Fe event rate

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20/Jan/00

Selection criterias are here;

1. Only use the defined "stable run" more than 3×10^{12}ppp.
2. Track exists
3. Noise hit cut
4. Check the consistency between the top-view and the side-view.
5. Reject extra track
6. Time window cut
7. End point is contained
8. Vertex is contained in radius<3m fiducial

Tracker version is (3,0,0), "bad channel" is always masked.

Uncertainty of the beam normalization is about 10% coming from CT calibration.

During Nov.1 and Nov.5 MUC elec. had a trouble. I reject this period. In this period, "good spill" is 94176 spills (17%).

	June200kA June4-June27	Nov.250kA Oct29-Nov24	Nov/June
beam int.($\times 10^{12}$)	4.59	4.93	
number of spill	656744	559016	
total POT ($\times 10^{18}$)	3.02	2.75	

MUC fiducial=(radius<3m)×(2m)=445ton

ν event (obs.)	27985	28077	
cosmic ray	-27	-23	
detection eff.(neut4.0)	0.218	0.224	
(neut2.5)	(0.225)	(0.225)	
ν event (corr.)	128543	125521	
ν rate (norm,$\times 10^{-14}$)	4.26	4.56	1.07

MC (cho,4.0) ($\times 10^{-14}$)	5.14	5.31	1.04
DATA/MC	0.83	0.86	

MC (cho,2.5+) ($\times 10^{-14}$)	4.70	4.83	1.03
DATA/MC	0.88	0.94	

Use neut.4.0

	June200kA June4-June27	Nov.250kA Oct29-Nov24	Nov/June
beam int.($\times 10^{12}$)	4.59	4.93	
number of spill	656744	559016	
total POT ($\times 10^{18}$)	3.02	2.75	

SciFi fiducial=(2.2m)×(2.2m)×(2m)=76ton

ν event (obs.)	5989	6122	
cosmic ray	0	0	
detection eff.	0.234	0.250	
ν event (corr.)	25583	24517	
ν rate (norm,$\times 10^{-14}$)	0.848	0.890	1.05
MC (cho) ($\times 10^{-14}$)	1.02	1.08	1.06
DATA/MC	0.83	0.82	

1kt -a fiducial=(radius<1.5m)×(2m)=111ton

ν event (obs.)	8615	8789	
cosmic ray	-9	-8	
detection eff.	0.237	0.243	
ν event (corr.)	36358	36122	
ν rate (norm,$\times 10^{-14}$)	1.21	1.31	1.08
MC (cho) ($\times 10^{-14}$)	1.48	1.57	1.06
DATA/MC	0.82	0.84	

1kt -b fiducial=(radius<2m)×(2m)=198ton

ν event (obs.)	14660	14739	
cosmic ray	-14	-12	
detection eff.	0.233	0.238	
ν event (corr.)	62887	61880	
ν rate (norm,$\times 10^{-14}$)	2.09	2.25	1.08
MC (cho) ($\times 10^{-14}$)	2.55	2.65	1.04
DATA/MC	0.82	0.85	