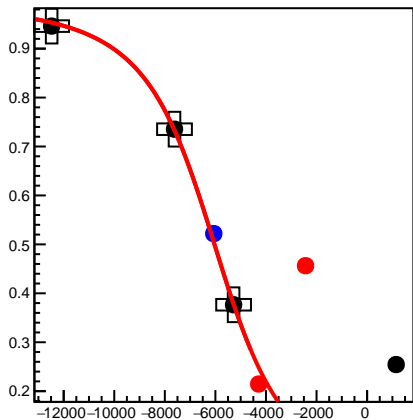
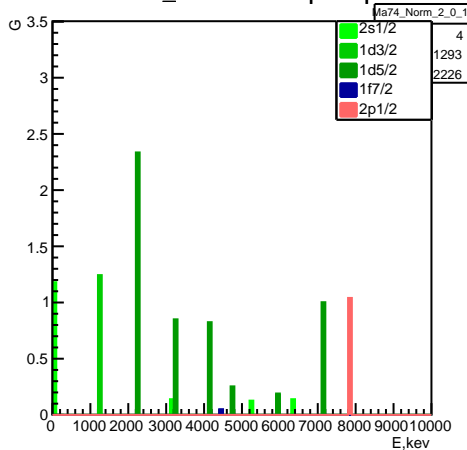
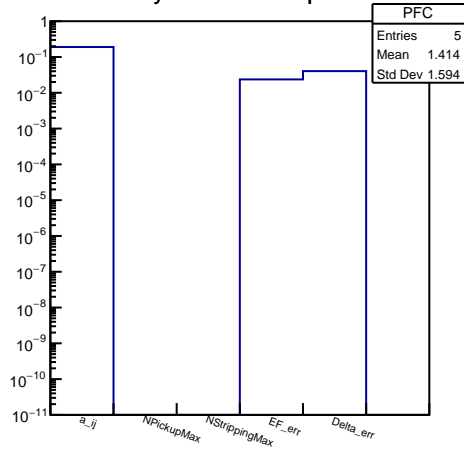


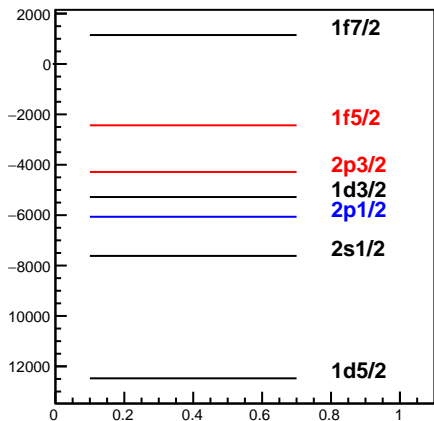
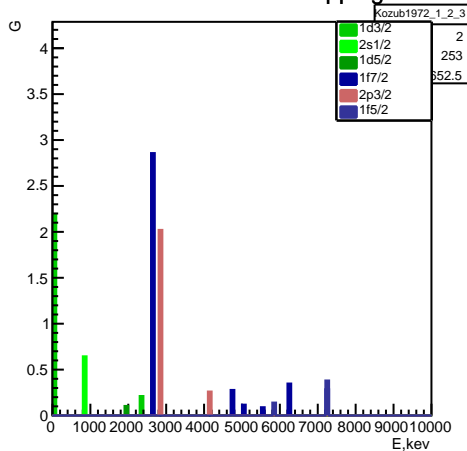
Ma74_Norm norm. pickup



Penalty function components



Kozub1972 norm. stripping



Experiment: Ma74_Norm (14) Kozub1972 (14)
proton transfer_norm

$$n^+ = 0.871347 \pm 0 \quad n^- = 0.951833 \pm 0$$

penalty: 0.0595668

E_F: -6036.11 \pm 40.0498 keV

Δ : 3001.91 \pm 101.061 keV

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

-7617.3 2s1/2 0.735398 1.11559

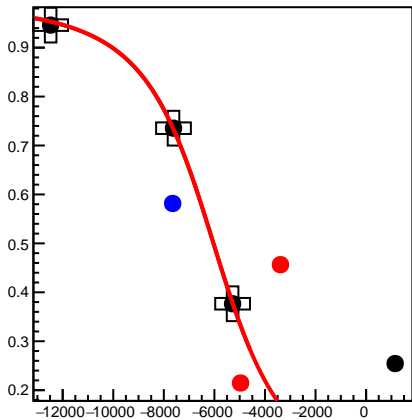
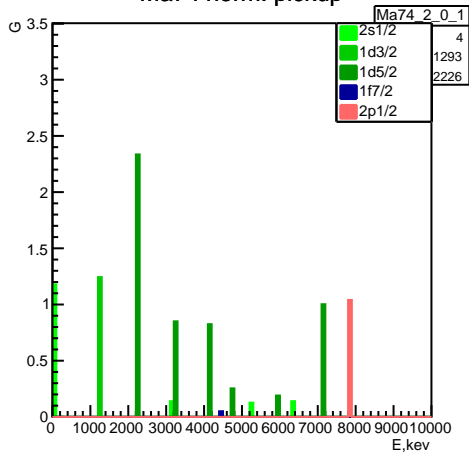
-5280.12 1d3/2 0.376625 0.957452

-12476.1 1d5/2 0.946051 0.926956

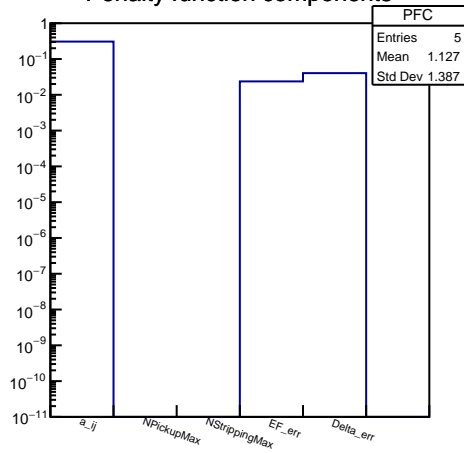
1148.89 1f7/2 0.254403 0.503885

-6064.28 2p1/2 0.522 0.996672

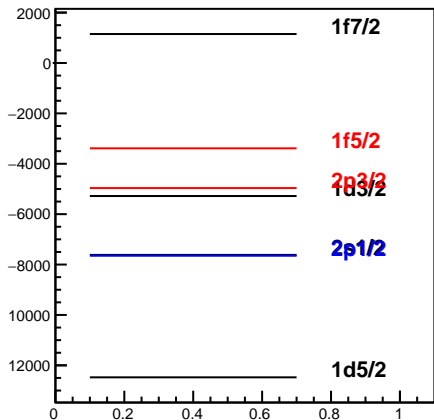
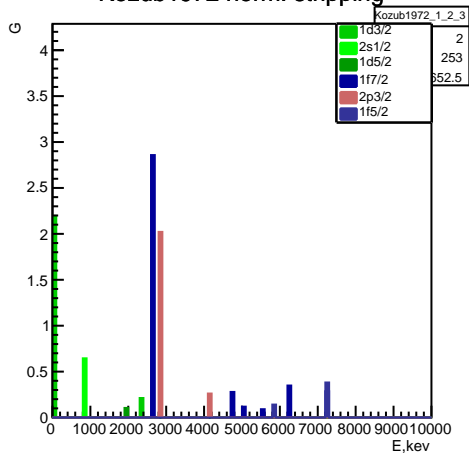
Ma74 norm. pickup



Penalty function components



Kozub1972 norm. stripping



Experiment: Ma74 (14) Kozub1972 (14)

proton transfer_norm

 $n^+ = 0.871347 \pm 0$ $n^- = 1.26911 \pm 0$

penalty: 0.107968

 $E_F: -6036.11 \pm 40.0498$ keV $\Delta: 3001.91 \pm 101.061$ keVSPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-7617.3 2s1/2 0.735398 1.11559

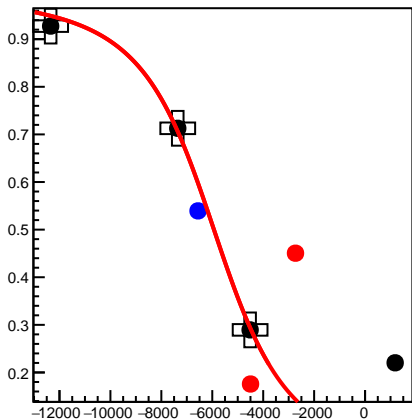
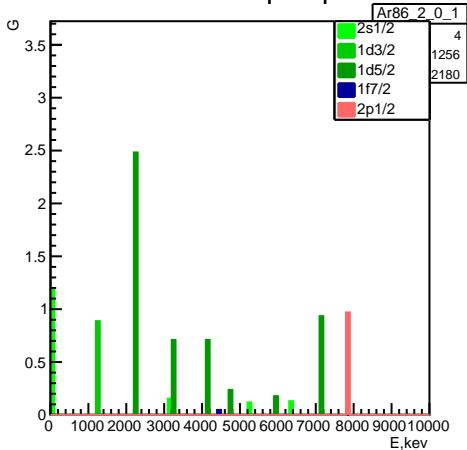
-5280.12 1d3/2 0.376625 0.957452

-12476.1 1d5/2 0.946051 0.926956

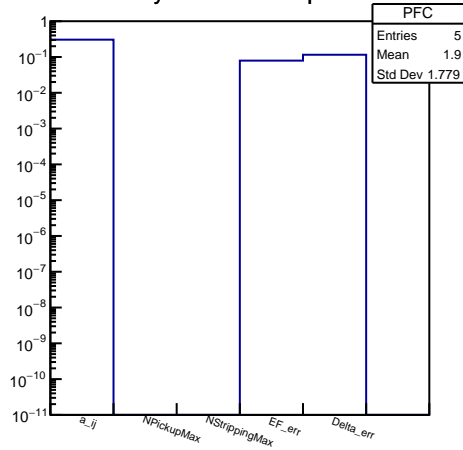
1148.89 1f7/2 0.254403 0.503885

-7649.57 2p1/2 0.581542 0.877587

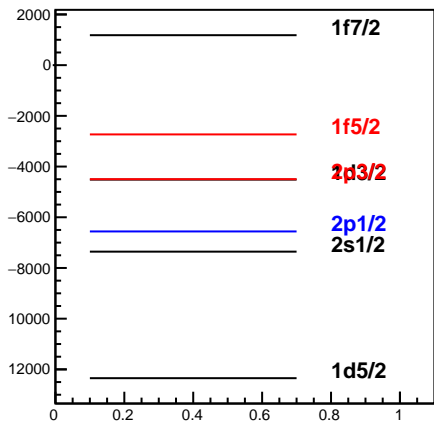
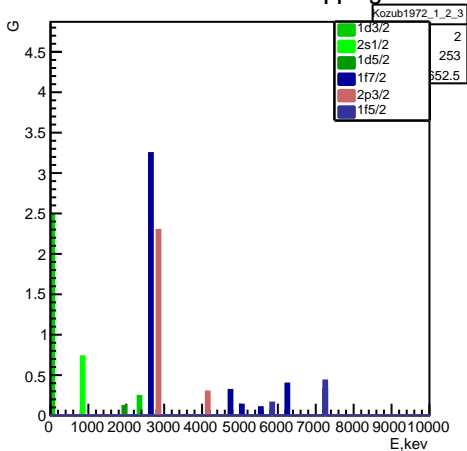
Ar86 norm. pickup



Penalty function components



Kozub1972 norm. stripping



Experiment: Ar86 (14) Kozub1972 (14)

proton transfer_norm

 $n^+ = 0.990101 \pm 0$ $n^- = 1.18205 \pm 0$

penalty: 0.128945

 $E_F: -5934.5 \pm 134.039$ keV $\Delta: 3141.94 \pm 289.814$ keVSPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-7355.77 2s1/2 0.712819 1.15831

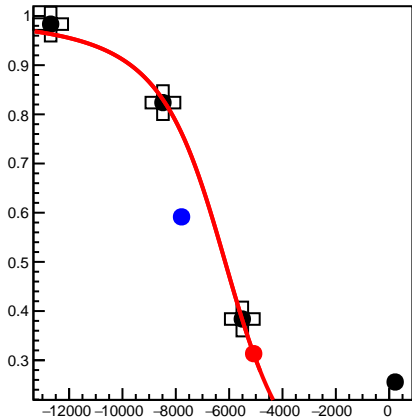
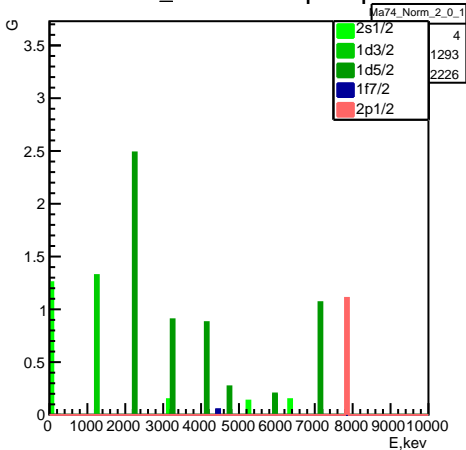
-4514.04 1d3/2 0.289423 0.947167

-12347 1d5/2 0.927458 0.894521

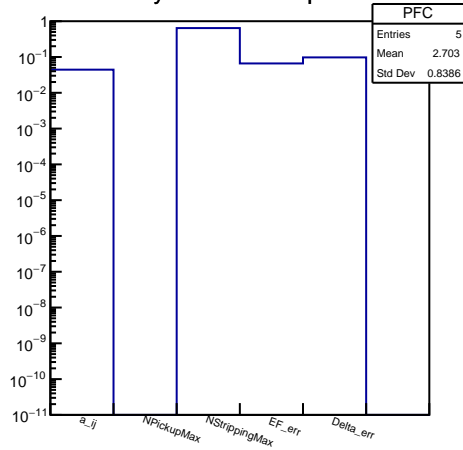
1181.76 1f7/2 0.220281 0.571258

-6559.08 2p1/2 0.53935 0.890583

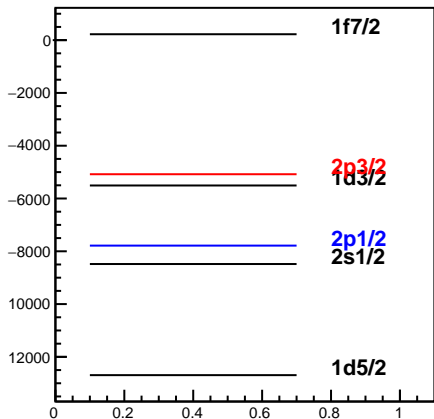
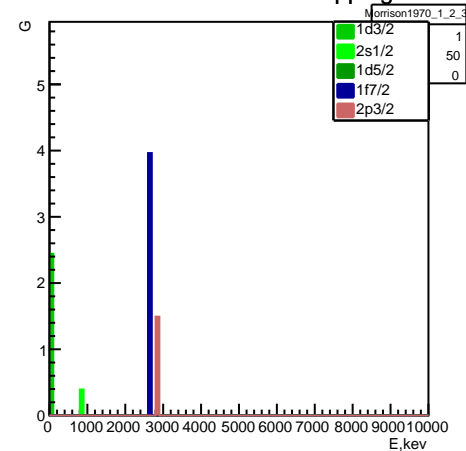
Ma74_Norm norm. pickup



Penalty function components



Morrison1970 norm. stripping



Experiment: Ma74_Norm (14) Morrison1970
proton transfer_norm

$n^+ = 0.678537 \pm 0$ $n^- = 1.01339 \pm 0$

penalty: 0.19917

$E_F: -6150.59 \pm 111.819$ keV

$\Delta: -2654.99 \pm 244.415$ keV

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

-8482.47 2s1/2 0.82386 1.04127

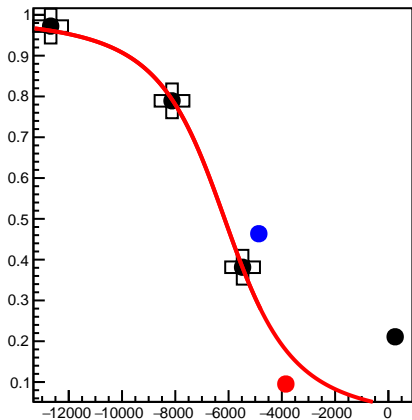
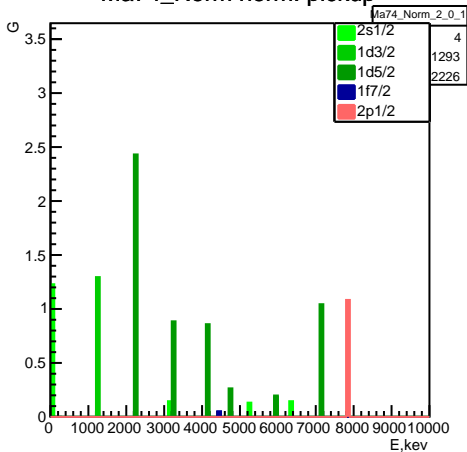
-5506.87 1d3/2 0.383825 0.989017

-12692.2 1d5/2 0.983499 0.969712

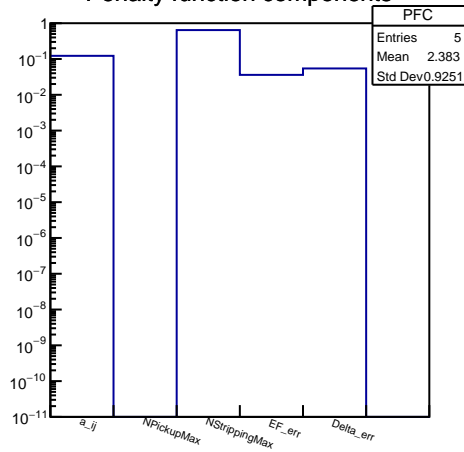
223.523 1f7/2 0.255712 0.502088

-7784.77 2p1/2 0.591528 0.924922

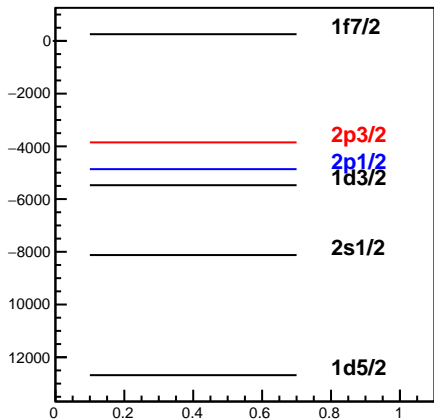
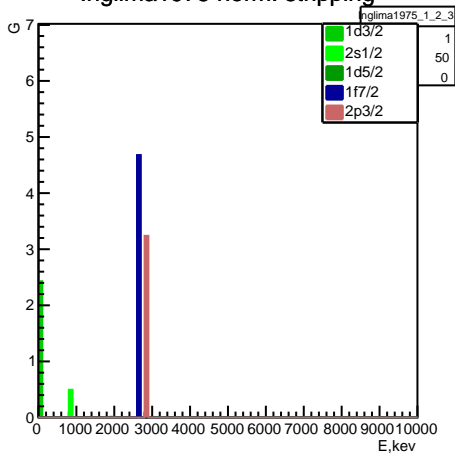
Ma74_Norm norm. pickup



Penalty function components



Inglima1975 norm. stripping



Experiment: Ma74_Norm (14) Inglima1975 (5)

proton transfer_norm

 $n^+ = 1.12459 \pm 0$ $n^- = 0.991139 \pm 0$

penalty: 0.204202

 $E_F: -6149.15 \pm 60.9357$ keV $\Delta: -2735.92 \pm 136.492$ keVSPE,kev nlj OCC $\frac{G^+ + G^-}{2J+1}$

-8123.27 2s1/2 0.78927 1.07336

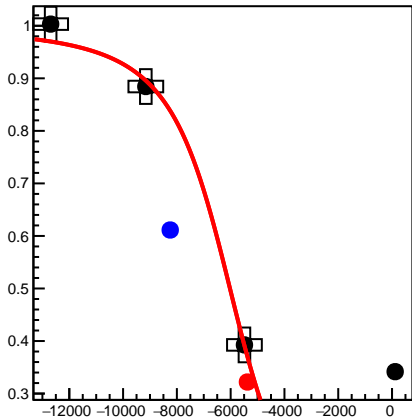
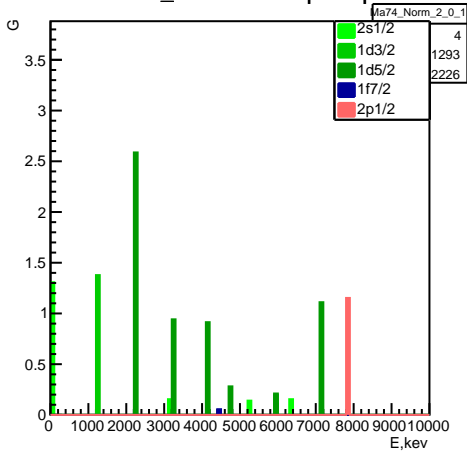
-5473.8 1d3/2 0.381373 0.977304

-12680.2 1d5/2 0.972419 0.949337

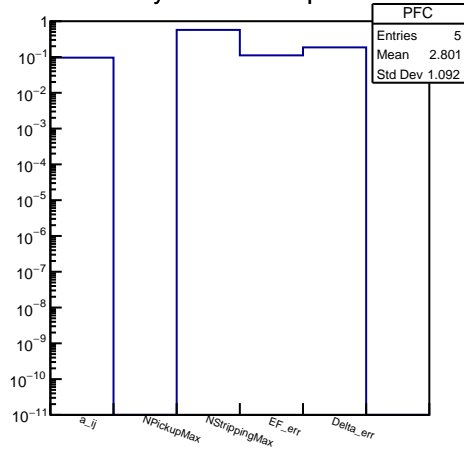
254.803 1f7/2 0.21091 0.591395

-4864.59 2p1/2 0.463523 1.1566

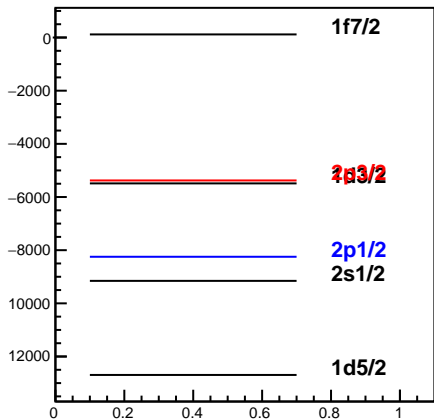
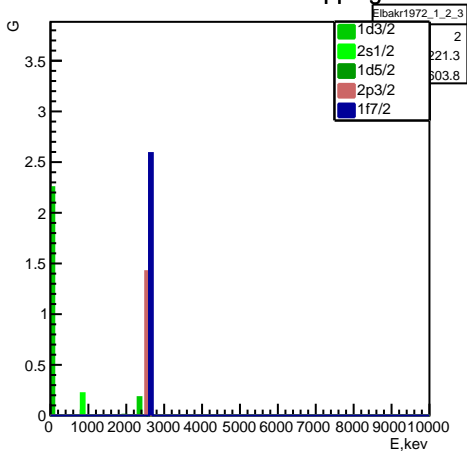
Ma74_Norm norm. pickup



Penalty function components



Elbakt1972 norm. stripping



Experiment: Ma74_Norm (14) Elbakt1972 (6)

proton transfer_norm

 $n^+ = 0.647307 \pm 0$ $n^- = 1.05456 \pm 0$

penalty: 0.222091

 $E_F: -6025.98 \pm 188.062$ keV $\Delta: 2417.4 \pm 465.507$ keV
$$\text{SPE, keV nlj OCC } \frac{G^+ + G^-}{2J+1}$$

-9154.52 2s1/2 0.884379 0.988843

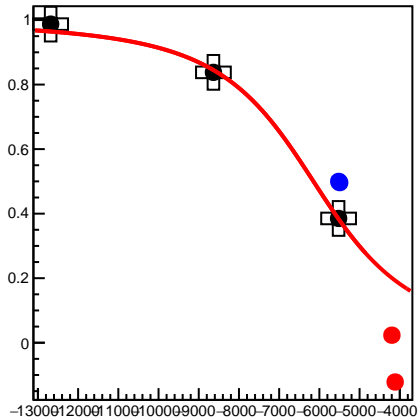
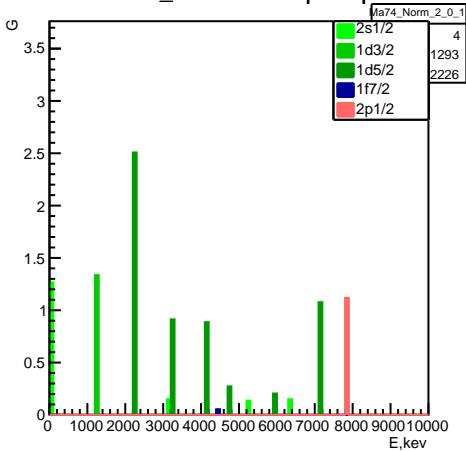
-5487.6 1d3/2 0.392617 1.00217

-12693.6 1d5/2 1.0032 1.00899

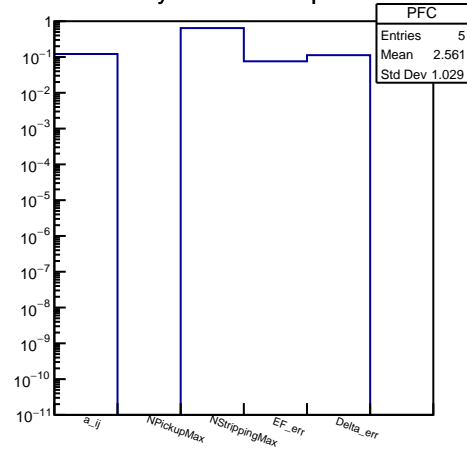
116.584 1f7/2 0.341688 0.330684

-8247.8 2p1/2 0.611316 0.930354

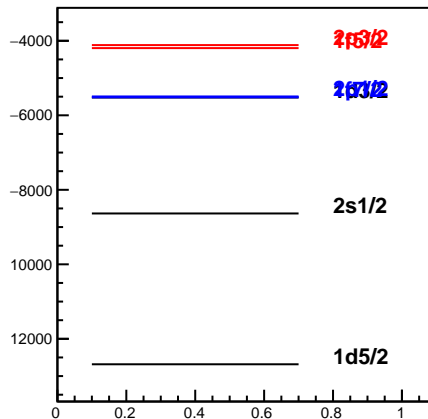
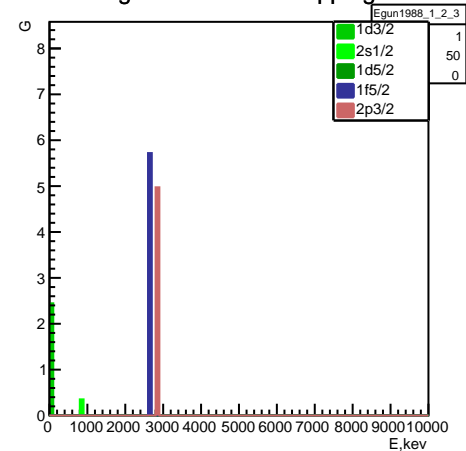
Ma74_Norm norm. pickup



Penalty function components



Egun1988 norm. stripping



Experiment: Ma74_Norm (14) Egun1988 (5)

proton transfer_norm

 $n^+ = 1.03625 \pm 0$ $n^- = 1.02227 \pm 0$

penalty: 0.223805

 $E_F: -6147.35 \pm 128.25$ keV $\Delta: 2609.59 \pm 282.218$ keVSPE,kev nlj OCC $\frac{G^+ + G^-}{2J+1}$

-8634.89 2s1/2 0.837865 1.02806

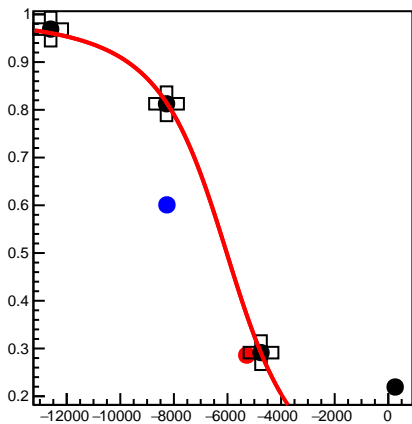
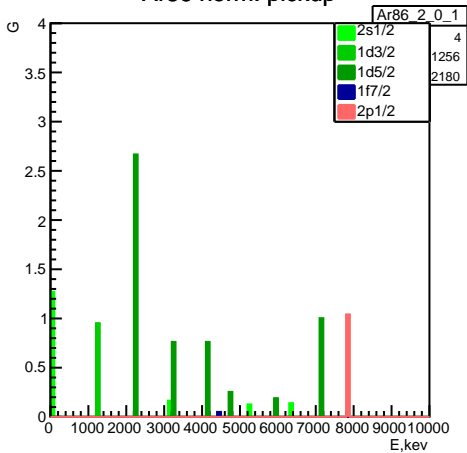
-5521.97 1d3/2 0.38513 0.993036

-12683.3 1d5/2 0.987382 0.978909

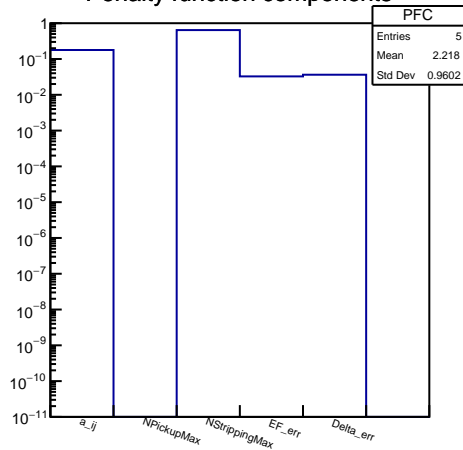
-5517.88 1f7/2 0.499953 0.0137235

-5494.35 2p1/2 0.496179 1.12533

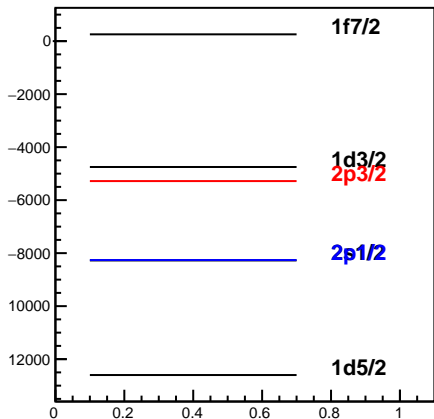
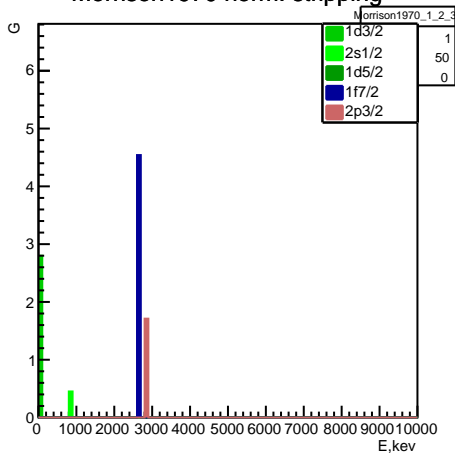
Ar86 norm. pickup



Penalty function components



Morrison1970 norm. stripping



Experiment: Ar86 (14) Morrison1970 (5)

proton transfer_norm

 $n^+ = 0.777624 \pm 0$ $n^- = 1.26988 \pm 0$

penalty: 0.226621

 $E_F: -6027.65 \pm 55.275$ keV $\Delta: -2770.66 \pm 91.1842$ keVSPE, keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-8275.17 2s1/2 0.812653 1.07633

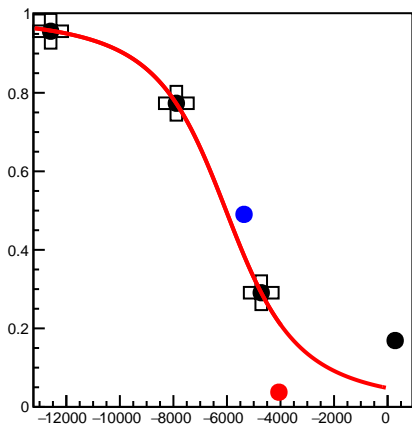
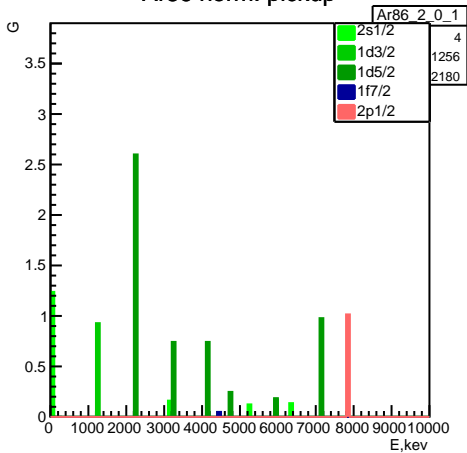
-4749.35 1d3/2 0.291343 0.982409

-12599.6 1d5/2 0.969076 0.941263

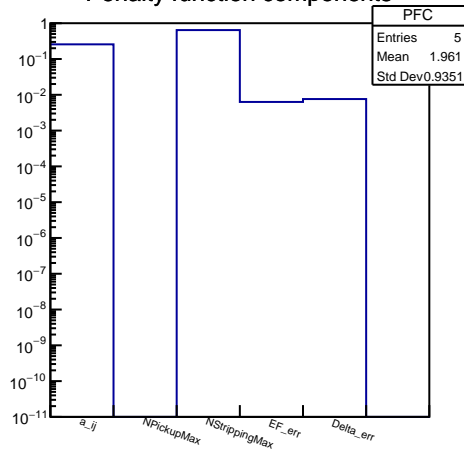
256.332 1f7/2 0.219342 0.574015

-8260.31 2p1/2 0.600911 0.839475

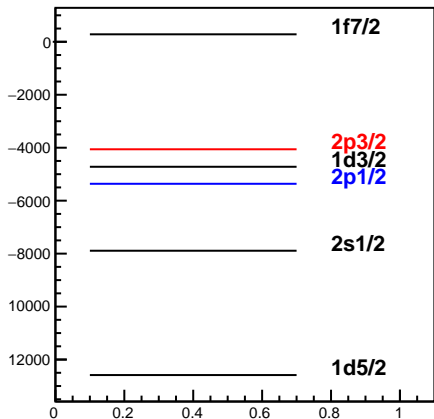
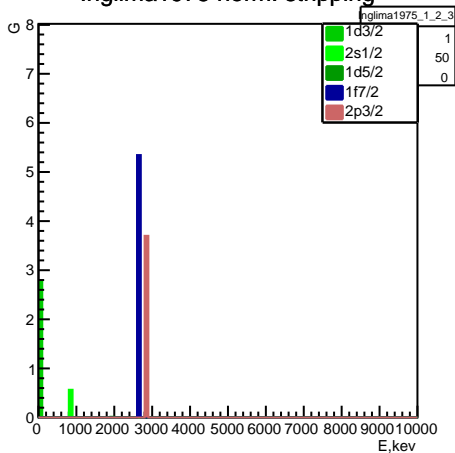
Ar86 norm. pickup



Penalty function components



Inglima1975 norm. stripping



Experiment: Ar86 (14) Inglima1975 (5)

proton transfer_norm

 $n^+ = 1.28482 \pm 0$ $n^- = 1.23796 \pm 0$

penalty: 0.232115

 $E_F: -6033.93 \pm 10.6797$ keV $\Delta: -2852.76 \pm 19.0646$ keVSPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-7890.61 2s1/2 0.773386 1.11209

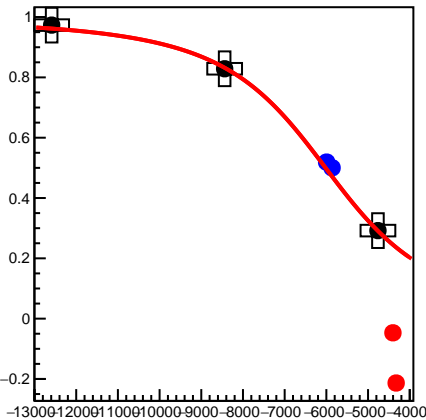
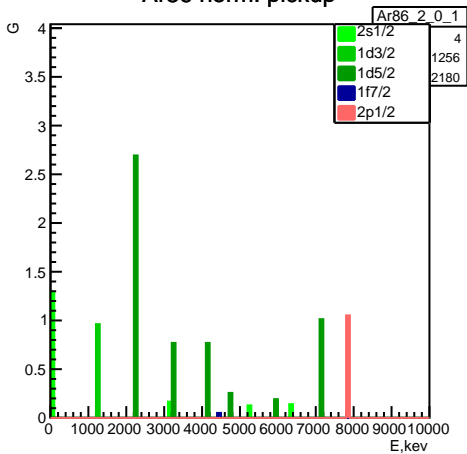
-4719.94 1d3/2 0.290822 0.969248

-12585.5 1d5/2 0.95676 0.918659

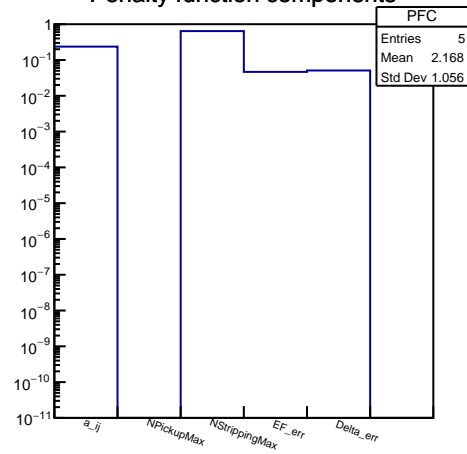
282.115 1f7/2 0.169042 0.674296

-5362.51 2p1/2 0.490394 1.03434

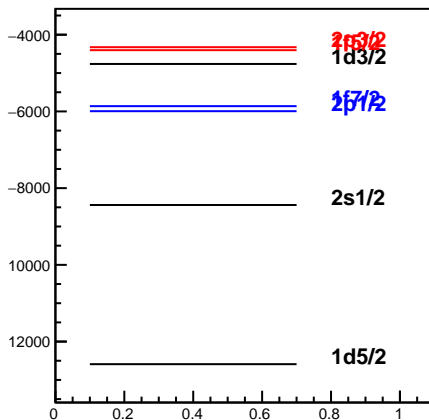
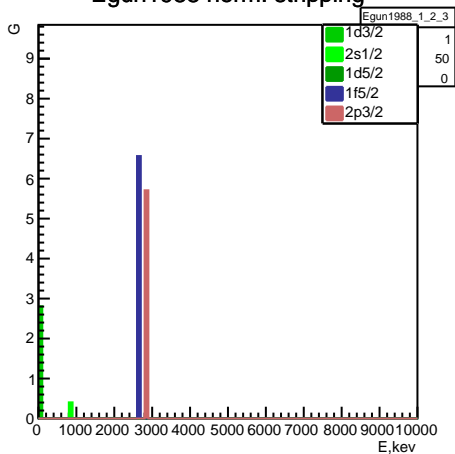
Ar86 norm. pickup



Penalty function components



Egun1988 norm. stripping



Experiment: Ar86 (14) Egun1988 (5)

proton transfer_norm

 $n^+ = 1.18907 \pm 0$ $n^- = 1.28265 \pm 0$

penalty: 0.243248

 $E_F: -6018.75 \pm 78.7506$ keV $\Delta: 2727.81 \pm 127.662$ keVSPE, keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-8439.6 2s1/2 0.828617 1.06152

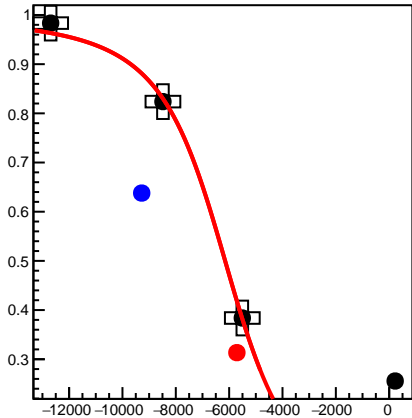
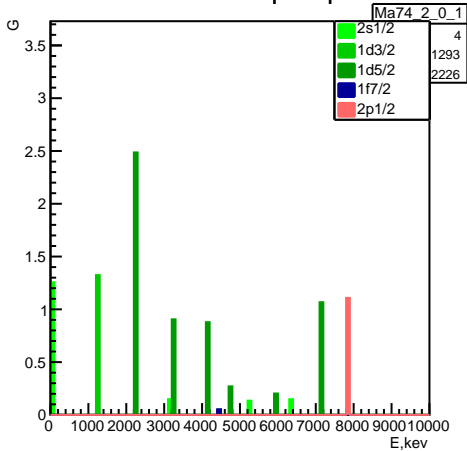
-4762.75 1d3/2 0.291919 0.986942

-12589.1 1d5/2 0.973392 0.95154

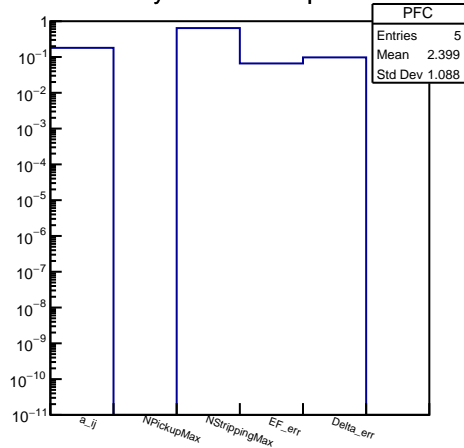
-5862.77 1f7/2 0.500234 0.0123586

-5993.94 2p1/2 0.519184 1.01341

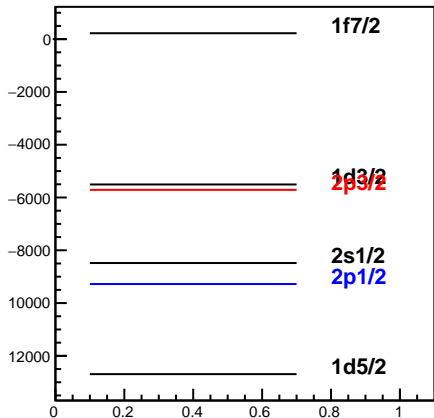
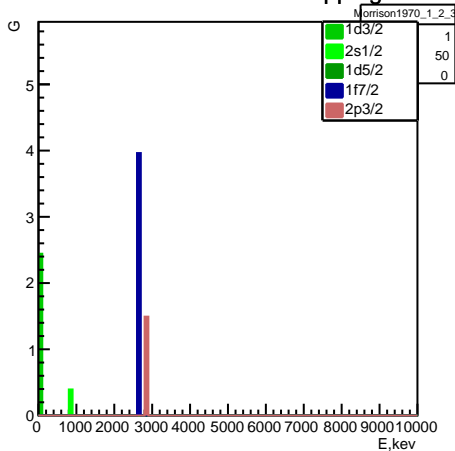
Ma74 norm. pickup



Penalty function components



Morrison1970 norm. stripping



Experiment: Ma74 (14) Morrison1970 (5)

proton transfer_norm

 $n^+ = 0.678537 \pm 0$ $n^- = 1.35119 \pm 0$

penalty: 0.248153

E_F: -6150.59 \pm 111.819 keV Δ : -2655 \pm 244.415 keVSPE, keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-8482.47 2s1/2 0.82386 1.04127

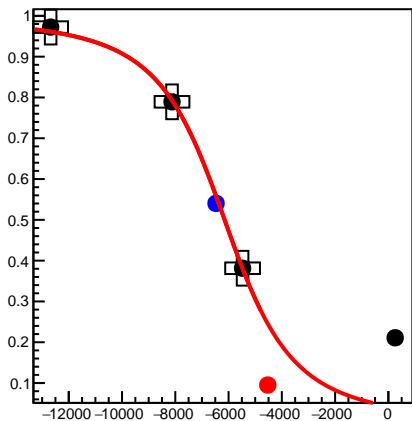
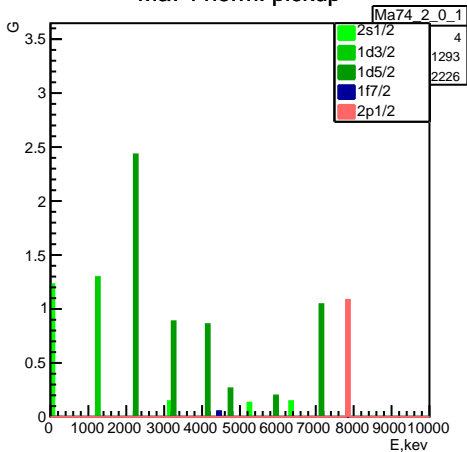
-5506.87 1d3/2 0.383825 0.989017

-12692.2 1d5/2 0.983499 0.969712

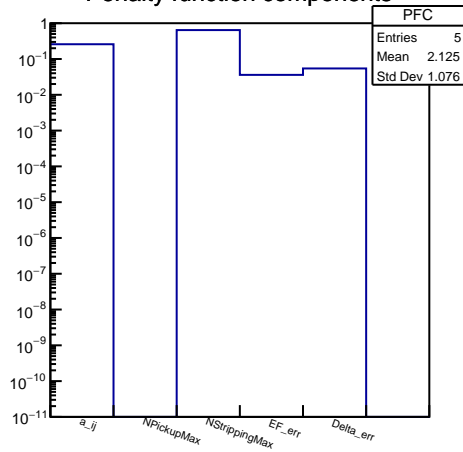
223.523 1f7/2 0.255712 0.502088

-9278.33 2p1/2 0.637895 0.832189

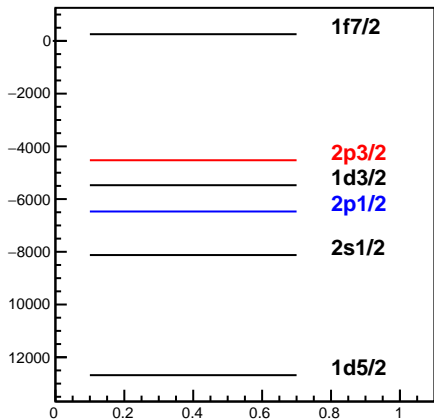
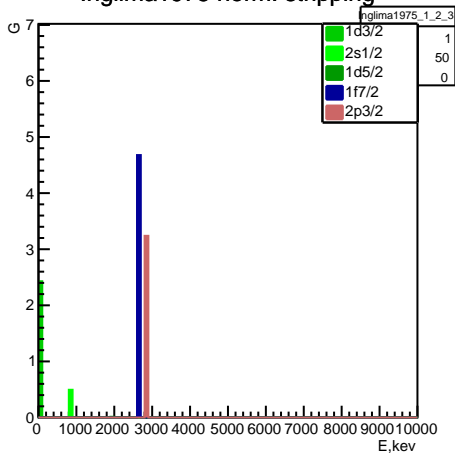
Ma74 norm. pickup



Penalty function components



Inglima1975 norm. stripping



Experiment: Ma74 (14) Inglima1975 (5)

proton transfer_norm

 $n^+ = 1.12459 \pm 0$ $n^- = 1.32152 \pm 0$

penalty: 0.251028

 $E_F: -6149.15 \pm 60.9357$ keV $\Delta: -2735.92 \pm 136.492$ keVSPE, keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-8123.27 2s1/2 0.78927 1.07336

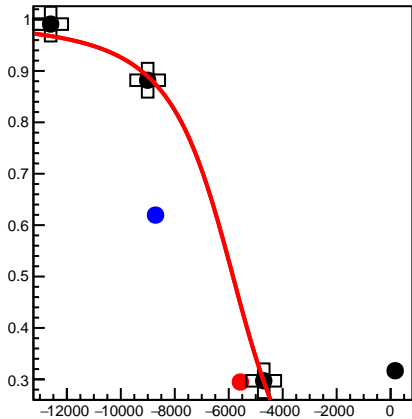
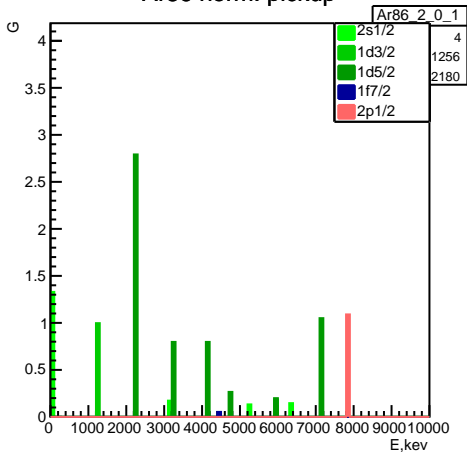
-5473.8 1d3/2 0.381373 0.977304

-12680.2 1d5/2 0.972419 0.949337

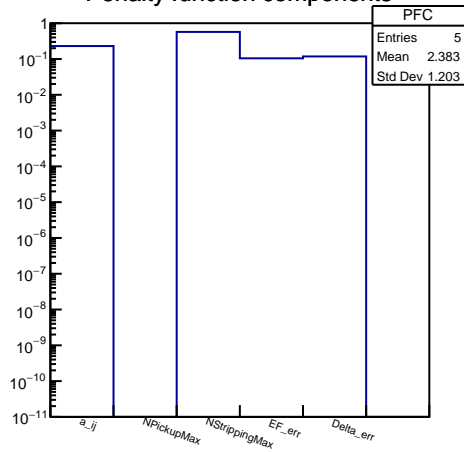
254.803 1f7/2 0.21091 0.591395

-6471.11 2p1/2 0.54037 1.0029

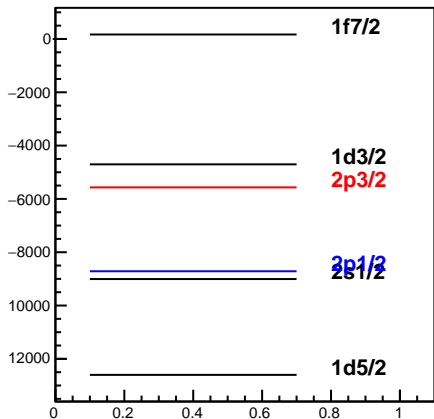
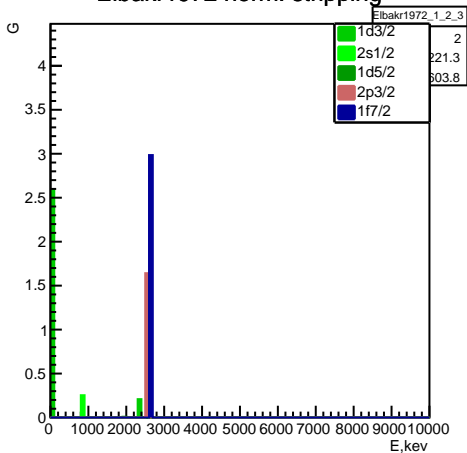
Ar86 norm. pickup



Penalty function components



Elbakra1972 norm. stripping



Experiment: Ar86 (14) Elbakra1972 (6)

proton transfer_norm

 $n^+ = 0.74623 \pm 0$ $n^- = 1.32937 \pm 0$

penalty: 0.252798

 $E_F: -5841.83 \pm 176.947$ keV $\Delta: 2546.23 \pm 295.202$ keVSPE,kev nlj OCC $\frac{G^+ + G^-}{2J+1}$

-9005.93 2s1/2 0.881909 1.01754

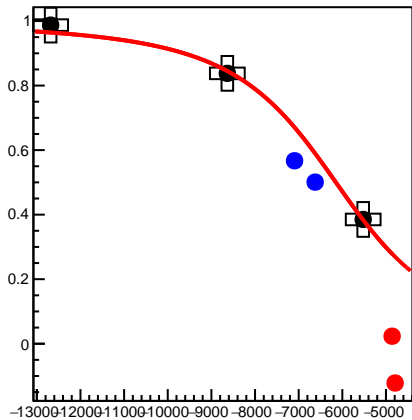
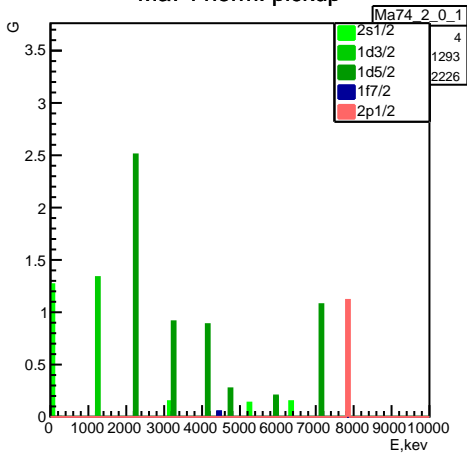
-4703.47 1d3/2 0.297164 0.99724

-12601.3 1d5/2 0.99112 0.985224

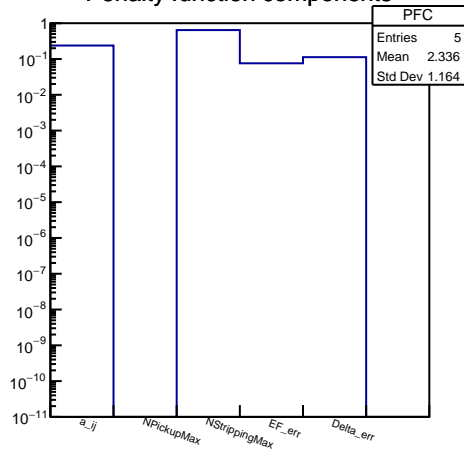
168.071 1f7/2 0.316766 0.379762

-8713.83 2p1/2 0.619543 0.850995

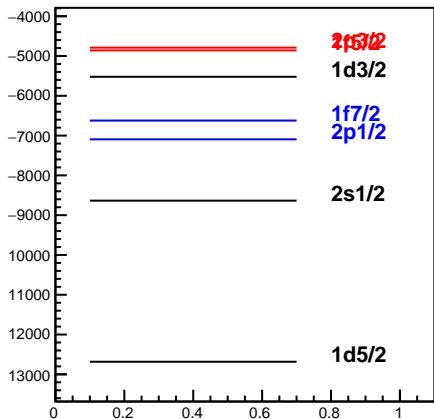
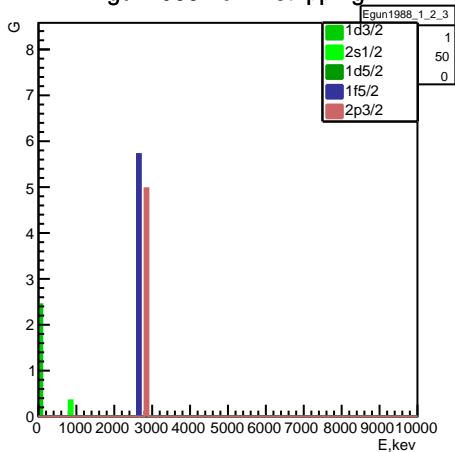
Ma74 norm. pickup



Penalty function components



Egun1988 norm. stripping



Experiment: Ma74 (14) Egun1988 (5)

proton transfer_norm

$$n^+ = 1.03625 \pm 0 \quad n^- = 1.36303 \pm 0$$

penalty: 0.264015

$$E_F: -6147.35 \pm 128.25 \text{ keV}$$

$$\Delta: 2609.59 \pm 282.218 \text{ keV}$$

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

$$-8634.89 \text{ 2s1/2 } 0.837865 \text{ 1.02806}$$

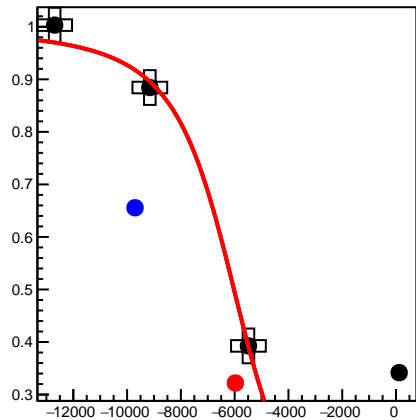
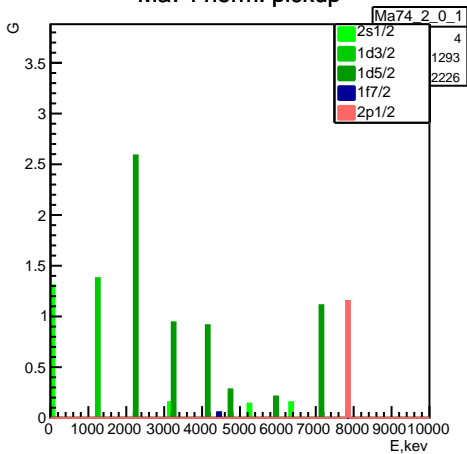
$$-5521.97 \text{ 1d3/2 } 0.38513 \text{ 0.993036}$$

$$-12683.3 \text{ 1d5/2 } 0.987382 \text{ 0.978909}$$

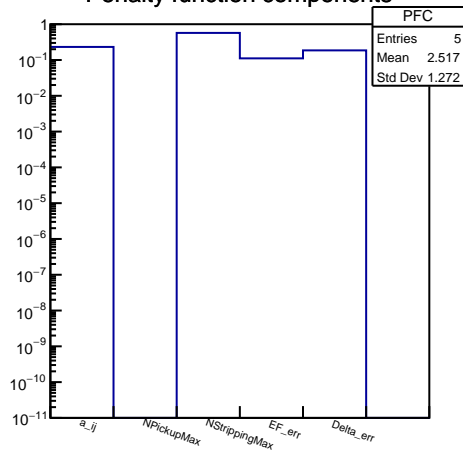
$$-6622.33 \text{ 1f7/2 } 0.500817 \text{ 0.0119964}$$

$$-7094.23 \text{ 2p1/2 } 0.566989 \text{ 0.983704}$$

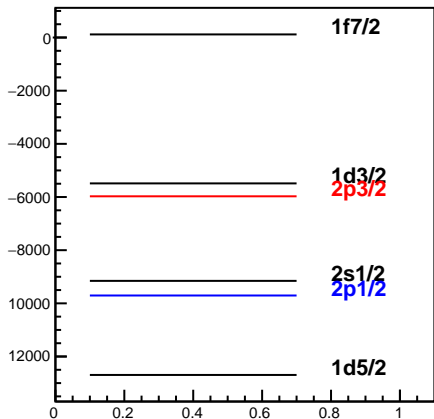
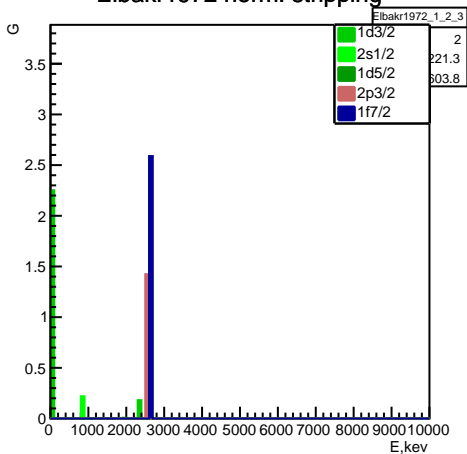
Ma74 norm. pickup



Penalty function components



Elbakra1972 norm. stripping



Experiment: Ma74 (14) Elbakra1972 (6)

proton transfer_norm

$$n^+ = 0.647307 \pm 0 \quad n^- = 1.40608 \pm 0$$

penalty: 0.269174

$$E_F: -6025.98 \pm 188.062 \text{ keV}$$

$$\Delta: 2417.4 \pm 465.507 \text{ keV}$$

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

$$-9154.52 \text{ 2s1/2 } 0.884379 \text{ 0.988843}$$

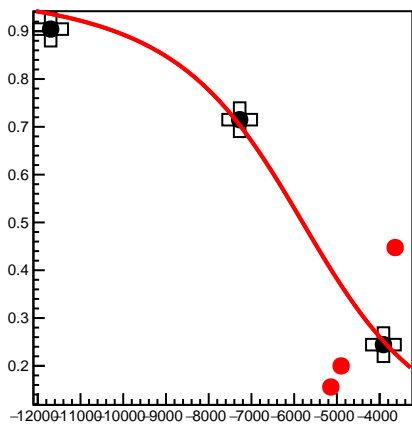
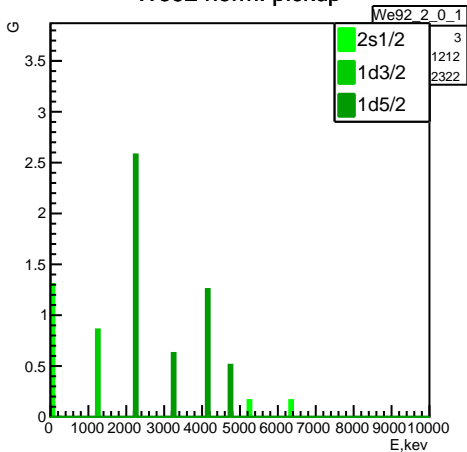
$$-5487.6 \text{ 1d3/2 } 0.392617 \text{ 1.00217}$$

$$-12693.6 \text{ 1d5/2 } 1.0032 \text{ 1.00899}$$

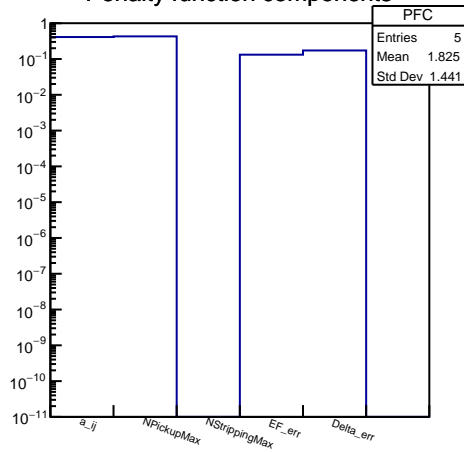
$$116.584 \text{ 1f7/2 } 0.341688 \text{ 0.330684}$$

$$-9704.87 \text{ 2p1/2 } 0.655549 \text{ 0.841889}$$

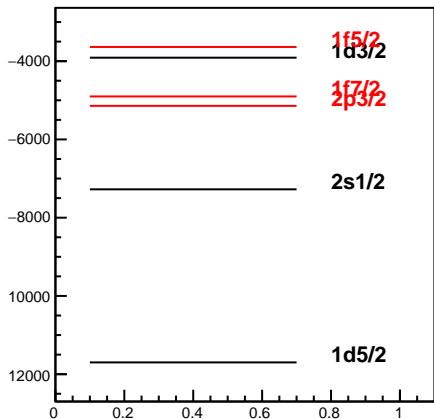
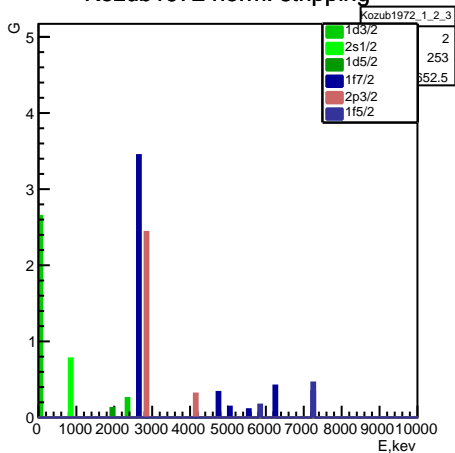
We92 norm. pickup



Penalty function components



Kozub1972 norm. stripping



Experiment: We92 (8) Kozub1972 (14)

proton transfer_norm

 $n^+ = 1.05115 \pm 0$ $n^- = 1.65418 \pm 0$

penalty: 0.302898

 $E_F: -5802.23 \pm 223.444$ keV $\Delta: 3303.83 \pm 433.875$ keVSPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-7275.34 2s1/2 0.714947 1.20774

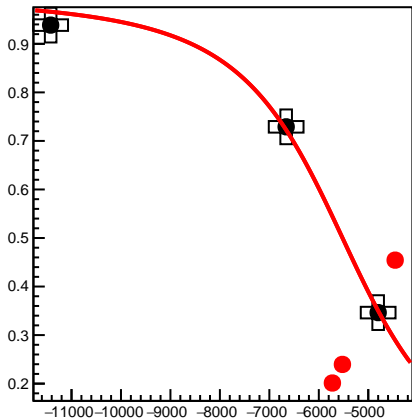
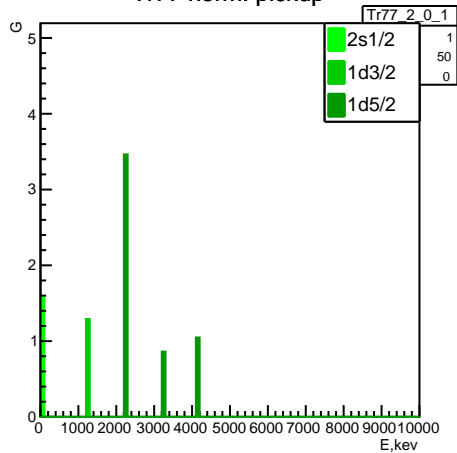
-3910.91 1d3/2 0.24435 0.941386

-11698.6 1d5/2 0.904412 0.85087

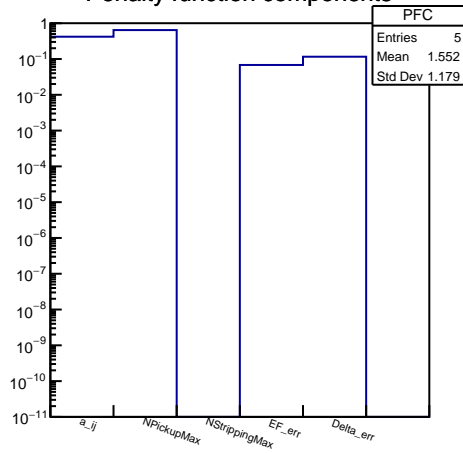
-4901.44 1f7/2 0.199897 0.600205

-5141.85 2p3/2 0.155749 0.688501

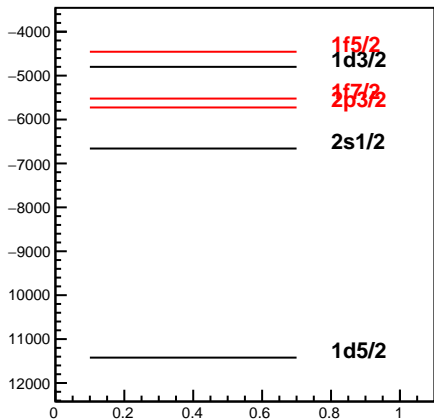
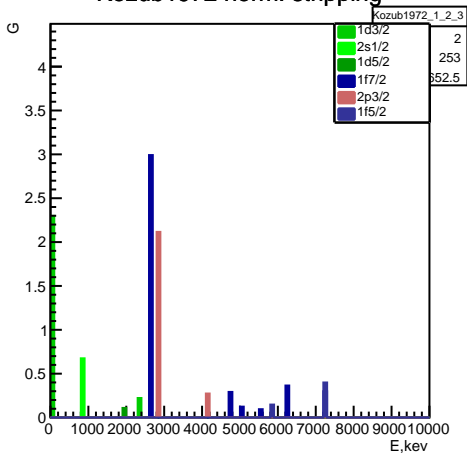
Tr77 norm. pickup



Penalty function components



Kozub1972 norm. stripping



Experiment: Tr77 (5) Kozub1972 (14)

proton transfer_norm

 $n^+ = 0.912162 \pm 0$ $n^- = 1.87199 \pm 0$

penalty: 0.343552

 $E_F: -5520.4 \pm 115.27$ keV $\Delta: -2292.67 \pm 290.421$ keVSPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-6660.16 2s1/2 0.729049 1.1331

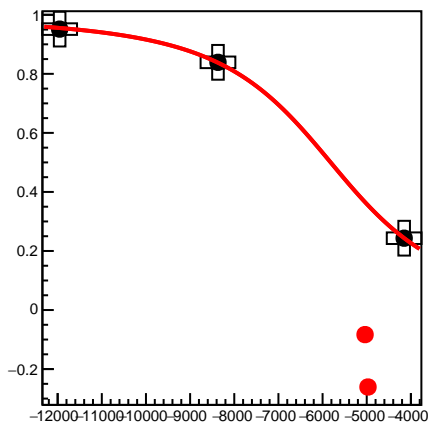
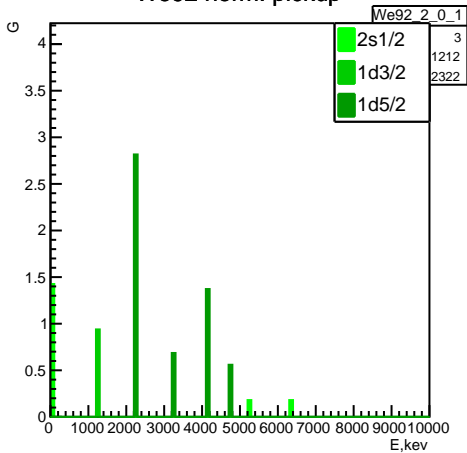
-4800.13 1d3/2 0.346307 0.953223

-11422 1d5/2 0.938597 0.91368

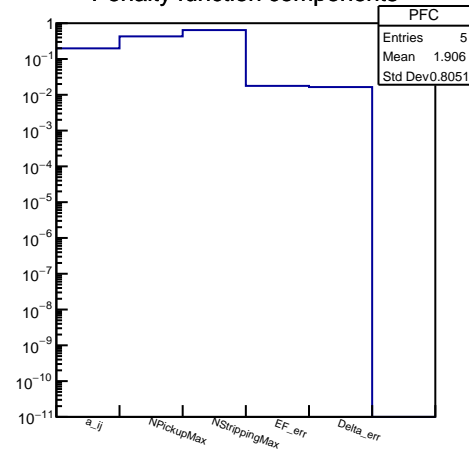
-5522.6 1f7/2 0.239578 0.520844

-5725.32 2p3/2 0.201267 0.597466

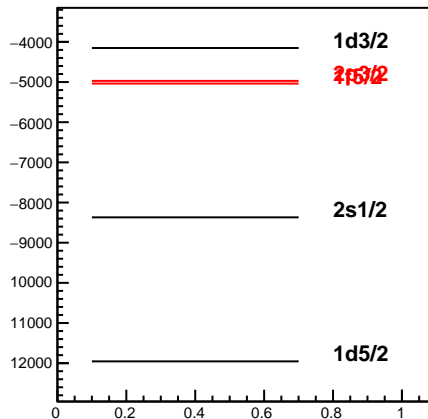
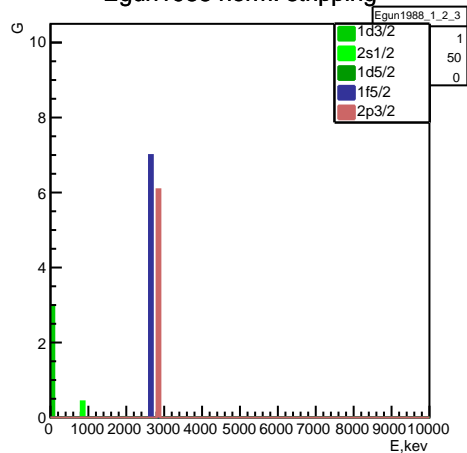
We92 norm. pickup



Penalty function components



Egun1988 norm. stripping



Experiment: We92 (8) Egun1988 (5)

proton transfer_norm

$$n^+ = 1.26794 \pm 0 \quad n^- = 1.80517 \pm 0$$

penalty: 0.344983

$$E_F: -5817.05 \pm 30.015 \text{ keV}$$

$$\Delta: 2786.01 \pm 41.2336 \text{ keV}$$

$$SPE, \text{keV} \quad n_l j \quad OCC \quad \frac{G^+ + G^-}{2J+1}$$

$$-8369.21 \quad 2s1/2 \quad 0.839005 \quad 1.10911$$

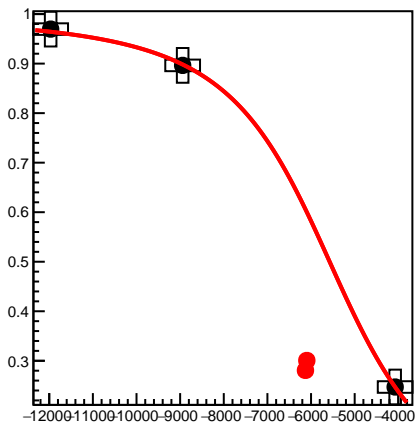
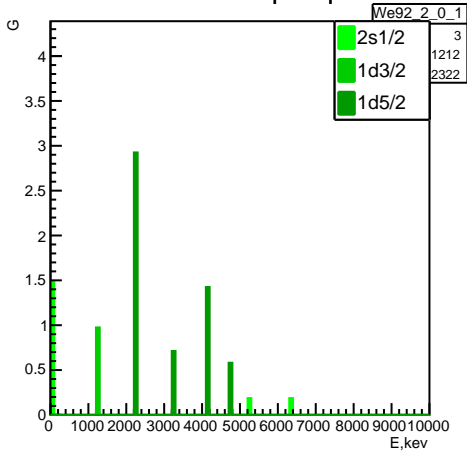
$$-4152.43 \quad 1d3/2 \quad 0.243293 \quad 0.982759$$

$$-11954.9 \quad 1d5/2 \quad 0.951529 \quad 0.908131$$

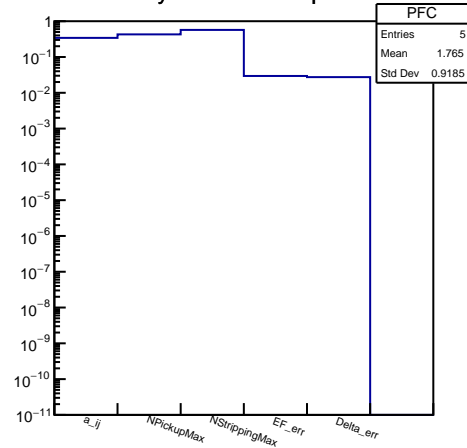
$$-5038 \quad 1f5/2 \quad -0.0832536 \quad 1.16651$$

$$-4971.61 \quad 2p3/2 \quad -0.260766 \quad 1.52153$$

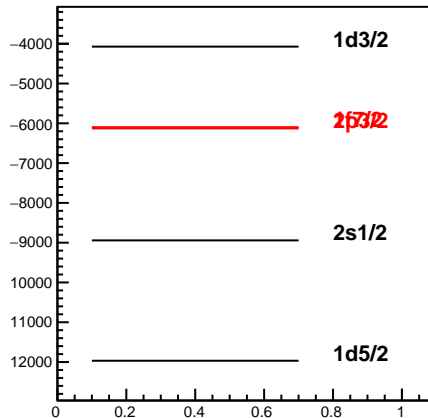
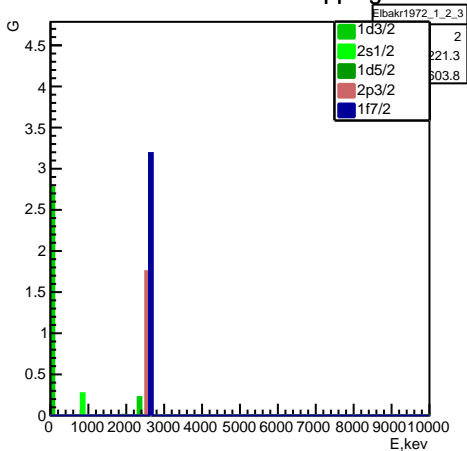
We92 norm. pickup



Penalty function components



Elbahr1972 norm. stripping



Experiment: We92 (8) Elbahr1972 (6)

proton transfer_norm

 $n^+ = 0.79756 \pm 0$ $n^- = 1.87554 \pm 0$

penalty: 0.373913

 $E_F: -5573.76 \pm 49.9413$ keV $\Delta: -2557.86 \pm 68.7119$ keVSPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-8942.47 2s1/2 0.896405 1.06398

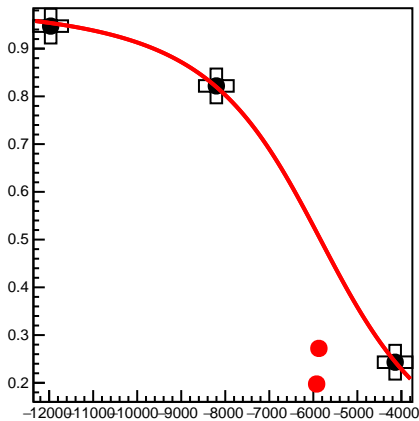
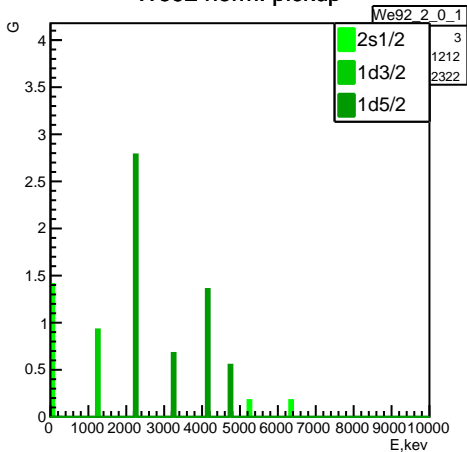
-4072.24 1d3/2 0.247057 0.993527

-11967.8 1d5/2 0.969652 0.942493

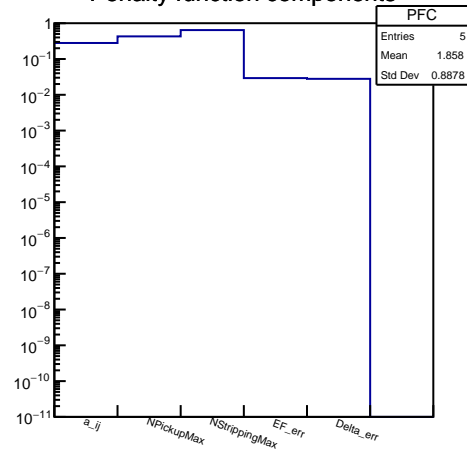
-6128.16 2p3/2 0.280671 0.438658

-6097.01 1f7/2 0.30061 0.39878

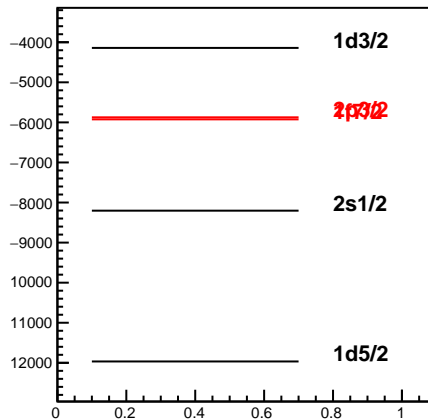
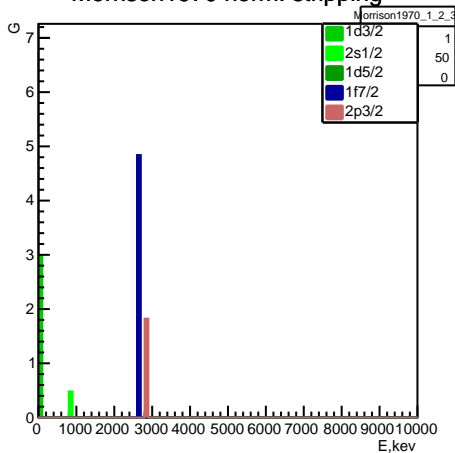
We92 norm. pickup



Penalty function components



Morrison1970 norm. stripping



Experiment: We92 (8) Morrison1970 (5)

proton transfer_norm

 $n^+ = 0.828718 \pm 0$ $n^- = 1.78595 \pm 0$

penalty: 0.390288

 $E_F: -5837.42 \pm 49.5382$ keV $\Delta: 2842.9 \pm 69.9734$ keVSPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-8203.01 2s1/2 0.821858 1.12437

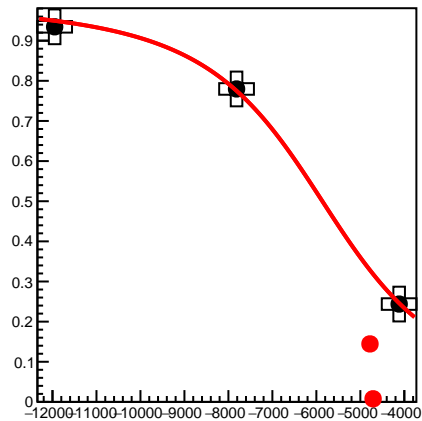
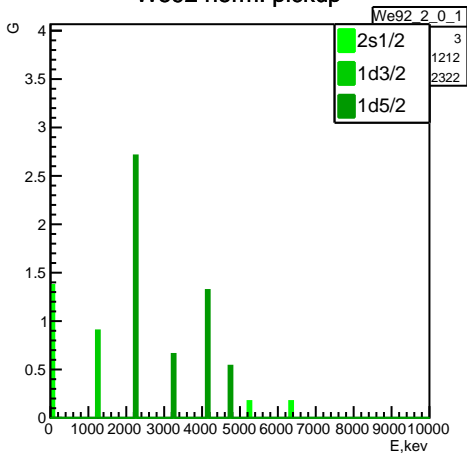
-4141.45 1d3/2 0.243164 0.978019

-11966 1d5/2 0.947147 0.897608

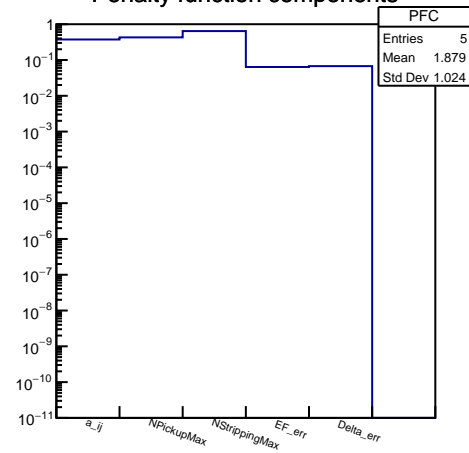
-5924.71 1f7/2 0.197518 0.604964

-5873.71 2p3/2 0.272103 0.455795

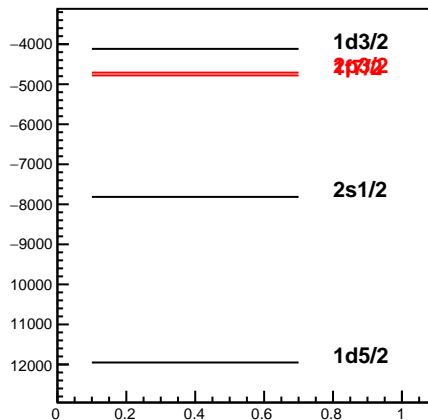
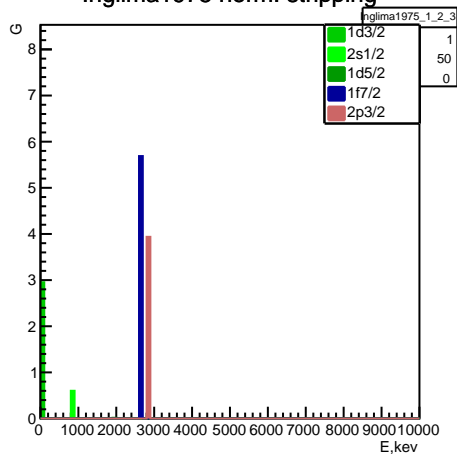
We92 norm. pickup



Penalty function components



Inglima1975 norm. stripping



Experiment: We92 (8) Inglima1975 (5)

proton transfer_norm

 $n^+ = 1.36734 \pm 0$ $n^- = 1.73795 \pm 0$

penalty: 0.408268

 $E_F: -5863.35 \pm 107.914$ keV $\Delta: -2960.8 \pm 169.034$ keVSPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-7814.63 2s1/2 0.779735 1.1611

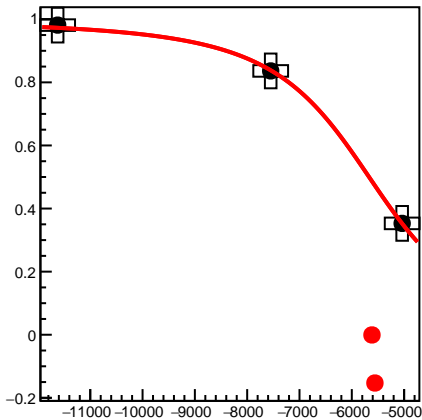
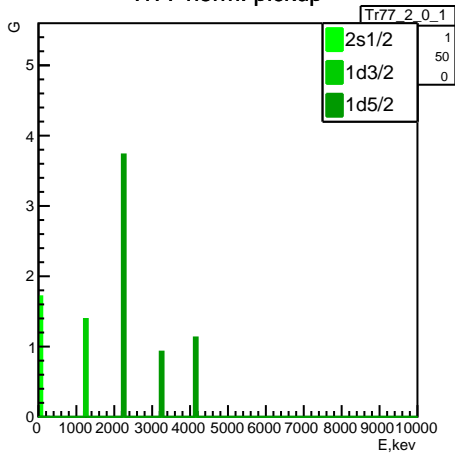
-4117.17 1d3/2 0.243786 0.964295

-11951 1d5/2 0.934568 0.874606

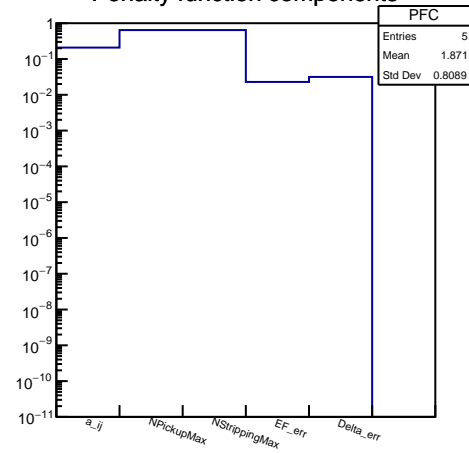
-4780.88 1f7/2 0.144492 0.711015

-4710.03 2p3/2 0.00775858 0.984483

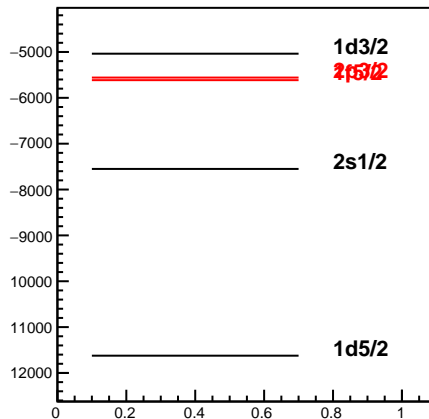
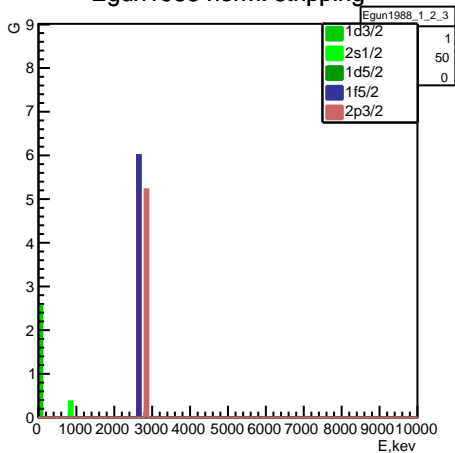
Tr77 norm. pickup



Penalty function components



Egun1988 norm. stripping



Experiment: Tr77 (5) Egun1988 (5)

proton transfer_norm

 $n^+ = 1.08835 \pm 0$ $n^- = 2.01767 \pm 0$

penalty: 0.417578

 $E_F: -5670.03 \pm 38.6938$ keV $\Delta: 2047.51 \pm 79.1016$ keVSPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-7550.54 2s1/2 0.836244 1.04253

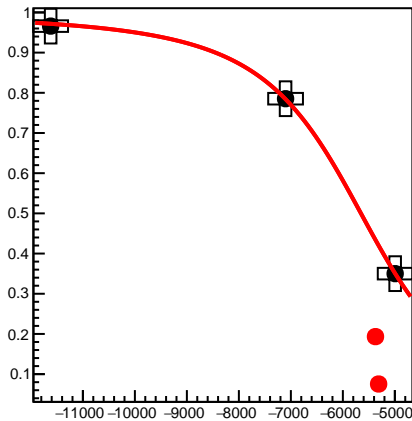
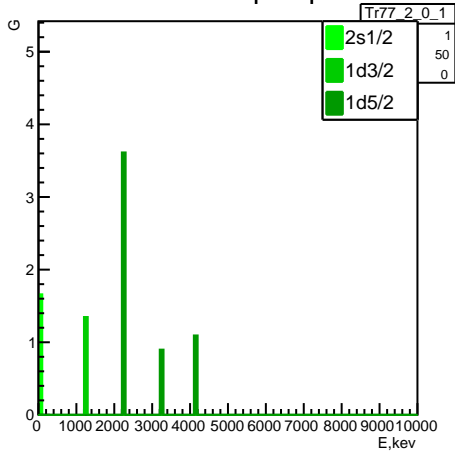
-5037.41 1d3/2 0.352959 0.990177

-11623.2 1d5/2 0.98147 0.967294

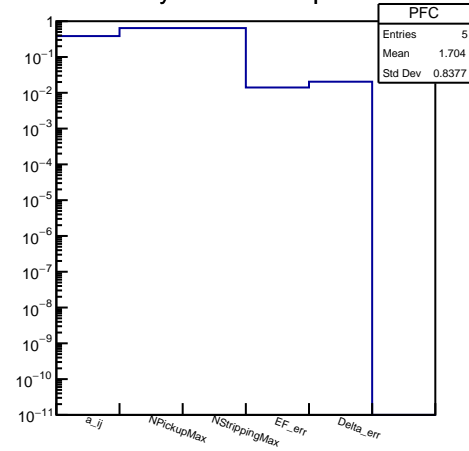
-5614.57 1f5/2 -0.000643031 1.00129

-5558.19 2p3/2 -0.153013 1.30603

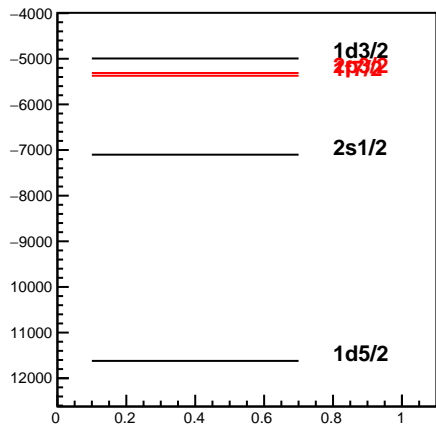
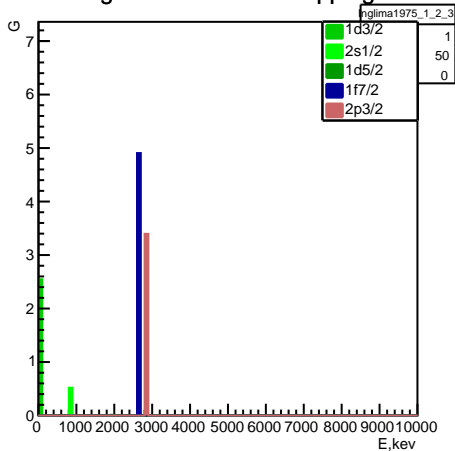
Tr77 norm. pickup



Penalty function components



Inglima1975 norm. stripping



Experiment: Tr77 (5) Inglima1975 (5)

proton transfer_norm

 $n^+ = 1.1794 \pm 0$ $n^- = 1.95318 \pm 0$

penalty: 0.457903

 $E_F: -5652.35 \pm 23.7925$ keV $\Delta: -2098.83 \pm 51.1711$ keVSPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-7101.85 2s1/2 0.785318 1.08957

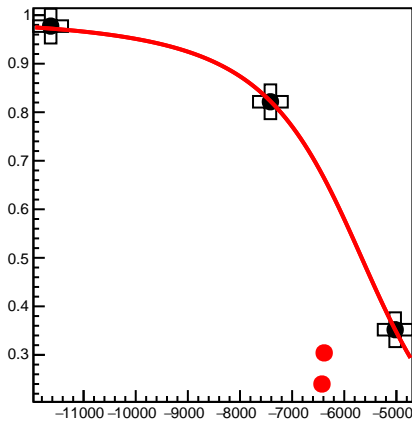
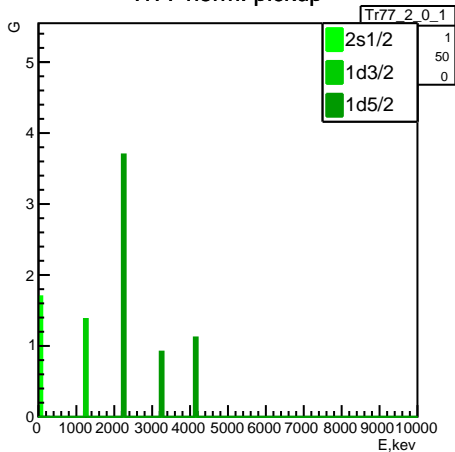
-4994.14 1d3/2 0.350025 0.973798

-11620.2 1d5/2 0.965957 0.936632

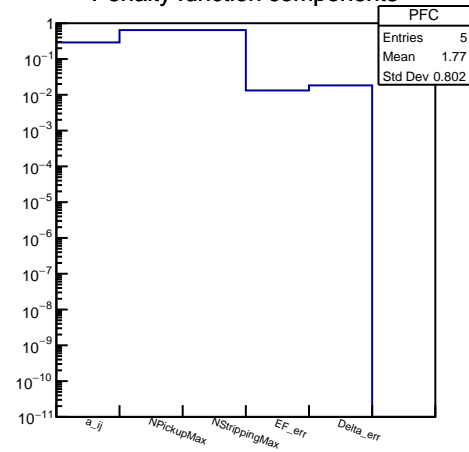
-5372.67 1f7/2 0.193357 0.613286

-5312.09 2p3/2 0.0754177 0.849165

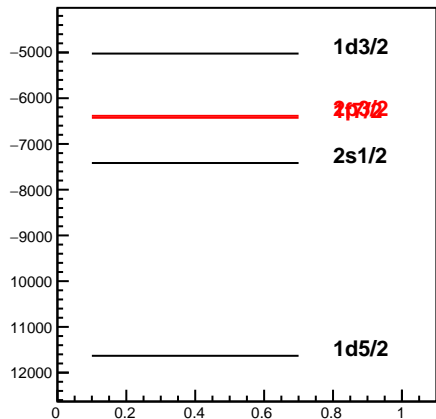
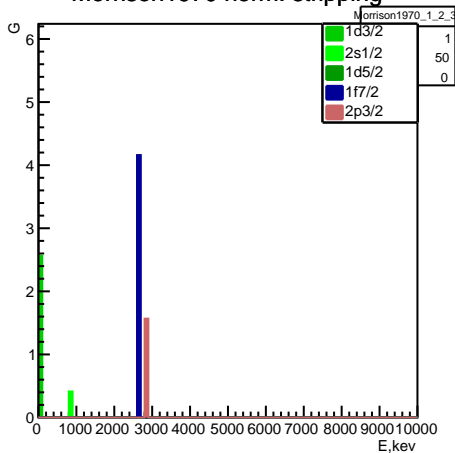
Tr77 norm. pickup



Penalty function components



Morrison1970 norm. stripping



Experiment: Tr77 (5) Morrison1970 (5)

proton transfer_norm

 $n^+ = 0.712349 \pm 0$ $n^- = 1.99927 \pm 0$

penalty: 0.459908

 $E_F: -5666.71 \pm 22.3579$ keV $\Delta: 2070.42 \pm 45.9304$ keVSPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-7416.64 2s1/2 0.821554 1.05627

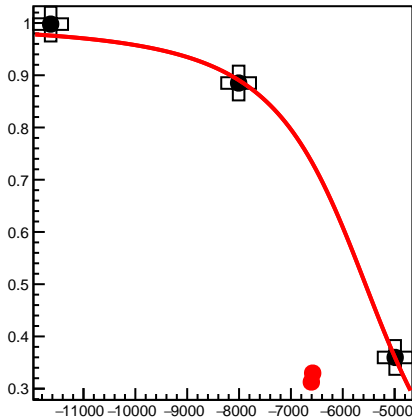
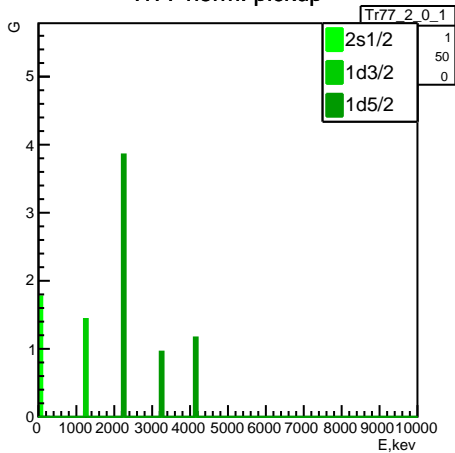
-5023.86 1d3/2 0.35188 0.985988

-11631.9 1d5/2 0.977446 0.957741

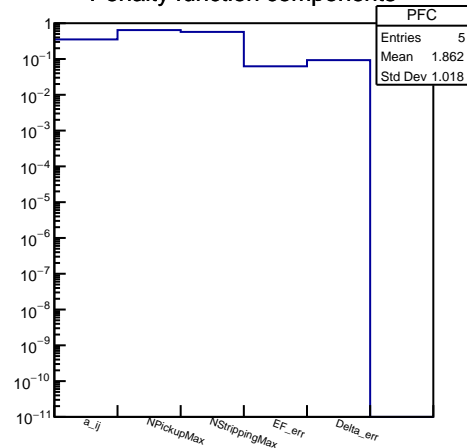
-6427.63 1f7/2 0.239992 0.520015

-6385.36 2p3/2 0.304104 0.391792

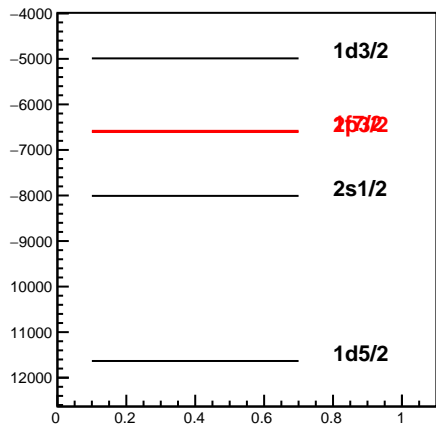
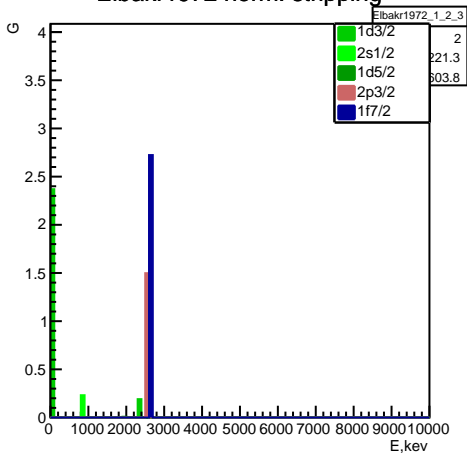
Tr77 norm. pickup



Penalty function components



Elbakra1972 norm. stripping



Experiment: Tr77 (5) Elbakra1972 (6)

proton transfer_norm

$$n^+ = 0.680931 \pm 0 \quad n^- = 2.08471 \pm 0$$

penalty: 0.468299

$$E_F: -5563.72 \pm 105.814 \text{ keV}$$

$$\Delta: 1951.18 \pm 233.14 \text{ keV}$$

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

$$-8008.5 \text{ 2s1/2 } 0.885122 \text{ 1.00176}$$

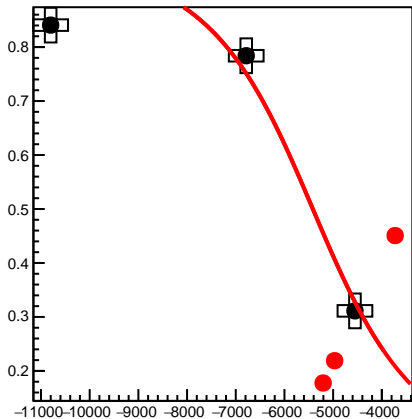
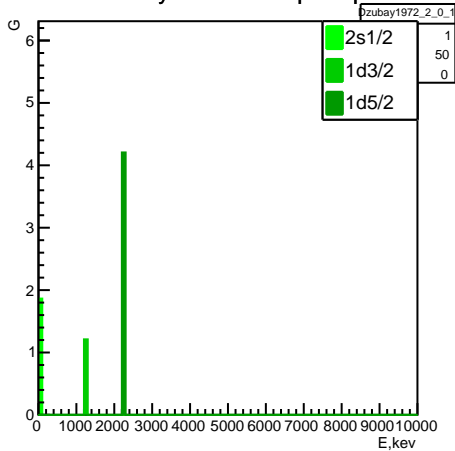
$$-4989.85 \text{ 1d3/2 } 0.359769 \text{ 0.999689}$$

$$-11633.3 \text{ 1d5/2 } 0.997913 \text{ 0.99855}$$

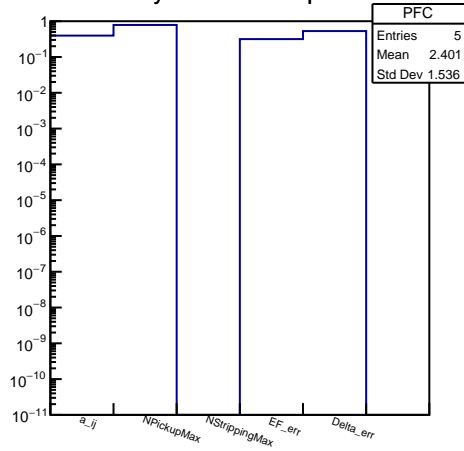
$$-6606.24 \text{ 2p3/2 } 0.312744 \text{ 0.374512}$$

$$-6580.53 \text{ 1f7/2 } 0.329767 \text{ 0.340466}$$

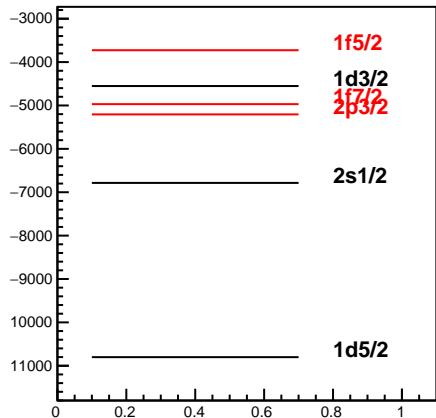
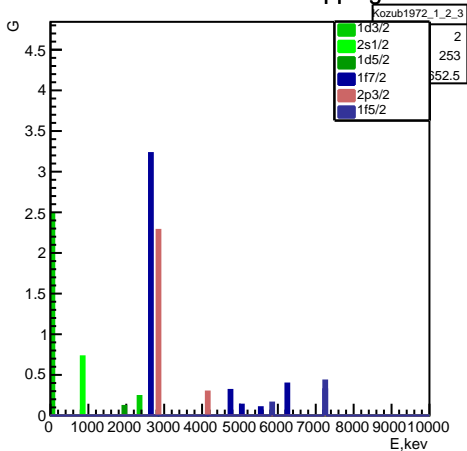
Dzubay1972 norm. pickup



Penalty function components



Kozub1972 norm. stripping



Experiment: Dzubay1972 (3) Kozub1972 (14)

proton transfer_norm

 $n^+ = 0.984403 \pm 0$ $n^- = 1.5933 \pm 0$

penalty: 0.510987

 $E_F: -5416.89 \pm 535.612$ keV $\Delta: 2355.08 \pm 1329.37$ keVSPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-6785.02 2s1/2 0.783926 1.29631

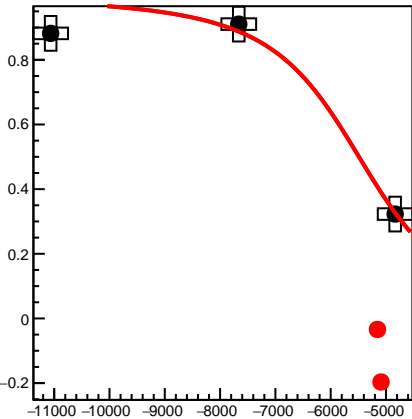
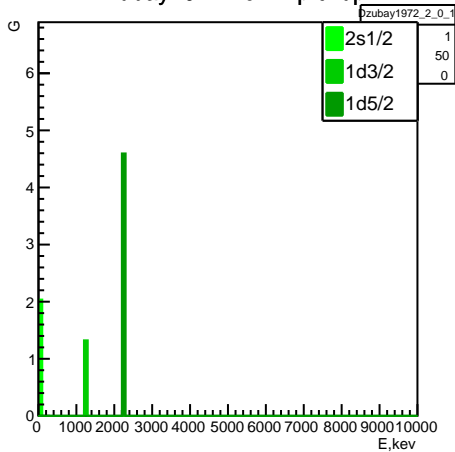
-4552 1d3/2 0.311252 0.98295

-10801.6 1d5/2 0.840682 0.72074

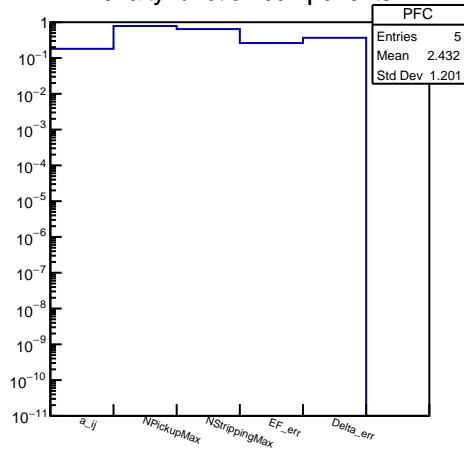
-4969.3 1f7/2 0.218953 0.562094

-5205.59 2p3/2 0.177608 0.644784

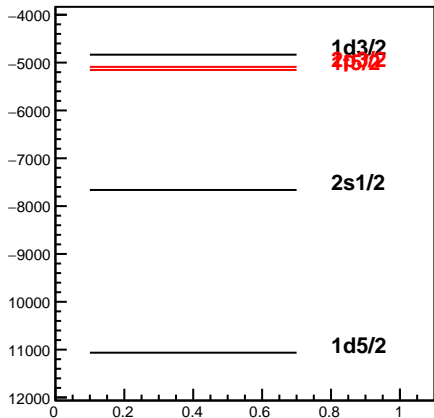
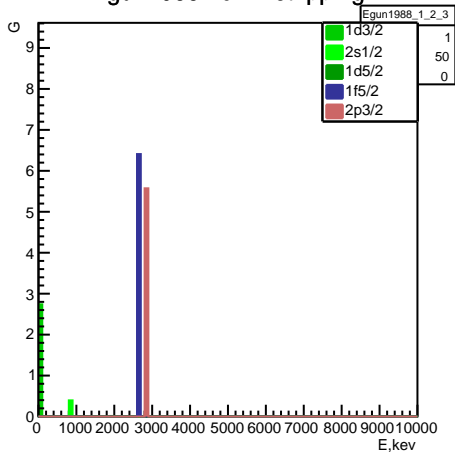
Dzubay1972 norm. pickup



Penalty function components



Egun1988 norm. stripping



Experiment: Dzubay1972 (3) Egun1988 (5)

proton transfer_norm

$$n^+ = 1.1611 \pm 0 \quad n^- = 1.74094 \pm 0$$

penalty: 0.56603

$$E_F: -5488.68 \pm 443.067 \text{ keV}$$

$$\Delta: 1771.9 \pm 919.187 \text{ keV}$$

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

$$-7662.41 \text{ 2s1/2 } 0.910531 \text{ 1.21584}$$

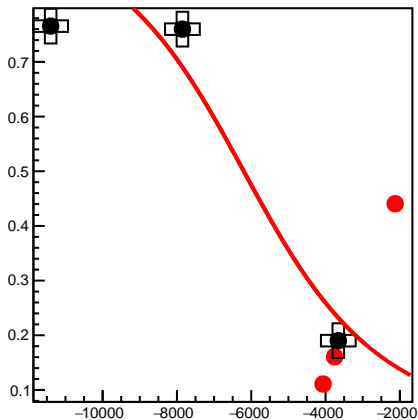
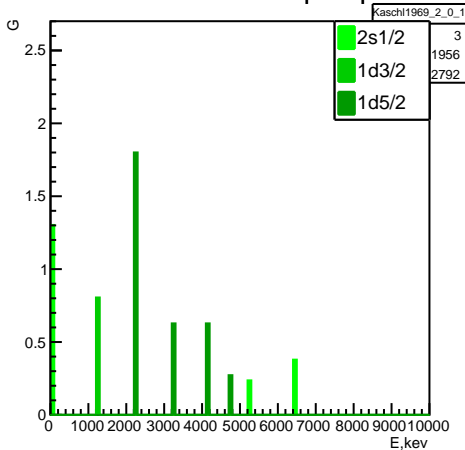
$$-4834.24 \text{ 1d3/2 } 0.322864 \text{ 1.01583}$$

$$-11064.1 \text{ 1d5/2 } 0.881845 \text{ 0.768335}$$

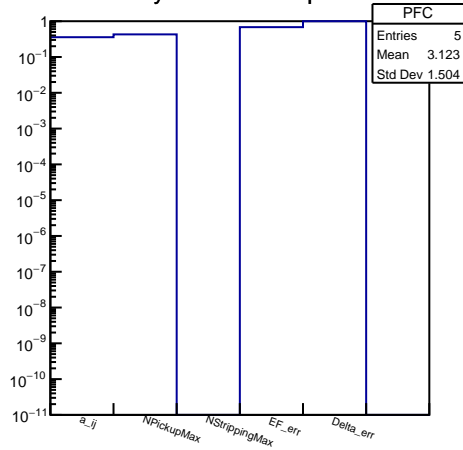
$$-5153.83 \text{ 1f5/2 } -0.0341067 \text{ 1.06821}$$

$$-5089.45 \text{ 2p3/2 } -0.196661 \text{ 1.39332}$$

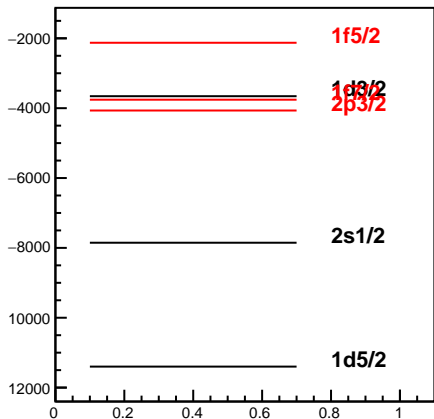
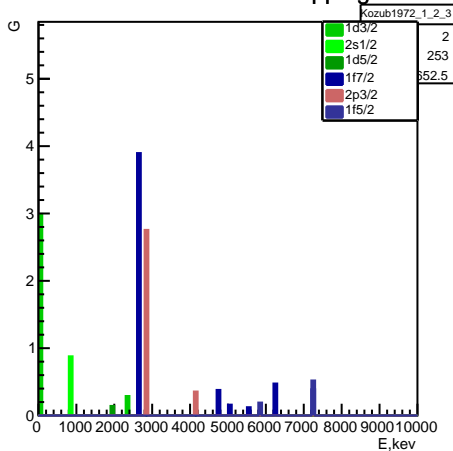
Kaschl1969 norm. pickup



Penalty function components



Kozub1972 norm. stripping



Experiment: Kaschl1969 (8) Kozub1972 (14)

proton transfer_norm

 $n^+ = 1.18819 \pm 0$ $n^- = 1.18451 \pm 0$

penalty: 0.569459

 $E_F: -6201.52 \pm 1155.01$ keV $\Delta: 4006.12 \pm 2506.86$ keVSPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-7852.43 2s1/2 0.75991 1.39908

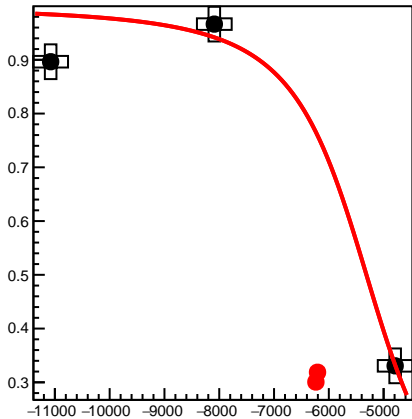
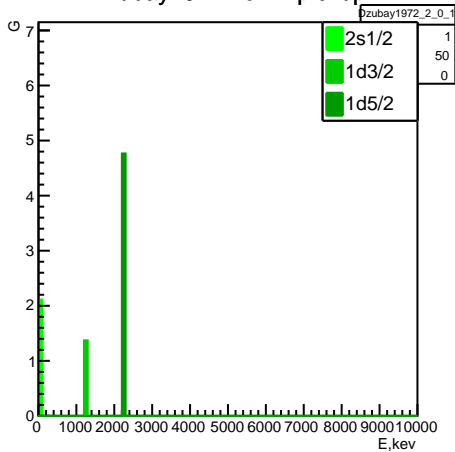
-3657.2 1d3/2 0.190163 1.02241

-11399 1d5/2 0.765491 0.578509

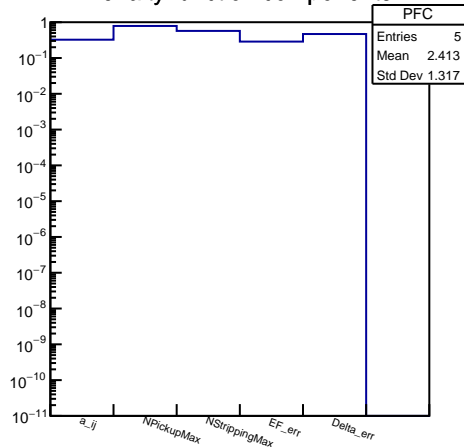
-3757.12 1f7/2 0.160771 0.678458

-4066.97 2p3/2 0.110867 0.778266

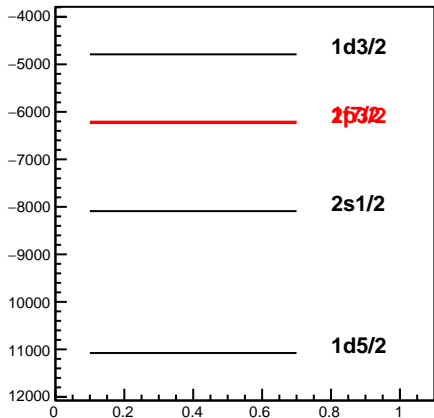
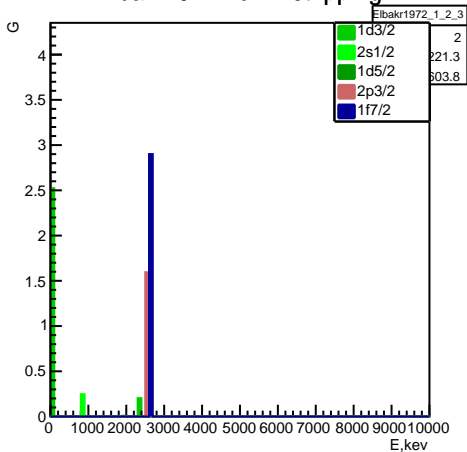
Dzubay1972 norm. pickup



Penalty function components



Elbakr1972 norm. stripping



Experiment: Dzubay1972 (3) Elbakr1972 (6)

proton transfer_norm

 $n^+ = 0.725199 \pm 0$ $n^- = 1.80541 \pm 0$

penalty: 0.604867

 $E_F: -5313.85 \pm 486.284$ keV $\Delta: -1471.27 \pm 1172.65$ keVSPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-8090.07 2s1/2 0.966442 1.17945

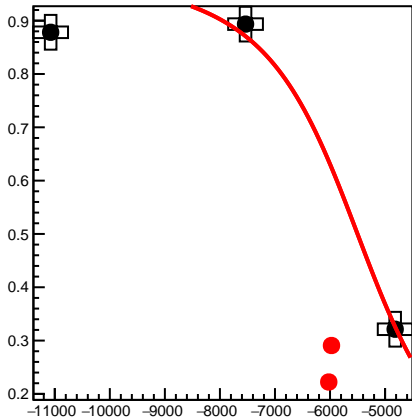
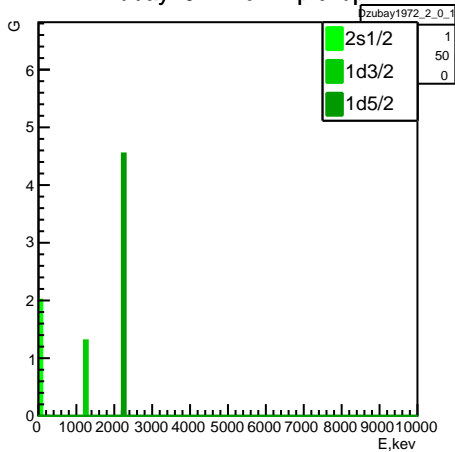
-4789.41 1d3/2 0.330671 1.02472

-11077.1 1d5/2 0.896466 0.795833

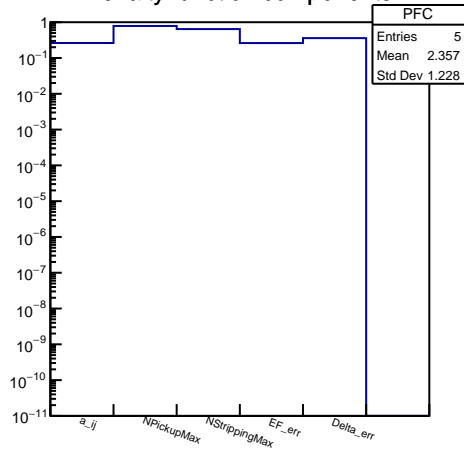
-6236.27 2p3/2 0.30057 0.39886

-6206.35 1f7/2 0.3187 0.3626

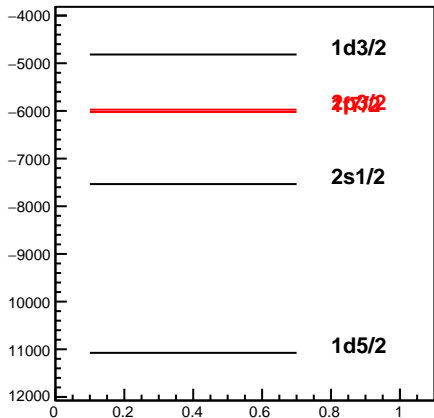
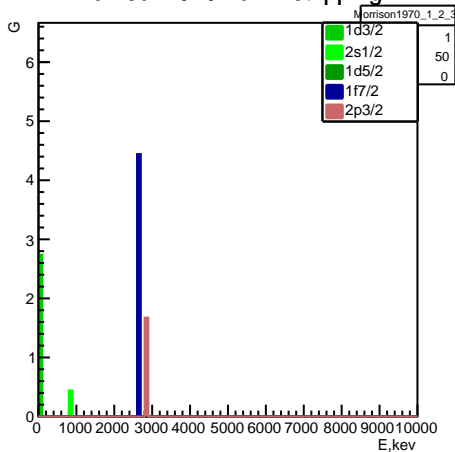
Dzubay1972 norm. pickup



Penalty function components



Morrison1970 norm. stripping



Experiment: Dzubay1972 (3) Morrison1970 (3)

proton transfer_norm

$n^+ = 0.760862 \pm 0$ $n^- = 1.72268 \pm 0$

penalty: 0.60575

$E_F: -5500.75 \pm 442.296$ keV

$\Delta: 1839.15 \pm 900.022$ keV

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

-7534.65 2s1/2 0.893558 1.22842

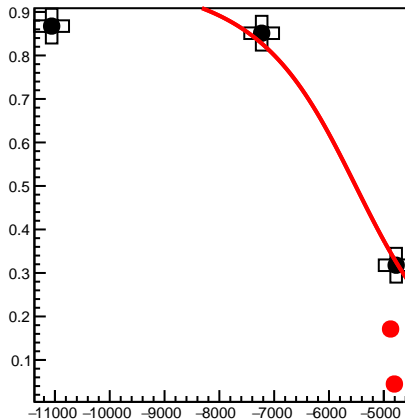
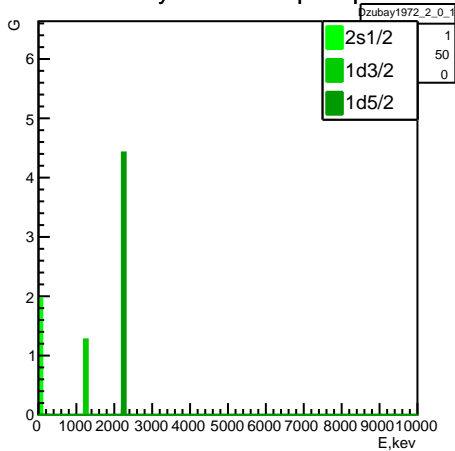
-4816.78 1d3/2 0.321267 1.01208

-11075.1 1d5/2 0.878228 0.7595

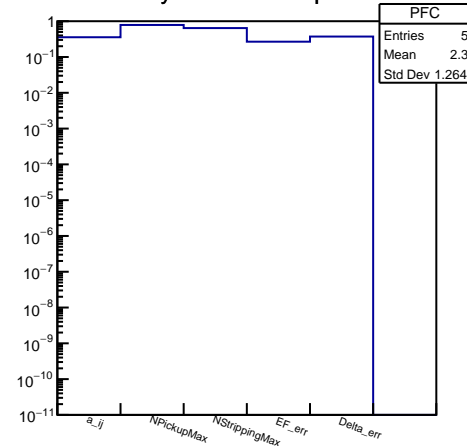
-6022.87 1f7/2 0.222286 0.555429

-5973.57 2p3/2 0.290763 0.418474

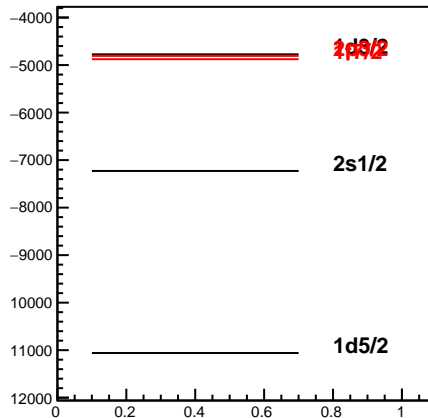
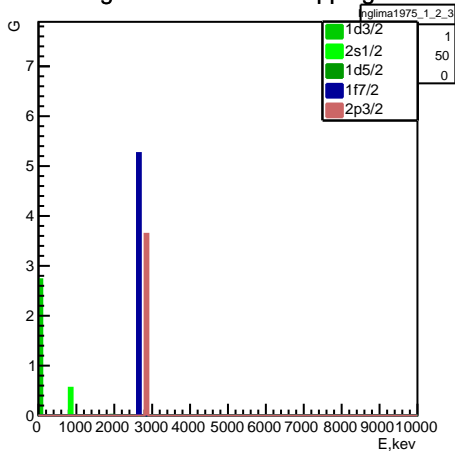
Dzubay1972 norm. pickup



Penalty function components



Inglisma1975 norm. stripping



Experiment: Dzubay1972 (3) Inglisma1975 (5)

proton transfer_norm

 $n^+ = 1.26464 \pm 0$ $n^- = 1.676 \pm 0$

penalty: 0.616575

 $E_F: -5513.09 \pm 453.291$ keV $\Delta: -1976.6 \pm 934.219$ keVSPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-7228.29 2s1/2 0.85112 1.25868

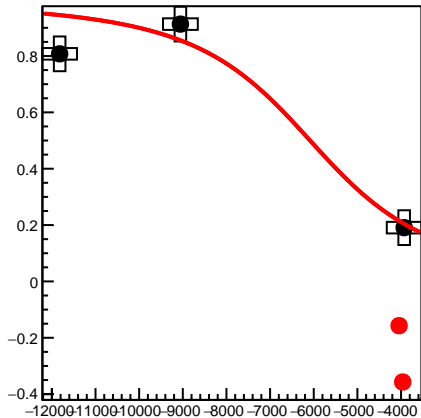
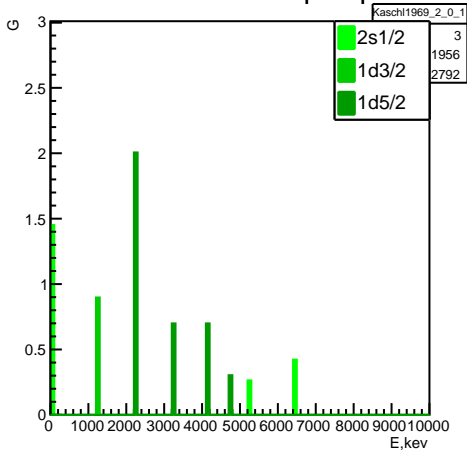
-4774.47 1d3/2 0.317767 1.00135

-11059.8 1d5/2 0.867456 0.73997

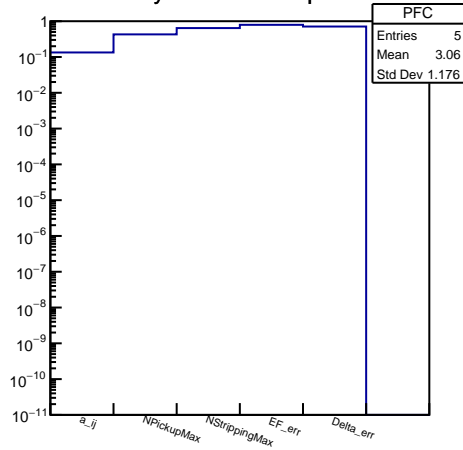
-4876.09 1f7/2 0.171193 0.657614

-4806.89 2p3/2 0.0447287 0.910543

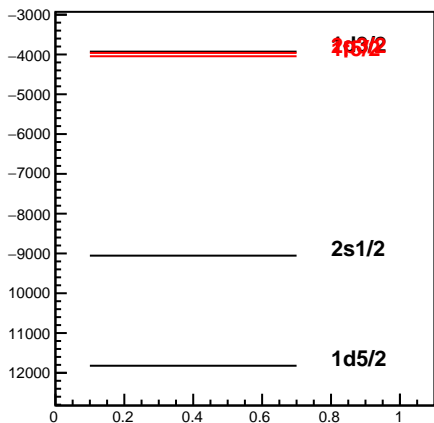
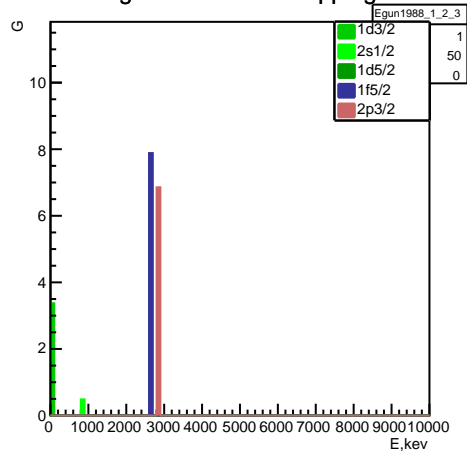
Kaschl1969 norm. pickup



Penalty function components



Egun1988 norm. stripping



Experiment: Kaschl1969 (8) Egun1988 (5)

proton transfer_norm

 $n^+ = 1.42829 \pm 0$ $n^- = 1.31989 \pm 0$

penalty: 0.634802

 $E_F: -6083.92 \pm 1341.13$ keV $\Delta: 2937.9 \pm 1780.19$ keVSPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-9054.99 2s1/2 0.913152 1.31192

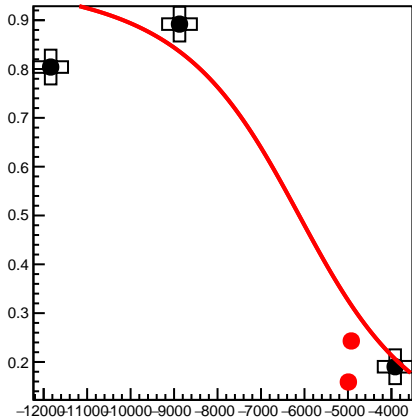
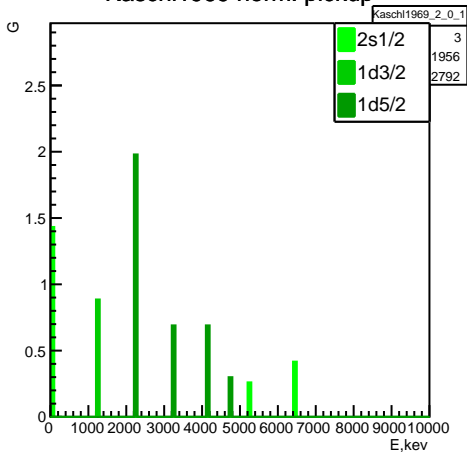
-3928.56 1d3/2 0.190846 1.06707

-11821.5 1d5/2 0.807647 0.621006

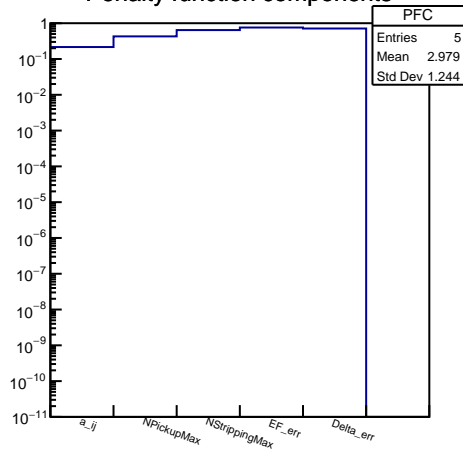
-4044.8 1f5/2 -0.157012 1.31402

-3961.17 2p3/2 -0.356973 1.71395

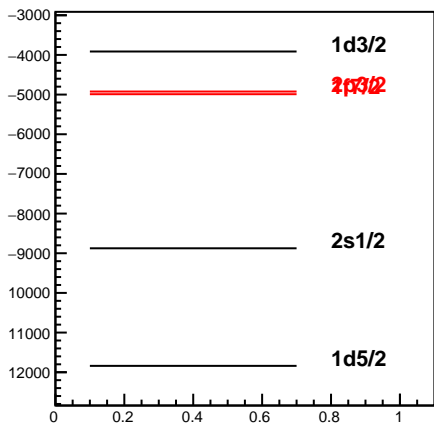
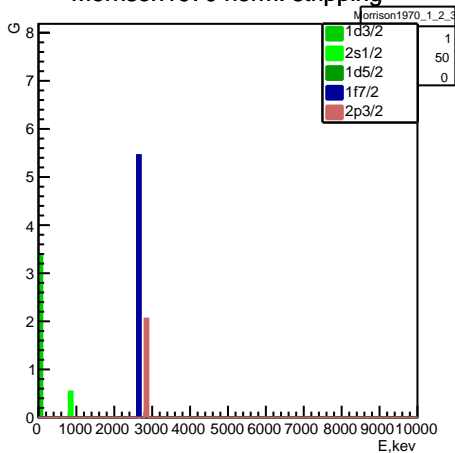
Kaschl1969 norm. pickup



Penalty function components



Morrison1970 norm. stripping



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

$$n^+ = 0.93434 \pm 0 \quad n^- = 1.30237 \pm 0$$

penalty: 0.646941

$$E_F: -6121.67 \pm 1282.38 \text{ keV}$$

$$\Delta: 3036.64 \pm 1782.98 \text{ keV}$$

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

$$-8875.44 \text{ 2s1/2 } 0.891981 \text{ 1.32588}$$

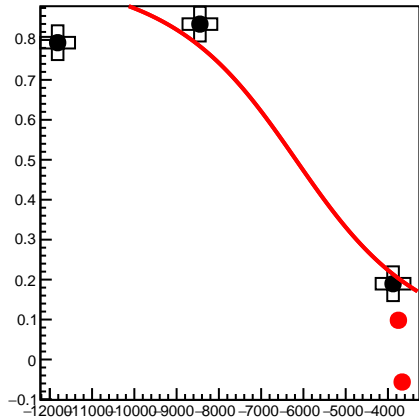
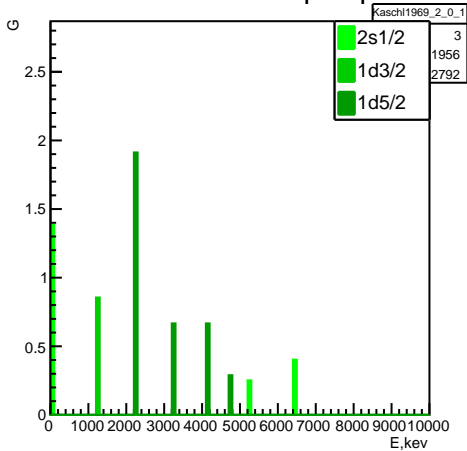
$$-3913.95 \text{ 1d3/2 } 0.190248 \text{ 1.06231}$$

$$-11839.5 \text{ 1d5/2 } 0.804037 \text{ 0.611812}$$

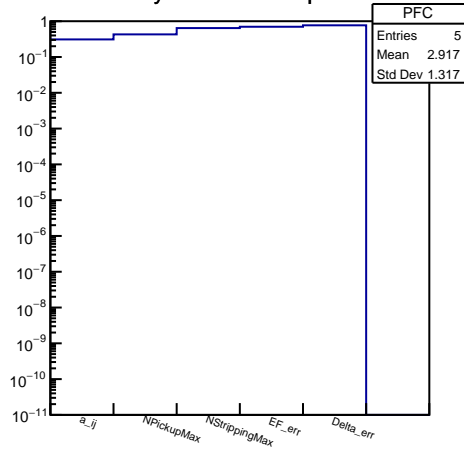
$$-4990.37 \text{ 1f7/2 } 0.158966 \text{ 0.682068}$$

$$-4923.16 \text{ 2p3/2 } 0.243056 \text{ 0.513887}$$

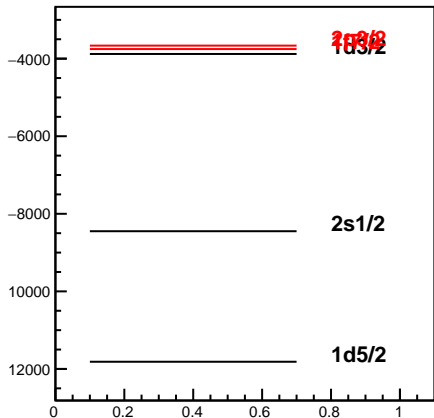
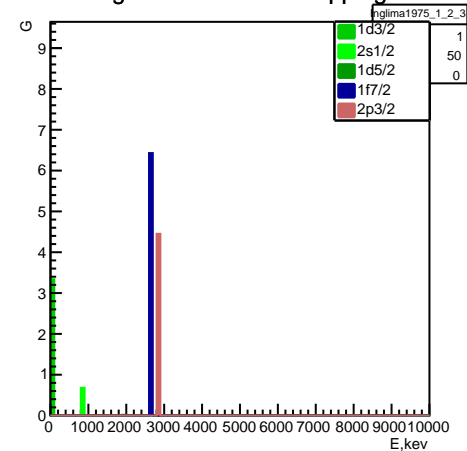
Kaschl1969 norm. pickup



Penalty function components



Inglima1975 norm. stripping



Experiment: Kaschl1969 (8) Inglima1975 (5)

proton transfer_norm

 $n^+ = 1.54543 \pm 0$ $n^- = 1.25826 \pm 0$

penalty: 0.671946

 $E_F: -6178.02 \pm 1184.49$ keV $\Delta: -3286.4 \pm 1925.3$ keVSPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-8449.12 2s1/2 0.839598 1.35919

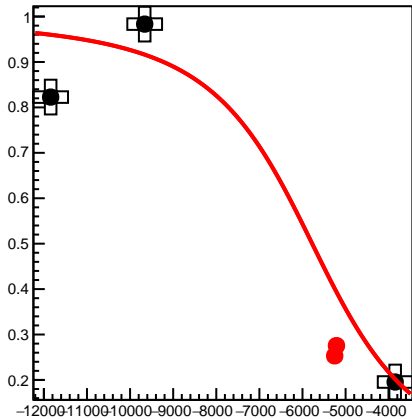
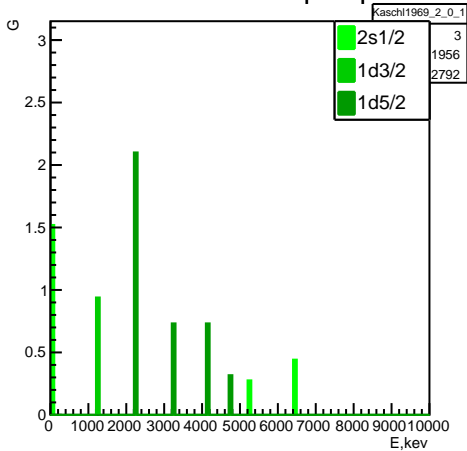
-3879.44 1d3/2 0.189685 1.04844

-11814.4 1d5/2 0.793097 0.592376

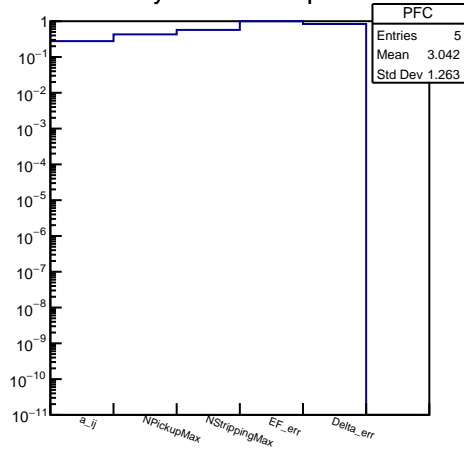
-3752.83 1f7/2 0.0981875 0.803625

-3664.14 2p3/2 -0.0563558 1.11271

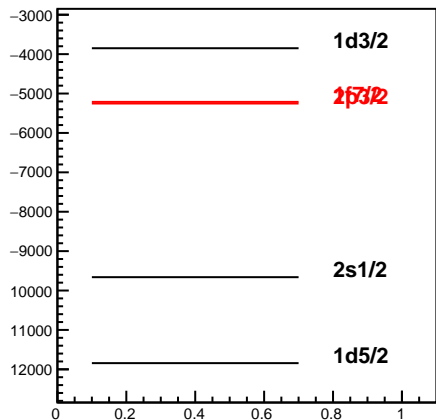
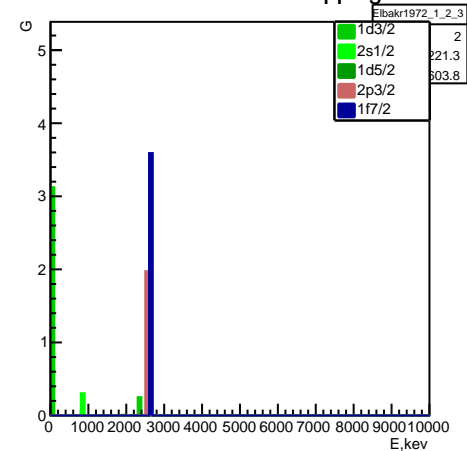
Kaschl1969 norm. pickup



Penalty function components



Elbakr1972 norm. stripping



Experiment: Kaschl1969 (8) Elbakr1972 (6)

proton transfer_norm

 $n^+ = 0.897906 \pm 0$ $n^- = 1.38195 \pm 0$

penalty: 0.718218

 $E_F: -5774.73 \pm 1692.03$ keV $\Delta: -2588.02 \pm 2094.8$ keVSPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-9660.96 2s1/2 0.983369 1.27203

-3850.13 1d3/2 0.19545 1.07896

-11842.8 1d5/2 0.822709 0.64901

-5252.94 2p3/2 0.253076 0.493848

-5211.83 1f7/2 0.275524 0.448953