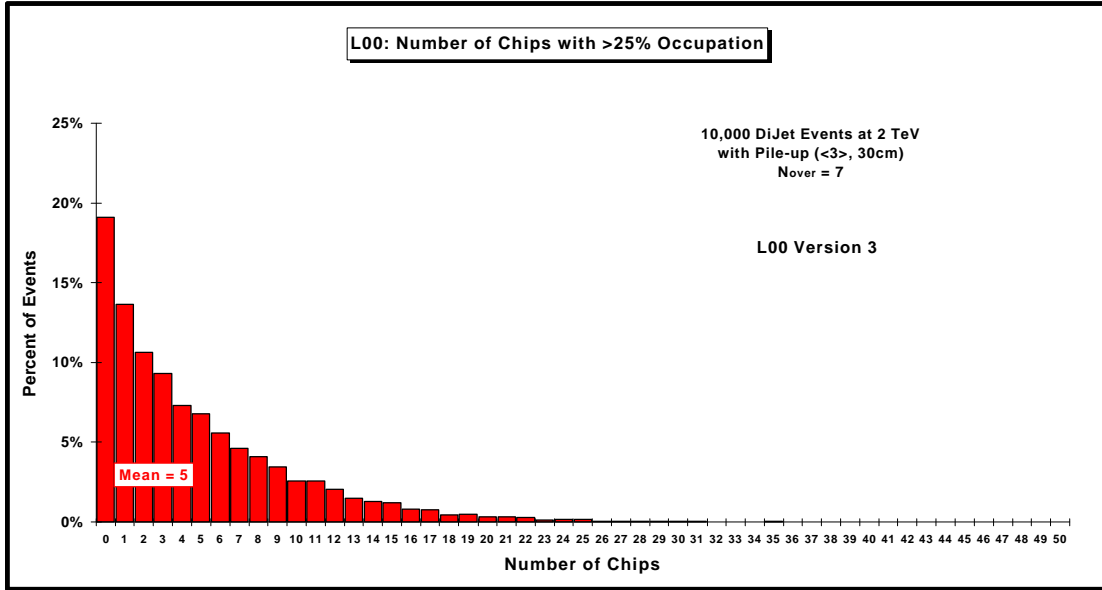
**L00 M99 Average Maximum Chip Hits:**



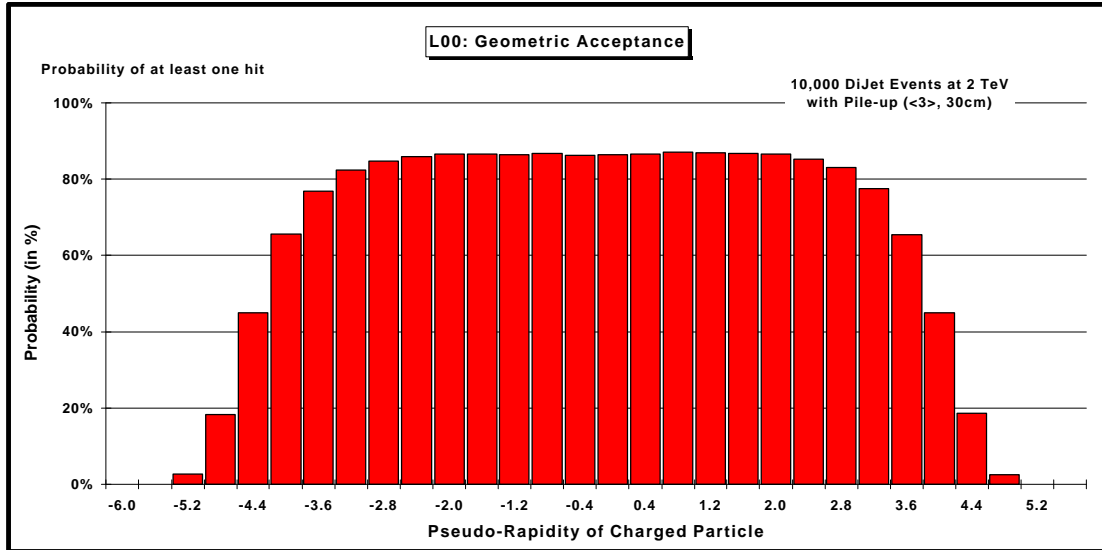
# L00: Chips with Large Occupation

10,000 DiJet Events ( $PT_{jet} > 10$  GeV) at 2 TeV with Pile-up ( $\langle 3 \rangle$ , 30cm) Nover = 7

## L00 M99 Number of Chips with > 25% Occupation:



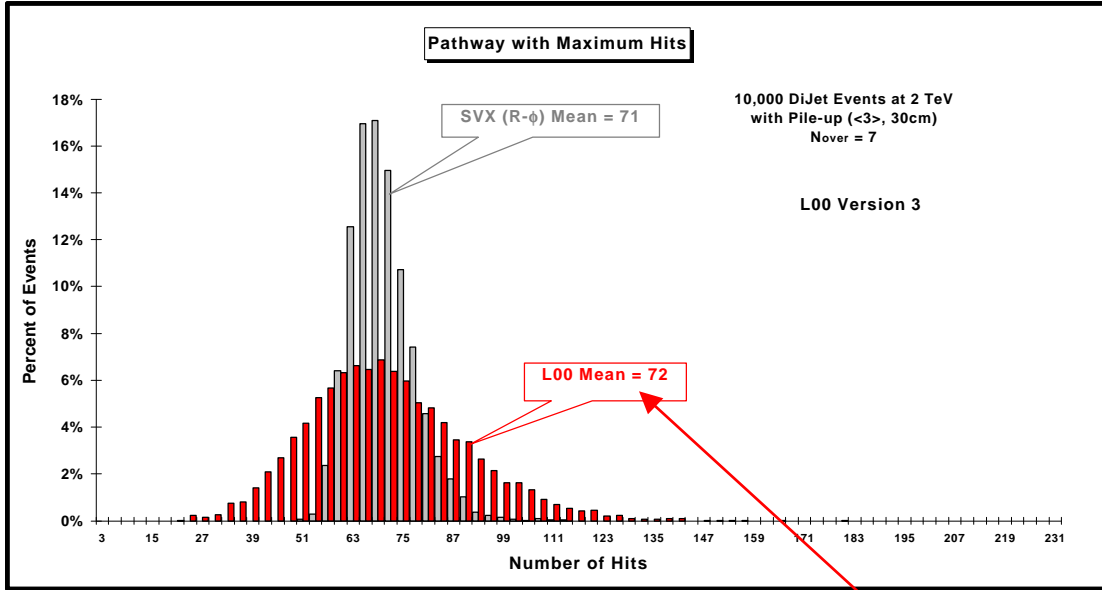
## L00 M99 Geometric Acceptance (probability of at least one hit):



# L00: Pathway Information

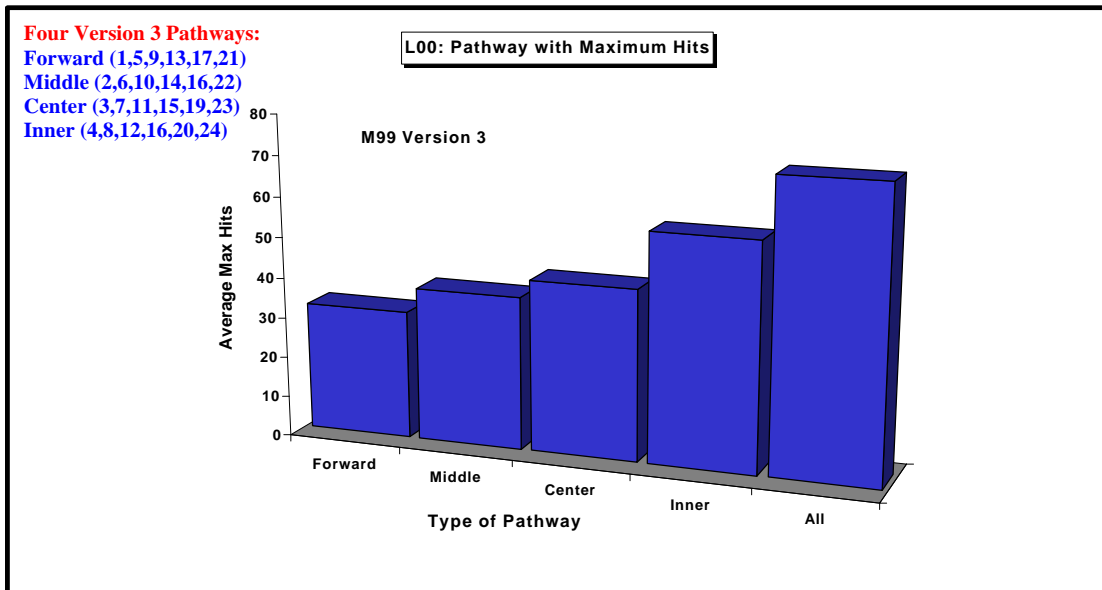
10,000 DiJet Events at 2 TeV with Pile-up (<3>, 30cm) Nover = 7

## L00 Version 3 Pathway with Maximum Hits:



## L00 Version 3 Pathway with Maximum Hits:

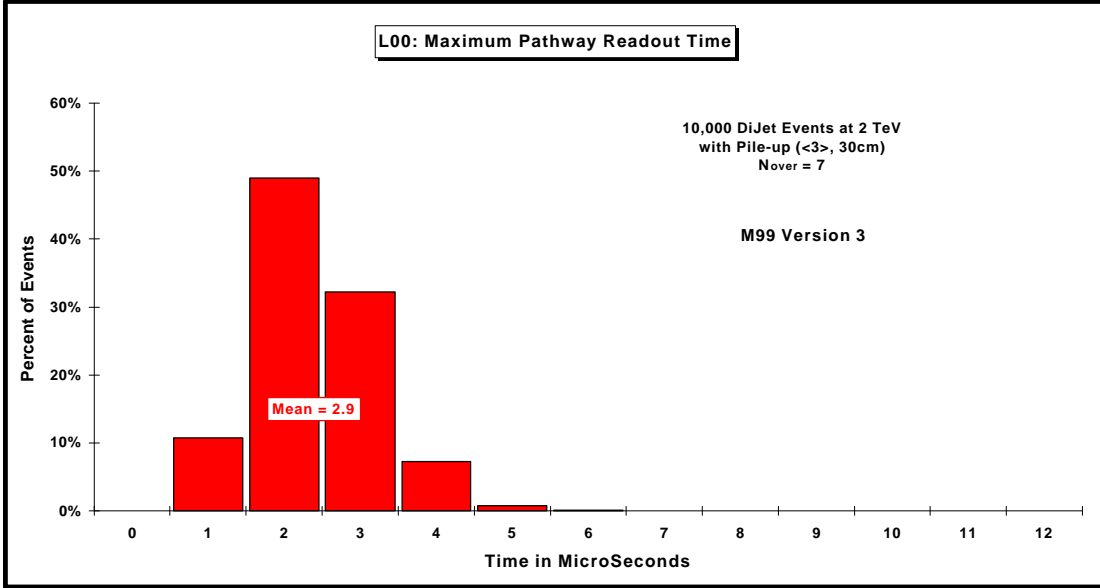
L00: M99 Version 3 Pathway with Maximum Hits								
Forward	Middle	Center	Inner	Inner	Central	Middle	Forward	all
32	38	42	56	56	42	38	32	72



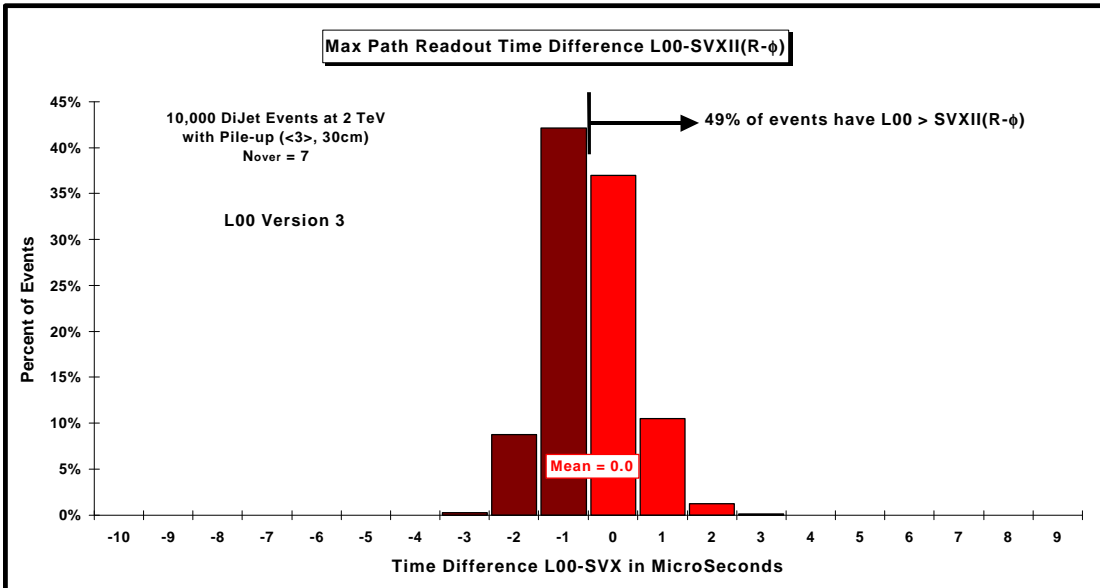
# L00: Readout Time Comparison with SVXII

10,000 DiJet Events at 2 TeV with Pile-up (<3>, 30cm) Nover = 7

## L00 Version 3 Max Path Read Time:



## L00 Version 3 Readout Time Difference L00-SVXII(R-φ only):



# L00: Group & Super-Group Information

10,000 DiJet Events at 2 TeV with Pile-up (<3>, 30cm) Nover = 7

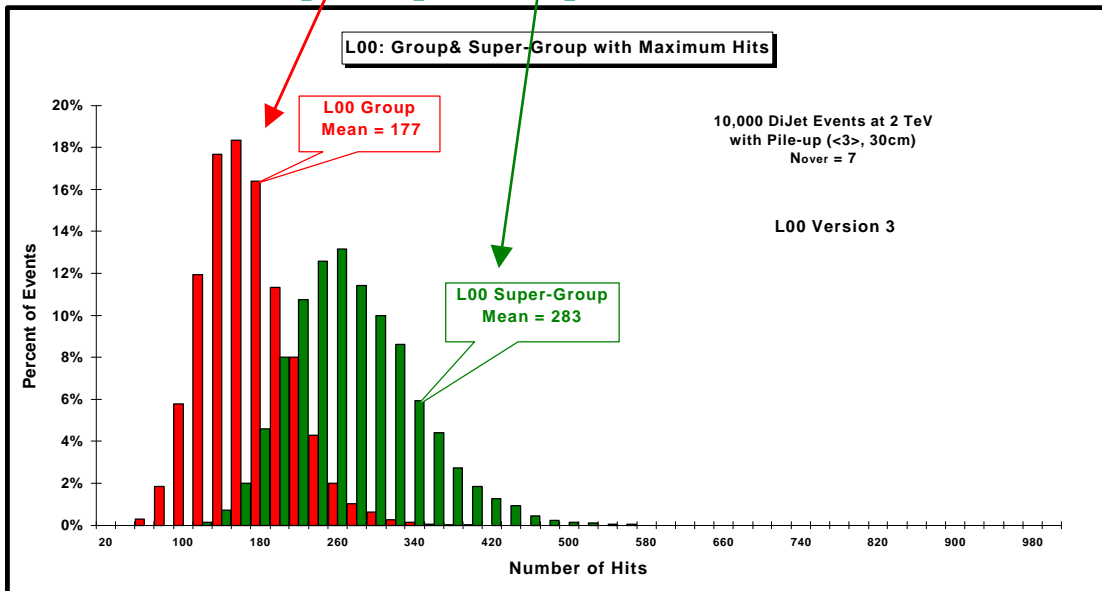
## L00 Version 3 Group & Super-Group Hits:

L00: M99 Version 3 Groups						
	Ave Hits	%Max	Max Hits	Paths/Chips	Max Path	Read Time
Group A	125	16.9%	177	4/9	47	7.1
Group B	125	17.1%	177	4/9	47	7.1
Group C	125	16.4%	178	4/9	47	7.1
Group D	125	16.5%	177	4/9	46	7.1
Group E	125	16.9%	177	4/9	46	7.1
Group F	125	16.3%	175	4/9	46	7.0
All Groups	1,502	100%	177	48/108	72	7.1

L00: M99 Version 3 Super-Groups						
	Ave Hits	%Max	Max Hits	Paths/Chips	Max Group	Read Time
SuperG A	251	17.9%	284	4/9	150	11.4
SuperG B	250	17.2%	285	4/9	150	11.4
SuperG C	250	16.6%	284	4/9	150	11.4
SuperG D	250	16.3%	285	4/9	150	11.4
SuperG E	250	15.9%	281	4/9	150	11.2
SuperG F	250	16.1%	281	4/9	150	11.3
All SuperG	1,502	100%	283	48/108	177	11.3

## L00 Version 3 Group & Super-Group with Maximum Hits:



## SVX: Group & Super-Group Information

10,000 DiJet Events at 2 TeV with Pile-up (<3>, 30cm) Nover = 7

### SVX Average Group & Super-Group Hits:

SVXII iphi	Ave Group and Super-Group Hits (R-Phi only)						10,000 DiJet Events
	iz= 1	2	3	4	5	6	SuperG
1	185	191	196	196	191	184	1,142
2	188	196	201	201	196	188	1,170
3	184	191	196	196	192	184	1,143
4	188	196	201	201	196	187	1,169
5	185	191	196	196	191	184	1,143
6	188	196	201	201	196	187	1,169
7	184	191	196	196	192	184	1,143
8	188	196	201	201	196	187	1,169
9	184	191	196	196	191	184	1,142
10	188	196	201	201	196	188	1,169
11	184	191	196	196	191	184	1,142
12	188	196	201	201	196	187	1,169
all	2,233	2,320	2,381	2,382	2,323	2,230	13,869

### SVX Group & Super-Group Max Hit Probability:

SVXII iphi	Group & Super-G Max Probability (R-Phi only)						10,000 DiJet Events
	iz= 1	2	3	4	5	6	SuperG
1	0.9%	1.0%	1.3%	1.3%	0.8%	0.6%	5.2%
2	1.3%	1.9%	2.3%	2.5%	1.9%	1.2%	12.1%
3	0.8%	1.0%	1.2%	1.2%	1.0%	0.7%	5.4%
4	1.4%	1.9%	2.3%	2.2%	1.7%	1.0%	11.5%
5	0.7%	1.1%	1.4%	1.3%	1.0%	0.7%	5.3%
6	1.3%	1.7%	2.3%	2.6%	1.6%	1.2%	11.6%
7	0.8%	0.9%	1.2%	1.1%	0.9%	0.8%	4.6%
8	1.3%	1.7%	2.3%	2.5%	1.8%	1.2%	11.4%
9	0.8%	0.9%	1.4%	1.2%	1.0%	0.7%	5.2%
10	1.1%	1.8%	2.3%	2.1%	2.0%	1.3%	11.5%
11	0.8%	0.9%	1.3%	1.3%	1.1%	0.7%	5.1%
12	1.2%	1.7%	2.3%	2.3%	1.9%	1.3%	11.3%
all	12.5%	16.3%	21.6%	21.4%	16.7%	11.4%	100.0%

Probability that the given group or super-group was the one with the maximum hits.

# SVX: Group & Super-Group Information

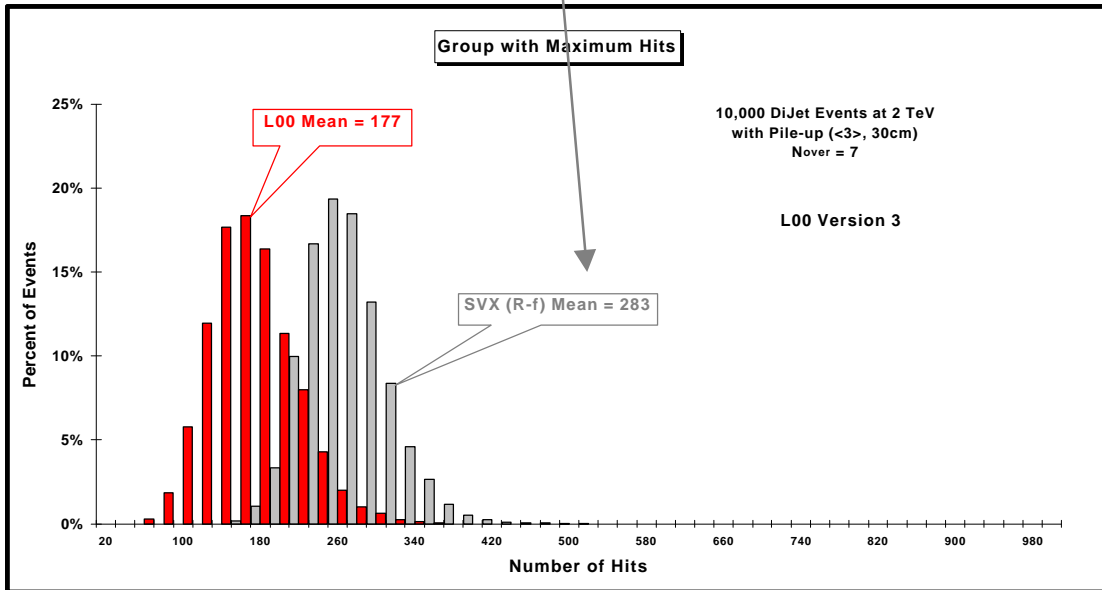
10,000 DiJet Events at 2 TeV with Pile-up (<3>, 30cm) Nover = 7

## SVX Ave Max Group & Super-Group Hits:

SVXII iphi	Ave Max Group & SuperG Hits (R-Phi only)						10,000 DiJet Events	
	iz= 1	2	3	4	5	6	SuperG	
1	273	282	279	279	281	265	1,237	
2	272	285	289	292	283	269	1,274	
3	270	279	279	281	278	270	1,243	
4	280	289	291	296	285	275	1,269	
5	263	285	292	291	282	266	1,245	
6	274	285	291	287	281	276	1,271	
7	267	278	288	277	285	267	1,241	
8	275	281	286	288	285	278	1,270	
9	272	282	279	283	286	268	1,247	
10	272	287	290	284	290	271	1,272	
11	270	287	282	280	280	266	1,244	
12	273	284	290	291	290	275	1,272	
<b>all</b>	<b>272</b>	<b>284</b>	<b>287</b>	<b>287</b>	<b>284</b>	<b>271</b>	<b>1,263</b>	

Overall average maximum group hits = 283

## SVX Group with Maximum Hits:





# SVX: Group & Super-Group Information

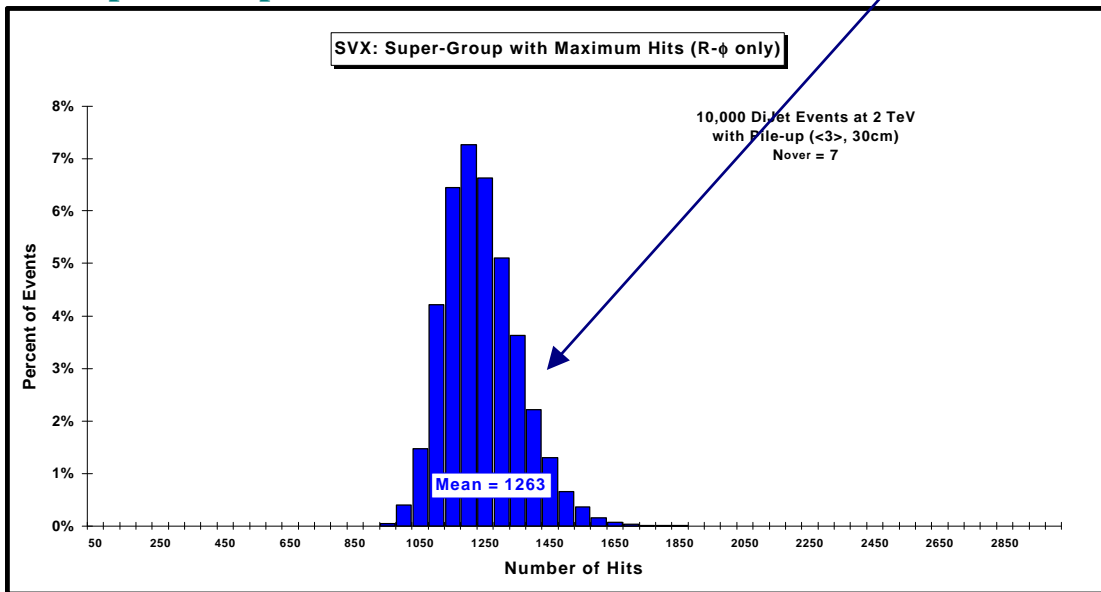
10,000 DiJet Events at 2 TeV with Pile-up (<3>, 30cm) Nover = 7

## SVX Ave Max Group & Super-Group Hits:

SVXII iphi	Ave Max Group & SuperG Hits (R-Phi only)						10,000 DiJet Events	
	iz= 1	2	3	4	5	6	SuperG	
1	273	282	279	279	281	265	1,237	
2	272	285	289	292	283	269	1,274	
3	270	279	279	281	278	270	1,243	
4	280	289	291	296	285	275	1,269	
5	263	285	292	291	282	266	1,245	
6	274	285	291	287	281	276	1,271	
7	267	278	288	277	285	267	1,241	
8	275	281	286	288	285	278	1,270	
9	272	282	279	283	286	268	1,247	
10	272	287	290	284	290	271	1,272	
11	270	287	282	280	280	266	1,244	
12	273	284	290	291	290	275	1,272	
<b>all</b>	<b>272</b>	<b>284</b>	<b>287</b>	<b>287</b>	<b>284</b>	<b>271</b>	<b>1,263</b>	

Overall average maximum group hits = 283

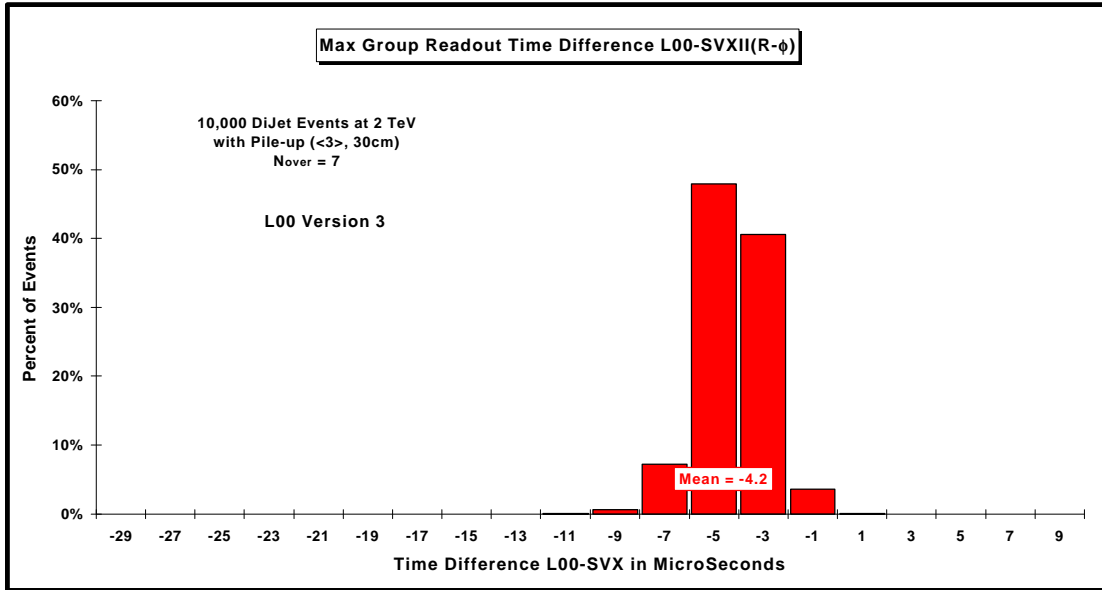
## SVX Super-Group with Maximum Hits:



# L00 & SVX: Group & Super-Group Readout Time Comparison

10,000 DiJet Events at 2 TeV with Pile-up (<3>, 30cm) Nover = 7

## Max Group Readout Time Difference L00-SVX(R-φ):



## Max Super-Group Readout Time Difference L00-SVX(R-φ):

