AMD analysis

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$^{132}Sn+^{124}Sn$ - AMD

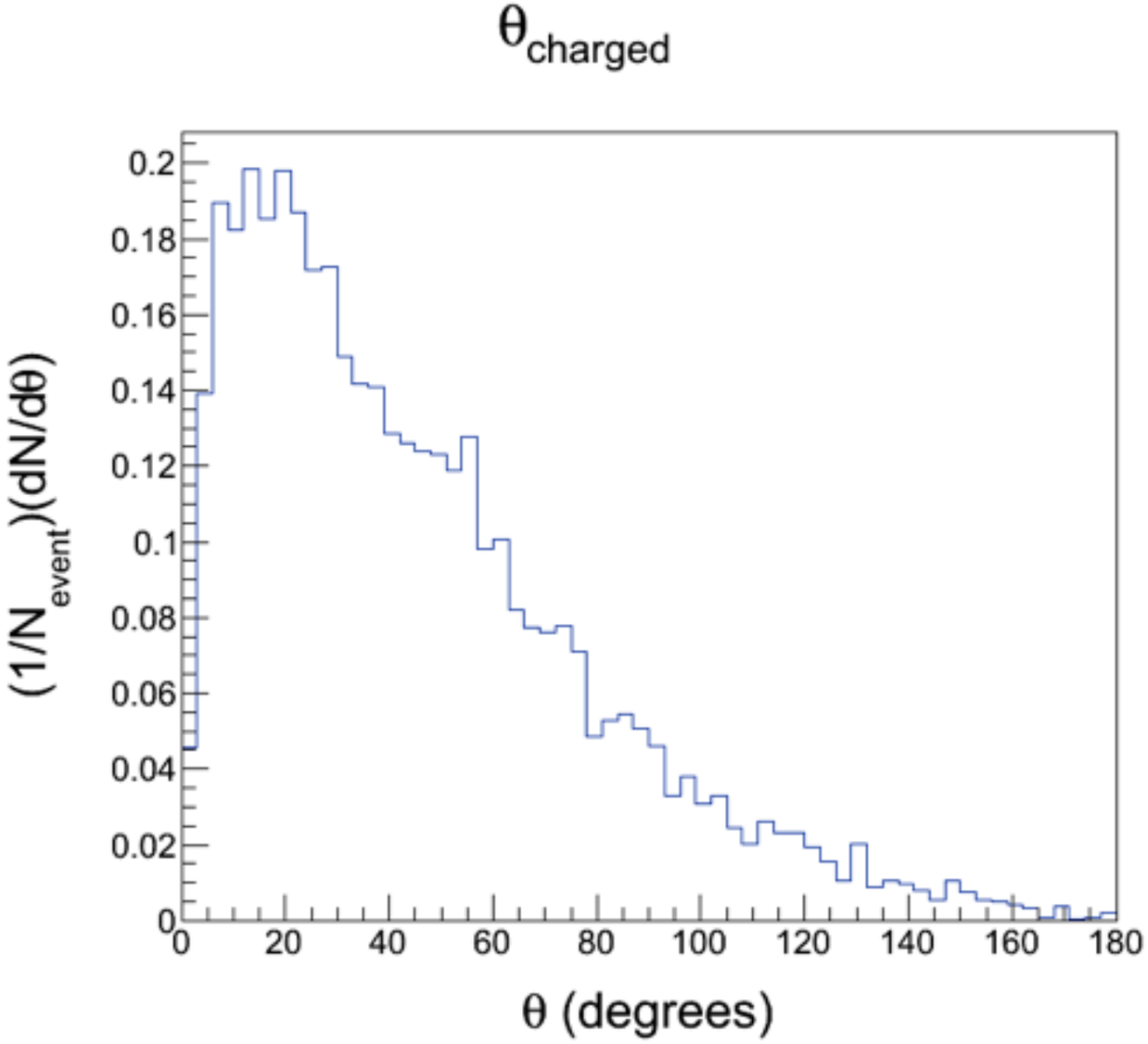
- N_{event} : 2010
- N : 124715 <N>=62.047
- $N_{neutron}$: 100063 (80.23%) $< N_{neutron} >$=49.783
- $N_{charged}$: 24652 (19.77%) $< N_{charged} >$=12.265
- N_{proton} : 10478 (8.40%) $< N_{proton} >$=5.213

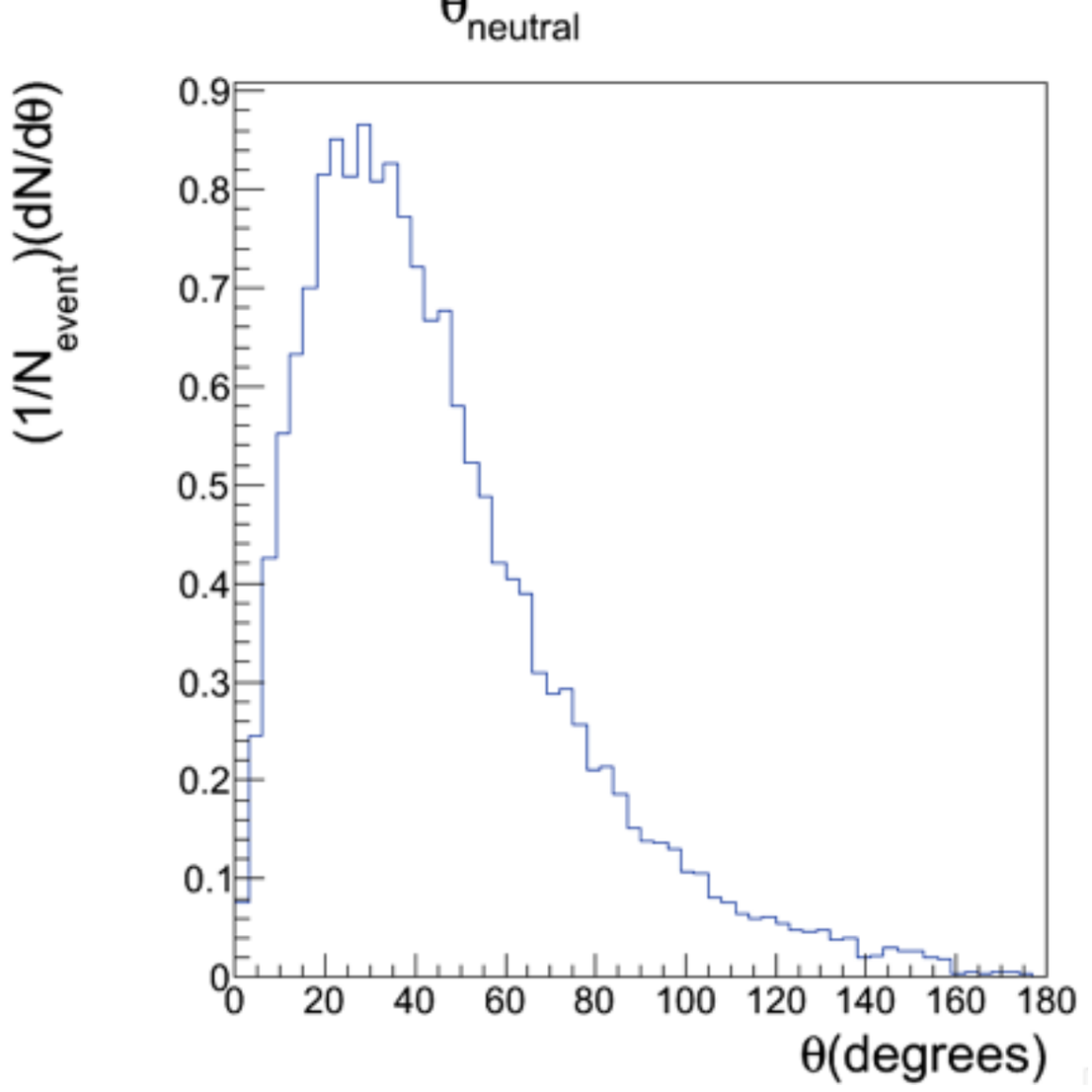
$^{132}Sn+^{124}Sn$ - PHITS

- N_{event} : 272018
- N : 14155928 <N>=52.040
- $N_{neutron}$: 9014089 (63.68%) $< N_{neutron} >$=33.138
- $N_{charged}$: 4348606 (30.72%) $< N_{charged} >$=15.986
- N_{proton} : 2736359 (19.33%) $< N_{proton} >$=10.059
- N_{gamma} : 793233 (5.60%) $< N_{gamma} >$=2.916

Theta - AMD

(number of bins : 60)

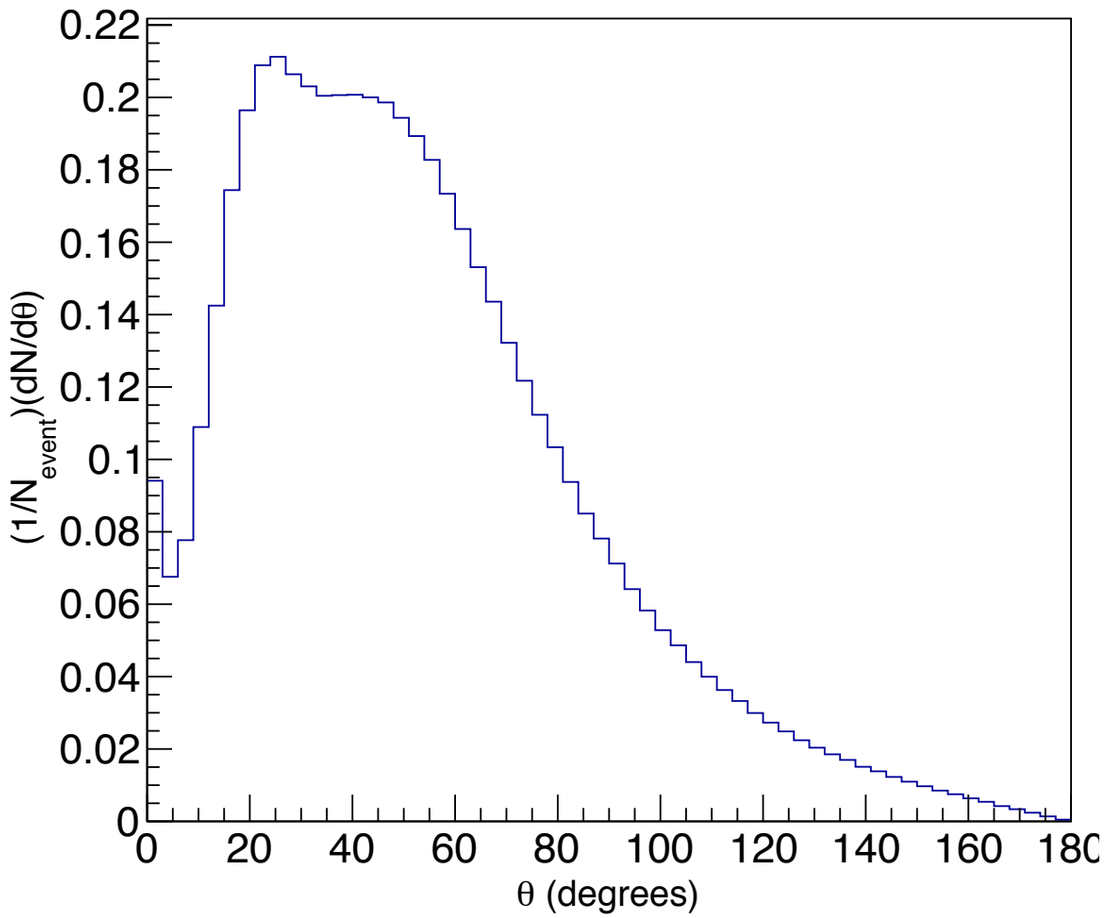




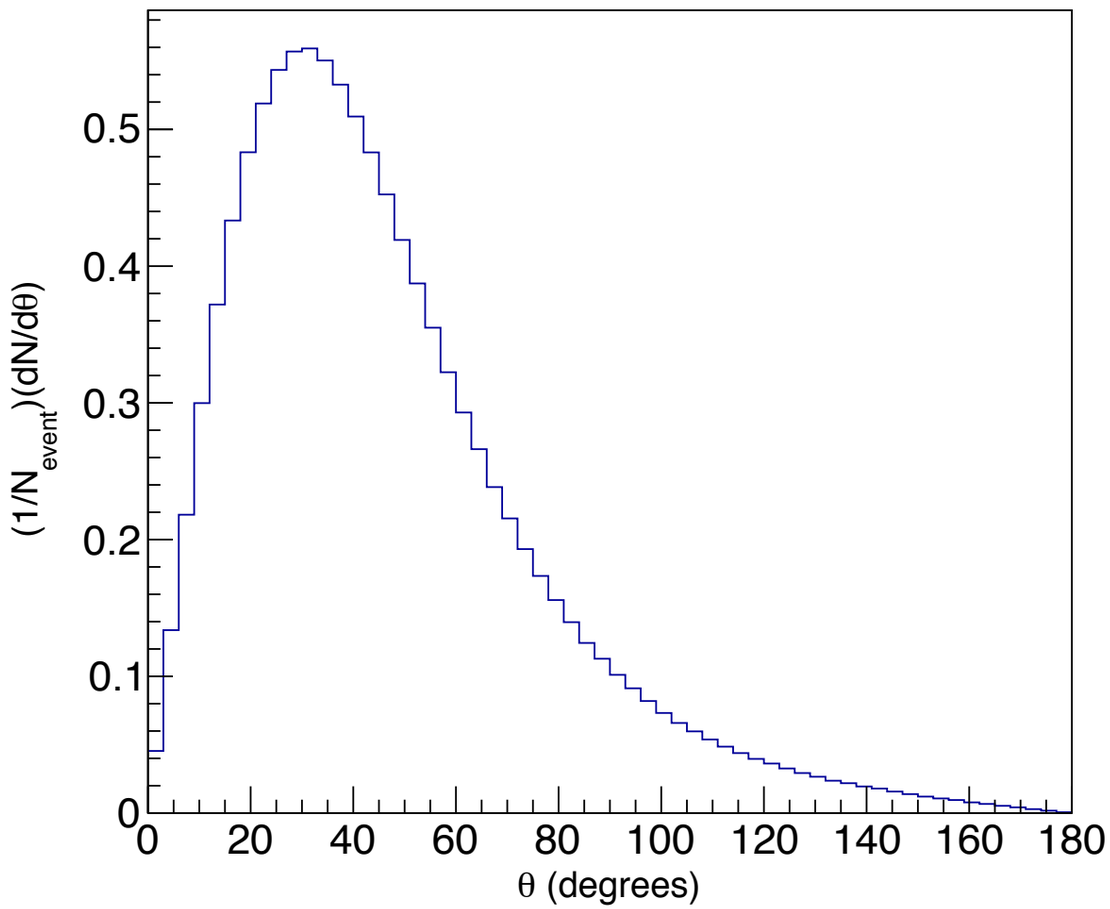
Theta - PHITS

(number of bins : 60)

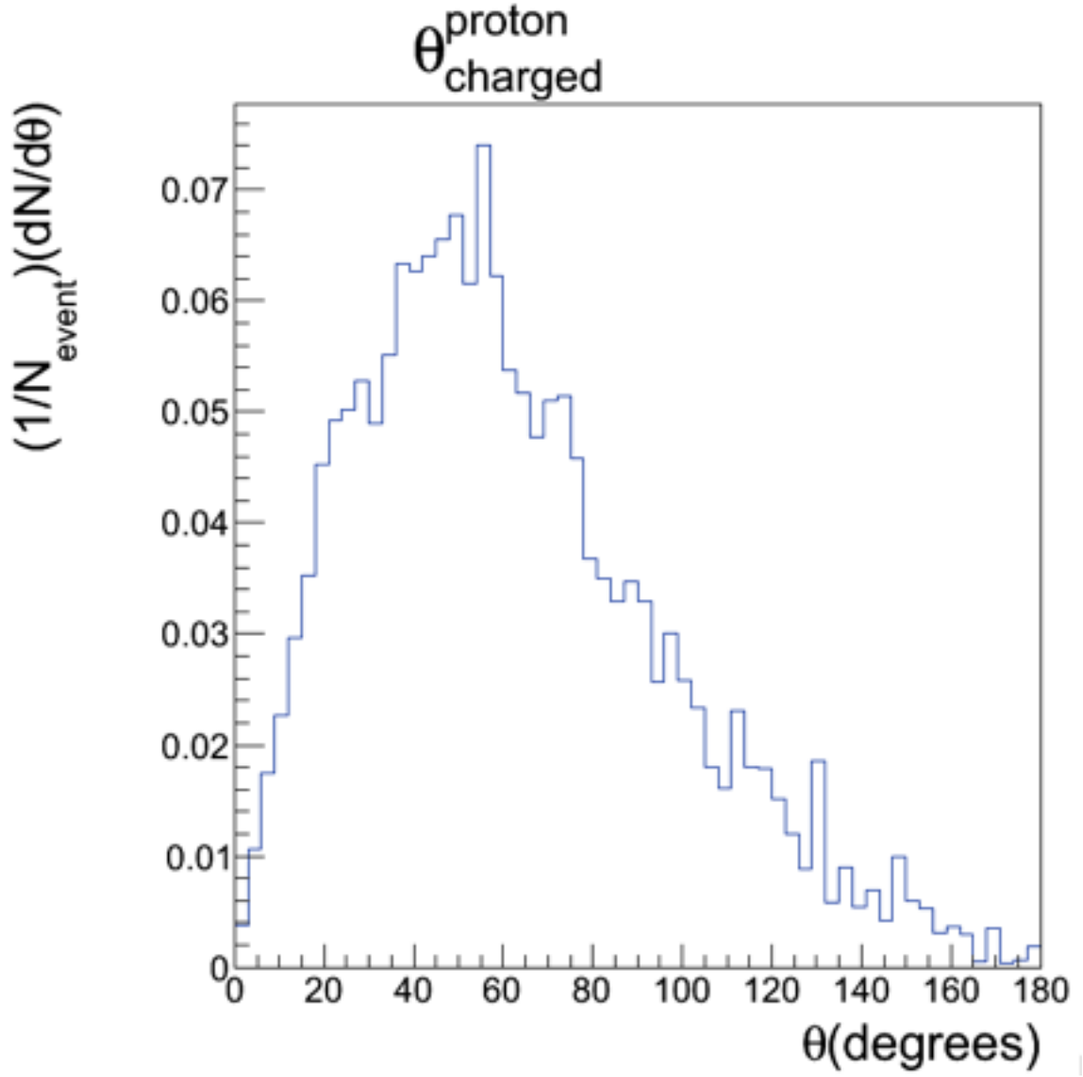
$\theta_{charged}$ (^{132}Sn + ^{124}Sn - 18.5 AMeV (PHITS))

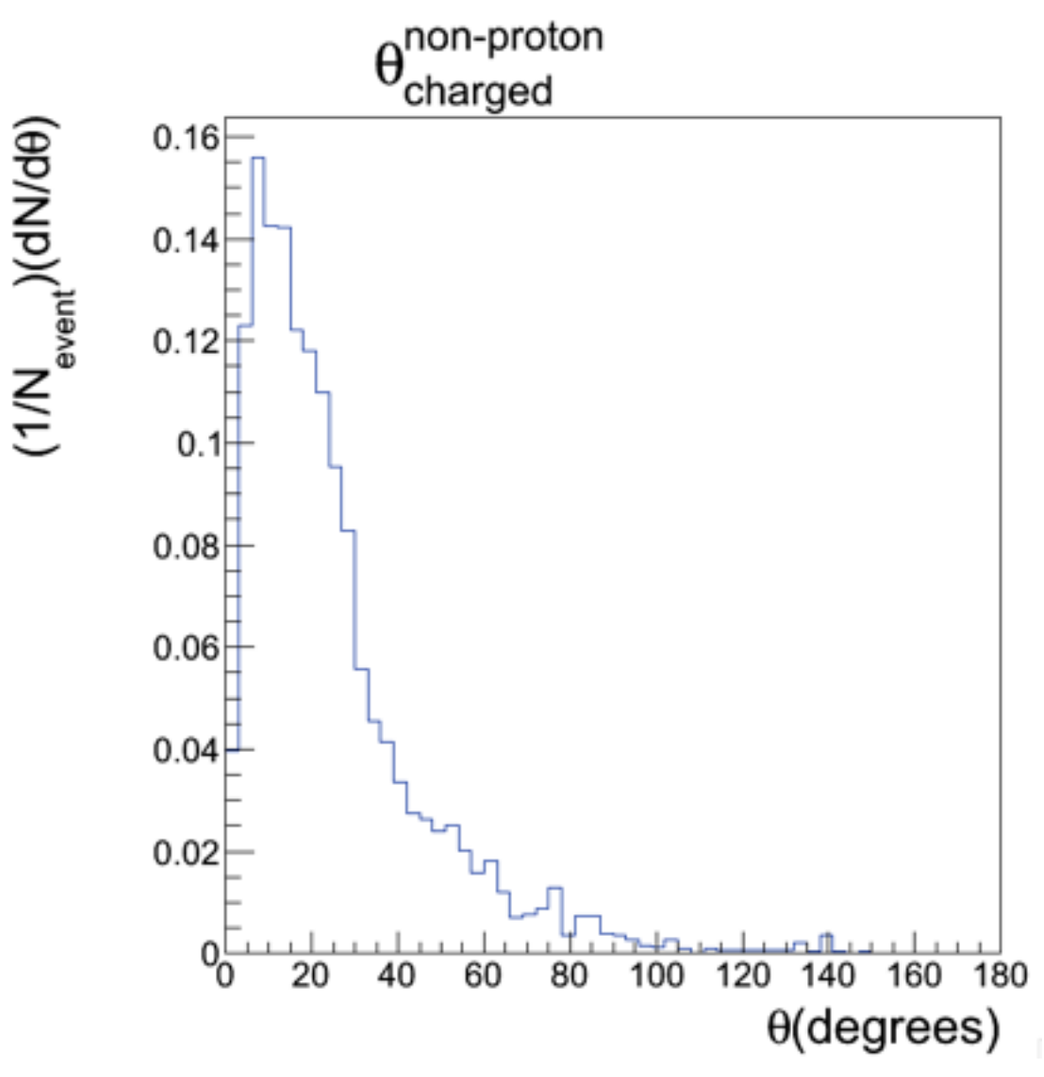


$\theta_{neutron}$ (^{132}Sn + ^{124}Sn - 18.5 AMeV (PHITS))



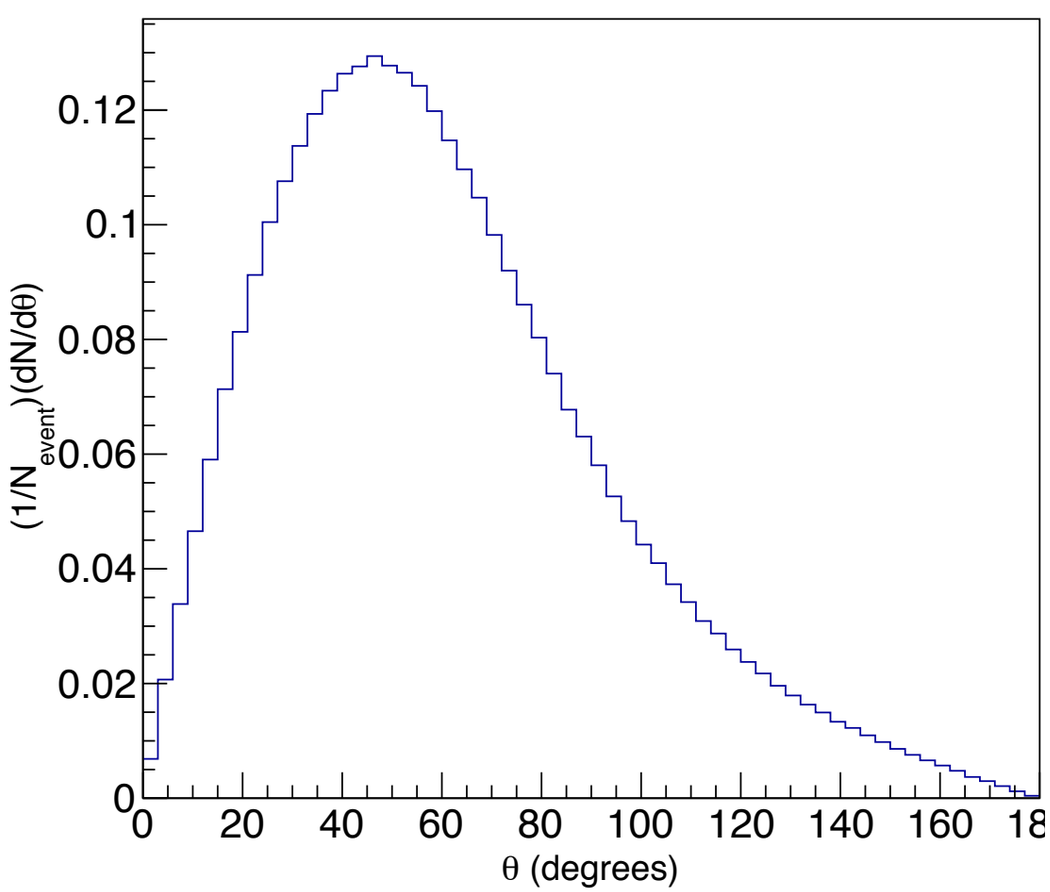
Theta (Charged) - AMD



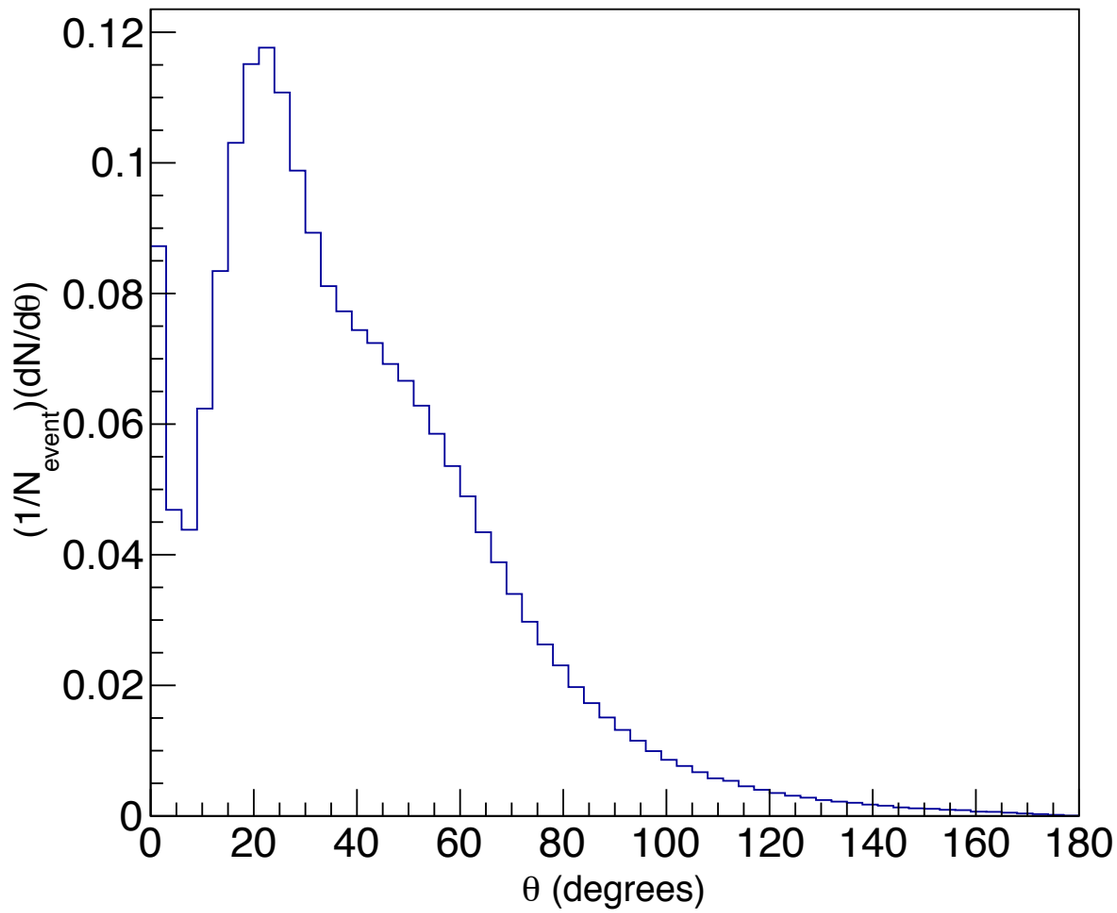


Theta (Charged) - PHITS

$\theta^{proton}_{charged}$ (^{132}Sn + ^{124}Sn - 18.5 AMeV (PHITS))

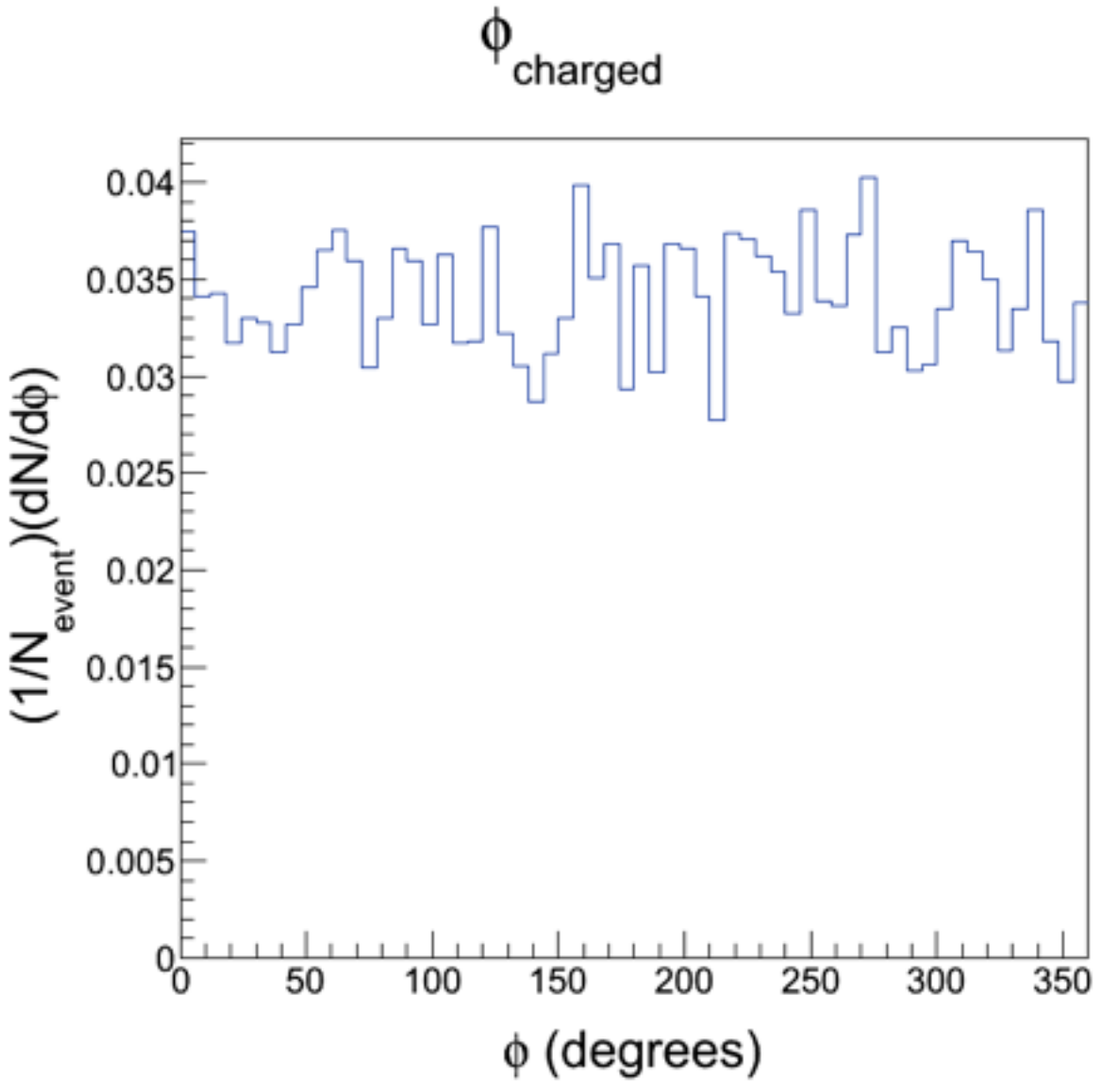


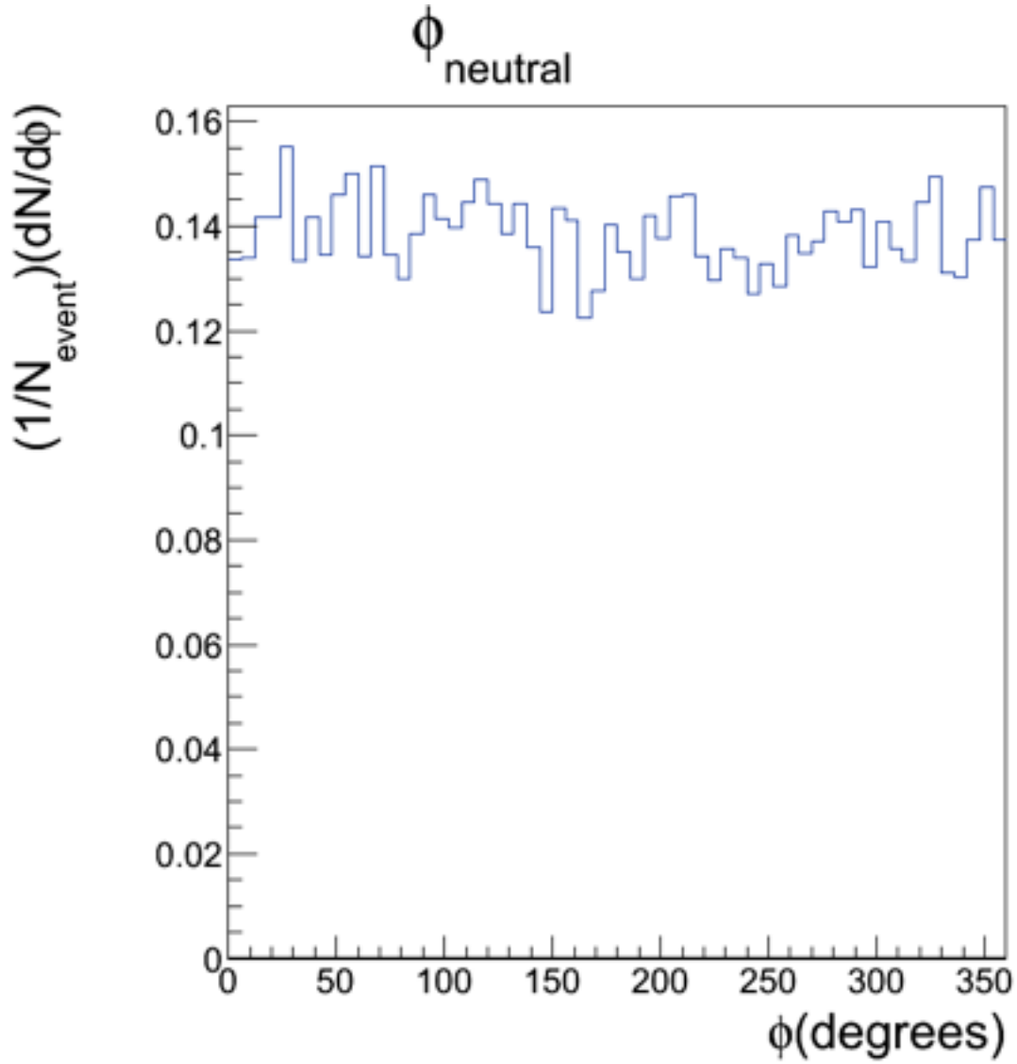
$\theta^{nonproton}_{charged}$ (^{132}Sn + ^{124}Sn - 18.5 AMeV (PHITS))



Phi - AMD

(number of bins : 60)

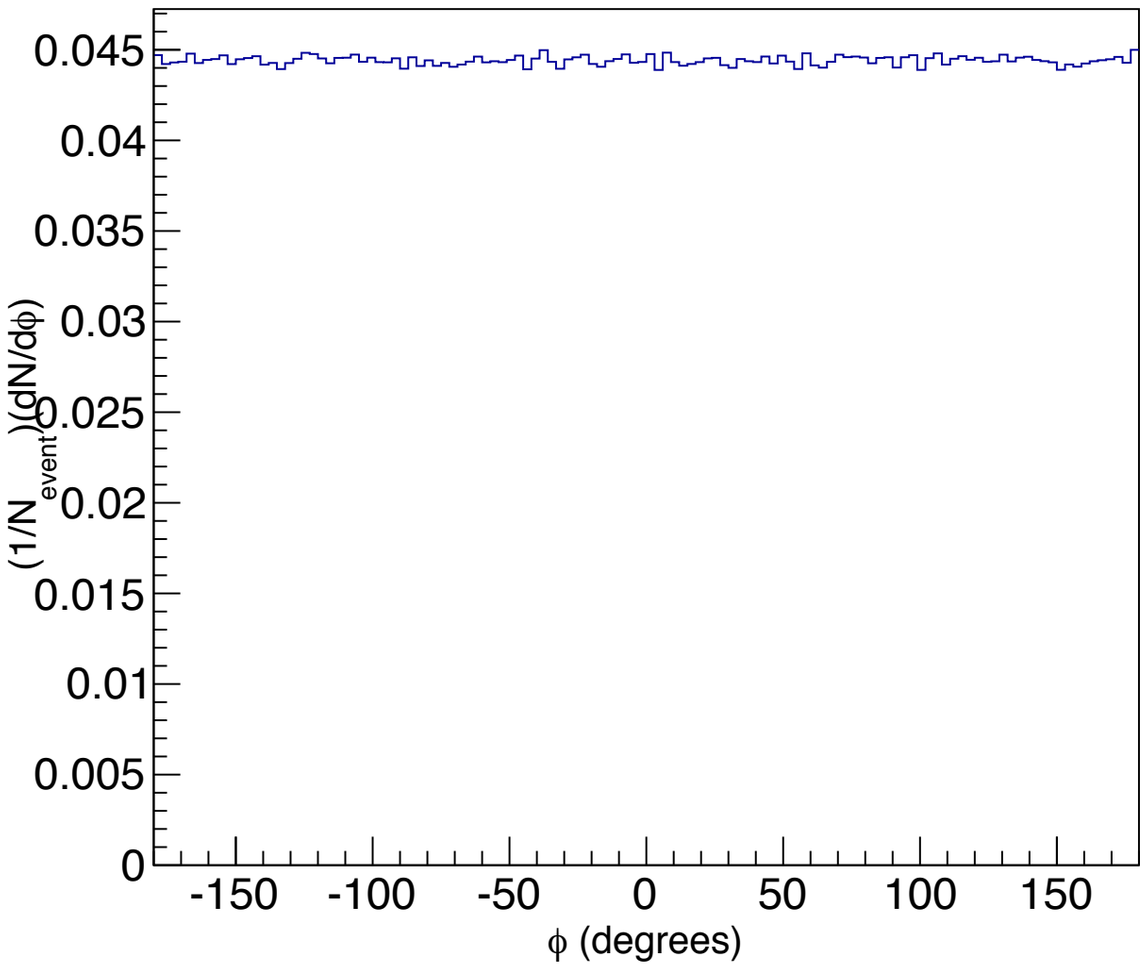




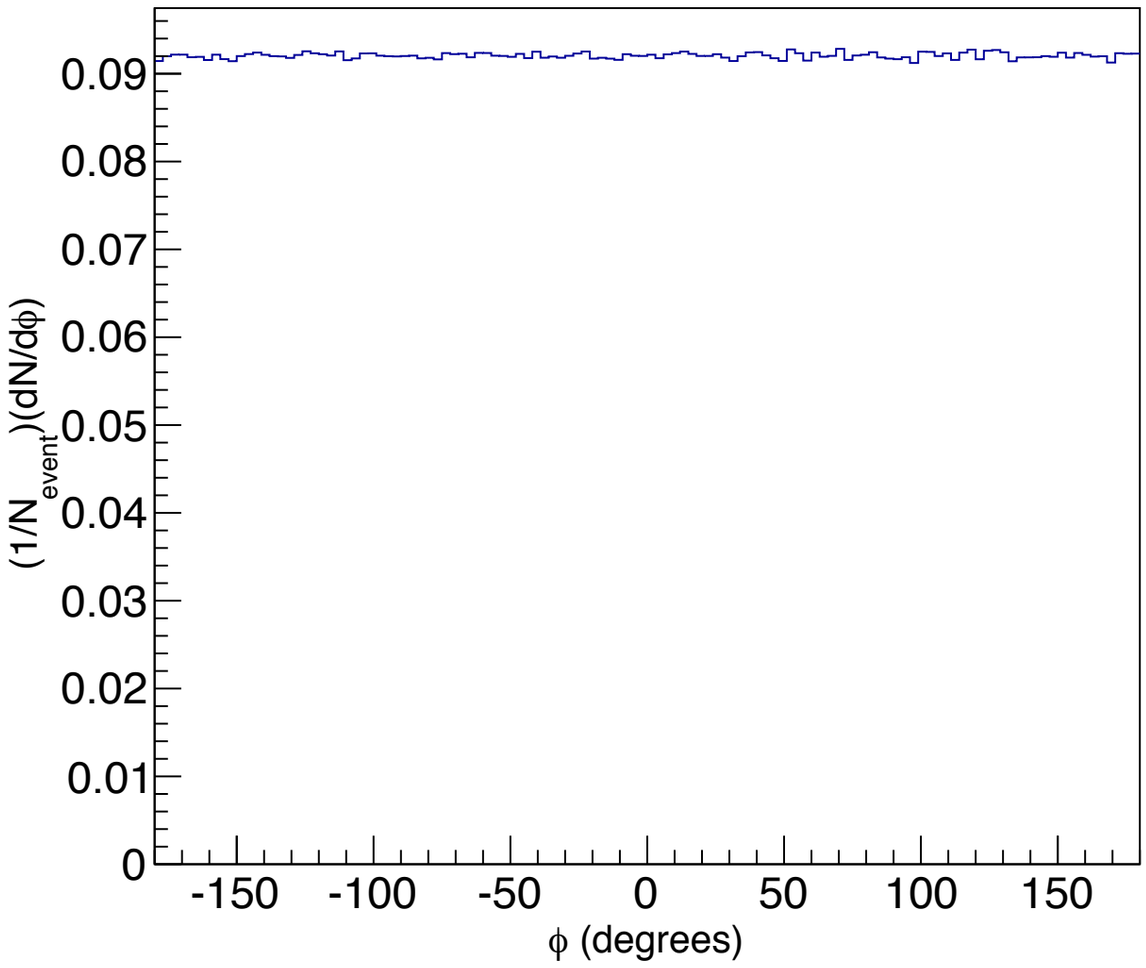
Phi - PHITS

(number of bins : 60)

$\phi_{charged}$ (^{132}Sn + ^{124}Sn - 18.5 AMeV (PHITS))

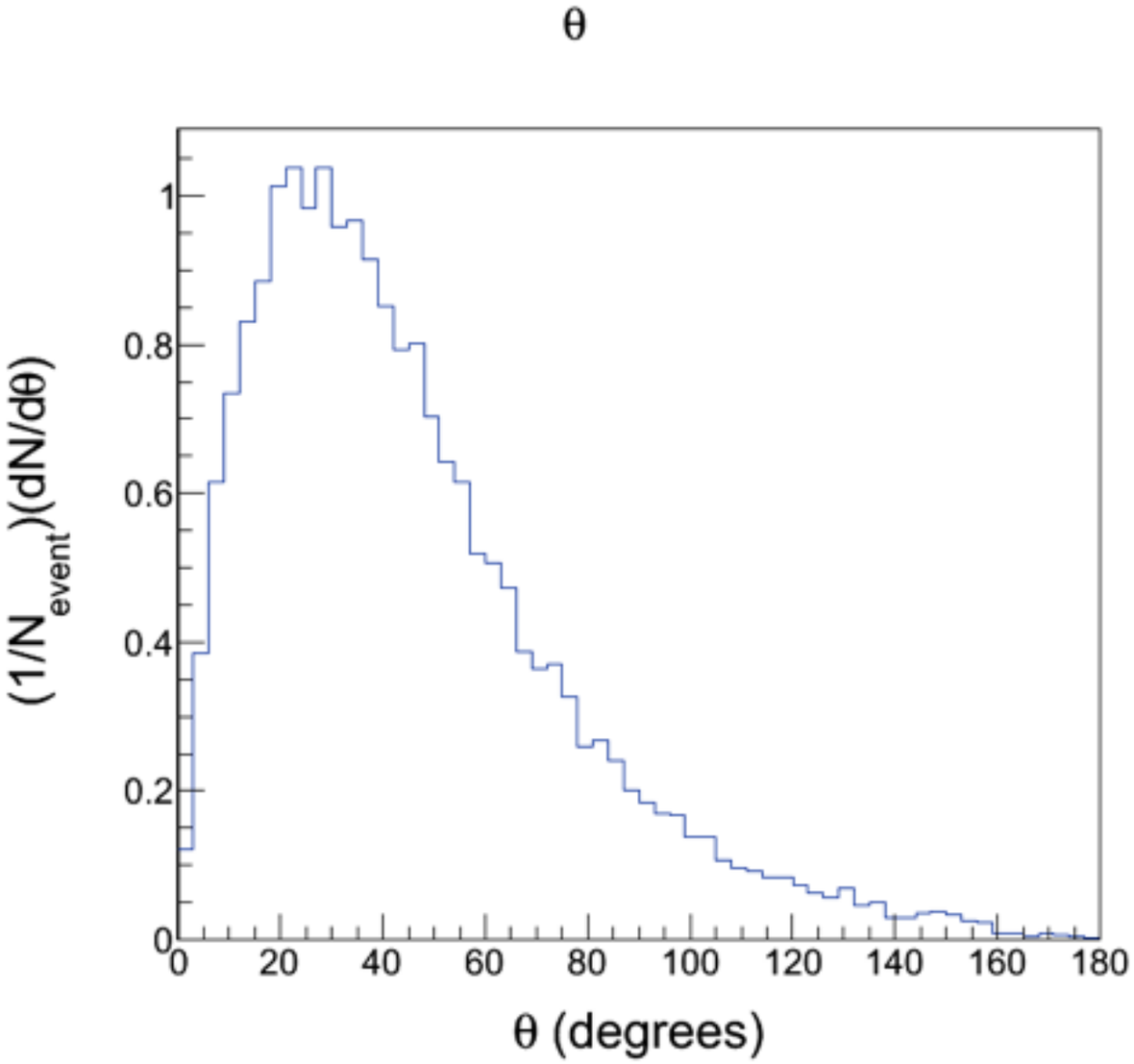


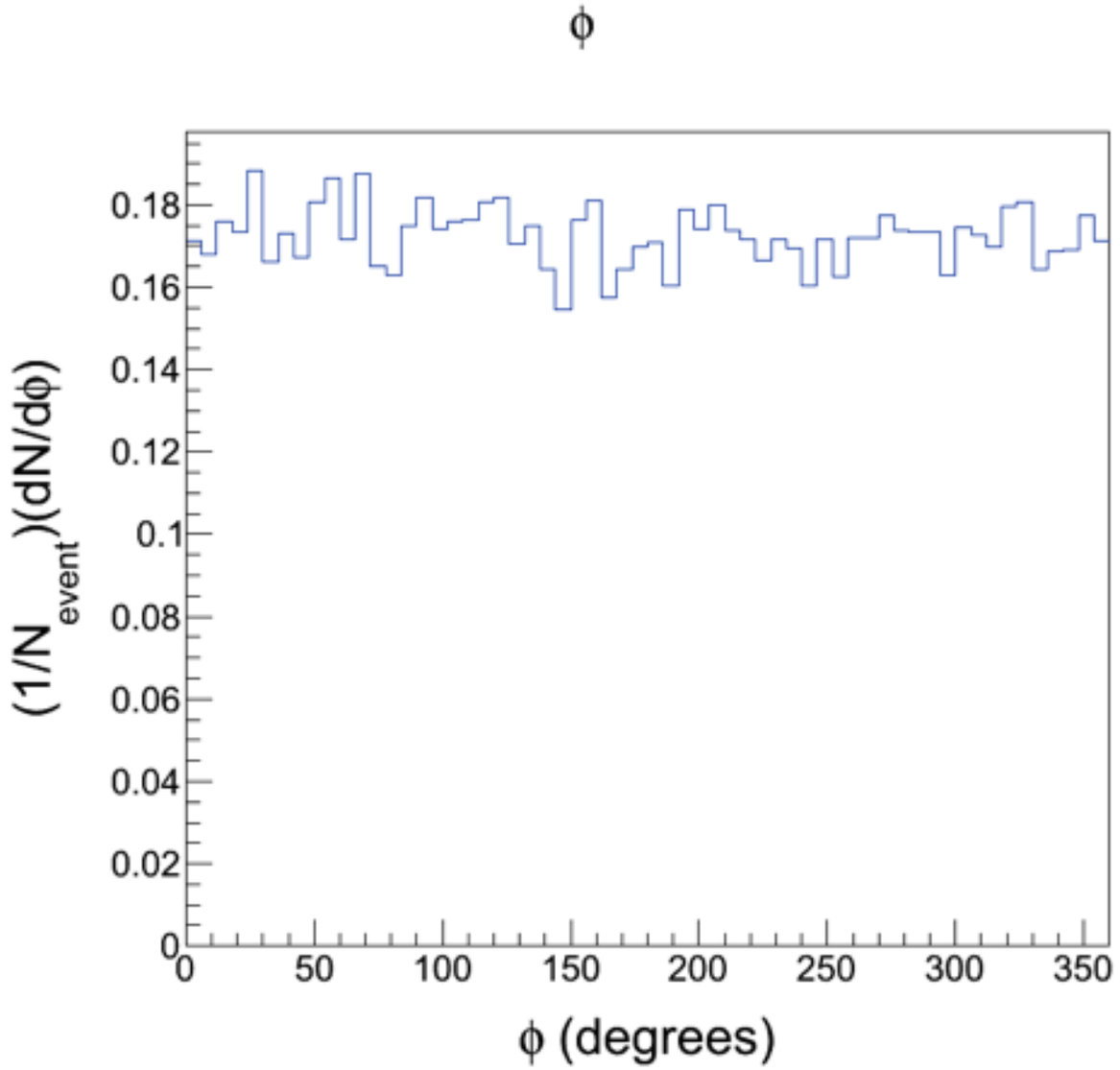
$\phi_{neutron}$ (^{132}Sn + ^{124}Sn - 18.5 AMeV (PHITS))



Theta/Phi - AMD

(All Particles, number of bins : 60)

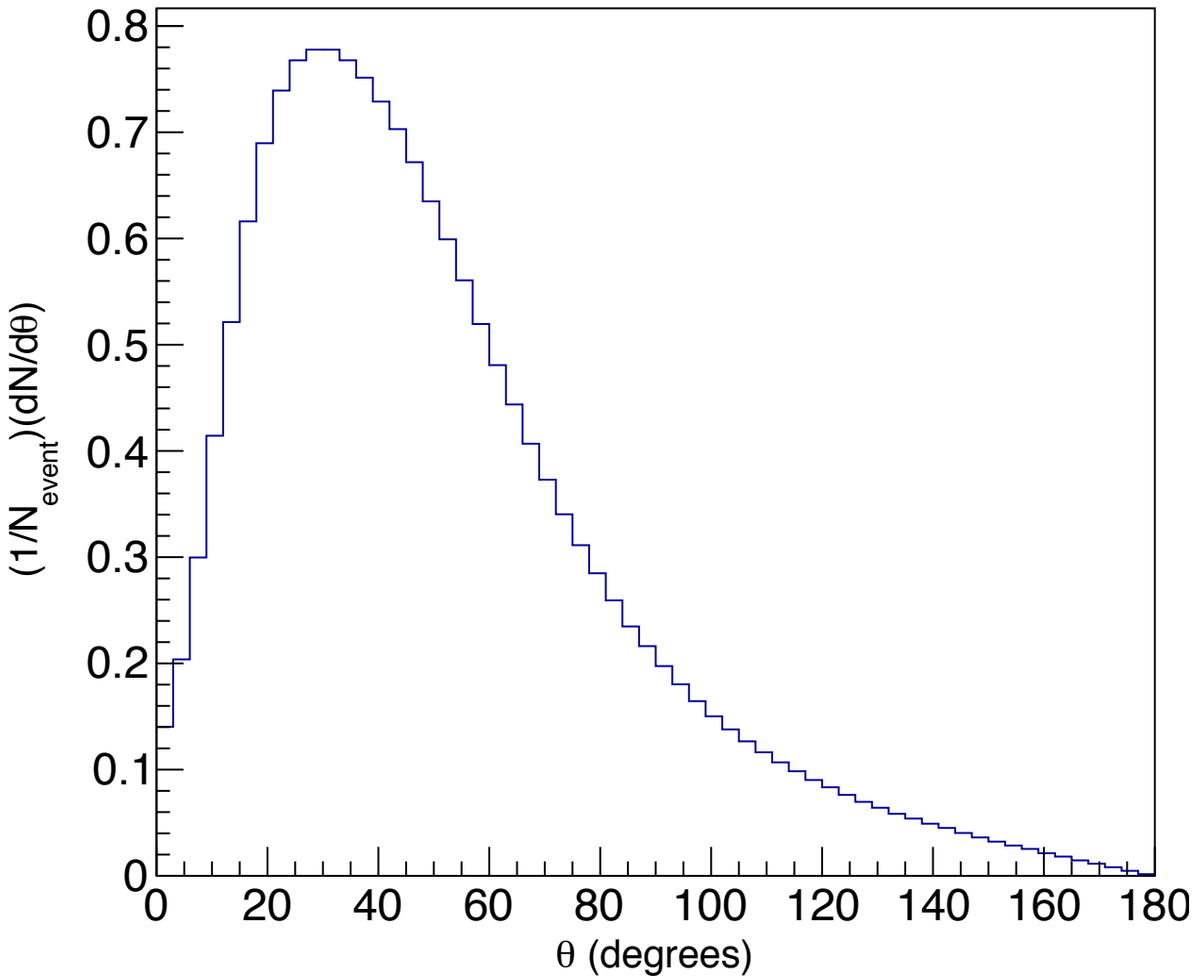




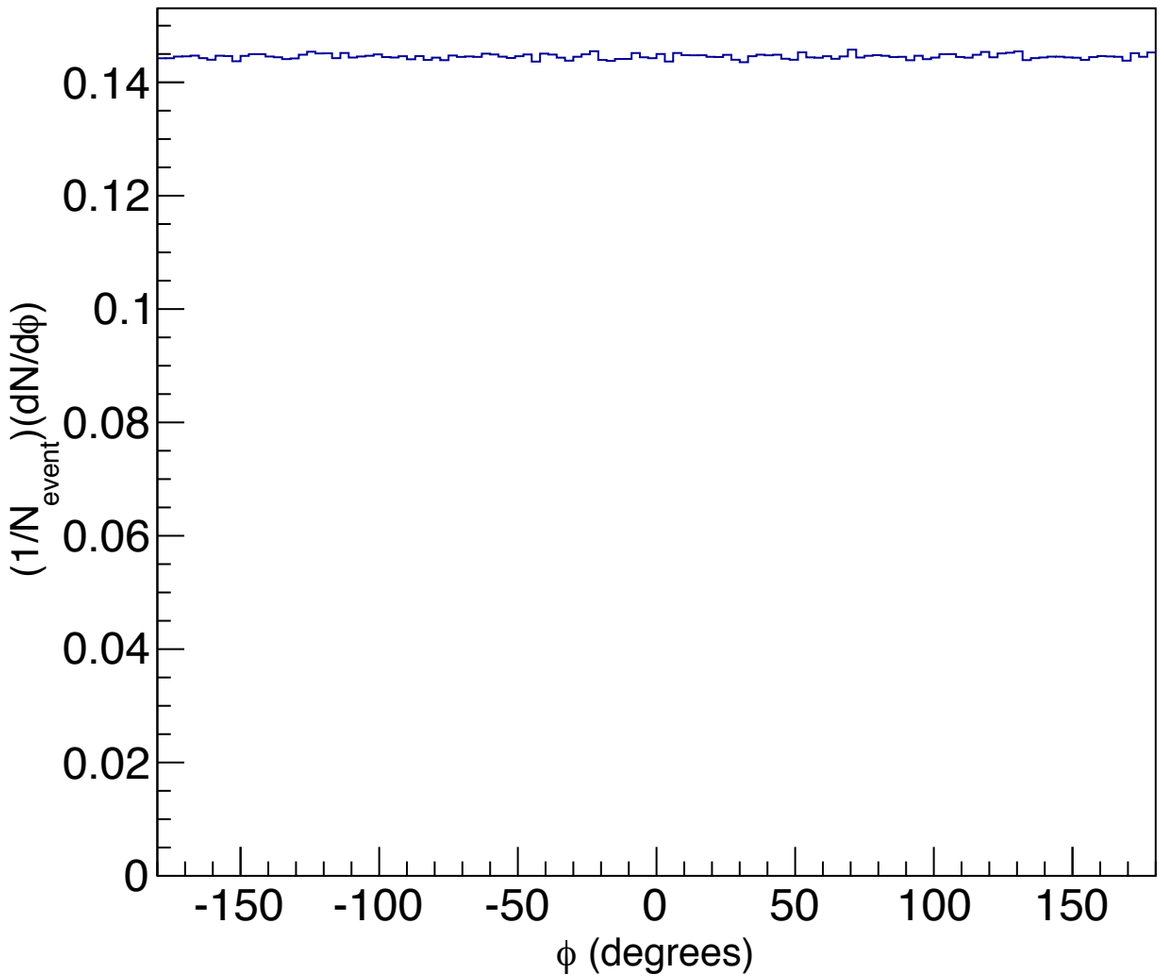
Theta/Phi - PHITS

(All Particles, number of bins : 60)

θ (^{132}Sn + ^{124}Sn - 18.5 AMeV (PHITS))

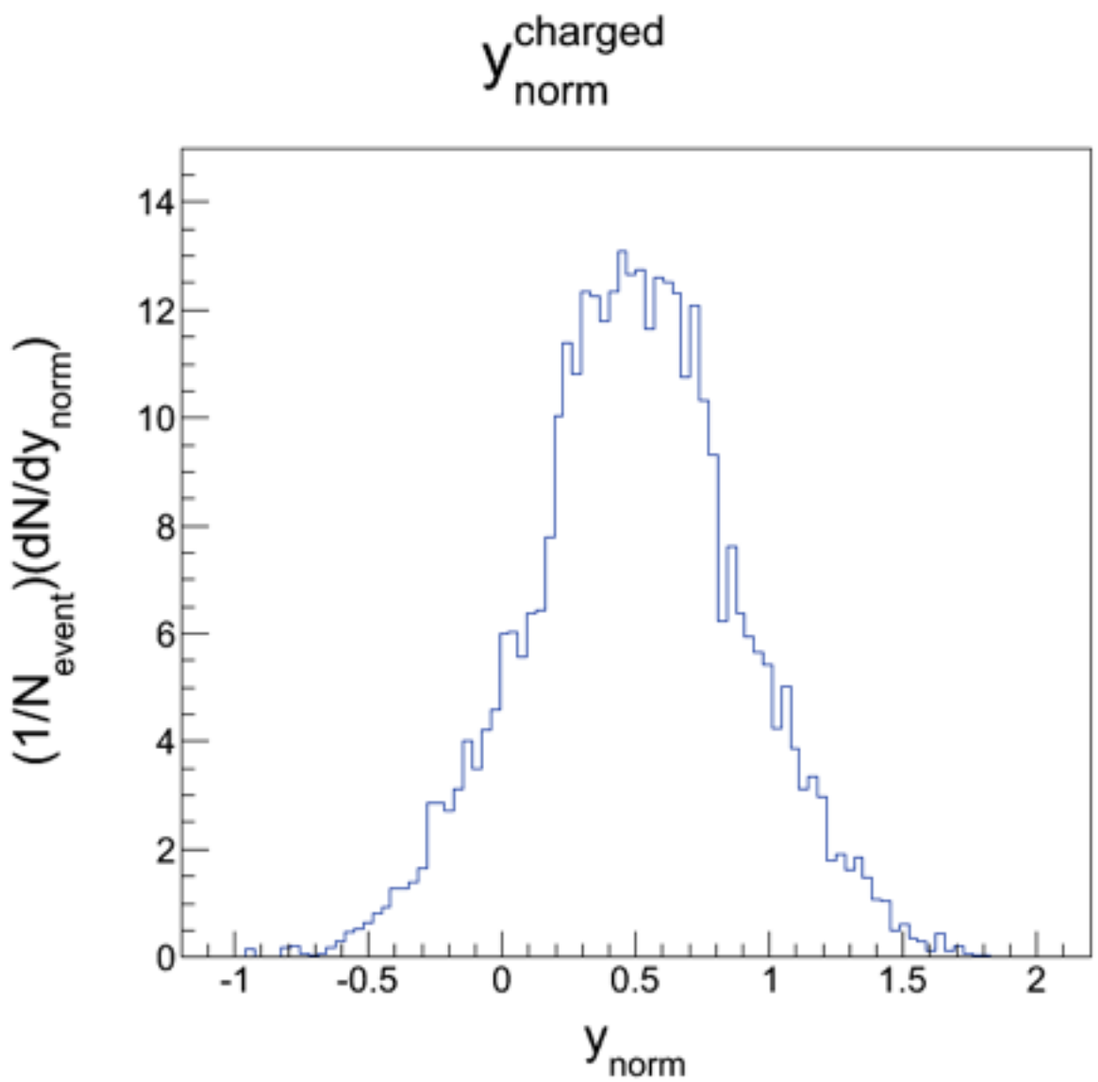


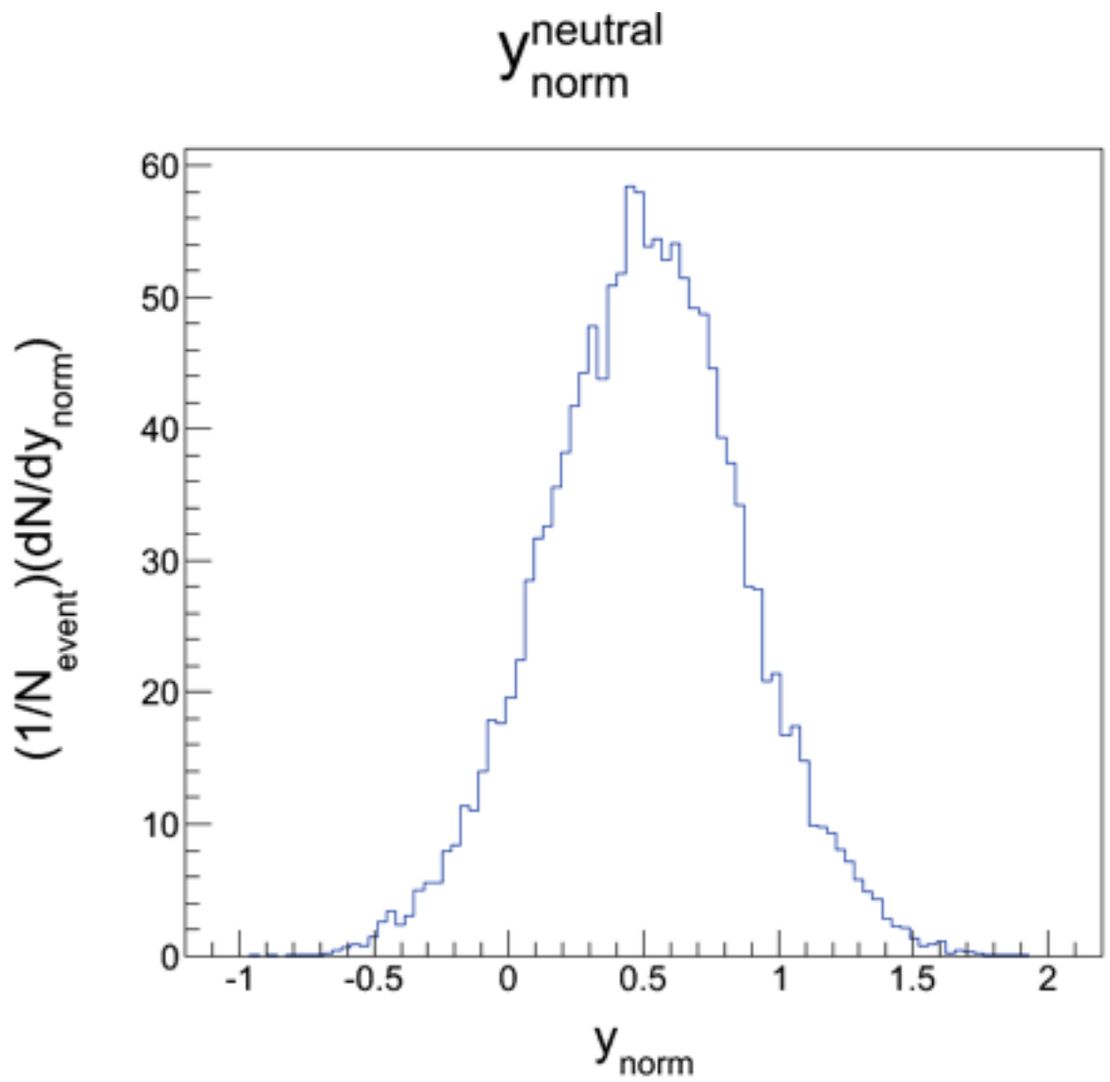
ϕ (^{132}Sn + ^{124}Sn - 18.5 AMeV (PHITS))



Rapidity - AMD

(number of bins : 100)

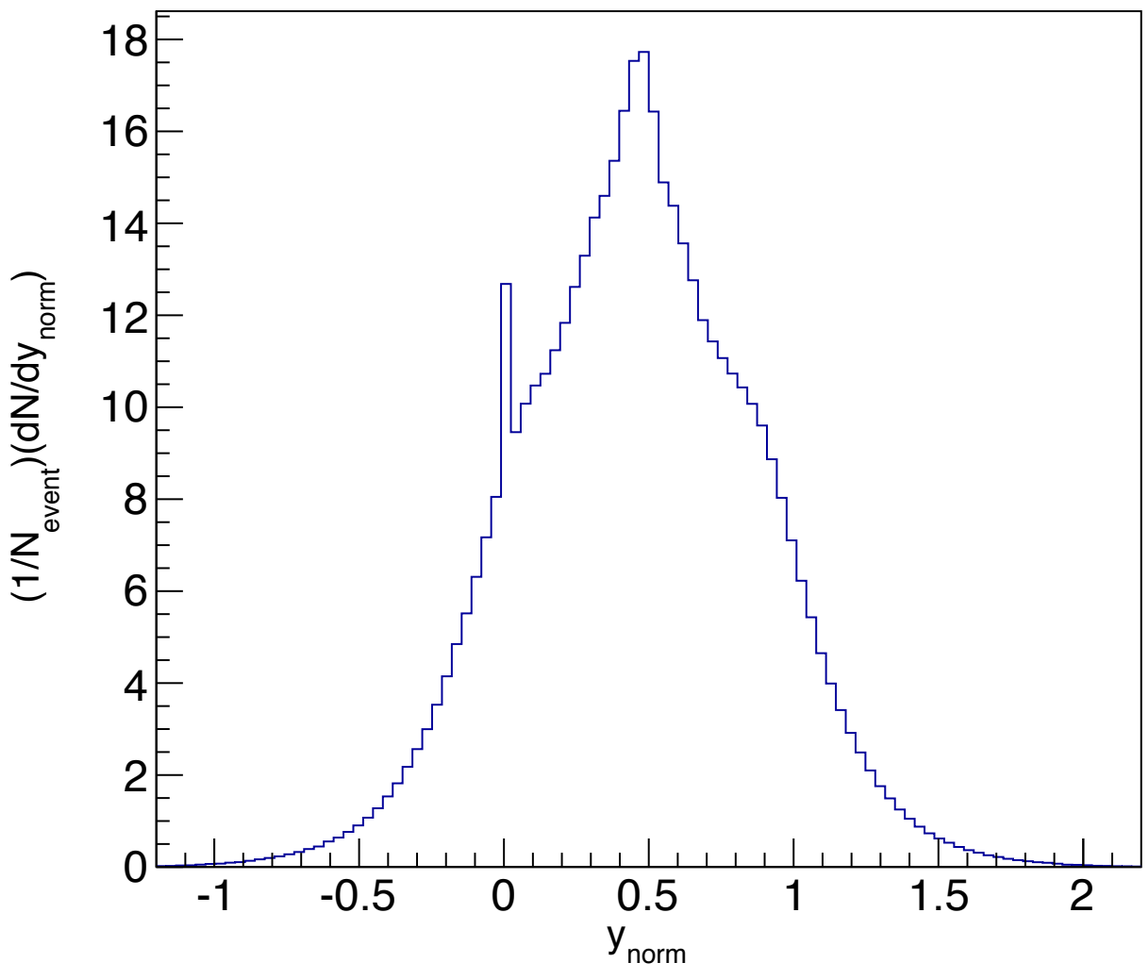




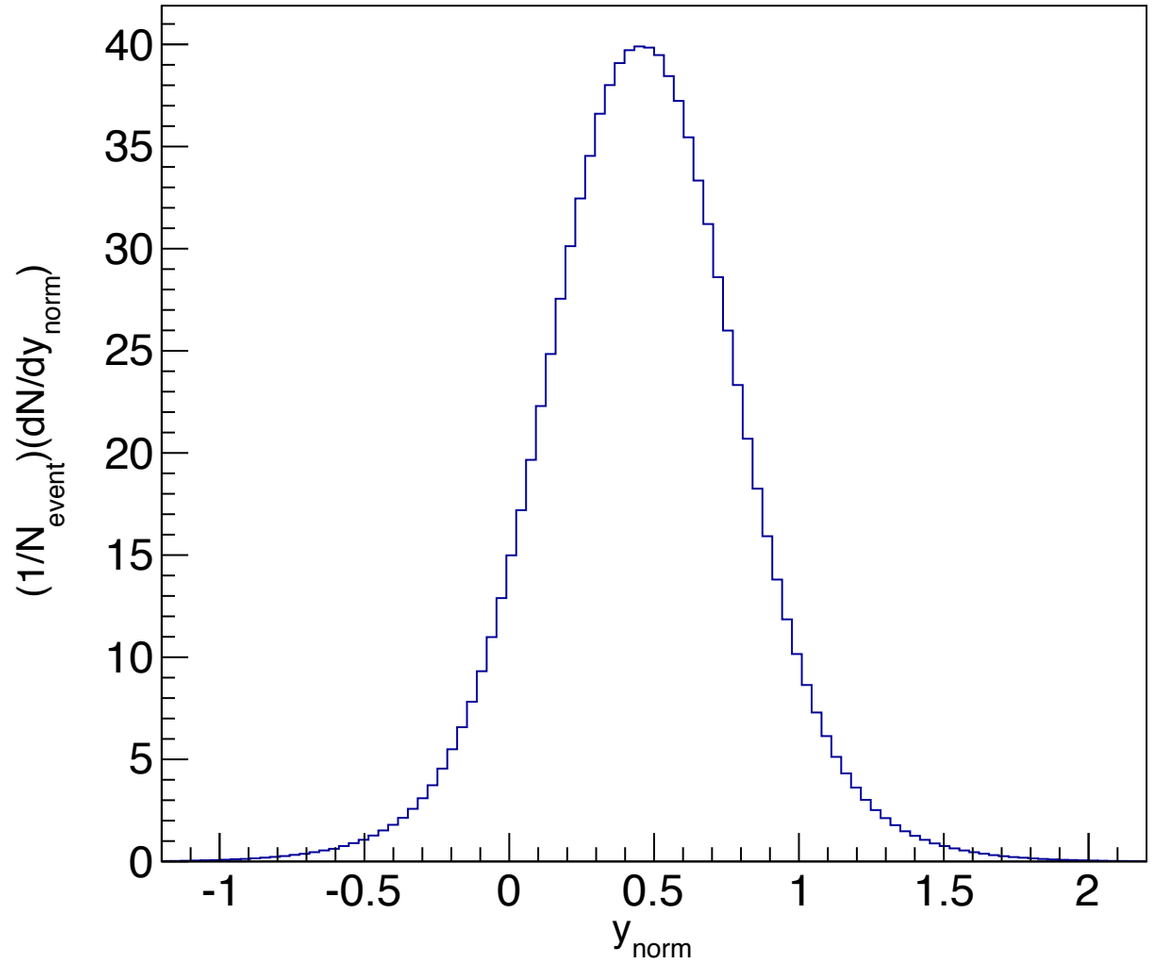
Rapidity - PHITS

(number of bins : 100)

$y^{charged}_{norm}$ (^{132}Sn + ^{124}Sn - 18.5 AMeV (PHITS))



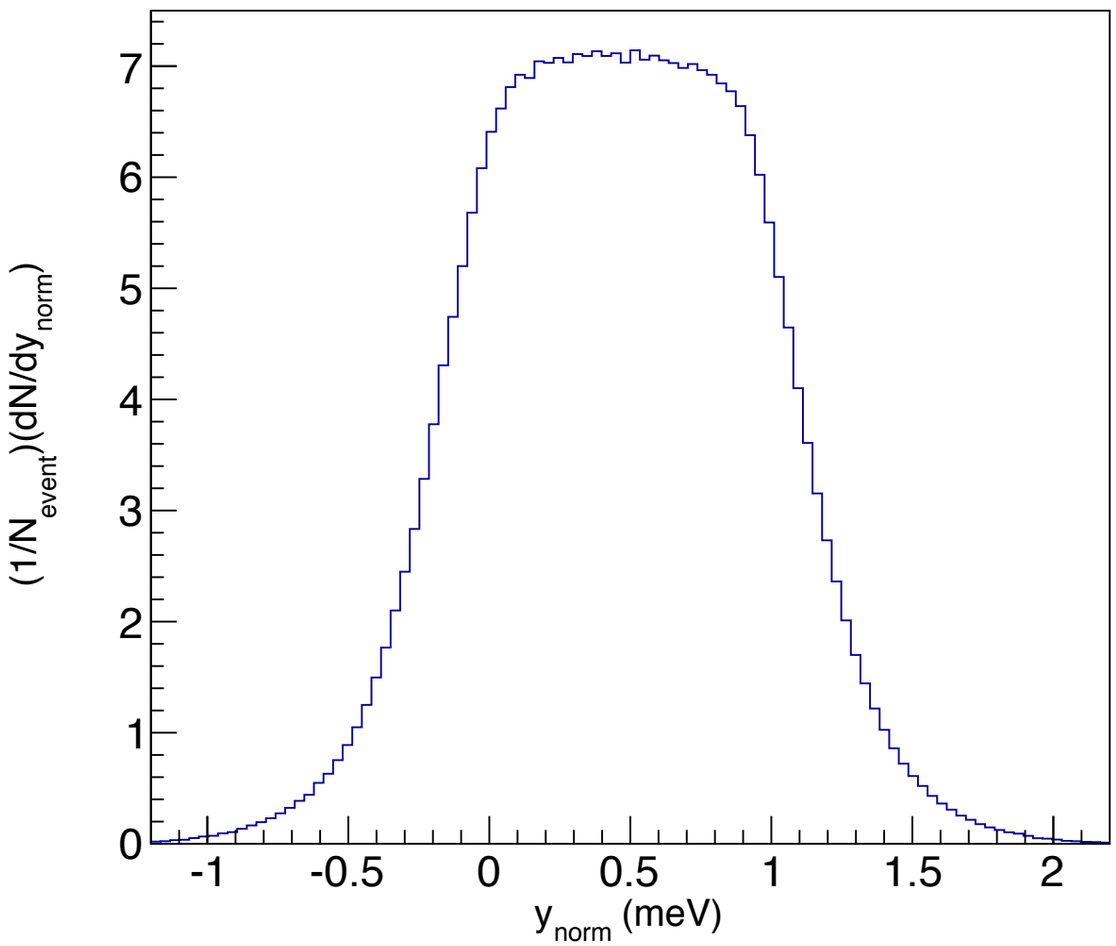
$y^{neutron}_{norm}$ (^{132}Sn + ^{124}Sn - 18.5 AMeV (PHITS))



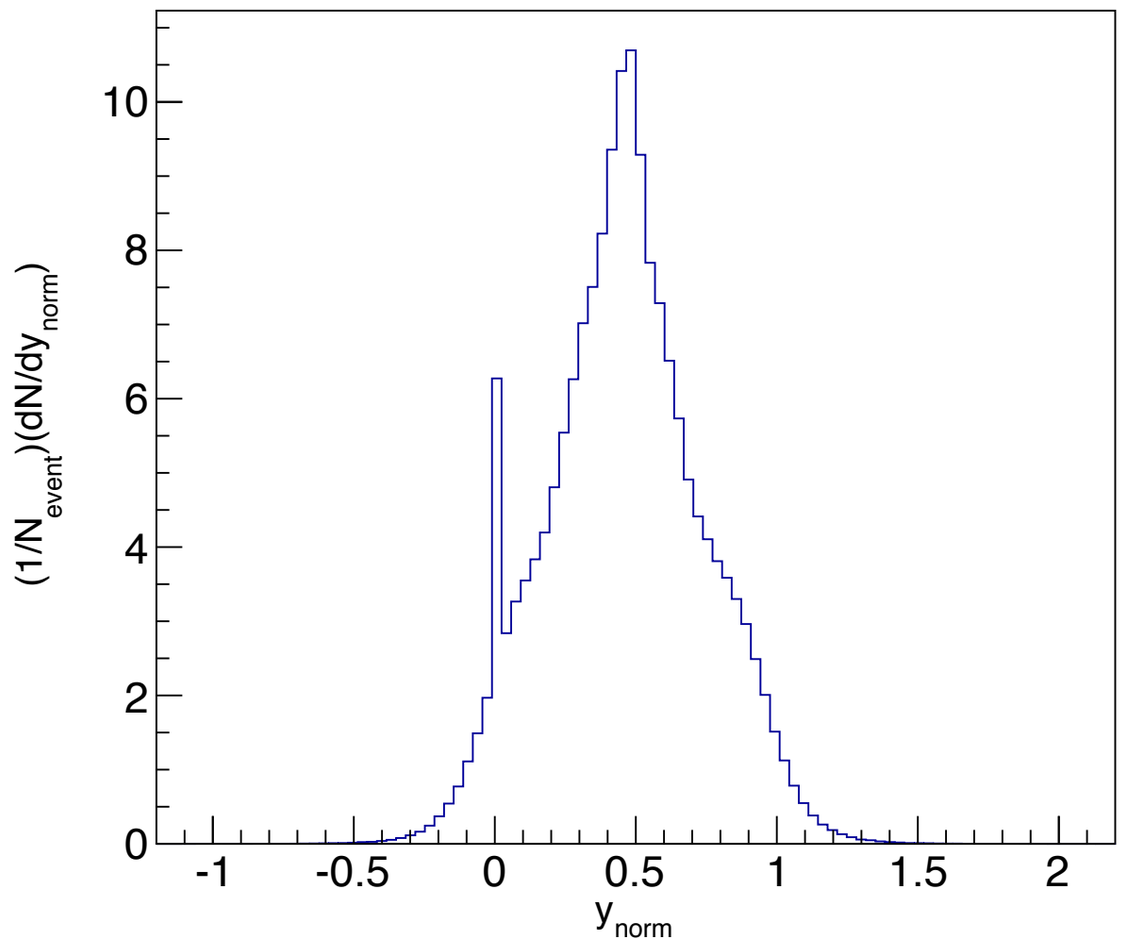
Rapidity - PHITS

(number of bins : 100)

y^{proton}_{norm} (^{132}Sn + ^{124}Sn - 18.5 AMeV (PHITS))

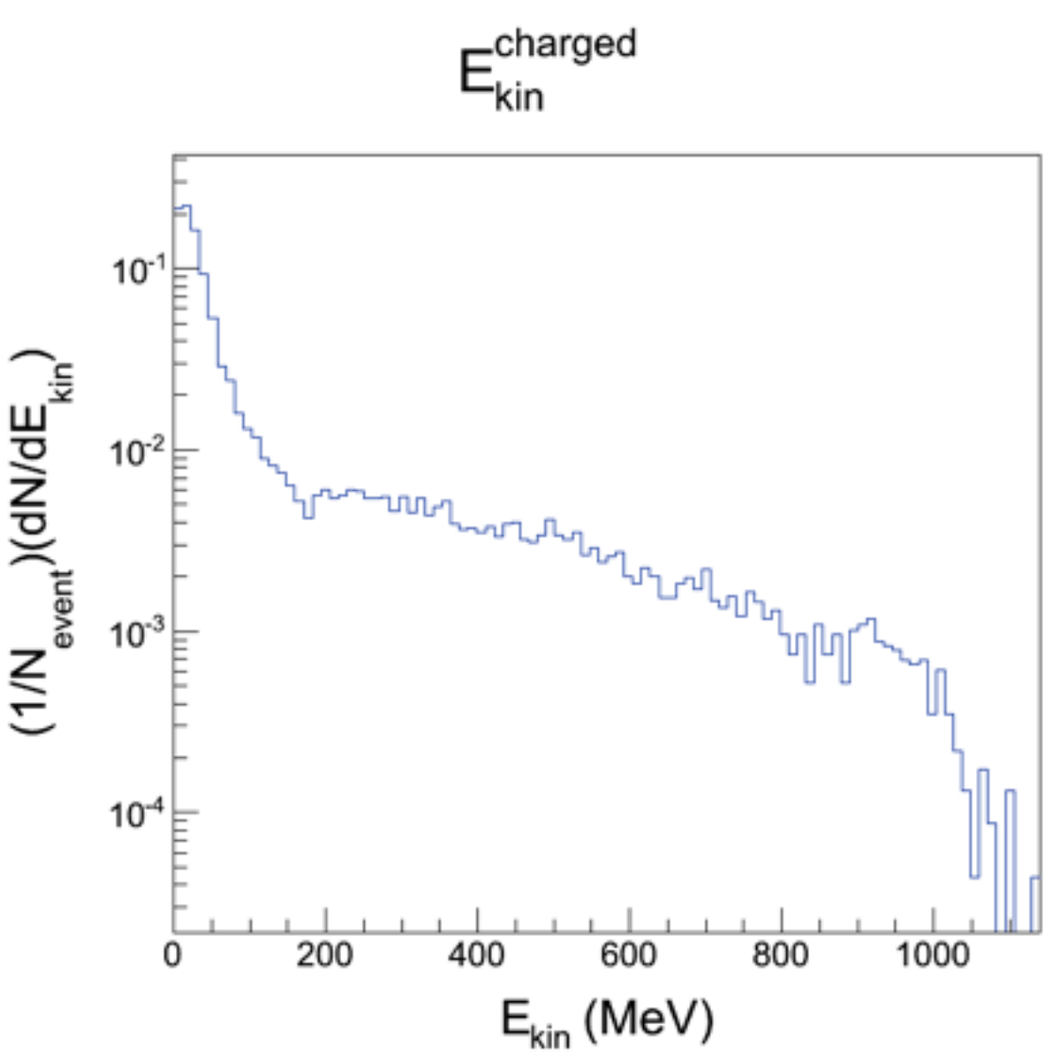


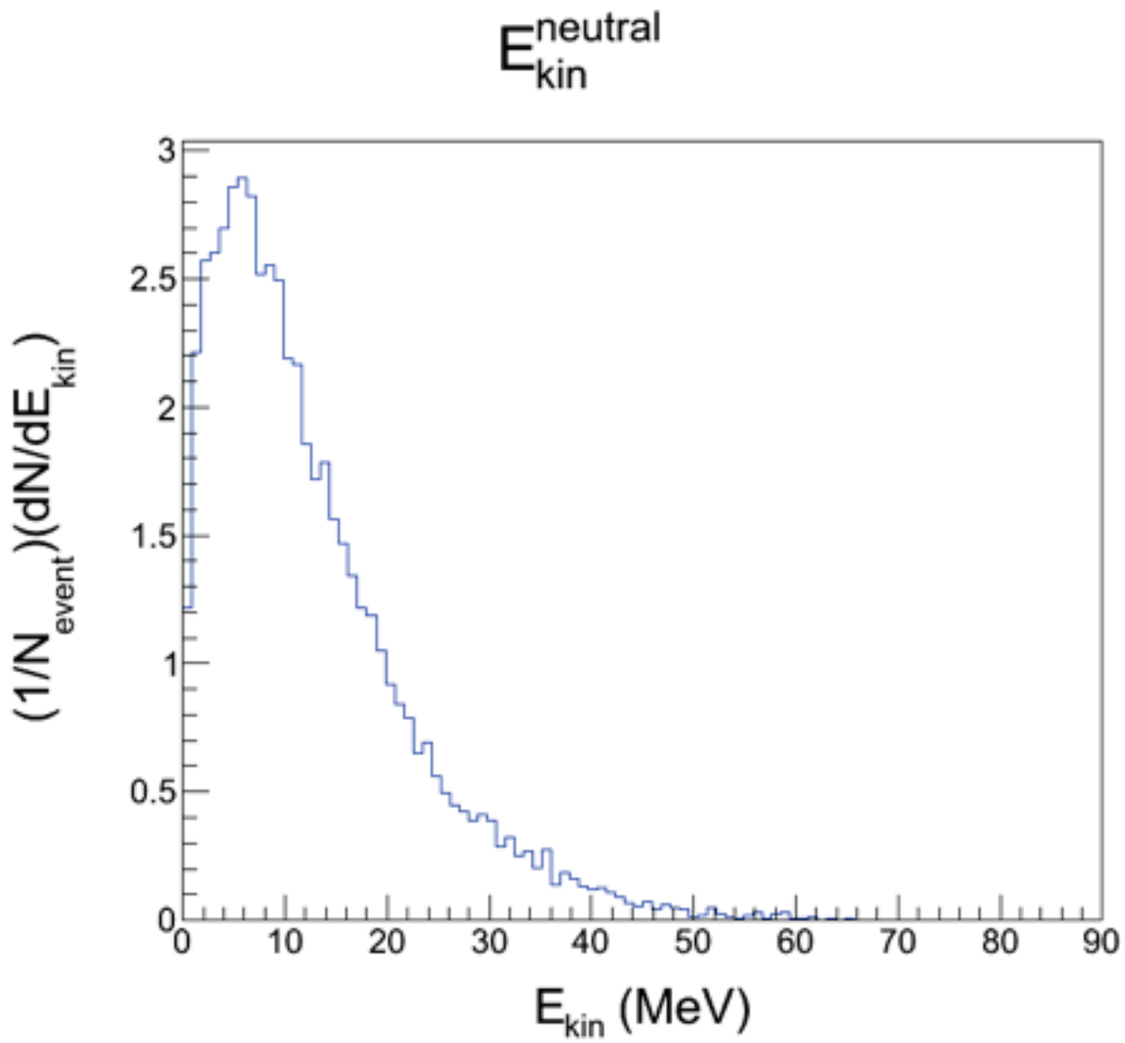
$y^{nonproton}_{norm}$ (^{132}Sn + ^{124}Sn - 18.5 AMeV (PHITS))



Kinetic Energy - AMD

(number of bins : 100)

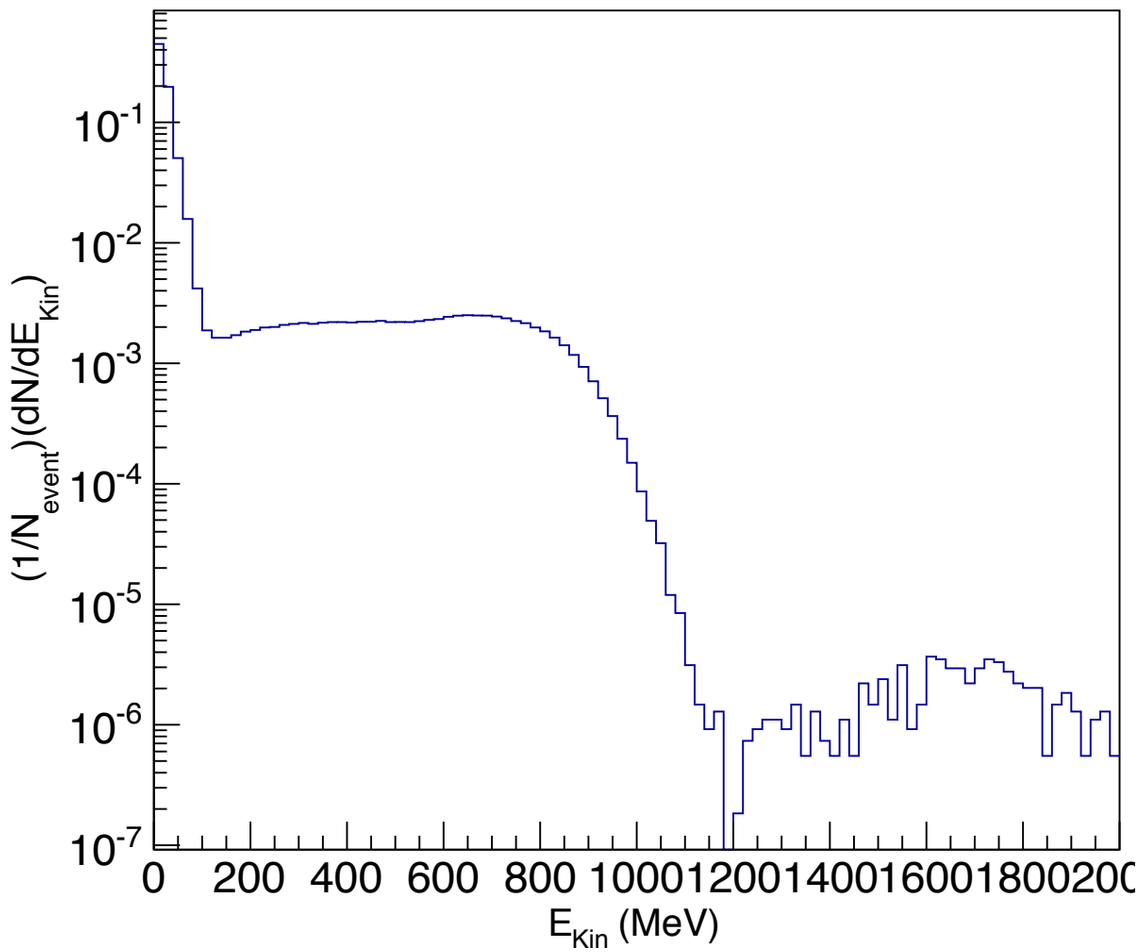




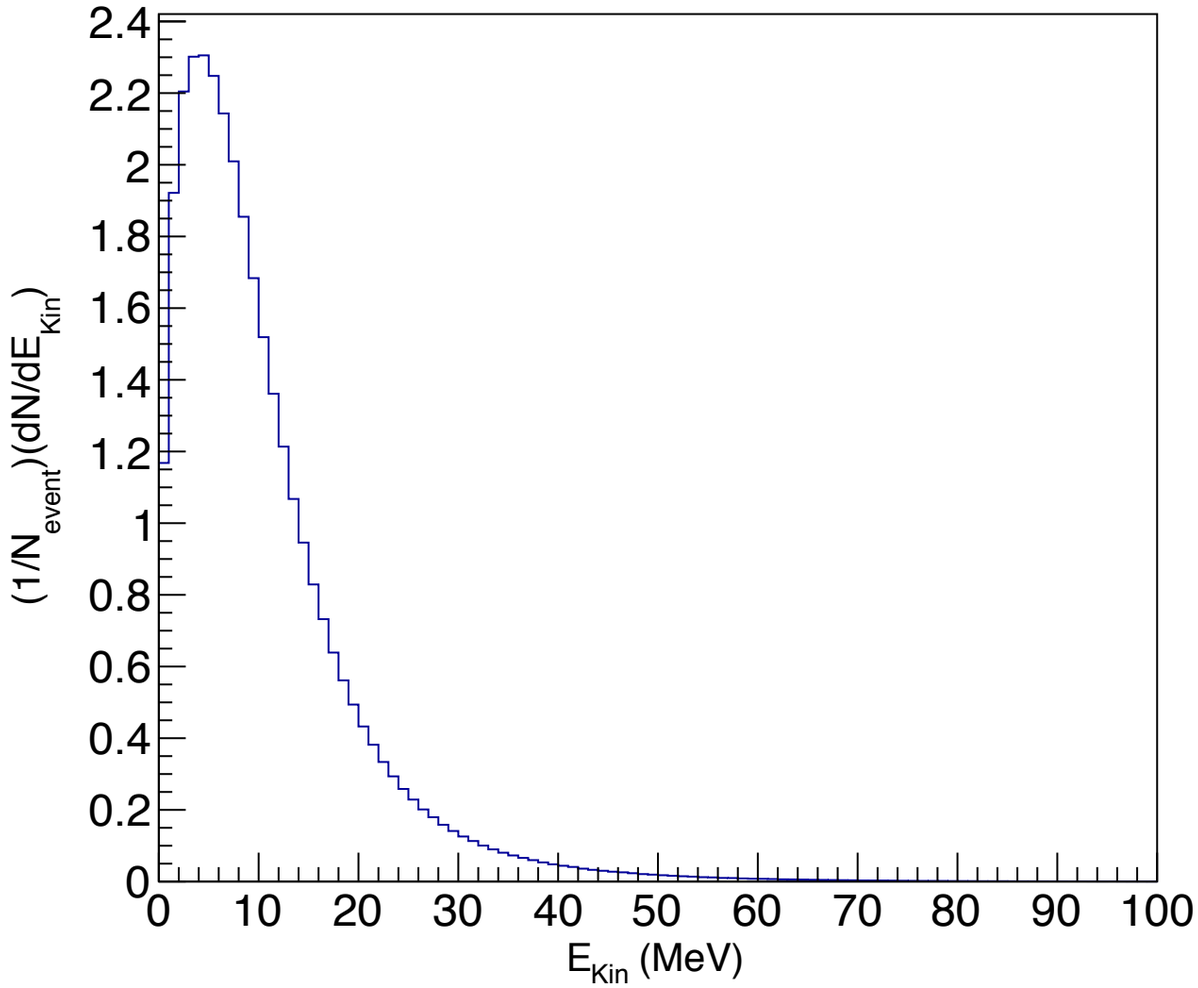
Kinetic Energy - PHITS

(number of bins : 100)

$E_{Kin}^{charged}$ ($^{132}Sn + ^{124}Sn$ - 18.5 AMeV (PHITS))

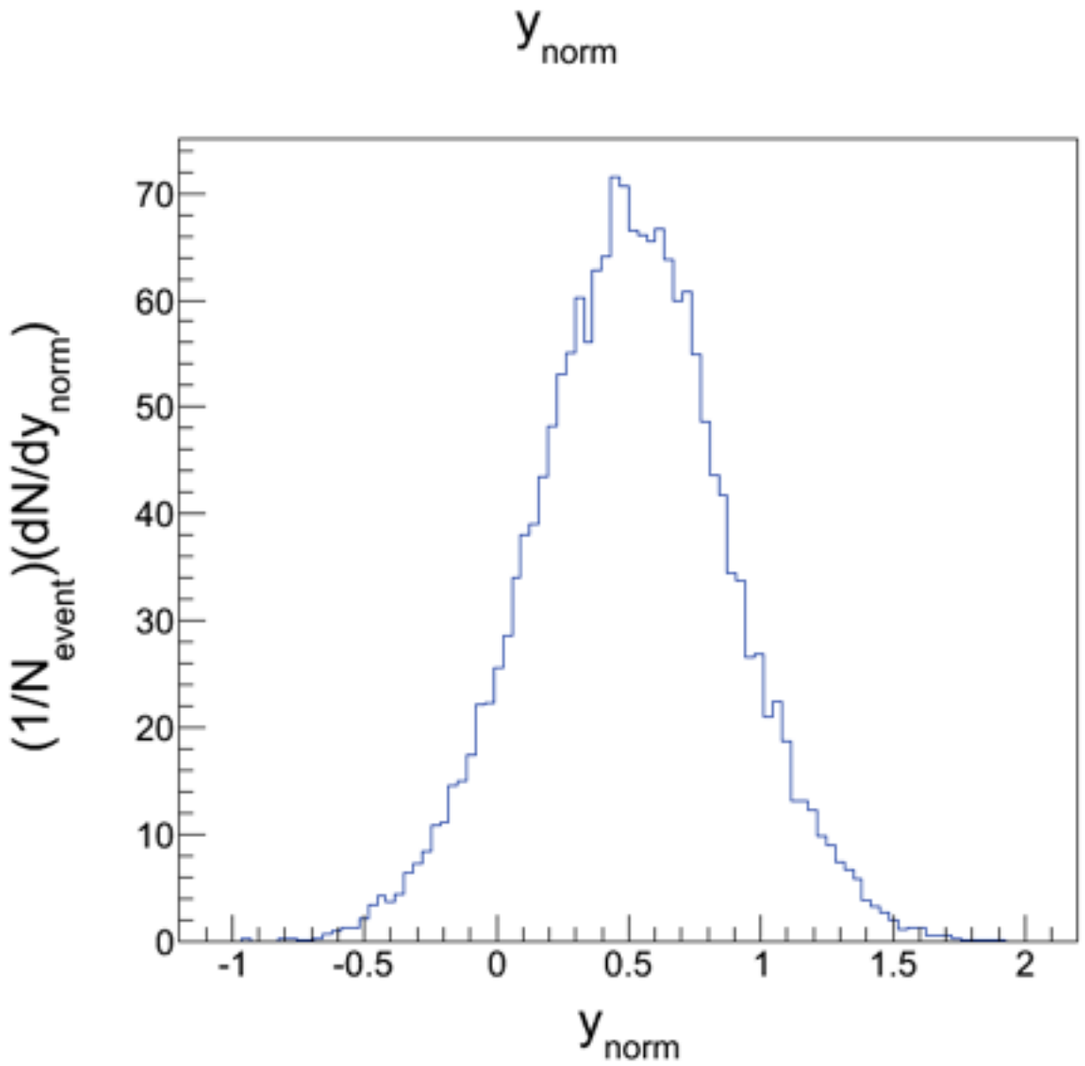


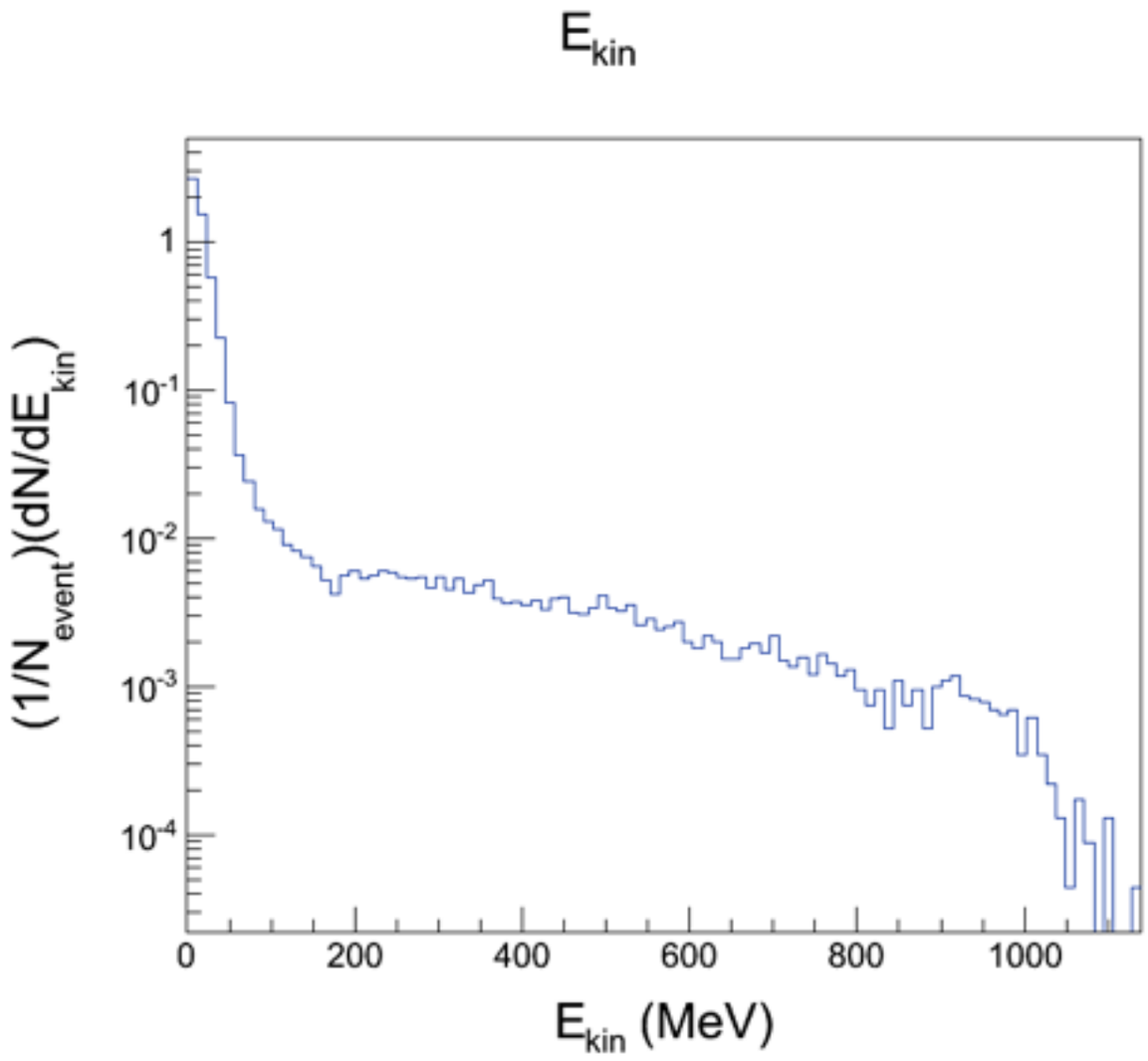
$E_{Kin}^{neutron}$ ($^{132}Sn + ^{124}Sn$ - 18.5 AMeV (PHITS))



Rapidity/E_{kin} - AMD

(All Particles, number of bins : 100)

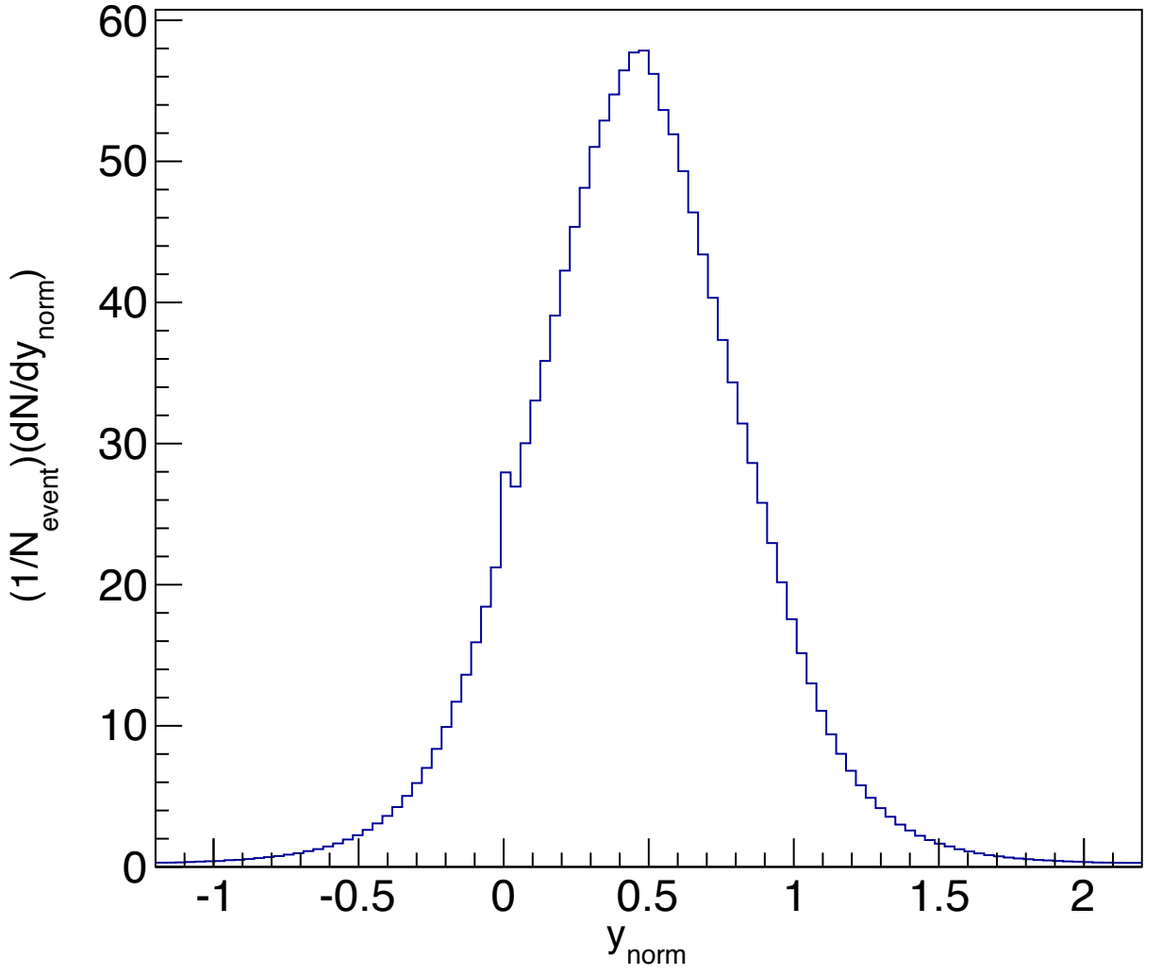




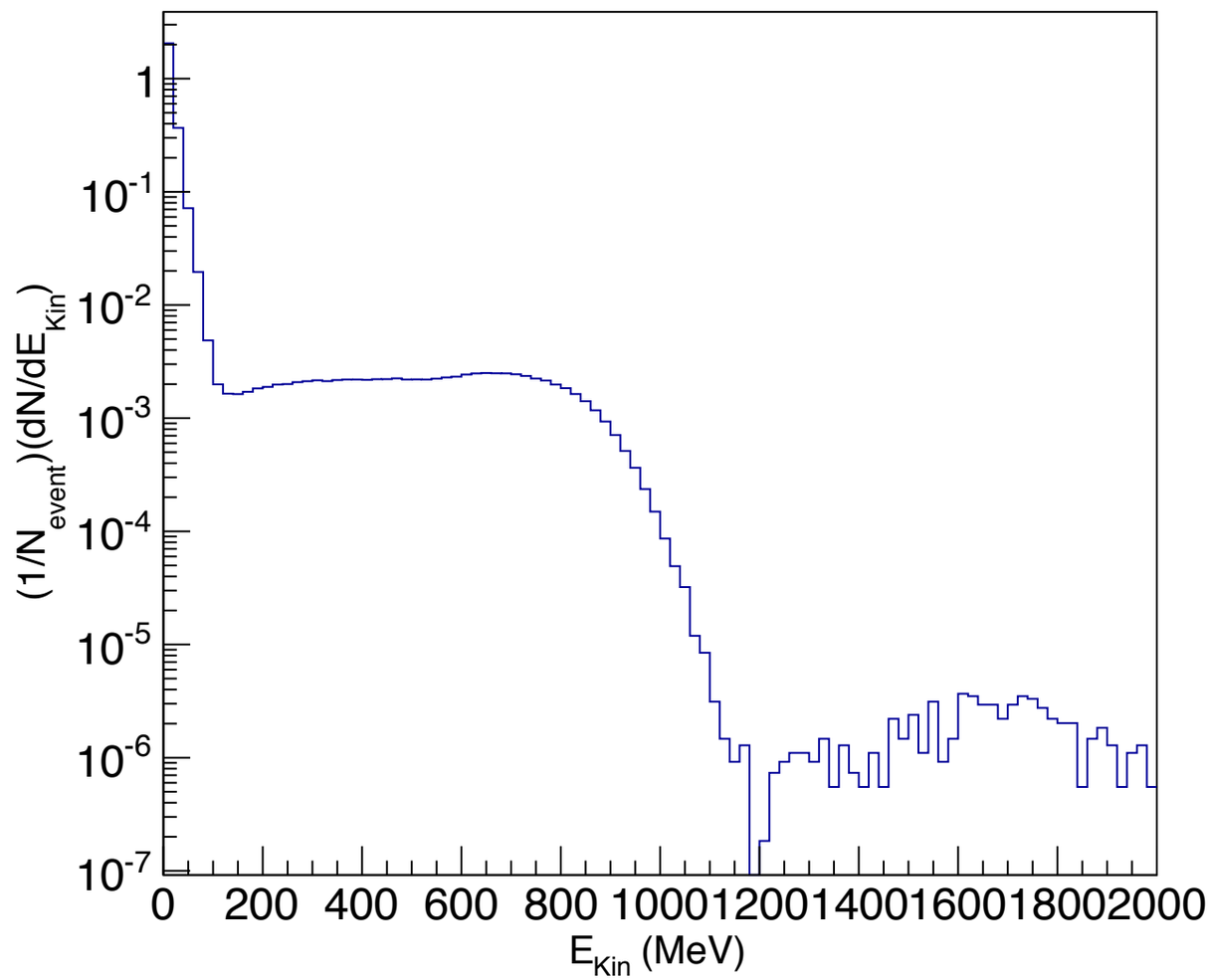
Rapidity/E_{kin} - PHITS

(All Particles, number of bins : 100)

y_{norm} (^{132}Sn + ^{124}Sn - 18.5 AMeV (PHITS))



E_{Kin} (^{132}Sn + ^{124}Sn - 18.5 AMeV (PHITS))



AMD - Charged Particles

Number of particles detected by each detector by one event.

$< N_{charged} > = N_{Det} \times R$, Occupancy : R = 0.05 (5%)

Bin	N(△θ)	N_Det N(△θ)/R	N_Det	Φ(△θ) = 360°/N_Det
1 : (10°<θ<20°)	1.8876	37.752	38	9.4737
2 : (20°<θ<30°)	1.8219	36.438	36	10.0000
3 : (30°<θ<40°)	1.4303	28.606	29	12.4138
4 : (40°<θ<50°)	1.2363	24.726	25	14.4000
5 : (50°<θ<60°)	1.1657	23.314	23	15.6522
6 : (60°<θ<75°)	1.2413	24.826	25	14.4000
7 : (75°<θ<90°)	0.8343	16.686	17	21.1765
8 : (90°<θ<115°)	0.7811	15.622	16	22.5000
9 : (115°<θ<145°)	0.4269	8.538	9	40.0000

PHITS - Charged Particles

Number of particles detected by each detector by one event.

$< N_{charged} > = N_{Det} \times R$, Occupancy : R = 0.05 (5%)

Bin	N(△θ)	N_Det N(△θ)/R	N_Det	Φ(△θ) = 360°/ N_Det
1 : (10°<θ<20°)	1.5656	31.312	31	11.61
2 : (20°<θ<30°)	2.0827	41.654	42	8.57
3 : (30°<θ<40°)	2.0125	40.25	40	9
4 : (40°<θ<50°)	1.9879	39.758	40	9
5 : (50°<θ<60°)	1.8295	36.59	37	9.73
6 : (60°<θ<75°)	2.1428	42.856	43	8.32
7 : (75°<θ<90°)	1.4180	28.36	28	12.86
8 : (90°<θ<115°)	1.2804	25.608	26	13.85
9 : (115°<θ<145°)	0.6460	12.92	13	27.69

AMD - Neutrons

Number of particles detected by each detector by one event.

$< N_{neutral} > = N_{Det} \times R$, Occupancy : R = 0.2 (20%)

Bin	N(△θ)	N_Det N(△θ)/R	N_Det	Φ(△θ) = 360°/N_Det
1 : (0°<θ<10°)	2.7886	13.943	14	25.7143
2 : (10°<θ<20°)	6.6726	33.363	33	10.9091
3 : (20°<θ<30°)	8.4637	42.3185	42	8.5714
4 : (30°<θ<40°)	7.9234	39.617	40	9.0000
5 : (40°<θ<50°)	6.7050	33.5250	34	10.5882
6 : (50°<θ<60°)	4.8289	24.1445	24	15.0000
7 : (60°<θ<75°)	5.0522	25.261	25	14.4000
8 : (75°<θ<90°)	3.0587	15.2935	15	24.0000
9 : (90°<θ<115°)	2.6010	13.0050	13	27.6923
10 : (115°<θ<145°)	1.2736	6.368	6	60

PHITS - Neutrons

Number of particles detected by each detector by one event.

$< N_{neutral} > = N_{Det} \times R$, Occupancy : R = 0.2 (20%)

Bin	N(△θ)	N_Det N(△θ)/R	N_Det	Φ(△θ) = 360°/N_Det
1 : (0°<θ<10°)	1.4666	7.333	8	45
2 : (10°<θ<20°)	3.9928	19.964	20	18
3 : (20°<θ<30°)	5.3561	26.7805	27	3.33
4 : (30°<θ<40°)	5.4425	27.2125	27	3.33
5 : (40°<θ<50°)	4.6693	23.3465	23	5.65
6 : (50°<θ<60°)	3.6018	18.009	18	20
7 : (60°<θ<75°)	3.6181	18.0905	18	20
8 : (75°<θ<90°)	2.1182	10.591	11	32.73
9 : (90°<θ<115°)	1.7716	8.858	9	40
10 : (115°<θ<145°)	0.8441	4.2205	4	90