

MIPP Run Plan

Holger Meyer
Fermilab All Experimenters' Meeting
7/22/05

- The goals and priorities
- Expectations on number of events
- Schedule

MIPP Run Plan

- The plan as worked out in Nov.04: MIPP Run Plan: Operations

<http://ppd.fnal.gov/experiments/e907/RunPlan/RunPlan.html>

- Some minor adjustments have been made
 - Data points at similar beam momenta were run at the same momentum
 - Momentum scale was wrong

Sum of Events				E										Grand Total	
Priority	Z	Target	Note	5	13.3	15	20	30	40	50	60	75	120		
1	1	H				0.80				0.80		0.80		2.40	
	4	Be	p only										1.00	1.00	
	6	C	p only		0.38			0.38		0.50				1.14	
		NuMI	p only											0.38	
	83	Bt	p only										1.00	1.00	
	92	U					0.50		1.00					1.00	
1 Total					0.38	0.80		0.50	0.38	3.30		0.80	2.76	6.92	
2	1	H		1.40		0.40		1.40		0.40		0.40		4.00	
	12	C			0.30		0.30		0.30		0.30			1.50	
	4	Be	p only					1.00		0.50				2.00	
	6	C	p only			0.29				0.29				0.58	
		NuMI	p only											1.15	
	7	N		0.50	0.50			0.50						1.50	
	83	Bt	p only										2.00	2.00	
	92	U					0.50		1.00		1.00			2.50	
2 Total				2.20	0.50	0.70	0.29	3.70		3.20	0.29	1.70	5.73	18.31	
3	1	H		3.00		3.00		3.00		3.00		3.00		15.00	
	12	C		0.30		0.30		0.30		0.30		0.30		1.50	
	4	Be	p only										3.00	3.00	
			p only, 2x target		1.00	1.00				0.61		1.00		0.60	3.81
	6	C	p only	1.00	0.62		0.62		0.62		0.62		0.62	3.10	
			pl.K only			0.66		0.66		0.66				1.98	
		NuMI	p only											3.08	
	7	N		0.50	0.50			0.50						1.50	
	29	Cu	p only					1.00		2.00		1.00	4.00	4.00	
	83	Bt	p only										3.00	3.00	
		p only, 2x target		1.00	1.00								0.60	2.00	
3 Total				6.80	3.12	3.30	1.28	4.80	1.28	6.11	1.28	5.30	14.90	46.17	
Grand Total				9.00	4.00	4.80	1.57	9.00	1.66	12.61	1.57	7.80	23.39	75.40	

- MIPP DAQ rates:
 - 20 to 25 Hz (NuMI target)
 - 30 to 35 Hz (thin and cryo)
- NuMI target run will finish monday, Aug. 1st
- 2.38 million events remain in priority 1 (thin target 120GeV/c)
 - this is next

MIPP Run Expectations

- The Fermilab Accelerator shutdown is not firmly scheduled
 - Oct 1st for the Tevatron, Oct. 31st for the complex (J. Appel ~ 1 month ago)
 - There may be some running in November, TeV may run in October
 - April '06 (much of the shutdown work really can't be done in winter)
- The spill rate is uncertain
 - We are now running at 1 spill per minute until Aug. 1st
 - Impact on p-bar will be evaluated, should be negligible
 - FNAL directorate will decide our spill rate
- We may learn more soon in discussions with the new Fermilab director
- At the end of the run we will have a complete priority 1 data set and some fraction of priority 2 data points · the same fraction for all points
 - Except NuMI: We already took more than proportion of NuMI priority2
 - This was the way to double the spills: everybody will get more data

MIPP Run Expectations

- The amount of data we will accumulate until the shutdown is uncertain.
 - Assume 0.5 spills per minute until Oct. 31st for 3500 spills per week for 13 weeks:
 - Roughly 45,000 spills or 5.4 million events (at 30 Hz)
 - At 1 spill per minute:
 - Roughly 90,000 spills or 11 million events (at 30 Hz)

MIPP Schedule

- The Priority 1 data will be taken until we have 2.4 million events or shut down.
 - Expect this to complete around early September
- Put back the primary target in MC6 and the cryo-target in MC7 and take H2 data
 - Downtime for primary target installation, interlock changes, etc. and cryo-target startup combine. I.e. Minimum overall downtime
 - Expect to take LH2 until sometime in October
- Take target wheel data with secondary beams
 - Until shutdown, presumably at higher rate when the TeV is off
- Details are subject to change · I try to do my best to get as much data as possible for everybody.