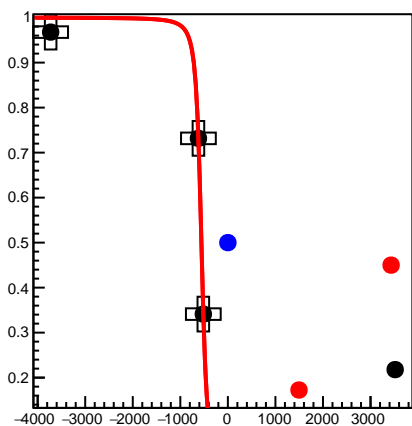
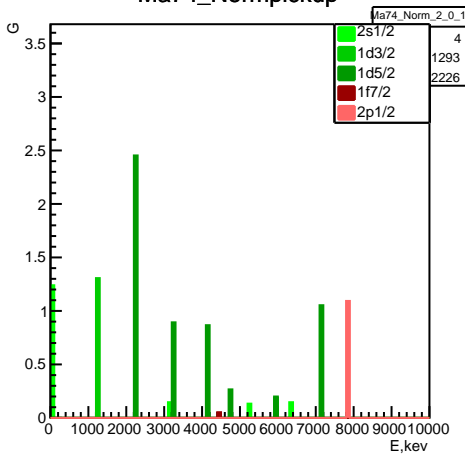
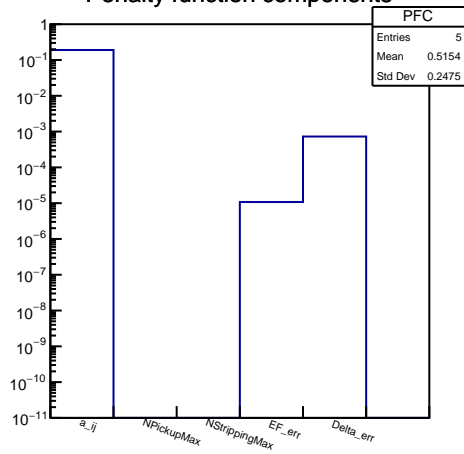


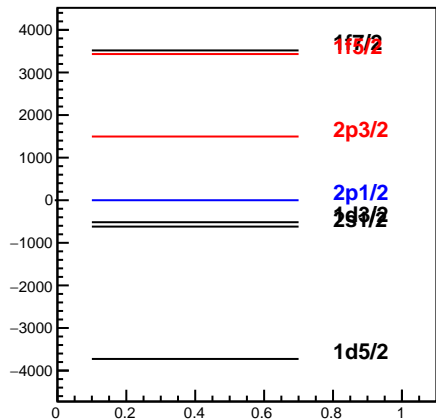
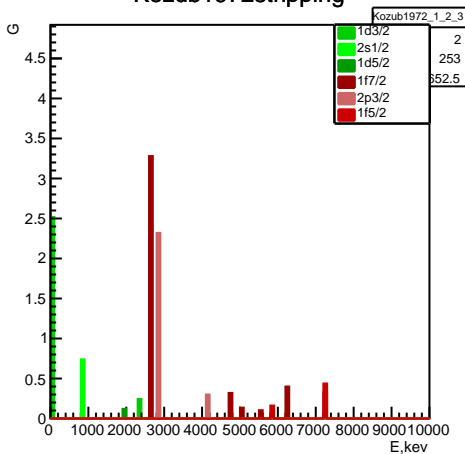
Ma74\_Normpickup



Penalty function components



Kozub1972stripping



Experiment: Ma74\_Norm (14) Kozub1972 (14)  
proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -556.503 ± 6.9438 keV

Δ: -119.908 ± 16.5328 keV

penalty: 0.0381699

SPE, keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$

-619.182 2s1/2 0.731667 1.20333

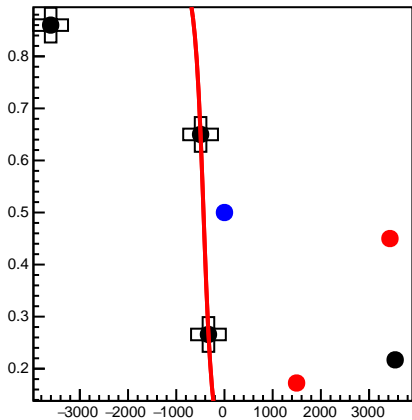
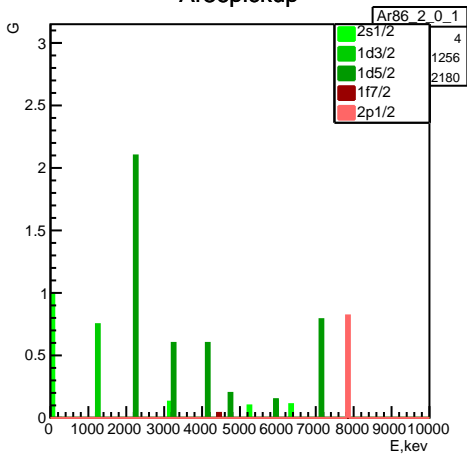
-516.347 1d3/2 0.341167 1.06433

-3726.83 1d5/2 0.967778 0.975556

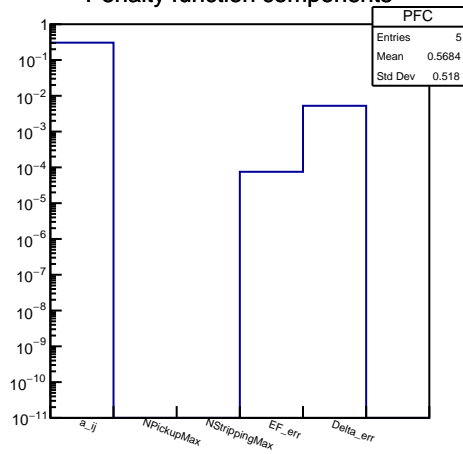
3517.8 1f7/2 0.217833 0.577667

8.31855e-13 2p1/2 0.5 1.09333

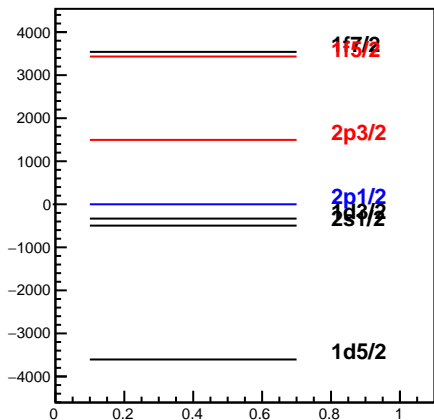
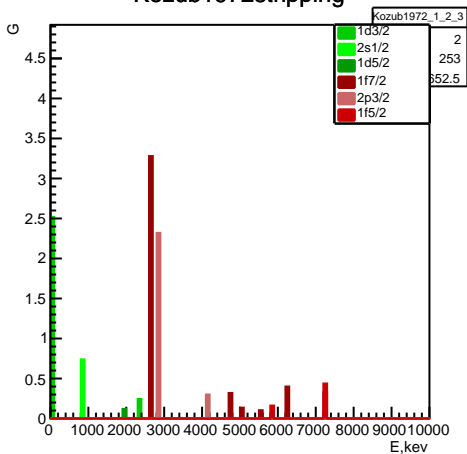
Ar86pickup



Penalty function components



Kozub1972stripping



Experiment: Ar86 (14) Kozub1972 (14)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -434.654 ± 48.5609 keV

Δ: -194.053 ± 119.364 keV

penalty: 0.06208

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-495.364 2s1/2 0.65 1.04

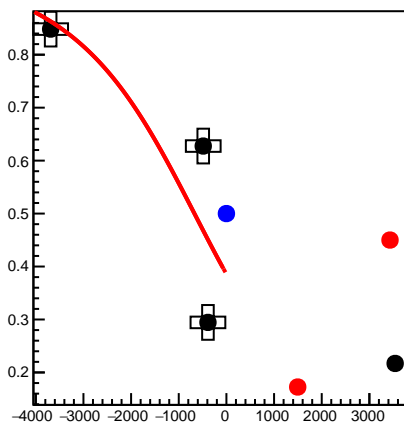
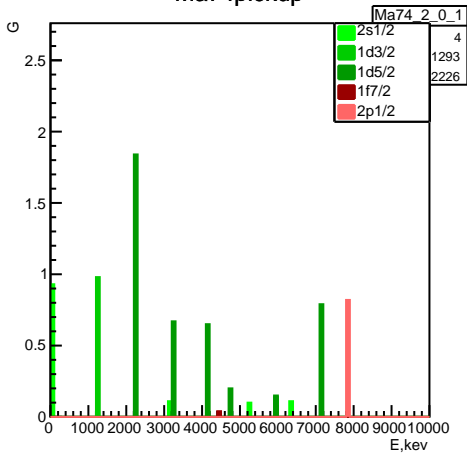
-332.243 1d3/2 0.26575 0.9135

-3605.65 1d5/2 0.86 0.76

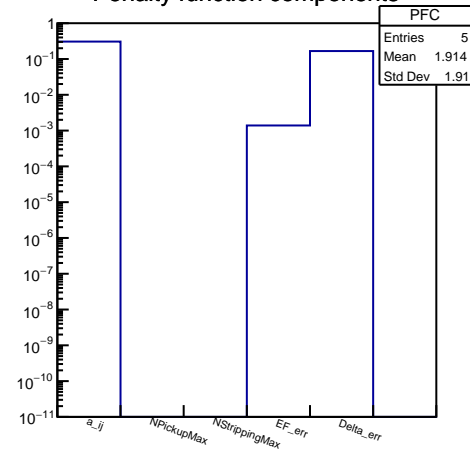
3540.8 1f7/2 0.217 0.576

5.5457e-13 2p1/2 0.5 0.82

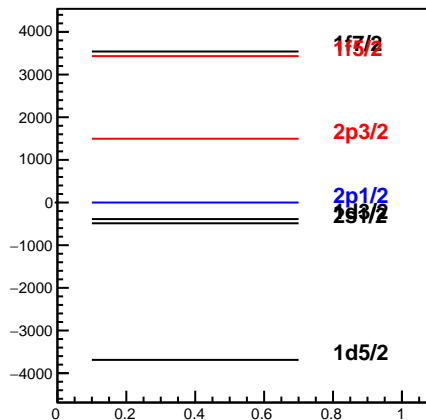
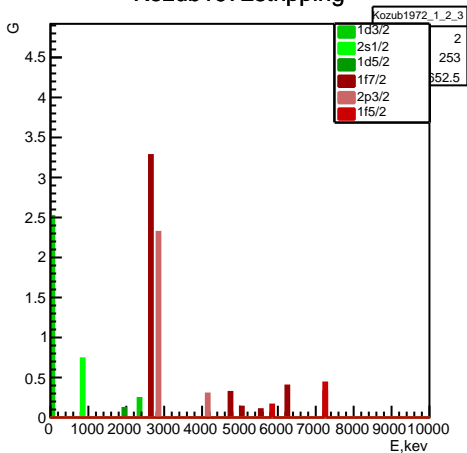
Ma74pickup



Penalty function components



Kozub1972stripping



Experiment: Ma74 (14) Kozub1972 (14)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -670.884 ± 896.436 keV

Δ: 2859.72 ± 3788.84 keV

penalty: 0.0949515

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-486.267 2s1/2 0.6275 0.995

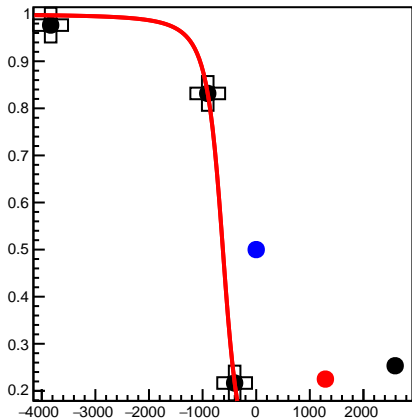
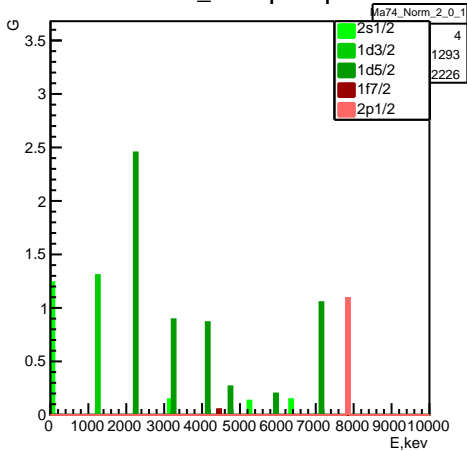
-387.545 1d3/2 0.2945 0.971

-3688.05 1d5/2 0.848333 0.736667

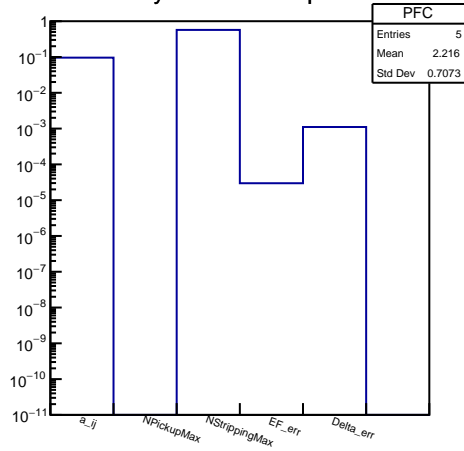
3540.8 1f7/2 0.217 0.576

5.5457e-13 2p1/2 0.5 0.82

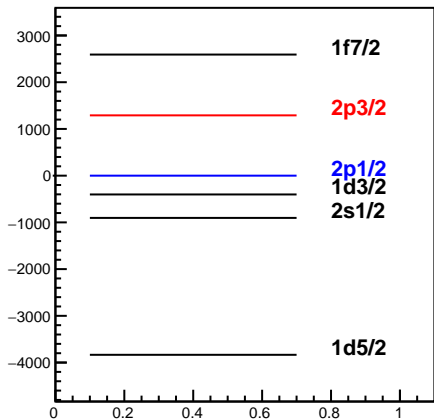
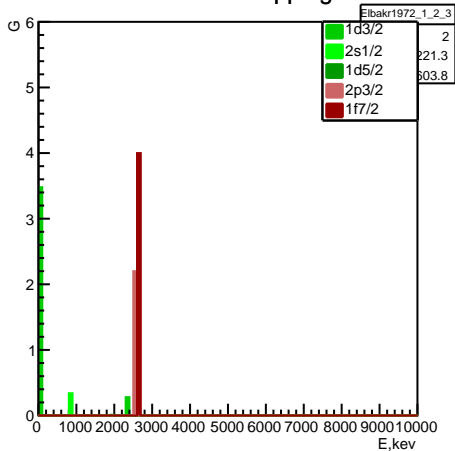
Ma74\_Normpickup



Penalty function components



Elbakr1972stripping



Experiment: Ma74\_Norm (14) Elbakr1972 (6)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -621.597 ± 19.1796 keV

Δ: -319.25 ± 25.1478 keV

penalty: 0.133706

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-904.179 2s1/2 0.831667 1.00333

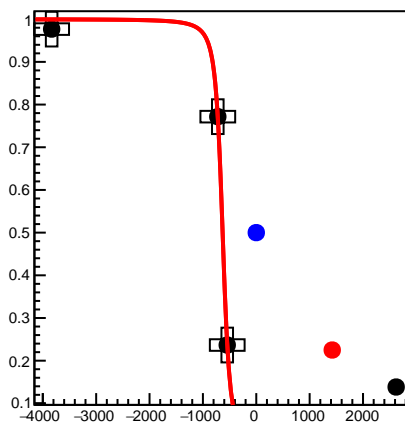
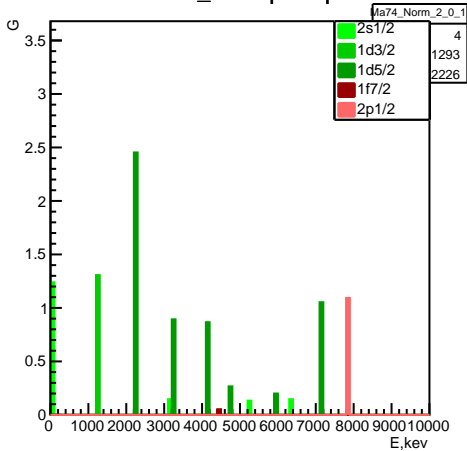
-402.333 1d3/2 0.216667 1.31333

-3834.23 1d5/2 0.976778 0.957556

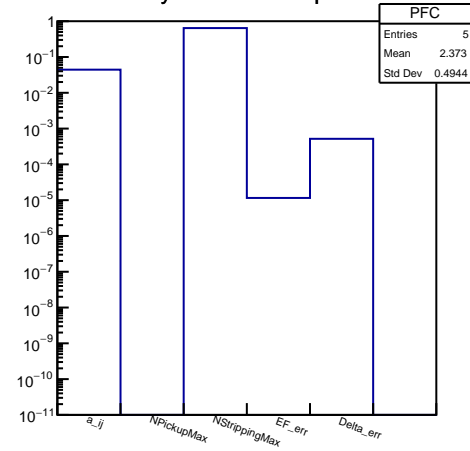
2591.76 1f7/2 0.253333 0.506667

8.31855e-13 2p1/2 0.5 1.09333

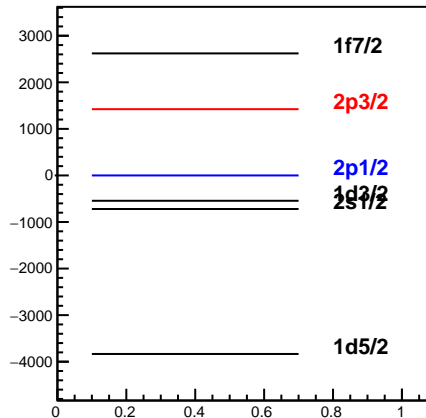
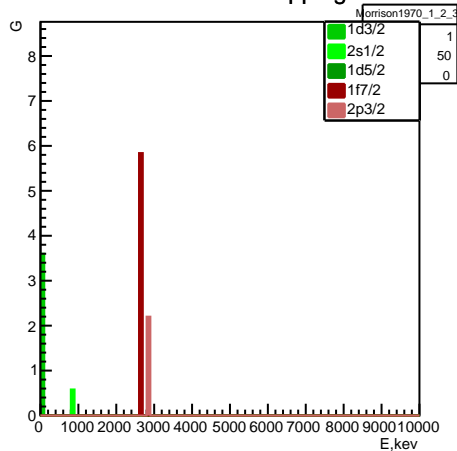
Ma74\_Normpickup



Penalty function components



Morrison1970stripping



Experiment: Ma74\_Norm (14) Morrison1970

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -630.71 ± 7.44274 keV

Δ: -139.555 ± 11.7658 keV

penalty: 0.137537

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-721.003 2s1/2 0.771667 1.12333

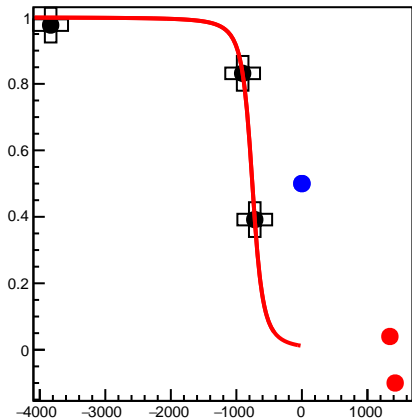
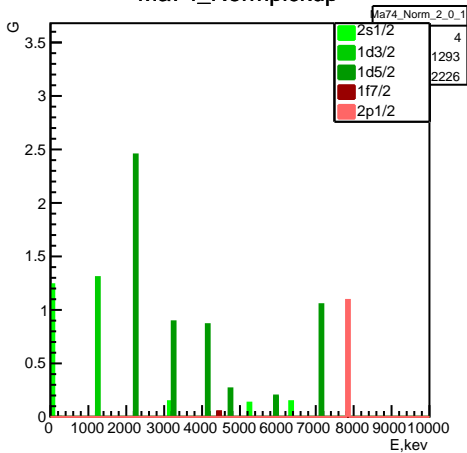
-544.271 1d3/2 0.236667 1.27333

-3834.23 1d5/2 0.976778 0.957556

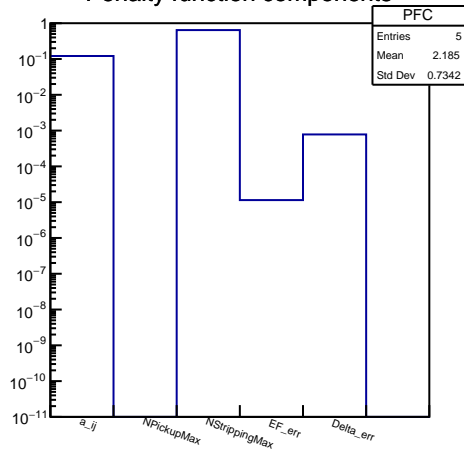
2621 1f7/2 0.138333 0.736667

8.31855e-13 2p1/2 0.5 1.09333

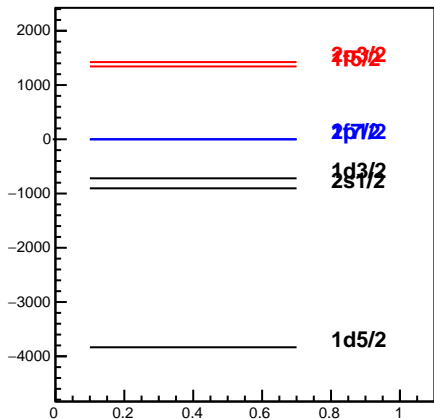
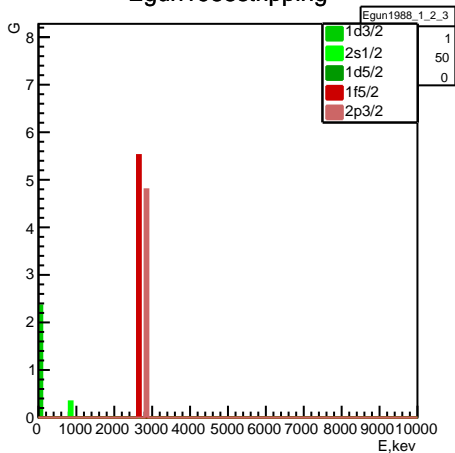
Ma74\_Normpickup



Penalty function components



Egun1988stripping



Experiment: Ma74\_Norm (14) Egun1988 (5)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -756.418  $\pm$  7.37616 keV $\Delta$ : 166.82  $\pm$  17.7274 keV

penalty: 0.15299

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-904.179 2s1/2 0.831667 1.00333

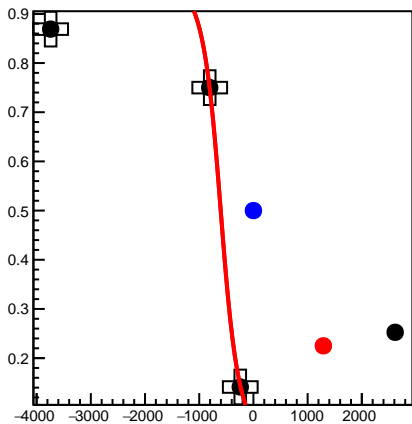
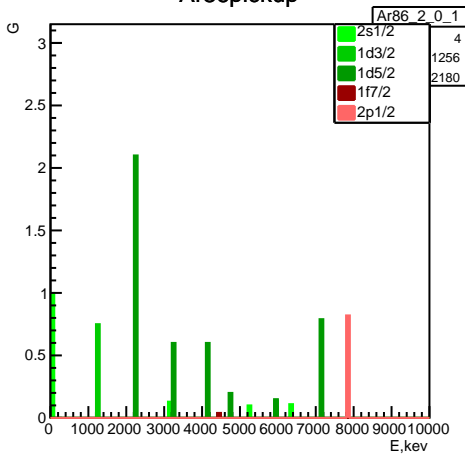
-719.416 1d3/2 0.391667 0.963333

-3834.23 1d5/2 0.976778 0.957556

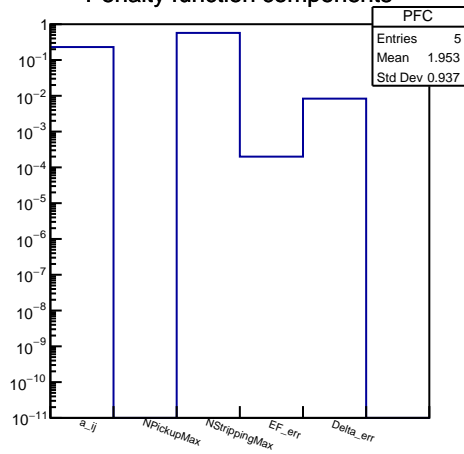
5.32907e-13 1f7/2 0.5 0.0133333

8.31855e-13 2p1/2 0.5 1.09333

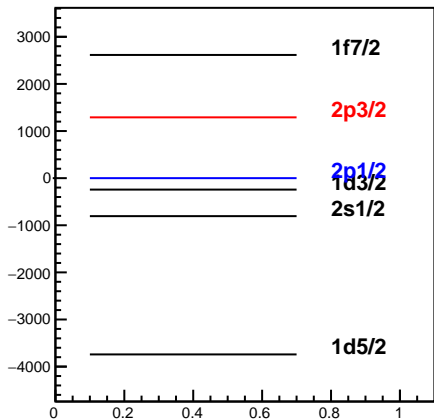
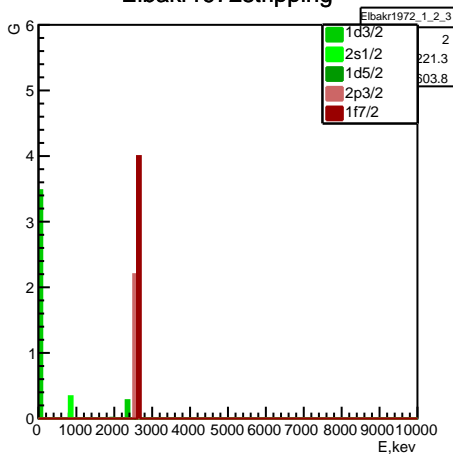
Ar86pickup



Penalty function components



Elbakra1972stripping



Experiment: Ar86 (14) Elbakra1972 (6)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

 $E_F$ : -603.404  $\pm$  128.766 keV $\Delta$ : 355.495  $\pm$  189.234 keV

penalty: 0.162008

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-806.296 2s1/2 0.75 0.84

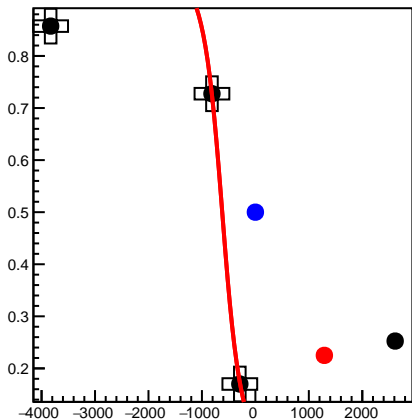
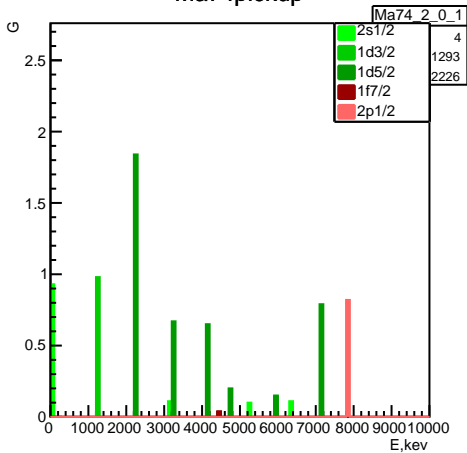
-242.87 1d3/2 0.14125 1.1625

-3741.3 1d5/2 0.869 0.742

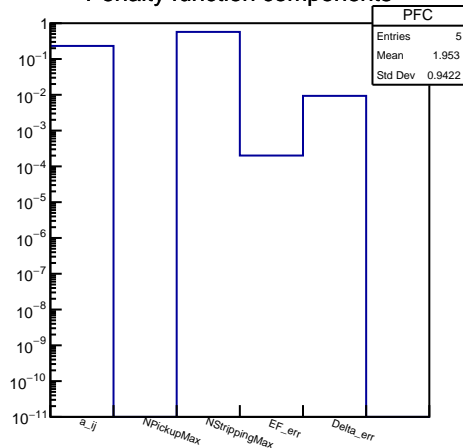
2614.94 1f7/2 0.2525 0.505

5.5457e-13 2p1/2 0.5 0.82

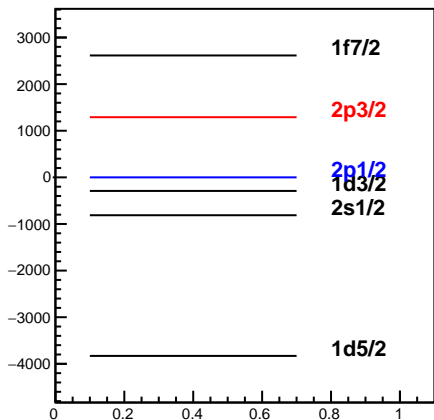
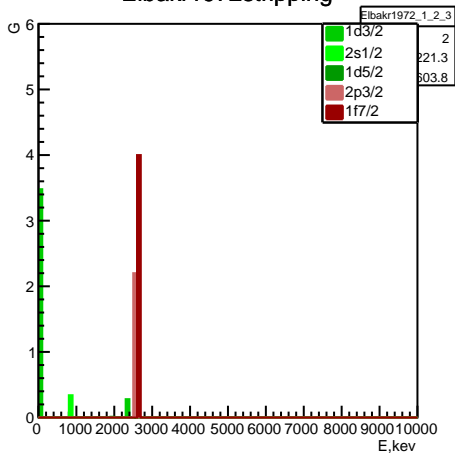
Ma74pickup



Penalty function components



Elbakra1972stripping



Experiment: Ma74 (14) Elbakra1972 (6)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

 $E_F: -620.309 \pm 129.593 \text{ keV}$  $\Delta: -380.717 \pm 212.017 \text{ keV}$ 

penalty: 0.16257

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-812.511 2s1/2 0.7275 0.795

-291.097 1d3/2 0.17 1.22

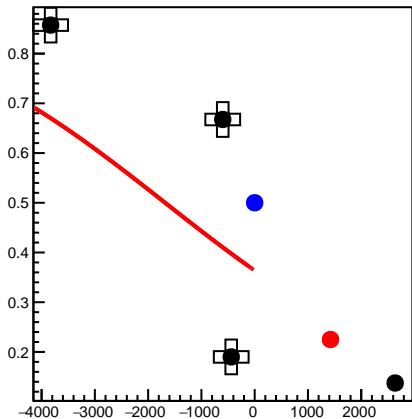
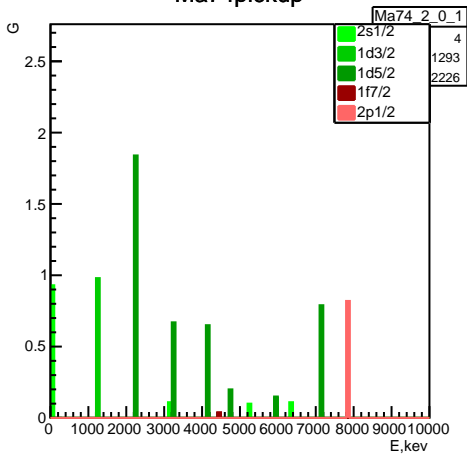
-3830.18 1d5/2 0.857333 0.718667

2614.94 1f7/2 0.2525 0.505

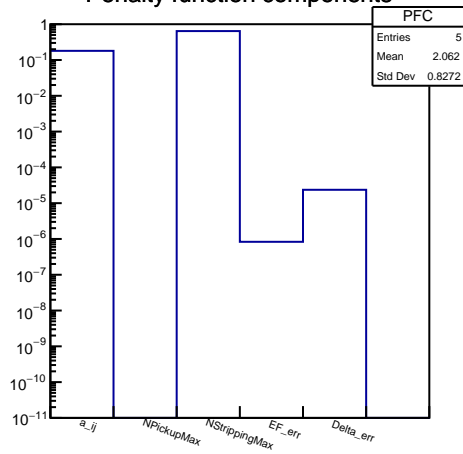
5.5457e-13 2p1/2 0.5 0.82



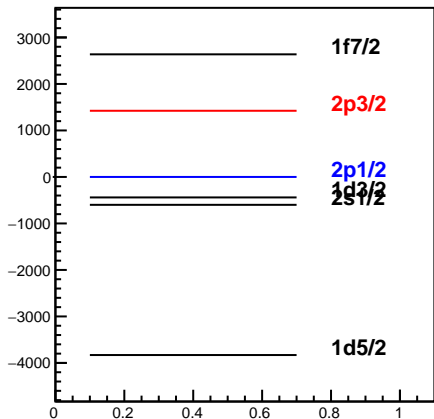
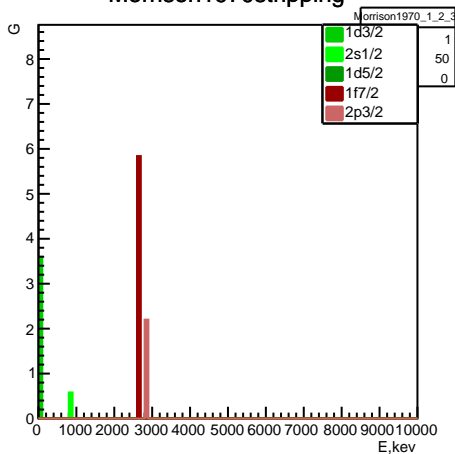
Ma74pickup



Penalty function components



Morrison1970stripping



Experiment: Ma74 (14) Morrison1970 (5)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -1681.02 ± 0.537152 keV

Δ: 5936 ± 0.537152 keV

penalty: 0.164621

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-599.65 2s1/2 0.6675 0.915

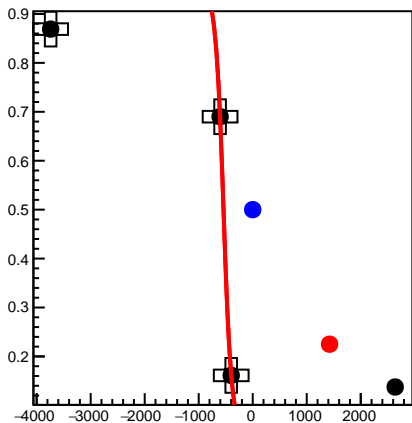
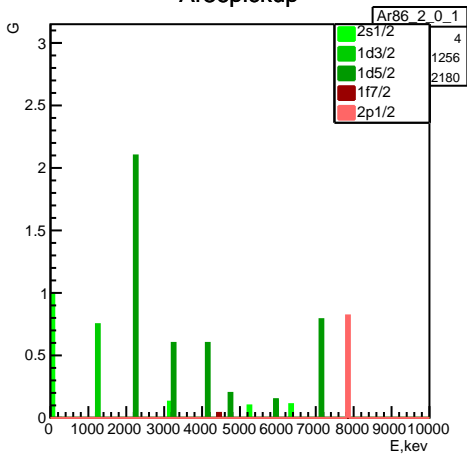
-440.49 1d3/2 0.19 1.18

-3830.18 1d5/2 0.857333 0.718667

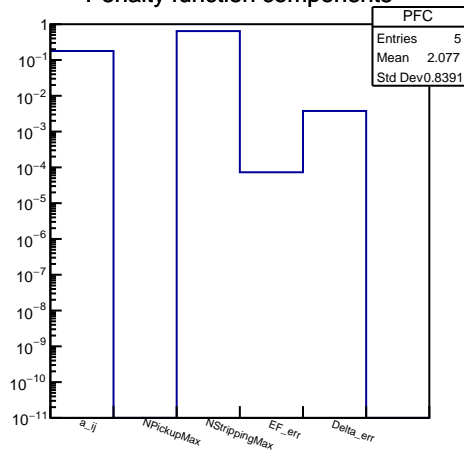
2636.99 1f7/2 0.1375 0.735

5.5457e-13 2p1/2 0.5 0.82

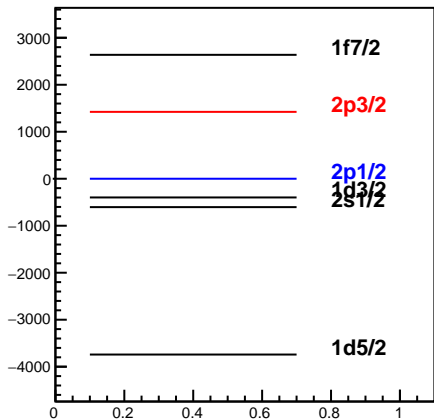
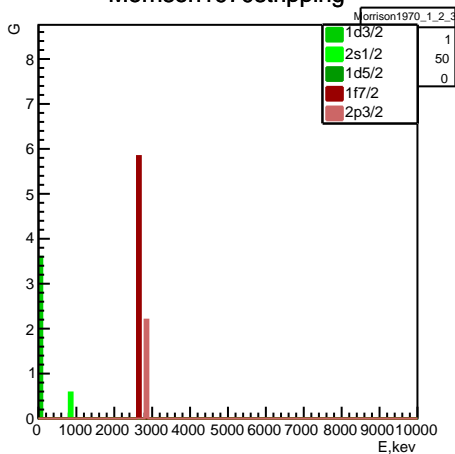
Ar86pickup



Penalty function components



Morrison1970stripping



Experiment: Ar86 (14) Morrison1970 (5)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -540.602 ± 47.1048 keV

Δ: -155.089 ± 85.5617 keV

penalty: 0.165022

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-604.191 2s1/2 0.69 0.96

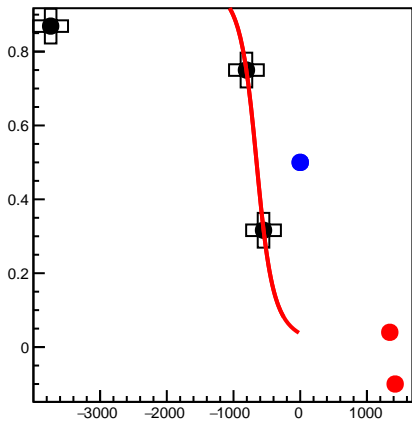
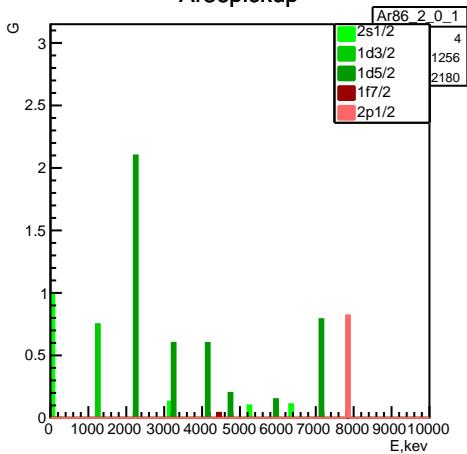
-398.197 1d3/2 0.16125 1.1225

-3741.3 1d5/2 0.869 0.742

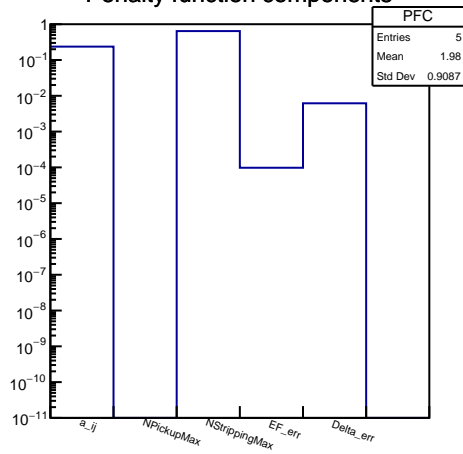
2636.99 1f7/2 0.1375 0.735

5.5457e-13 2p1/2 0.5 0.82

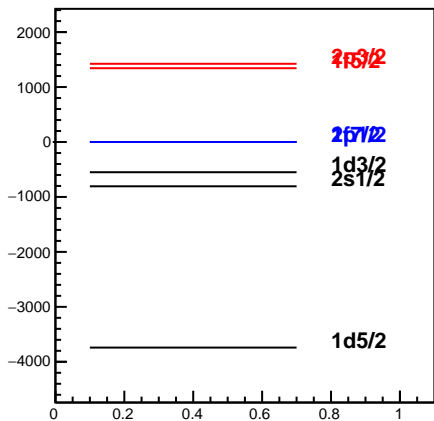
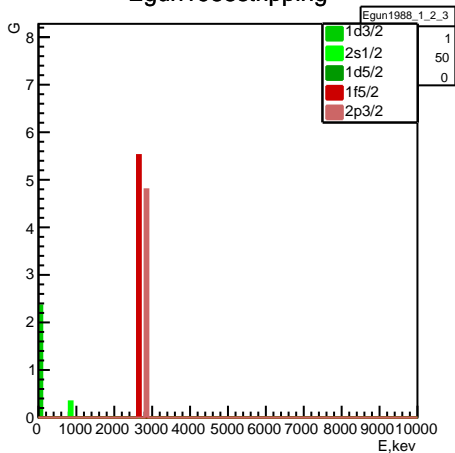
Ar86pickup



Penalty function components



Egun1988stripping



Experiment: Ar86 (14) Egun1988 (5)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

 $E_F$ : -654.108  $\pm$  62.9755 keV $\Delta$ : -265.157  $\pm$  140.202 keV

penalty: 0.177125

SPE,kev nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-806.296 2s1/2 0.75 0.84

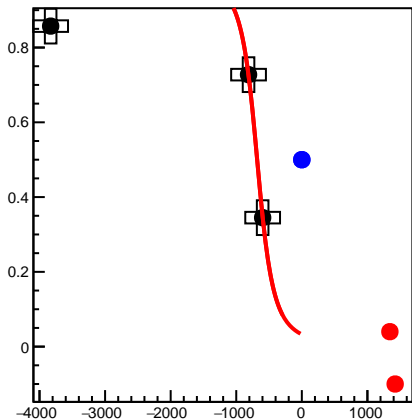
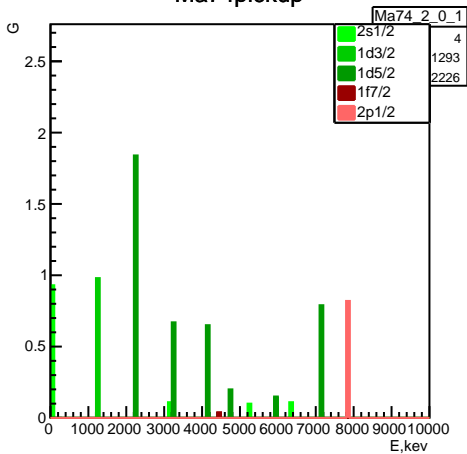
-550.124 1d3/2 0.31625 0.8125

-3741.3 1d5/2 0.869 0.742

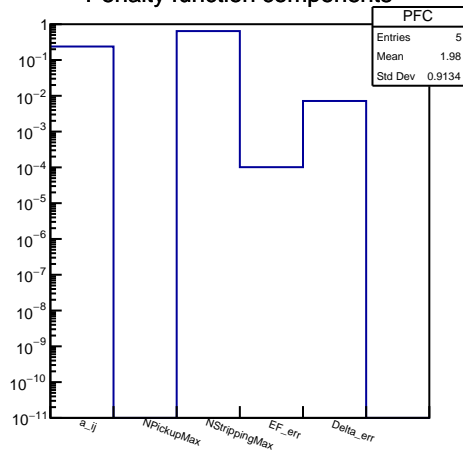
3.55271e-13 1f7/2 0.5 0.01

5.5457e-13 2p1/2 0.5 0.82

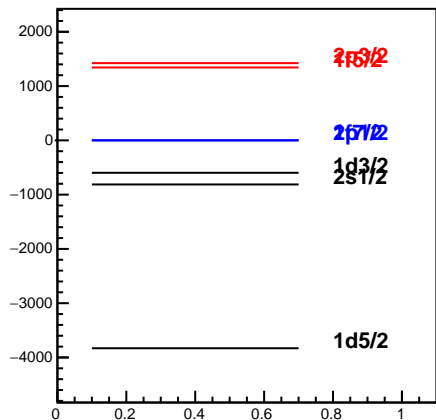
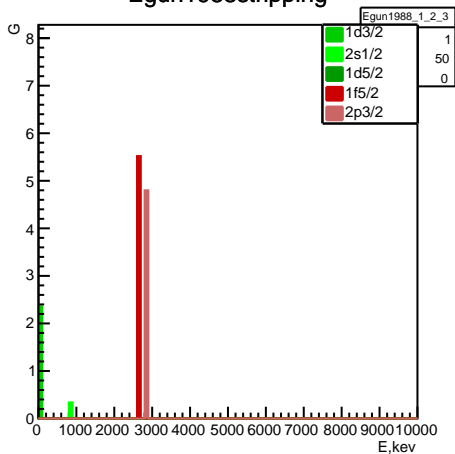
Ma74pickup



Penalty function components



Egun1988stripping



Experiment: Ma74 (14) Egun1988 (5)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -681.23  $\pm$  65.397 keV $\Delta$ : 259.297  $\pm$  162.727 keV

penalty: 0.177634

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-812.511 2s1/2 0.7275 0.795

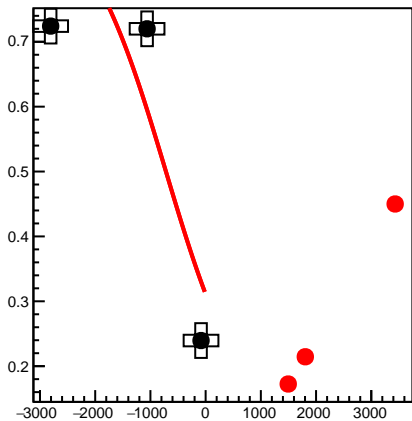
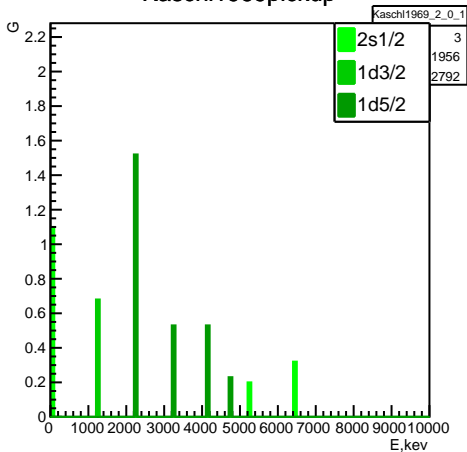
-597.446 1d3/2 0.345 0.87

-3830.18 1d5/2 0.857333 0.718667

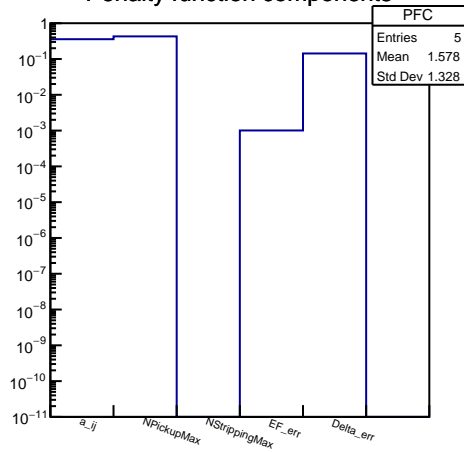
3.55271e-13 1f7/2 0.5 0.01

5.5457e-13 2p1/2 0.5 0.82

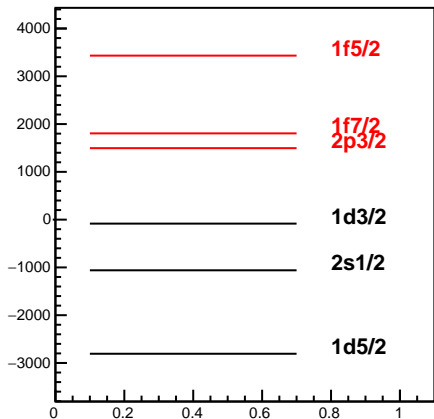
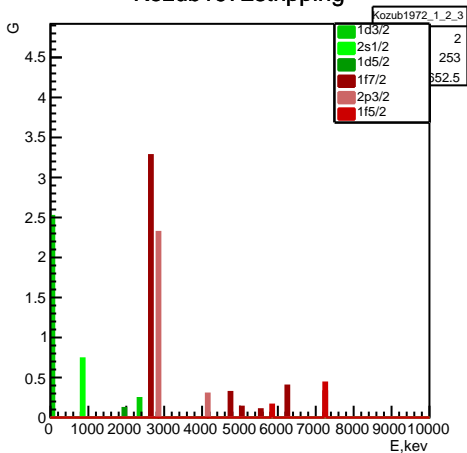
Kaschl1969pickup



Penalty function components



Kozub1972stripping



Experiment: Kaschl1969 (8) Kozub1972 (14)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -718.857 ± 650.206 keV

Δ: 1761.91 ± 3243.8 keV

penalty: 0.185957

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-1060.49 2s1/2 0.72 1.18

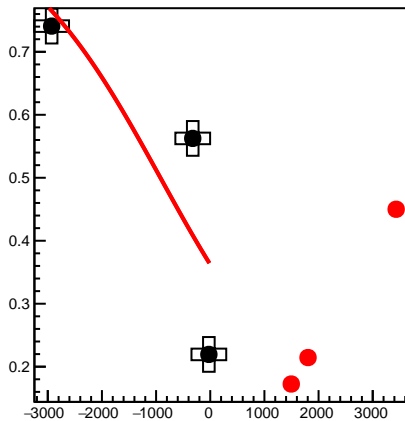
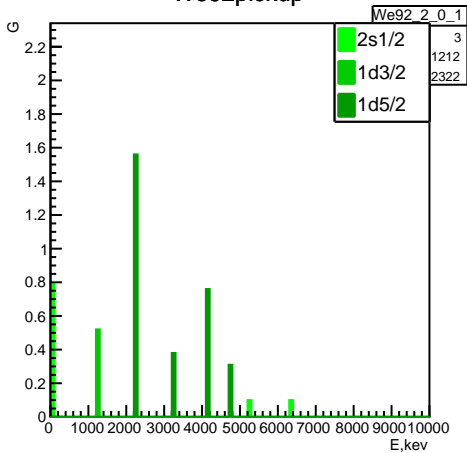
-83.3567 1d3/2 0.2395 0.861

-2806.97 1d5/2 0.724167 0.488333

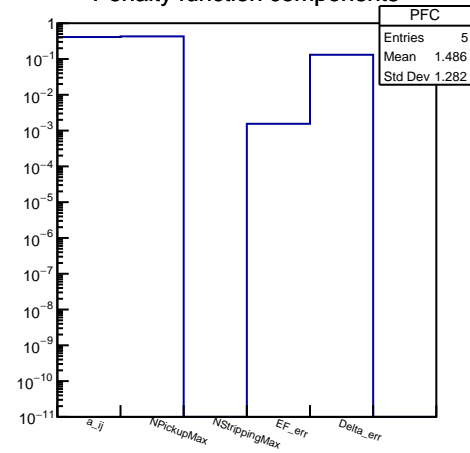
1805.3 1f7/2 0.2145 0.571

1495.93 2p3/2 0.1725 0.655

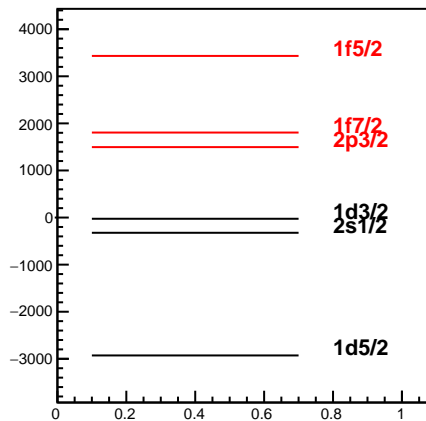
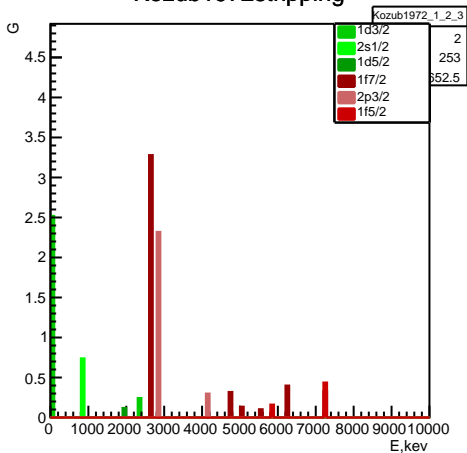
We92pickup



Penalty function components



Kozub1972stripping



Experiment: We92 (8) Kozub1972 (14)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -920.114 ± 998.997 keV

Δ: 3210.85 ± 2983.14 keV

penalty: 0.194493

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-323.429 2s1/2 0.5625 0.865

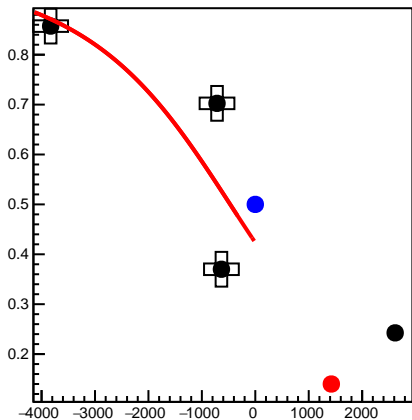
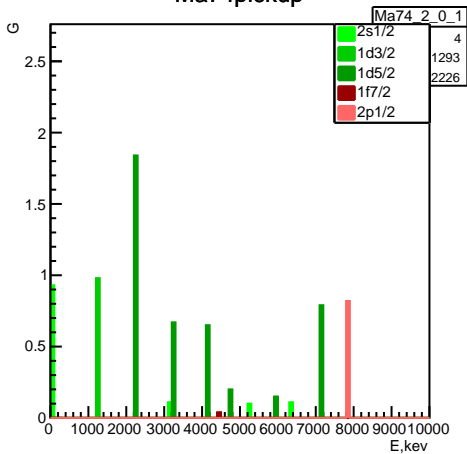
-25.7307 1d3/2 0.2195 0.821

-2928.47 1d5/2 0.740833 0.521667

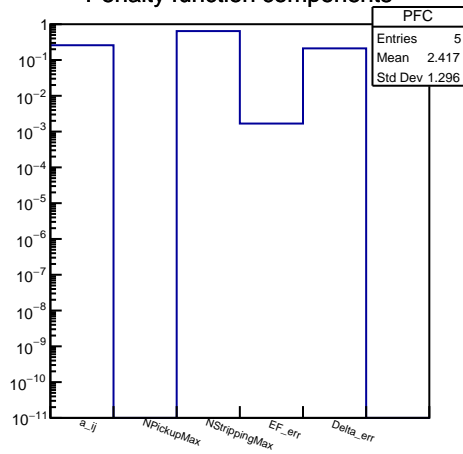
1805.3 1f7/2 0.2145 0.571

1495.93 2p3/2 0.1725 0.655

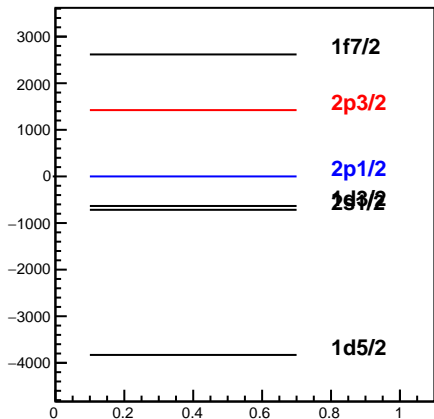
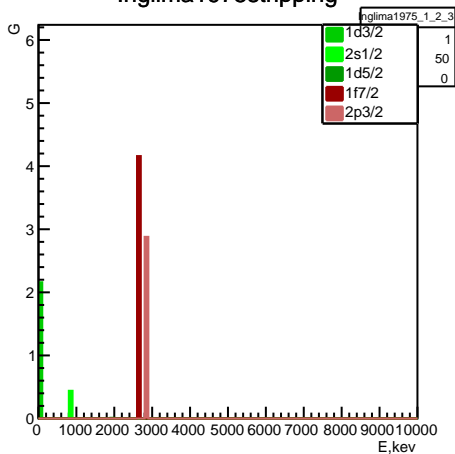
Ma74pickup



Penalty function components



Inglima1975stripping



Experiment: Ma74 (14) Inglima1975 (5)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -469.961 ± 1082.1 keV

Δ: 3031.19 ± 4799.11 keV

penalty: 0.22286

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-716.472 2s1/2 0.7025 0.845

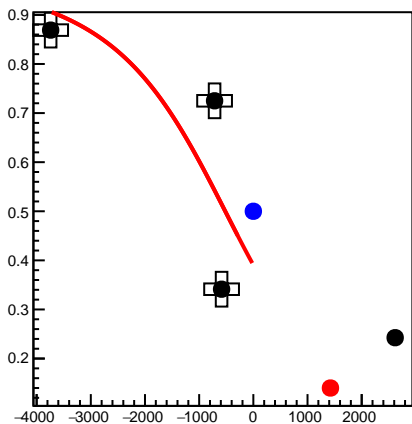
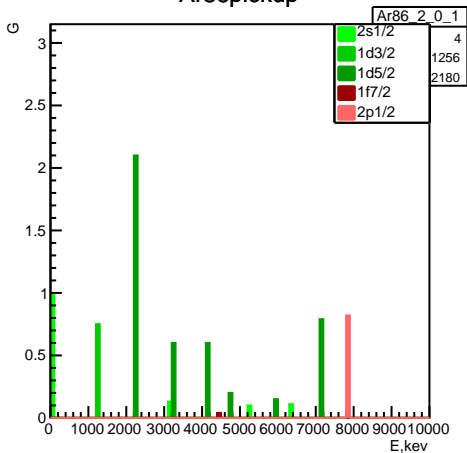
-633.876 1d3/2 0.37 0.82

-3830.18 1d5/2 0.857333 0.718667

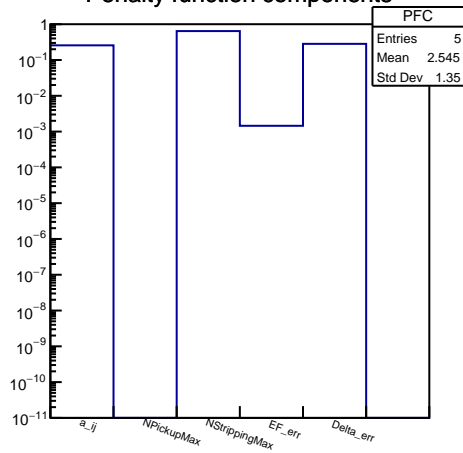
2617.62 1f7/2 0.2425 0.525

5.5457e-13 2p1/2 0.5 0.82

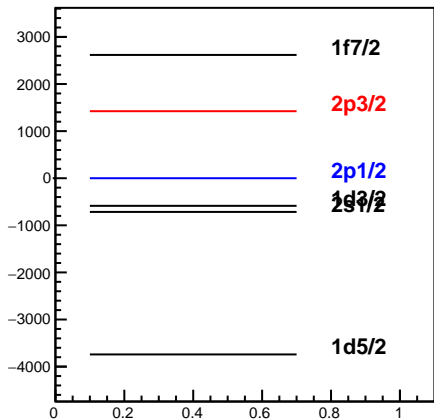
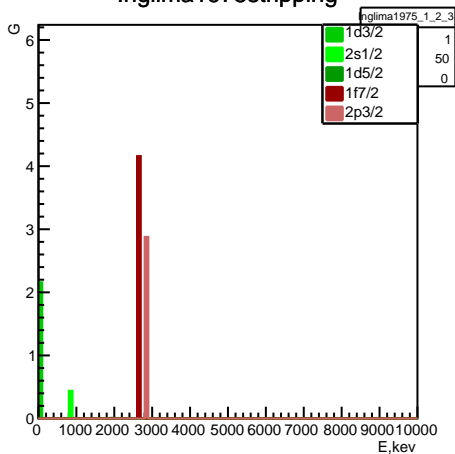
Ar86pickup



Penalty function components



Inglima1975stripping



Experiment: Ar86 (14) Inglima1975 (5)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -518.62 ± 936.555 keV

Δ: 2309.14 ± 6421.61 keV

penalty: 0.236736

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-715.462 2s1/2 0.725 0.89

-586.198 1d3/2 0.34125 0.7625

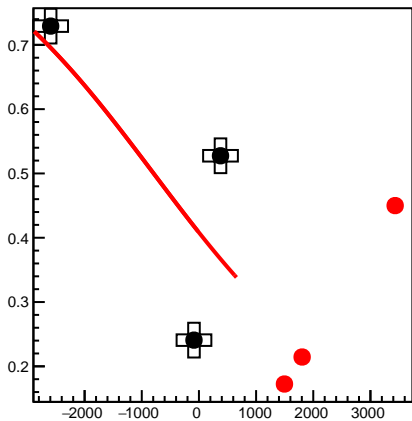
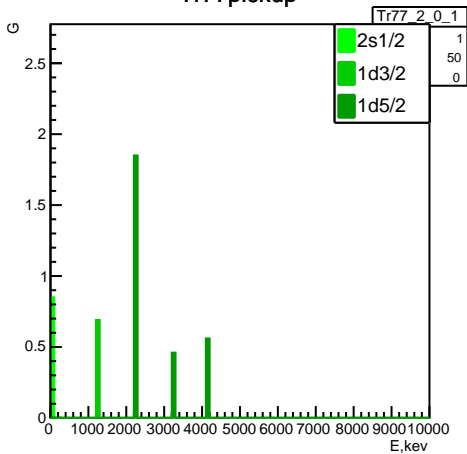
-3741.3 1d5/2 0.869 0.742

2617.62 1f7/2 0.2425 0.525

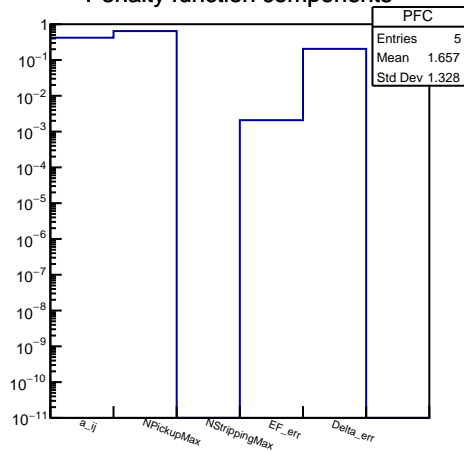
5.5457e-13 2p1/2 0.5 0.82



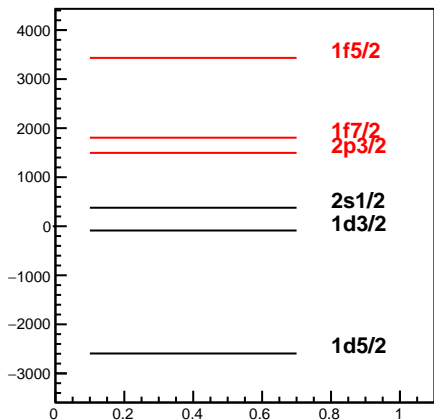
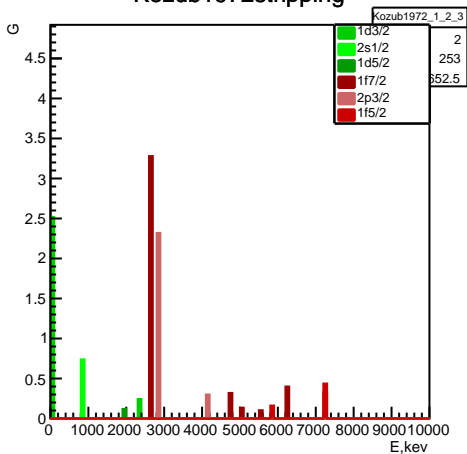
Tr77pickup



Penalty function components



Kozub1972stripping



Experiment: Tr77 (5) Kozub1972 (14)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -792.579  $\pm$  1345.53 keV $\Delta$ : 4240.38  $\pm$  4652.03 keV

penalty: 0.253842

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

377.237 2s1/2 0.5275 0.795

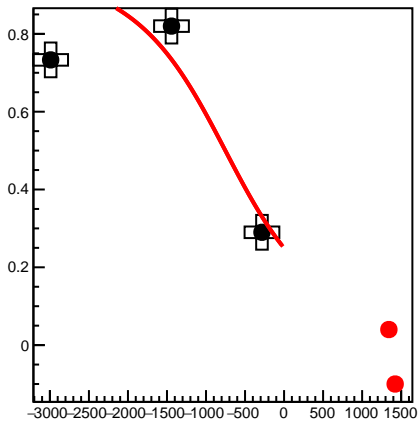
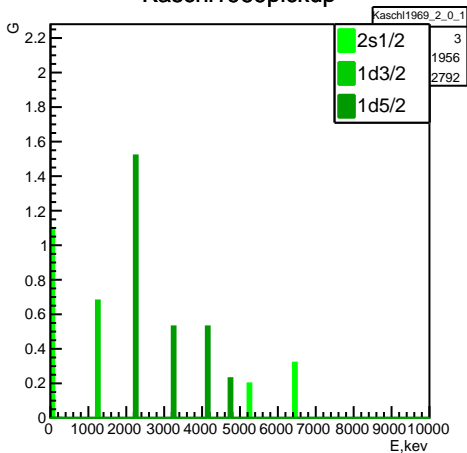
-86.781 1d3/2 0.24075 0.8635

-2594.12 1d5/2 0.729167 0.498333

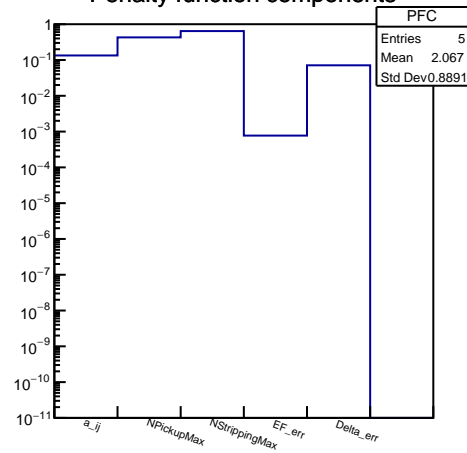
1805.3 1f7/2 0.2145 0.571

1495.93 2p3/2 0.1725 0.655

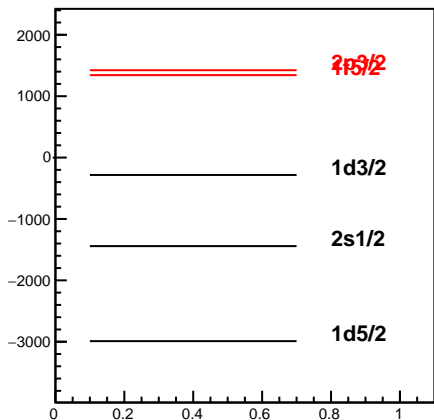
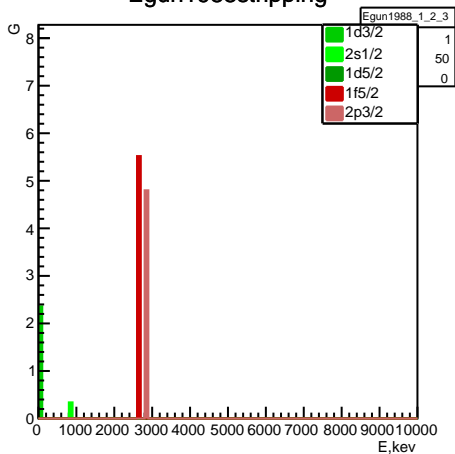
Kaschl1969pickup



Penalty function components



Egun1988stripping



Experiment: Kaschl1969 (8) Egun1988 (5)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -752.348  $\pm$  498.606 keV $\Delta$ : 1299.67  $\pm$  1615.18 keV

penalty: 0.255444

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-1442.33 2s1/2 0.82 0.98

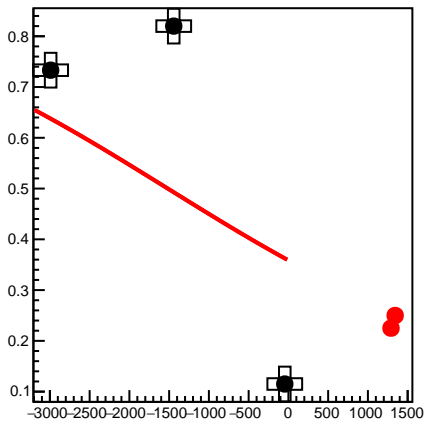
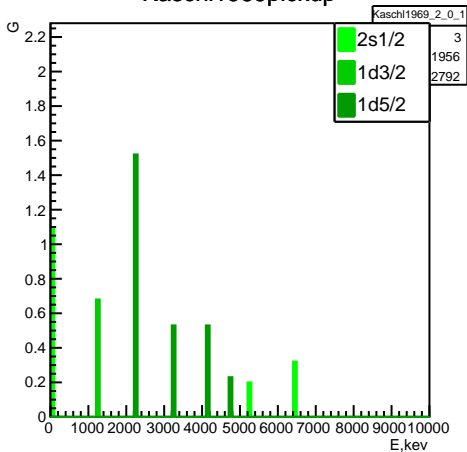
-283.213 1d3/2 0.29 0.76

-2990.41 1d5/2 0.733167 0.470333

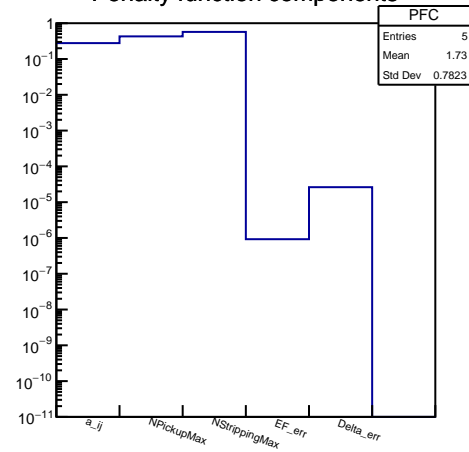
1342.7 1f5/2 0.04 0.92

1423.15 2p3/2 -0.1 1.2

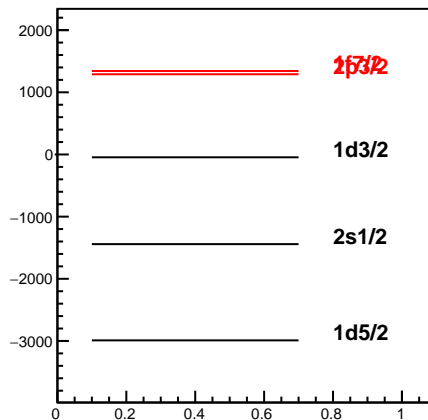
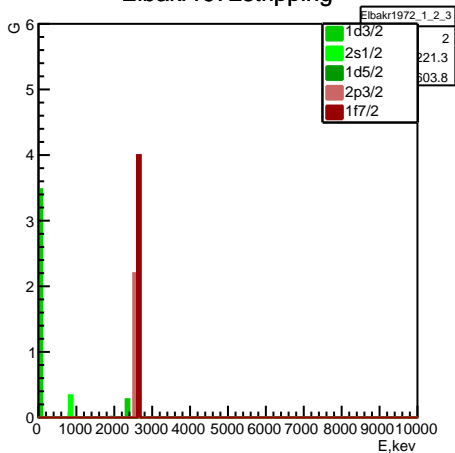
Kaschl1969pickup



Penalty function components



Elbakr1972stripping



Experiment: Kaschl1969 (8) Elbakr1972 (6)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -1517.04  $\pm$  0.595806 keV $\Delta$ : 5145.5  $\pm$  0.595806 keV

penalty: 0.255592

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-1442.33 2s1/2 0.82 0.98

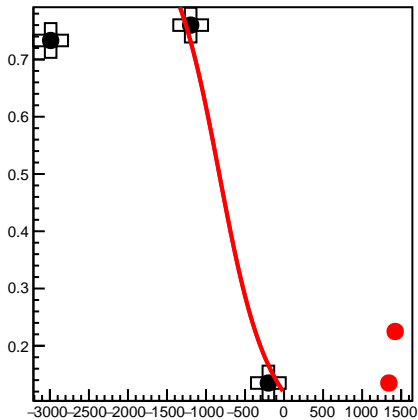
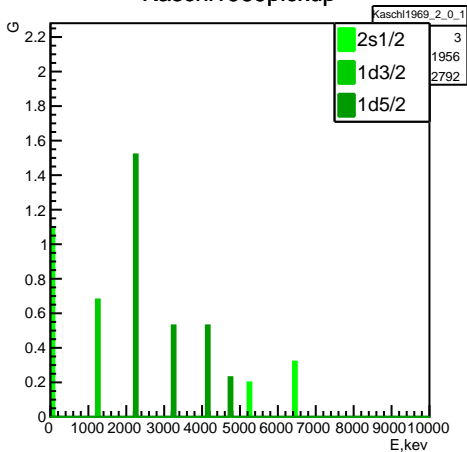
-45.5875 1d3/2 0.115 1.11

-2990.41 1d5/2 0.733167 0.470333

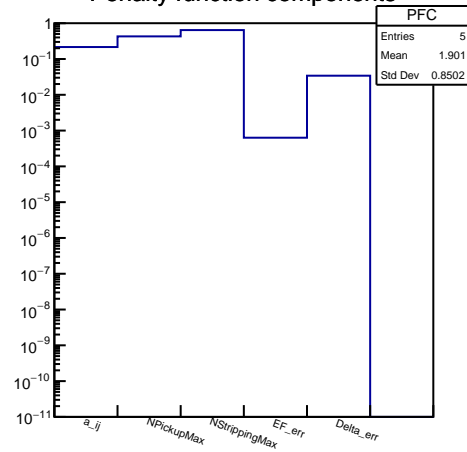
1290.5 2p3/2 0.225 0.55

1342.7 1f7/2 0.25 0.5

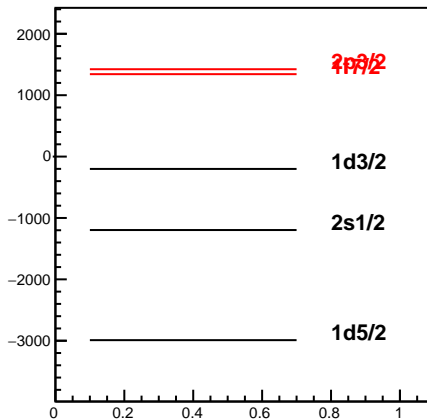
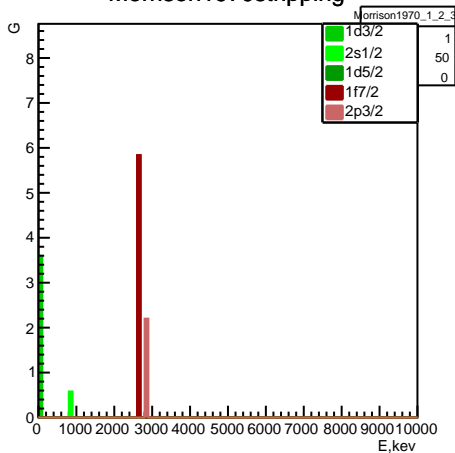
Kaschl1969pickup



Penalty function components



Morrison1970stripping



Experiment: Kaschl1969 (8) Morrison1970 (5)  
proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -830.422 ± 407.981 keV

Δ: -701.867 ± 776.18 keV

penalty: 0.264431

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$

-1196.56 2s1/2 0.76 1.1

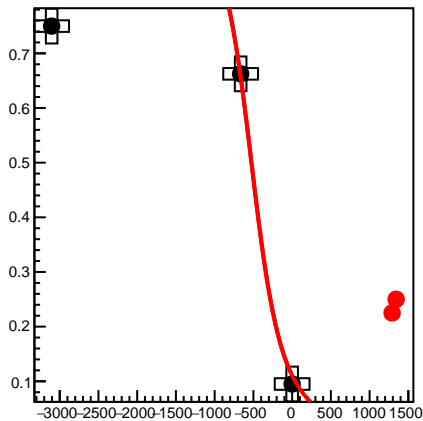
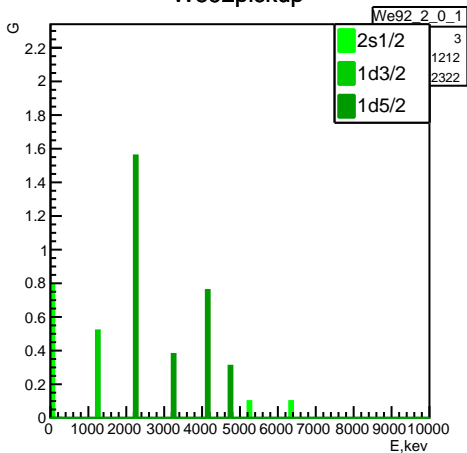
-201.161 1d3/2 0.135 1.07

-2990.41 1d5/2 0.733167 0.470333

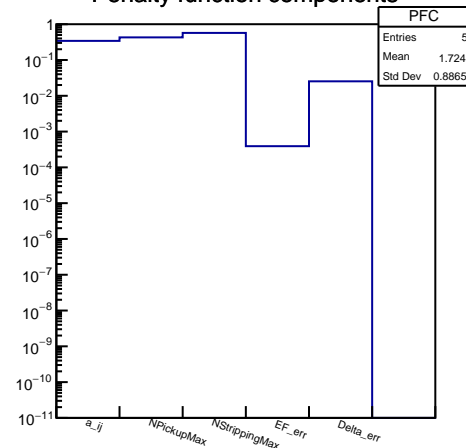
1342.7 1f7/2 0.135 0.73

1423.15 2p3/2 0.225 0.55

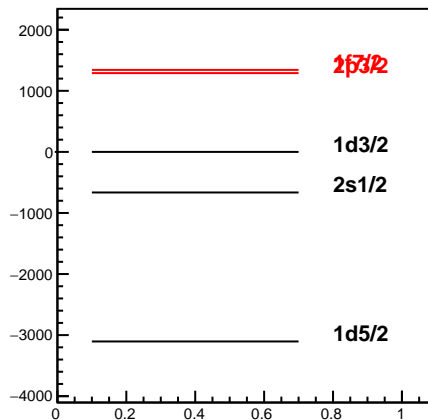
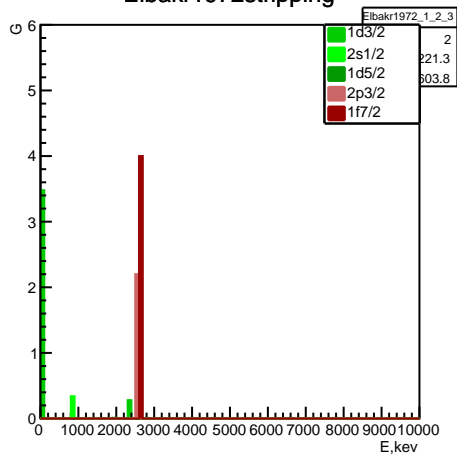
We92pickup



Penalty function components



Elbkr1972stripping



Experiment: We92 (8) Elbkr1972 (6)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -524.978  $\pm$  252.355 keV $\Delta$ : -422.088  $\pm$  576.274 keV

penalty: 0.273604

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-664.476 2s1/2 0.6625 0.665

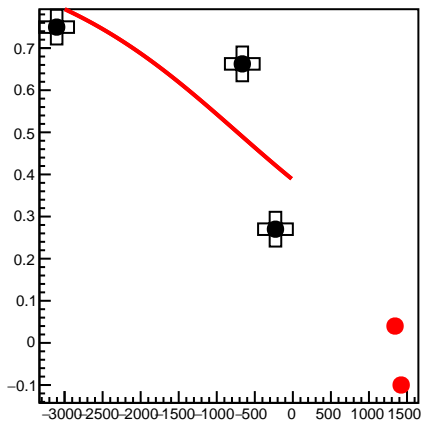
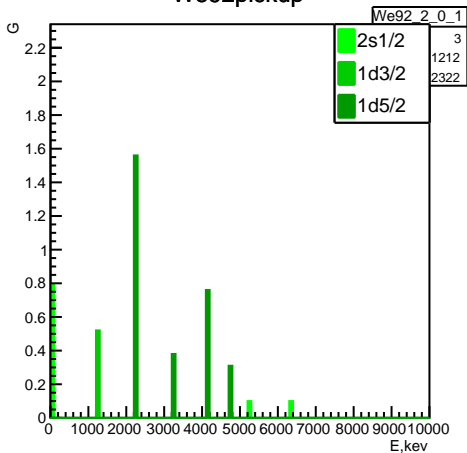
0.0402804 1d3/2 0.095 1.07

-3104.11 1d5/2 0.749833 0.503667

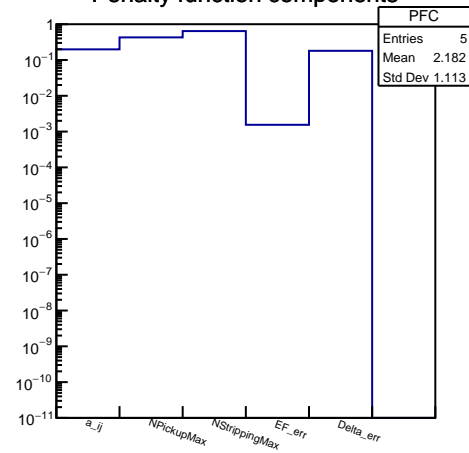
1290.5 2p3/2 0.225 0.55

1342.7 1f7/2 0.25 0.5

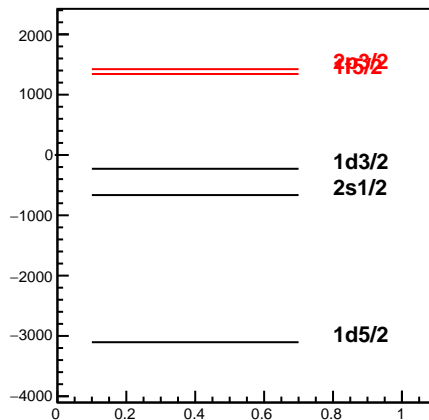
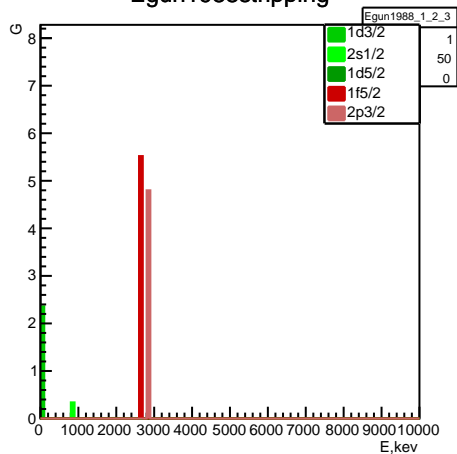
We92pickup



Penalty function components



Egun1988stripping



Experiment: We92 (8) Egun1988 (5)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -727.951 ± 998.174 keV

Δ: 3148.37 ± 4104.38 keV

penalty: 0.290376

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-664.476 2s1/2 0.6625 0.665

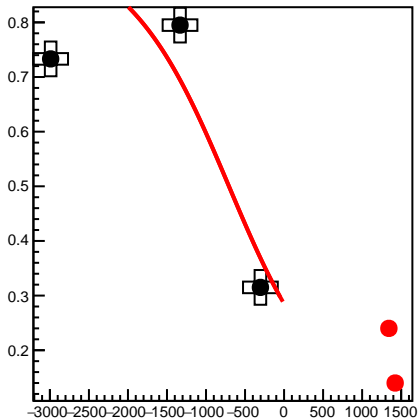
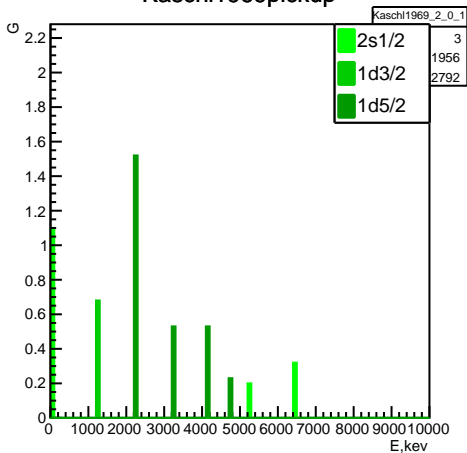
-228.607 1d3/2 0.27 0.72

-3104.11 1d5/2 0.749833 0.503667

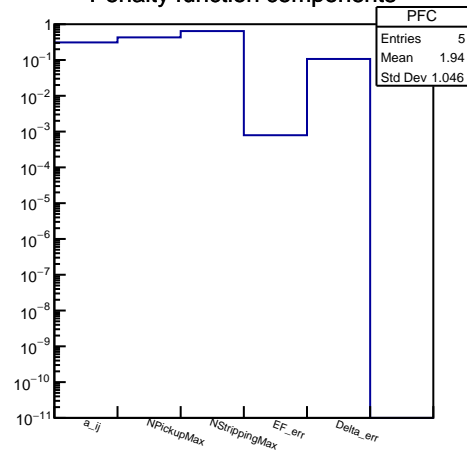
1342.7 1f5/2 0.04 0.92

1423.15 2p3/2 -0.1 1.2

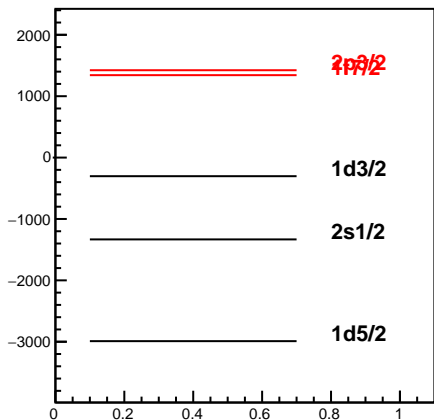
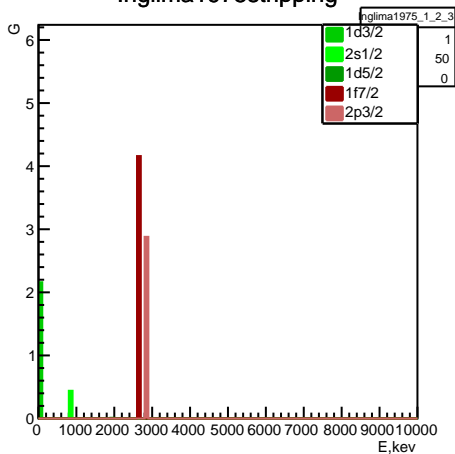
Kaschl1969pickup



Penalty function components



Inglima1975stripping



Experiment: Kaschl1969 (8) Inglima1975 (5)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -706.057 ± 510.85 keV

Δ: 1481.5 ± 2428.59 keV

penalty: 0.297807

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-1332.97 2s1/2 0.795 1.03

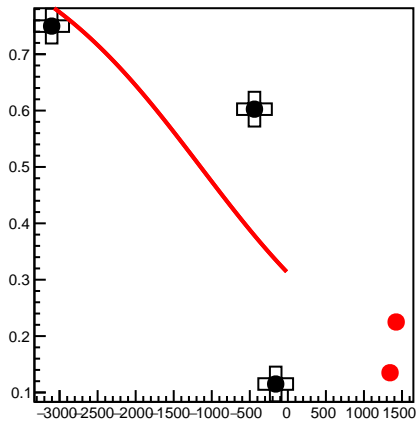
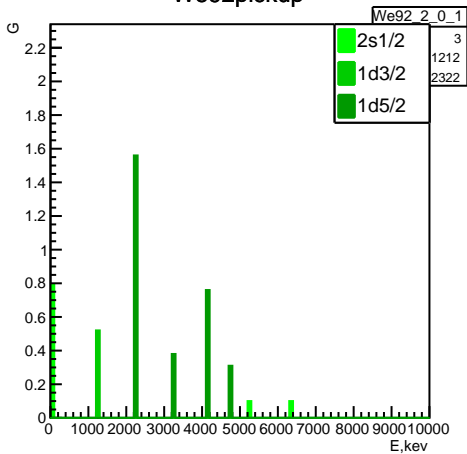
-303.158 1d3/2 0.315 0.71

-2990.41 1d5/2 0.733167 0.470333

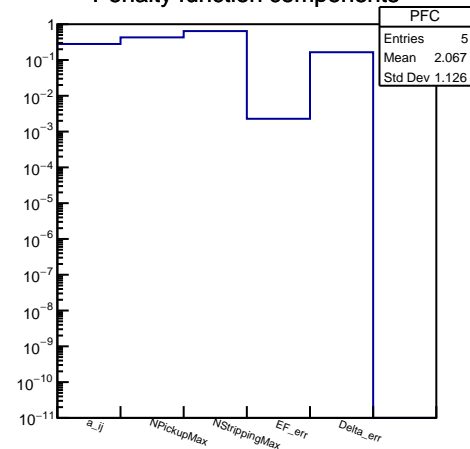
1342.7 1f7/2 0.24 0.52

1423.15 2p3/2 0.14 0.72

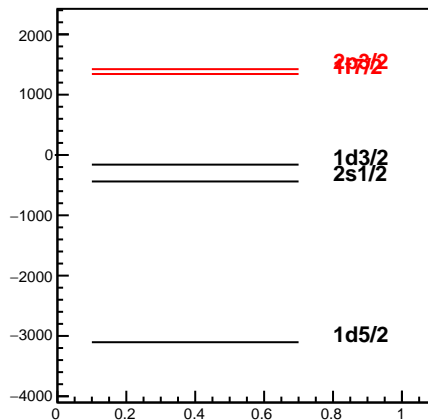
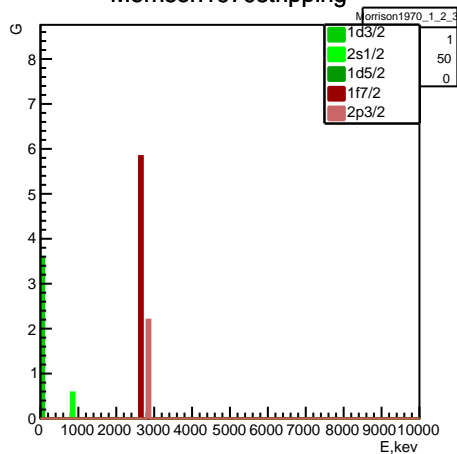
We92pickup



Penalty function components



Morrison1970stripping



Experiment: We92 (8) Morrison1970 (5)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

 $E_F$ : -1146.38  $\pm$  1470.56 keV $\Delta$ : 2822.36  $\pm$  3747.25 keV

penalty: 0.303779

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-438.994 2s1/2 0.6025 0.785

-159.803 1d3/2 0.115 1.03

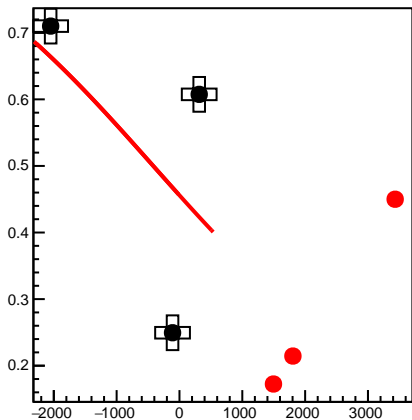
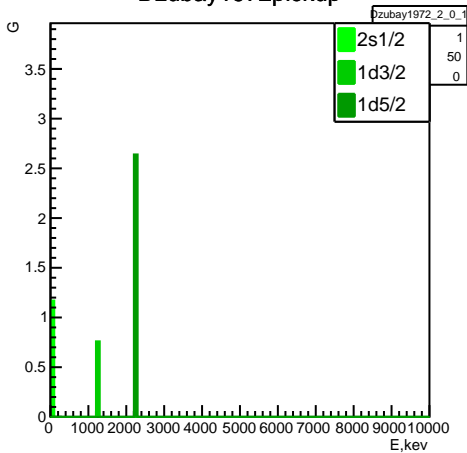
-3104.11 1d5/2 0.749833 0.503667

1342.7 1f7/2 0.135 0.73

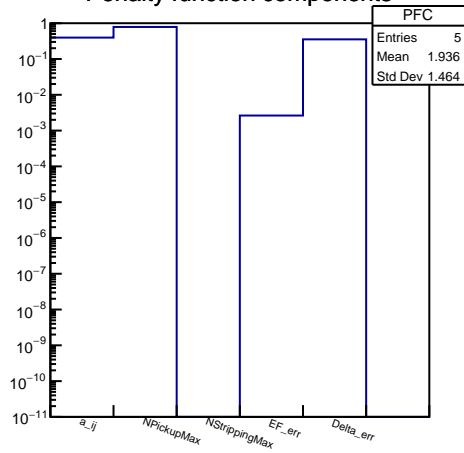
1423.15 2p3/2 0.225 0.55



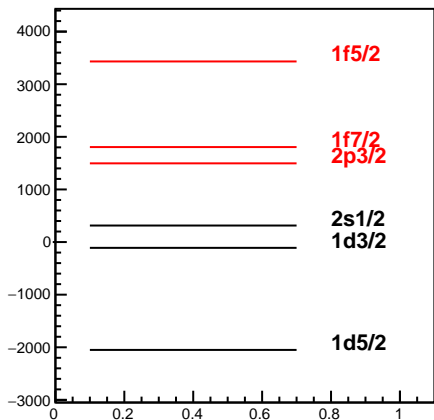
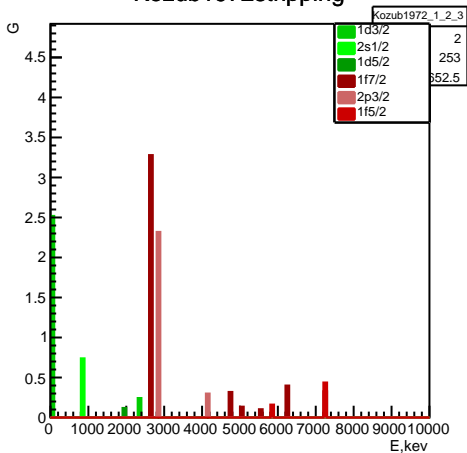
Dzubay1972pickup



Penalty function components



Kozub1972stripping



Experiment: Dzubay1972 (3) Kozub1972 (14)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -416.993 ± 1699.41 keV

Δ: 4708.42 ± 8038.82 keV

penalty: 0.307695

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

314.035 2s1/2 0.6075 0.955

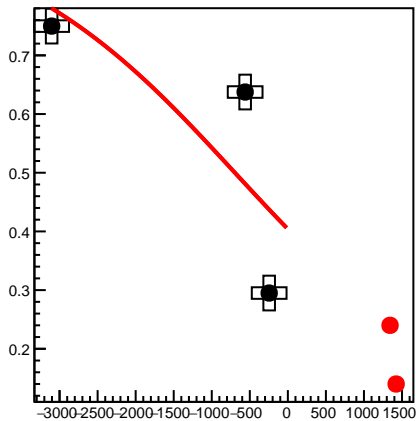
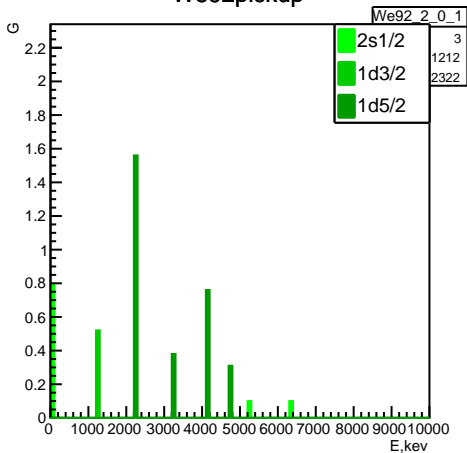
-110.207 1d3/2 0.2495 0.881

-2050.13 1d5/2 0.71 0.46

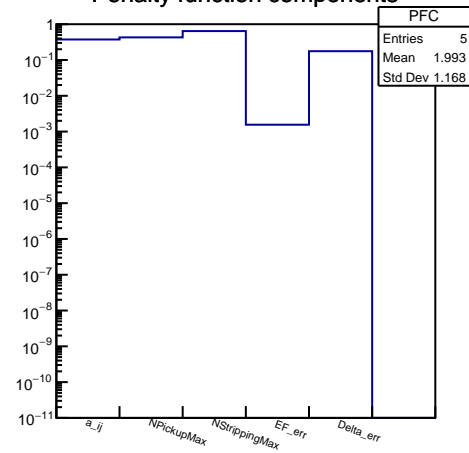
1805.3 1f7/2 0.2145 0.571

1495.93 2p3/2 0.1725 0.655

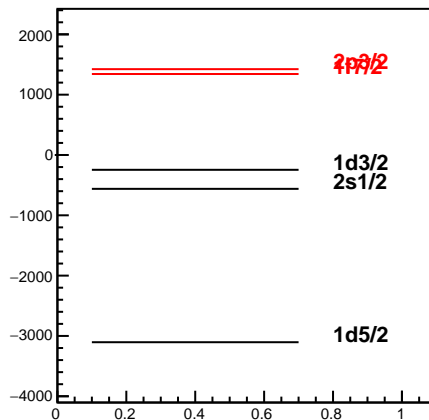
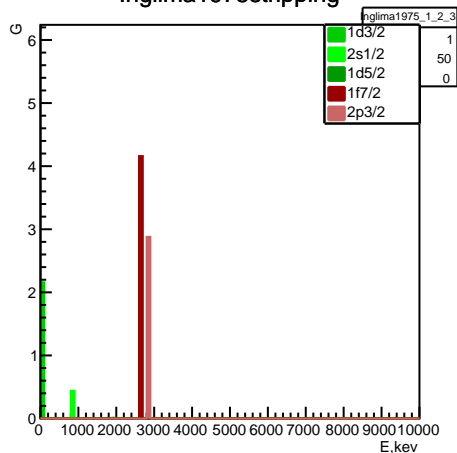
We92pickup



Penalty function components



Inglima1975stripping



Experiment: We92 (8) Inglima1975 (5)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -695.849 ± 1004.35 keV

Δ: 3558.34 ± 4005.59 keV

penalty: 0.324708

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-561.327 2s1/2 0.6375 0.715

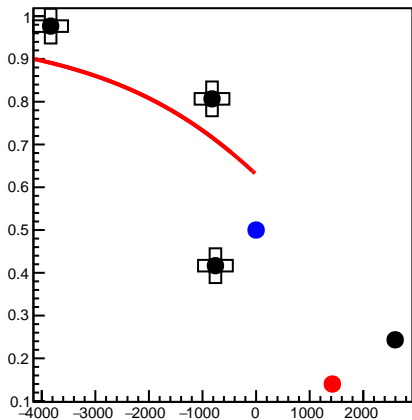
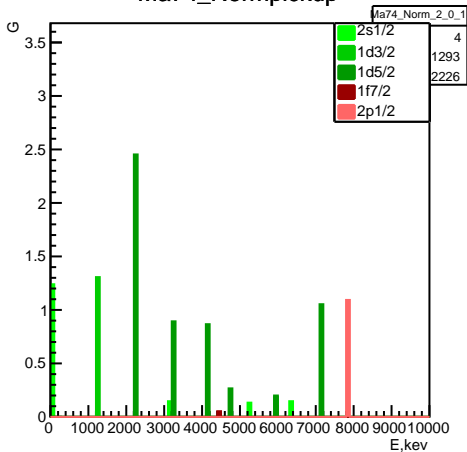
-245.667 1d3/2 0.295 0.67

-3104.11 1d5/2 0.749833 0.503667

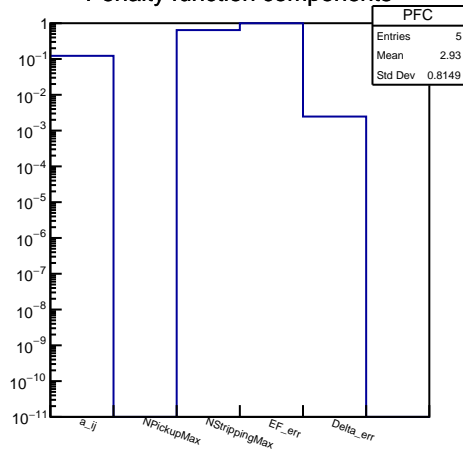
1342.7 1f7/2 0.24 0.52

1423.15 2p3/2 0.14 0.72

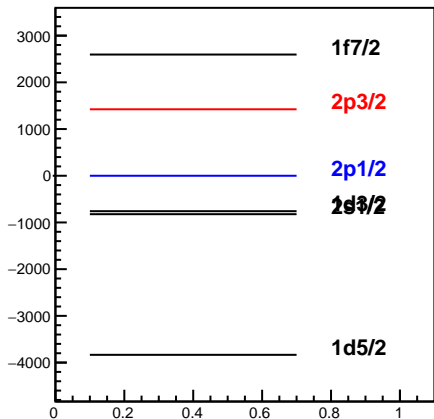
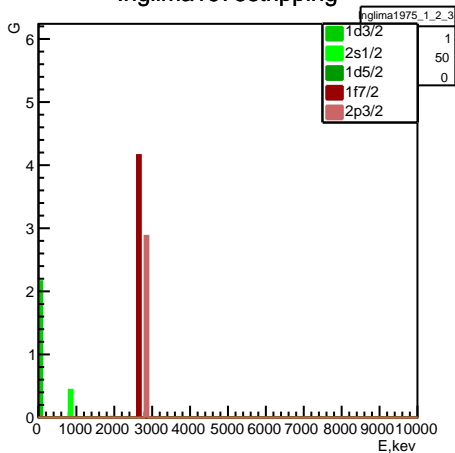
Ma74\_Normpickup



Penalty function components



Inglima1975stripping



Experiment: Ma74\_Norm (14) Inglima1975 (5)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: 1049.91  $\pm$  645443 keV $\Delta$ : 3895.34  $\pm$  56.0256 keV

penalty: 0.353591

SPE,kev nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

-822.783 2s1/2 0.806667 1.05333

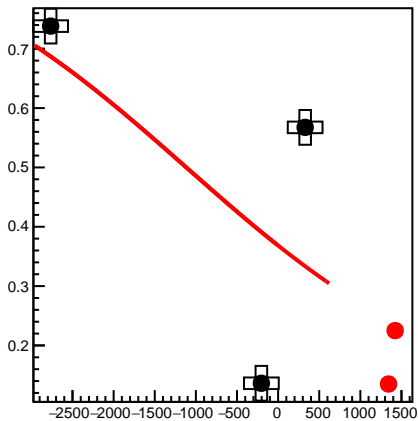
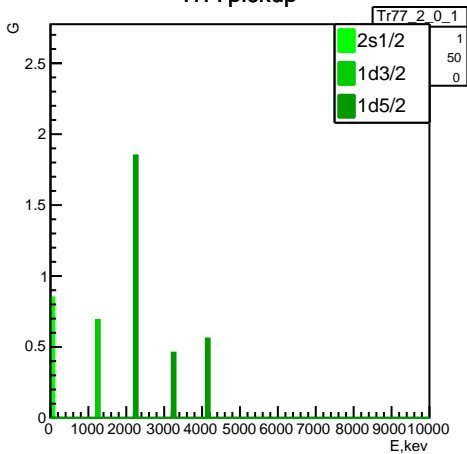
-758.801 1d3/2 0.416667 0.913333

-3834.23 1d5/2 0.976778 0.957556

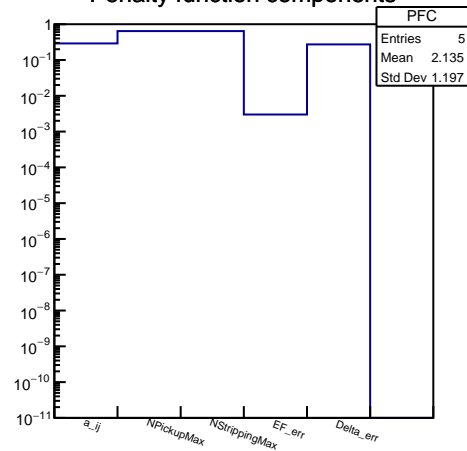
2595.32 1f7/2 0.243333 0.526667

8.31855e-13 2p1/2 0.5 1.09333

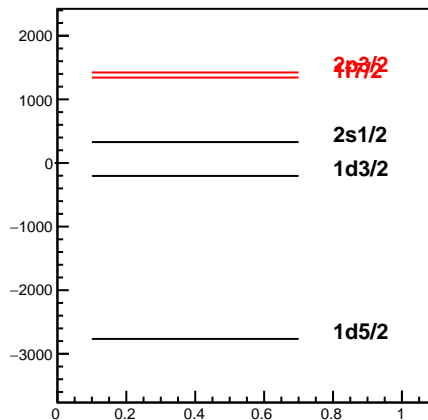
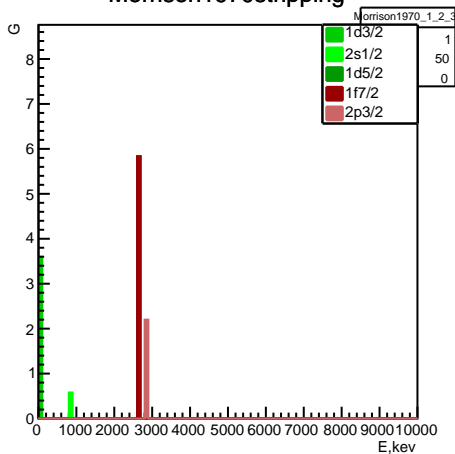
Tr77pickup



Penalty function components



Morrison1970stripping



Experiment: Tr77 (5) Morrison1970 (5)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

 $E_F: -1116.48 \pm 1935.82 \text{ keV}$  $\Delta: 4091.32 \pm 6197.26 \text{ keV}$ 

penalty: 0.370379

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

328.755 2s1/2 0.5675 0.715

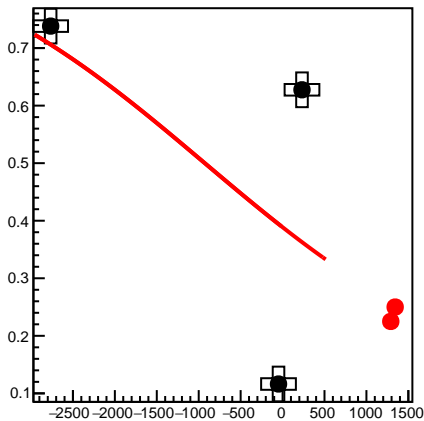
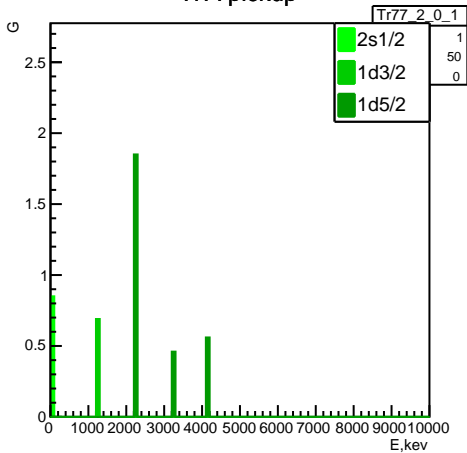
-203.643 1d3/2 0.13625 1.0725

-2765.76 1d5/2 0.738167 0.480333

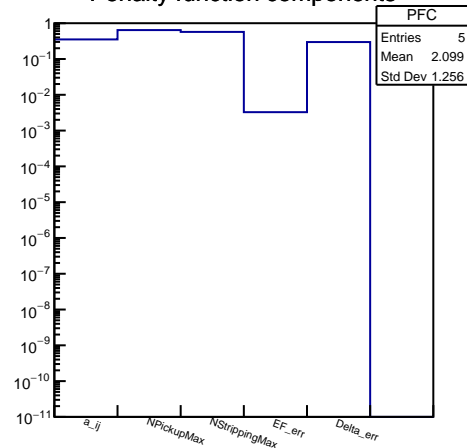
1342.7 1f7/2 0.135 0.73

1423.15 2p3/2 0.225 0.55

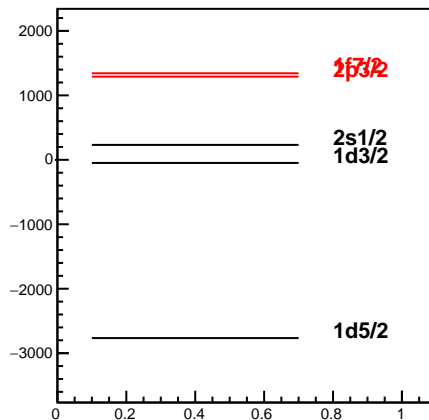
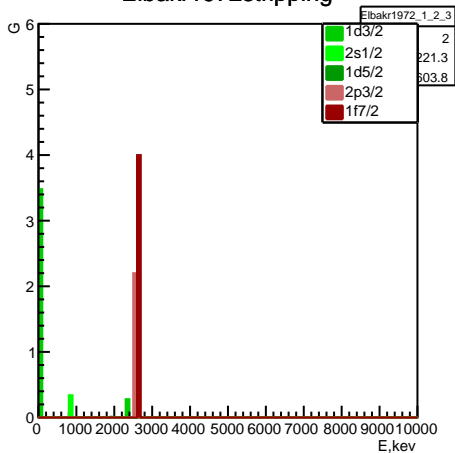
Tr77pickup



Penalty function components



Elbakra1972stripping



Experiment: Tr77 (5) Elbakra1972 (6)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -927.43 ± 2111.13 keV

Δ: 4062.89 ± 6761.37 keV

penalty: 0.373513

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

231.586 2s1/2 0.6275 0.595

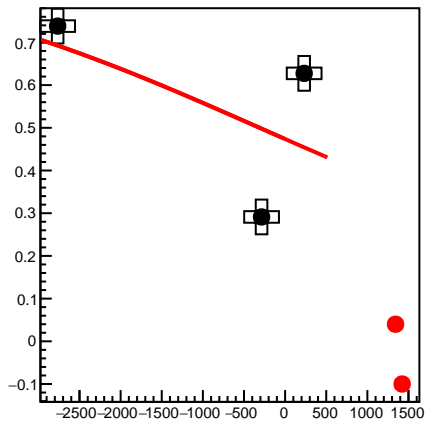
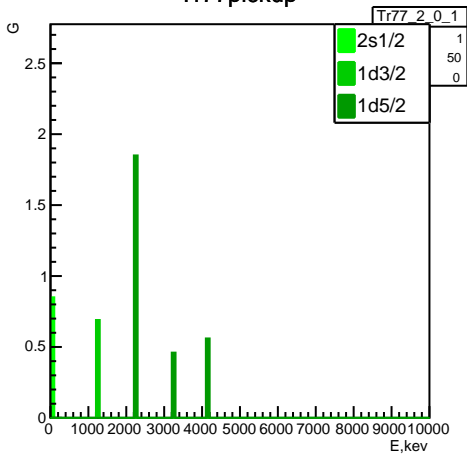
-48.3303 1d3/2 0.11625 1.1125

-2765.76 1d5/2 0.738167 0.480333

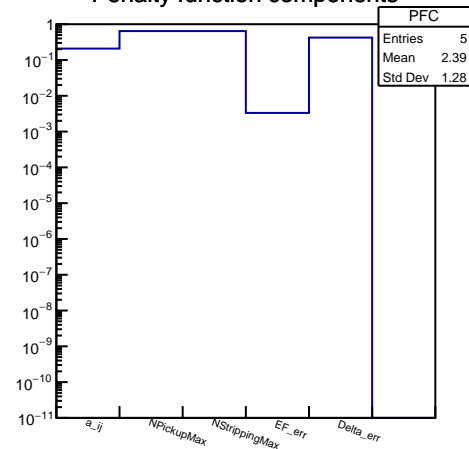
1290.5 2p3/2 0.225 0.55

1342.7 1f7/2 0.25 0.5

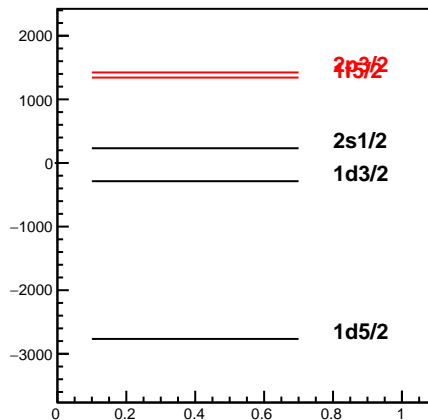
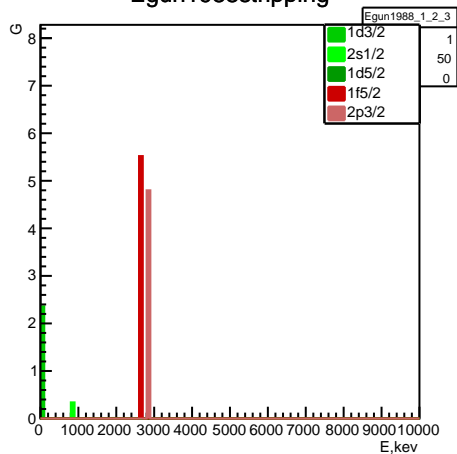
Tr77pickup



Penalty function components



Egun1988stripping



Experiment: Tr77 (5) Egun1988 (5)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

 $E_F$ : -309.666  $\pm$  2143.99 keV $\Delta$ : 5882.48  $\pm$  9610.4 keV

penalty: 0.384086

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

231.586 2s1/2 0.6275 0.595

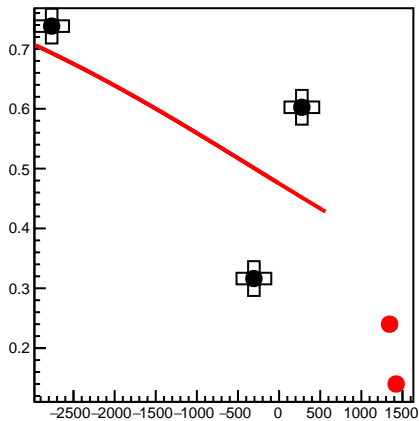
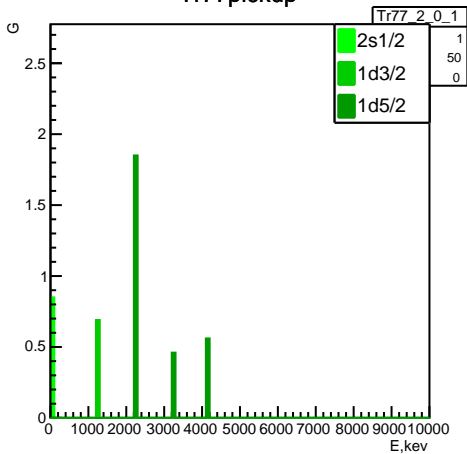
-286.436 1d3/2 0.29125 0.7625

-2765.76 1d5/2 0.738167 0.480333

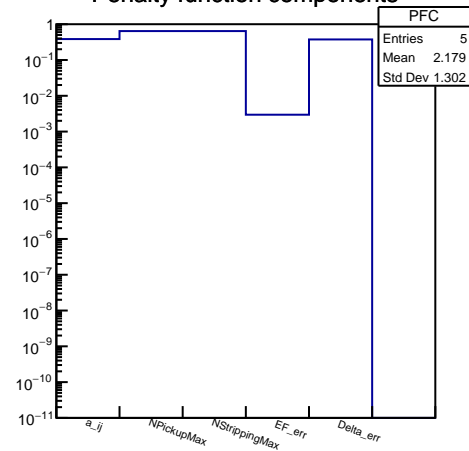
1342.7 1f5/2 0.04 0.92

1423.15 2p3/2 -0.1 1.2

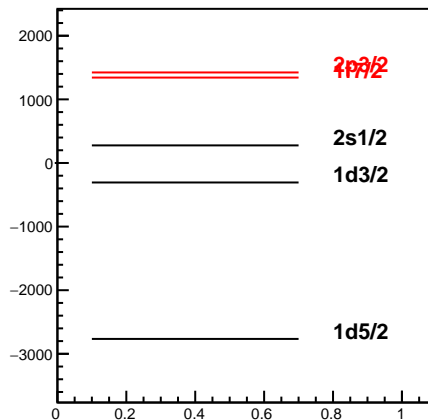
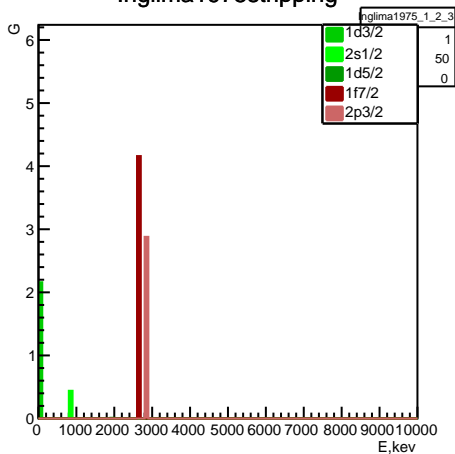
Tr77pickup



Penalty function components



Inglima1975stripping



Experiment: Tr77 (5) Inglima1975 (5)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

 $E_F: -294.905 \pm 1911.33 \text{ keV}$  $\Delta: 5900.22 \pm 8528.16 \text{ keV}$ 

penalty: 0.409688

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$ 

276.467 2s1/2 0.6025 0.645

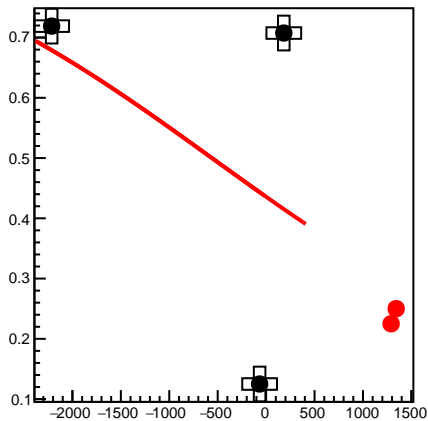
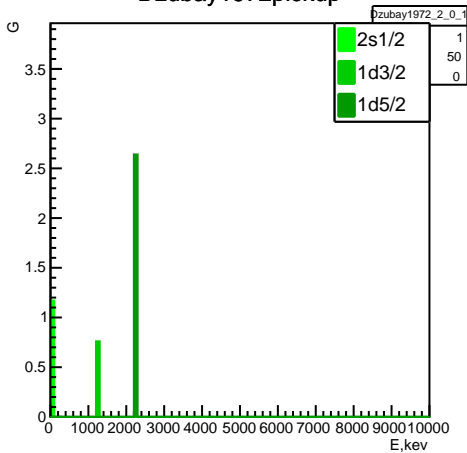
-306.537 1d3/2 0.31625 0.7125

-2765.76 1d5/2 0.738167 0.480333

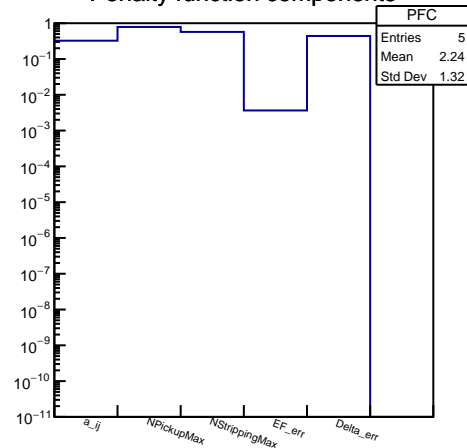
1342.7 1f7/2 0.24 0.52

1423.15 2p3/2 0.14 0.72

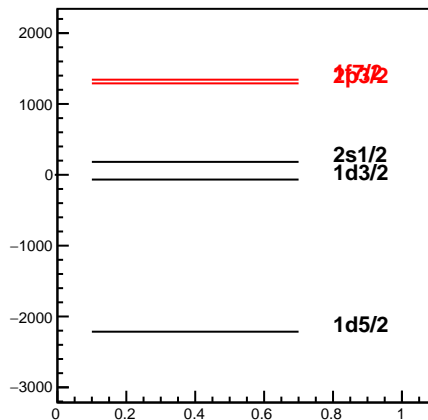
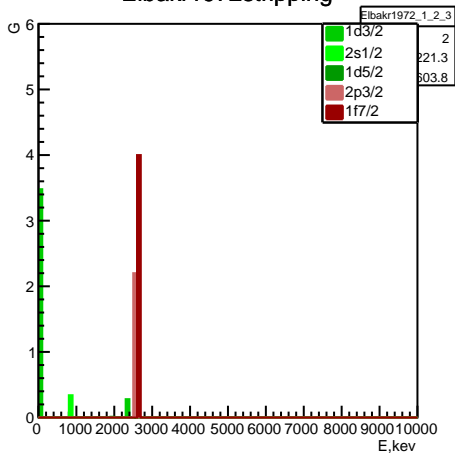
Dzubay1972pickup



Penalty function components



Elbakr1972stripping



Experiment: Dzubay1972 (3) Elbakr1972 (6)  
proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: -559.305 ± 2356.09 keV

Δ: 4315.68 ± 9989.81 keV

penalty: 0.42501

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$

182.508 2s1/2 0.7075 0.755

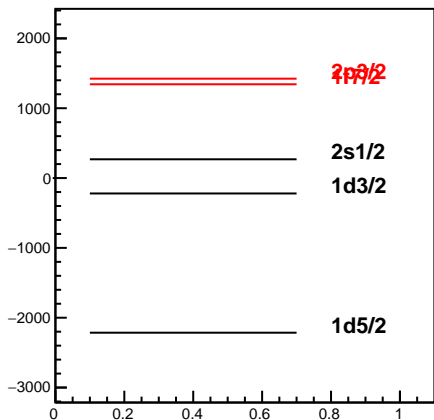
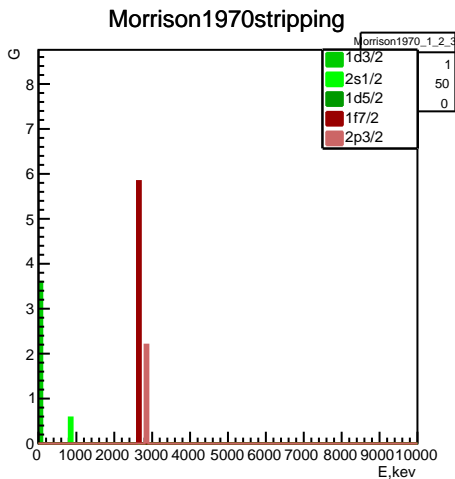
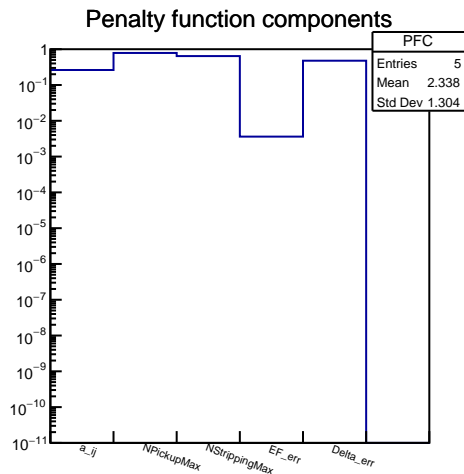
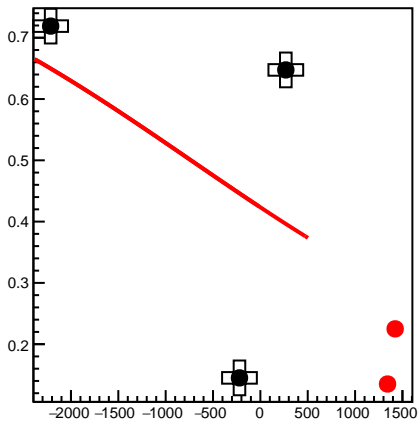
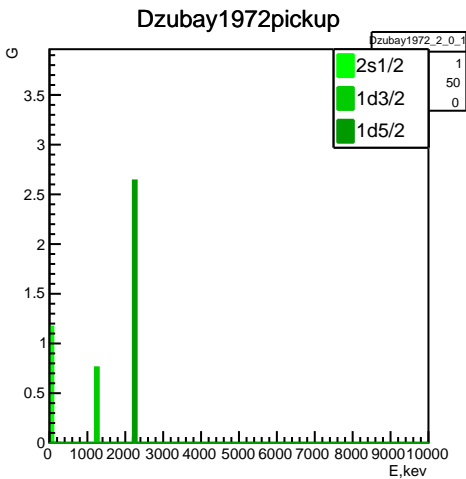
-67.19 1d3/2 0.125 1.13

-2214.51 1d5/2 0.719 0.442

1290.5 2p3/2 0.225 0.55

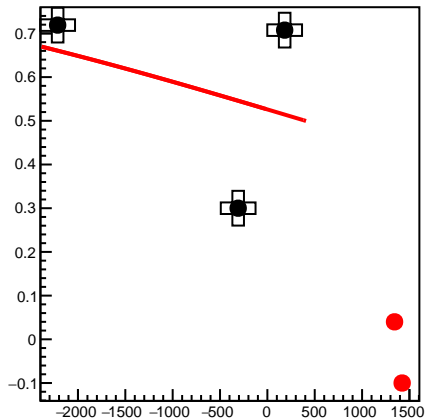
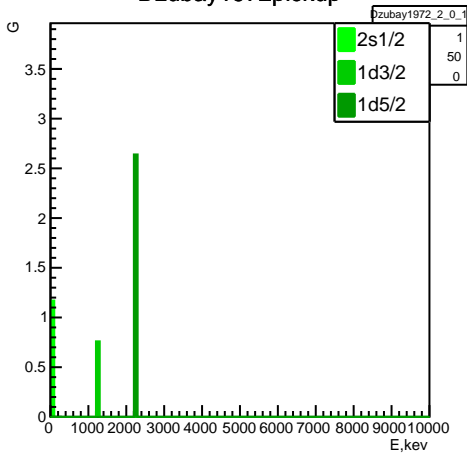
1342.7 1f7/2 0.25 0.5



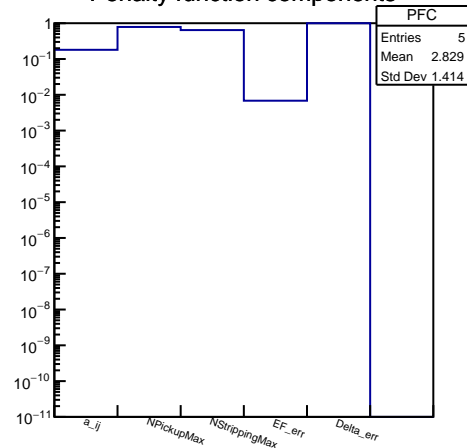


Experiment: Dzubay1972 (3) Morrison1970 (3)  
 proton transfer  
 p separation energy A:0, A+1: -8.88178e-13  
 E\_F: -732.397 ± 2331.81 keV  
 Δ: 4720.48 ± 10845.7 keV  
 penalty: 0.434422  
 SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$   
 268.639 2s1/2 0.6475 0.875  
 -220.702 1d3/2 0.145 1.09  
 -2214.51 1d5/2 0.719 0.442  
 1342.7 1f7/2 0.135 0.73  
 1423.15 2p3/2 0.225 0.55

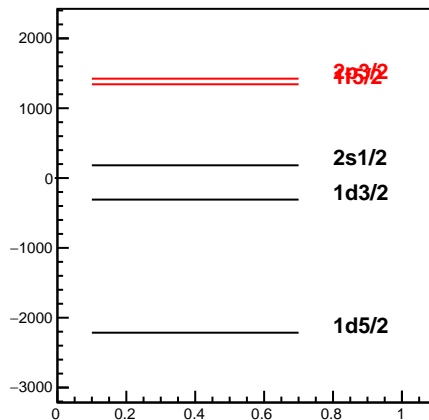
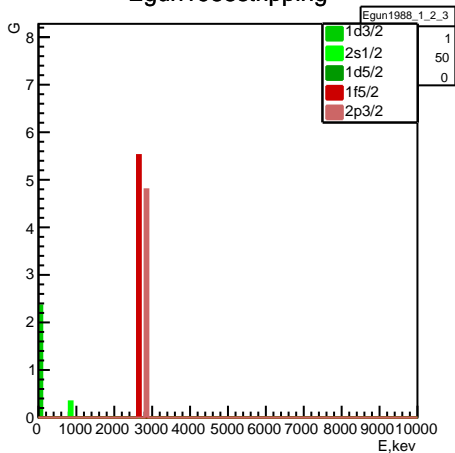
Dzubay1972pickup



Penalty function components



Egun1988stripping



Experiment: Dzubay1972 (3) Egun1988 (5)  
proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: 402.804 ± 4411.69 keV

Δ: 7724.61 ± 22721.7 keV

penalty: 0.523201

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$

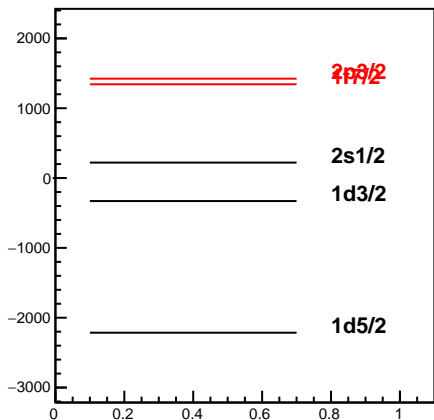
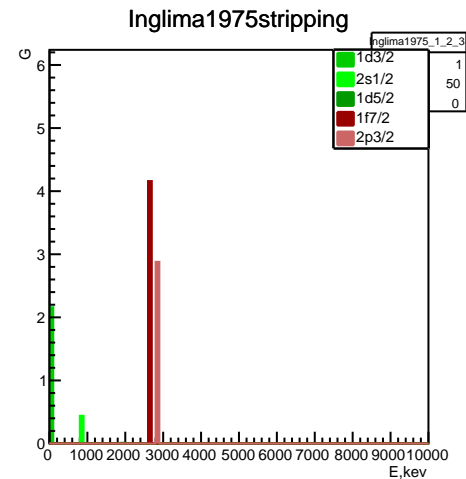
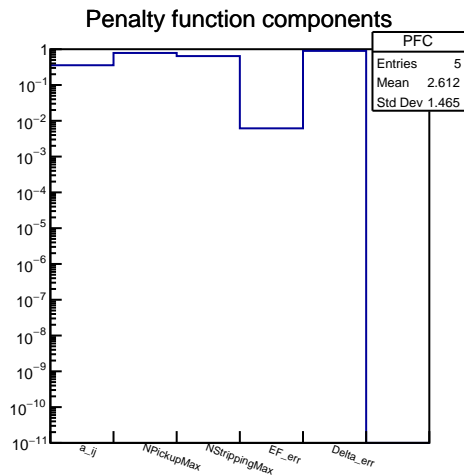
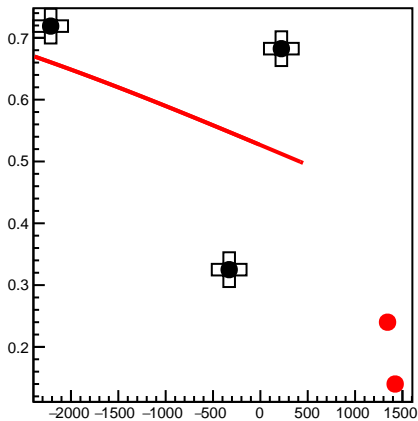
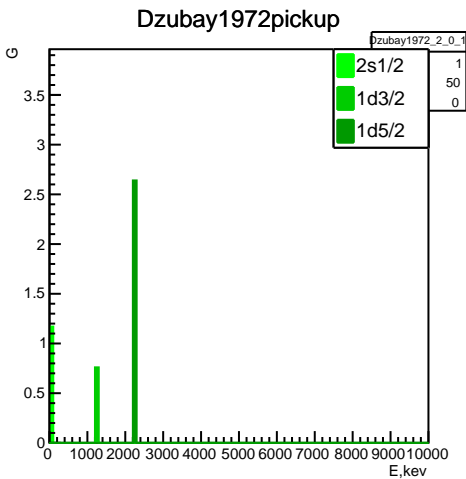
182.508 2s1/2 0.7075 0.755

-308.416 1d3/2 0.3 0.78

-2214.51 1d5/2 0.719 0.442

1342.7 1f5/2 0.04 0.92

1423.15 2p3/2 -0.1 1.2



Experiment: Dzubay1972 (3) Inglima1975 (5)

proton transfer

p separation energy A:0, A+1: -8.88178e-13

E\_F: 413.507 ± 3971.14 keV

Δ: 7750.88 ± 20383.4 keV

penalty: 0.537682

SPE,keV nlj OCC  $\frac{G^+ + G^-}{2J+1}$

221.517 2s1/2 0.6825 0.805

-329.541 1d3/2 0.325 0.73

-2214.51 1d5/2 0.719 0.442

1342.7 1f7/2 0.24 0.52

1423.15 2p3/2 0.14 0.72