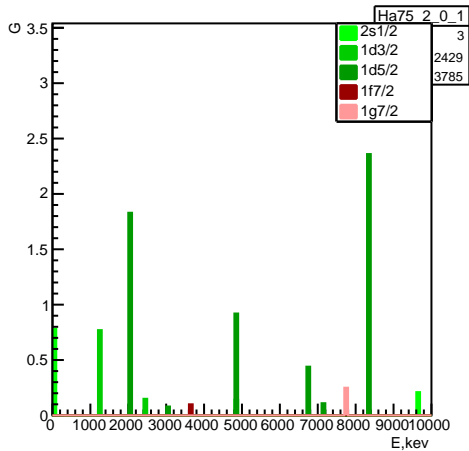
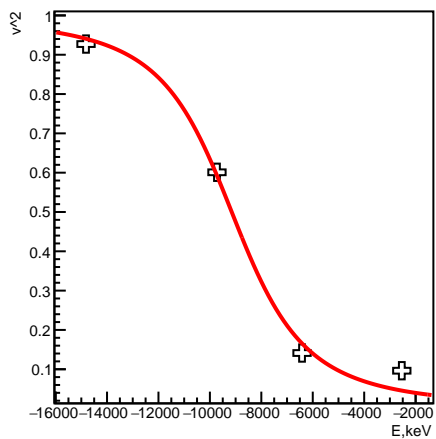


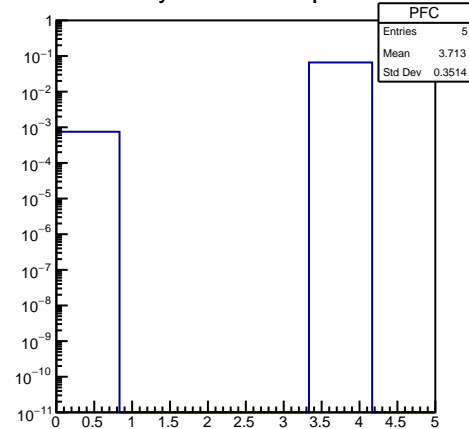
Ha75



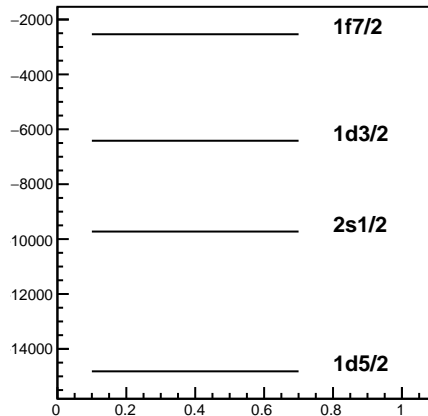
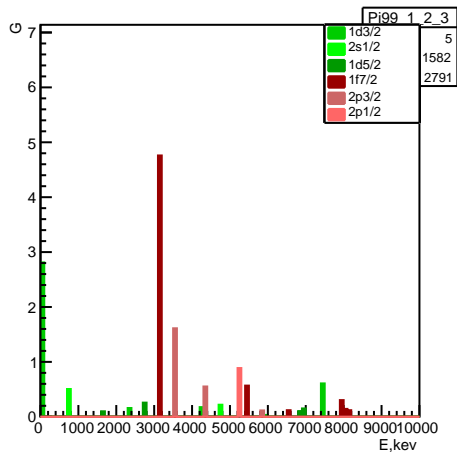
Occupancy



Penalty function components



Pi99



Experiment: Ha75 (13) Pi99 (23)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -9151.35 \pm 237.747$ keV $\Delta: -3039.06 \pm 552.698$ keV

penalty: 0.0133452

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

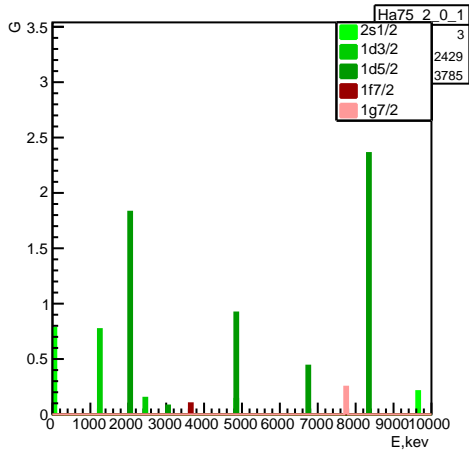
-9725.14 2s1/2 0.601 0.928

-6417.17 1d3/2 0.14125 1.1775

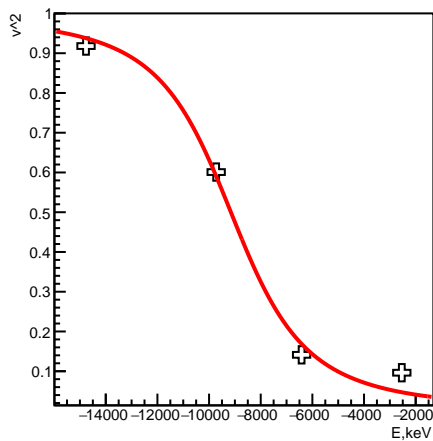
-14817.6 1d5/2 0.927167 1.059

-2537.33 1f7/2 0.09625 0.8325

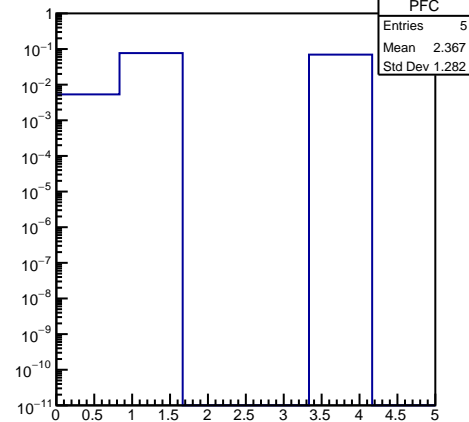
Ha75



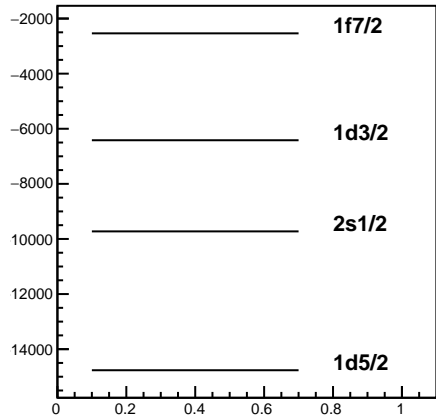
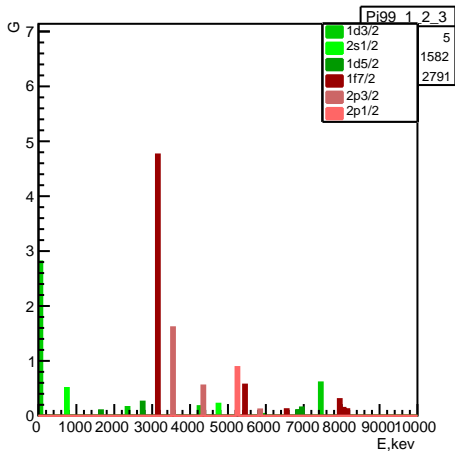
Occupancy



Penalty function components



Pi99



Experiment: Ha75 (12) Pi99 (23)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -9154.92 \pm 249.456$ keV $\Delta: -3094.99 \pm 583.856$ keV

penalty: 0.0303903

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

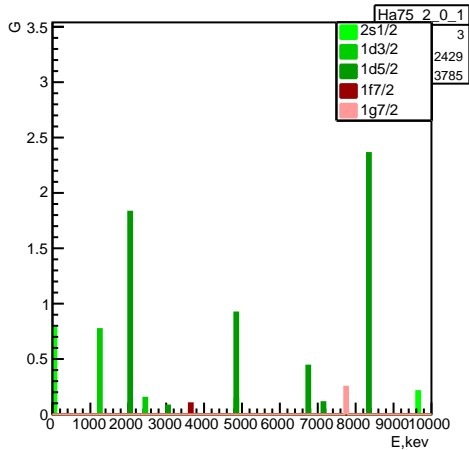
-9725.14 2s1/2 0.601 0.928

-6417.17 1d3/2 0.14125 1.1775

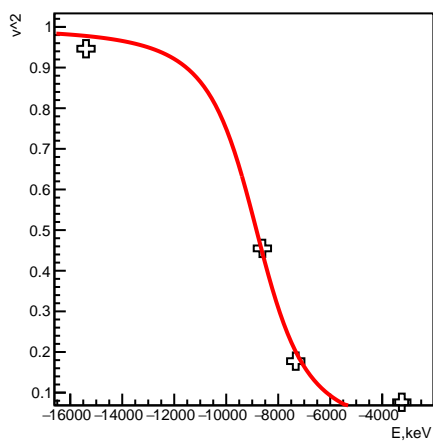
-14765 1d5/2 0.918 1.04067

-2537.33 1f7/2 0.09625 0.8325

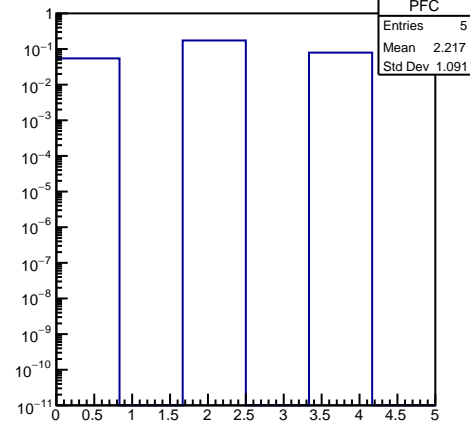
Ha75



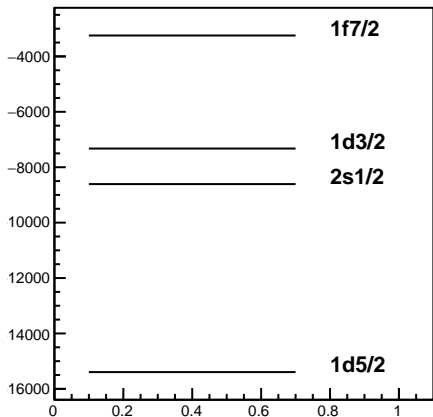
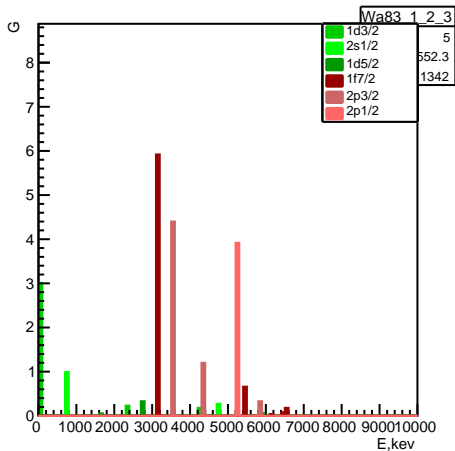
Occupancy



Penalty function components



Wa83



Experiment: Ha75 (13) Wa83 (19)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -8836.53 \pm 234.489$ keV $\Delta: -2022.71 \pm 663.778$ keV

penalty: 0.0615381

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

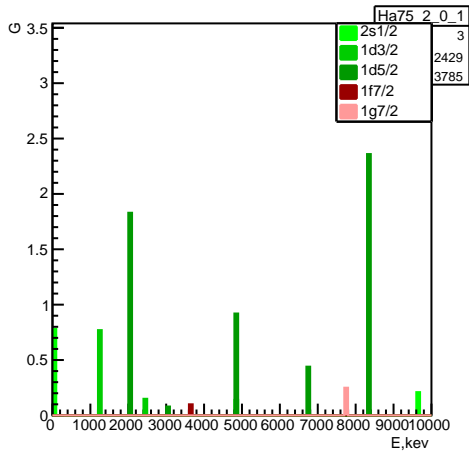
-8608.79 2s1/2 0.455 1.22

-7325.56 1d3/2 0.1775 1.105

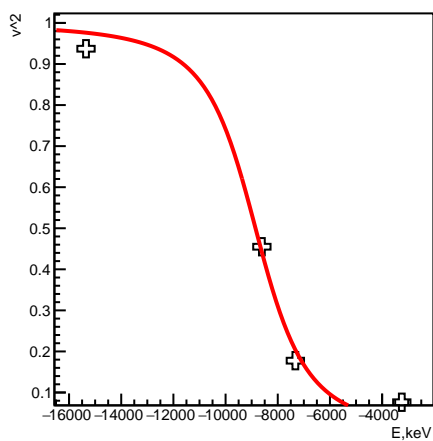
-15394.1 1d5/2 0.946333 1.02067

-3245.61 1f7/2 0.07625 0.8725

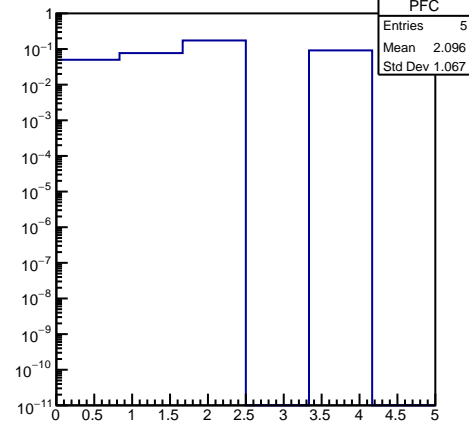
Ha75



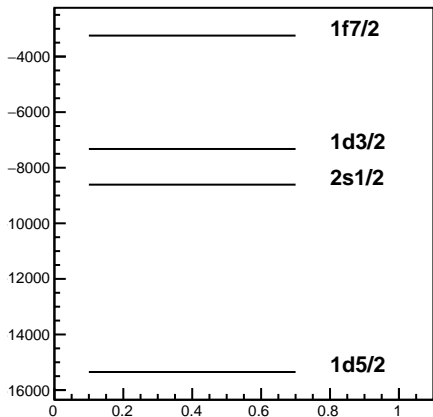
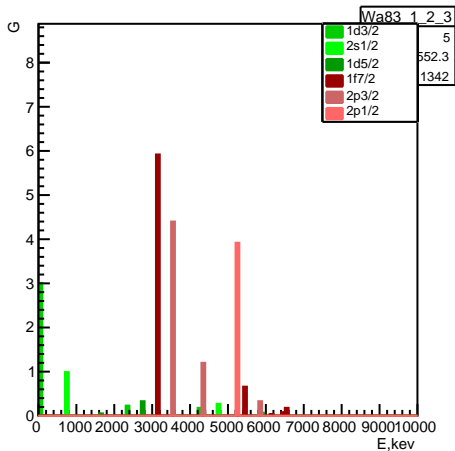
Occupancy



Penalty function components



Wa83



Experiment: Ha75 (12) Wa83 (19)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -8853.1 \pm 270.592 keV Δ : -2078.38 \pm 766.642 keV

penalty: 0.0784618

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

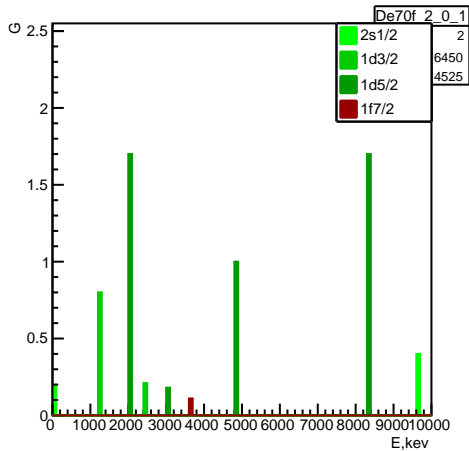
-8608.79 2s1/2 0.455 1.22

-7325.56 1d3/2 0.1775 1.105

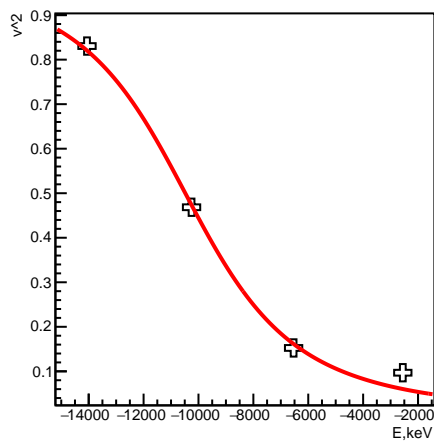
-15350 1d5/2 0.937167 1.00233

-3245.61 1f7/2 0.07625 0.8725

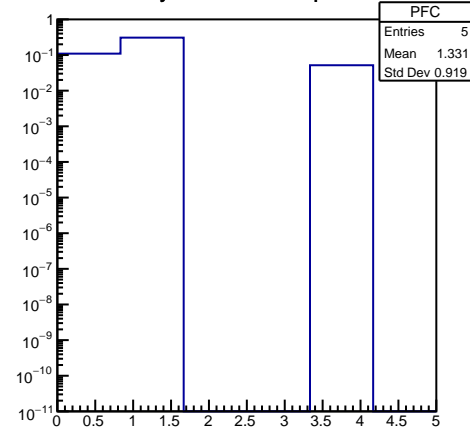
De70f



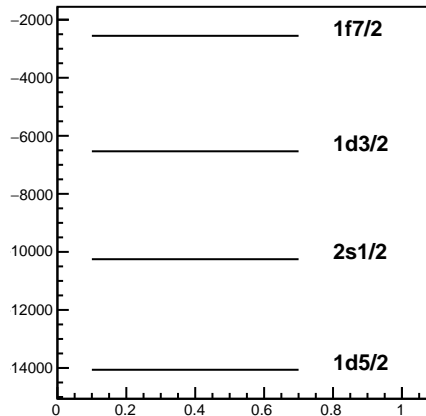
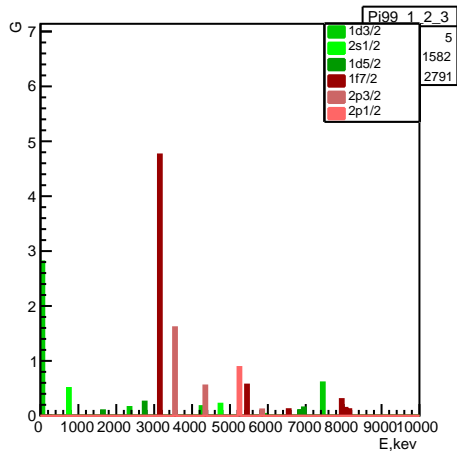
Occupancy



Penalty function components



Pi99



Experiment: De70f (9) Pi99 (23)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -10480.5 \pm 203.024 keV Δ : -4288.05 \pm 432.921 keV

penalty: 0.0937532

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

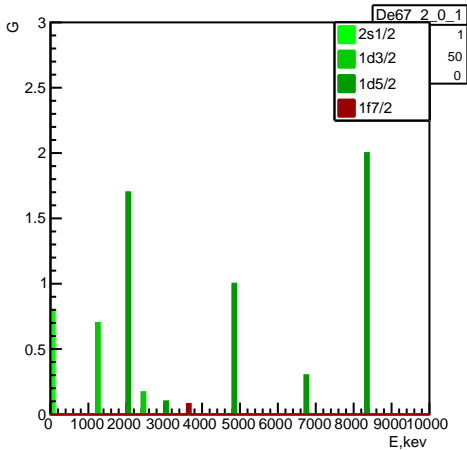
-10252.3 2s1/2 0.4685 0.663

-6534.02 1d3/2 0.1525 1.2

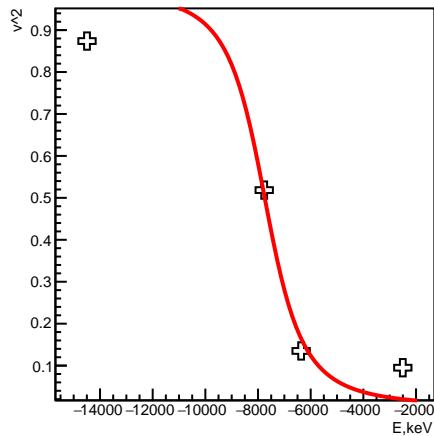
-14061.9 1d5/2 0.8305 0.865667

-2554.87 1f7/2 0.096875 0.83375

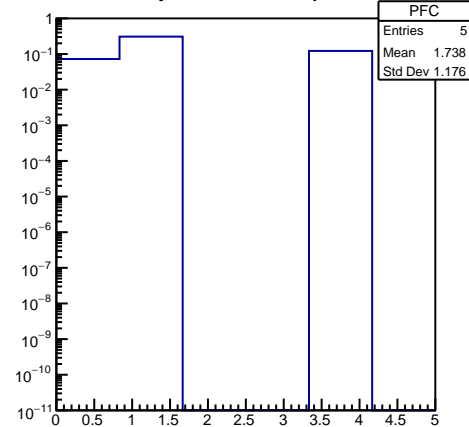
De67



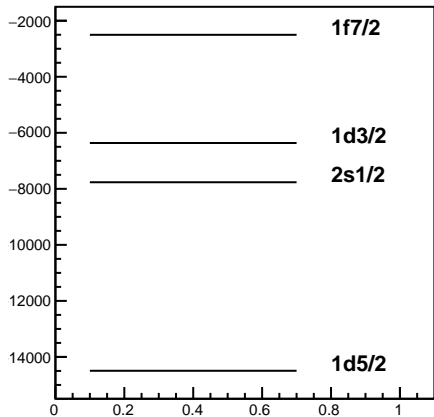
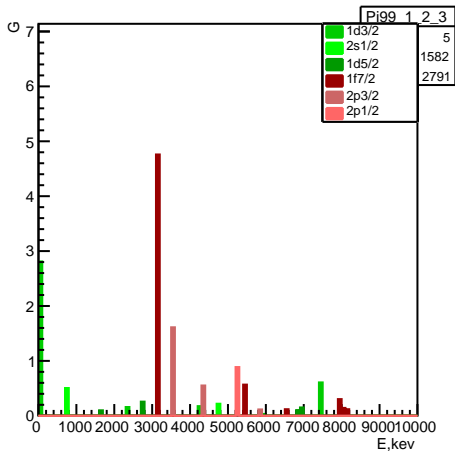
Occupancy



Penalty function components



Pi99



Experiment: De67 (9) Pi99 (23)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -7745.54 \pm 311.988 keV Δ : -1526.94 \pm 1022.85 keV

penalty: 0.100441

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

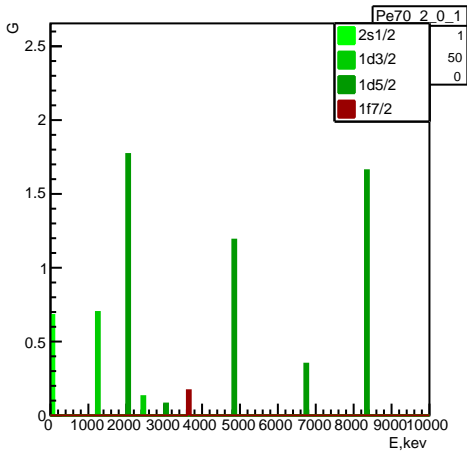
-7764.95 2s1/2 0.5185 0.763

-6363.48 1d3/2 0.135 1.165

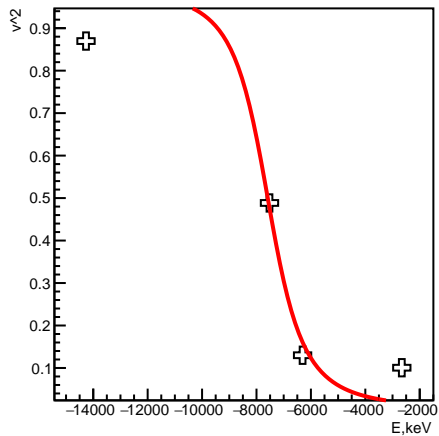
-14494.4 1d5/2 0.873833 0.952333

-2502.11 1f7/2 0.095 0.83

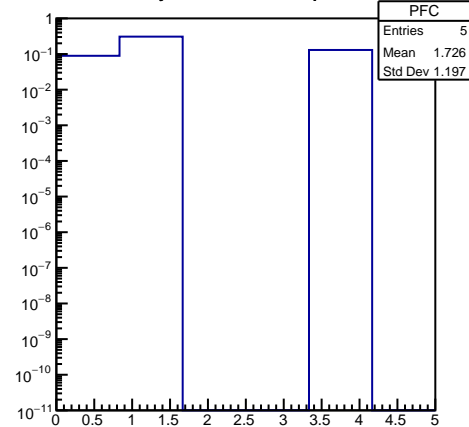
Pe70



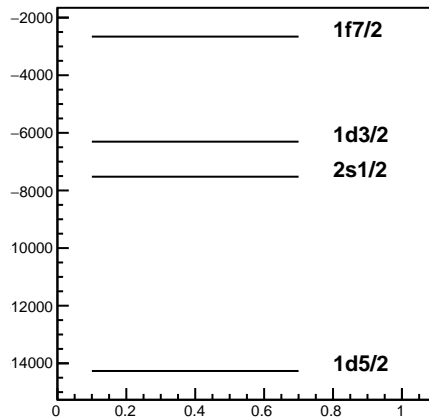
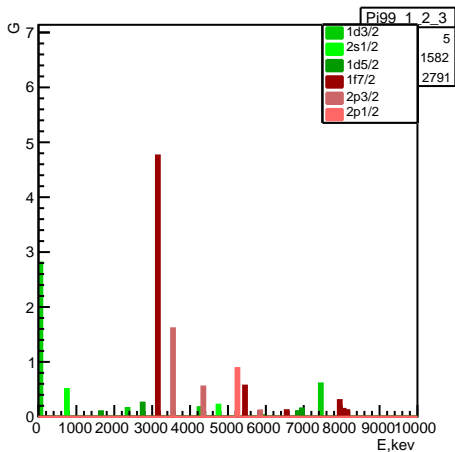
Occupancy



Penalty function components



Pi99



Experiment: Pe70 (9) Pi99 (23)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -7586.45 \pm 337.687$ keV $\Delta: -1384.65 \pm 1088.6$ keV

penalty: 0.105365

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

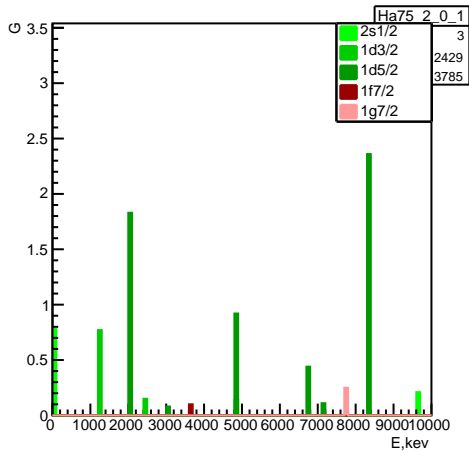
-7522.32 2s1/2 0.4885 0.703

-6305.73 1d3/2 0.13 1.155

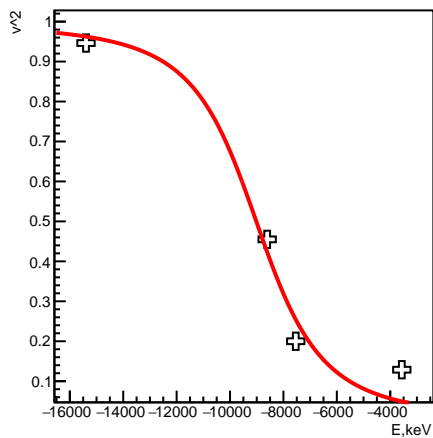
-14266.3 1d5/2 0.869667 0.944

-2658.97 1f7/2 0.100625 0.84125

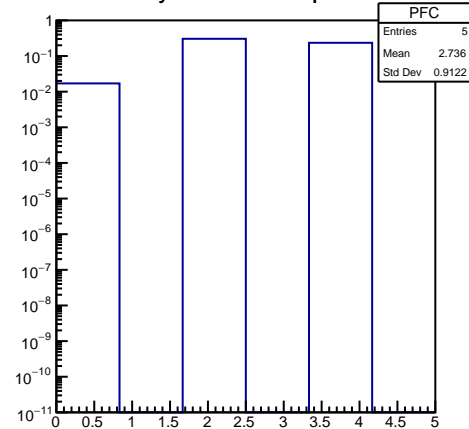
Ha75



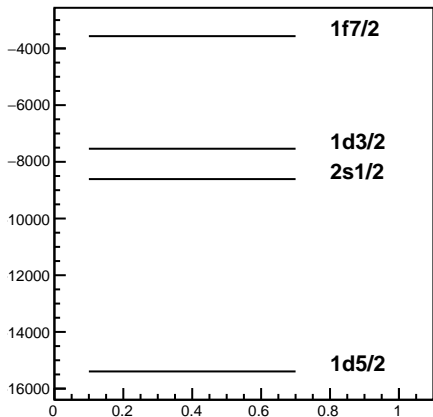
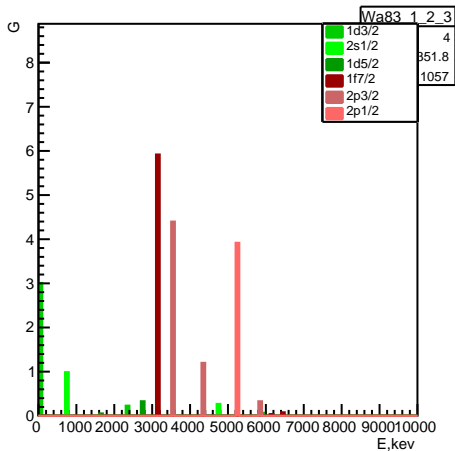
Occupancy



Penalty function components



Wa83



Experiment: Ha75 (13) Wa83 (16)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 E_F : -9016.88 ± 662.112 keV Δ : -2619.55 ± 1969.21 keV

penalty: 0.111291

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

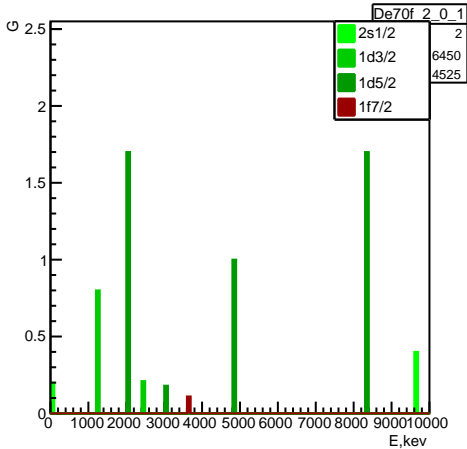
-8608.79 2s1/2 0.455 1.22

-7537.85 1d3/2 0.2 1.06

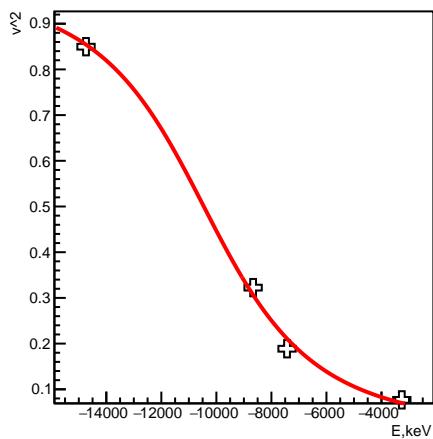
-15394.1 1d5/2 0.946333 1.02067

-3566.49 1f7/2 0.12875 0.7675

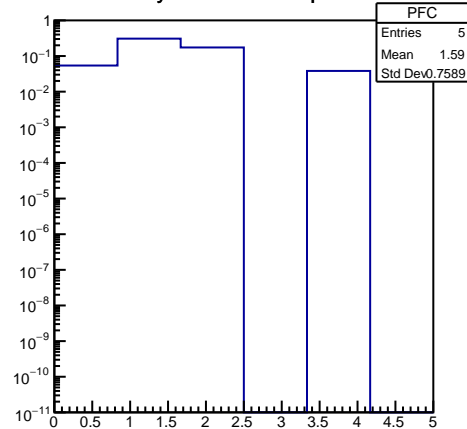
De70f



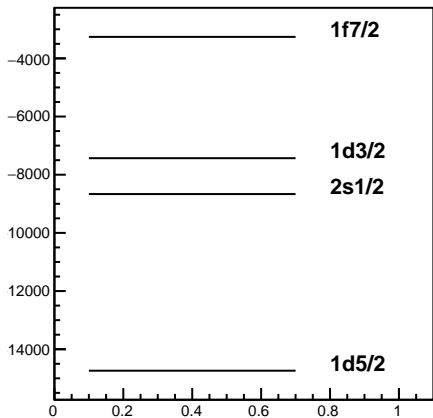
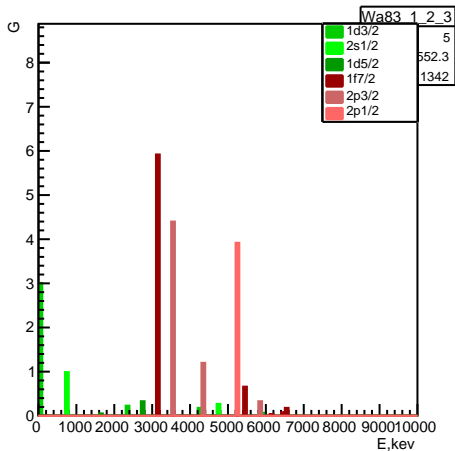
Occupancy



Penalty function components



Wa83



Experiment: De70f (9) Wa83 (19)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -10456.7 \pm 205.068 keV Δ : 4266.07 \pm 319.86 keV

penalty: 0.114778

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

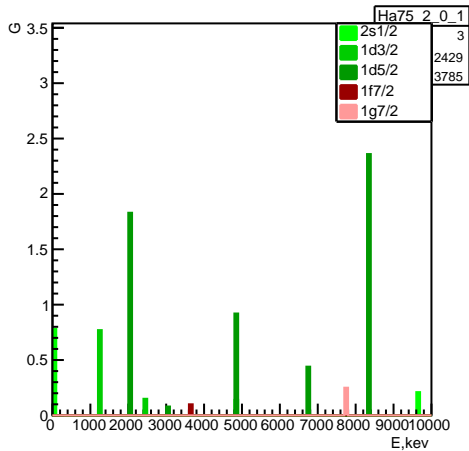
-8664.99 2s1/2 0.3225 0.955

-7431.8 1d3/2 0.18875 1.1275

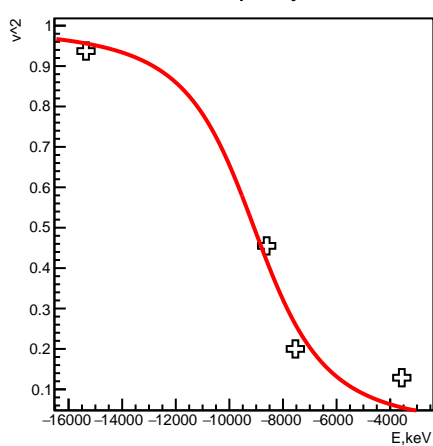
-14738 1d5/2 0.849667 0.827333

-3261.33 1f7/2 0.076875 0.87375

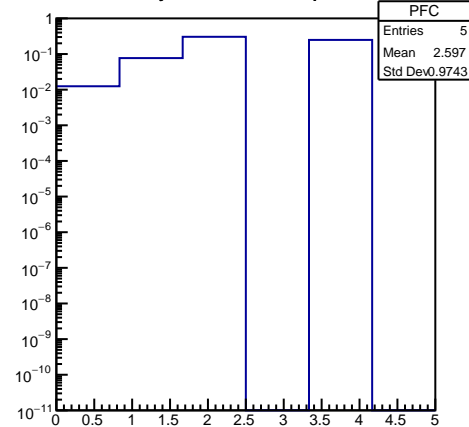
Ha75



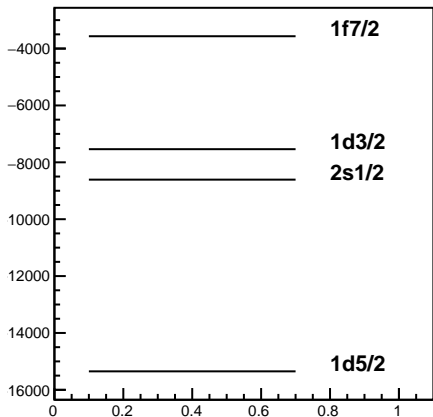
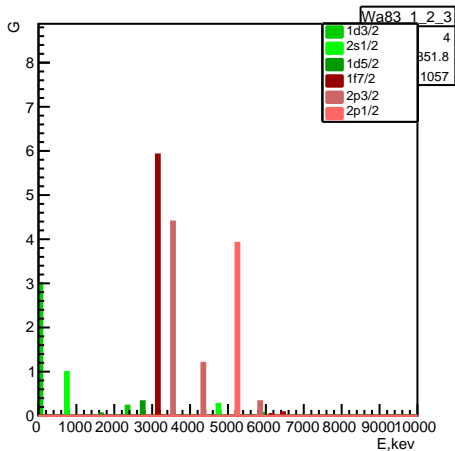
Occupancy



Penalty function components



Wa83



Experiment: Ha75 (12) Wa83 (16)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9077.89 \pm 716.234 keV Δ : -2824.36 \pm 2084.88 keV

penalty: 0.128521

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

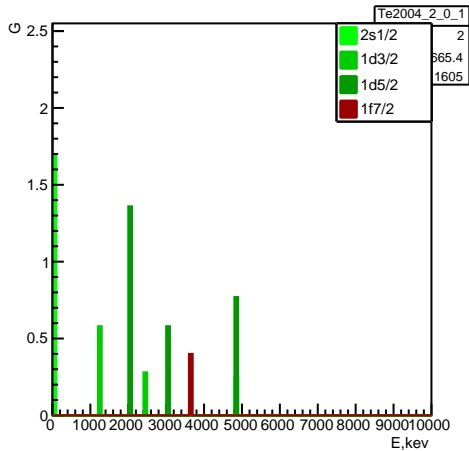
-8608.79 2s1/2 0.455 1.22

-7537.85 1d3/2 0.2 1.06

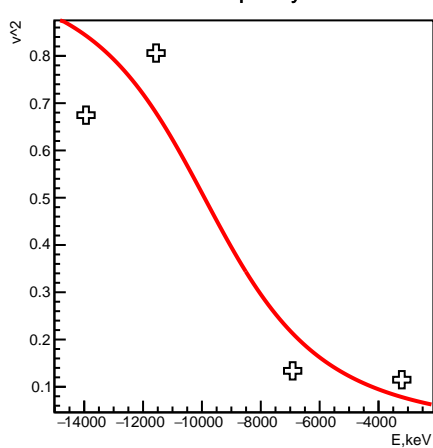
-15350 1d5/2 0.937167 1.00233

-3566.49 1f7/2 0.12875 0.7675

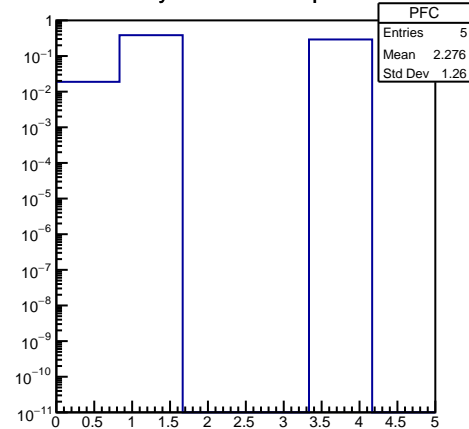
Te2004



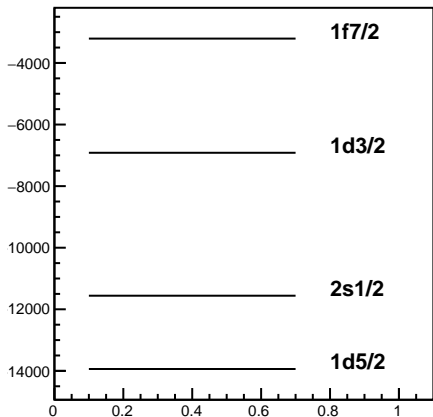
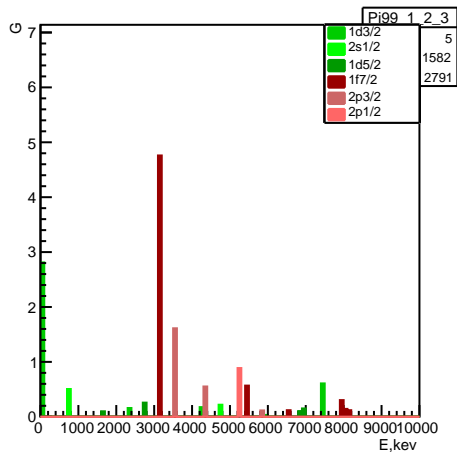
Occupancy



Penalty function components



Pi99



Experiment: Te2004 (8) Pi99 (23)

proton transfer

p separation energy A:13516.9, A+1: 7297.3;

E_F: -9914.66 \pm 1229.41 keV Δ : 4272.92 \pm 2442.12 keV

penalty: 0.139001

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

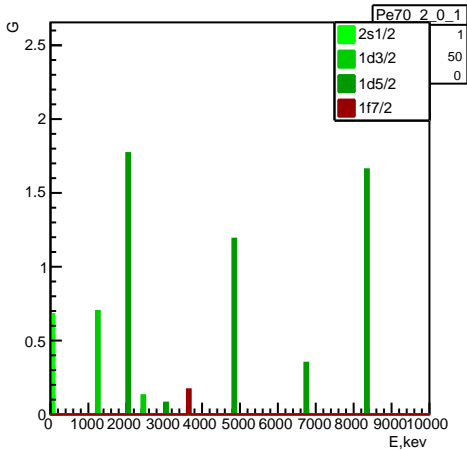
-11558.7 2s1/2 0.806 1.338

-6916.9 1d3/2 0.13375 1.1625

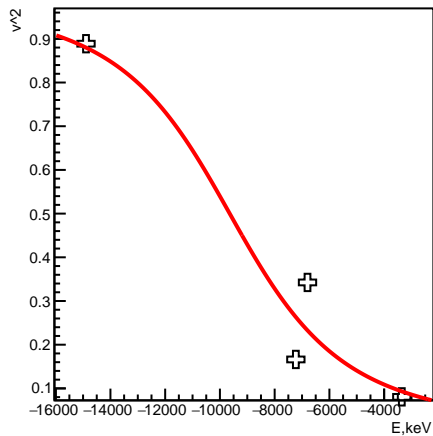
-13938.9 1d5/2 0.674667 0.554

-3208.57 1f7/2 0.115 0.87

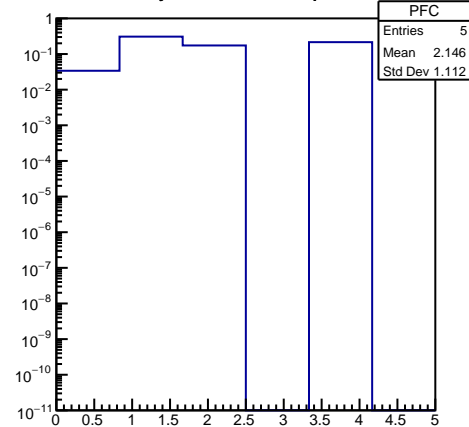
Pe70



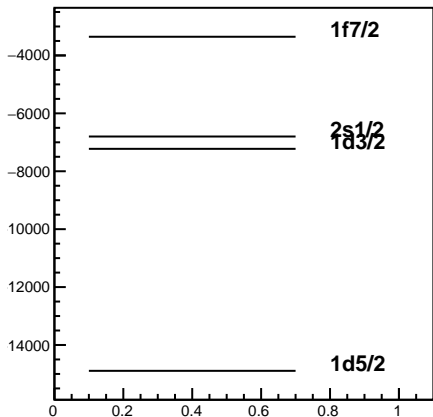
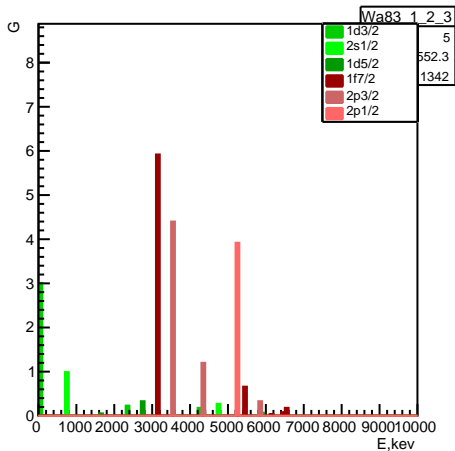
Occupancy



Penalty function components



Wa83



Experiment: Pe70 (9) Wa83 (19)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 E_F : -9641.75 \pm 1257.71 keV Δ : -4491.84 \pm 1804.23 keV

penalty: 0.146175

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

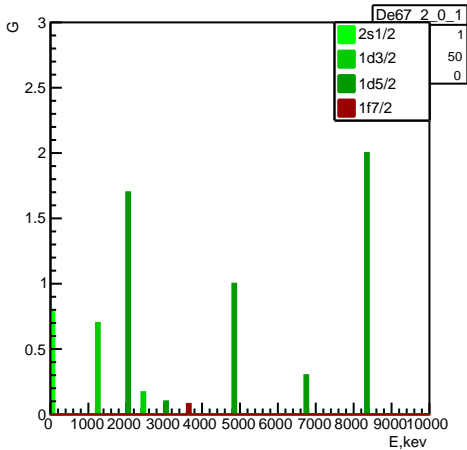
-6799.98 2s1/2 0.3425 0.995

-7225.54 1d3/2 0.16625 1.0825

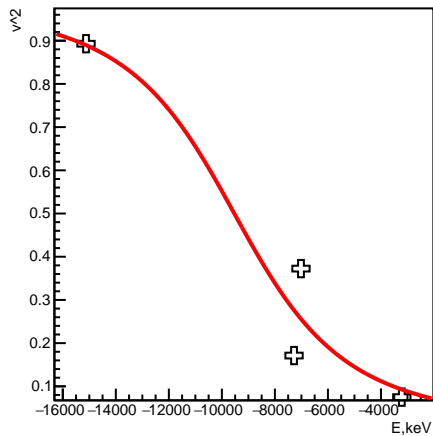
-14892.6 1d5/2 0.888833 0.905667

-3354.69 1f7/2 0.080625 0.88125

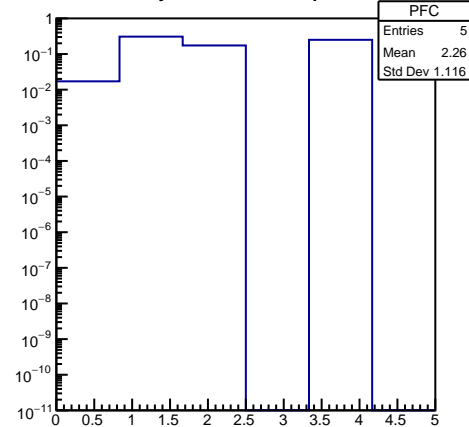
De67



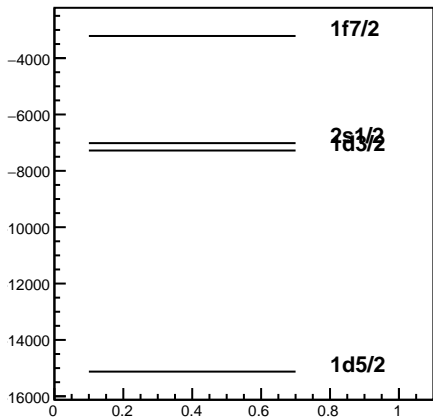
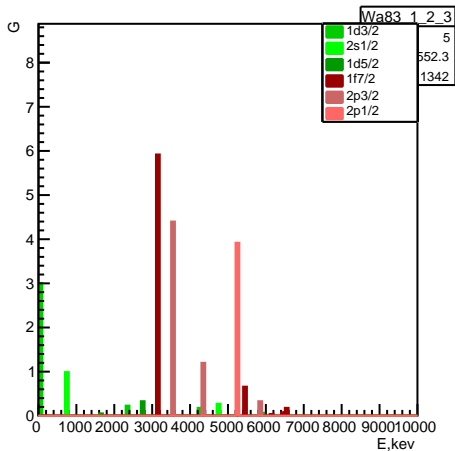
Occupancy



Penalty function components



Wa83



Experiment: De67 (9) Wa83 (19)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9532.46 \pm 1363.42 keV

Δ : -4497.24 \pm 2097.84 keV

penalty: 0.14983

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

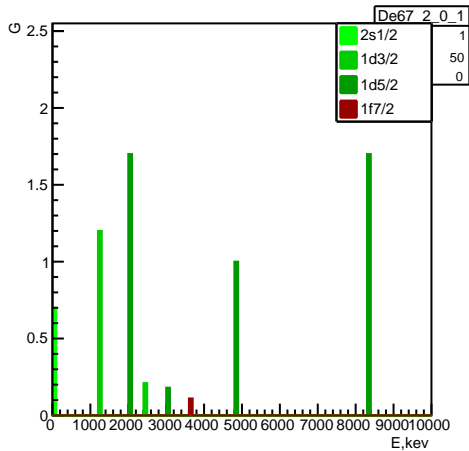
-7016.54 2s1/2 0.3725 1.055

-7278.71 1d3/2 0.17125 1.0925

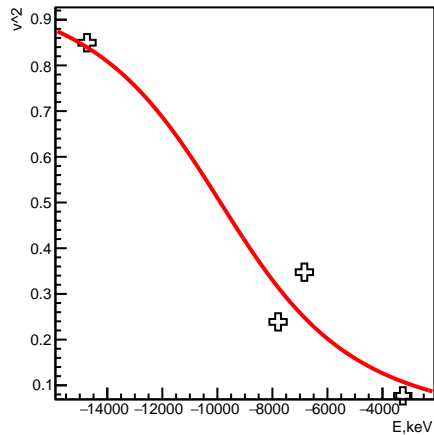
-15124.6 1d5/2 0.893 0.914

-3214.05 1f7/2 0.075 0.87

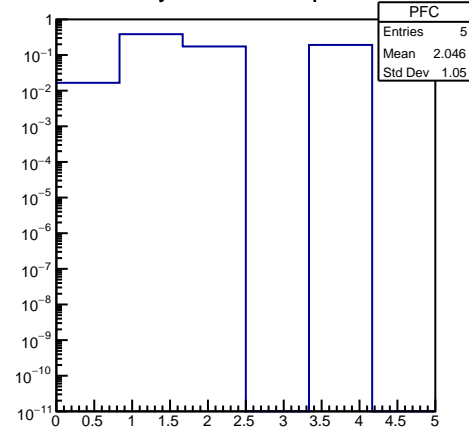
De67



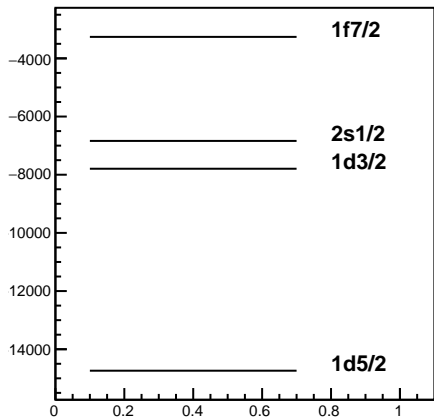
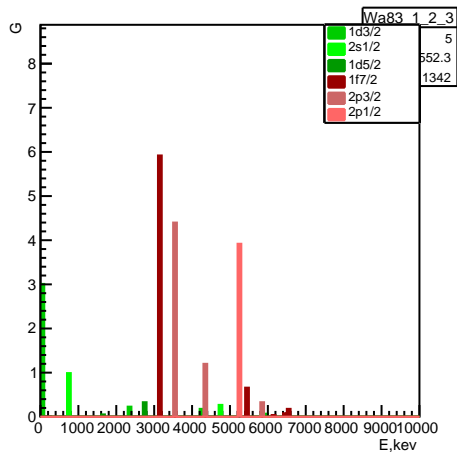
Occupancy



Penalty function components



Wa83



Experiment: De67 (8) Wa83 (19)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9888.76 \pm 987.446 keV

Δ : -5239.57 \pm 1606.98 keV

penalty: 0.153392

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

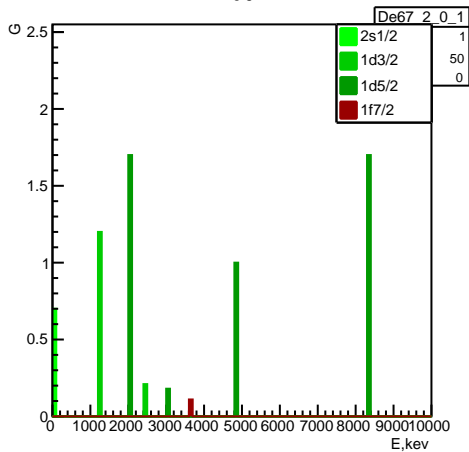
-6837.87 2s1/2 0.3475 1.005

-7794.28 1d3/2 0.23875 1.2275

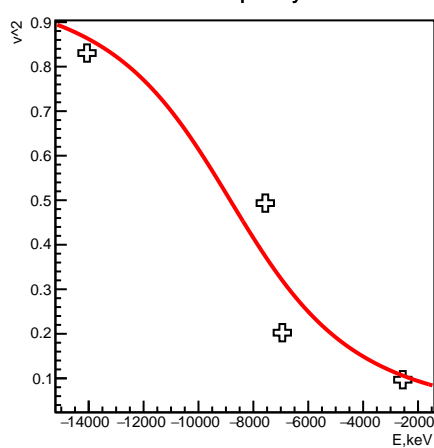
-14738 1d5/2 0.849667 0.827333

-3261.33 1f7/2 0.076875 0.87375

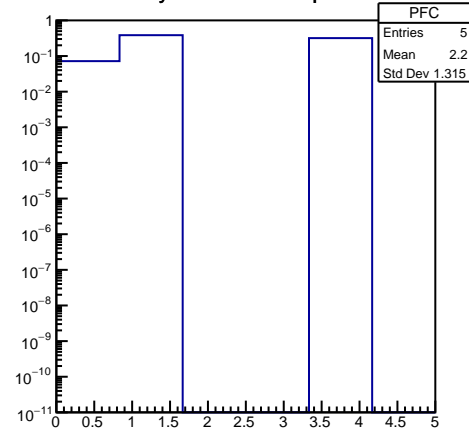
De67



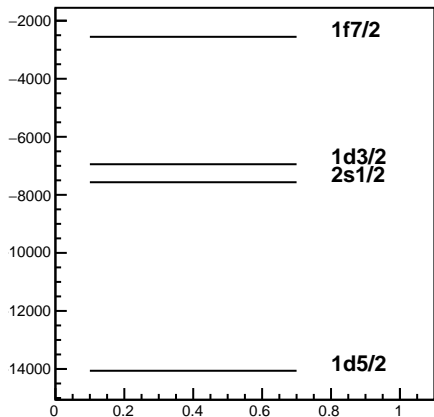
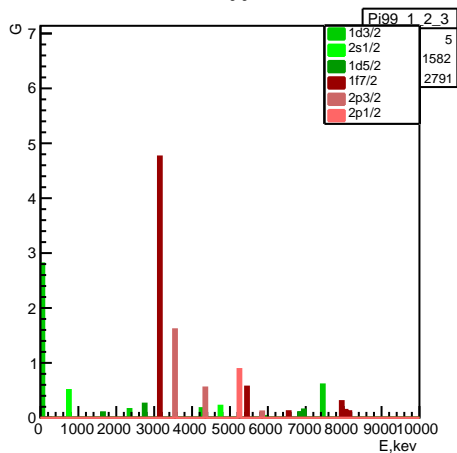
Occupancy



Penalty function components



Pi99



Experiment: De67 (8) Pi99 (23)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -8844.42 \pm 1232.87 keV Δ : -4917.22 \pm 2665.87 keV

penalty: 0.154948

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

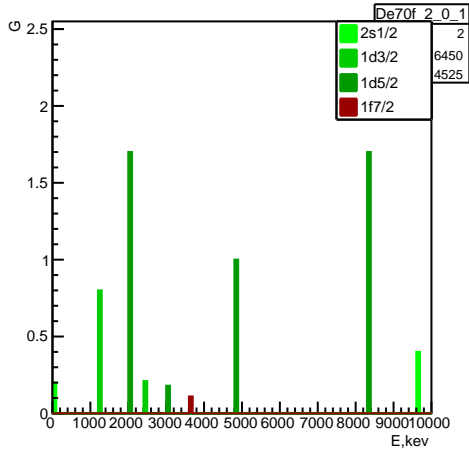
-7565.59 2s1/2 0.4935 0.713

-6945.35 1d3/2 0.2025 1.3

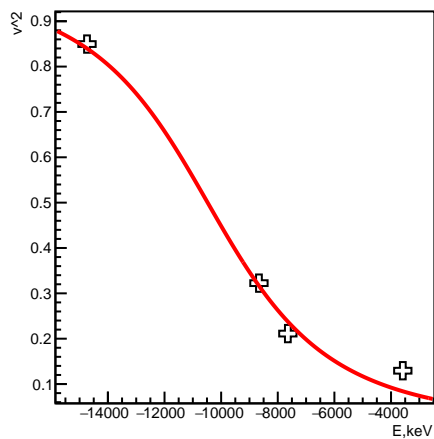
-14061.9 1d5/2 0.8305 0.865667

-2554.87 1f7/2 0.096875 0.83375

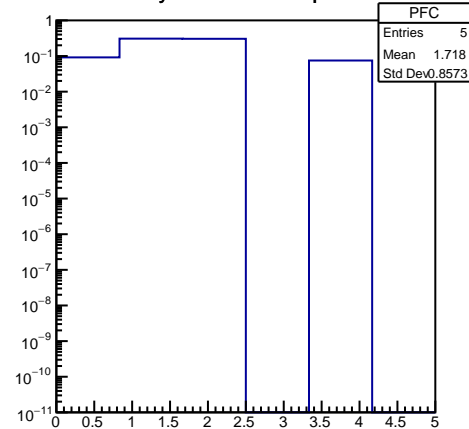
De70f



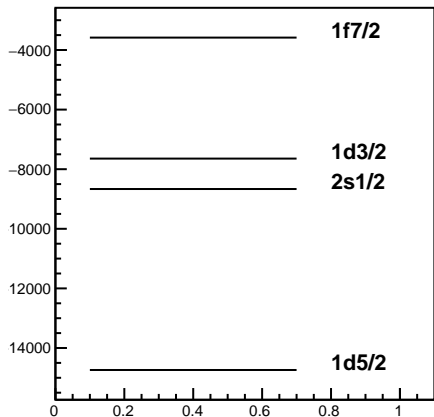
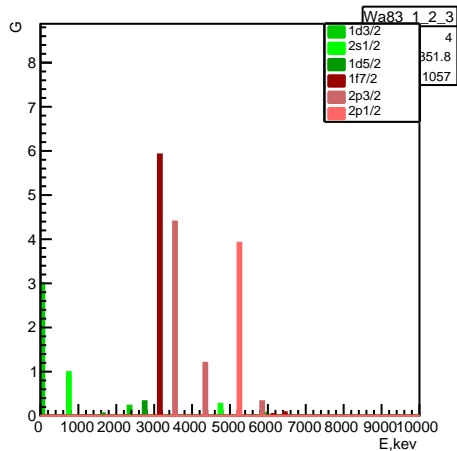
Occupancy



Penalty function components



Wa83



Experiment: De70f (9) Wa83 (16)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -10476.7 \pm 365.607 keV Δ : -4595.39 \pm 626.909 keV

penalty: 0.155696

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

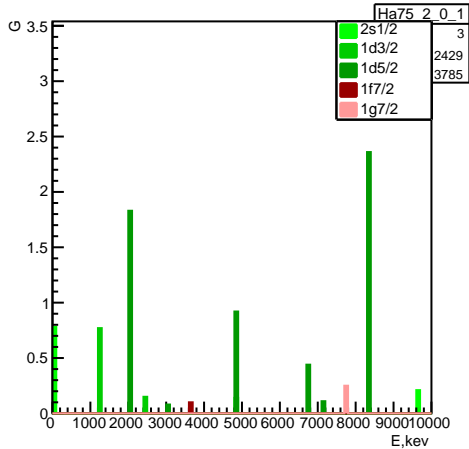
-8664.99 2s1/2 0.3225 0.955

-7644.1 1d3/2 0.21125 1.0825

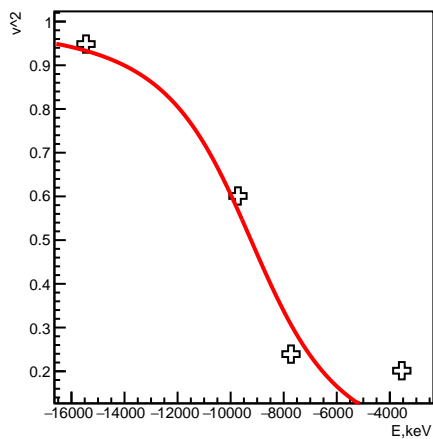
-14738 1d5/2 0.849667 0.827333

-3583.83 1f7/2 0.129375 0.76875

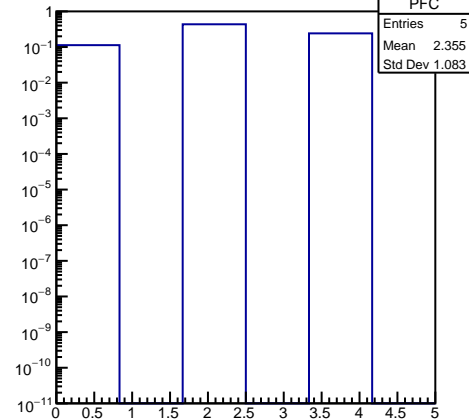
Ha75



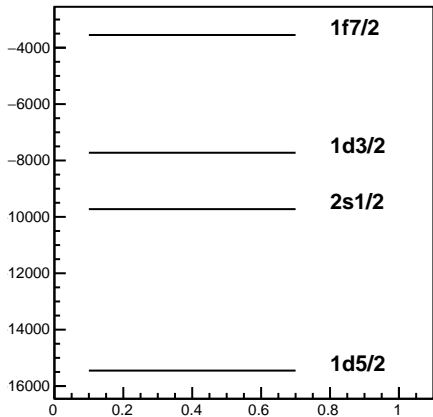
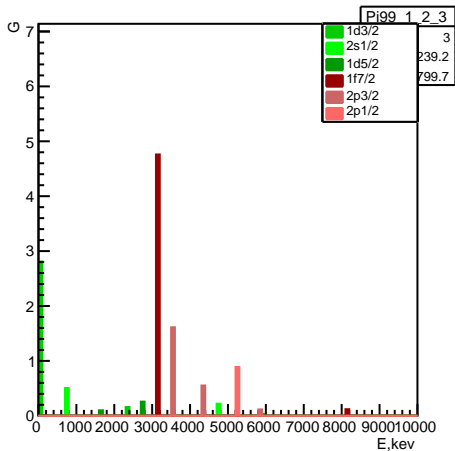
Occupancy



Penalty function components



Pi99



Experiment: Ha75 (13) Pi99 (13)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9231.57 \pm 579.166 keV Δ : -3590.56 \pm 2025.28 keV

penalty: 0.157892

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

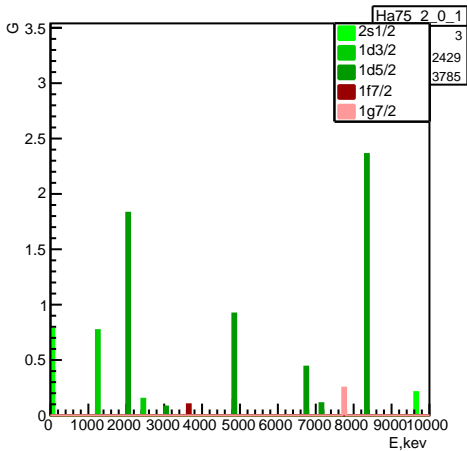
-9725.14 2s1/2 0.601 0.928

-7725.33 1d3/2 0.23925 0.9815

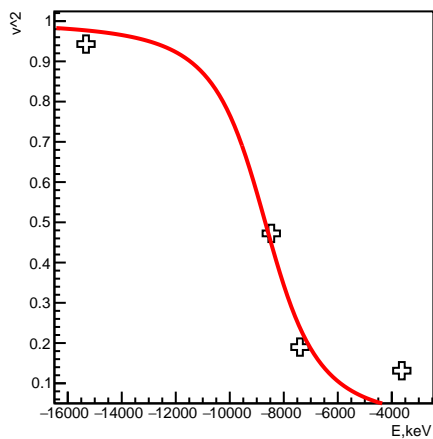
-15451.8 1d5/2 0.9485 1.01633

-3548.89 1f7/2 0.20125 0.6225

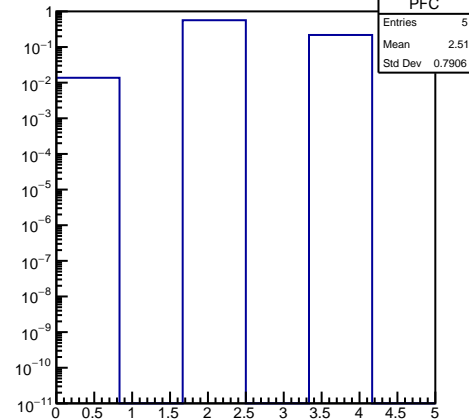
Ha75



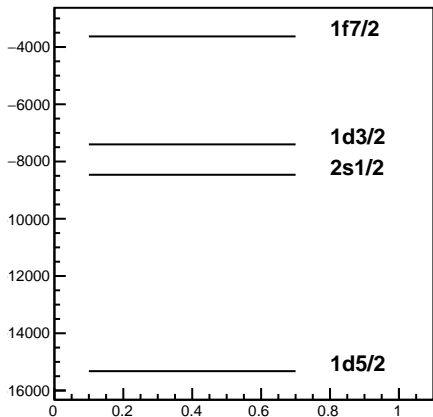
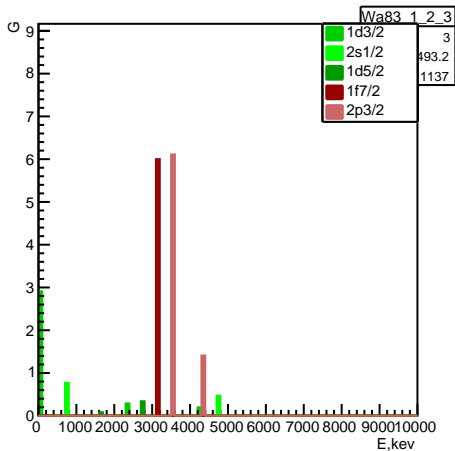
Occupancy



Penalty function components



Wa83



Experiment: Ha75 (13) Wa83 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 E_F : -8686.11 \pm 556.82 keV Δ : -2086.68 \pm 1825.28 keV

penalty: 0.159362

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

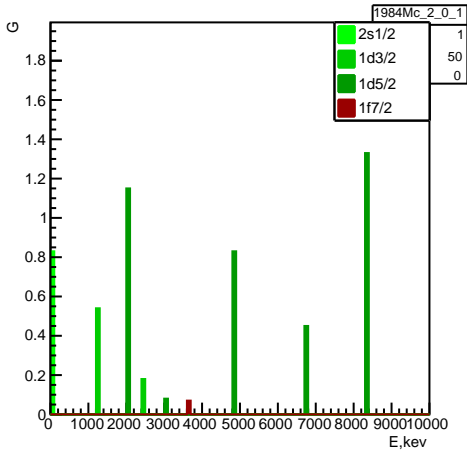
-8462.87 2s1/2 0.4725 1.185

-7401.35 1d3/2 0.19 1.08

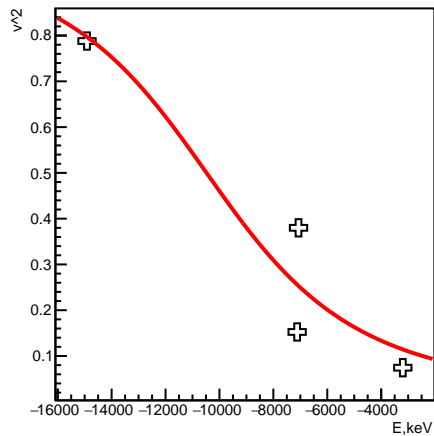
-15324.2 1d5/2 0.943 1.02733

-3629.79 1f7/2 0.13125 0.7625

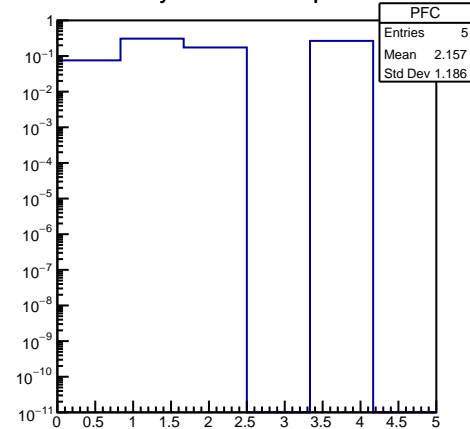
1984Mc



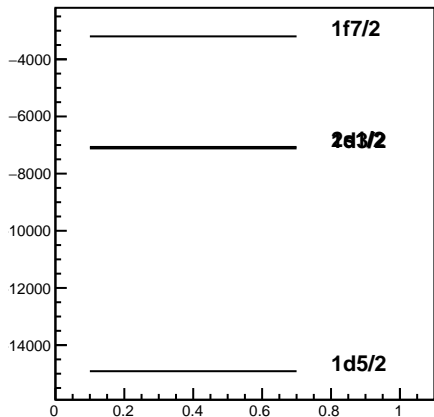
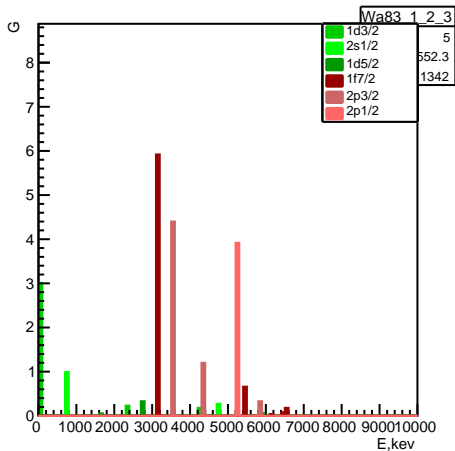
Occupancy



Penalty function components



Wa83



Experiment: 1984Mc (9) Wa83 (19)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -10480.6 \pm 1508.97$ keV $\Delta: -6008.1 \pm 2227.19$ keV

penalty: 0.164606

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

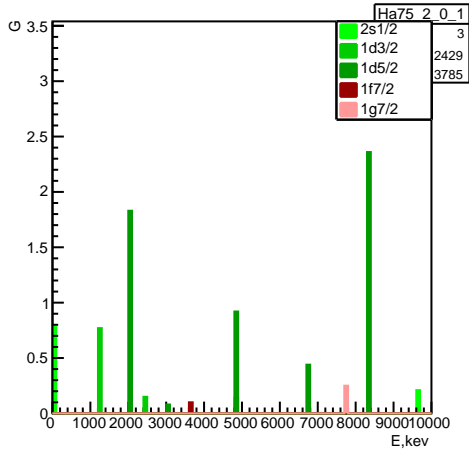
-7066.89 2s1/2 0.38 1.07

-7117.84 1d3/2 0.1525 1.055

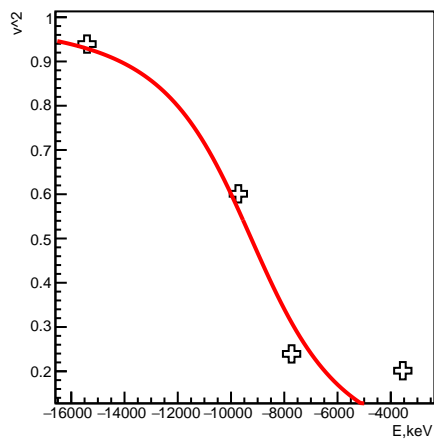
-14913.2 1d5/2 0.788 0.704

-3198.19 1f7/2 0.074375 0.86875

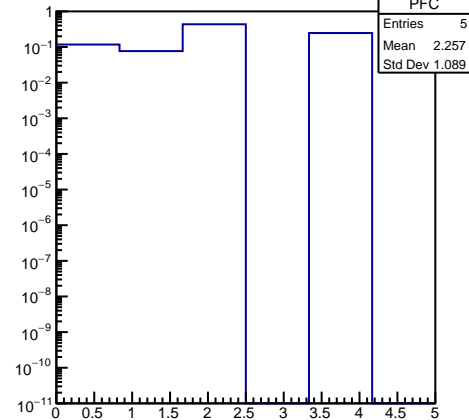
Ha75



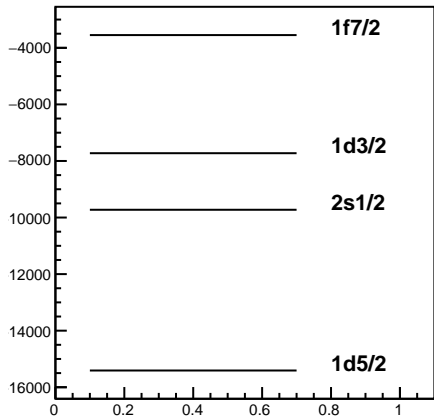
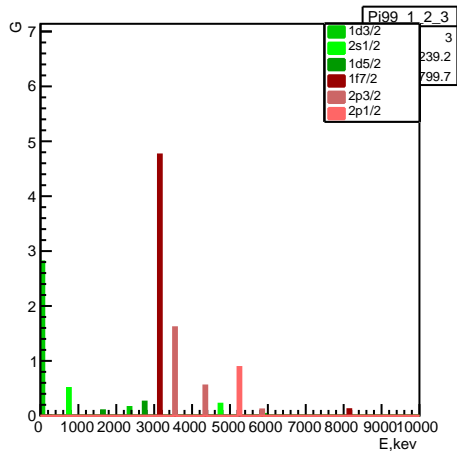
Occupancy



Penalty function components



Pi99



Experiment: Ha75 (12) Pi99 (13)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 E_F : -9242.01 \pm 589.455 keV Δ : -3689.67 \pm 2070.16 keV

penalty: 0.175264

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

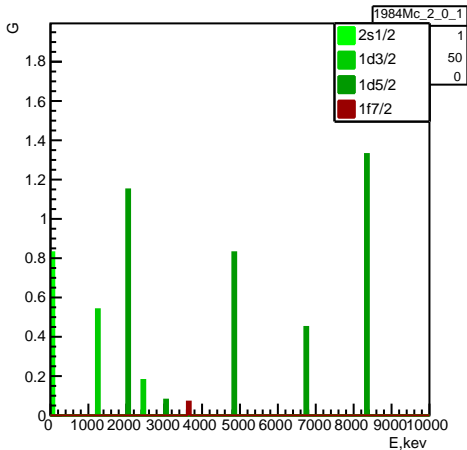
-9725.14 2s1/2 0.601 0.928

-7725.33 1d3/2 0.23925 0.9815

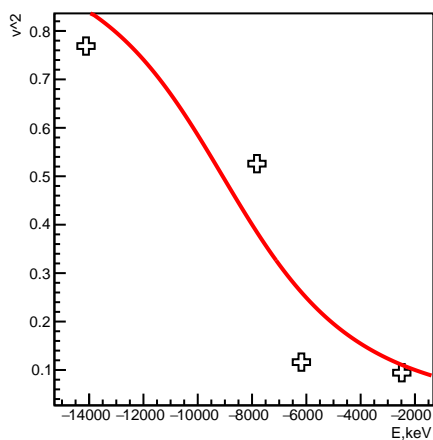
-15408.5 1d5/2 0.939333 0.998

-3548.89 1f7/2 0.20125 0.6225

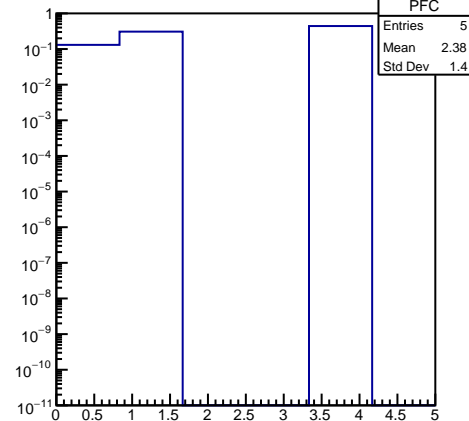
1984Mc



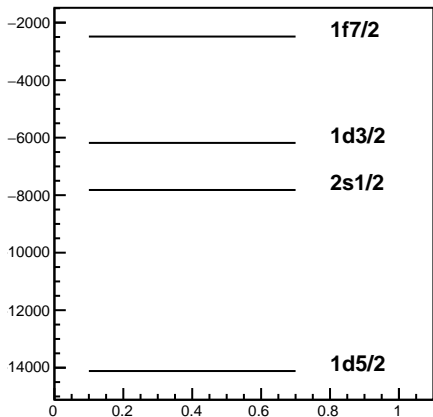
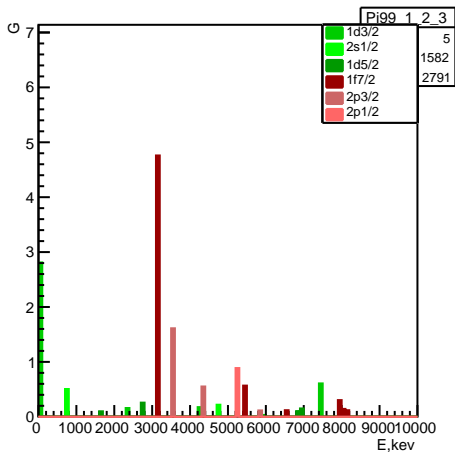
Occupancy



Penalty function components



Pi99



Experiment: 1984Mc (9) Pi99 (23)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9081.36 \pm 1936.08 keV Δ : -5312.87 \pm 3699.62 keV

penalty: 0.176034

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

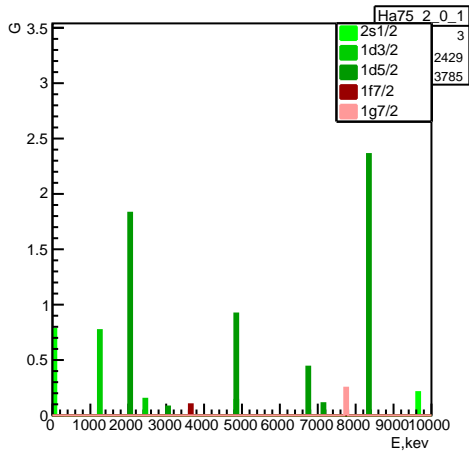
-7819.77 2s1/2 0.526 0.778

-6182.52 1d3/2 0.11625 1.1275

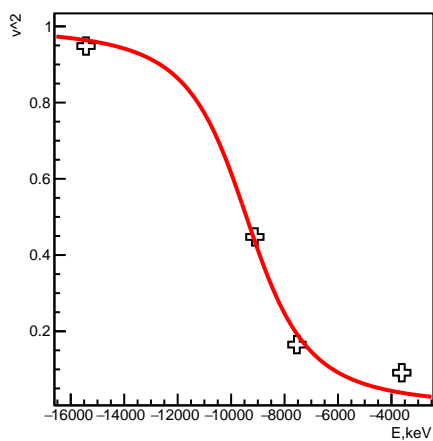
-14115.6 1d5/2 0.768833 0.742333

-2484.42 1f7/2 0.094375 0.82875

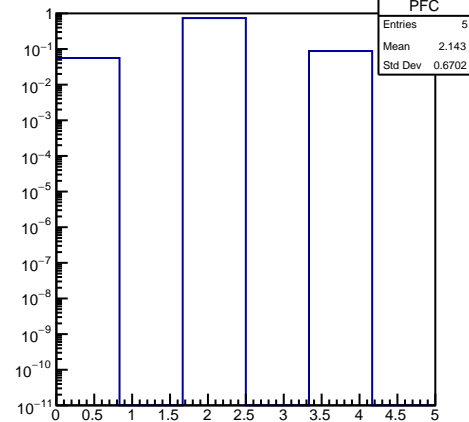
Ha75



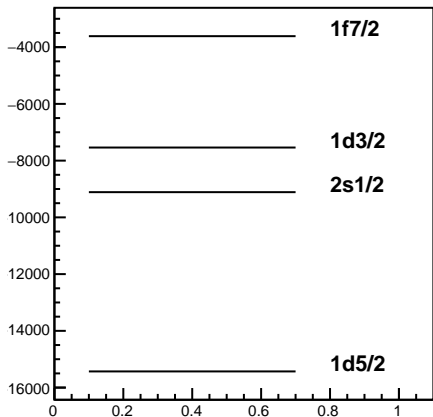
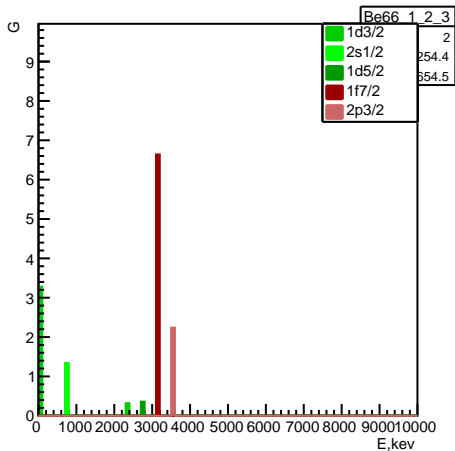
Occupancy



Penalty function components



Be66



Experiment: Ha75 (13) Be66 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9425.75 \pm 278.649 keV

Δ : -2424.94 \pm 736.466 keV

penalty: 0.176617

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

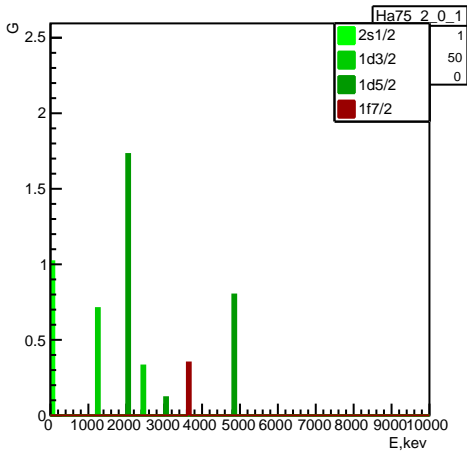
-9111.29 2s1/2 0.4475 1.235

-7538.49 1d3/2 0.165 1.13

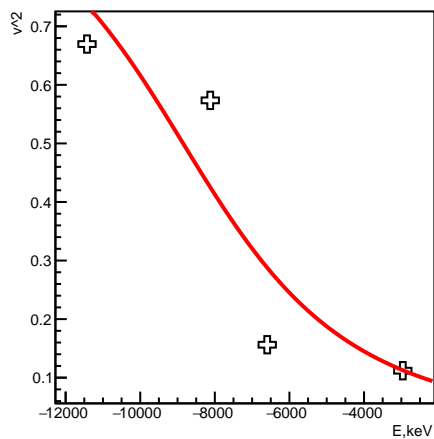
-15430 1d5/2 0.948333 1.01667

-3613.01 1f7/2 0.09125 0.8425

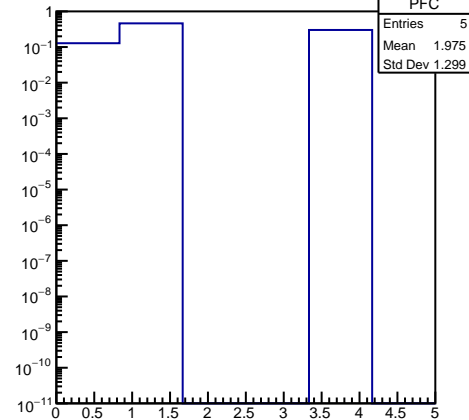
Ha75



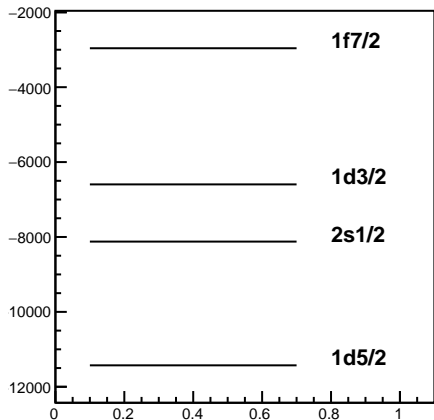
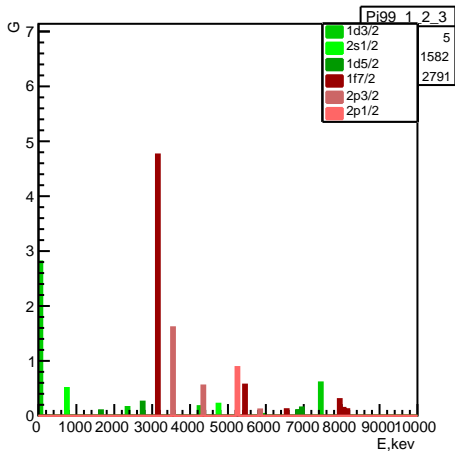
Occupancy



Penalty function components



Pi99



Experiment: Ha75 (7) Pi99 (23)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -8851.09 \pm 1109.93$ keV $\Delta: -4811.14 \pm 2522.17$ keV

penalty: 0.17811

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

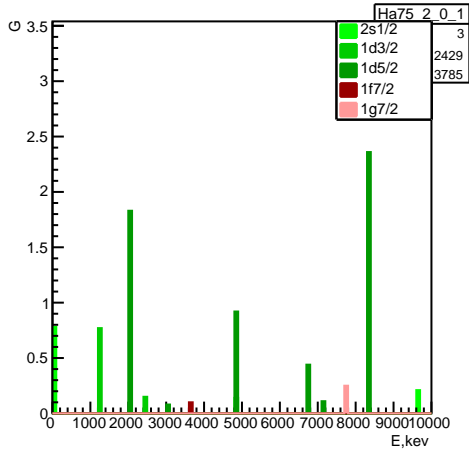
-8123.17 2s1/2 0.5735 0.873

-6595.87 1d3/2 0.15625 1.2075

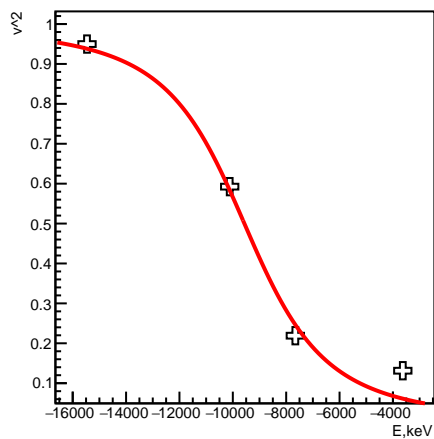
-11427.5 1d5/2 0.669667 0.544

-2960.42 1f7/2 0.111875 0.86375

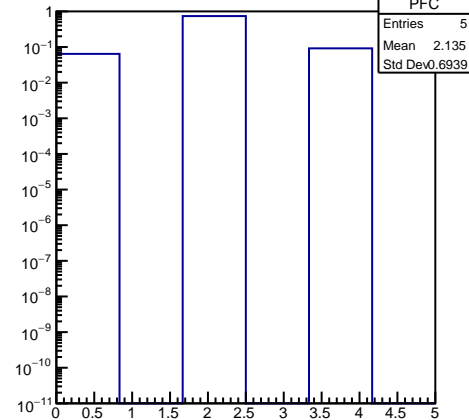
Ha75



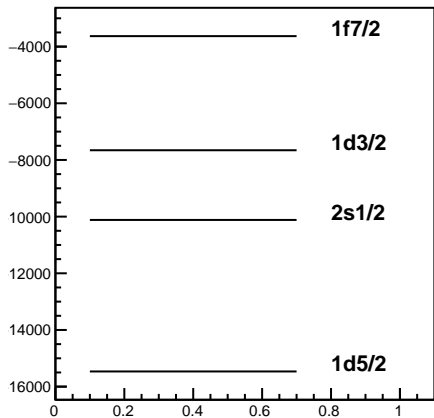
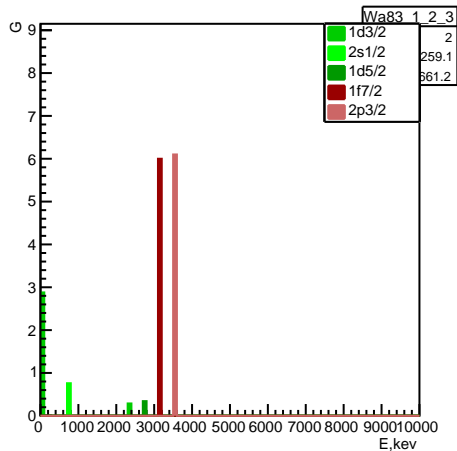
Occupancy



Penalty function components



Wa83



Experiment: Ha75 (13) Wa83 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 E_F : -9566.79 \pm 300.422 keV Δ : 3244.32 \pm 769.039 keV

penalty: 0.179028

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

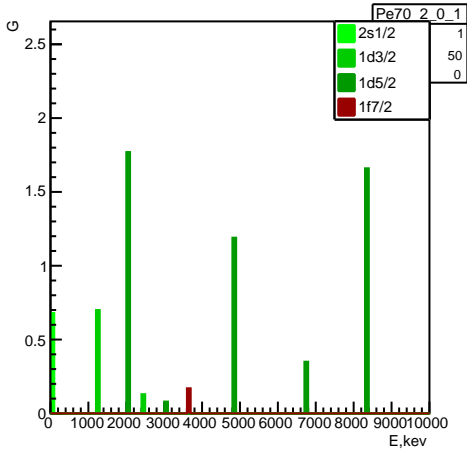
-10116.9 2s1/2 0.5925 0.945

-7657.21 1d3/2 0.219 1.022

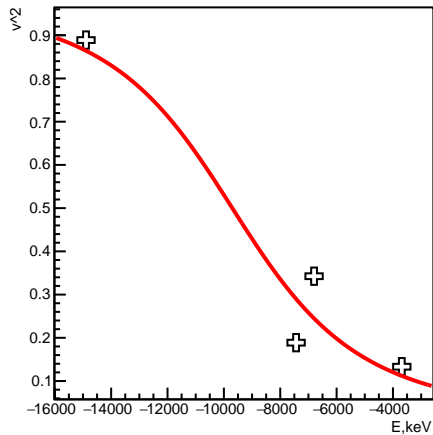
-15464.5 1d5/2 0.949833 1.01367

-3629.79 1f7/2 0.13125 0.7625

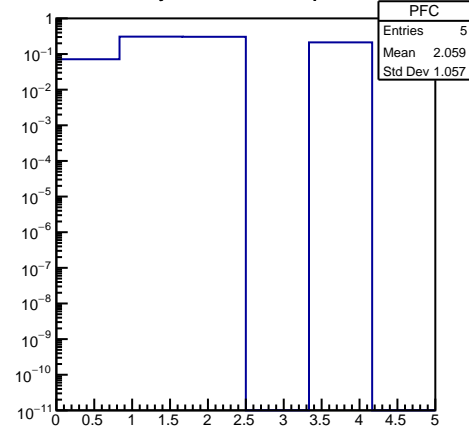
Pe70



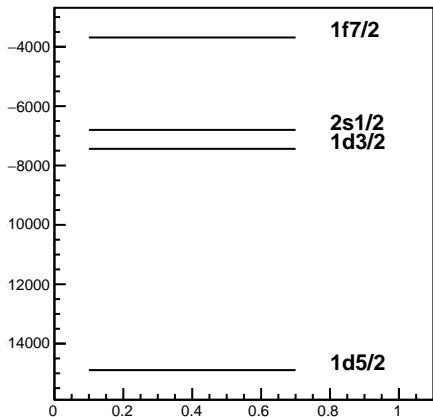
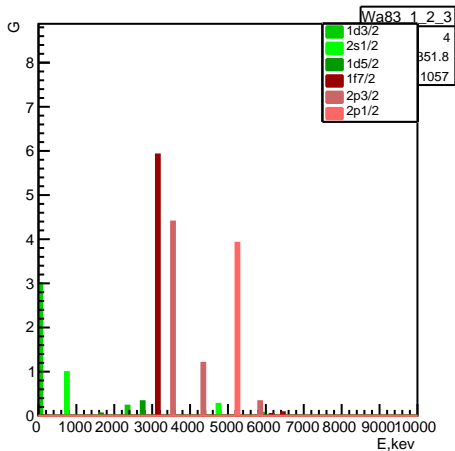
Occupancy



Penalty function components



Wa83



Experiment: Pe70 (9) Wa83 (16)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F : -9700.68 \pm 1122.61 keV

Δ : -4887.47 \pm 1778.82 keV

penalty: 0.179155

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

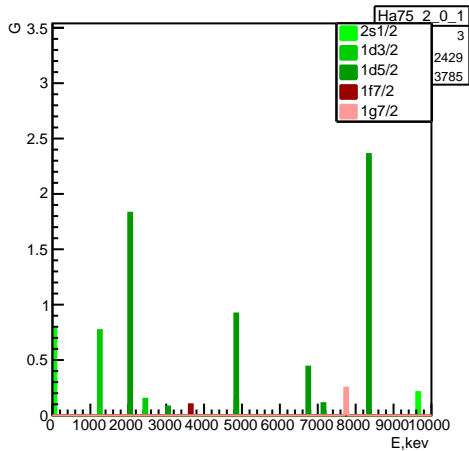
-6799.98 2s1/2 0.3425 0.995

-7438.1 1d3/2 0.18875 1.0375

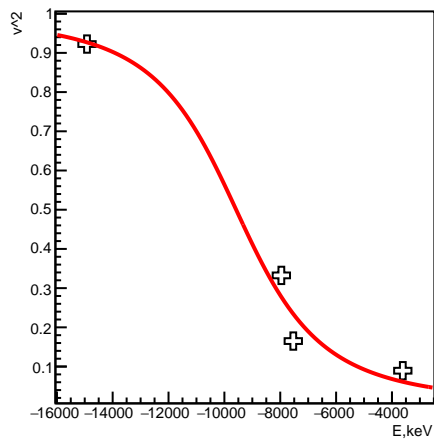
-14892.6 1d5/2 0.888833 0.905667

-3686.71 1f7/2 0.133125 0.77625

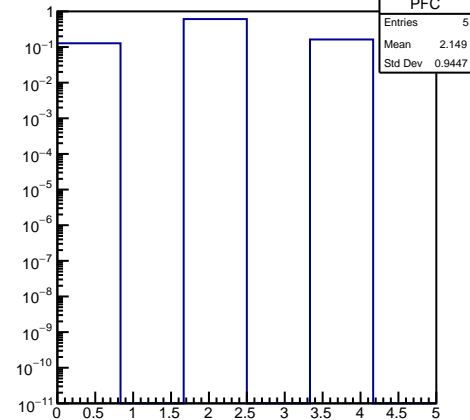
Ha75



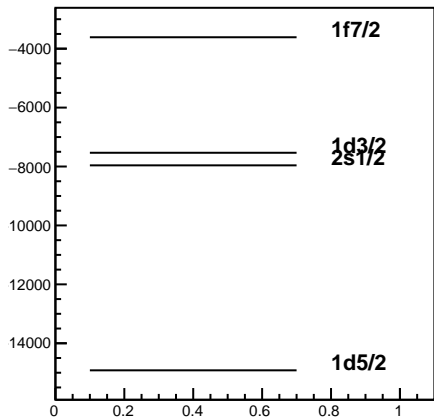
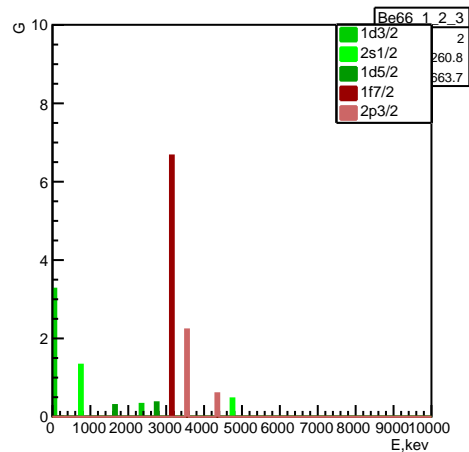
Occupancy



Penalty function components



Be66



Experiment: Ha75 (13) Be66 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -9579.33 \pm 847.36$ keV $\Delta: -3258.16 \pm 1363.74$ keV

penalty: 0.179776

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

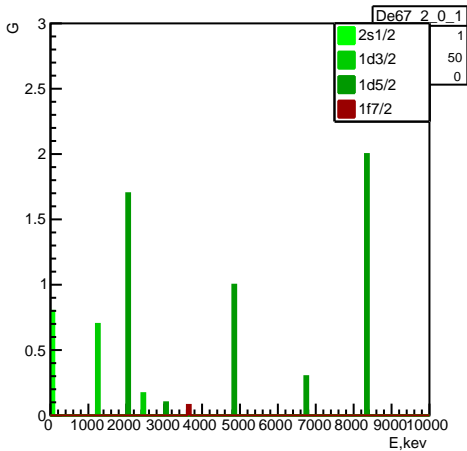
-7960.5 2s1/2 0.3325 1.465

-7533.36 1d3/2 0.165 1.13

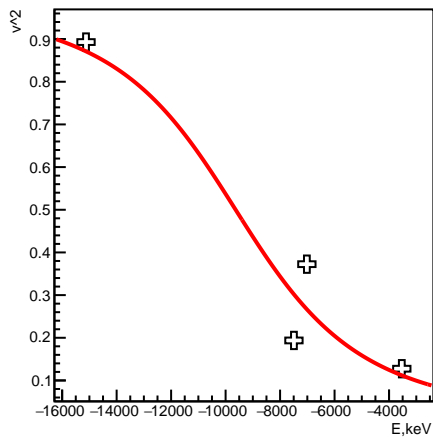
-14918.7 1d5/2 0.9225 1.06833

-3612.3 1f7/2 0.089375 0.84625

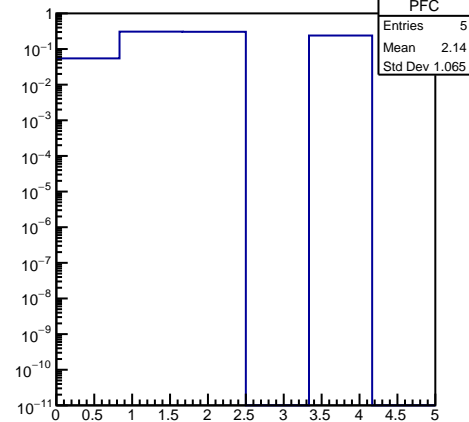
De67



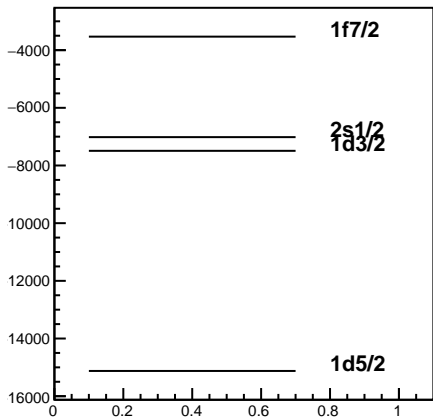
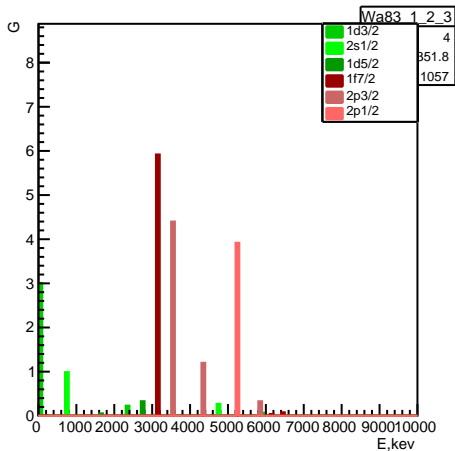
Occupancy



Penalty function components



Wa83



Experiment: De67 (9) Wa83 (16)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9631.71 \pm 1196.26 keV

Δ : -4956.69 \pm 2004.54 keV

penalty: 0.18119

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

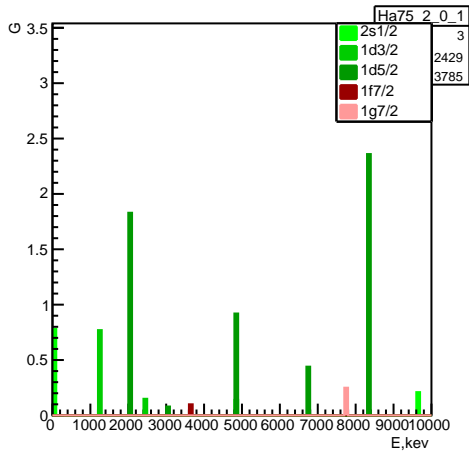
-7016.54 2s1/2 0.3725 1.055

-7491.52 1d3/2 0.19375 1.0475

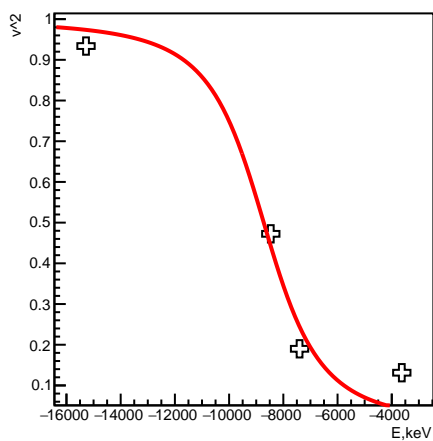
-15124.6 1d5/2 0.893 0.914

-3531.64 1f7/2 0.1275 0.765

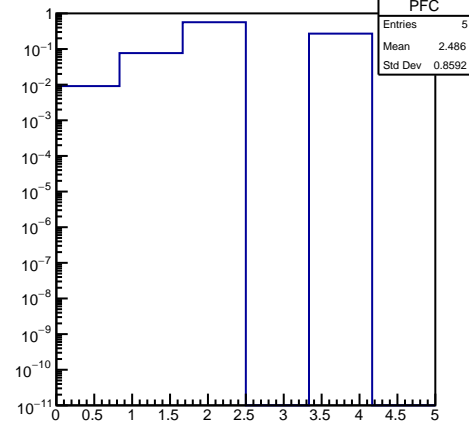
Ha75



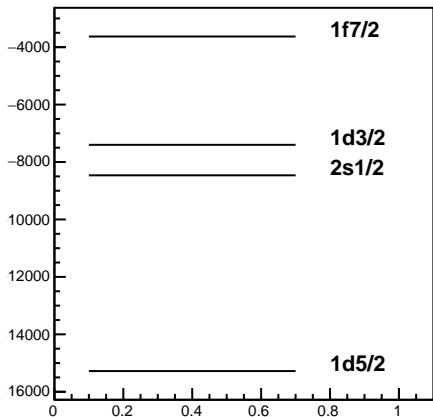
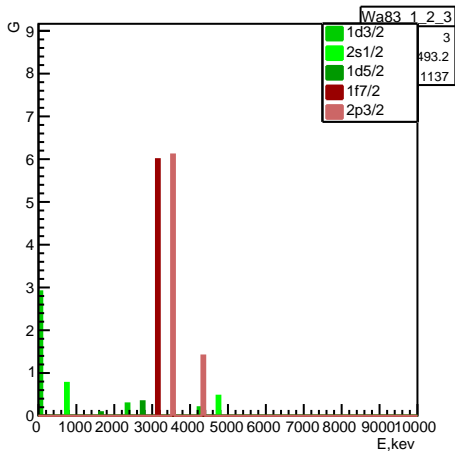
Occupancy



Penalty function components



Wa83



Experiment: Ha75 (12) Wa83 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 E_F : -8722.49 ± 689.046 keV Δ : -2219.92 ± 2266.36 keV

penalty: 0.18436

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

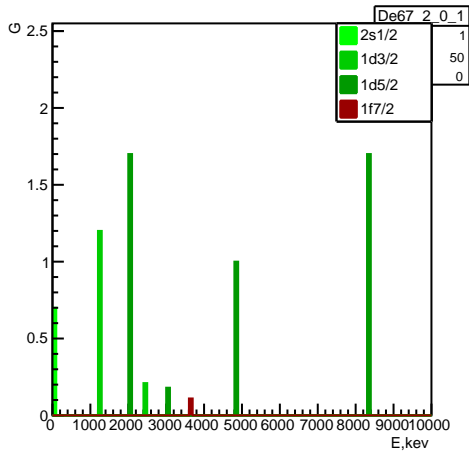
-8462.87 2s1/2 0.4725 1.185

-7401.35 1d3/2 0.19 1.08

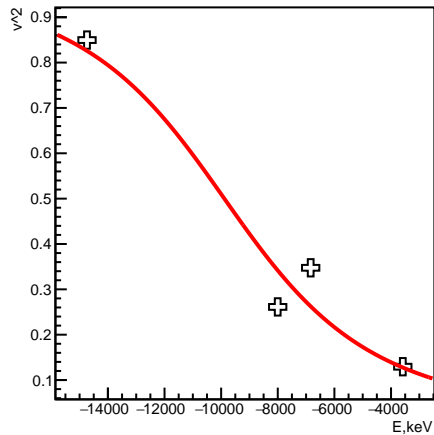
-15279.1 1d5/2 0.933833 1.009

-3629.79 1f7/2 0.13125 0.7625

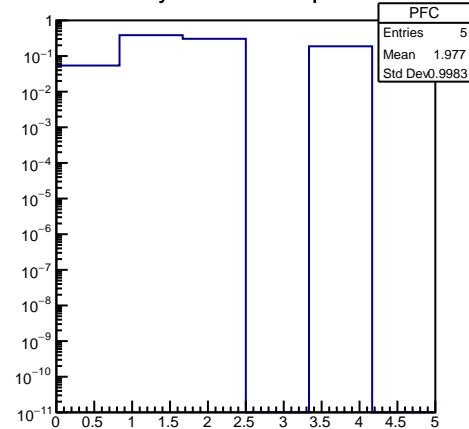
De67



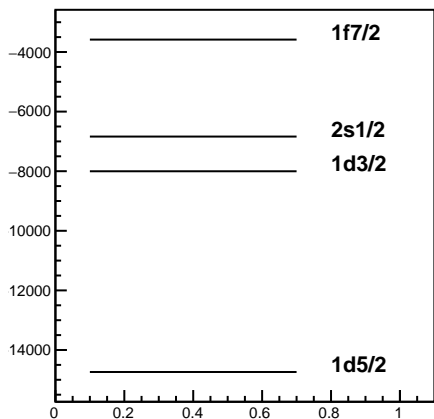
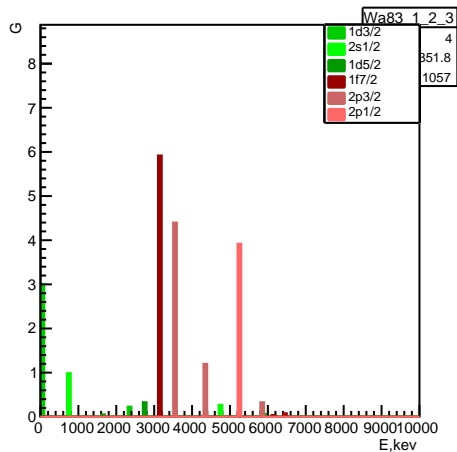
Occupancy



Penalty function components



Wa83



Experiment: De67 (8) Wa83 (16)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -9886.81 \pm 874.365 \text{ keV}$ $\Delta: 5646.6 \pm 1569.01 \text{ keV}$

penalty: 0.186072

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

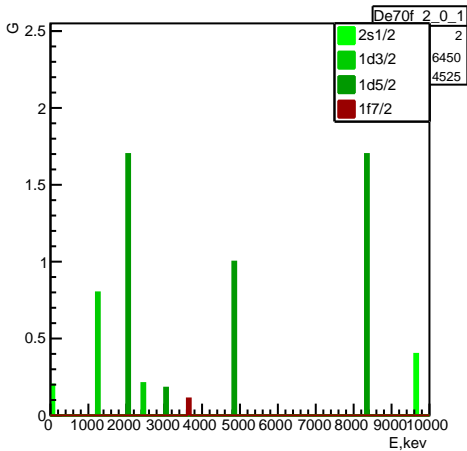
-6837.87 2s1/2 0.3475 1.005

-8002.42 1d3/2 0.26125 1.1825

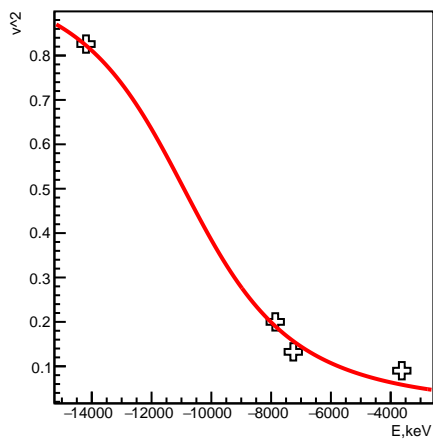
-14738 1d5/2 0.849667 0.827333

-3583.83 1f7/2 0.129375 0.76875

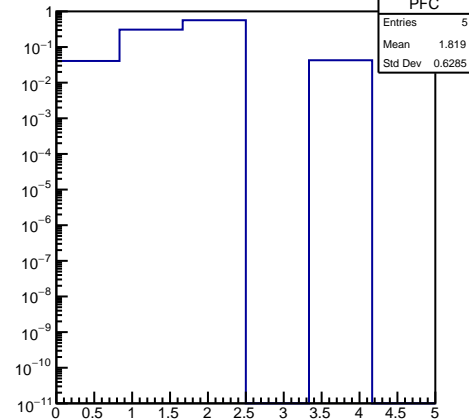
De70f



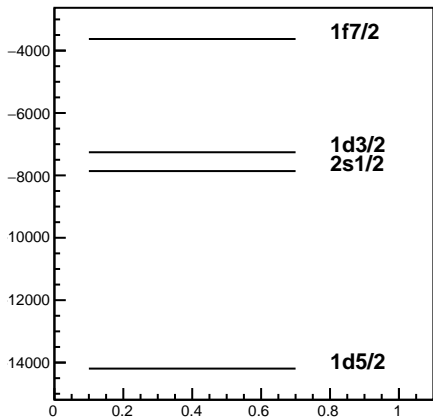
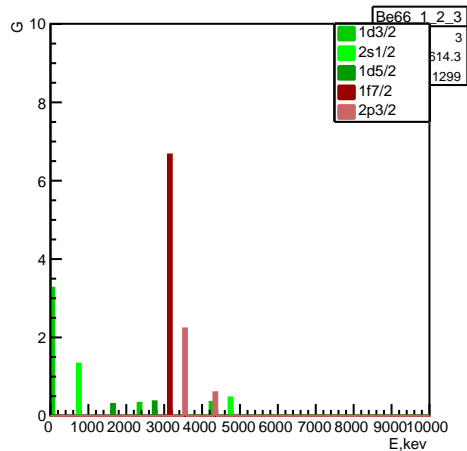
Occupancy



Penalty function components



Be66



Experiment: De70f (9) Be66 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -10918.3 \pm 307.407 keV Δ : -3875.14 \pm 356.521 keV

penalty: 0.191219

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

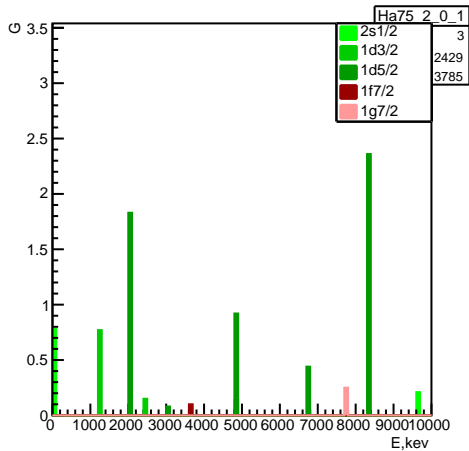
-7862.06 2s1/2 0.2 1.2

-7258.67 1d3/2 0.1325 1.24

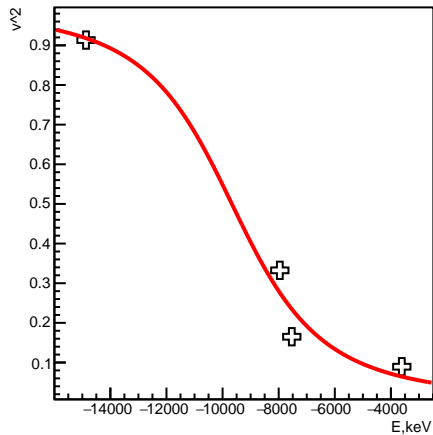
-14193.3 1d5/2 0.825833 0.875

-3627.96 1f7/2 0.09 0.8475

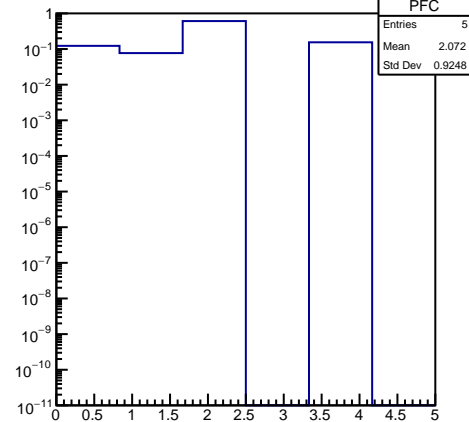
Ha75



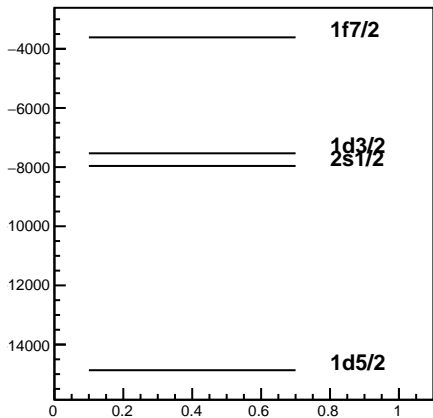
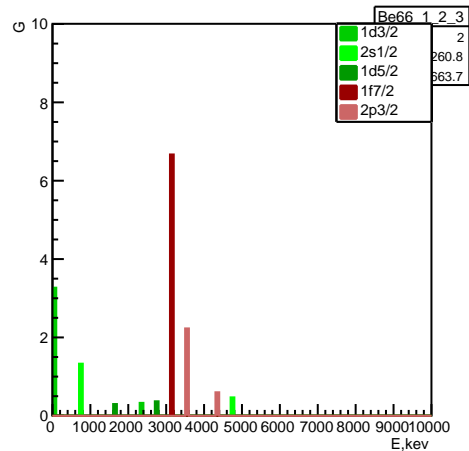
Occupancy



Penalty function components



Be66



Experiment: Ha75 (12) Be66 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9669.43 \pm 818.53 keV

Δ : -3413.18 \pm 1294.01 keV

penalty: 0.19258

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

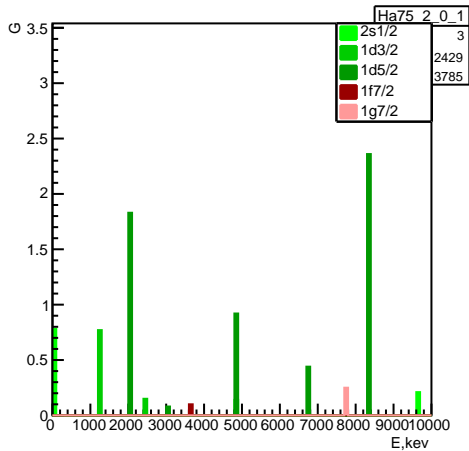
-7960.5 2s1/2 0.3325 1.465

-7533.36 1d3/2 0.165 1.13

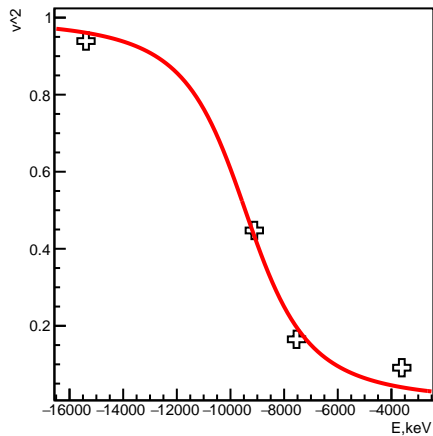
-14868.3 1d5/2 0.913333 1.05

-3612.3 1f7/2 0.089375 0.84625

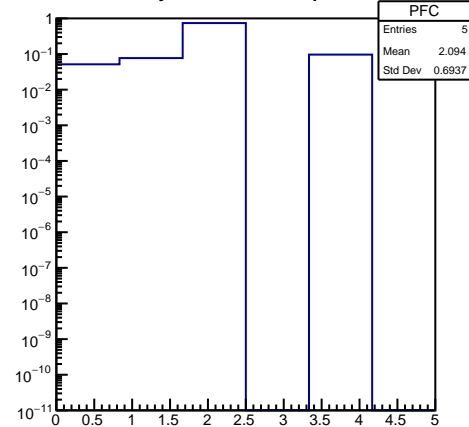
Ha75



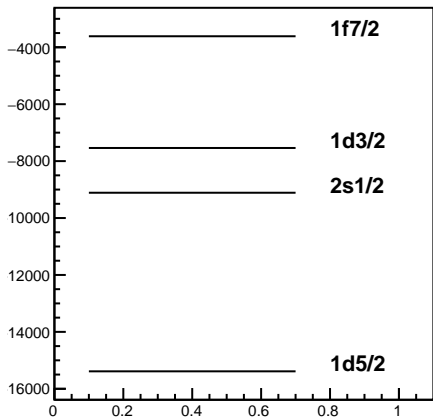
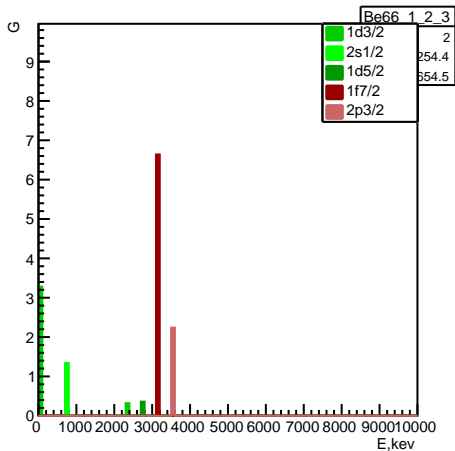
Occupancy



Penalty function components



Be66



Experiment: Ha75 (12) Be66 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9449.78 \pm 307.384 keV

Δ : -2504.44 \pm 807.052 keV

penalty: 0.19277

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

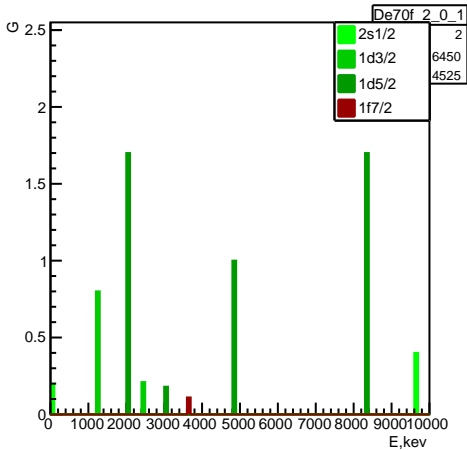
-9111.29 2s1/2 0.4475 1.235

-7538.49 1d3/2 0.165 1.13

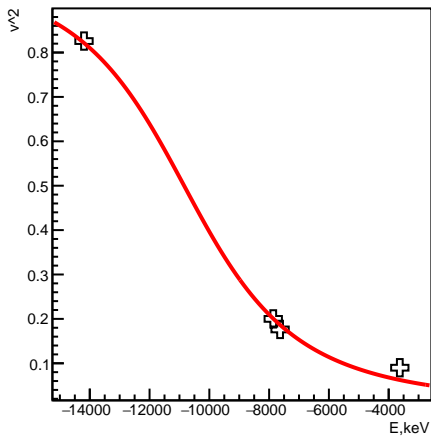
-15386.4 1d5/2 0.939167 0.998333

-3613.01 1f7/2 0.09125 0.8425

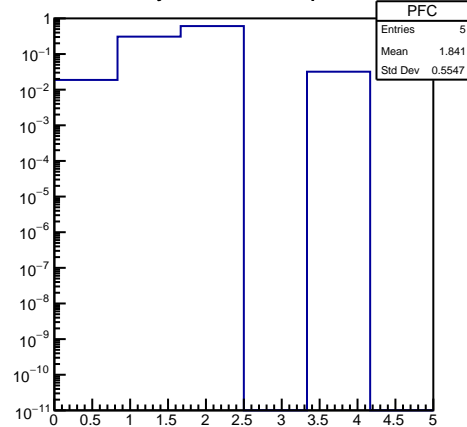
De70f



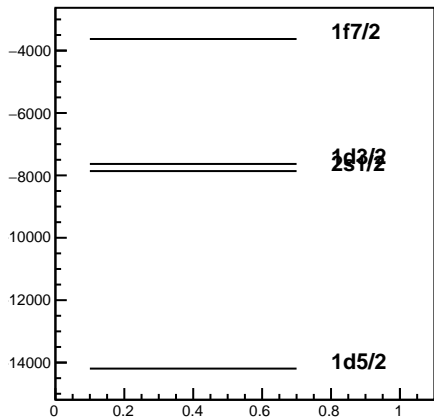
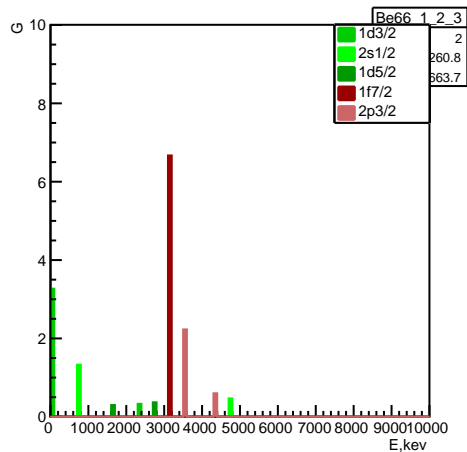
Occupancy



Penalty function components



Be66



Experiment: De70f (9) Be66 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -10844.3 \pm 215.473 keV Δ : -3987.9 \pm 267.362 keV

penalty: 0.193411

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

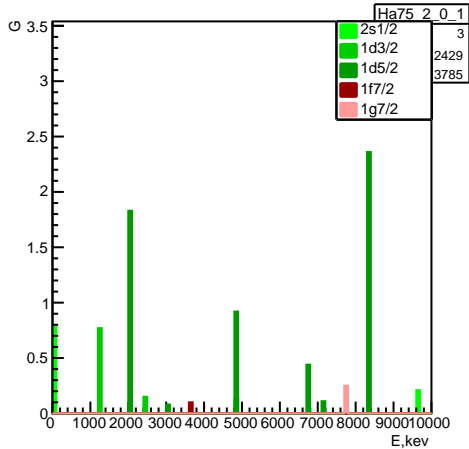
-7862.06 2s1/2 0.2 1.2

-7633.24 1d3/2 0.17625 1.1525

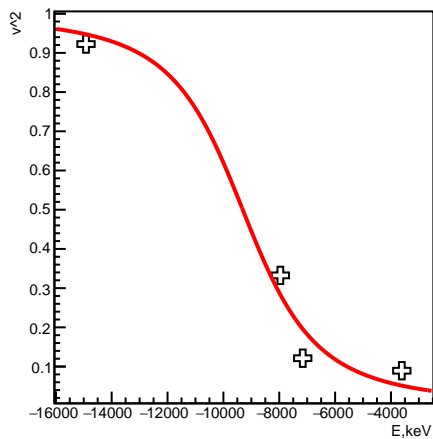
-14193.3 1d5/2 0.825833 0.875

-3627.96 1f7/2 0.09 0.8475

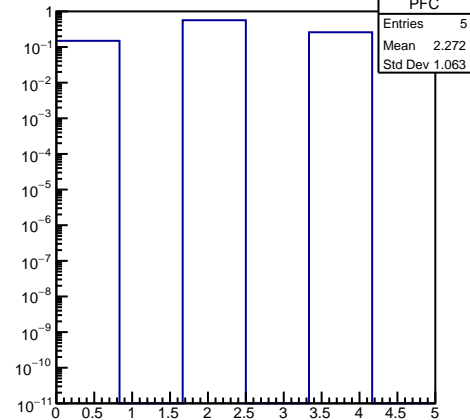
Ha75



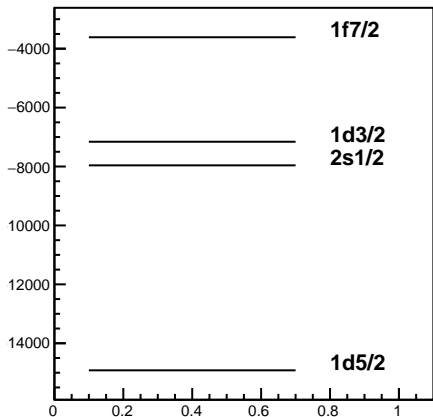
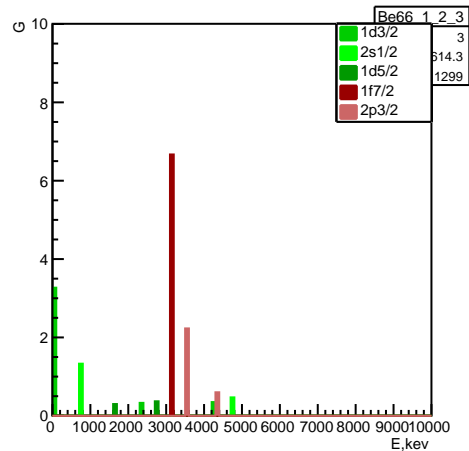
Occupancy



Penalty function components



Be66



Experiment: Ha75 (13) Be66 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 E_F : -9307.55 \pm 1372.88 keV Δ : 2801.04 \pm 2174.95 keV

penalty: 0.194823

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

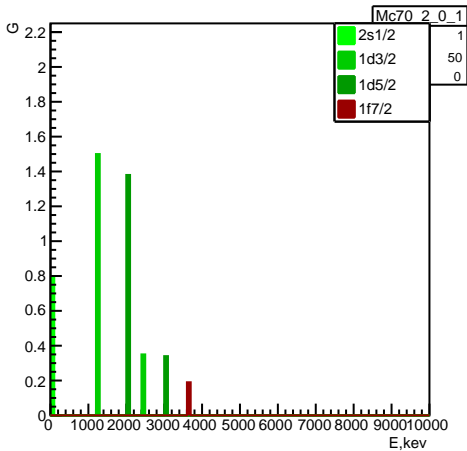
-7960.5 2s1/2 0.3325 1.465

-7159.04 1d3/2 0.12125 1.2175

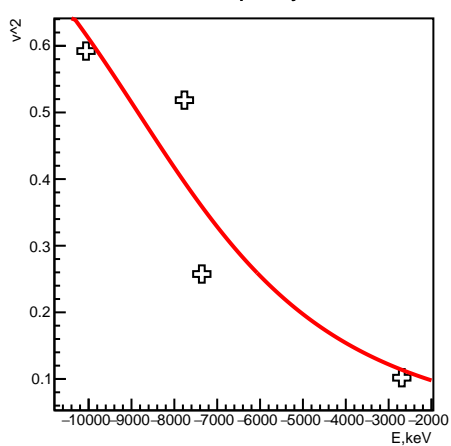
-14918.7 1d5/2 0.9225 1.06833

-3612.3 1f7/2 0.089375 0.84625

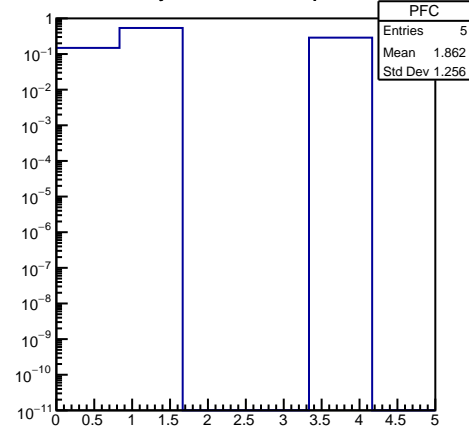
Mc70



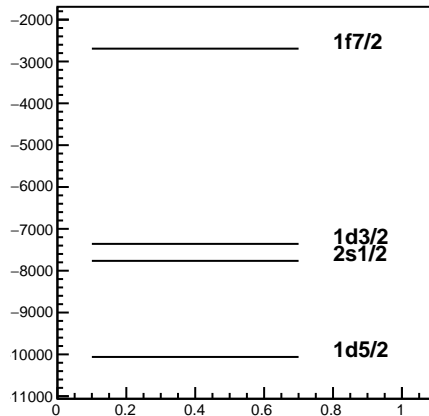
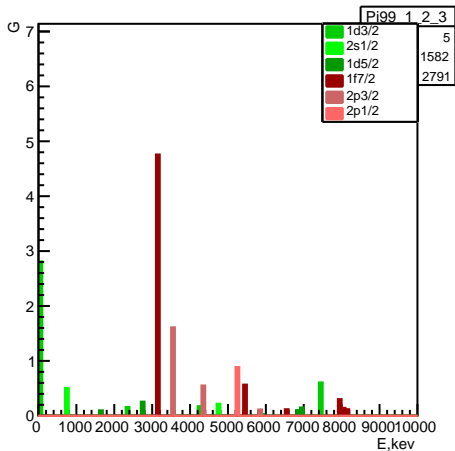
Occupancy



Penalty function components



Pi99



Experiment: Mc70 (6) Pi99 (23)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -8847.5 \pm 787.636 keV Δ : 5058.27 \pm 2415.21 keV

penalty: 0.195066

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

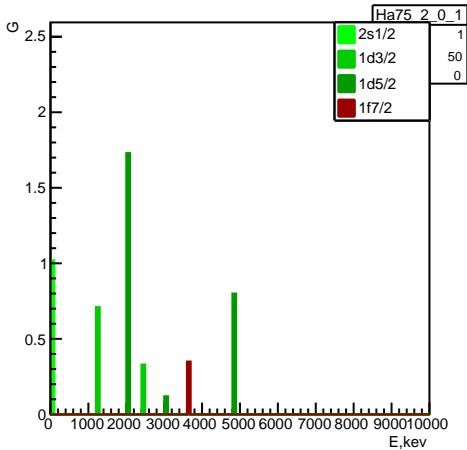
-7764.95 2s1/2 0.5185 0.763

-7359.03 1d3/2 0.2575 1.41

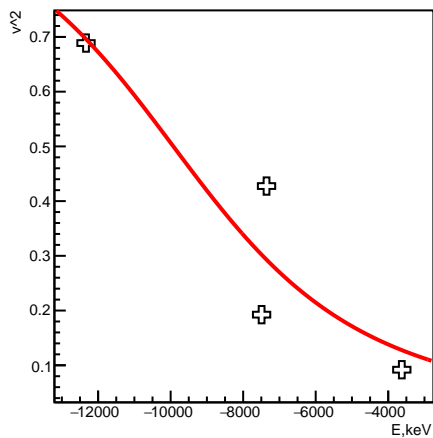
-10061.1 1d5/2 0.592167 0.389

-2693.25 1f7/2 0.101875 0.84375

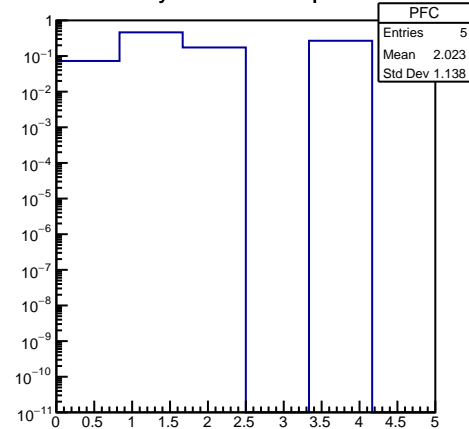
Ha75



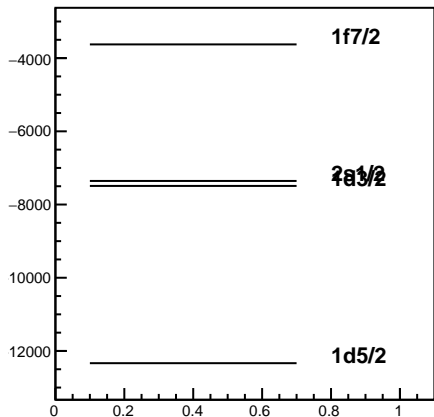
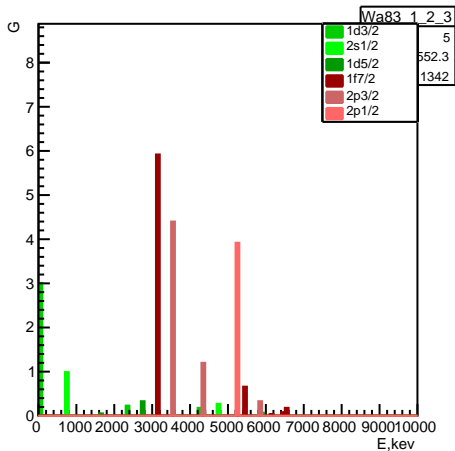
Occupancy



Penalty function components



Wa83



Experiment: Ha75 (7) Wa83 (19)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9925.34 \pm 1140.69 keV

Δ : 5647.7 \pm 2246.03 keV

penalty: 0.195242

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

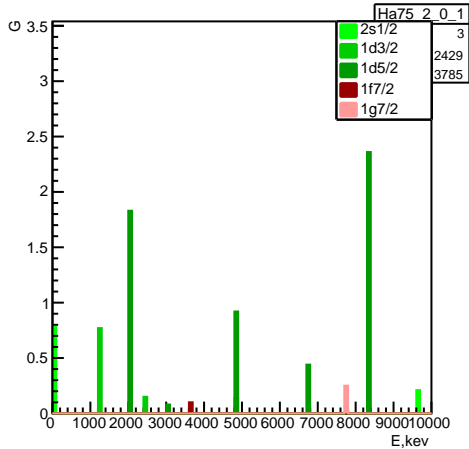
-7355.64 2s1/2 0.4275 1.165

-7491.67 1d3/2 0.1925 1.135

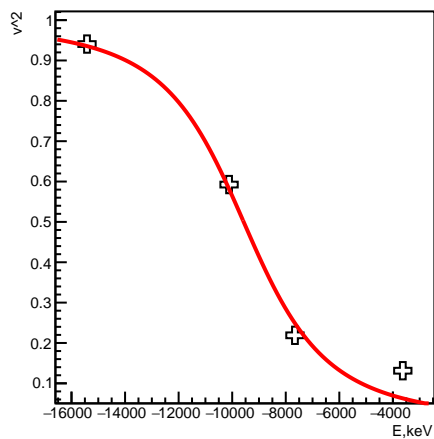
-12334 1d5/2 0.688833 0.505667

-3625.48 1f7/2 0.091875 0.90375

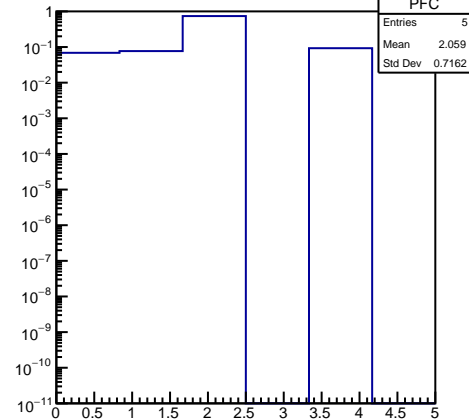
Ha75



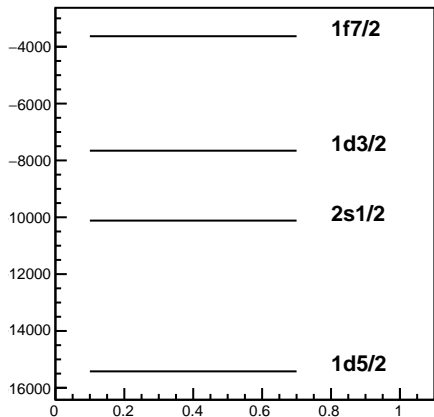
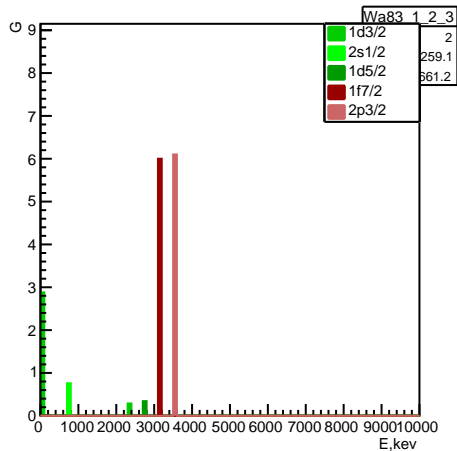
Occupancy



Penalty function components



Wa83



Experiment: Ha75 (12) Wa83 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9572.47 \pm 300.135 keV

Δ : 3295.21 \pm 776.59 keV

penalty: 0.195509

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

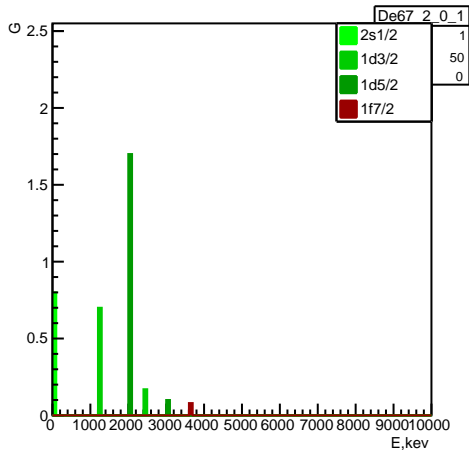
-10116.9 2s1/2 0.5925 0.945

-7657.21 1d3/2 0.219 1.022

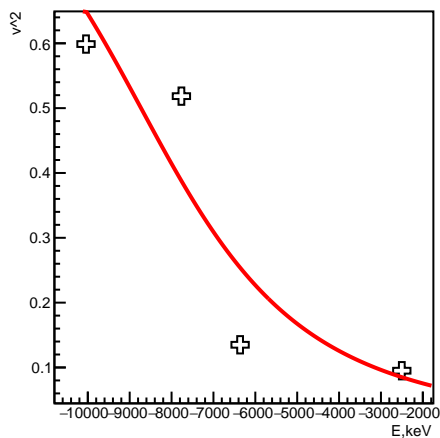
-15421.3 1d5/2 0.940667 0.995333

-3629.79 1f7/2 0.13125 0.7625

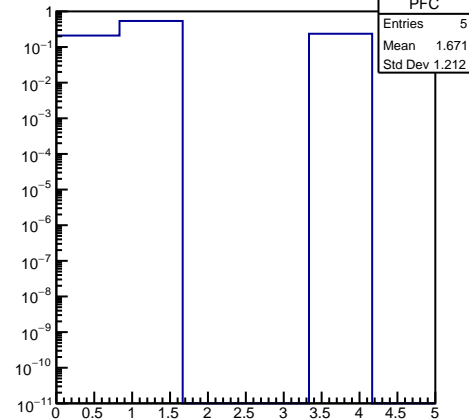
De67



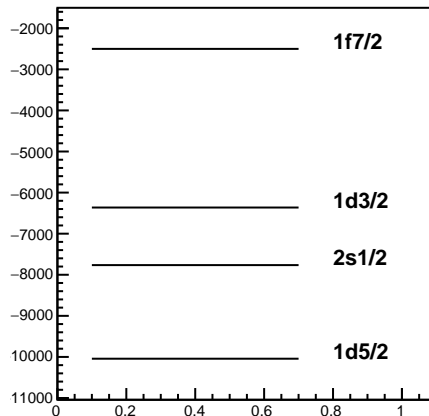
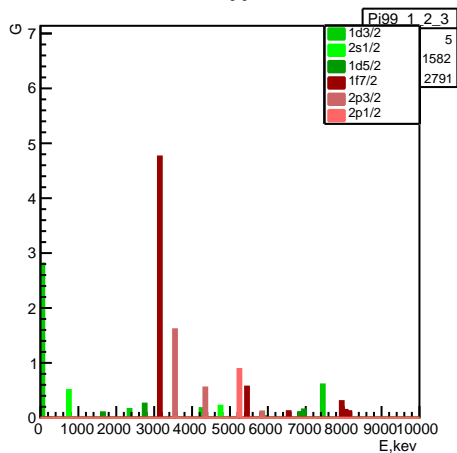
Occupancy



Penalty function components



Pi99



Experiment: De67 (6) Pi99 (23)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -8728.89 \pm 833.869$ keV $\Delta: 4185.9 \pm 1975.54$ keV

penalty: 0.19684

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

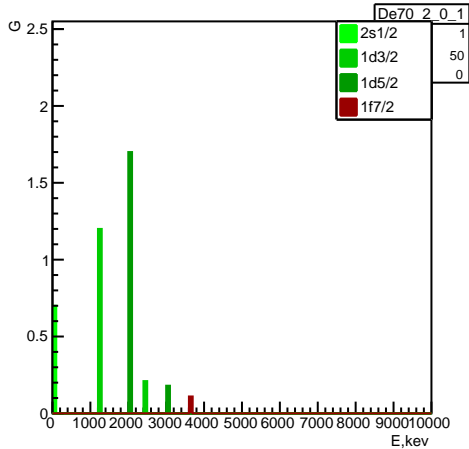
-7764.95 2s1/2 0.5185 0.763

-6363.48 1d3/2 0.135 1.165

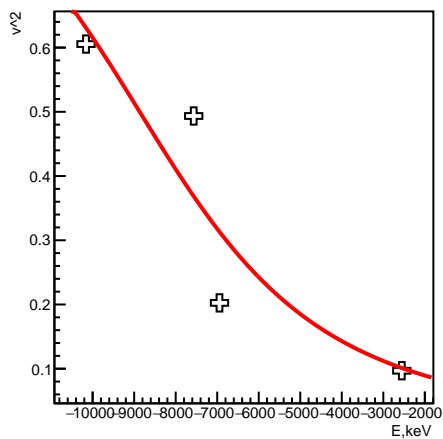
-10043.2 1d5/2 0.598833 0.402333

-2502.11 1f7/2 0.095 0.83

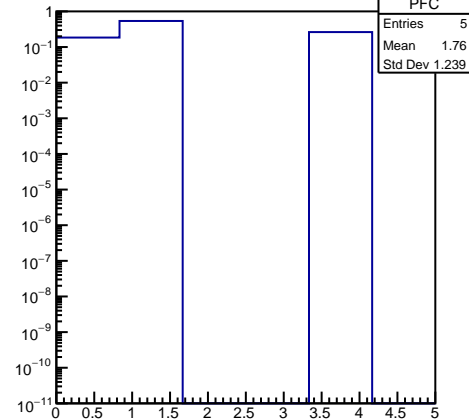
De70



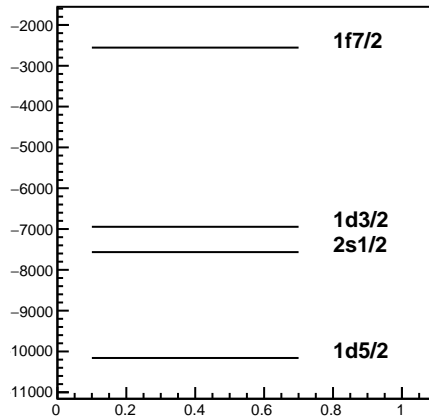
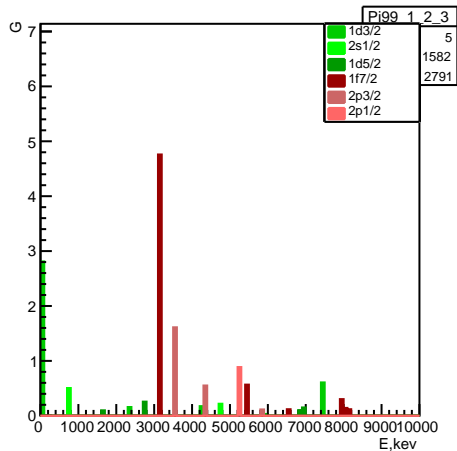
Occupancy



Penalty function components



Pi99



Experiment: De70 (6) Pi99 (23)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -8866.9 \pm 831.732 \text{ keV}$ $\Delta: -4771.48 \pm 2200.48 \text{ keV}$

penalty: 0.197106

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

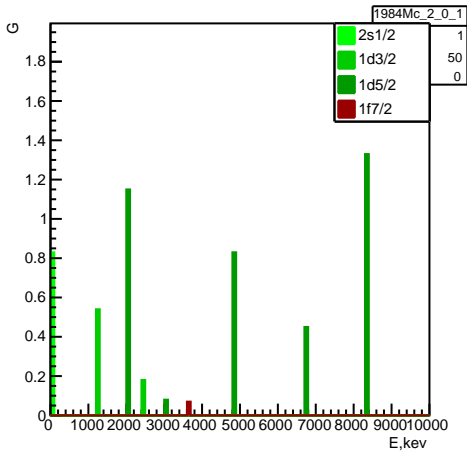
-7565.59 2s1/2 0.4935 0.713

-6945.35 1d3/2 0.2025 1.3

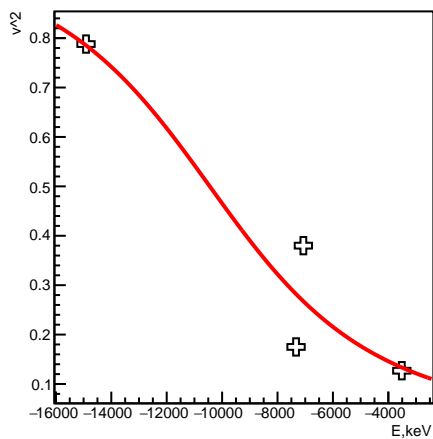
-10159.7 1d5/2 0.6055 0.415667

-2554.87 1f7/2 0.096875 0.83375

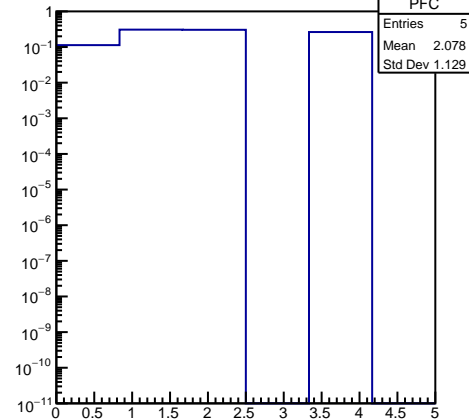
1984Mc



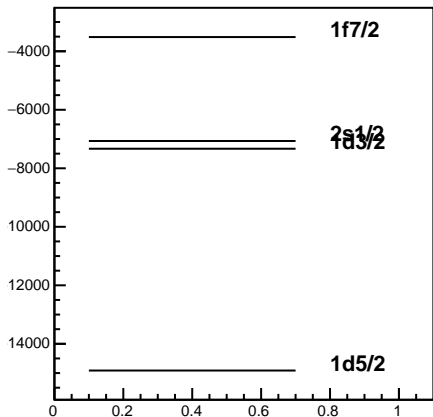
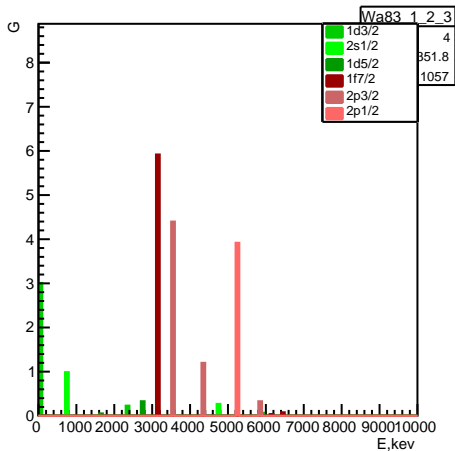
Occupancy



Penalty function components



Wa83



Experiment: 1984Mc (9) Wa83 (16)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -10445.3 \pm 1335.93$ keV $\Delta: 6428.05 \pm 2207.29$ keV

penalty: 0.197718

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

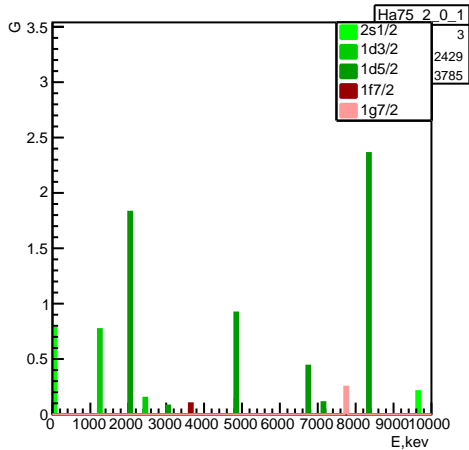
-7066.89 2s1/2 0.38 1.07

-7331.38 1d3/2 0.175 1.01

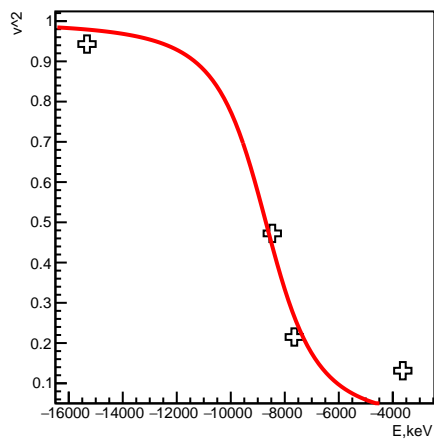
-14913.2 1d5/2 0.788 0.704

-3514.13 1f7/2 0.126875 0.76375

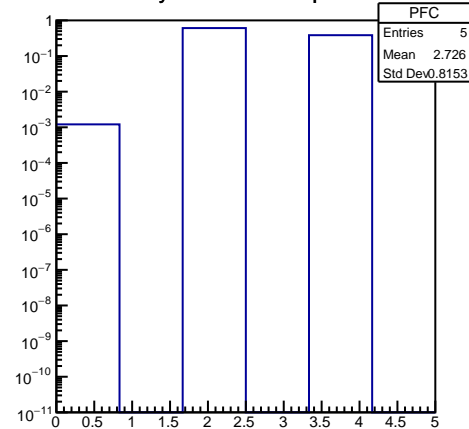
Ha75



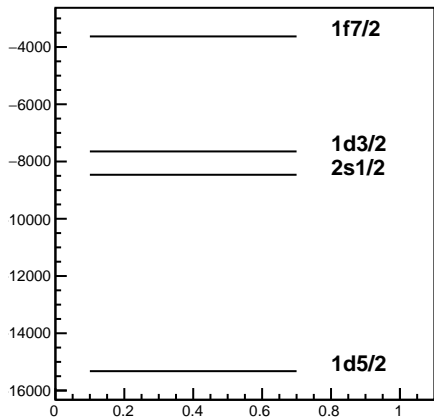
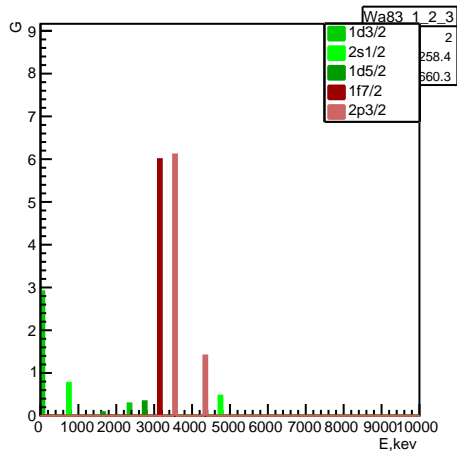
Occupancy



Penalty function components



Wa83



Experiment: Ha75 (13) Wa83 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 E_F : -8699.47 \pm 897.114 keV Δ : -1978.51 \pm 3219.69 keV

penalty: 0.198848

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

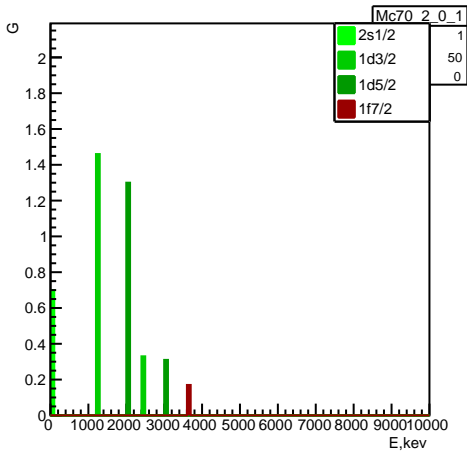
-8462.87 2s1/2 0.4725 1.185

-7647.77 1d3/2 0.215 1.03

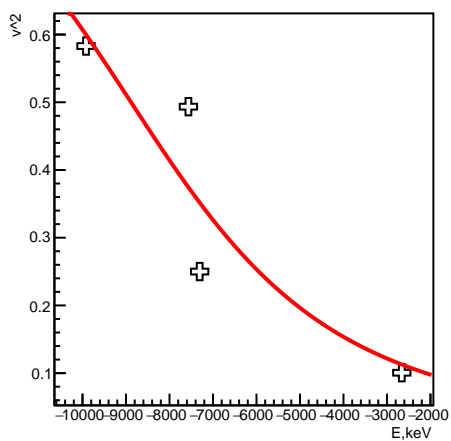
-15324.2 1d5/2 0.943 1.02733

-3629.79 1f7/2 0.13125 0.7625

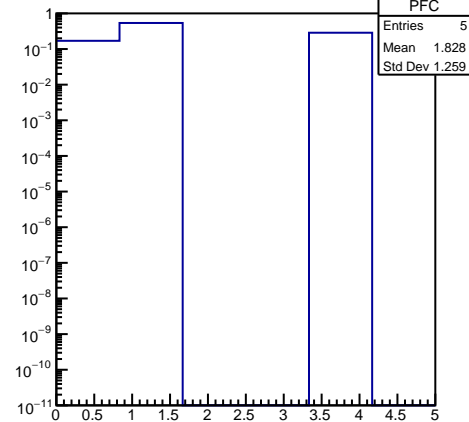
Mc70



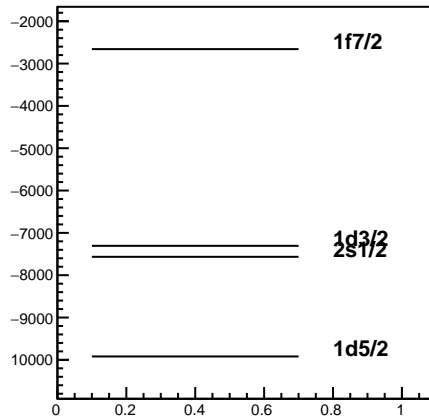
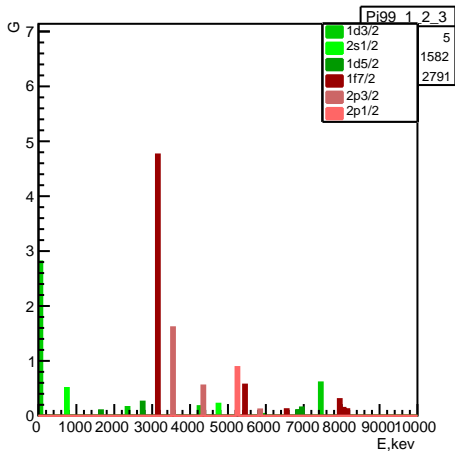
Occupancy



Penalty function components



Pi99



Experiment: Mc70 (6) Pi99 (23)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -8883.76 \pm 797.85$ keV $\Delta: 5083.42 \pm 2401.11$ keV

penalty: 0.199021

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

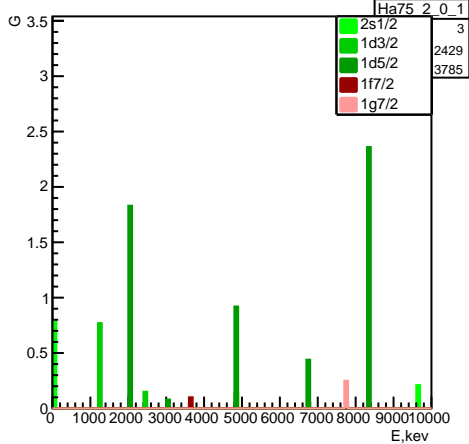
-7565.59 2s1/2 0.4935 0.713

-7306.27 1d3/2 0.25 1.395

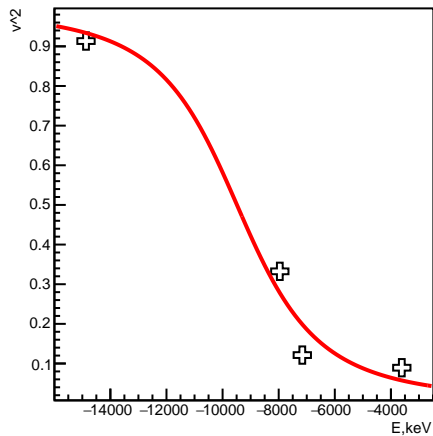
-9919.77 1d5/2 0.583 0.370667

-2658.97 1f7/2 0.100625 0.84125

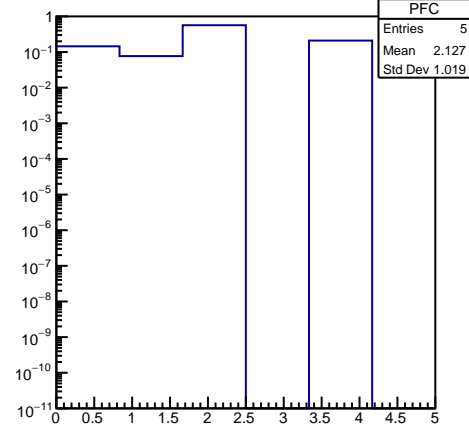
Ha75



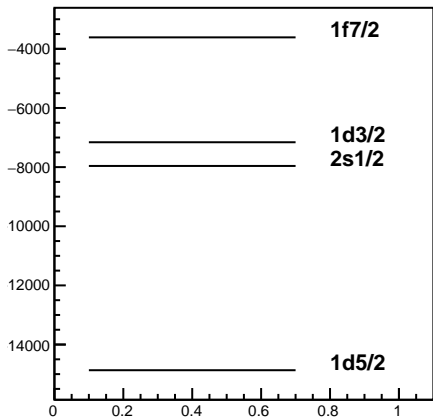
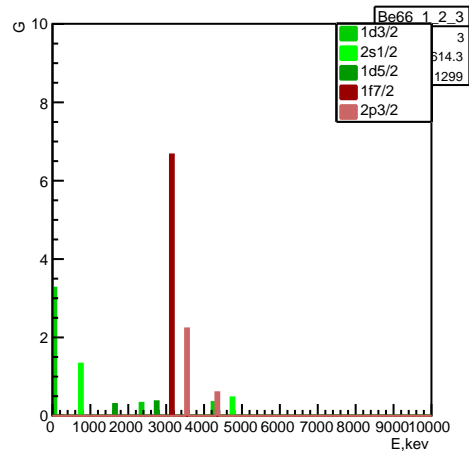
Occupancy



Penalty function components



Be66



Experiment: Ha75 (12) Be66 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 E_F : -9487.79 \pm 1155.83 keV Δ : 3084.28 \pm 1753.36 keV

penalty: 0.199225

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

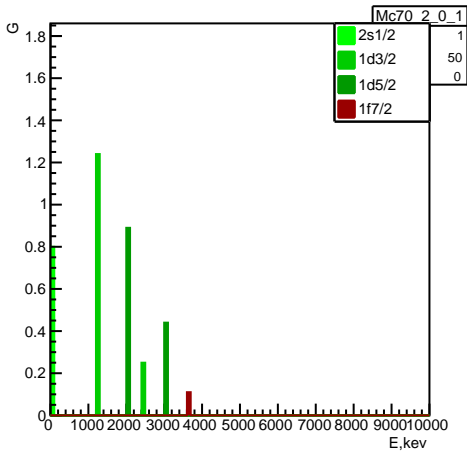
-7960.5 2s1/2 0.3325 1.465

-7159.04 1d3/2 0.12125 1.2175

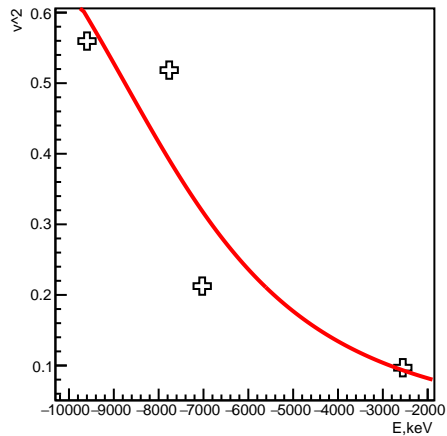
-14868.3 1d5/2 0.913333 1.05

-3612.3 1f7/2 0.089375 0.84625

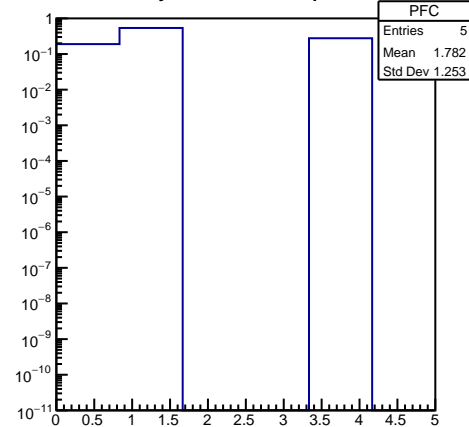
Mc70



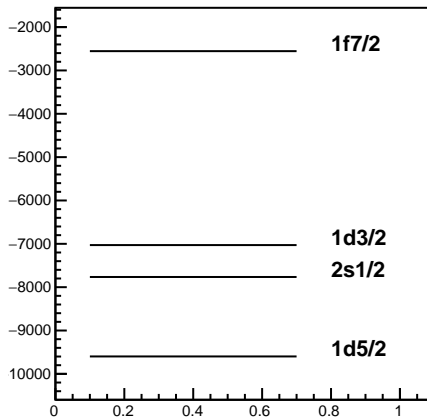
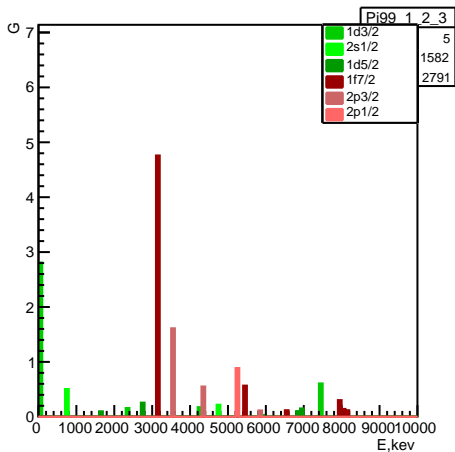
Occupancy



Penalty function components



Pi99



Experiment: Mc70 (6) Pi99 (23)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 E_F : -8750.83 \pm 763.629 keV Δ : 4430.16 \pm 2322.07 keV

penalty: 0.201092

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

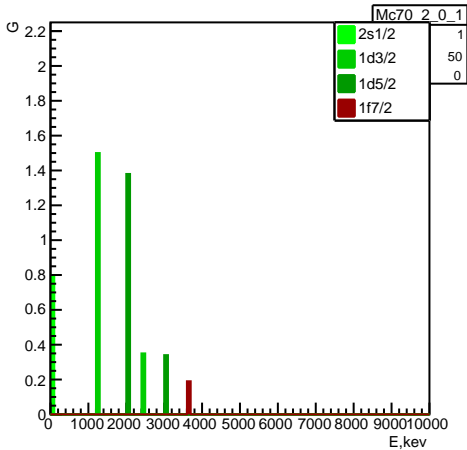
-7764.95 2s1/2 0.5185 0.763

-7028.87 1d3/2 0.2125 1.32

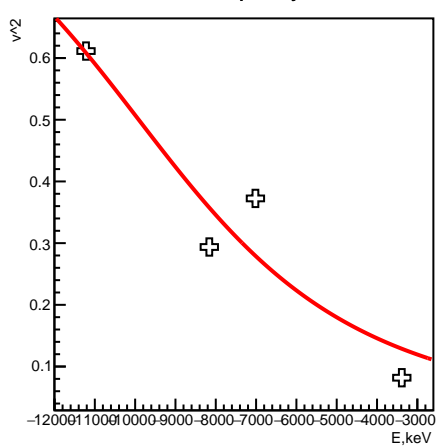
-9598.02 1d5/2 0.559667 0.324

-2554.87 1f7/2 0.096875 0.83375

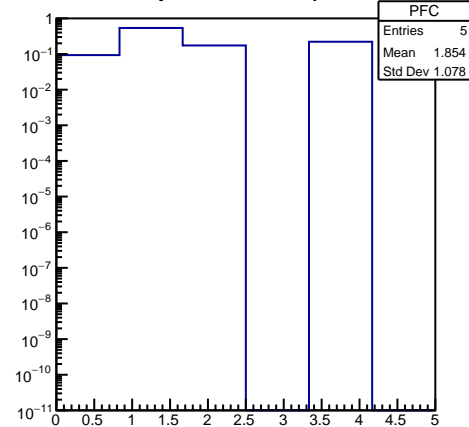
Mc70



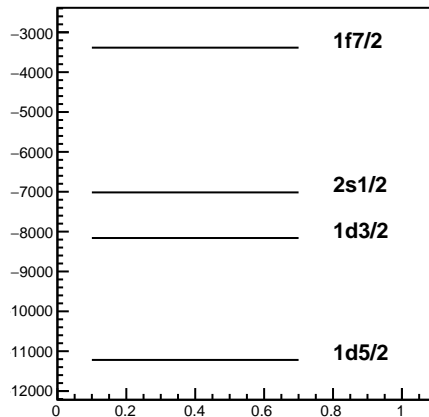
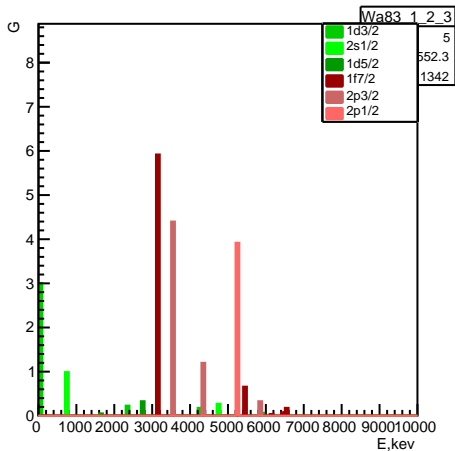
Occupancy



Penalty function components



Wa83



Experiment: Mc70 (6) Wa83 (19)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9911.41 \pm 754.165 keV

Δ : 5890.07 \pm 1851.6 keV

penalty: 0.205334

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

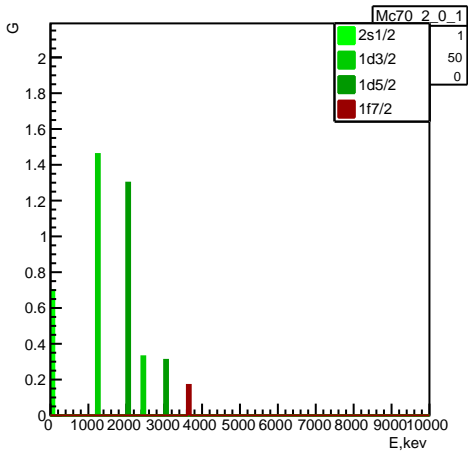
-7016.54 2s1/2 0.3725 1.055

-8160.57 1d3/2 0.29375 1.3375

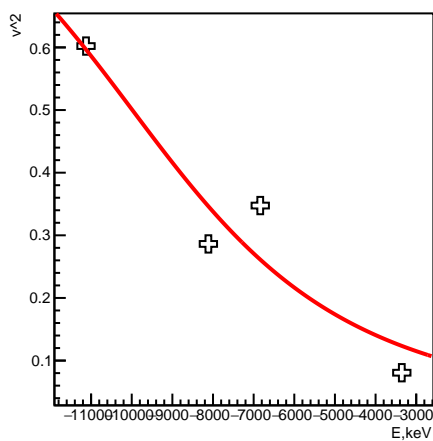
-11219 1d5/2 0.611333 0.350667

-3385.46 1f7/2 0.081875 0.88375

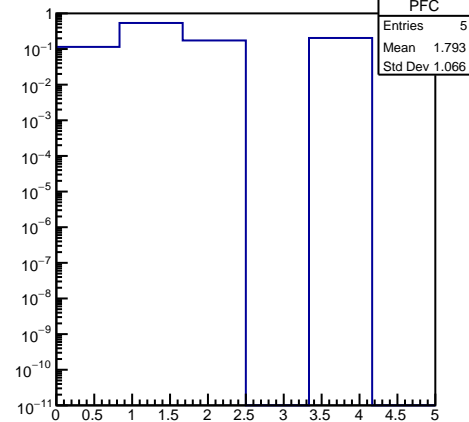
Mc70



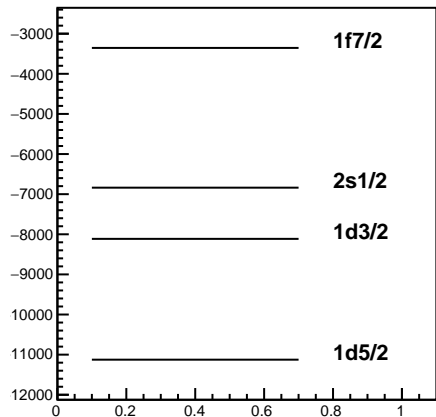
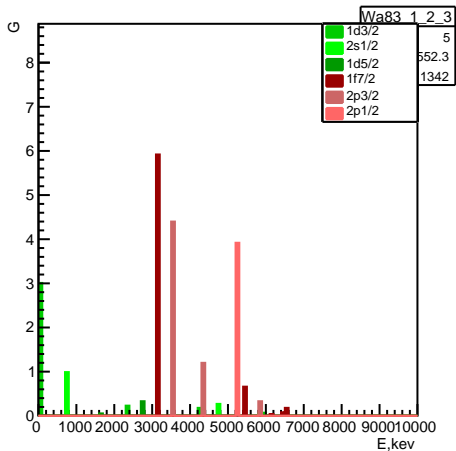
Occupancy



Penalty function components



Wa83



Experiment: Mc70 (6) Wa83 (19)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -9984.48 \pm 706.172$ keV $\Delta: 5791.19 \pm 1711.01$ keV

penalty: 0.20627

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

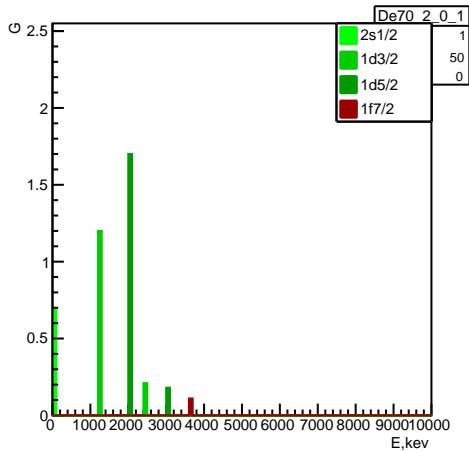
-6837.87 2s1/2 0.3475 1.005

-8114.01 1d3/2 0.28625 1.3225

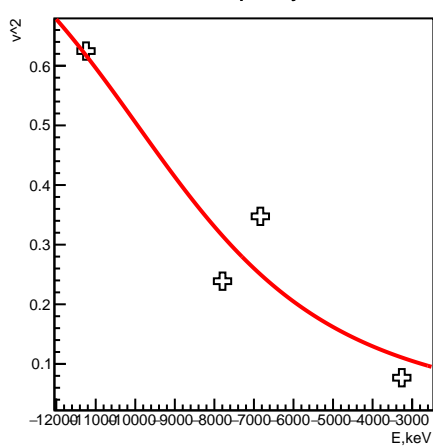
-11125.2 1d5/2 0.602167 0.332333

-3354.69 1f7/2 0.080625 0.88125

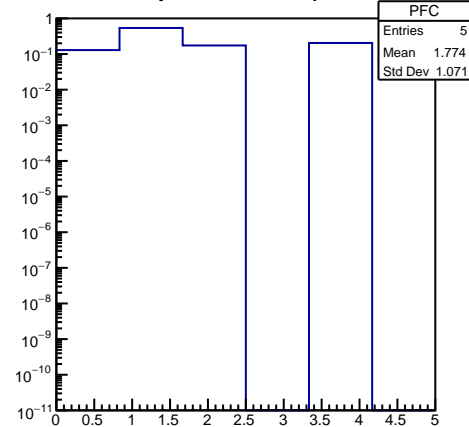
De70



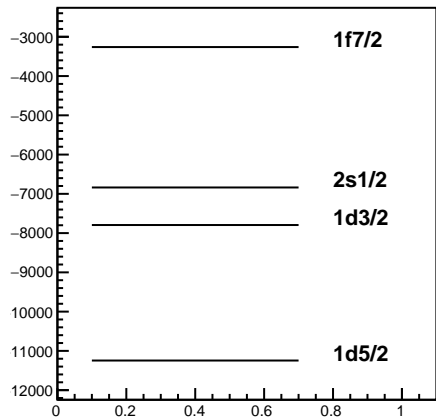
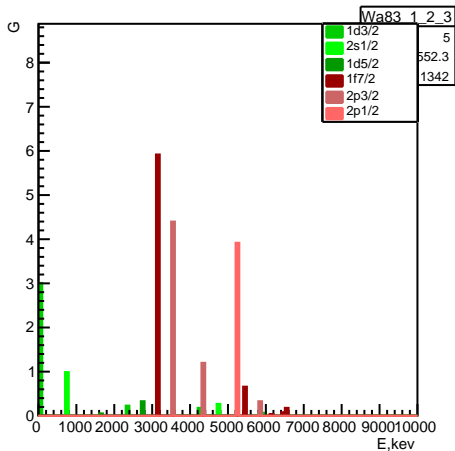
Occupancy



Penalty function components



Wa83



Experiment: De70 (6) Wa83 (19)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9943.16 \pm 762.701 keV

Δ : 5388.01 \pm 1711.12 keV

penalty: 0.209147

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

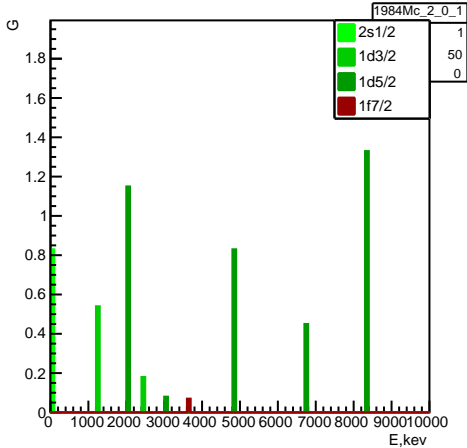
-6837.87 2s1/2 0.3475 1.005

-7794.28 1d3/2 0.23875 1.2275

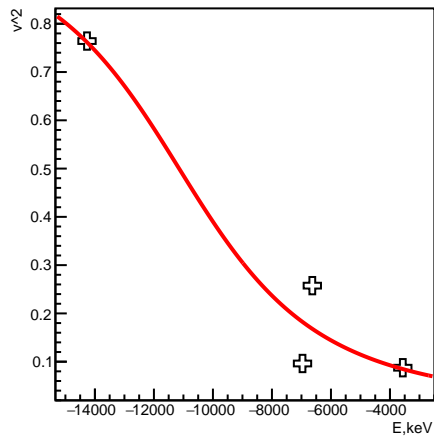
-11245.8 1d5/2 0.624667 0.377333

-3261.33 1f7/2 0.076875 0.87375

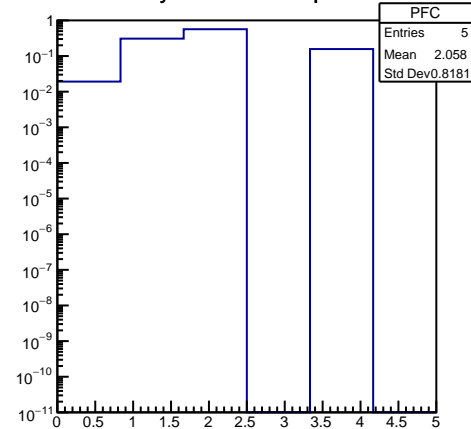
1984Mc



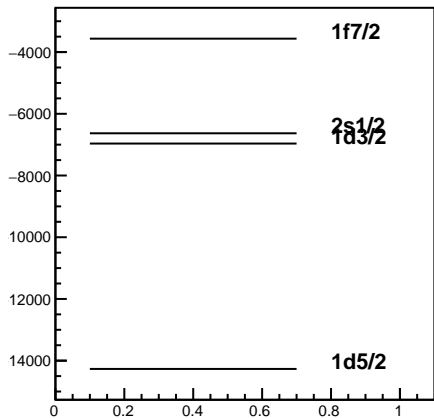
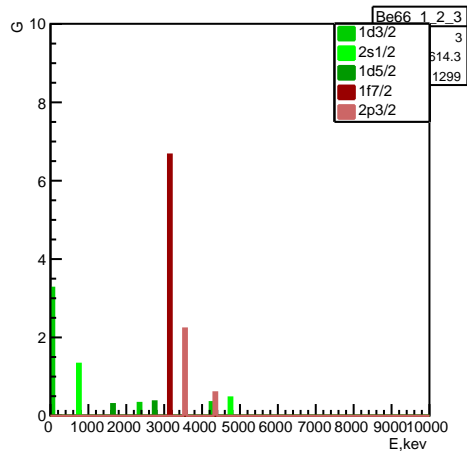
Occupancy



Penalty function components



Be66



Experiment: 1984Mc (9) Be66 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -11145.9 \pm 1016.64$ keV $\Delta: 5083.67 \pm 1314.33$ keV

penalty: 0.209794

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

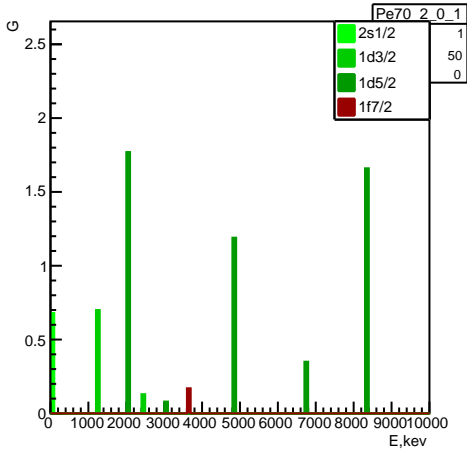
-6631.92 2s1/2 0.2575 1.315

-6964.21 1d3/2 0.09625 1.1675

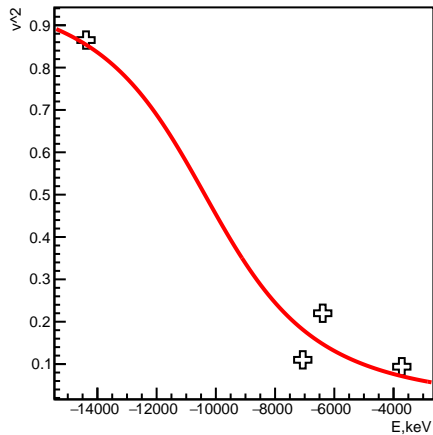
-14268 1d5/2 0.764167 0.751667

-3565.04 1f7/2 0.0875 0.8425

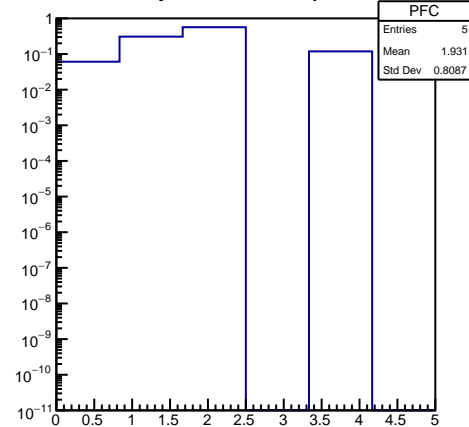
Pe70



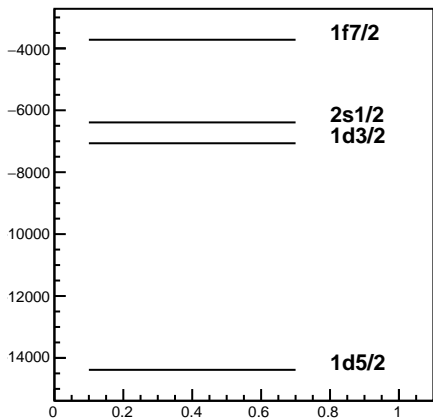
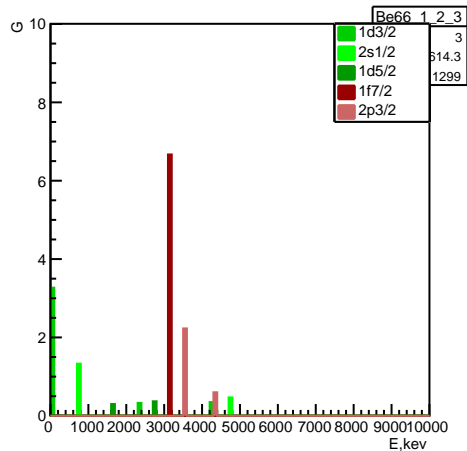
Occupancy



Penalty function components



Be66



Experiment: Pe70 (9) Be66 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -10372.2 \pm 914.663 keV Δ : 3999.38 \pm 994.903 keV

penalty: 0.210501

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

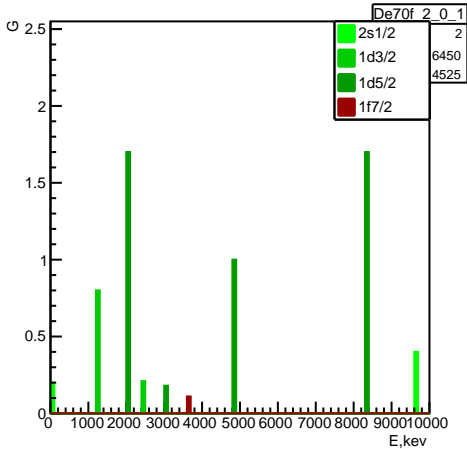
-6391.44 2s1/2 0.22 1.24

-7065.31 1d3/2 0.11 1.195

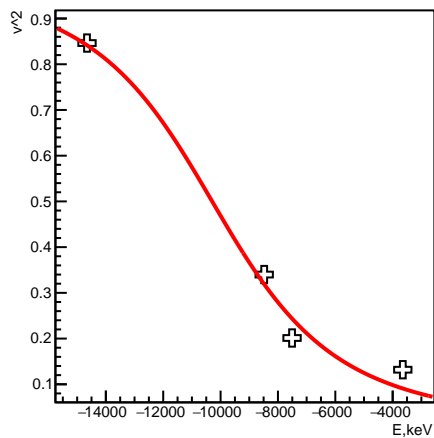
-14384.9 1d5/2 0.865 0.953333

-3720.98 1f7/2 0.09375 0.855

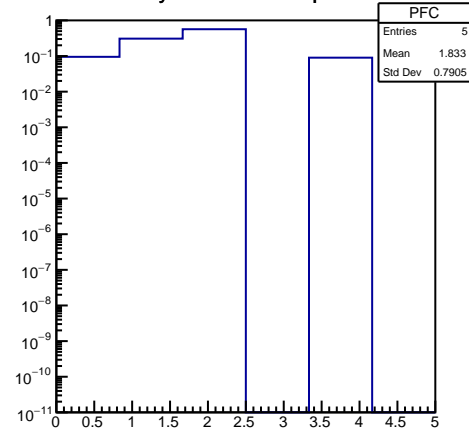
De70f



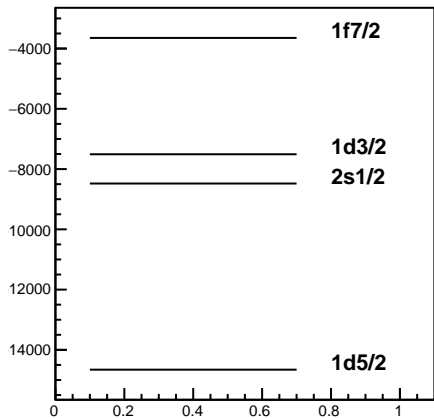
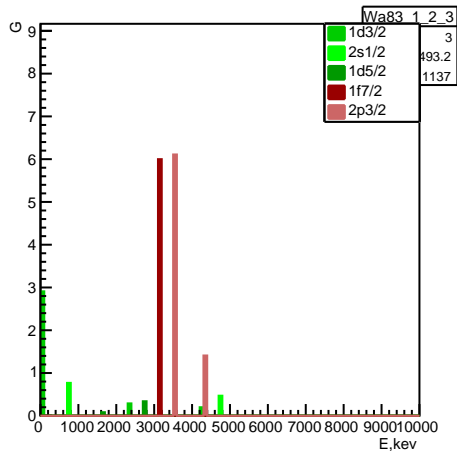
Occupancy



Penalty function components



Wa83



Experiment: De70f (9) Wa83 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -10293.8 \pm 438.539 \text{ keV}$ $\Delta: 4665.91 \pm 753.559 \text{ keV}$

penalty: 0.21156

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

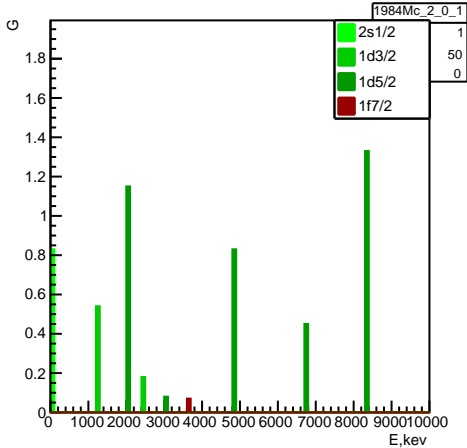
-8479.18 2s1/2 0.34 0.92

-7508.46 1d3/2 0.20125 1.1025

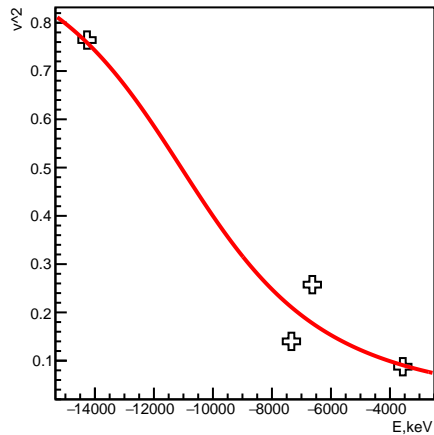
-14657.1 1d5/2 0.846333 0.834

-3647.14 1f7/2 0.131875 0.76375

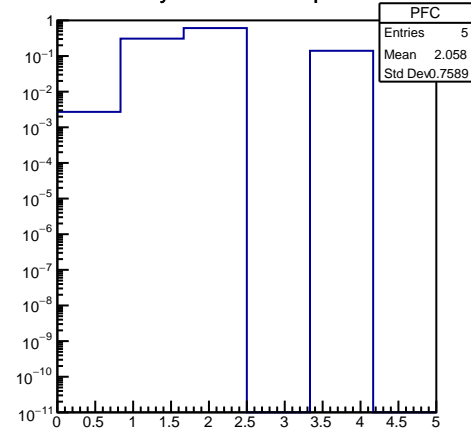
1984Mc



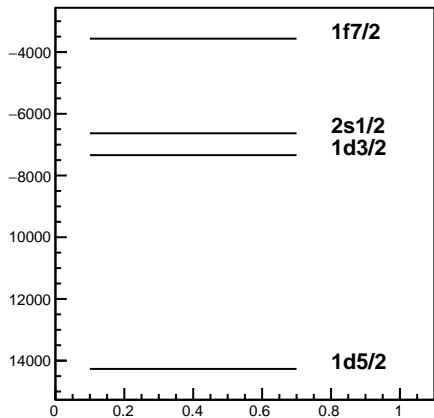
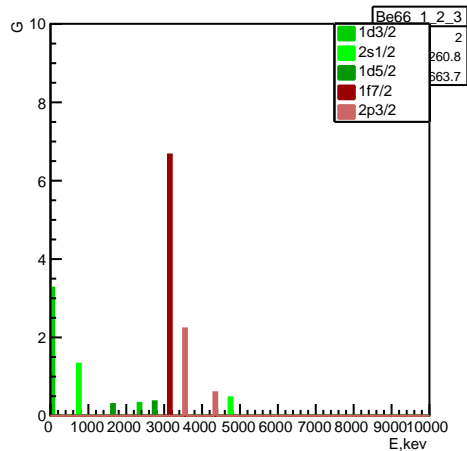
Occupancy



Penalty function components



Be66



Experiment: 1984Mc (9) Be66 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 E_F : -11078.4 \pm 852.952 keV Δ : -5270.92 \pm 1175.28 keV

penalty: 0.211878

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

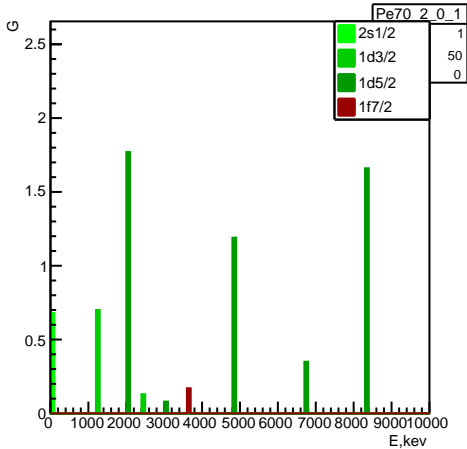
-6631.92 2s1/2 0.2575 1.315

-7340.07 1d3/2 0.14 1.08

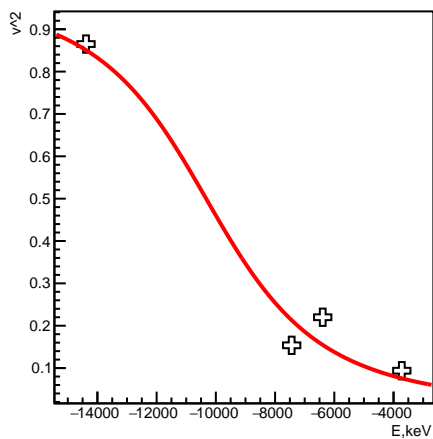
-14268 1d5/2 0.764167 0.751667

-3565.04 1f7/2 0.0875 0.8425

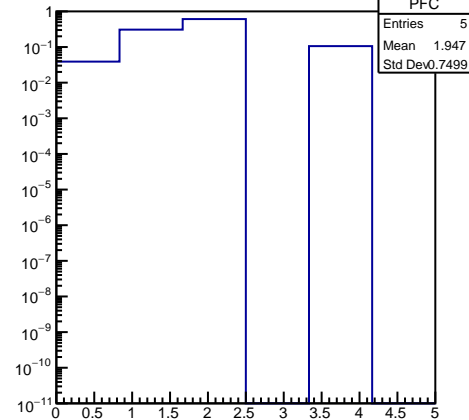
Pe70



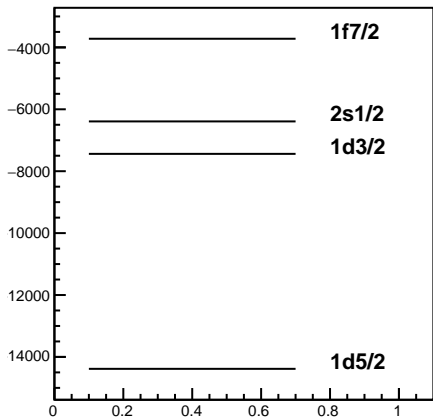
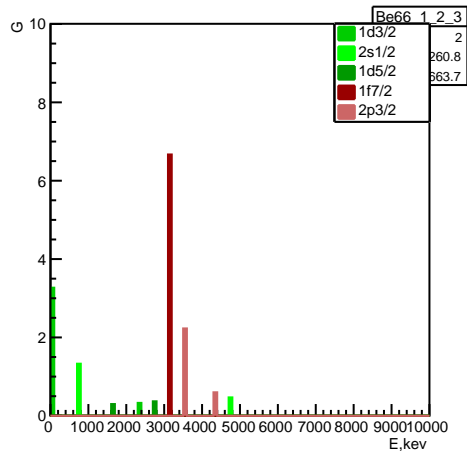
Occupancy



Penalty function components



Be66



Experiment: Pe70 (9) Be66 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -10328.3 \pm 743.181 keV Δ : -4120.81 \pm 888.589 keV

penalty: 0.212284

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

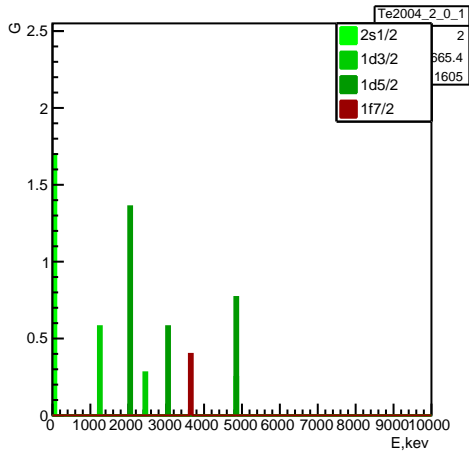
-6391.44 2s1/2 0.22 1.24

-7439.82 1d3/2 0.15375 1.1075

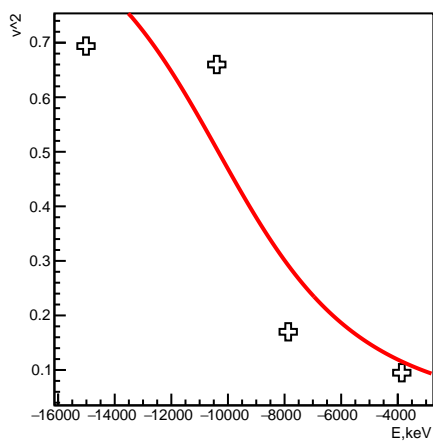
-14384.9 1d5/2 0.865 0.953333

-3720.98 1f7/2 0.09375 0.855

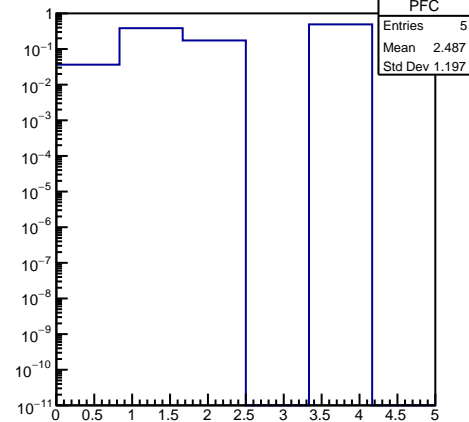
Te2004



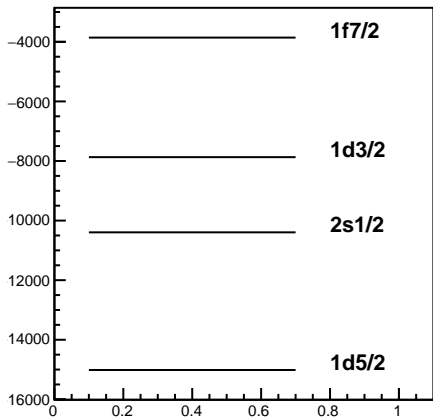
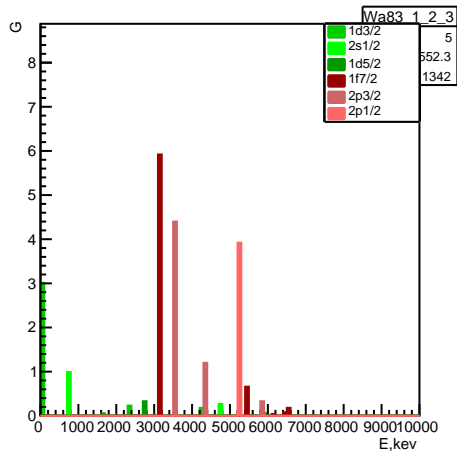
Occupancy



Penalty function components



Wa83



Experiment: Te2004 (8) Wa83 (19)

proton transfer

p separation energy A:13516.9, A+1: 7297.3:

 $E_F: -10337.8 \pm 1630.94$ keV $\Delta: 5389.1 \pm 4120.78$ keV

penalty: 0.217369

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

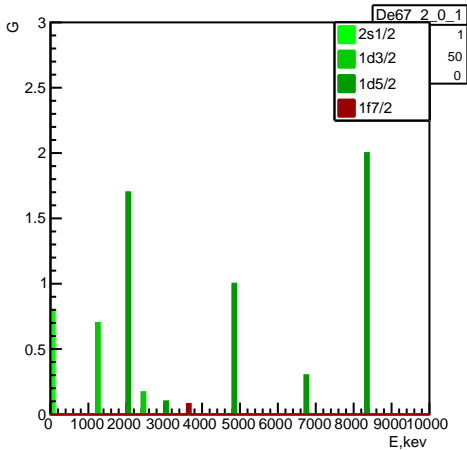
-10394.7 2s1/2 0.66 1.63

-7871.04 1d3/2 0.17 1.09

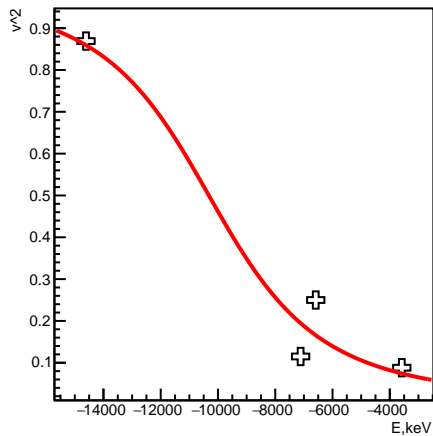
-15014.6 1d5/2 0.693833 0.515667

-3858.16 1f7/2 0.095 0.91

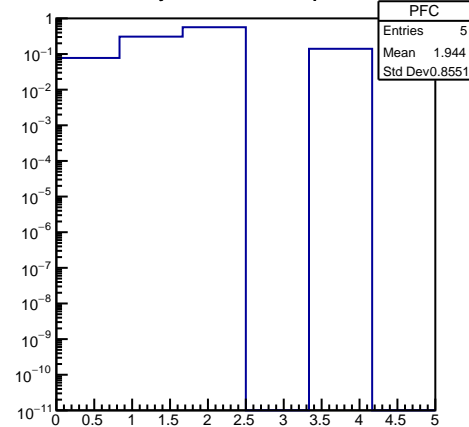
De67



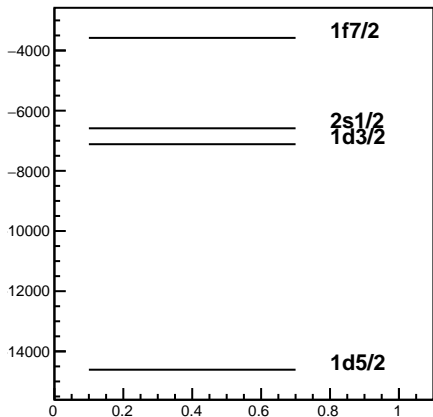
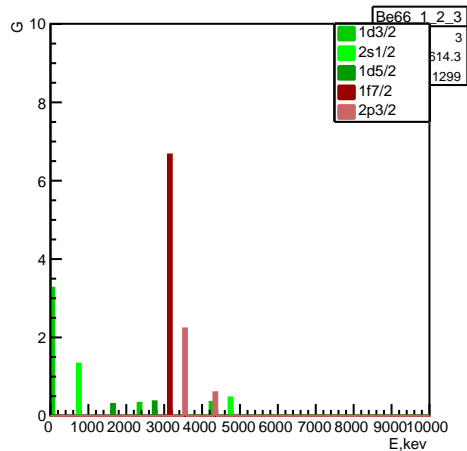
Occupancy



Penalty function components



Be66



Experiment: De67 (9) Be66 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -10319 \pm 1038.81 keV Δ : 4152.54 \pm 1174.36 keV

penalty: 0.21814

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

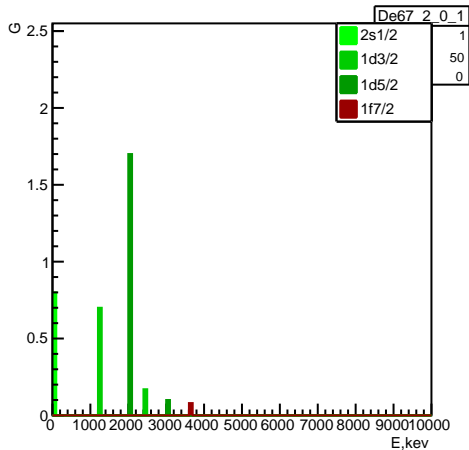
-6586.04 2s1/2 0.25 1.3

-7114.84 1d3/2 0.115 1.205

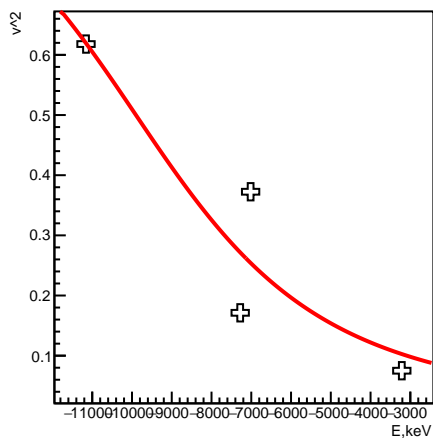
-14609.8 1d5/2 0.869167 0.961667

-3580.84 1f7/2 0.088125 0.84375

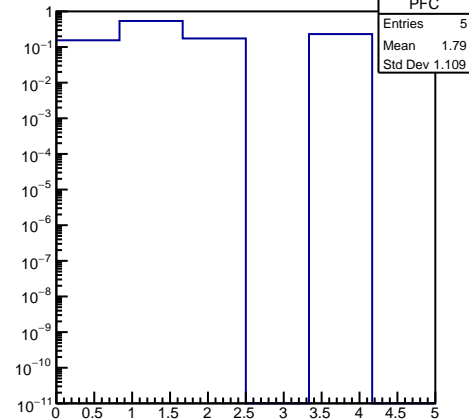
De67



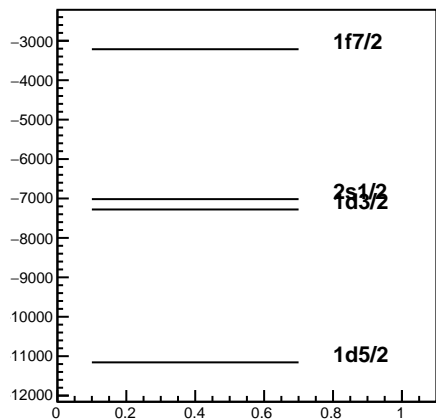
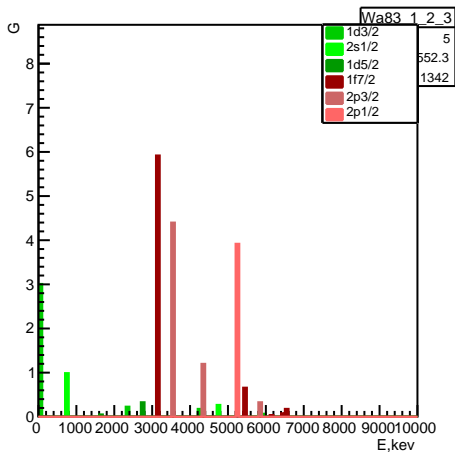
Occupancy



Penalty function components



Wa83



Experiment: De67 (6) Wa83 (19)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9901.2 \pm 930.071 keV

Δ : -5109.09 \pm 1934.25 keV

penalty: 0.219578

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

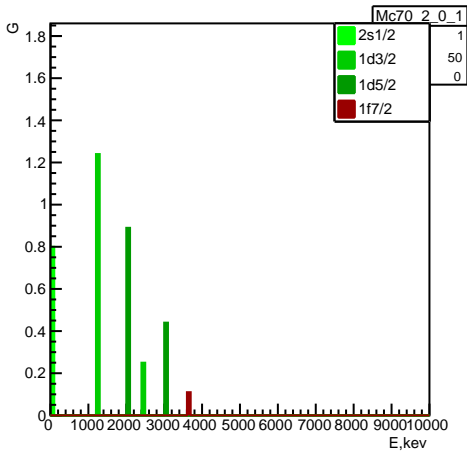
-7016.54 2s1/2 0.3725 1.055

-7278.71 1d3/2 0.17125 1.0925

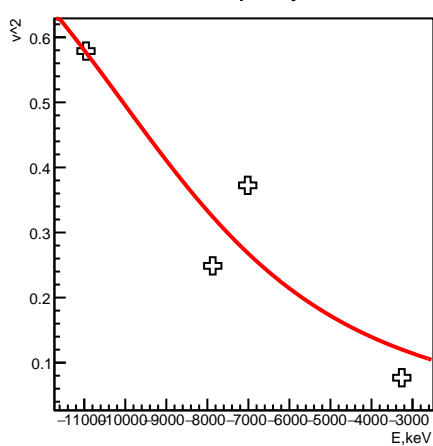
-11156.8 1d5/2 0.618 0.364

-3214.05 1f7/2 0.075 0.87

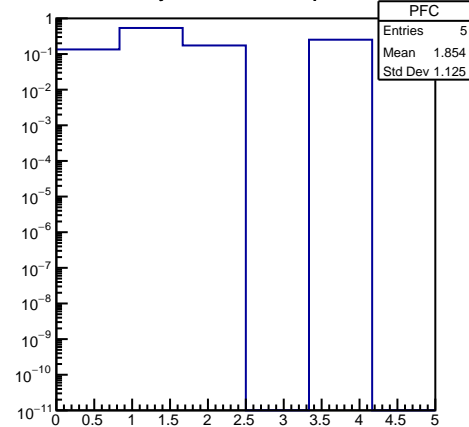
Mc70



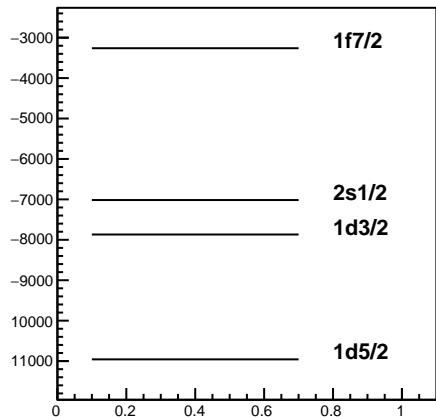
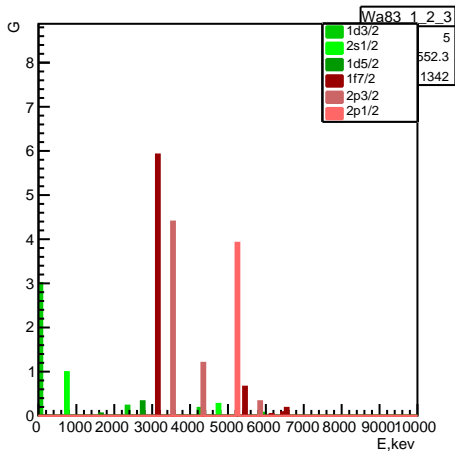
Occupancy



Penalty function components



Wa83



Experiment: Mc70 (6) Wa83 (19)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -10055 \pm 878.709 keV

Δ : 5818.86 \pm 2113.49 keV

penalty: 0.219837

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

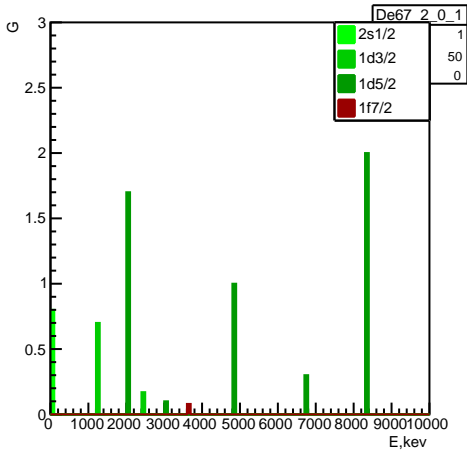
-7016.54 2s1/2 0.3725 1.055

-7869.04 1d3/2 0.24875 1.2475

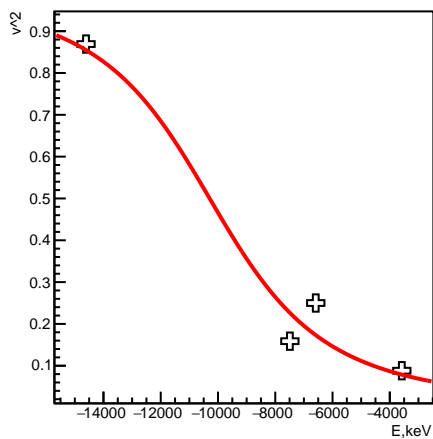
-10957.2 1d5/2 0.578833 0.285667

-3261.33 1f7/2 0.076875 0.87375

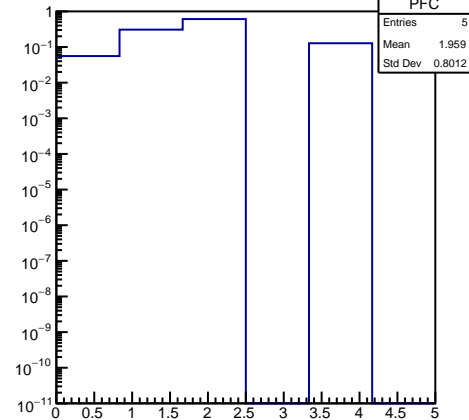
De67



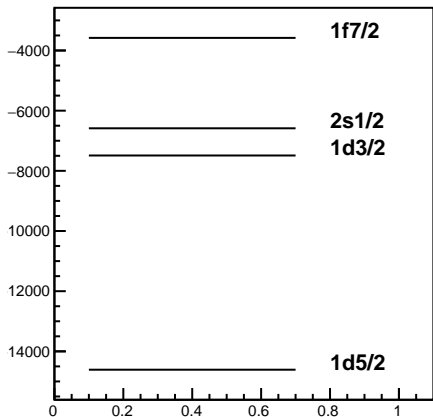
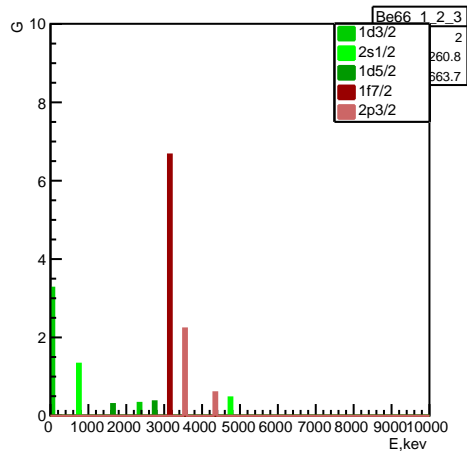
Occupancy



Penalty function components



Be66



Experiment: De67 (9) Be66 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -10291.1 \pm 856.115 keV Δ : -4289 \pm 1069.1 keV

penalty: 0.219947

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

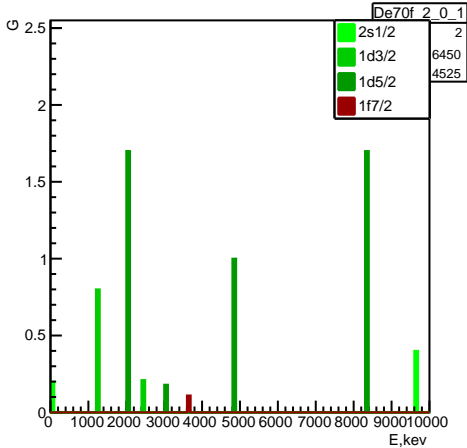
-6586.04 2s1/2 0.25 1.3

-7489.88 1d3/2 0.15875 1.1175

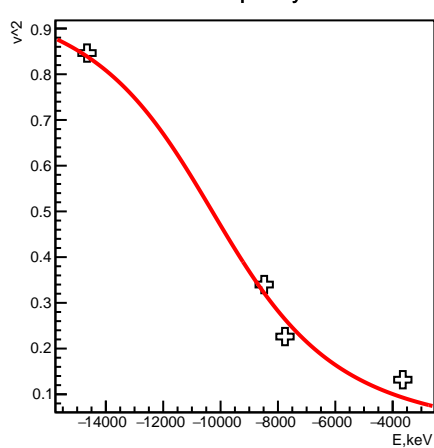
-14609.8 1d5/2 0.869167 0.961667

-3580.84 1f7/2 0.088125 0.84375

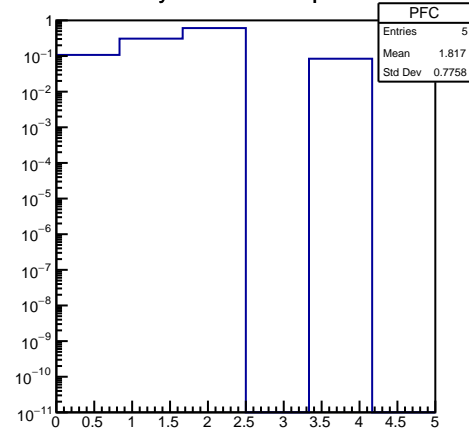
De70f



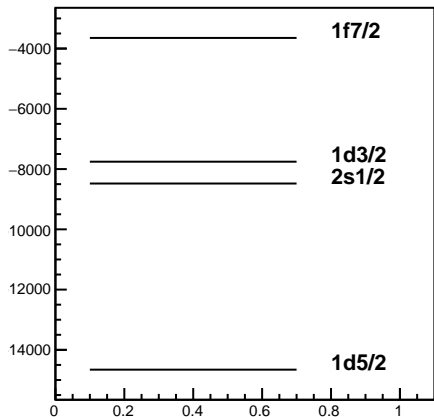
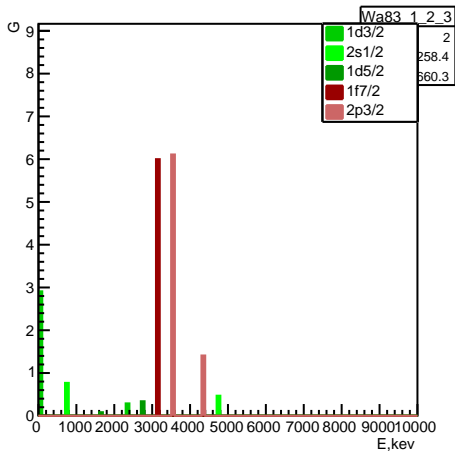
Occupancy



Penalty function components



Wa83



Experiment: De70f (9) Wa83 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -10290.3 \pm 392.59 keV Δ : -4734.47 \pm 703.864 keV

penalty: 0.221569

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

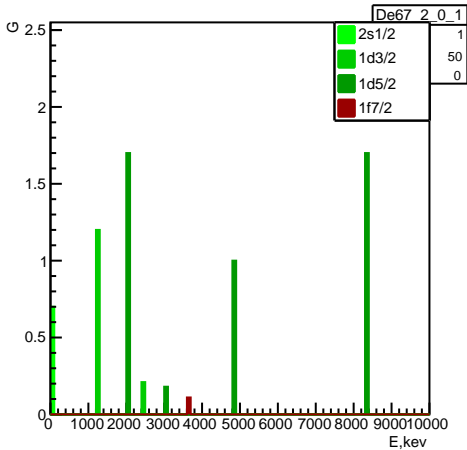
-8479.18 2s1/2 0.34 0.92

-7754.7 1d3/2 0.22625 1.0525

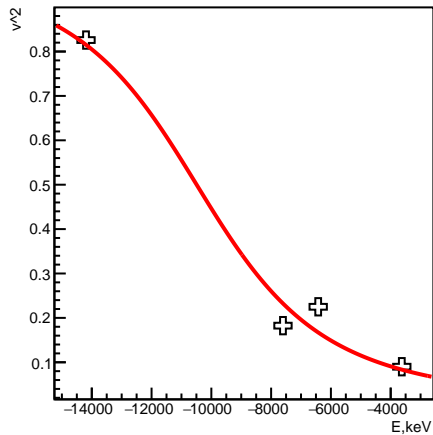
-14657.1 1d5/2 0.846333 0.834

-3647.14 1f7/2 0.131875 0.76375

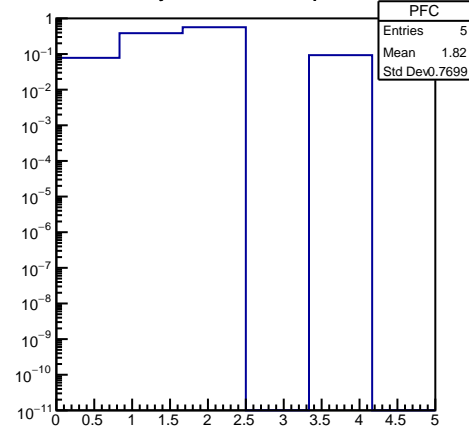
De67



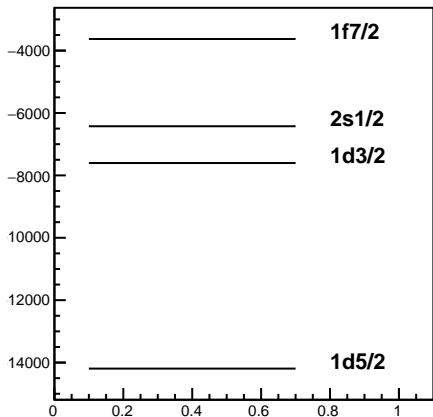
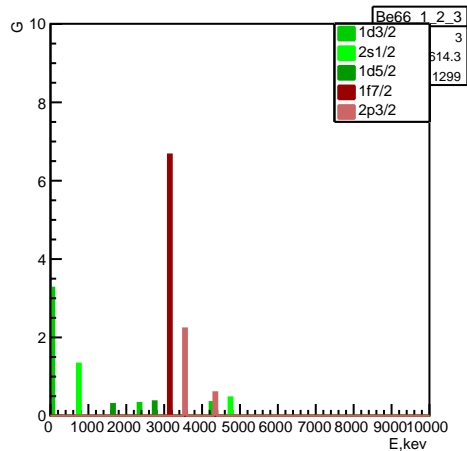
Occupancy



Penalty function components



Be66



Experiment: De67 (8) Be66 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -10491.7 \pm 595.937 keV Δ : -4558.58 \pm 779.117 keV

penalty: 0.224192

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

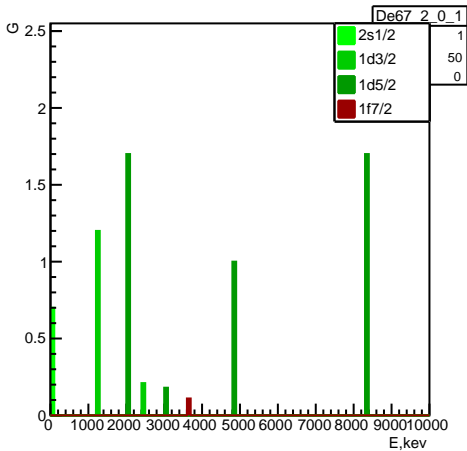
-6425.17 2s1/2 0.225 1.25

-7603.64 1d3/2 0.1825 1.34

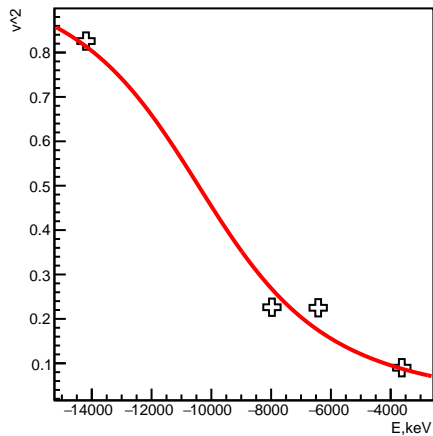
-14193.3 1d5/2 0.825833 0.875

-3627.96 1f7/2 0.09 0.8475

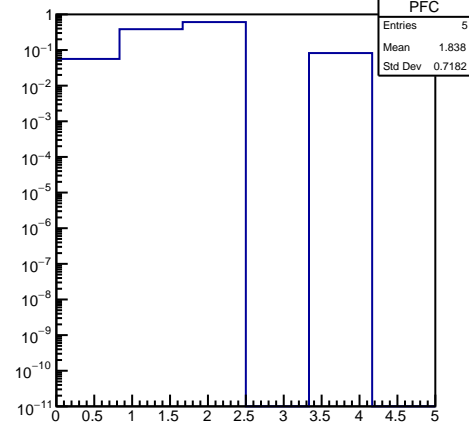
De67



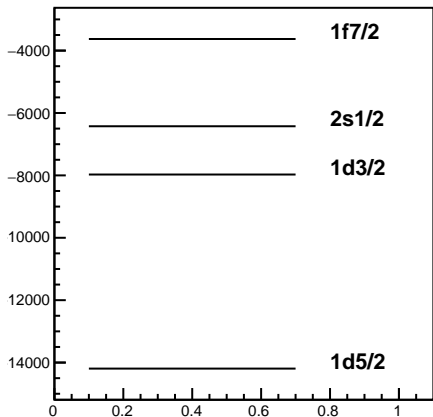
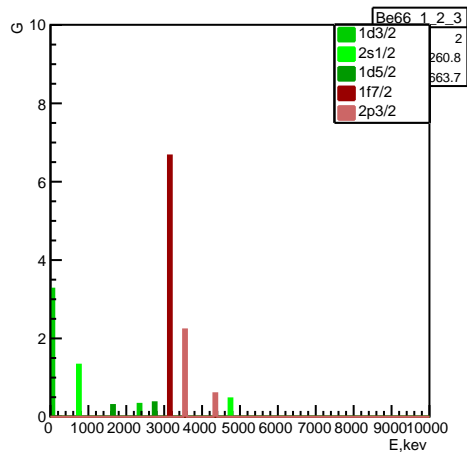
Occupancy



Penalty function components



Be66



Experiment: De67 (8) Be66 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -10431 \pm 484.329 keV

Δ : -4668.86 \pm 688.759 keV

penalty: 0.226356

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

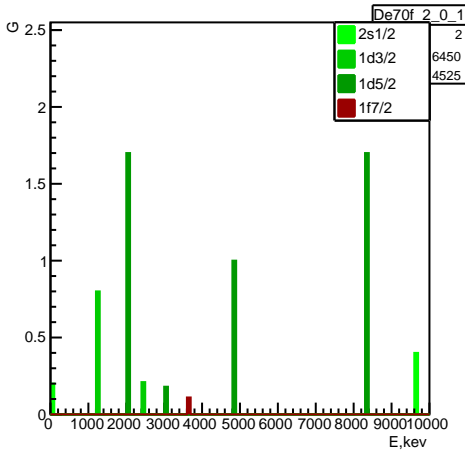
-6425.17 2s1/2 0.225 1.25

-7972.4 1d3/2 0.22625 1.2525

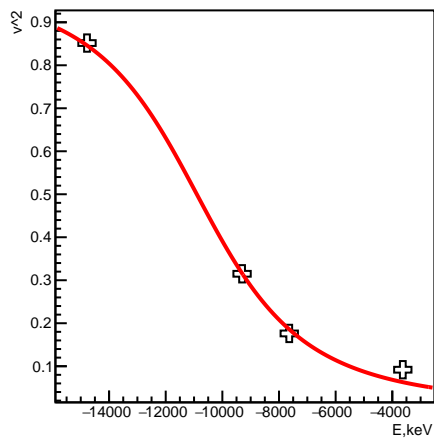
-14193.3 1d5/2 0.825833 0.875

-3627.96 1f7/2 0.09 0.8475

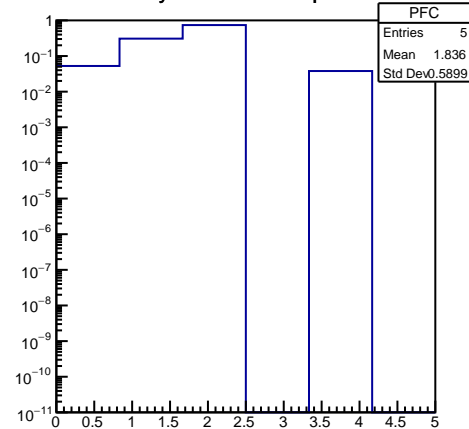
De70f



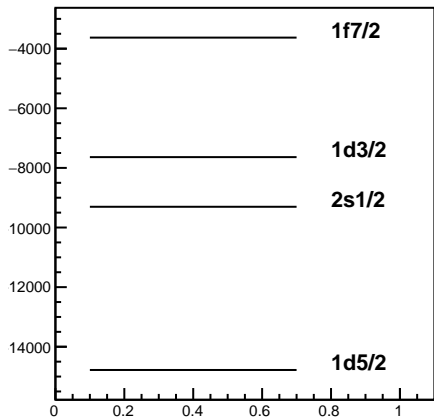
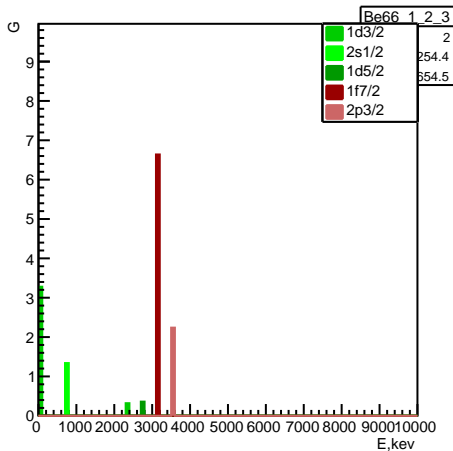
Occupancy



Penalty function components



Be66



Experiment: De70f (9) Be66 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -10902.3 \pm 198.976 keV

Δ : -4039.66 \pm 317.804 keV

penalty: 0.227473

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

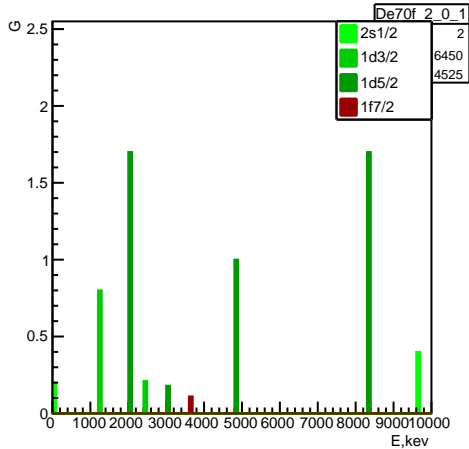
-9303.9 2s1/2 0.315 0.97

-7638.27 1d3/2 0.17625 1.1525

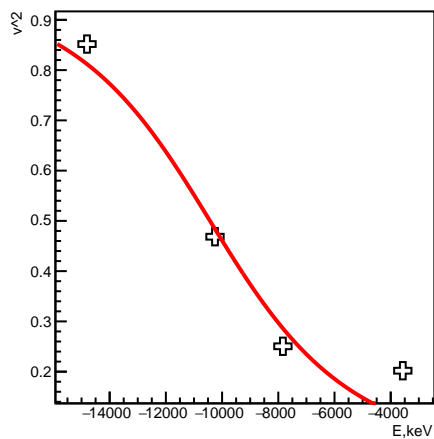
-14779.2 1d5/2 0.851667 0.823333

-3628.74 1f7/2 0.091875 0.84375

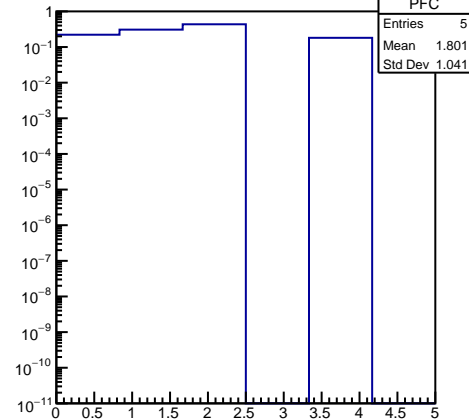
De70f



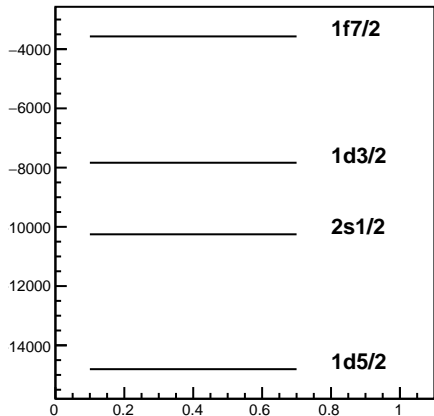
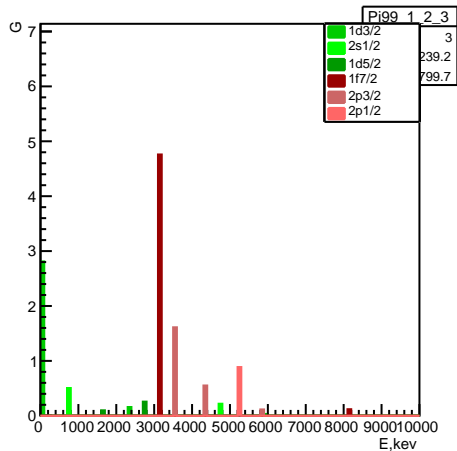
Occupancy



Penalty function components



Pi99



Experiment: De70f (9) Pi99 (13)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -10430 \pm 613.447 keV Δ : 5481.44 \pm 1518.76 keV

penalty: 0.229066

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

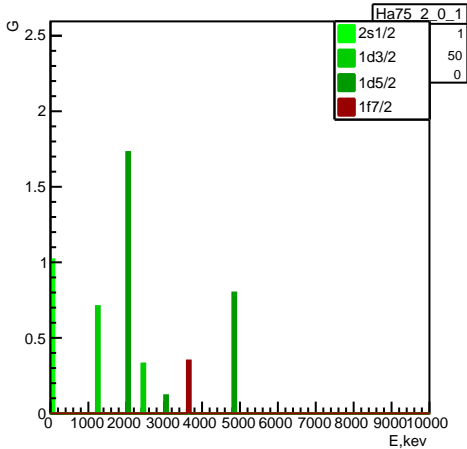
-10252.3 2s1/2 0.4685 0.663

-7835.69 1d3/2 0.2505 1.004

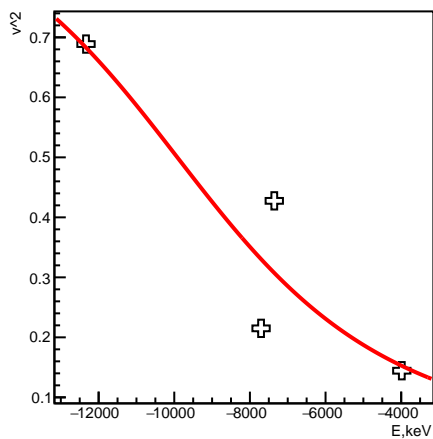
-14805.8 1d5/2 0.851833 0.823

-3570.29 1f7/2 0.201875 0.62375

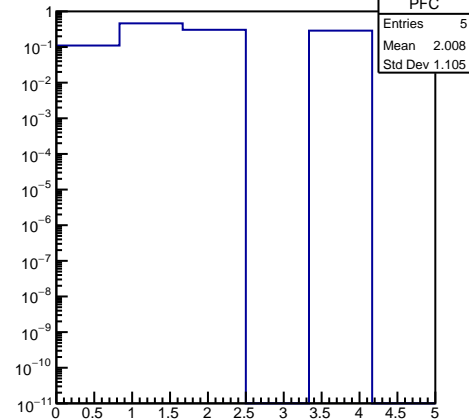
Ha75



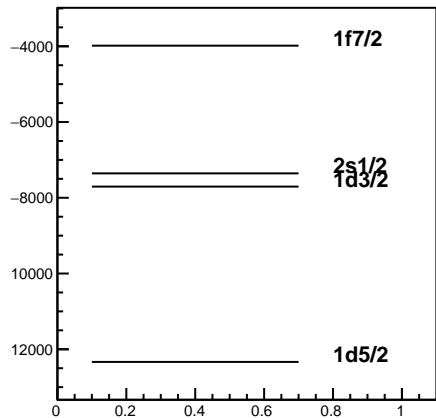
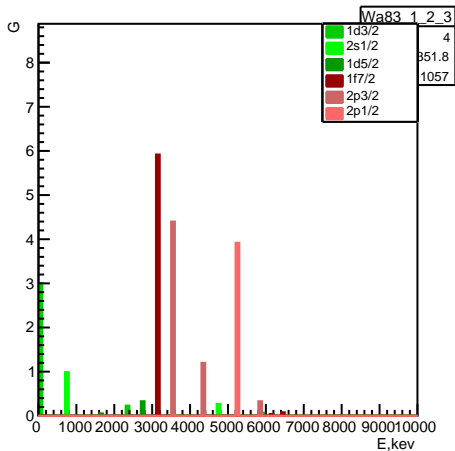
Occupancy



Penalty function components



Wa83



Experiment: Ha75 (7) Wa83 (16)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9919.03 \pm 1088.25 keV

Δ : 6140.16 \pm 2415.61 keV

penalty: 0.232877

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

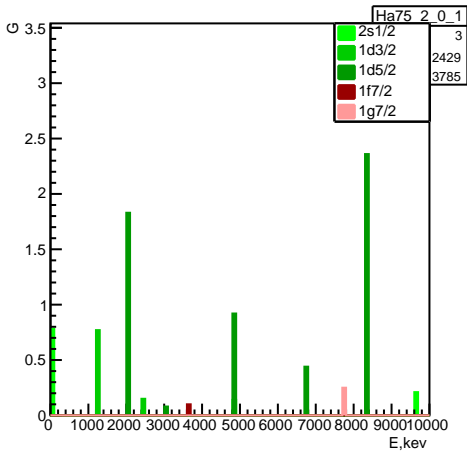
-7355.64 2s1/2 0.4275 1.165

-7704.97 1d3/2 0.215 1.09

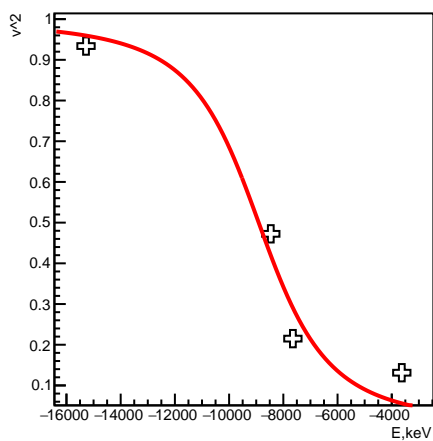
-12334 1d5/2 0.688833 0.505667

-3983.74 1f7/2 0.144375 0.79875

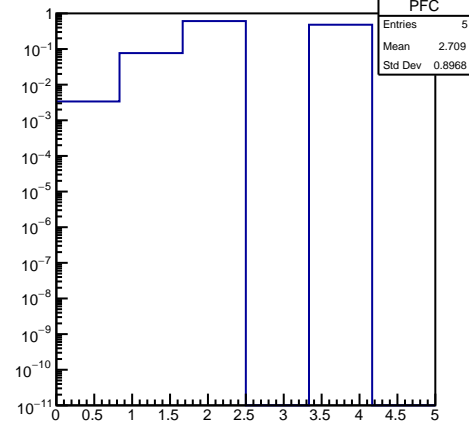
Ha75



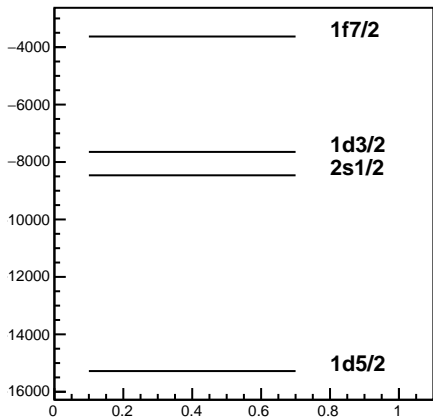
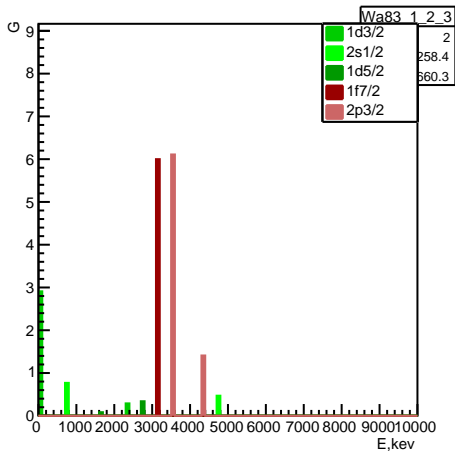
Occupancy



Penalty function components



Wa83



Experiment: Ha75 (12) Wa83 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 E_F : -8908.81 \pm 1209.54 keV Δ : -2732.72 \pm 4027.16 keV

penalty: 0.233944

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

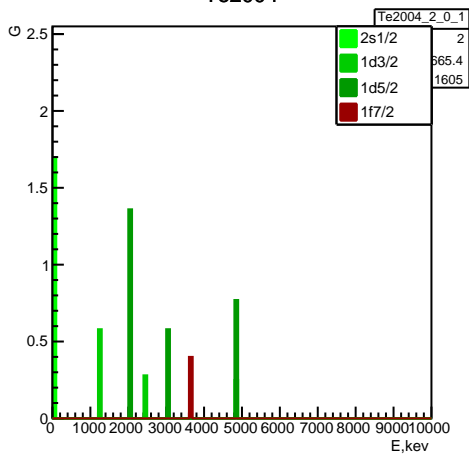
-8462.87 2s1/2 0.4725 1.185

-7647.77 1d3/2 0.215 1.03

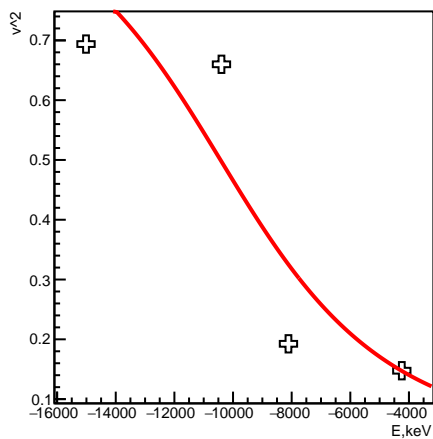
-15279.1 1d5/2 0.933833 1.009

-3629.79 1f7/2 0.13125 0.7625

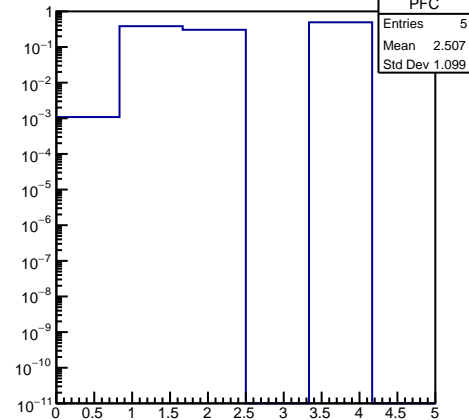
Te2004



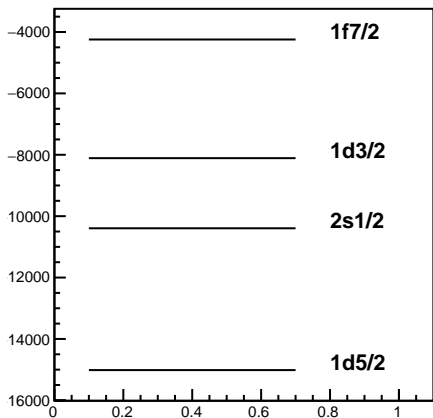
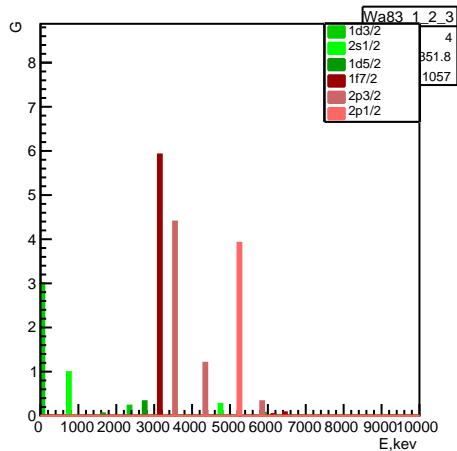
Occupancy



Penalty function components



Wa83



Experiment: Te2004 (8) Wa83 (16)

proton transfer

p separation energy A:13516.9, A+1: 7297.3:

 $E_F: -10427.6 \pm 1587.46$ keV $\Delta: 6207.33 \pm 4139.86$ keV

penalty: 0.236845

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

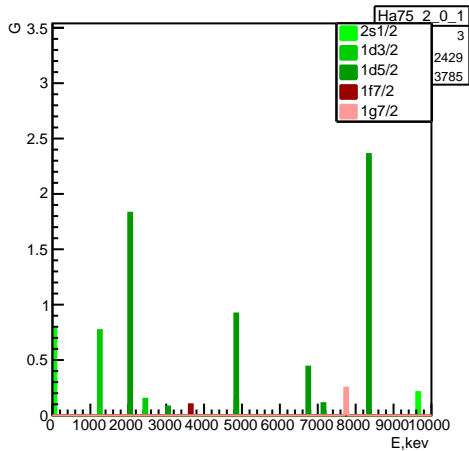
-10394.7 2s1/2 0.66 1.63

-8109.86 1d3/2 0.1925 1.045

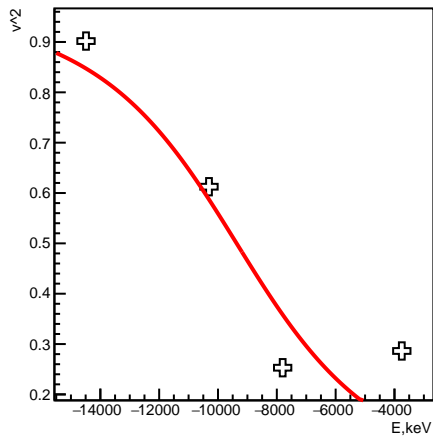
-15014.6 1d5/2 0.693833 0.515667

-4243.99 1f7/2 0.1475 0.805

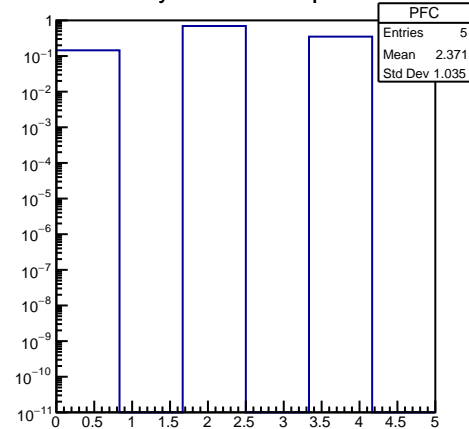
Ha75



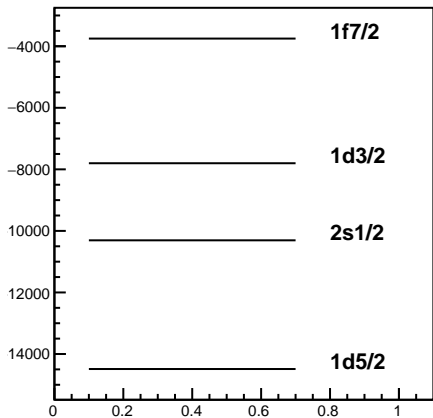
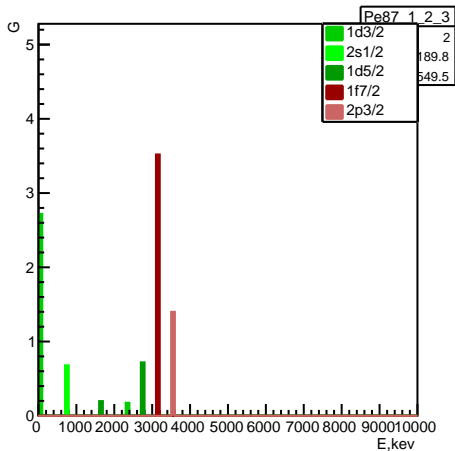
Occupancy



Penalty function components



Pe87



Experiment: Ha75 (13) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9367.4 \pm 1032.37 keV Δ : 5302.23 \pm 2932.53 keV

penalty: 0.238084

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

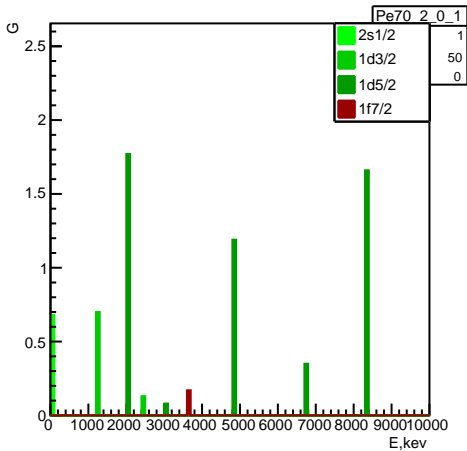
-10306.2 2s1/2 0.6125 0.905

-7801.53 1d3/2 0.253 0.954

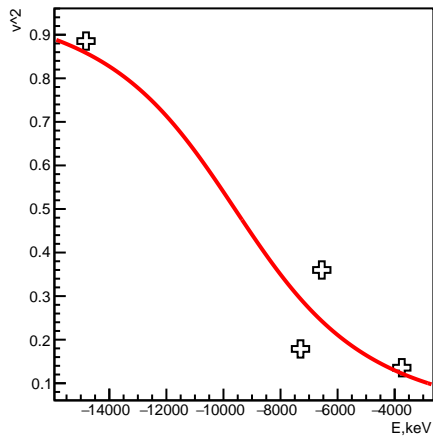
-14487.7 1d5/2 0.901833 1.10967

-3750.84 1f7/2 0.28625 0.4525

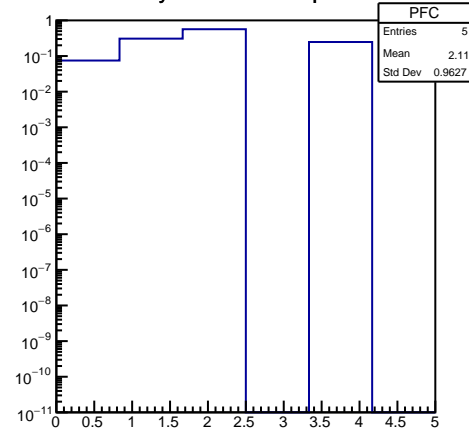
Pe70



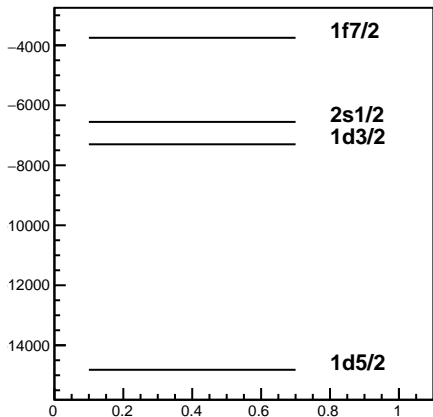
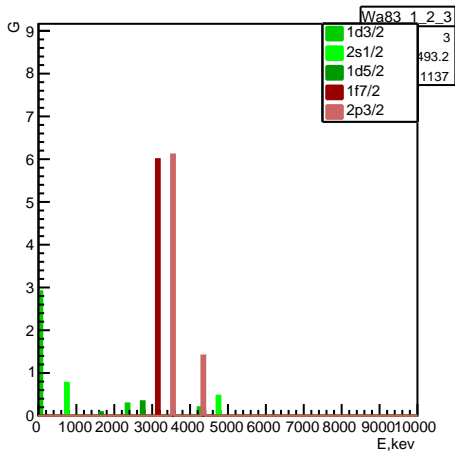
Occupancy



Penalty function components



Wa83



Experiment: Pe70 (9) Wa83 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 E_F : -9601.14 ± 1308.88 keV Δ : -5078.36 ± 2072.39 keV

penalty: 0.239004

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

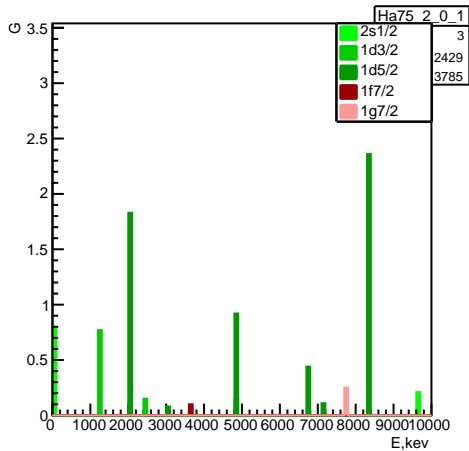
-6553.92 2s1/2 0.36 0.96

-7300.58 1d3/2 0.17875 1.0575

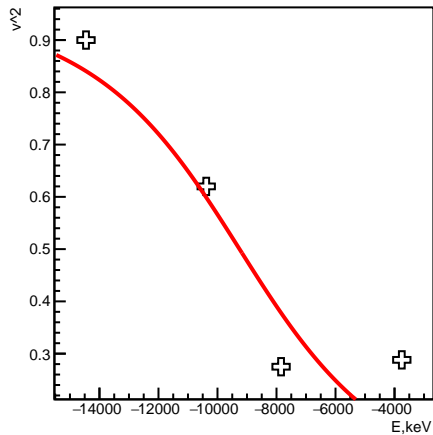
-14817.5 1d5/2 0.8855 0.912333

-3750.06 1f7/2 0.135625 0.77125

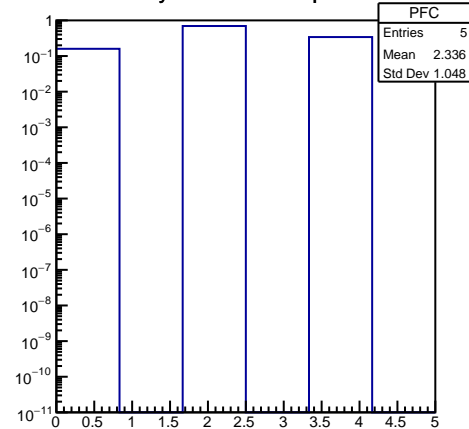
Ha75



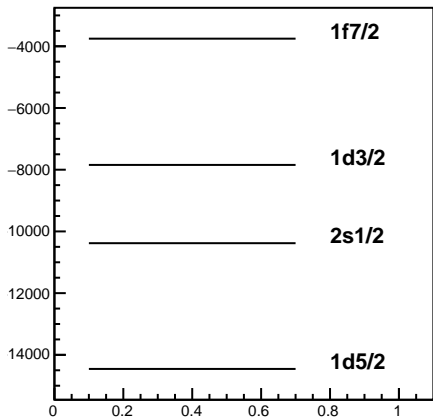
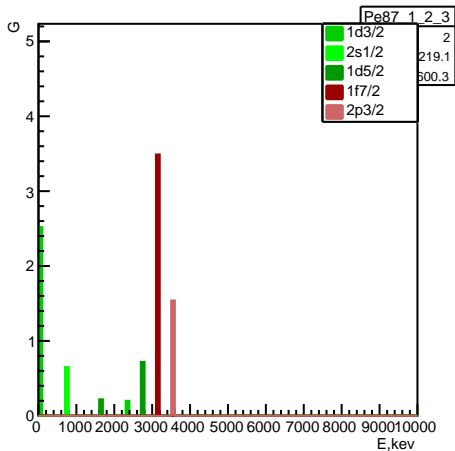
Occupancy



Penalty function components



Pe87



Experiment: Ha75 (13) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -9252.59 \pm 1034.9$ keV $\Delta: 5593.54 \pm 2853.42$ keV

penalty: 0.239149

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

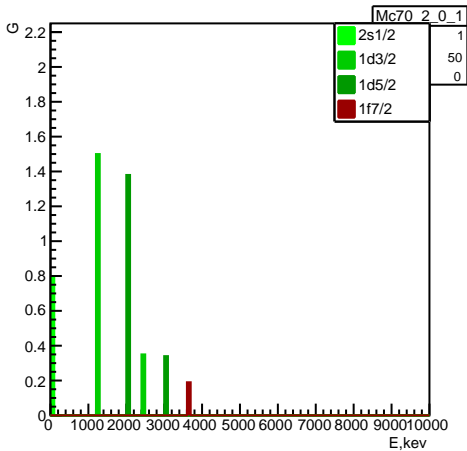
-10381.6 2s1/2 0.62 0.89

-7844.99 1d3/2 0.275 0.91

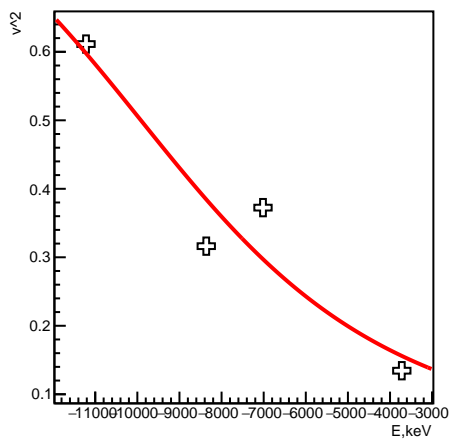
-14456.1 1d5/2 0.9 1.11333

-3753.32 1f7/2 0.288125 0.44875

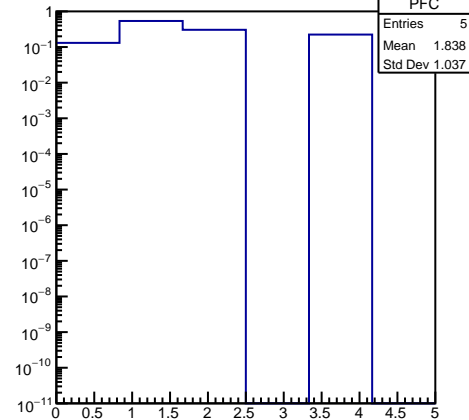
Mc70



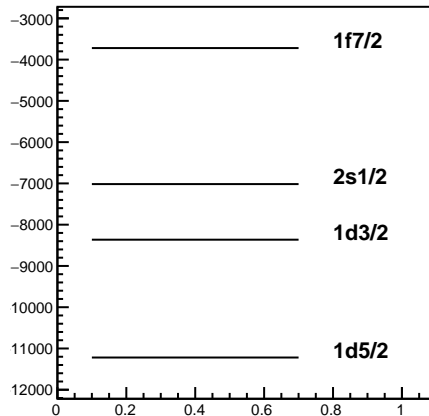
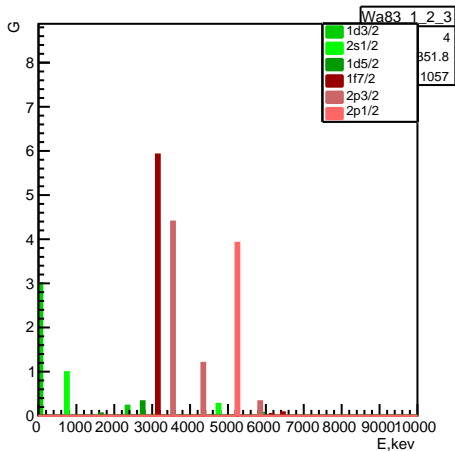
Occupancy



Penalty function components



Wa83



Experiment: Mc70 (6) Wa83 (16)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 E_F : -9915.5 \pm 688.665 keV Δ : -6533.8 \pm 1874.02 keV

penalty: 0.239457

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

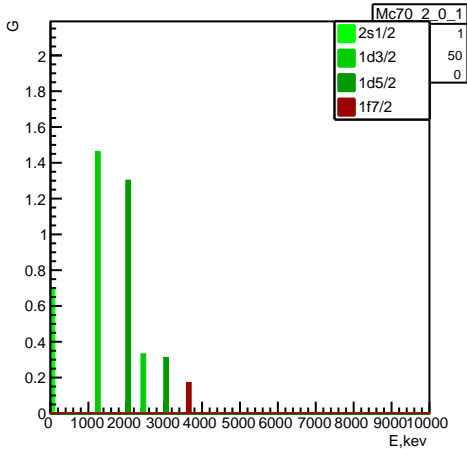
-7016.54 2s1/2 0.3725 1.055

-8363.74 1d3/2 0.31625 1.2925

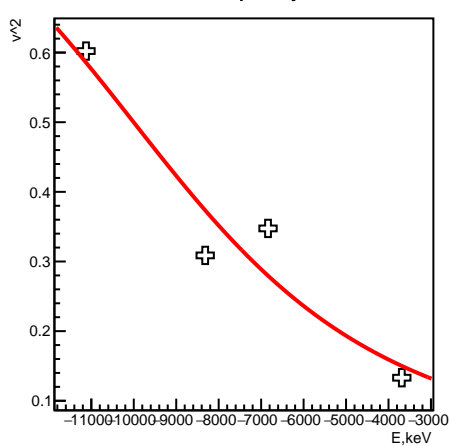
-11219 1d5/2 0.611333 0.350667

-3720.56 1f7/2 0.134375 0.77875

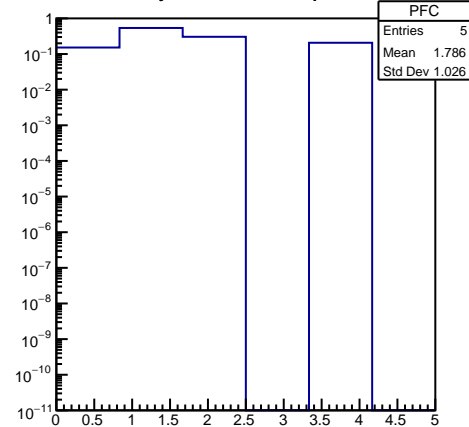
Mc70



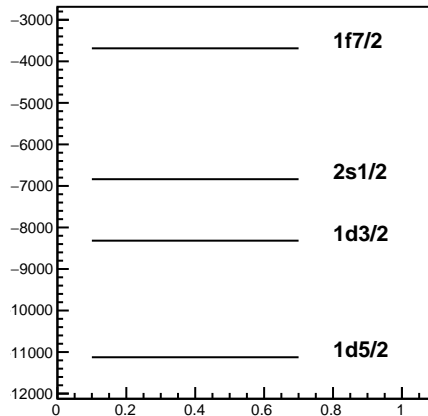
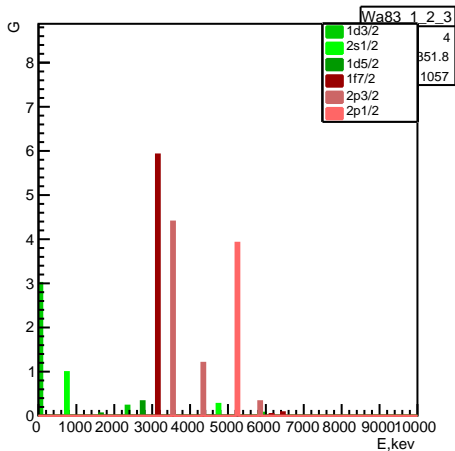
Occupancy



Penalty function components



Wa83



Experiment: Mc70 (6) Wa83 (16)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -10003.4 \pm 647.056 keV

Δ : -6445.86 \pm 1733.9 keV

penalty: 0.240403

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

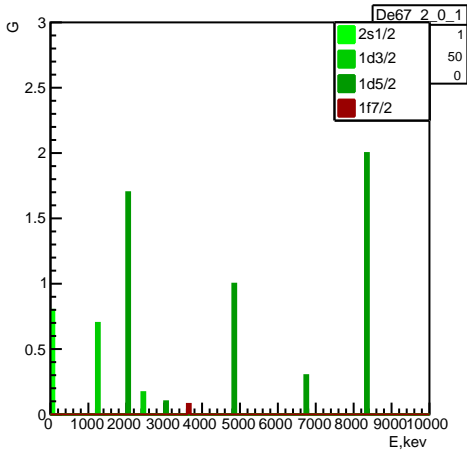
-6837.87 2s1/2 0.3475 1.005

-8317.93 1d3/2 0.30875 1.2775

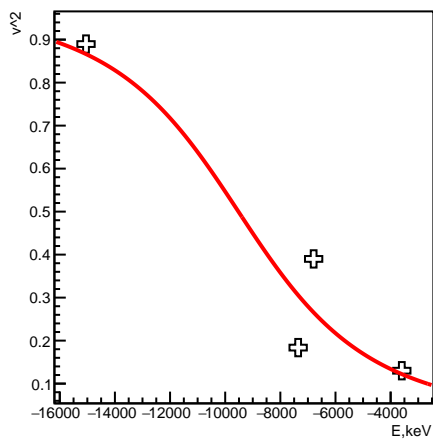
-11125.2 1d5/2 0.602167 0.332333

-3686.71 1f7/2 0.133125 0.77625

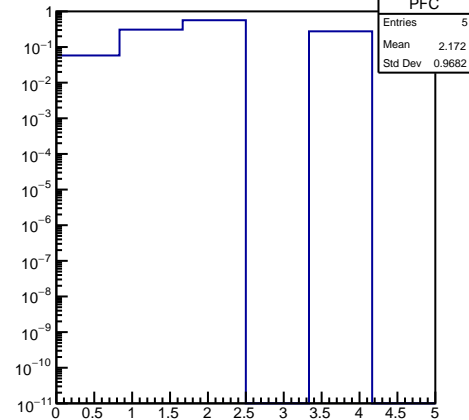
De67



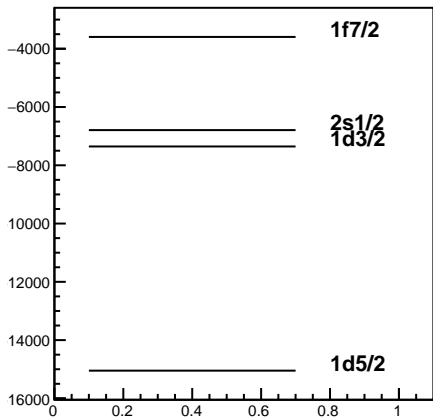
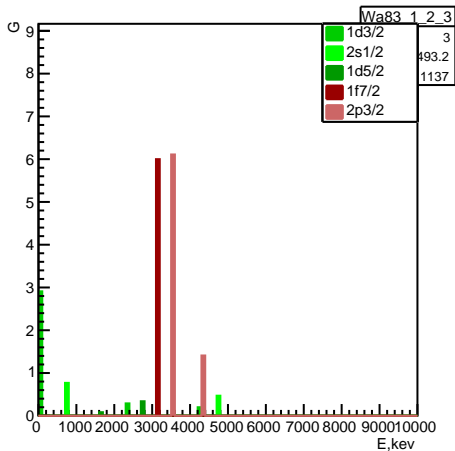
Occupancy



Penalty function components



Wa83



Experiment: De67 (9) Wa83 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9520.16 \pm 1383.03 keV

Δ : -5134.32 \pm 2309.42 keV

penalty: 0.241309

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

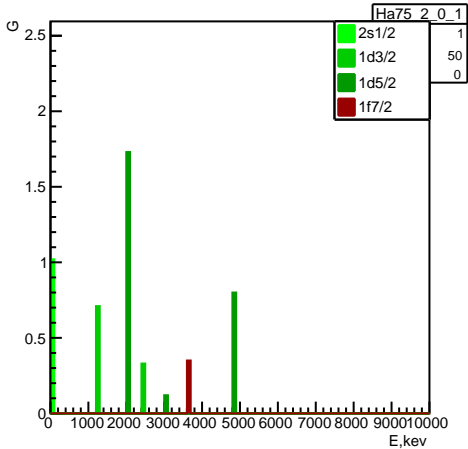
-6792.39 2s1/2 0.39 1.02

-7354.29 1d3/2 0.18375 1.0675

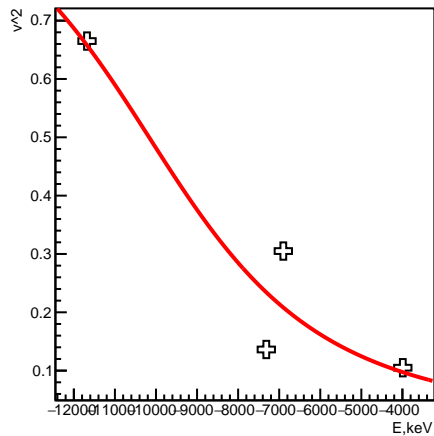
-15048.5 1d5/2 0.889667 0.920667

-3594.91 1f7/2 0.13 0.76

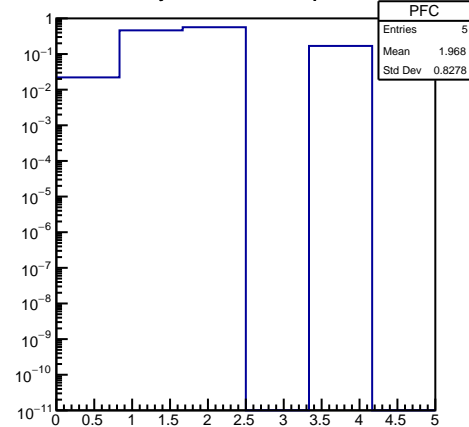
Ha75



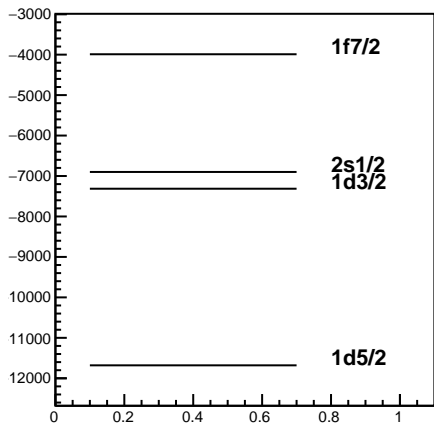
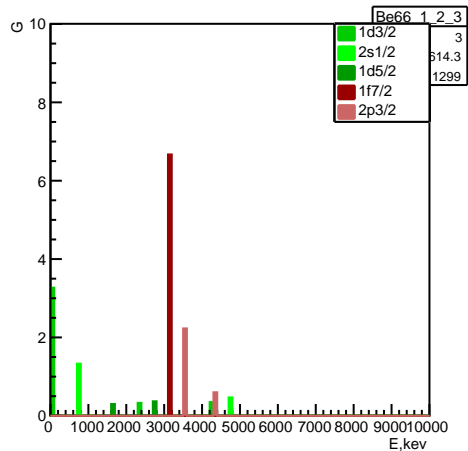
Occupancy



Penalty function components



Be66



Experiment: Ha75 (7) Be66 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -10167.3 \pm 773.756$ keV $\Delta: -4546.83 \pm 1413.32$ keV

penalty: 0.24351

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

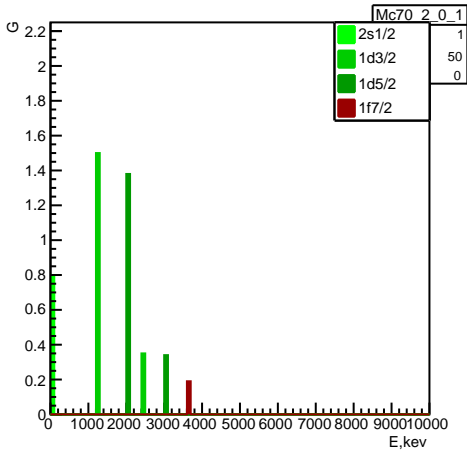
-6899.8 2s1/2 0.305 1.41

-7314.18 1d3/2 0.13625 1.2475

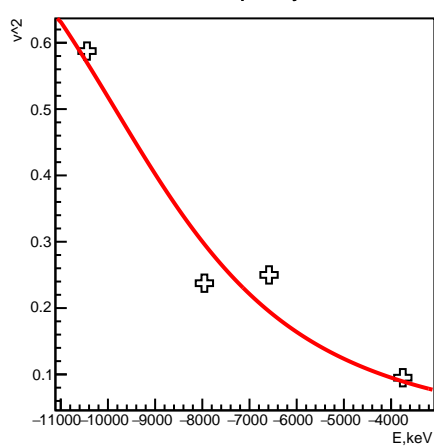
-11679.7 1d5/2 0.665 0.553333

-3990.47 1f7/2 0.105 0.8775

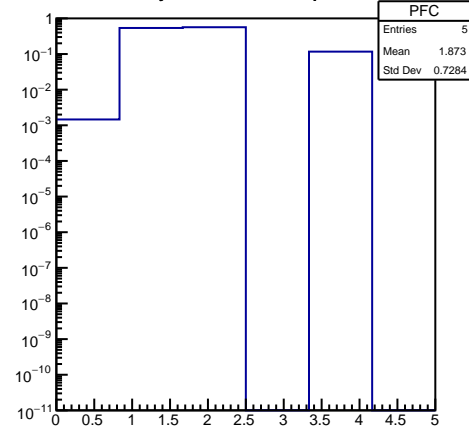
Mc70



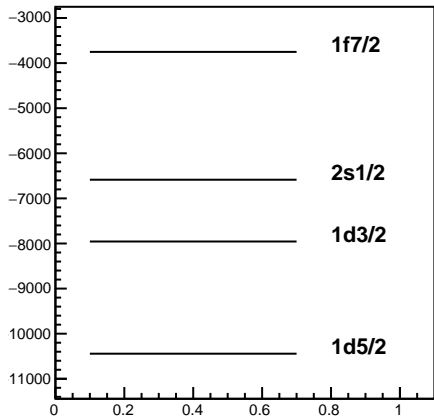
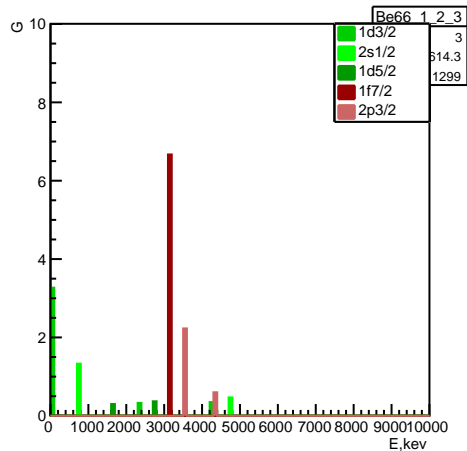
Occupancy



Penalty function components



Be66



Experiment: Mc70 (6) Be66 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9845 ± 408.323 keV

Δ: -4235.27 ± 977.914 keV

penalty: 0.244374

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

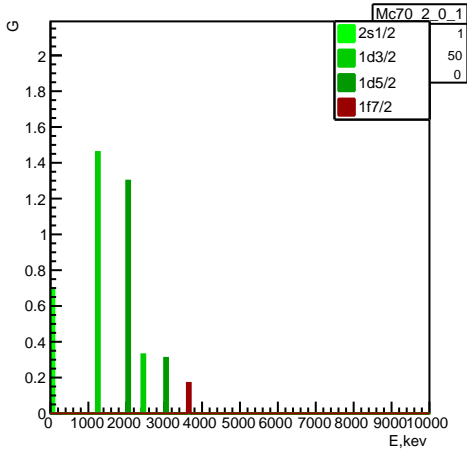
-6586.04 2s1/2 0.25 1.3

-7955.97 1d3/2 0.2375 1.45

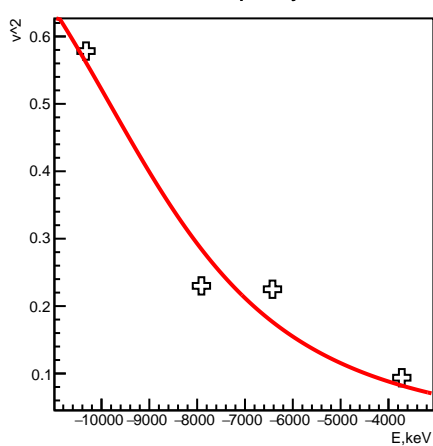
-10443.6 1d5/2 0.5875 0.398333

-3751.62 1f7/2 0.095 0.8575

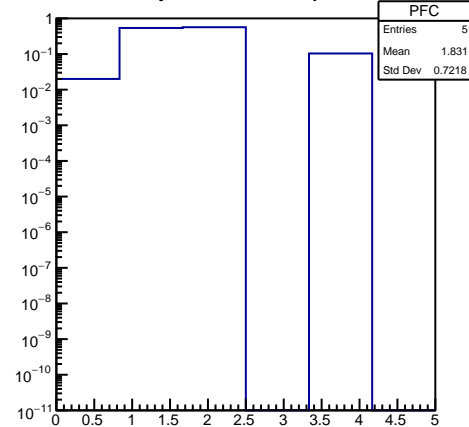
Mc70



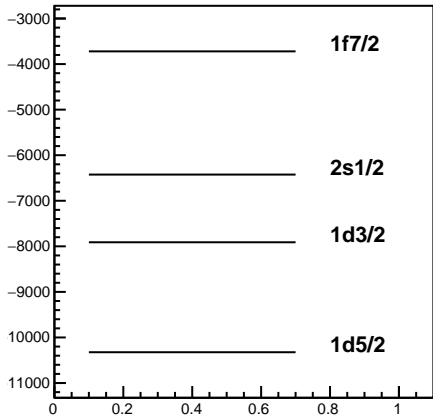
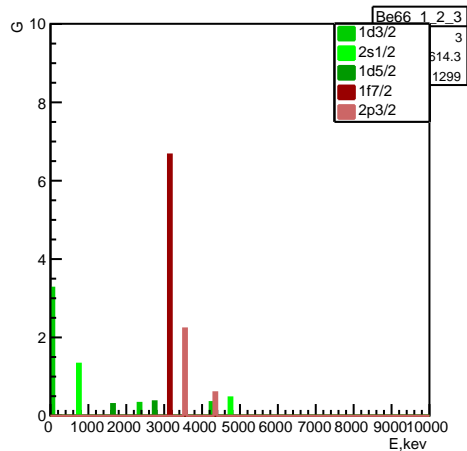
Occupancy



Penalty function components



Be66



Experiment: Mc70 (6) Be66 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9827.68 ± 362.68 keV

Δ: -4011.64 ± 868.355 keV

penalty: 0.245467

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

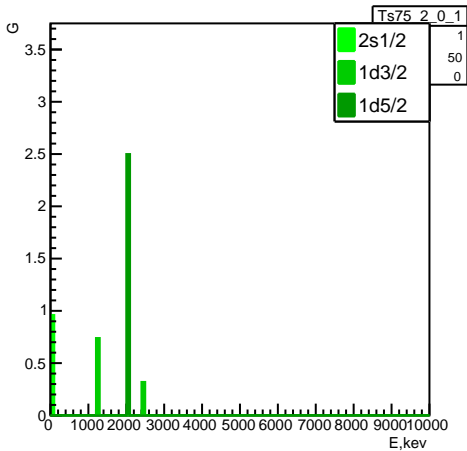
-6425.17 2s1/2 0.225 1.25

-7910.92 1d3/2 0.23 1.435

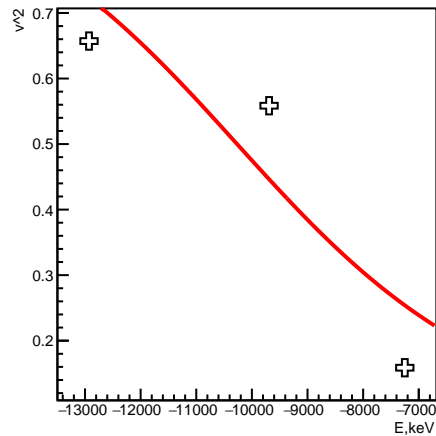
-10324.1 1d5/2 0.578333 0.38

-3720.98 1f7/2 0.09375 0.855

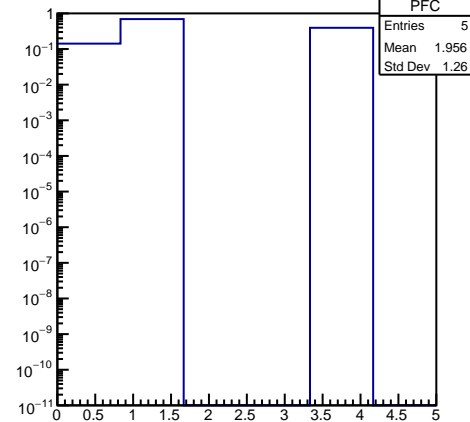
Ts75



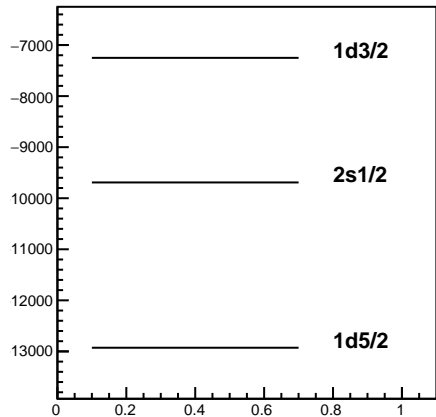
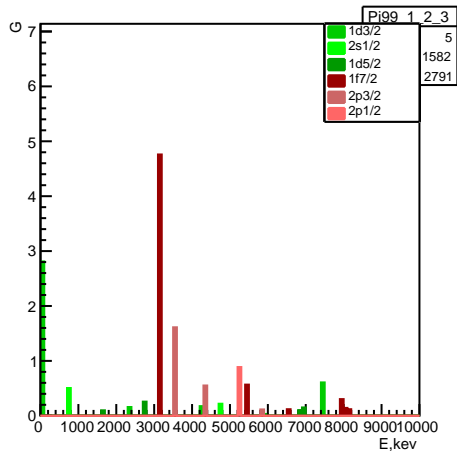
Occupancy



Penalty function components



Pi99



Experiment: Ts75 (4) Pi99 (23)

proton transfer

p separation energy A:13516.9, A+1: 7297.3:

E_F: -10266.2 \pm 1315.73 keV Δ : 5334.36 \pm 3301.01 keV

penalty: 0.245637

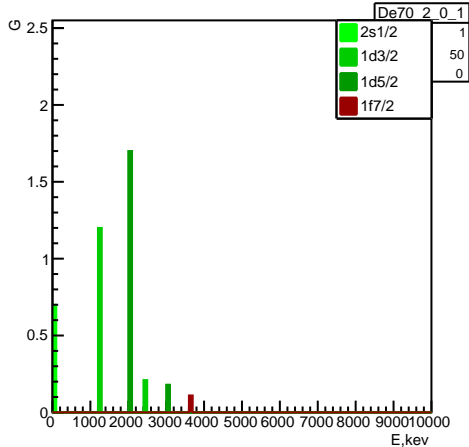
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-9691.15 2s1/2 0.5585 0.843

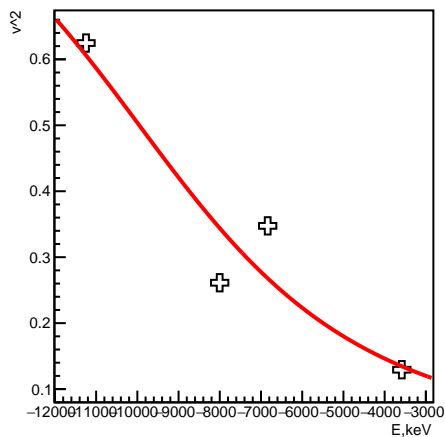
-7251.08 1d3/2 0.15875 1.2125

-12928.1 1d5/2 0.657167 0.519

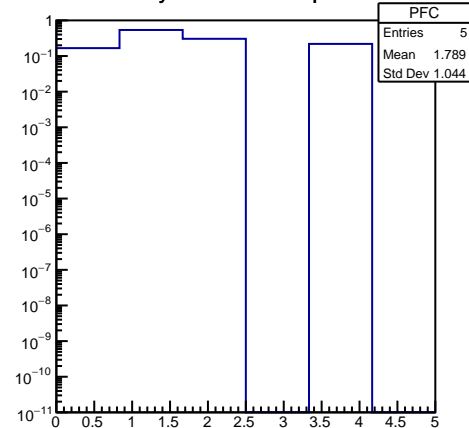
De70



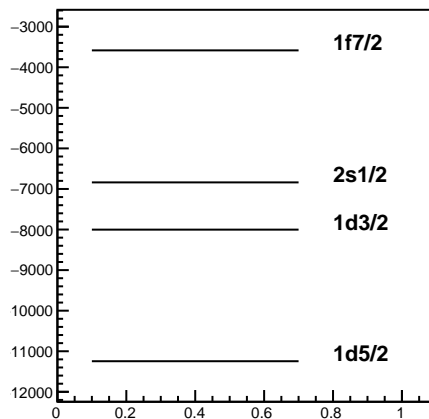
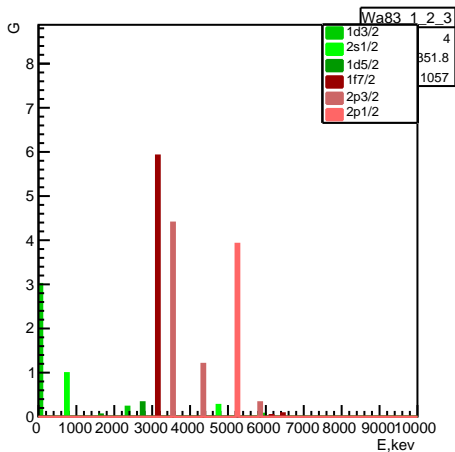
Occupancy



Penalty function components



Wa83



Experiment: De70 (6) Wa83 (16)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9954.11 \pm 732.556 keV Δ : 5948.52 \pm 1834.39 keV

penalty: 0.245677

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

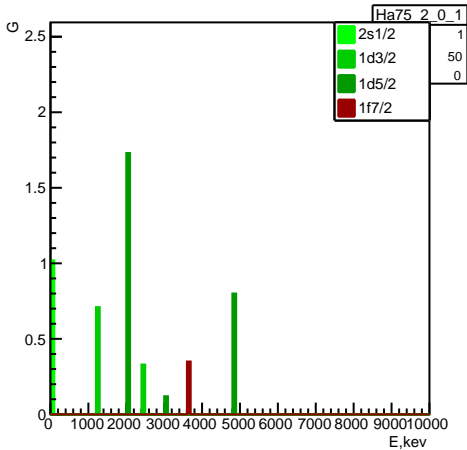
-6837.87 2s1/2 0.3475 1.005

-8002.42 1d3/2 0.26125 1.1825

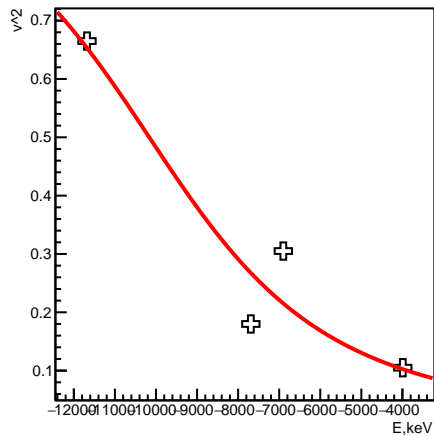
-11245.8 1d5/2 0.624667 0.377333

-3583.83 1f7/2 0.129375 0.76875

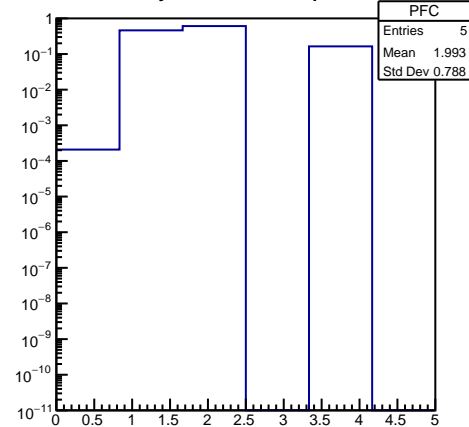
Ha75



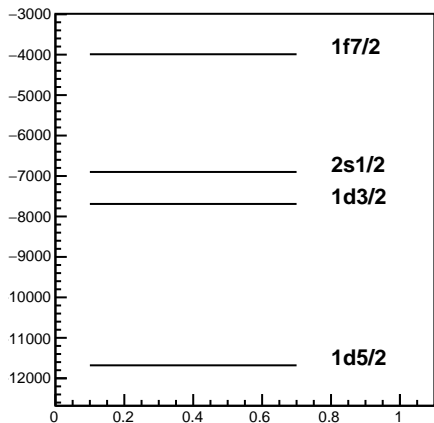
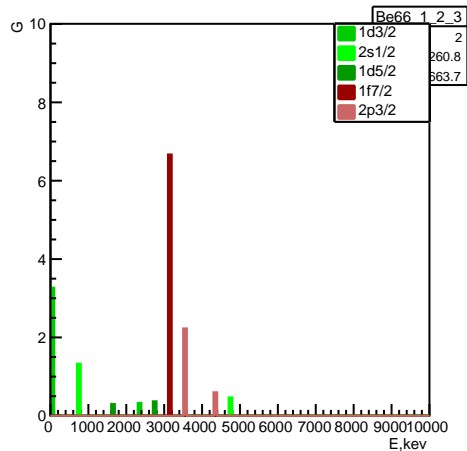
Occupancy



Penalty function components



Be66



Experiment: Ha75 (7) Be66 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -10163.8 \pm 699.217 keV

Δ : -4709.69 \pm 1373.58 keV

penalty: 0.246882

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

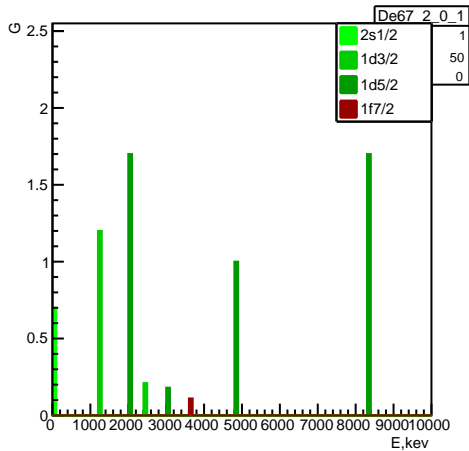
-6899.8 2s1/2 0.305 1.41

-7690.52 1d3/2 0.18 1.16

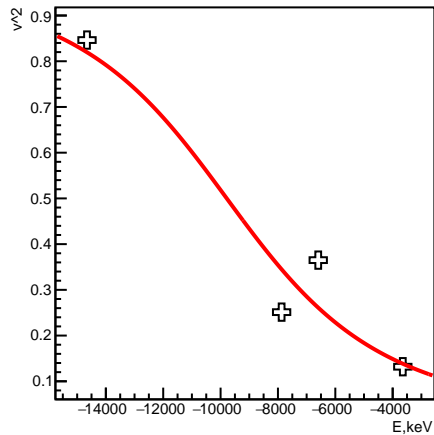
-11679.7 1d5/2 0.665 0.553333

-3990.47 1f7/2 0.105 0.8775

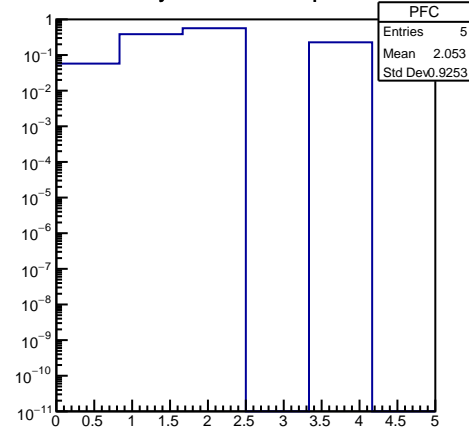
De67



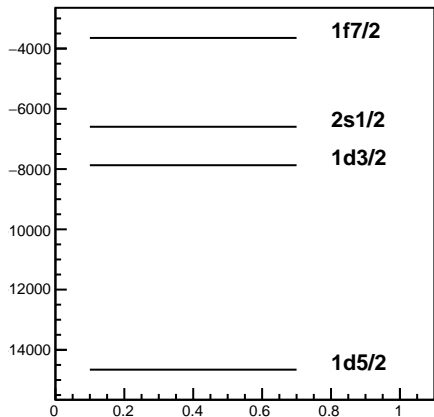
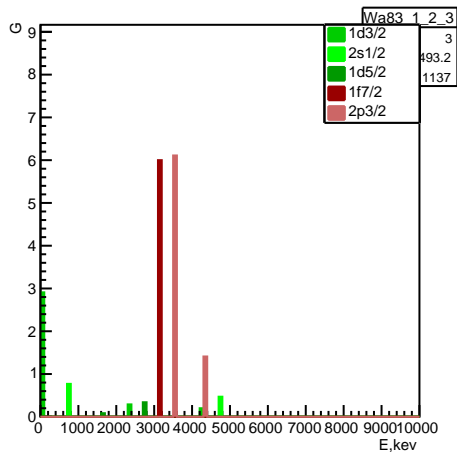
Occupancy



Penalty function components



Wa83



Experiment: De67 (8) Wa83 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 E_F : -9785.4 \pm 1059.36 keV Δ : 5861.49 \pm 1905.04 keV

penalty: 0.246935

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

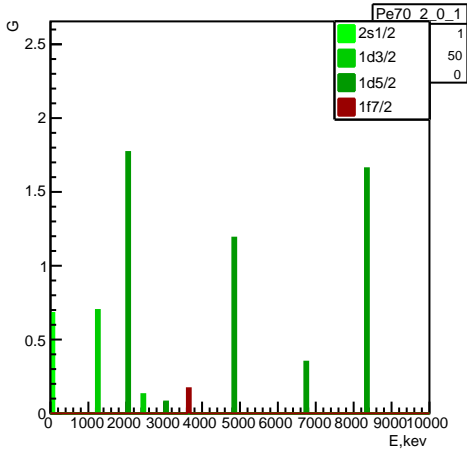
-6595.71 2s1/2 0.365 0.97

-7872.1 1d3/2 0.25125 1.2025

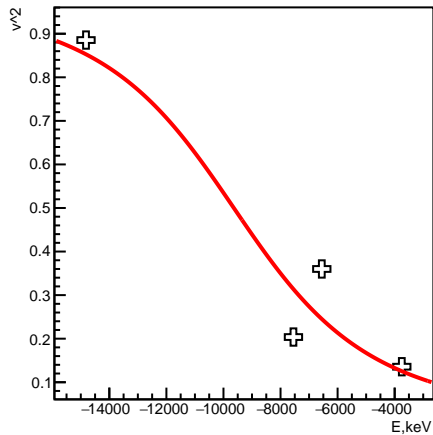
-14657.1 1d5/2 0.846333 0.834

-3647.14 1f7/2 0.131875 0.76375

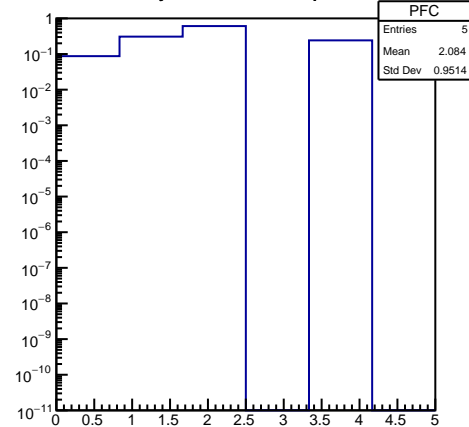
Pe70



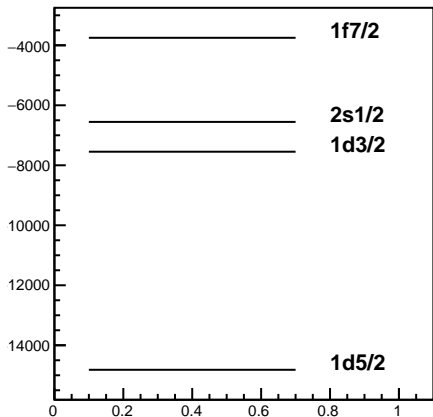
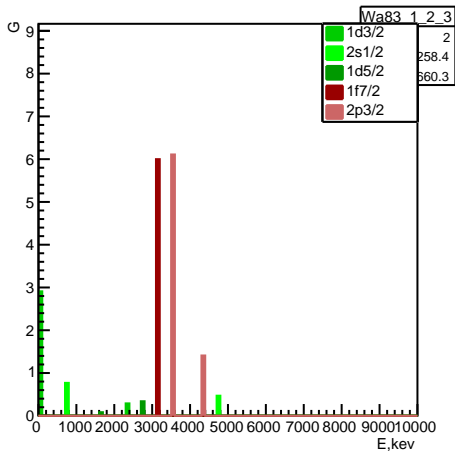
Occupancy



Penalty function components



Wa83



Experiment: Pe70 (9) Wa83 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 E_F : -9636.8 \pm 1222.33 keV Δ : -5203.08 \pm 2024.44 keV

penalty: 0.249055

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

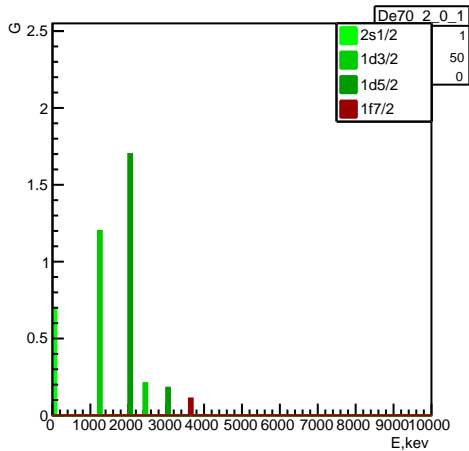
-6553.92 2s1/2 0.36 0.96

-7547.51 1d3/2 0.20375 1.0075

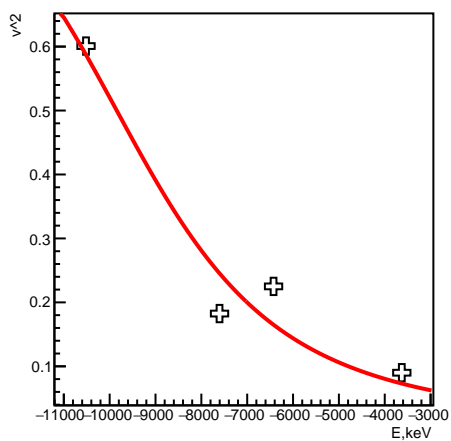
-14817.5 1d5/2 0.8855 0.912333

-3750.06 1f7/2 0.135625 0.77125

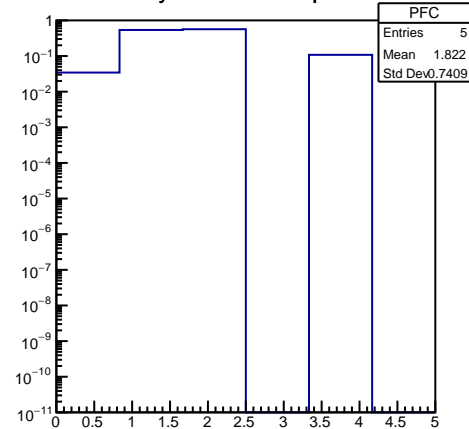
De70



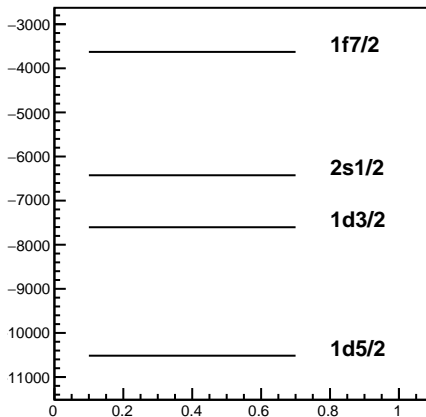
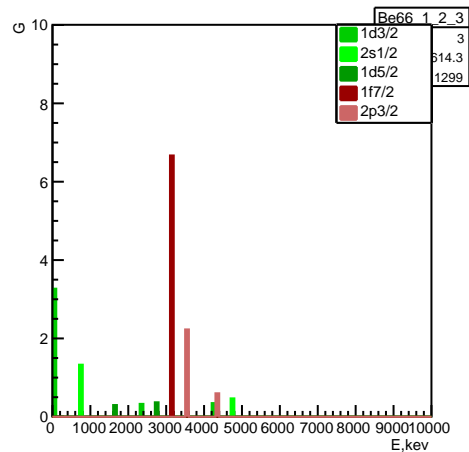
Occupancy



Penalty function components



Be66



Experiment: De70 (6) Be66 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9845.49 ± 412.506 keV

Δ: 3789.45 ± 904.547 keV

penalty: 0.249206

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

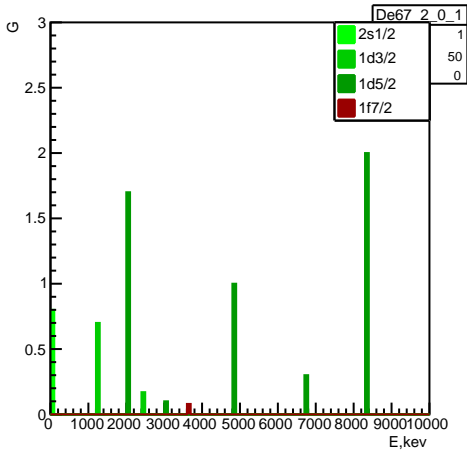
-6425.17 2s1/2 0.225 1.25

-7603.64 1d3/2 0.1825 1.34

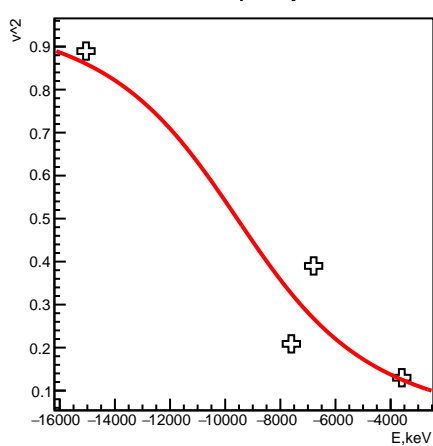
-10516 1d5/2 0.600833 0.425

-3627.96 1f7/2 0.09 0.8475

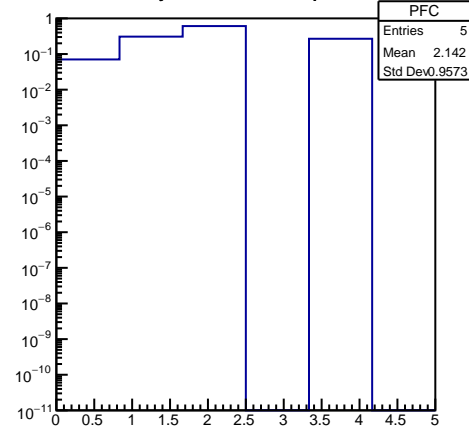
De67



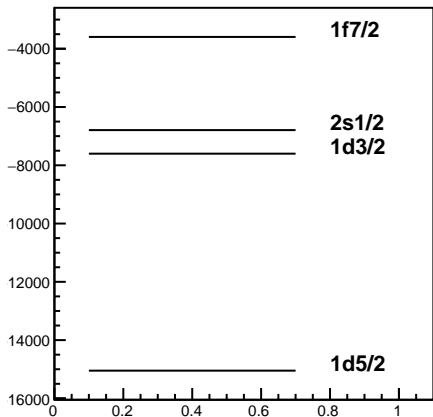
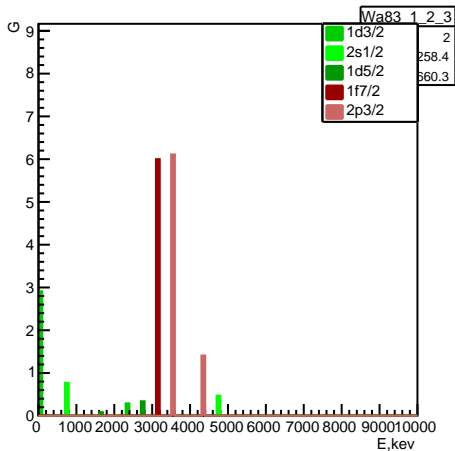
Occupancy



Penalty function components



Wa83



Experiment: De67 (9) Wa83 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9566.01 \pm 1292.3 keV

Δ : -5283.33 \pm 2247.12 keV

penalty: 0.251017

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

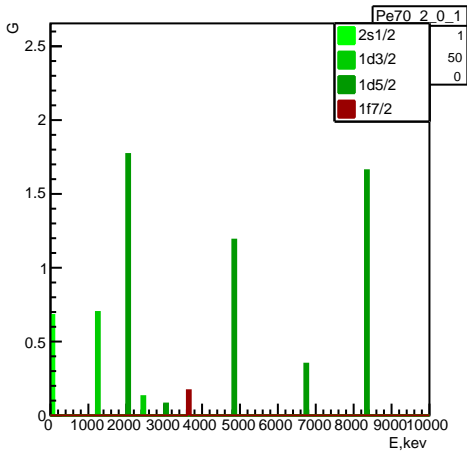
-6792.39 2s1/2 0.39 1.02

-7601.43 1d3/2 0.20875 1.0175

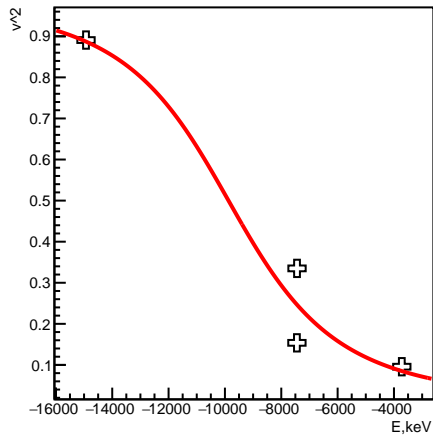
-15048.5 1d5/2 0.889667 0.920667

-3594.91 1f7/2 0.13 0.76

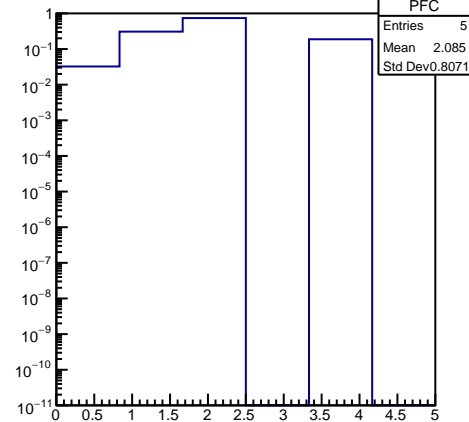
Pe70



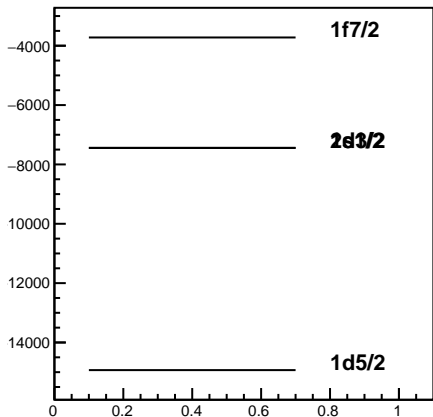
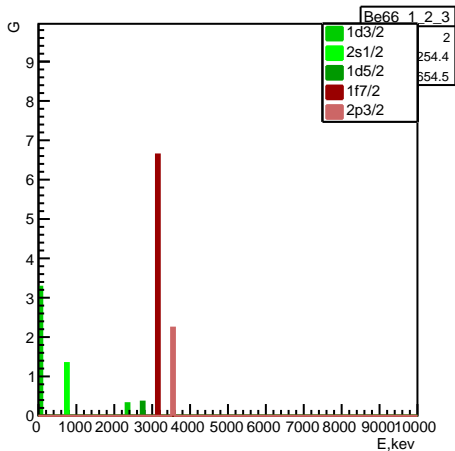
Occupancy



Penalty function components



Be66



Experiment: Pe70 (9) Be66 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9873.38 \pm 1089.6 keV

Δ : -4134.51 \pm 1573.64 keV

penalty: 0.253413

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

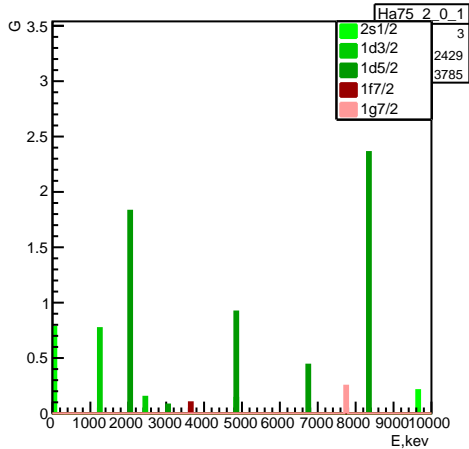
-7441.28 2s1/2 0.335 1.01

-7445.05 1d3/2 0.15375 1.1075

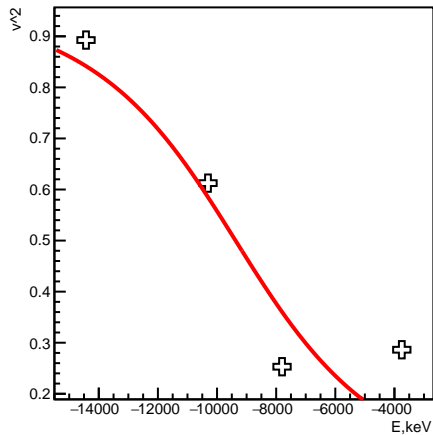
-14930.9 1d5/2 0.890833 0.901667

-3722.16 1f7/2 0.095625 0.85125

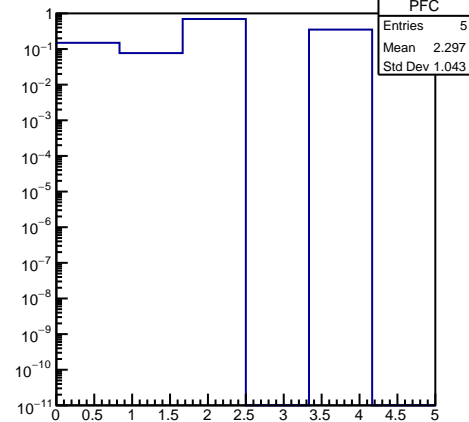
Ha75



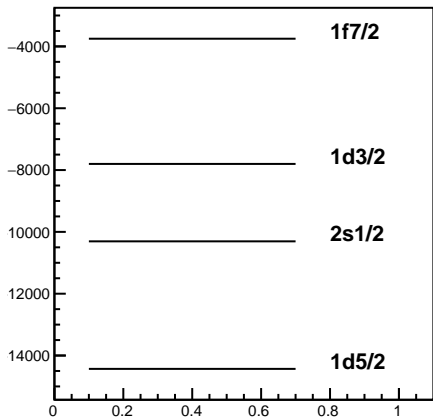
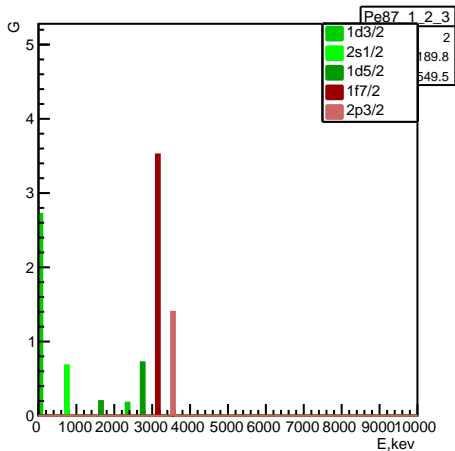
Occupancy



Penalty function components



Pe87



Experiment: Ha75 (12) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -9373.87 \pm 1033.08$ keV $\Delta: 5404.41 \pm 2939.96$ keV

penalty: 0.254562

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

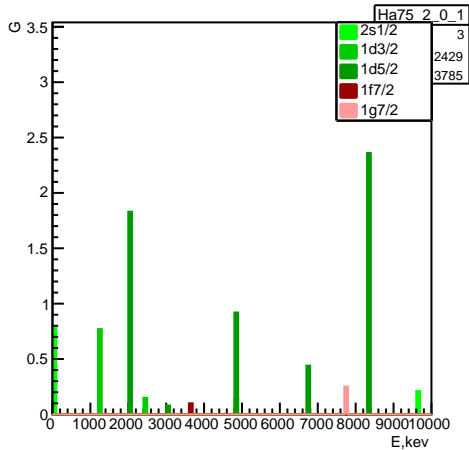
-10306.2 2s1/2 0.6125 0.905

-7801.53 1d3/2 0.253 0.954

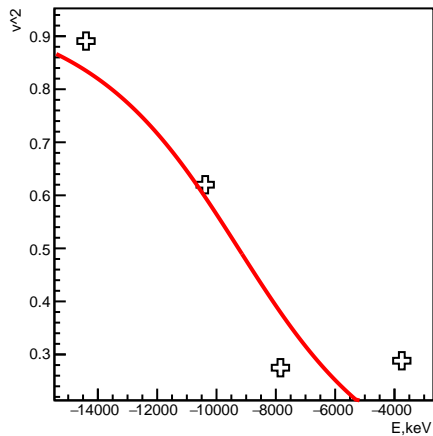
-14432 1d5/2 0.892667 1.09133

-3750.84 1f7/2 0.28625 0.4525

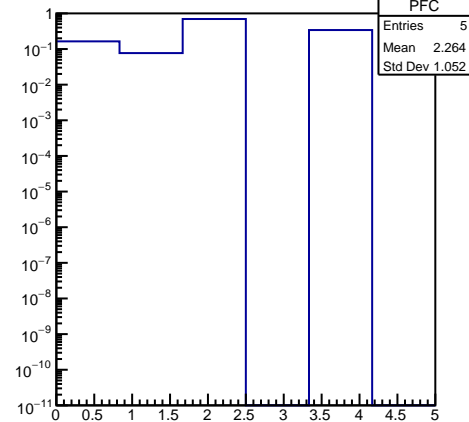
Ha75



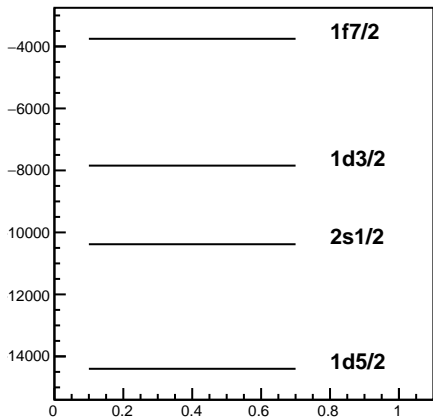
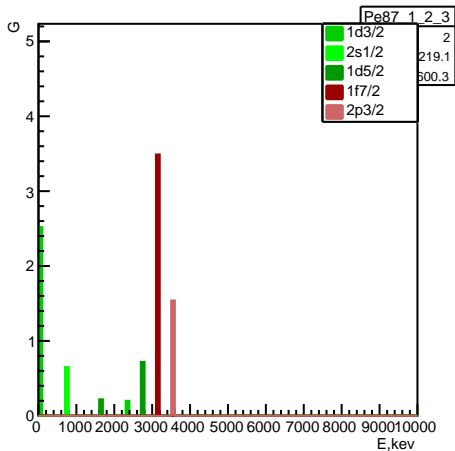
Occupancy



Penalty function components



Pe87



Experiment: Ha75 (12) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 E_F : -9260.5 \pm 1031.83 keV Δ : 5697.16 \pm 2857.01 keV

penalty: 0.255536

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

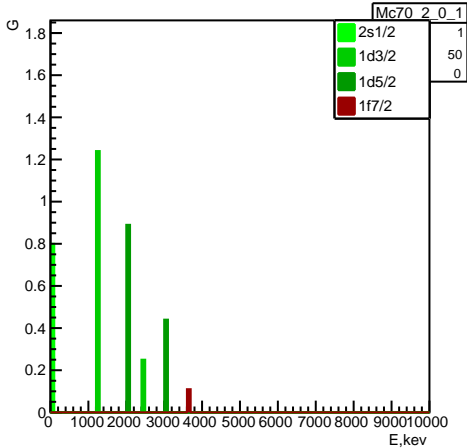
-10381.6 2s1/2 0.62 0.89

-7844.99 1d3/2 0.275 0.91

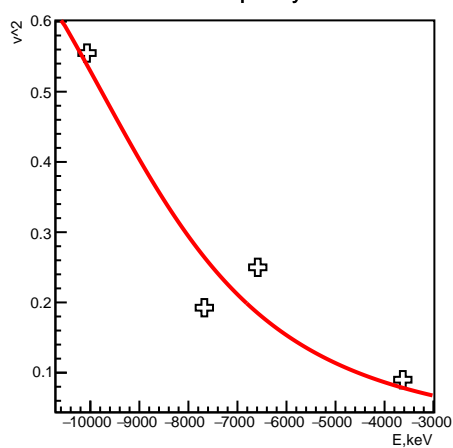
-14400 1d5/2 0.890833 1.095

-3753.32 1f7/2 0.288125 0.44875

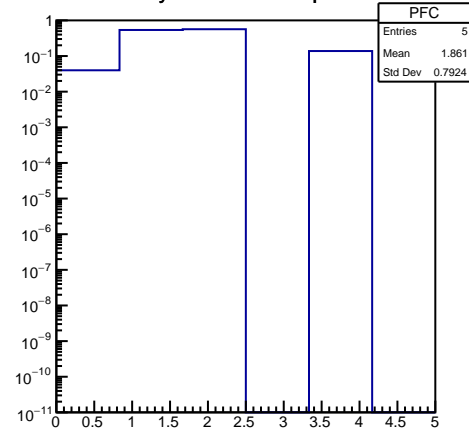
Mc70



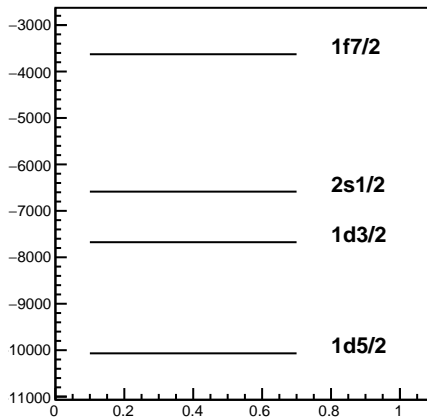
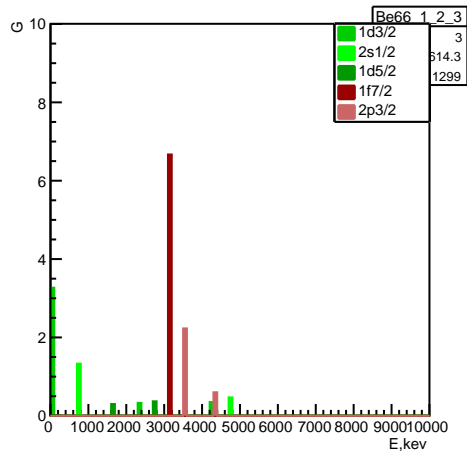
Occupancy



Penalty function components



Be66



Experiment: Mc70 (6) Be66 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9769.82 ± 487.619 keV

Δ: -3919 ± 1156.6 keV

penalty: 0.256307

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

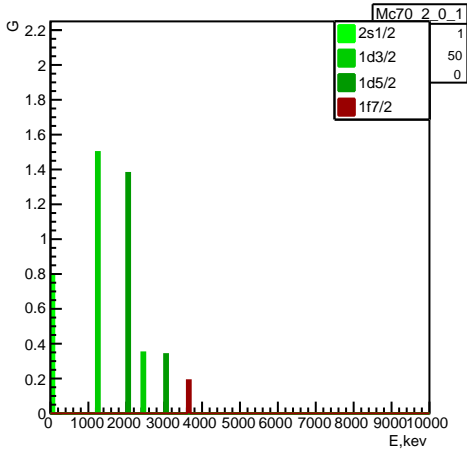
-6586.04 2s1/2 0.25 1.3

-7675.02 1d3/2 0.1925 1.36

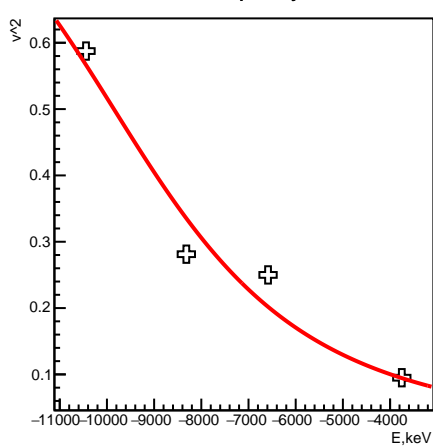
-10068 1d5/2 0.555 0.333333

-3627.96 1f7/2 0.09 0.8475

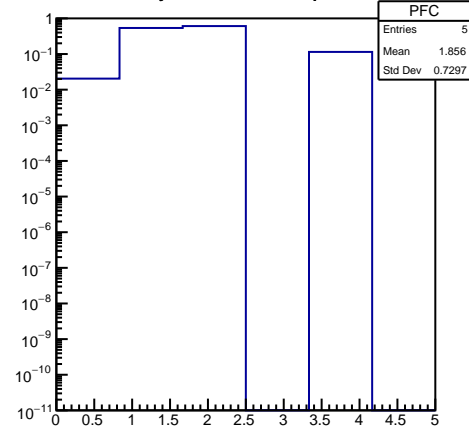
Mc70



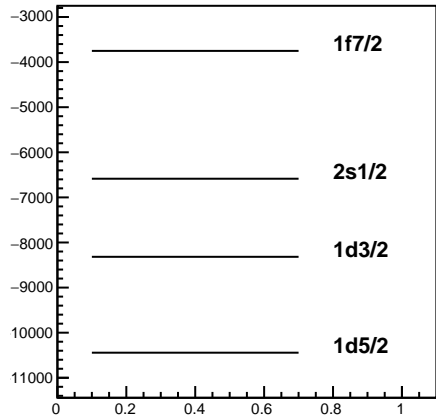
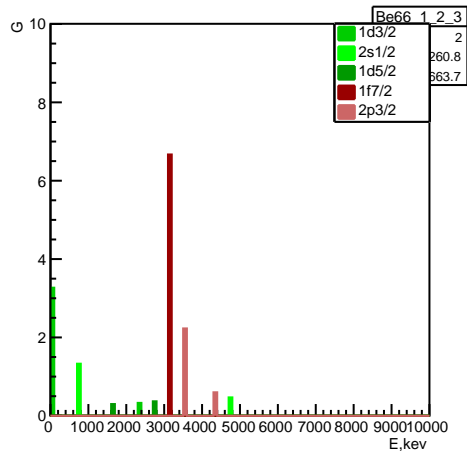
Occupancy



Penalty function components



Be66



Experiment: Mc70 (6) Be66 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9852.72 ± 371.702 keV

Δ: 4399.12 ± 960.095 keV

penalty: 0.256436

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

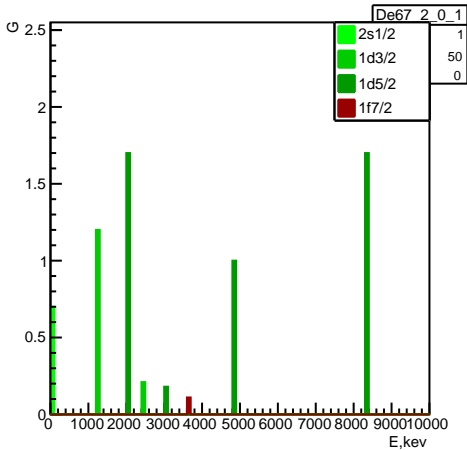
-6586.04 2s1/2 0.25 1.3

-8317.59 1d3/2 0.28125 1.3625

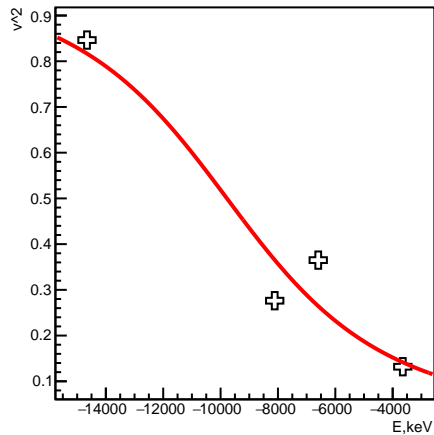
-10443.6 1d5/2 0.5875 0.398333

-3751.62 1f7/2 0.095 0.8575

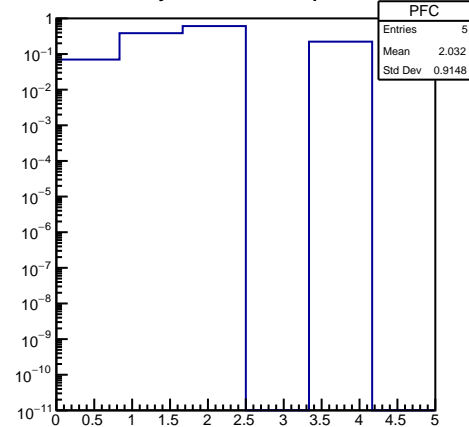
De67



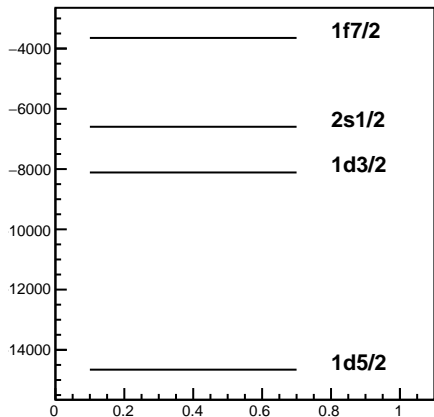
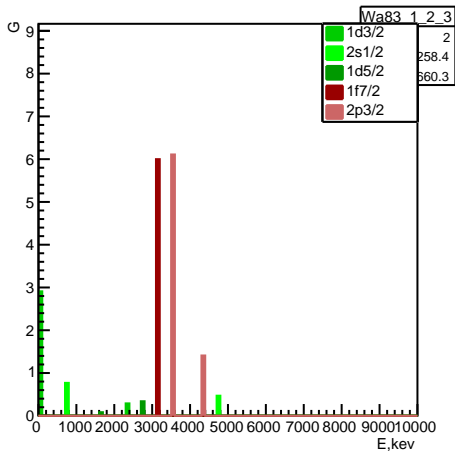
Occupancy



Penalty function components



Wa83



Experiment: De67 (8) Wa83 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 E_F : -9779.24 \pm 999.029 keV Δ : 5961.64 \pm 1863.9 keV

penalty: 0.257149

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

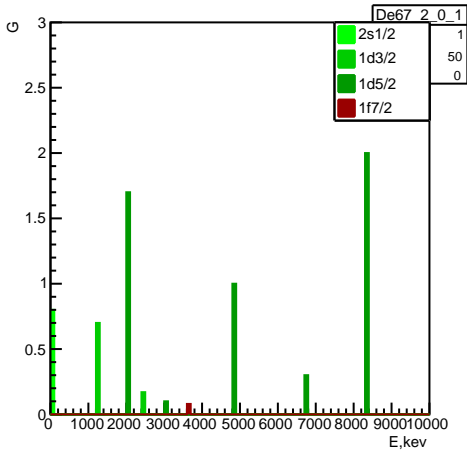
-6595.71 2s1/2 0.365 0.97

-8112.75 1d3/2 0.27625 1.1525

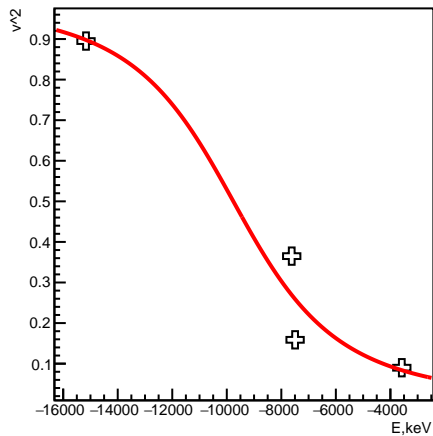
-14657.1 1d5/2 0.846333 0.834

-3647.14 1f7/2 0.131875 0.76375

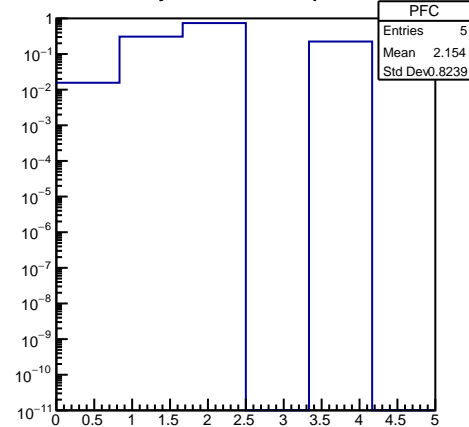
De67



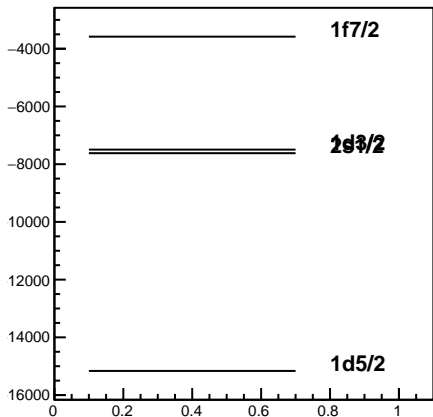
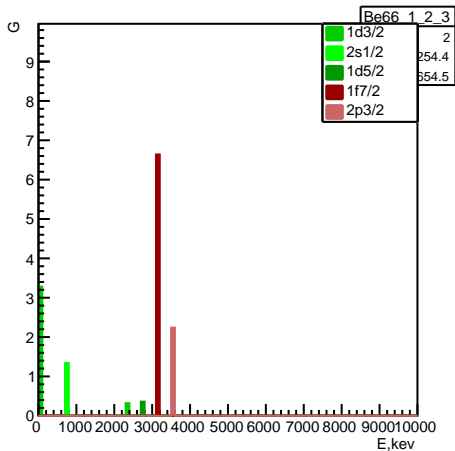
Occupancy



Penalty function components



Be66



Experiment: De67 (9) Be66 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9760.48 \pm 1201.83 keV

Δ : 4117.13 \pm 1878.56 keV

penalty: 0.257339

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

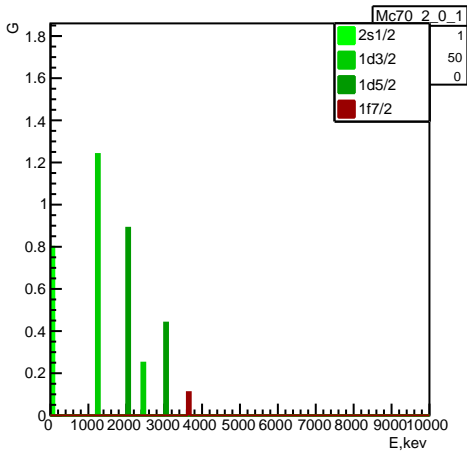
-7618.85 2s1/2 0.365 1.07

-7495.07 1d3/2 0.15875 1.1175

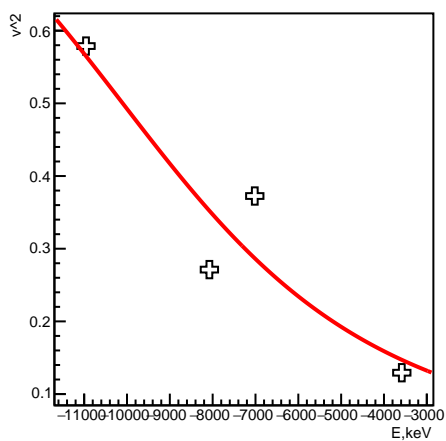
-15163.5 1d5/2 0.895 0.91

-3581.41 1f7/2 0.09 0.84

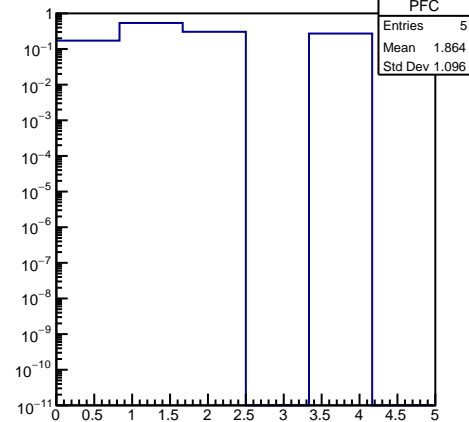
Mc70



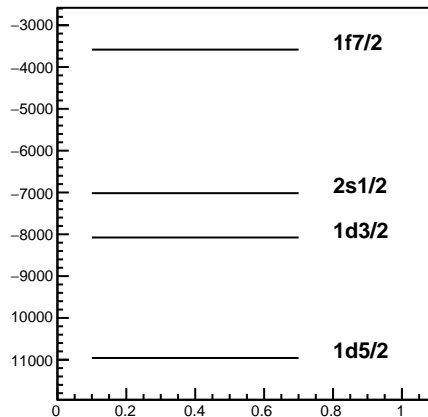
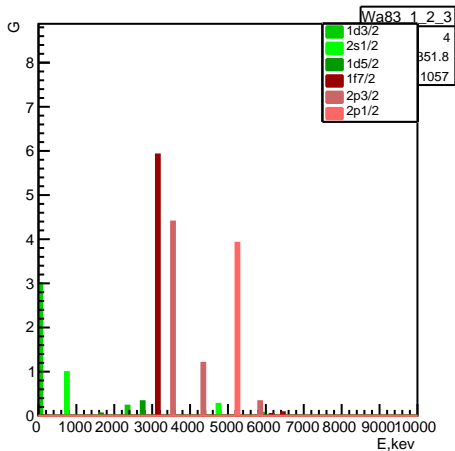
Occupancy



Penalty function components



Wa83



Experiment: Mc70 (6) Wa83 (16)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -10099.6 \pm 852.231 keV

Δ : -6540.27 \pm 2277.92 keV

penalty: 0.257349

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

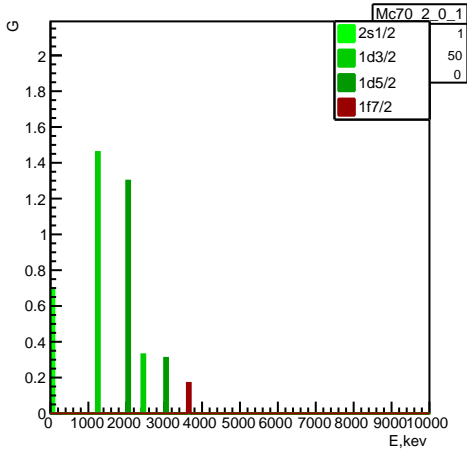
-7016.54 2s1/2 0.3725 1.055

-8076.51 1d3/2 0.27125 1.2025

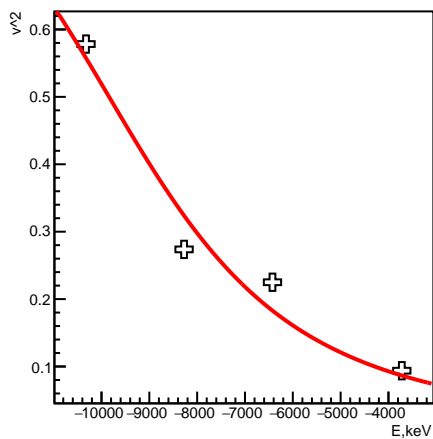
-10957.2 1d5/2 0.578833 0.285667

-3583.83 1f7/2 0.129375 0.76875

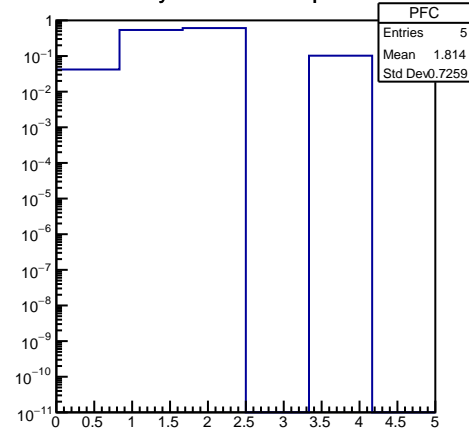
Mc70



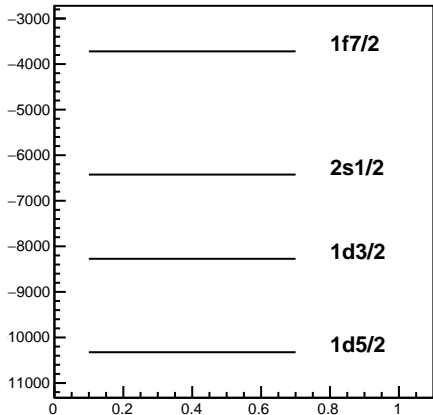
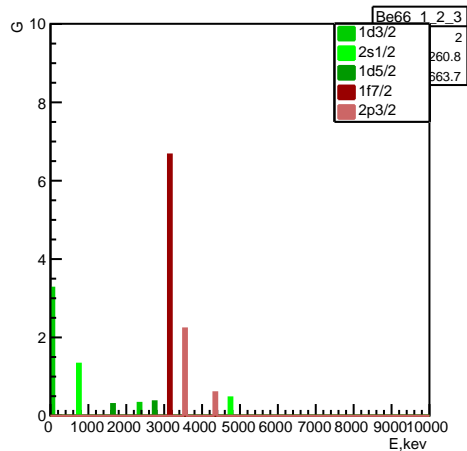
Occupancy



Penalty function components



Be66



Experiment: Mc70 (6) Be66 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9841.58 \pm 331.13 keV

Δ : -4164.9 \pm 856.426 keV

penalty: 0.258253

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

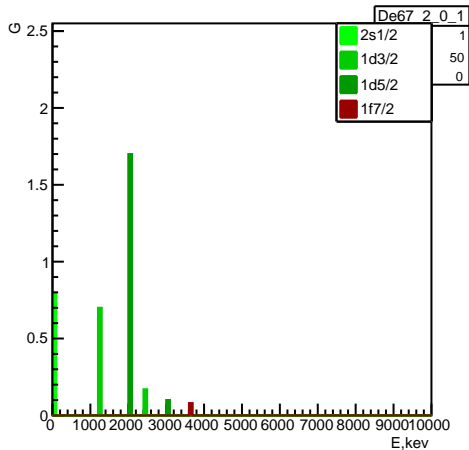
-6425.17 2s1/2 0.225 1.25

-8273.64 1d3/2 0.27375 1.3475

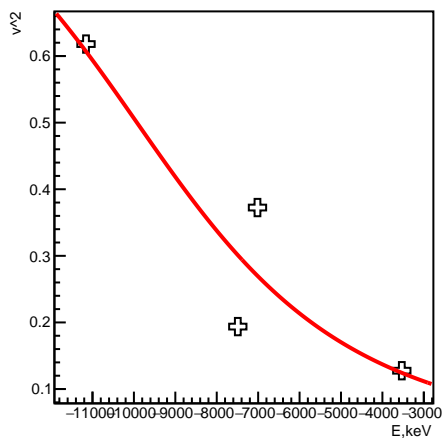
-10324.1 1d5/2 0.578333 0.38

-3720.98 1f7/2 0.09375 0.855

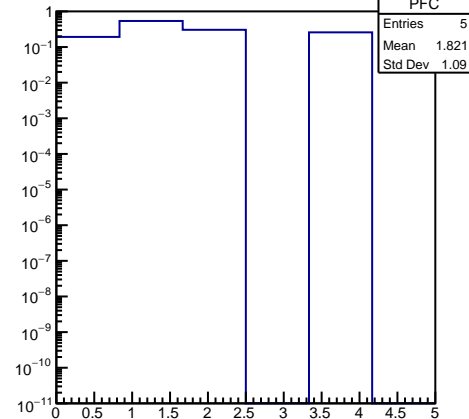
De67



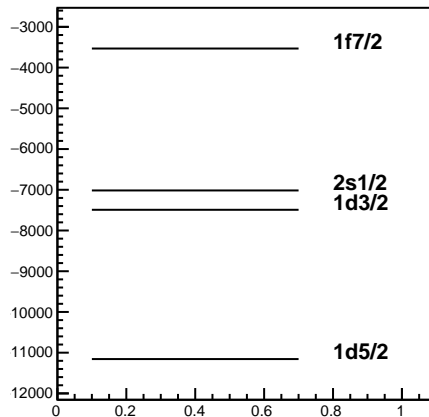
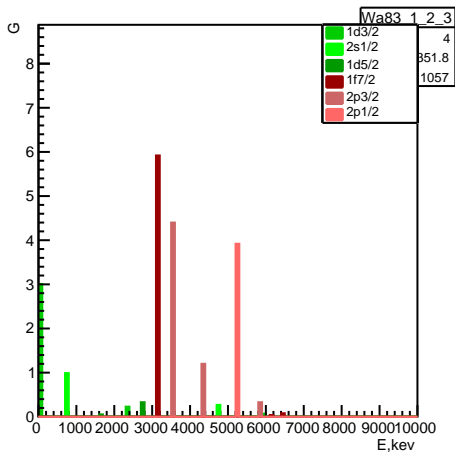
Occupancy



Penalty function components



Wa83



Experiment: De67 (6) Wa83 (16)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 E_F : -9926.68 ± 925.454 keV Δ : 5617.08 ± 2161.72 keV

penalty: 0.258596

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

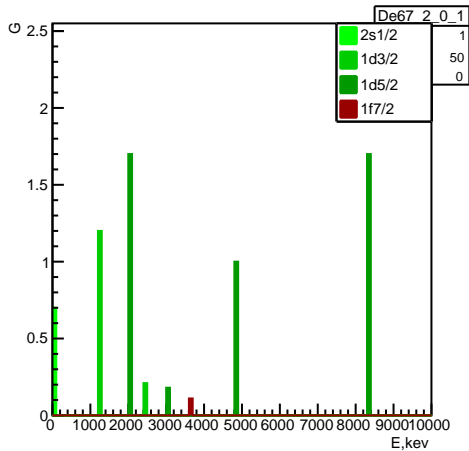
-7016.54 2s1/2 0.3725 1.055

-7491.52 1d3/2 0.19375 1.0475

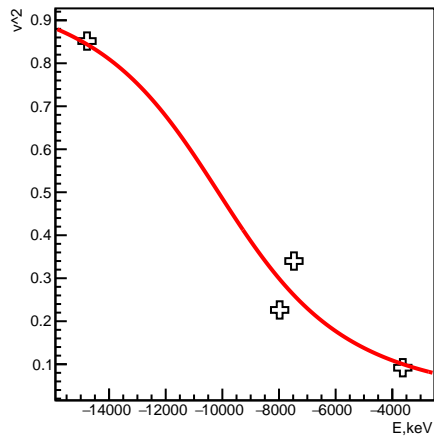
-11156.8 1d5/2 0.618 0.364

-3531.64 1f7/2 0.1275 0.765

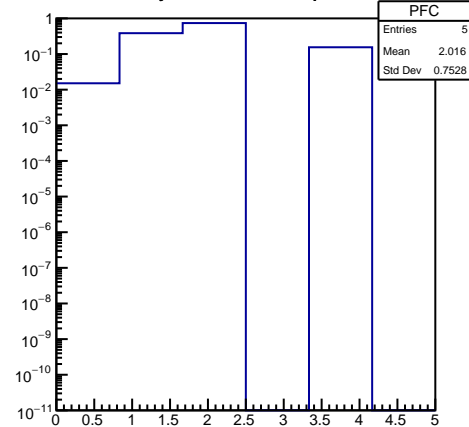
De67



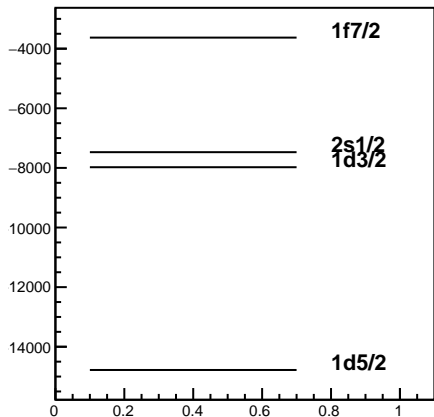
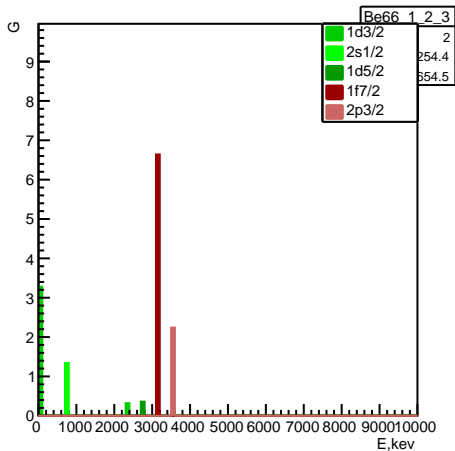
Occupancy



Penalty function components



Be66



Experiment: De67 (8) Be66 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -10141.2 \pm 796.285 keV Δ : -4891.42 \pm 1296.94 keV

penalty: 0.258733

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

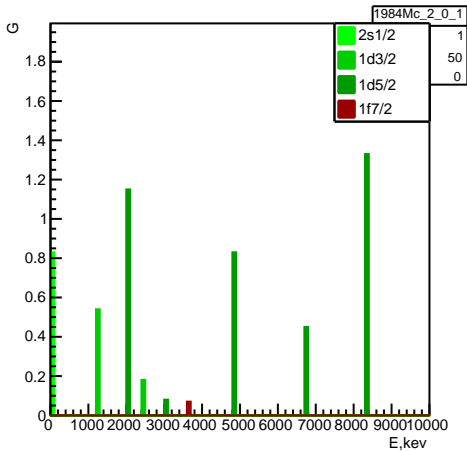
-7472.33 2s1/2 0.34 1.02

-7977.03 1d3/2 0.22625 1.2525

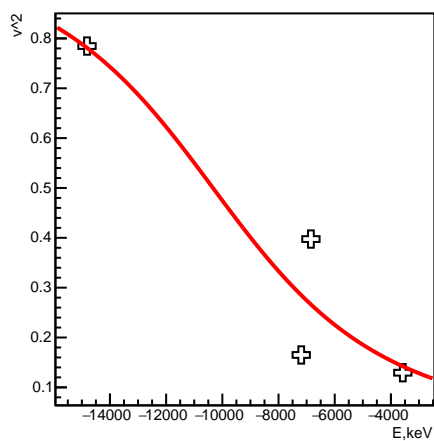
-14779.2 1d5/2 0.851667 0.823333

-3628.74 1f7/2 0.091875 0.84375

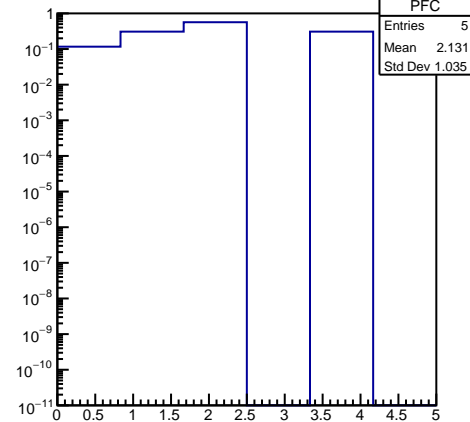
1984Mc



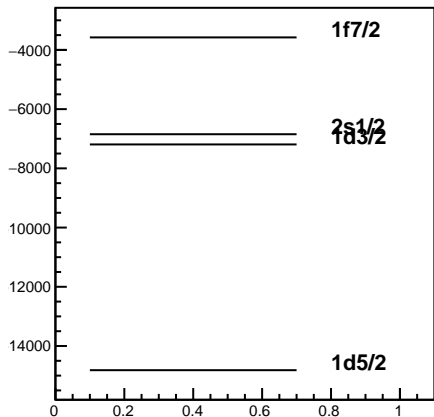
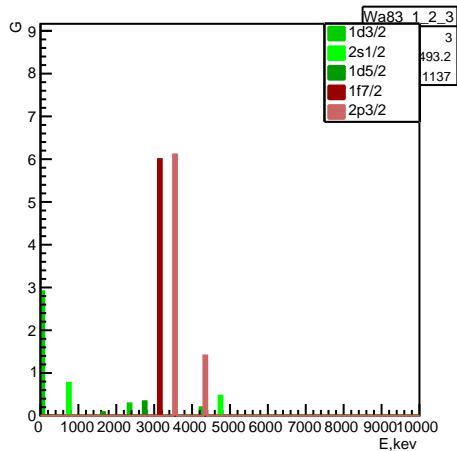
Occupancy



Penalty function components



Wa83



Experiment: 1984Mc (9) Wa83 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -10333.5 \pm 1550.39 keV Δ : 6594.79 \pm 2577.74 keV

penalty: 0.259402

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

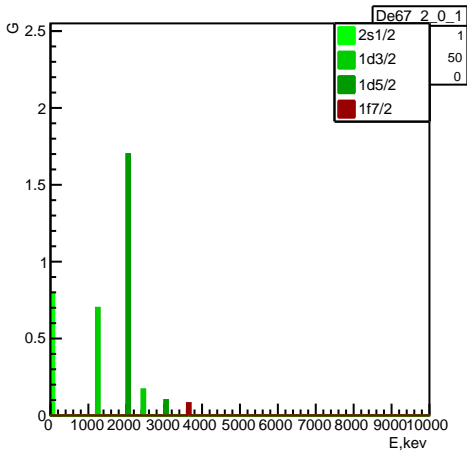
-6847.68 2s1/2 0.3975 1.035

-7192.27 1d3/2 0.165 1.03

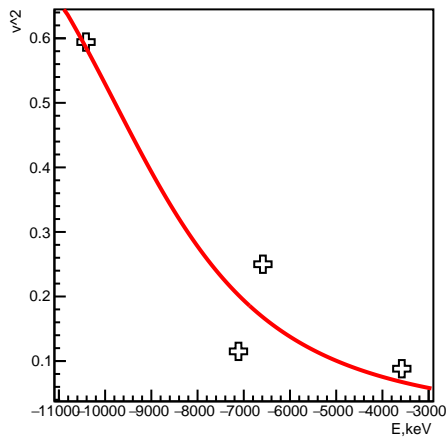
-14816.6 1d5/2 0.784667 0.710667

-3577.39 1f7/2 0.129375 0.75875

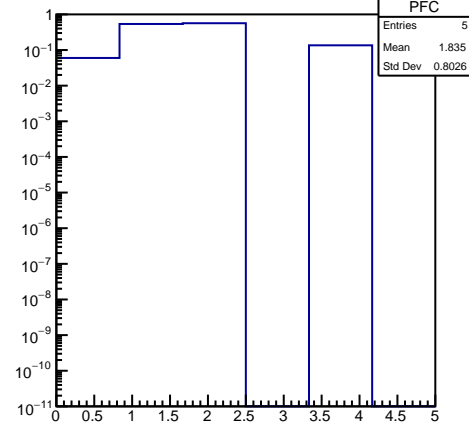
De67



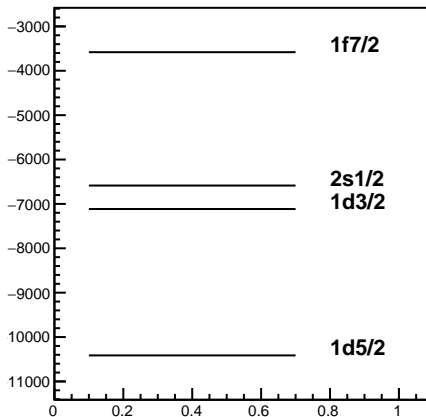
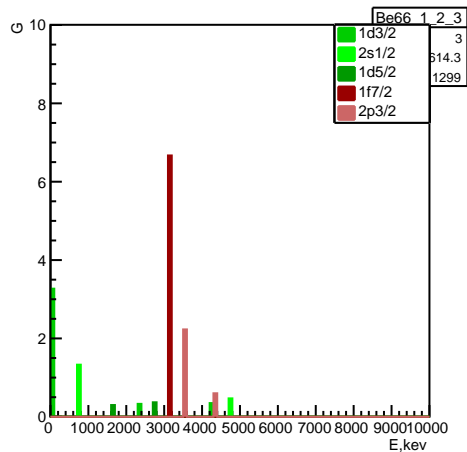
Occupancy



Penalty function components



Be66



Experiment: De67 (6) Be66 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9787.86 \pm 552.14 keV

Δ : 3603.48 \pm 1135.67 keV

penalty: 0.259828

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

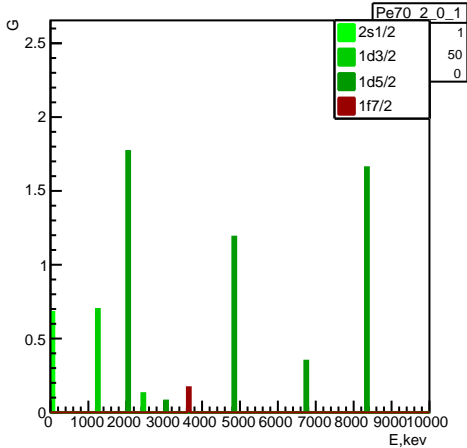
-6586.04 2s1/2 0.25 1.3

-7114.84 1d3/2 0.115 1.205

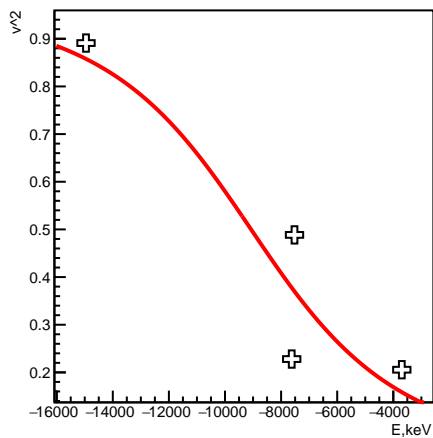
-10413.6 1d5/2 0.594167 0.411667

-3580.84 1f7/2 0.088125 0.84375

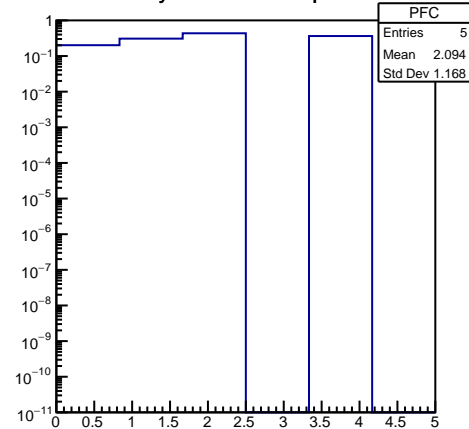
Pe70



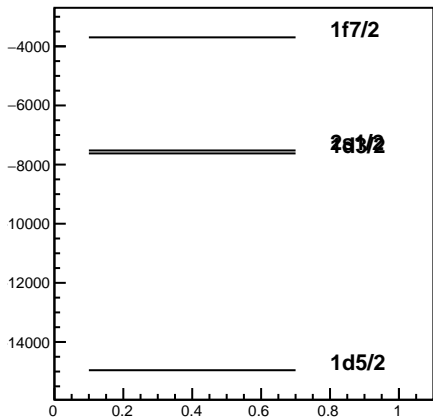
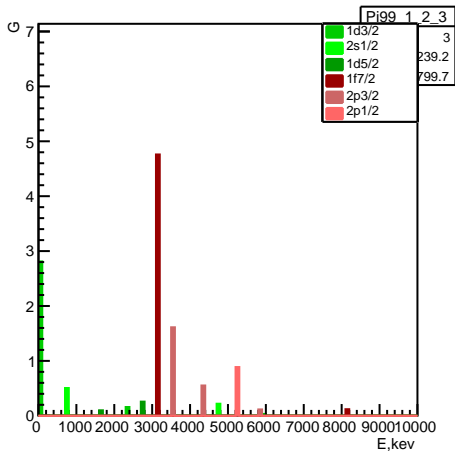
Occupancy



Penalty function components



Pi99



Experiment: Pe70 (9) Pi99 (13)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 E_F : -9070.25 \pm 1308.45 keV Δ : -5746.44 \pm 3048.38 keV

penalty: 0.261543

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

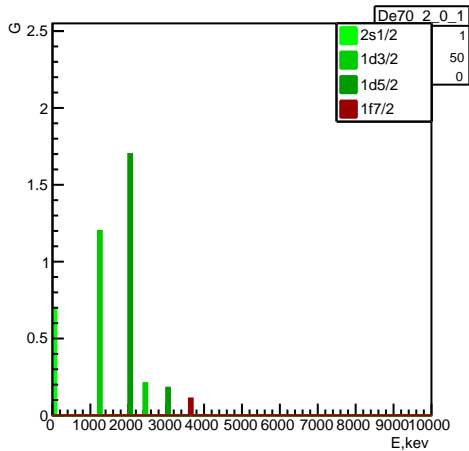
-7522.32 2s1/2 0.4885 0.703

-7621.82 1d3/2 0.228 0.959

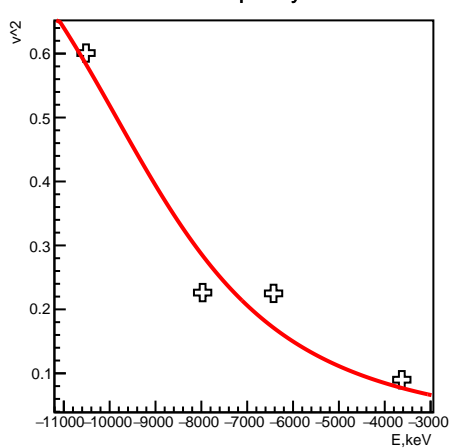
-14955.3 1d5/2 0.891 0.901333

-3696.96 1f7/2 0.205625 0.63125

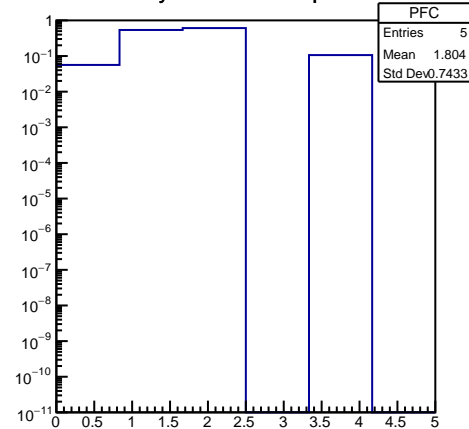
De70



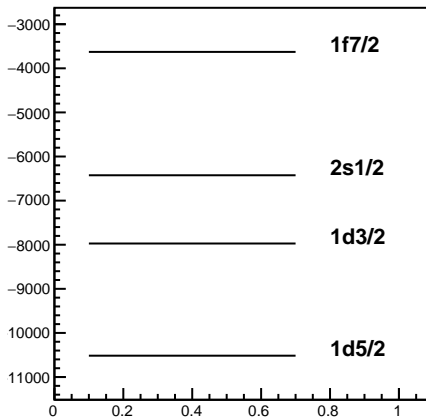
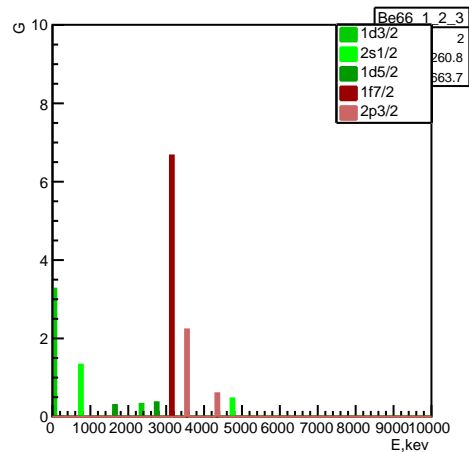
Occupancy



Penalty function components



Be66



Experiment: De70 (6) Be66 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9852.26 \pm 376.5 keV

Δ : -3926.29 \pm 890.466 keV

penalty: 0.261941

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

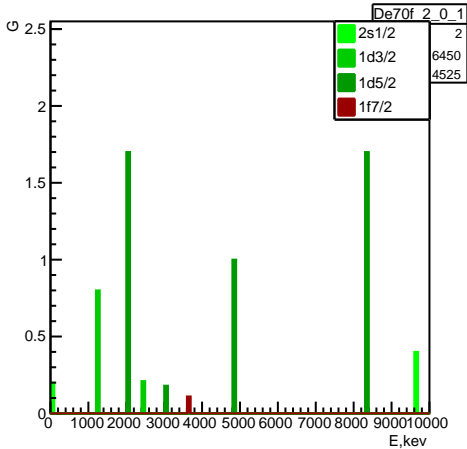
-6425.17 2s1/2 0.225 1.25

-7972.4 1d3/2 0.22625 1.2525

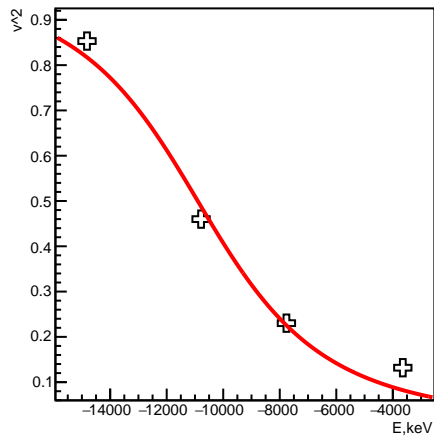
-10516 1d5/2 0.600833 0.425

-3627.96 1f7/2 0.09 0.8475

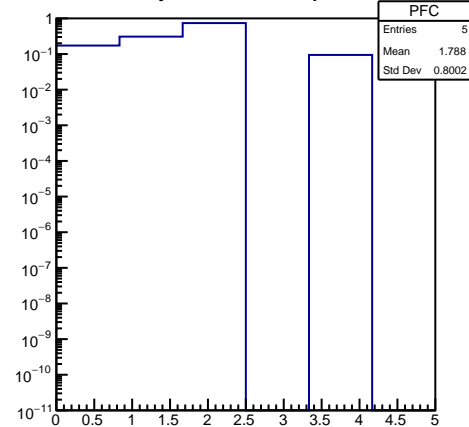
De70f



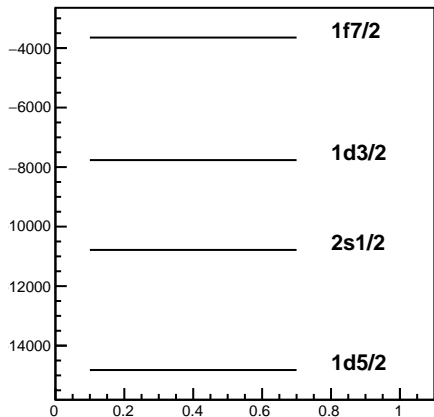
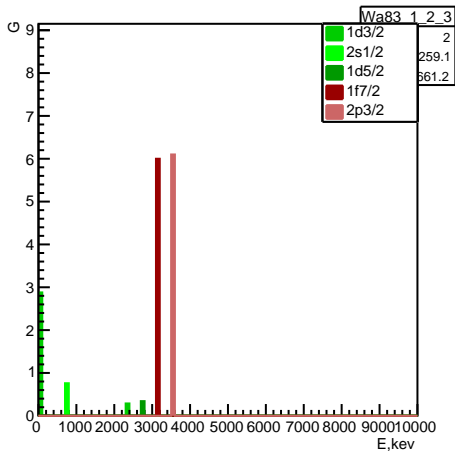
Occupancy



Penalty function components



Wa83



Experiment: De70f (9) Wa83 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 E_F : -10901.1 \pm 359.668 keV Δ : 4774.5 \pm 789.658 keV

penalty: 0.262788

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

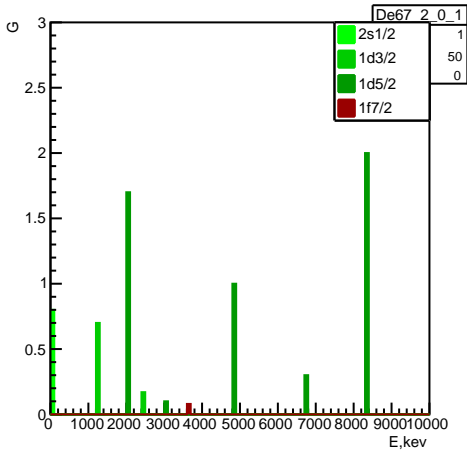
-10783.6 2s1/2 0.46 0.68

-7764.76 1d3/2 0.23025 1.0445

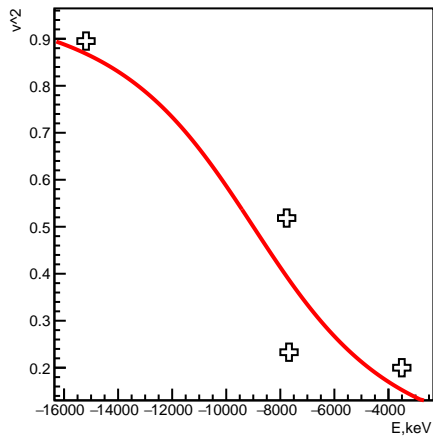
-14819.4 1d5/2 0.853167 0.820333

-3647.14 1f7/2 0.131875 0.76375

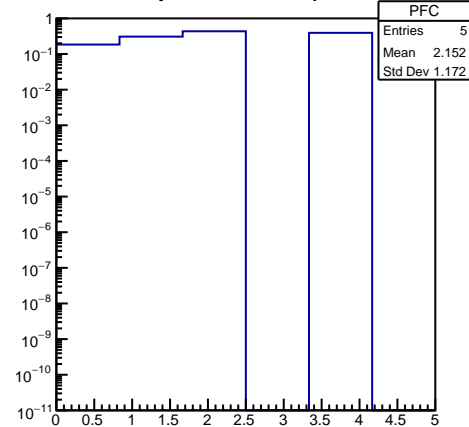
De67



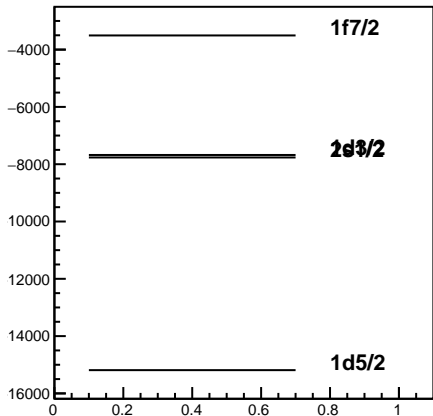
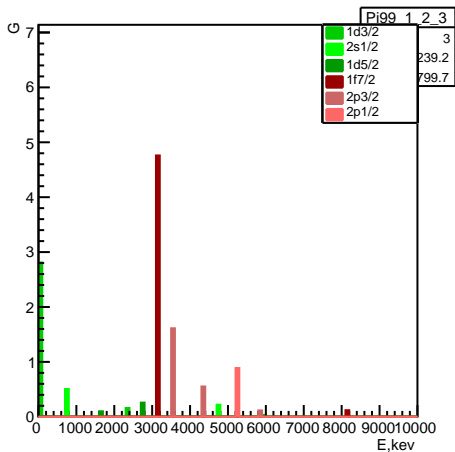
Occupancy



Penalty function components



Pi99



Experiment: De67 (9) Pi99 (13)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -8997.5 \pm 1311.59 keV Δ : -5689.16 \pm 3292.77 keV

penalty: 0.264024

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

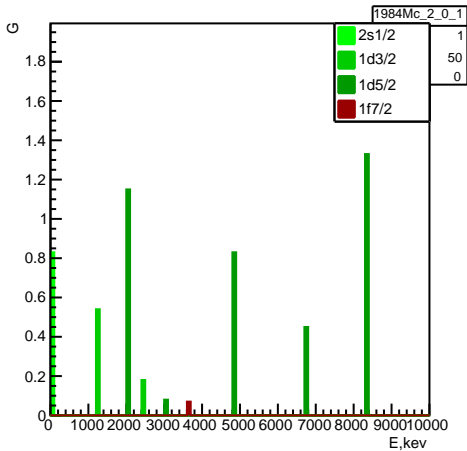
-7764.95 2s1/2 0.5185 0.763

-7677.67 1d3/2 0.233 0.969

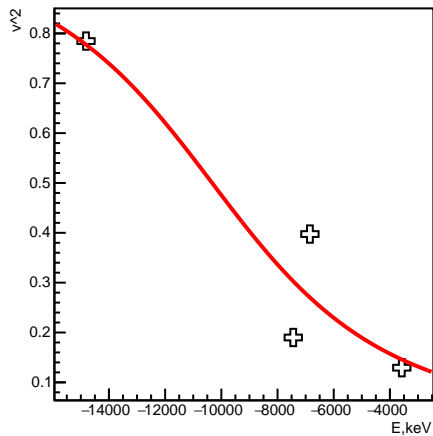
-15187.7 1d5/2 0.895167 0.909667

-3505.81 1f7/2 0.2 0.62

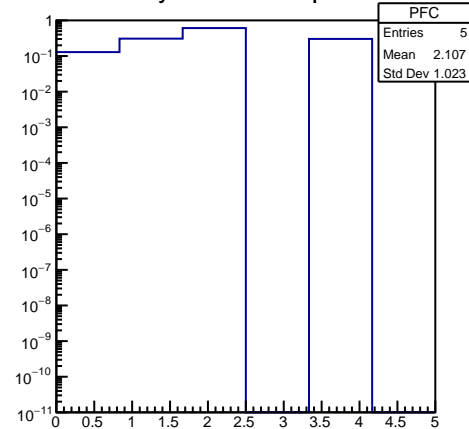
1984Mc



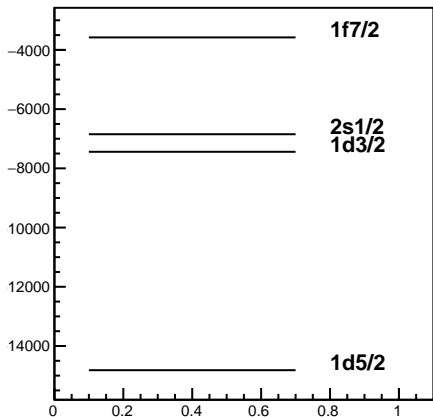
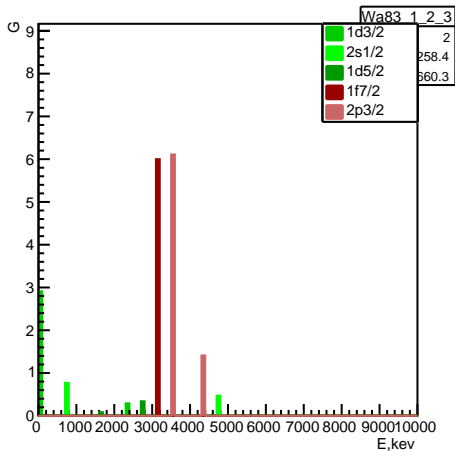
Occupancy



Penalty function components



Wa83



Experiment: 1984Mc (9) Wa83 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 E_F : -10328 \pm 1456.97 keV Δ : 6726.09 \pm 2529.45 keV

penalty: 0.269445

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

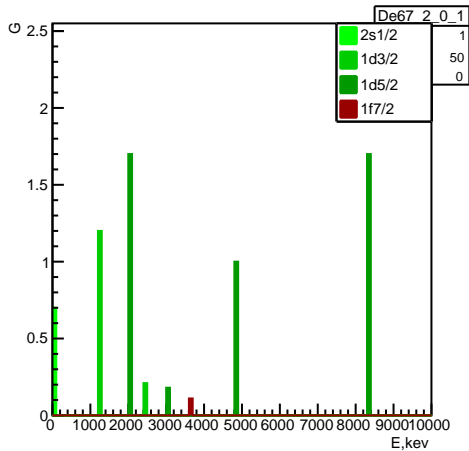
-6847.68 2s1/2 0.3975 1.035

-7440.6 1d3/2 0.19 0.98

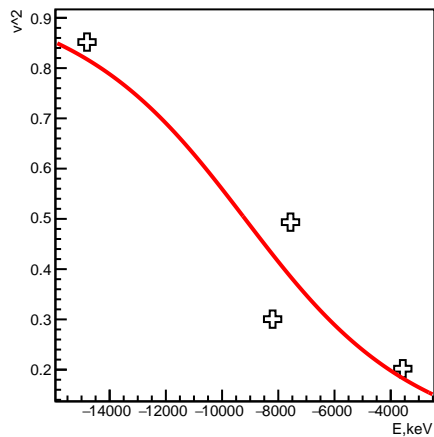
-14816.6 1d5/2 0.784667 0.710667

-3577.39 1f7/2 0.129375 0.75875

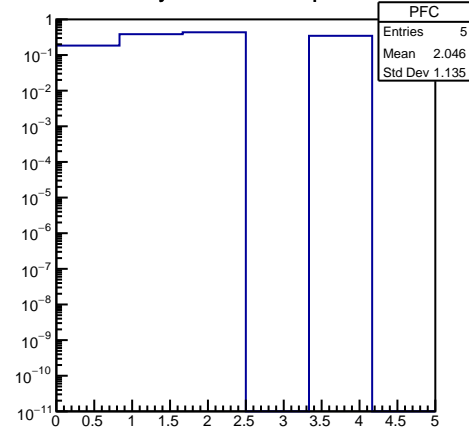
De67



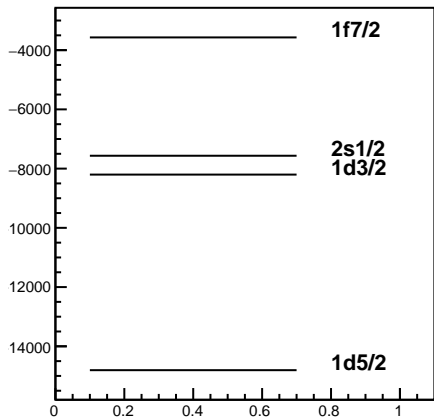
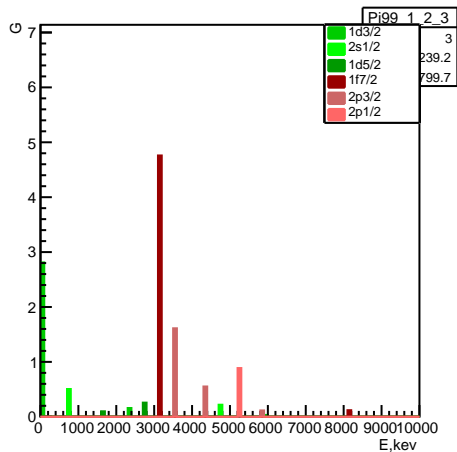
Occupancy



Penalty function components



Pi99



Experiment: De67 (8) Pi99 (13)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9182.06 \pm 1175.15 keV

Δ : 6839.4 \pm 2899.16 keV

penalty: 0.269907

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

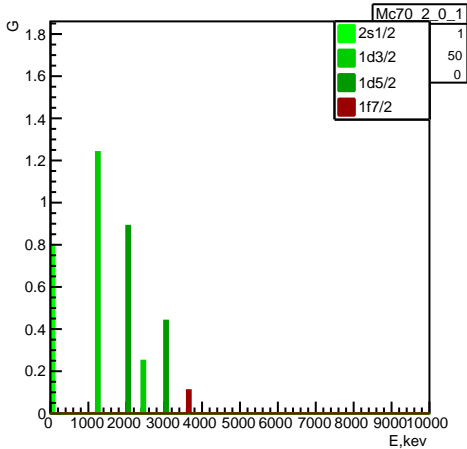
-7565.59 2s1/2 0.4935 0.713

-8202.13 1d3/2 0.3005 1.104

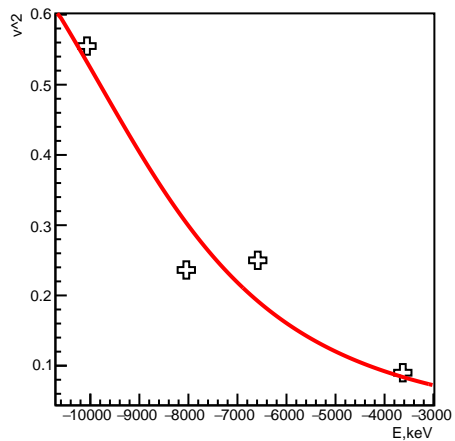
-14805.8 1d5/2 0.851833 0.823

-3570.29 1f7/2 0.201875 0.62375

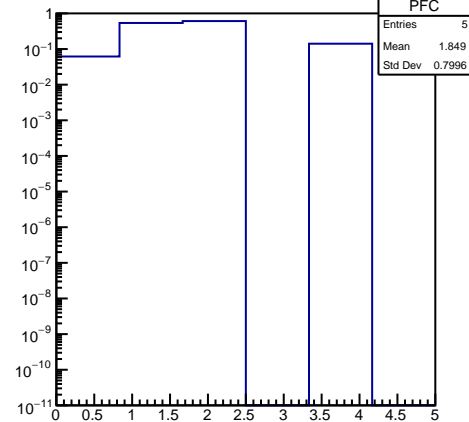
Mc70



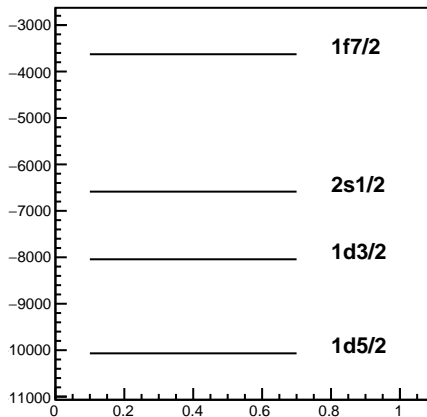
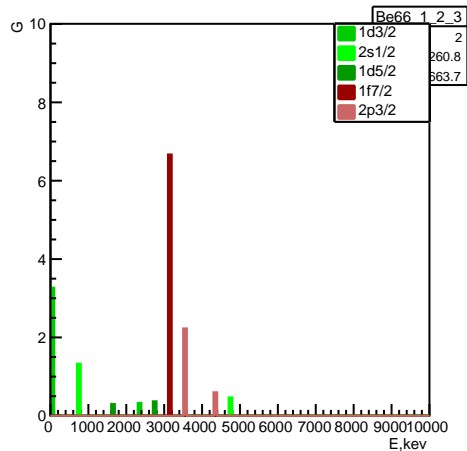
Occupancy



Penalty function components



Be66



Experiment: Mc70 (6) Be66 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9802.8 ± 462.337 keV

Δ: -4112.78 ± 1182.3 keV

penalty: 0.269991

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

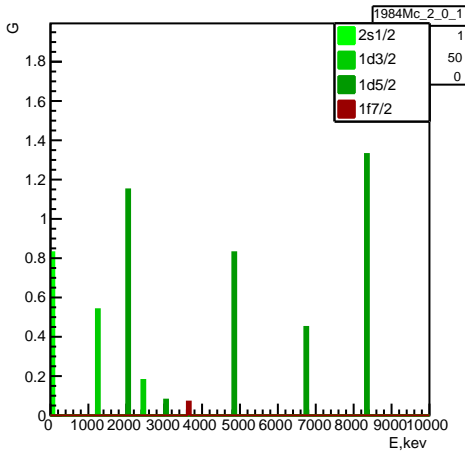
-6586.04 2s1/2 0.25 1.3

-8042.9 1d3/2 0.23625 1.2725

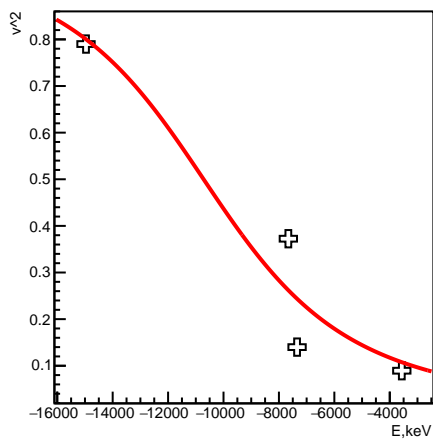
-10068 1d5/2 0.555 0.333333

-3627.96 1f7/2 0.09 0.8475

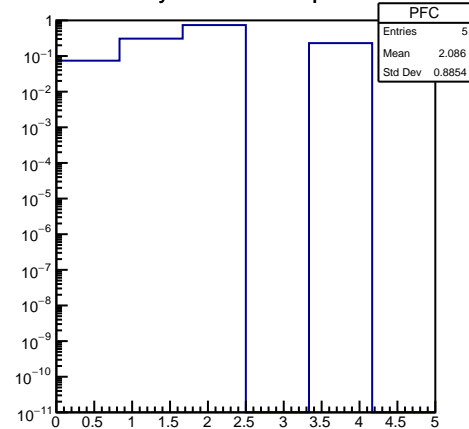
1984Mc



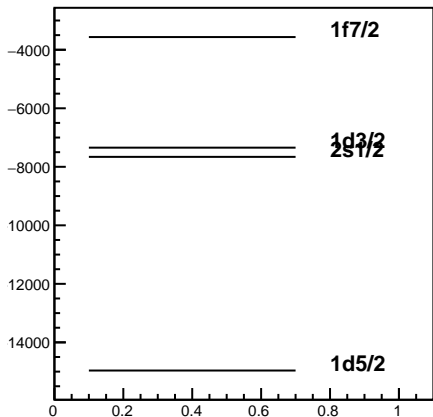
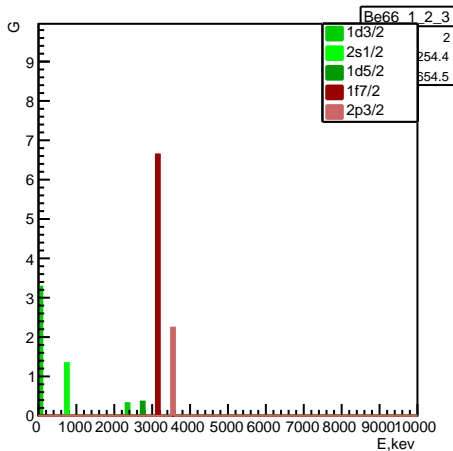
Occupancy



Penalty function components



Be66



Experiment: 1984Mc (9) Be66 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 E_F : -10718.8 ± 1308.18 keV Δ : -5649.94 ± 1929.36 keV

penalty: 0.270239

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

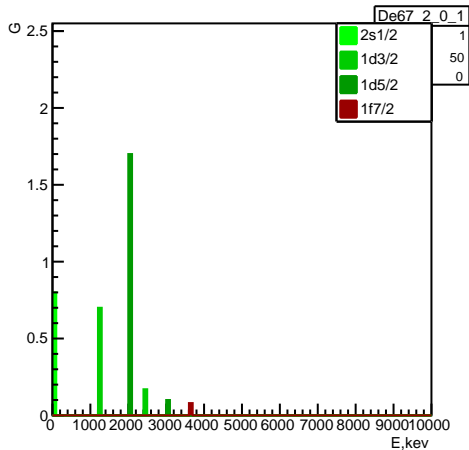
-7660.17 2s1/2 0.3725 1.085

-7345.44 1d3/2 0.14 1.08

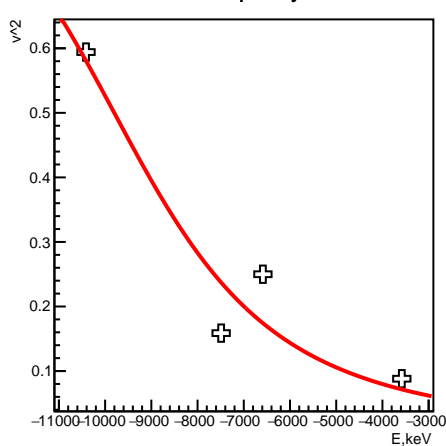
-14962.6 1d5/2 0.79 0.7

-3565.54 1f7/2 0.089375 0.83875

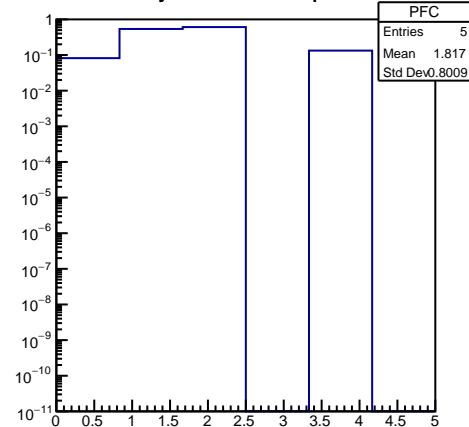
De67



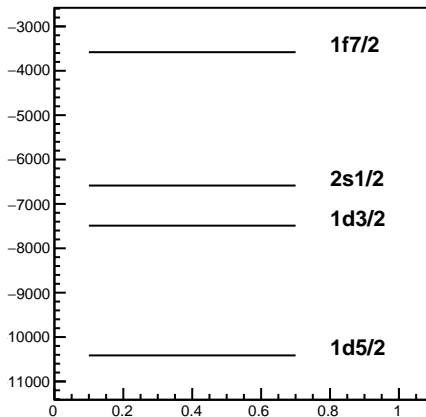
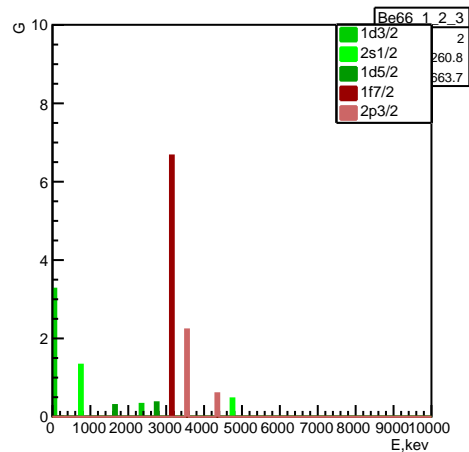
Occupancy



Penalty function components



Be66



Experiment: De67 (6) Be66 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9802.05 ± 508.949 keV

Δ: 3743.54 ± 1114.39 keV

penalty: 0.272391

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

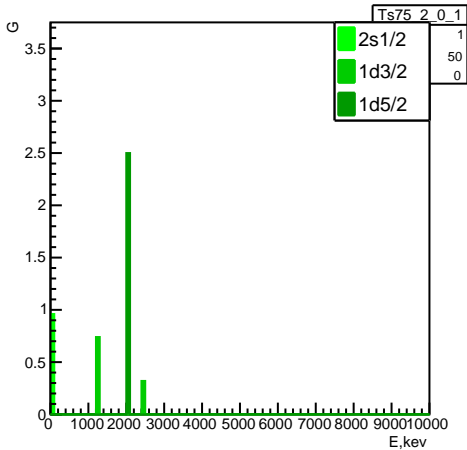
-6586.04 2s1/2 0.25 1.3

-7489.88 1d3/2 0.15875 1.1175

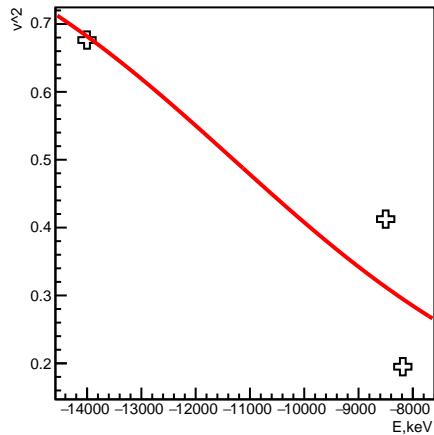
-10413.6 1d5/2 0.594167 0.411667

-3580.84 1f7/2 0.088125 0.84375

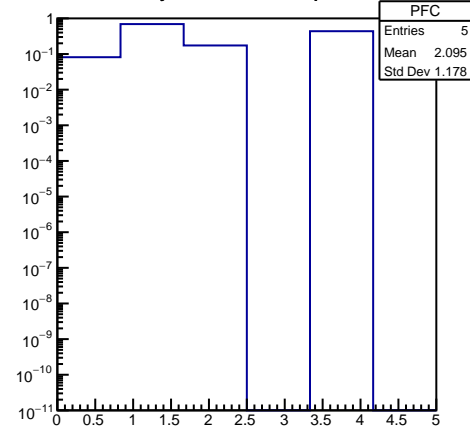
Ts75



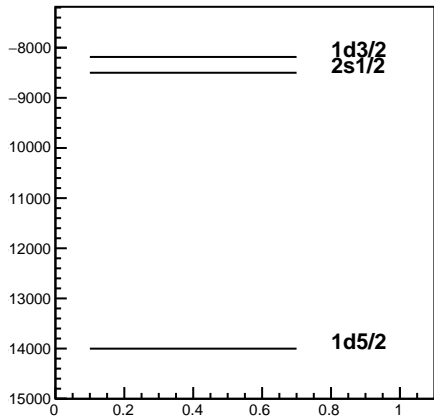
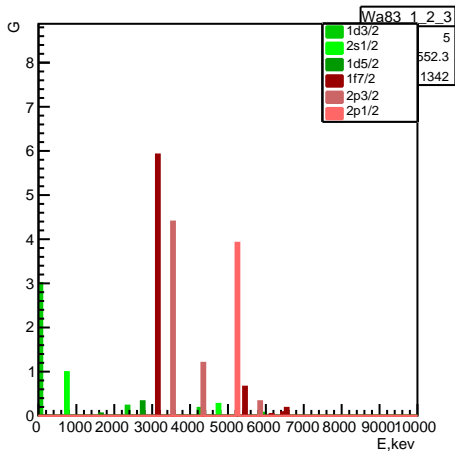
Occupancy



Penalty function components



Wa83



Experiment: Ts75 (4) Wa83 (19)

proton transfer

p separation energy A:13516.9, A+1: 7297.3:

E_F: -11300.5 \pm 1532.94 keV

Δ : 6919.94 \pm 3661.06 keV

penalty: 0.276938

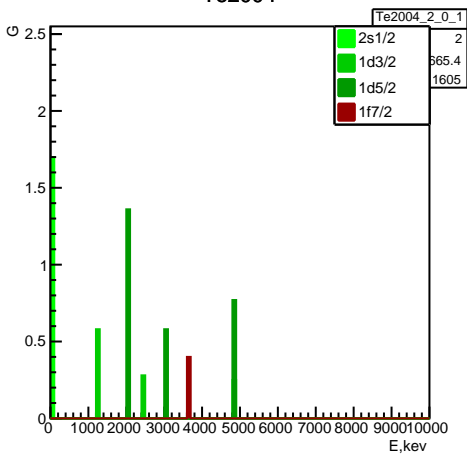
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-8499.94 2s1/2 0.4125 1.135

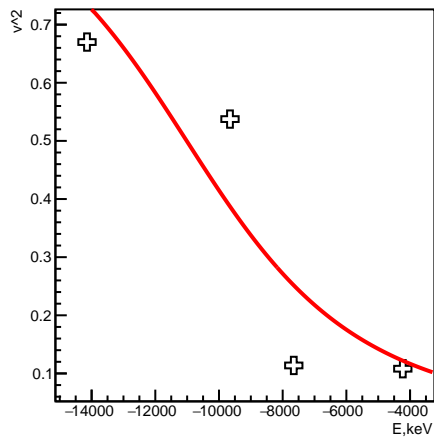
-8184.62 1d3/2 0.195 1.14

-14001.5 1d5/2 0.676333 0.480667

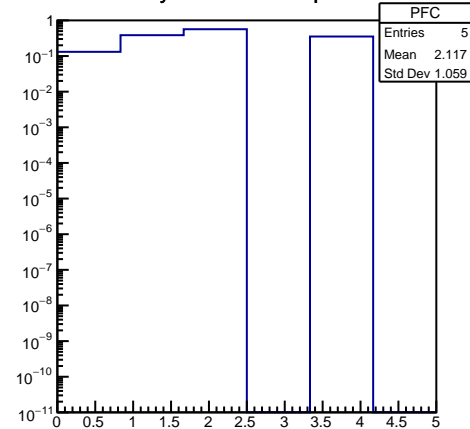
Te2004



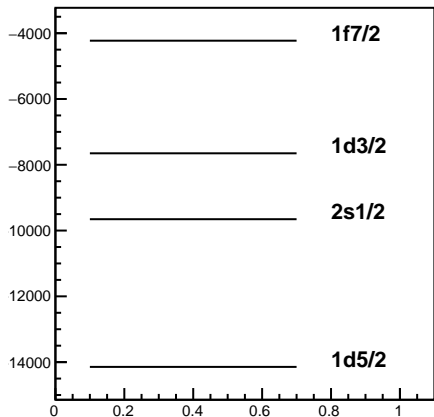
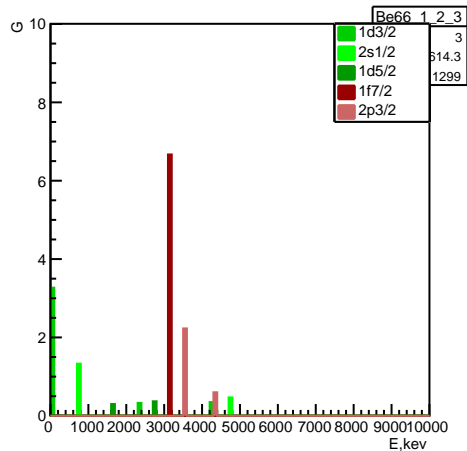
Occupancy



Penalty function components



Be66



Experiment: Te2004 (8) Be66 (10)

proton transfer

p separation energy A:13516.9, A+1: 7297.3:

 E_F : -11014.4 \pm 1525.17 keV Δ : -5872.69 \pm 2953.79 keV

penalty: 0.286715

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

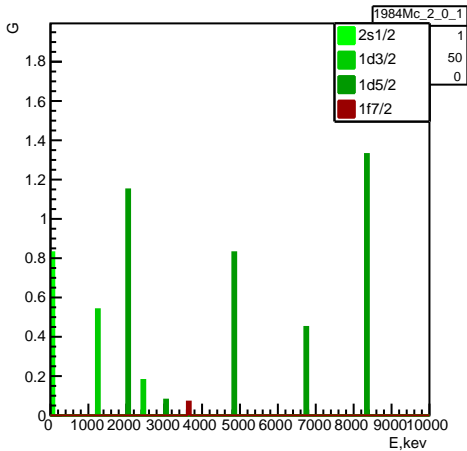
-9654.8 2s1/2 0.5375 1.875

-7651.41 1d3/2 0.11375 1.2025

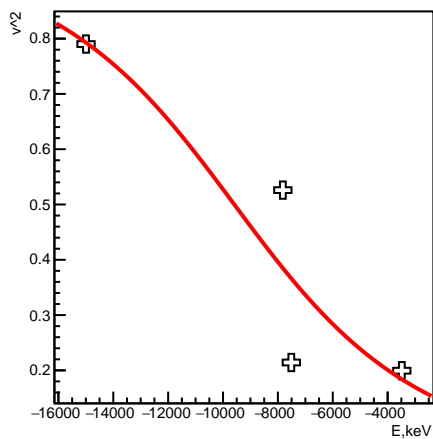
-14145.1 1d5/2 0.67 0.563333

-4227.48 1f7/2 0.108125 0.88375

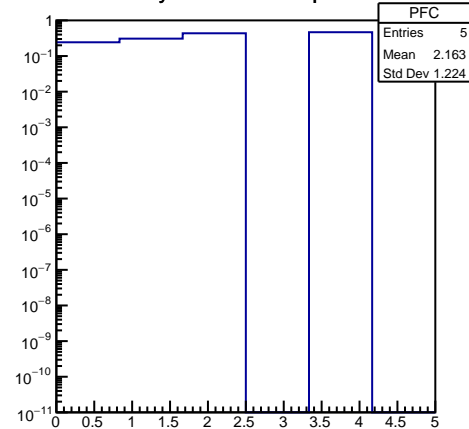
1984Mc



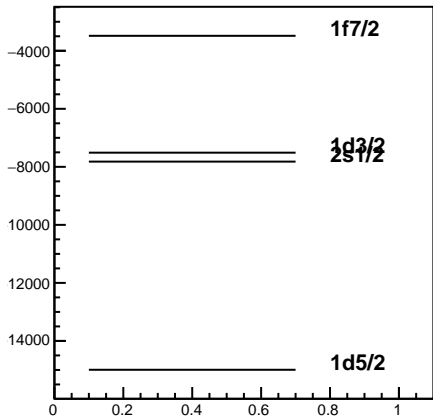
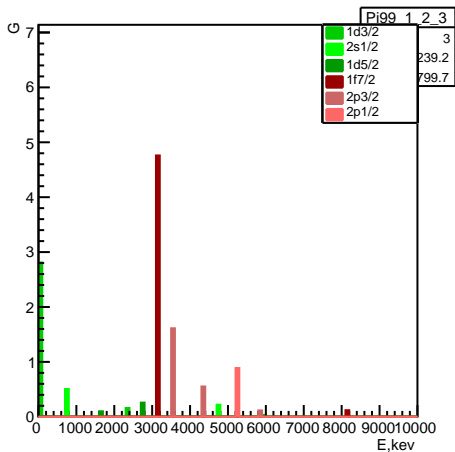
Occupancy



Penalty function components



Pi99



Experiment: 1984Mc (9) Pi99 (13)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 E_F : -9589.13 \pm 1659.89 keV Δ : 7483.73 \pm 3902.2 keV

penalty: 0.290261

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

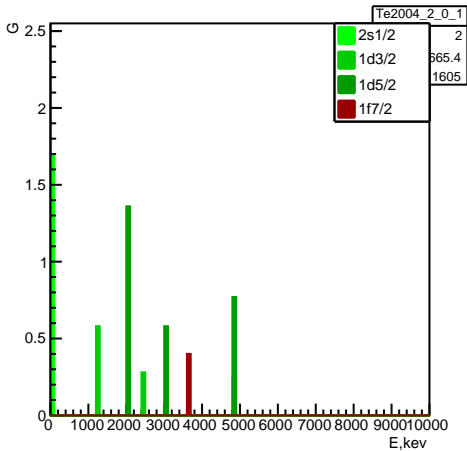
-7819.77 2s1/2 0.526 0.778

-7511.54 1d3/2 0.21425 0.9315

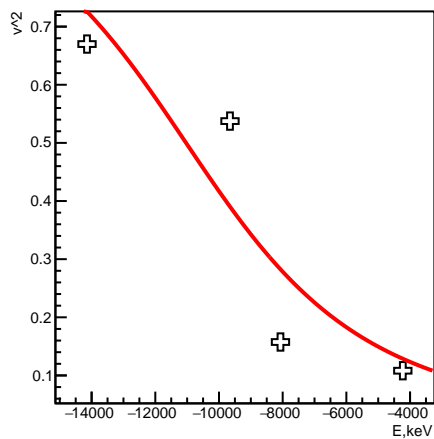
-14994 1d5/2 0.790167 0.699667

-3484.14 1f7/2 0.199375 0.61875

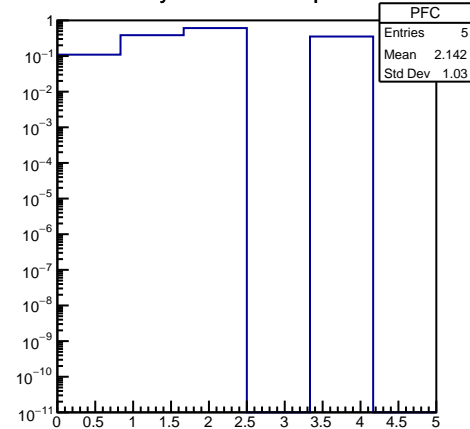
Te2004



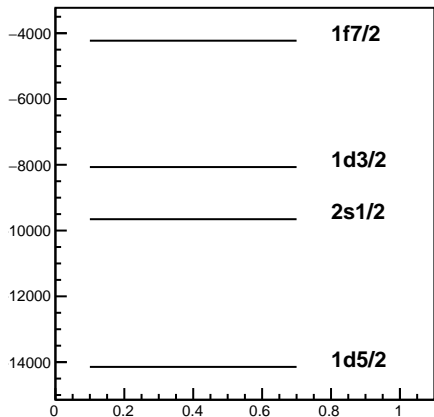
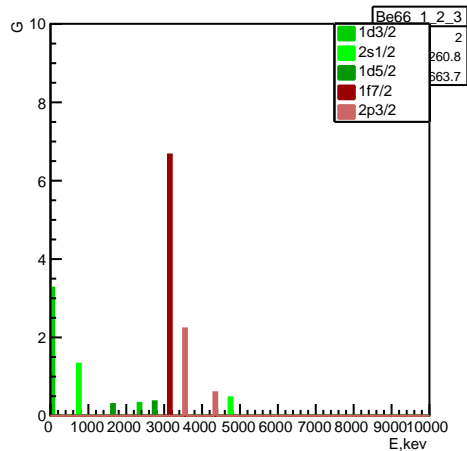
Occupancy



Penalty function components



Be66



Experiment: Te2004 (8) Be66 (9)

proton transfer

p separation energy A:13516.9, A+1: 7297.3;

E_F: -11034.5 \pm 1413.5 keV Δ : 6140.01 \pm 2953.92 keV

penalty: 0.291039

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

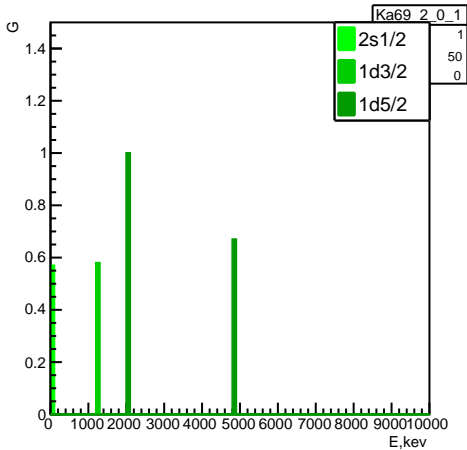
-9654.8 2s1/2 0.5375 1.875

-8069.4 1d3/2 0.1575 1.115

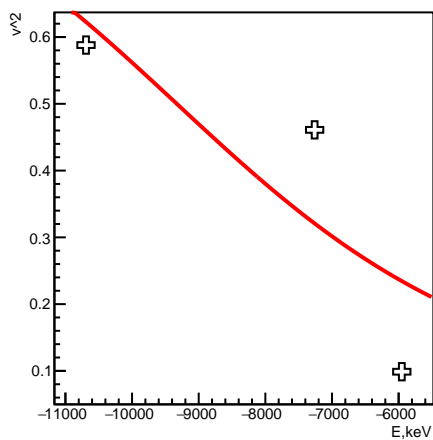
-14145.1 1d5/2 0.67 0.563333

-4227.48 1f7/2 0.108125 0.88375

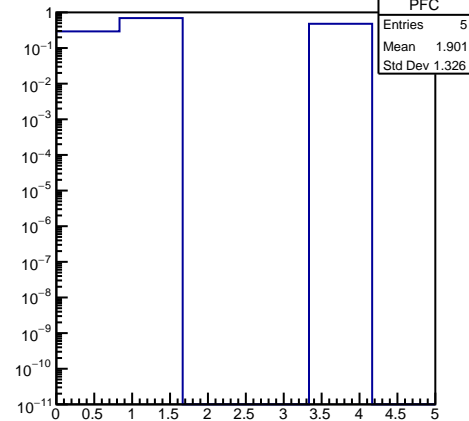
Ka69



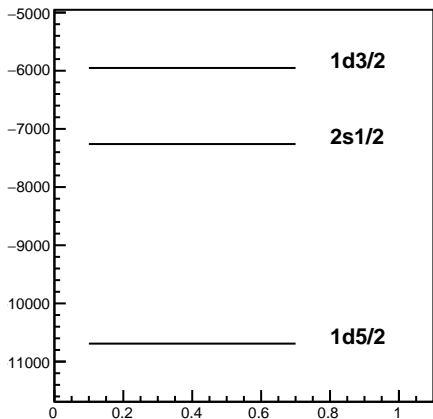
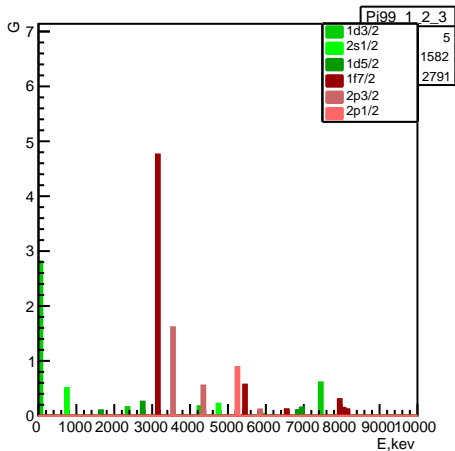
Occupancy



Penalty function components



Pi99



Experiment: Ka69 (4) Pi99 (23)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -9328.84 \pm 1755.53 \text{ keV}$ $\Delta: -5387.8 \pm 4011.31 \text{ keV}$

penalty: 0.292817

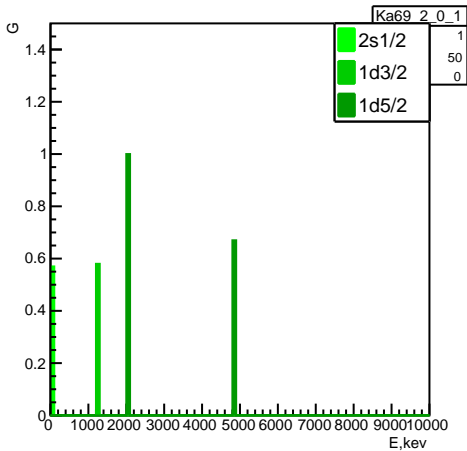
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-7260.43 2s1/2 0.461 0.648

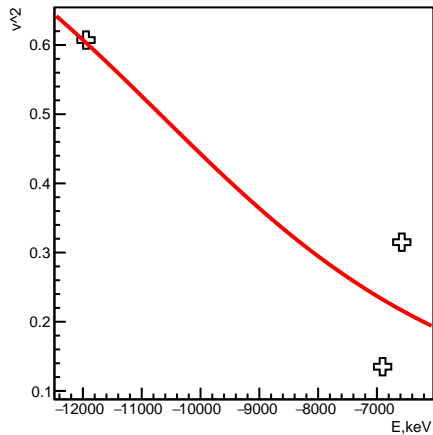
-5952.48 1d3/2 0.09875 1.0925

-10691.1 1d5/2 0.588 0.380667

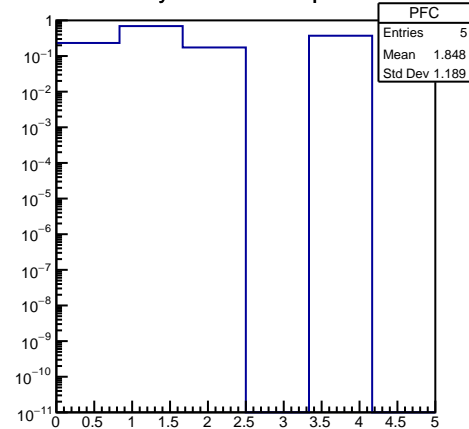
Ka69



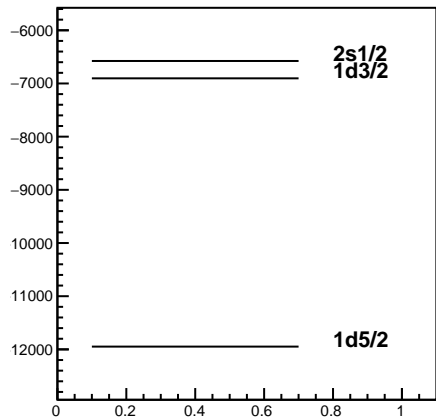
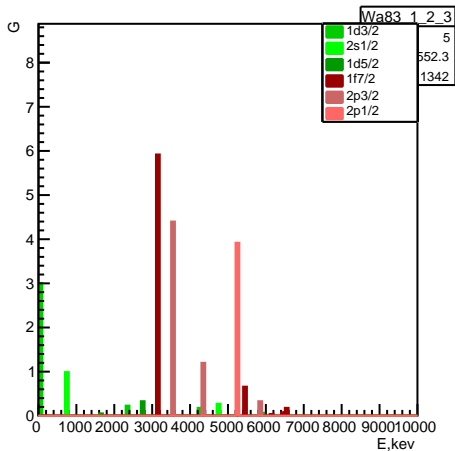
Occupancy



Penalty function components



Wa83



Experiment: Ka69 (4) Wa83 (19)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -10687.5 ± 1416.62 keV

Δ: 5968.13 ± 3109.79 keV

penalty: 0.293999

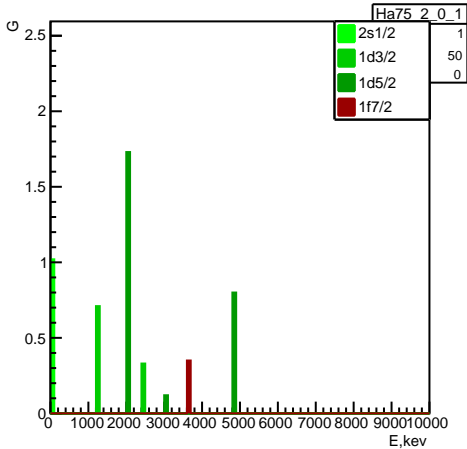
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-6577.18 2s1/2 0.315 0.94

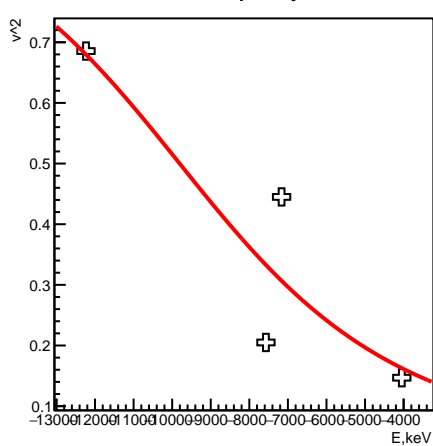
-6903.54 1d3/2 0.135 1.02

-11947.8 1d5/2 0.607167 0.342333

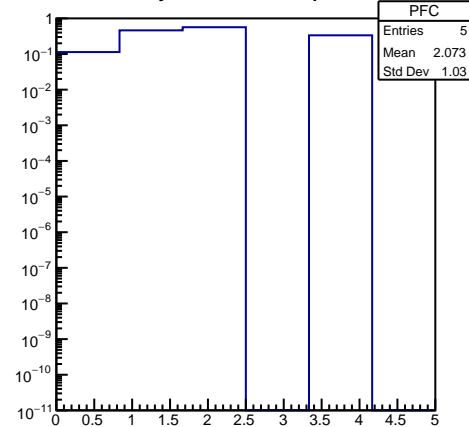
Ha75



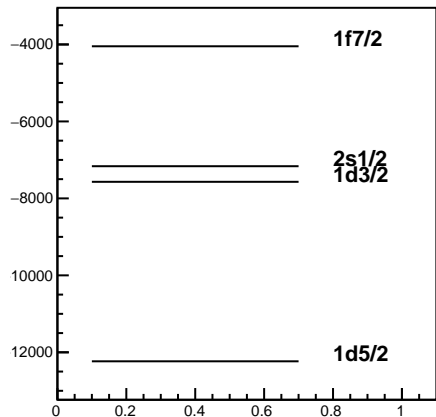
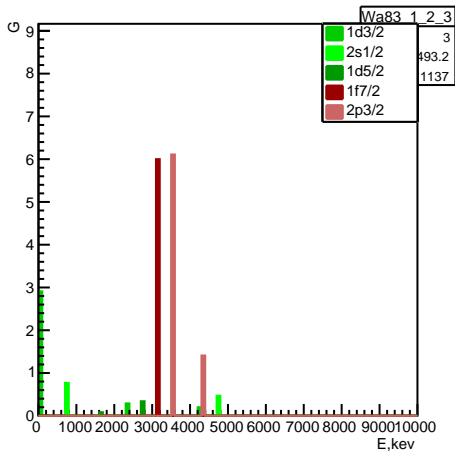
Occupancy



Penalty function components



Wa83



Experiment: Ha75 (7) Wa83 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9805.25 \pm 1260.17 keV

Δ : 6302.4 \pm 2805.98 keV

penalty: 0.295037

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

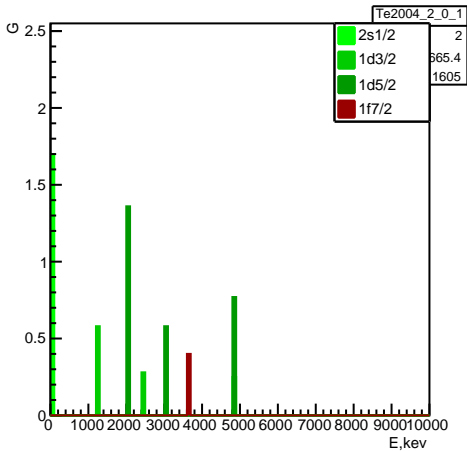
-7163.8 2s1/2 0.445 1.13

-7569.15 1d3/2 0.205 1.11

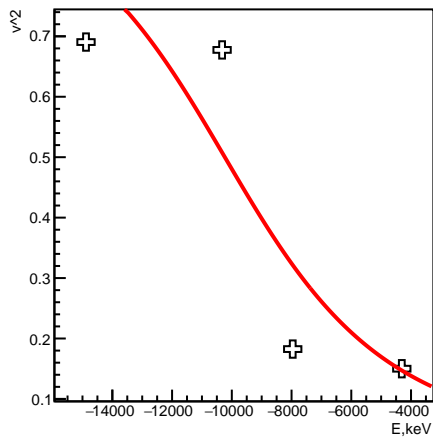
-12233.6 1d5/2 0.6855 0.512333

-4047.17 1f7/2 0.146875 0.79375

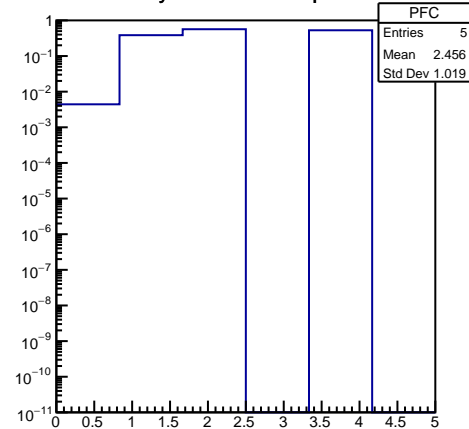
Te2004



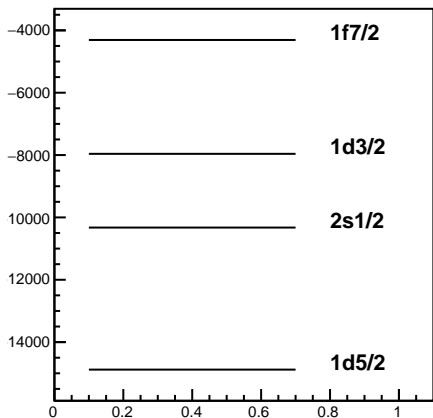
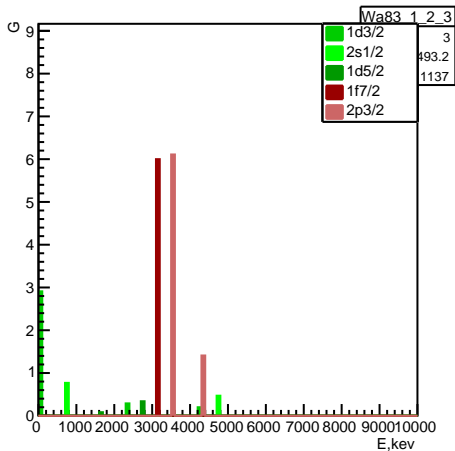
Occupancy



Penalty function components



Wa83



Experiment: Te2004 (8) Wa83 (10)

proton transfer

p separation energy A:13516.9, A+1: 7297.3:

 $E_F: -10233.3 \pm 1662.18 \text{ keV}$ $\Delta: 5946.28 \pm 4423.43 \text{ keV}$

penalty: 0.296455

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

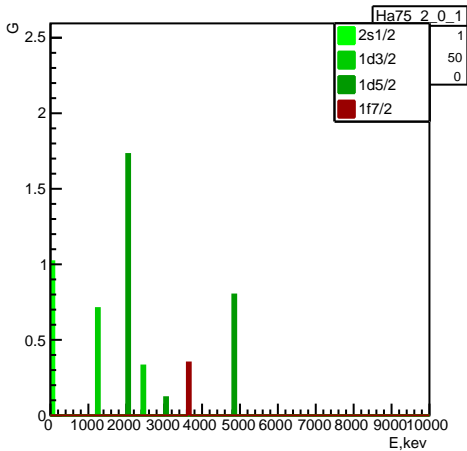
-10325.5 2s1/2 0.6775 1.595

-7960.7 1d3/2 0.1825 1.065

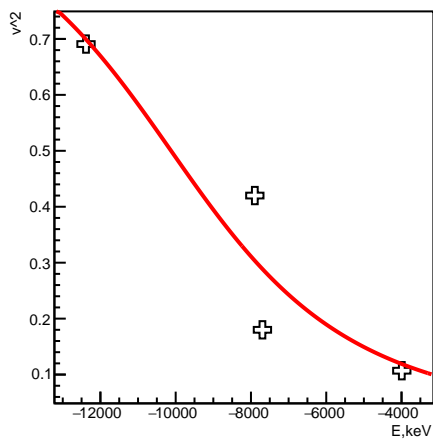
-14881.9 1d5/2 0.6905 0.522333

-4308.55 1f7/2 0.15 0.8

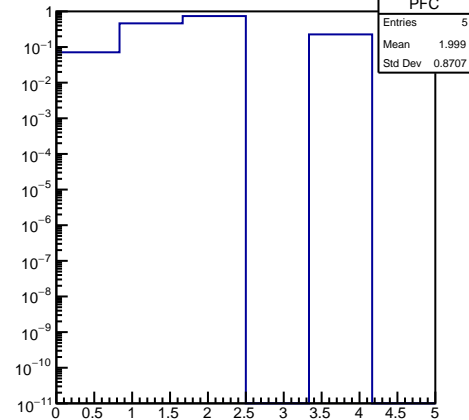
Ha75



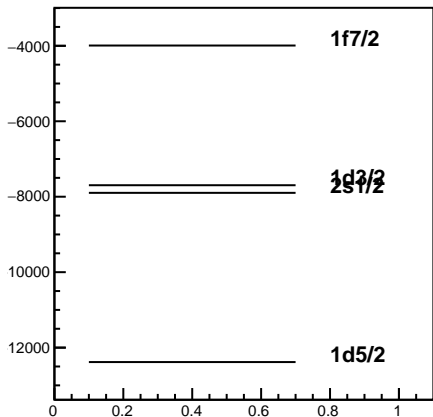
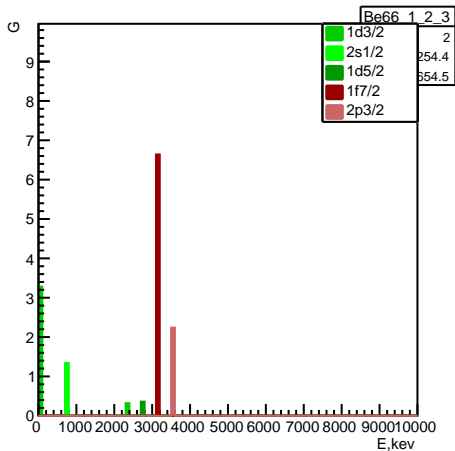
Occupancy



Penalty function components



Be66



Experiment: Ha75 (7) Be66 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -10122.1 \pm 954.265 keV

Δ : 5204.82 \pm 1893.97 keV

penalty: 0.29958

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

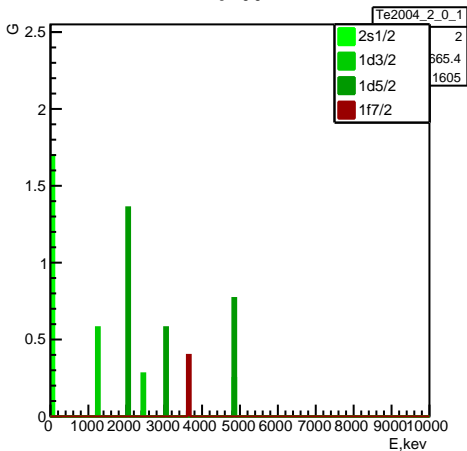
-7897.48 2s1/2 0.42 1.18

-7695.51 1d3/2 0.18 1.16

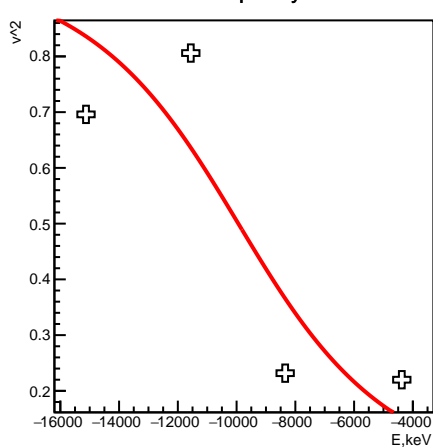
-12382.5 1d5/2 0.690833 0.501667

-3992.78 1f7/2 0.106875 0.87375

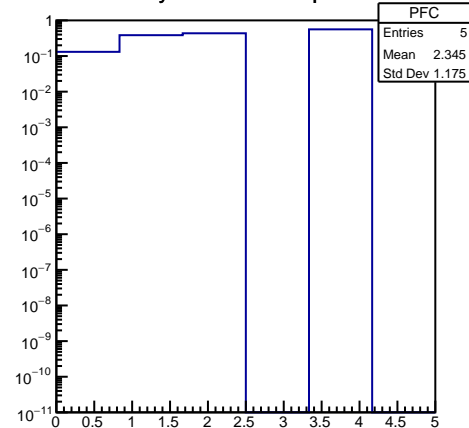
Te2004



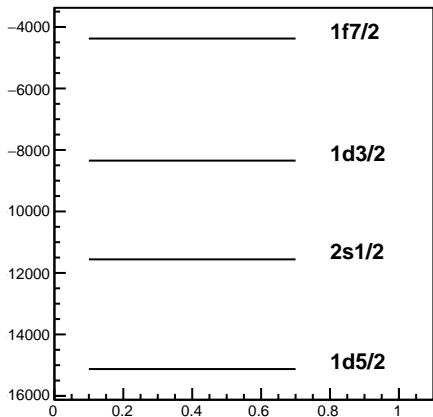
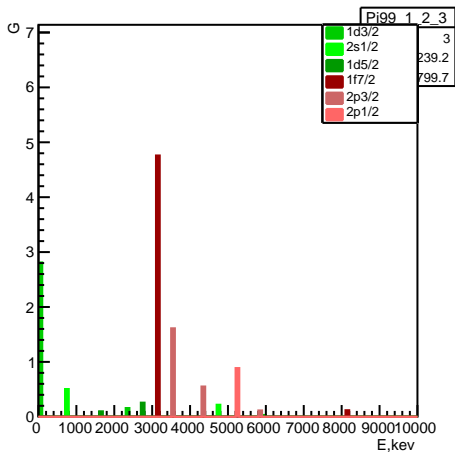
Occupancy



Penalty function components



Pi99



Experiment: Te2004 (8) Pi99 (13)

proton transfer

p separation energy A:13516.9, A+1: 7297.3;

E_F: -9940.44 \pm 1501.17 keV Δ : 5715.92 \pm 4694.7 keV

penalty: 0.30217

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

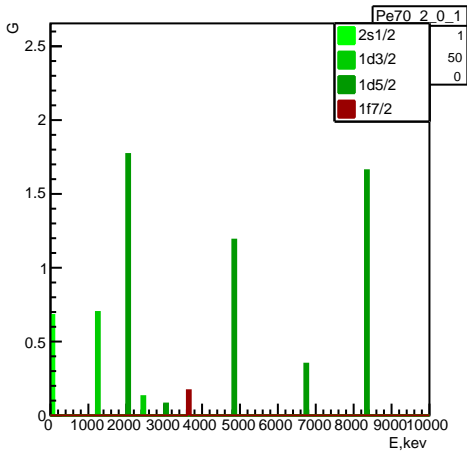
-11558.7 2s1/2 0.806 1.338

-8346.72 1d3/2 0.23175 0.9665

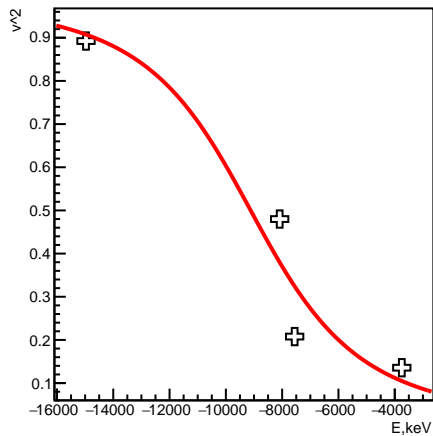
-15126 1d5/2 0.696 0.511333

-4376.23 1f7/2 0.22 0.66

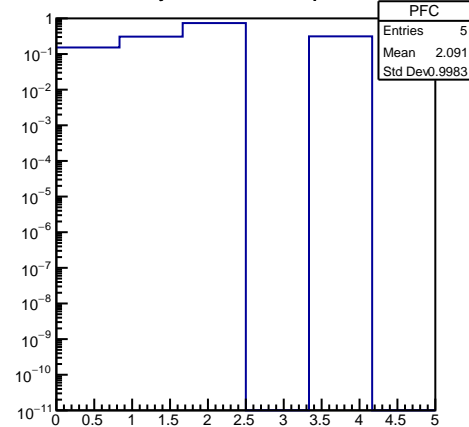
Pe70



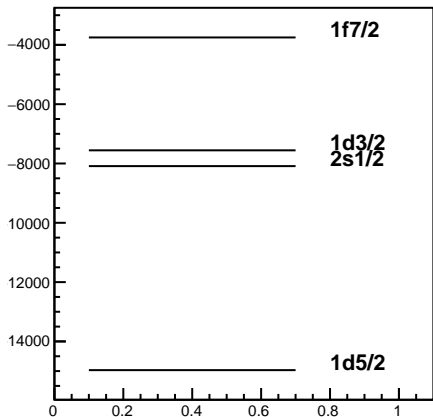
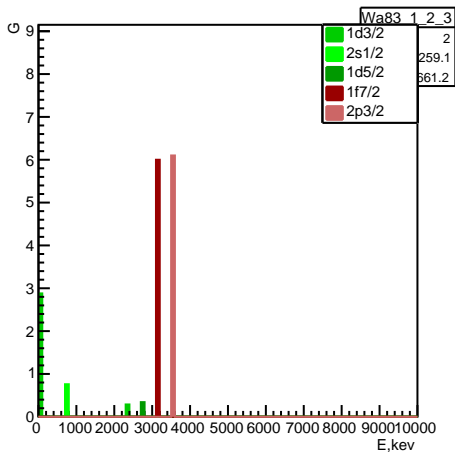
Occupancy



Penalty function components



Wa83



Experiment: Pe70 (9) Wa83 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9118.9 ± 1081.96 keV

Δ: -4161.27 ± 2623.97 keV

penalty: 0.302539

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

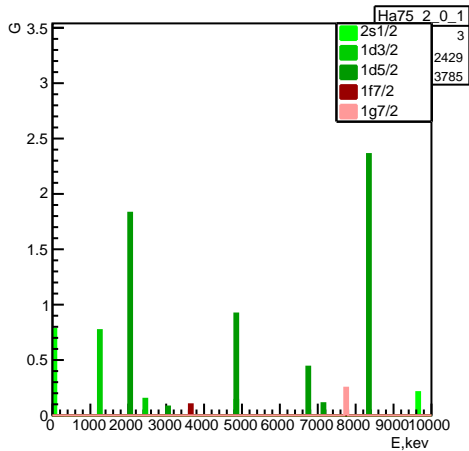
-8088.51 2s1/2 0.48 0.72

-7556.36 1d3/2 0.20775 0.9995

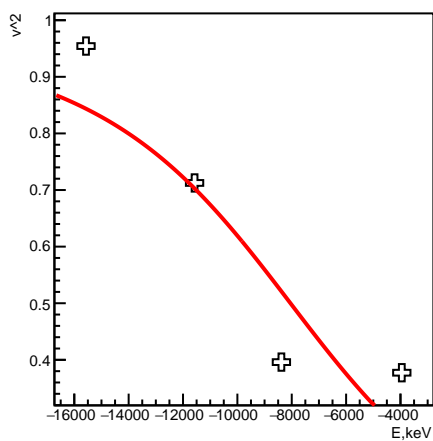
-14968.1 1d5/2 0.892333 0.898667

-3750.06 1f7/2 0.135625 0.77125

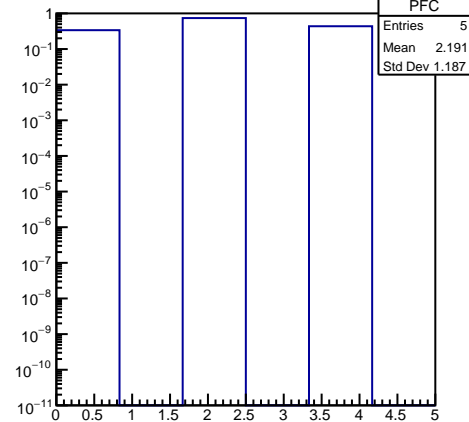
Ha75



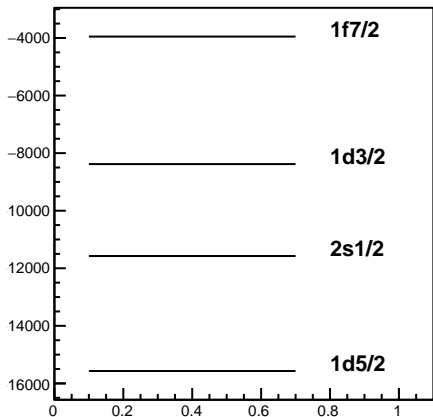
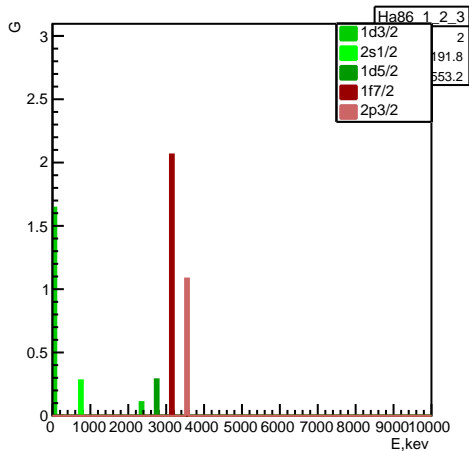
Occupancy



Penalty function components



Ha86



Experiment: Ha75 (13) Ha86 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -8047.25 \pm 1669$ keV $\Delta: 7950.99 \pm 3652.8$ keV

penalty: 0.302625

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

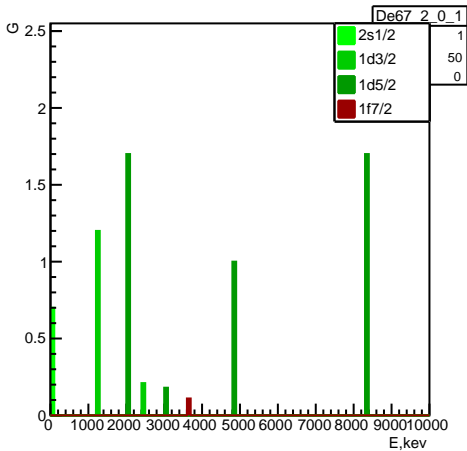
-11574.8 2s1/2 0.7125 0.705

-8380.66 1d3/2 0.396 0.668

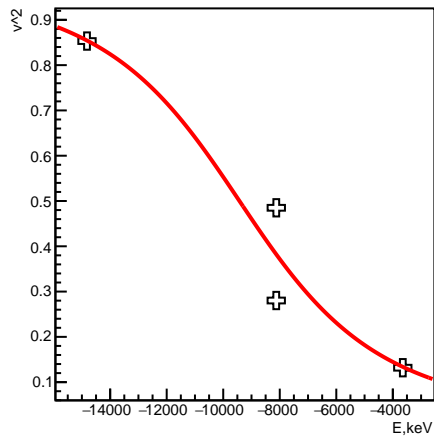
-15569 1d5/2 0.954333 1.00467

-3951.17 1f7/2 0.37725 0.2705

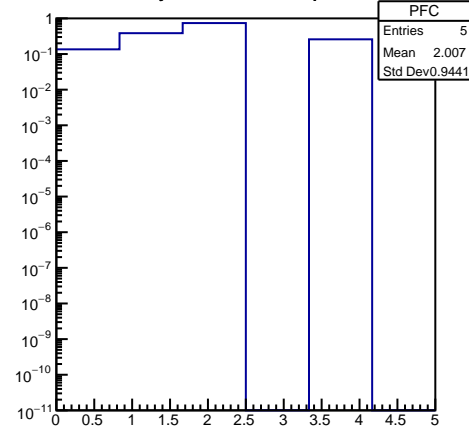
De67



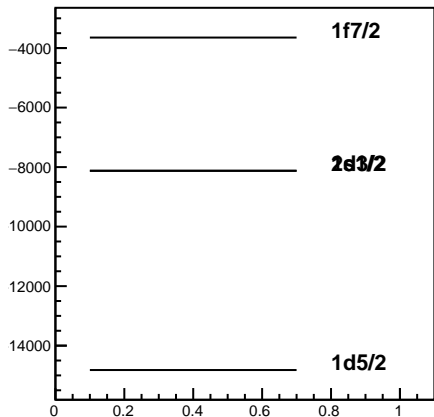
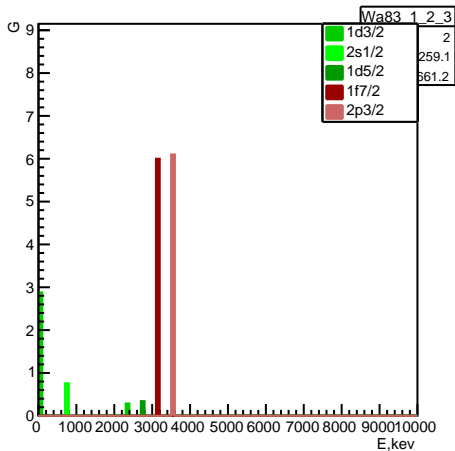
Occupancy



Penalty function components



Wa83



Experiment: De67 (8) Wa83 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -9425.93 \pm 913.924$ keV $\Delta: -5370.51 \pm 2166.31$ keV

penalty: 0.303539

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

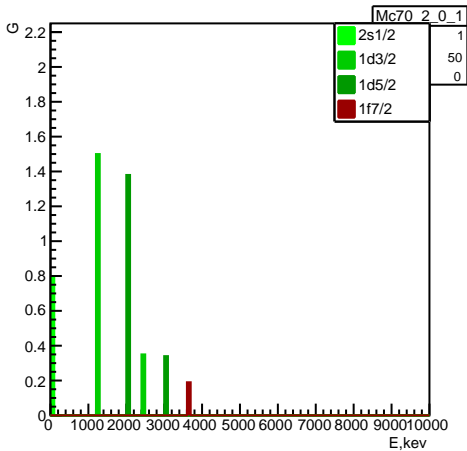
-8123.02 2s1/2 0.485 0.73

-8124.43 1d3/2 0.28025 1.1445

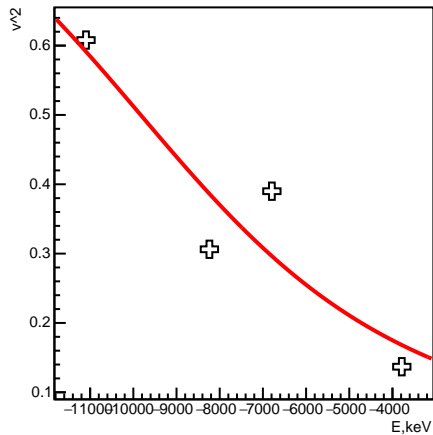
-14819.4 1d5/2 0.853167 0.820333

-3647.14 1f7/2 0.131875 0.76375

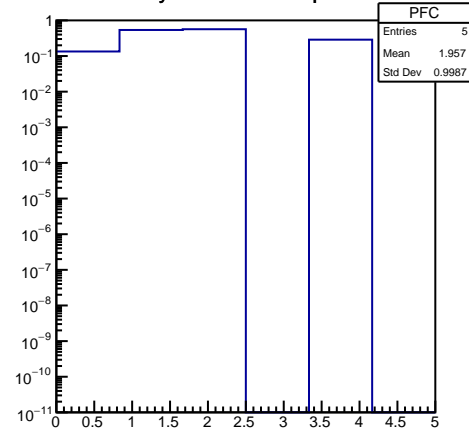
Mc70



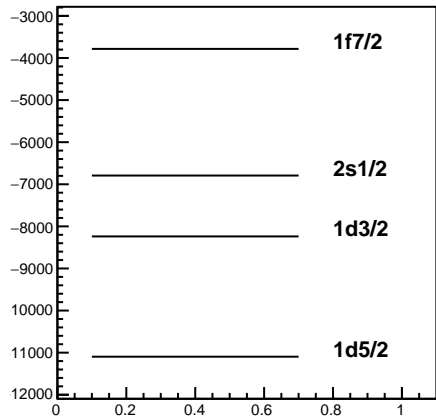
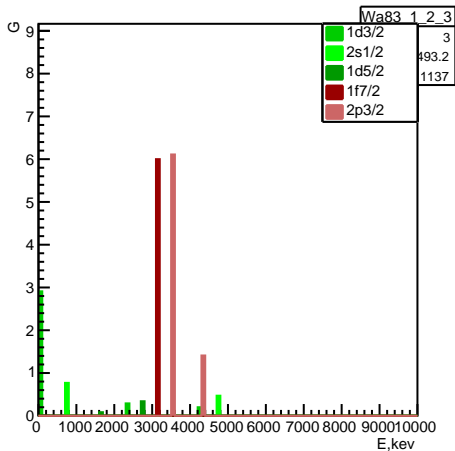
Occupancy



Penalty function components



Wa83



Experiment: Mc70 (6) Wa83 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9829.47 \pm 882.331 keV

Δ : -6814.5 \pm 2411.18 keV

penalty: 0.305121

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

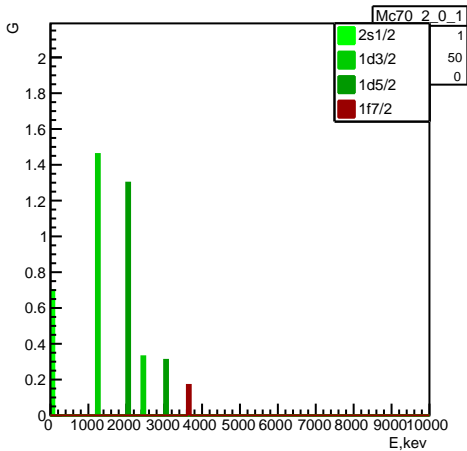
-6792.39 2s1/2 0.39 1.02

-8238.84 1d3/2 0.30625 1.3125

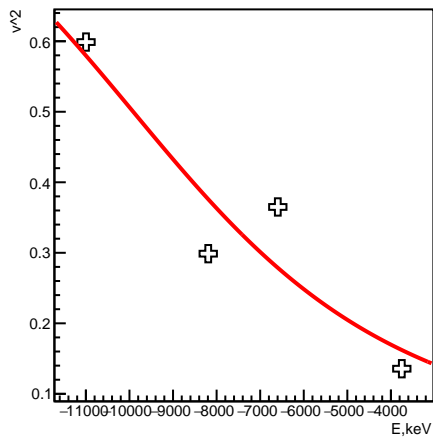
-11095.9 1d5/2 0.608 0.357333

-3783.93 1f7/2 0.136875 0.77375

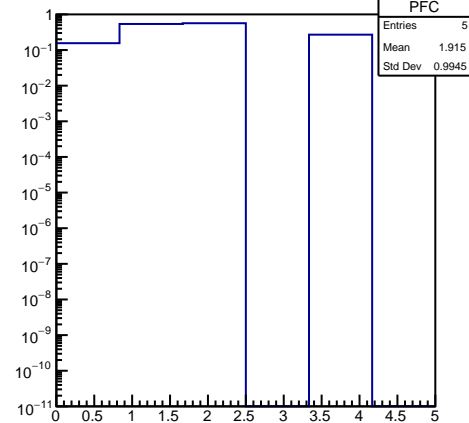
Mc70



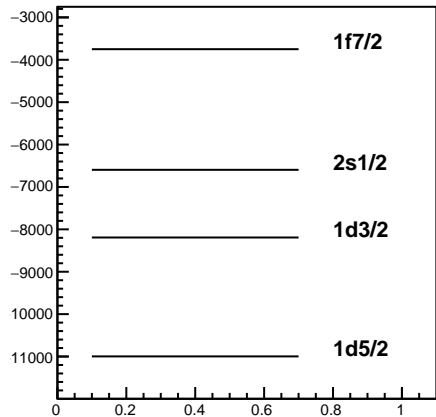
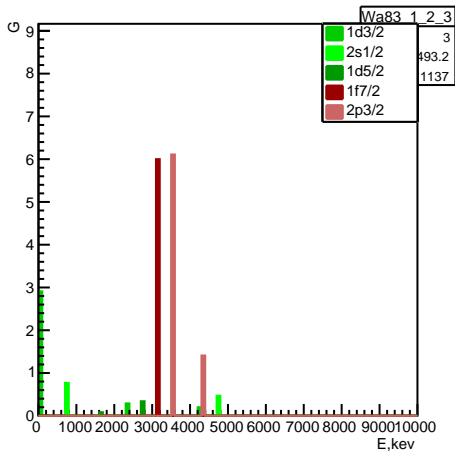
Occupancy



Penalty function components



Wa83



Experiment: Mc70 (6) Wa83 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -9913.9 \pm 841.712$ keV $\Delta: -6723.83 \pm 2261.43$ keV

penalty: 0.305838

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

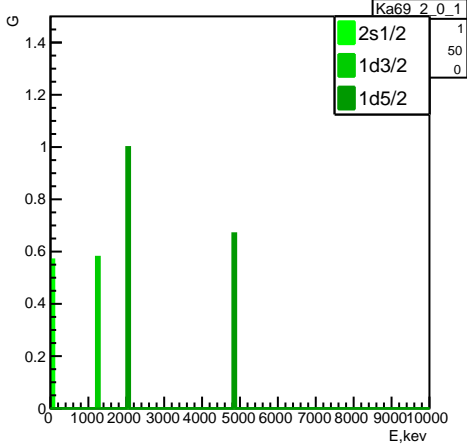
-6595.71 2s1/2 0.365 0.97

-8192.29 1d3/2 0.29875 1.2975

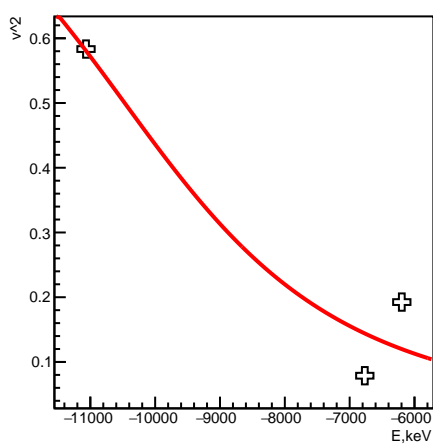
-10997.3 1d5/2 0.598833 0.339

-3750.06 1f7/2 0.135625 0.77125

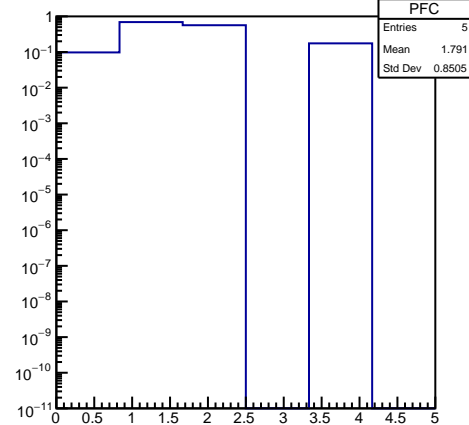
Ka69



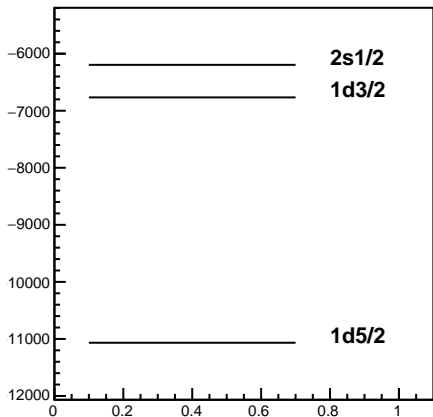
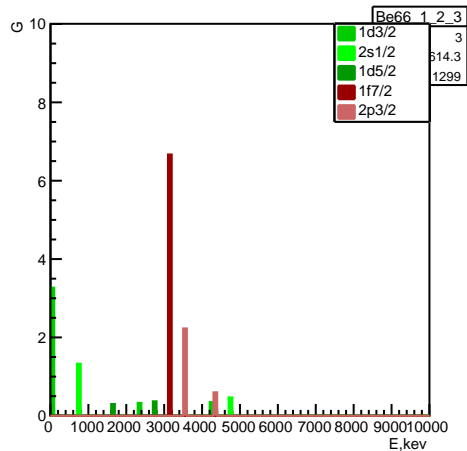
Occupancy



Penalty function components



Be66



Experiment: Ka69 (4) Be66 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -10470.3 \pm 675.157 keV

Δ : 3652.01 \pm 1466.44 keV

penalty: 0.306015

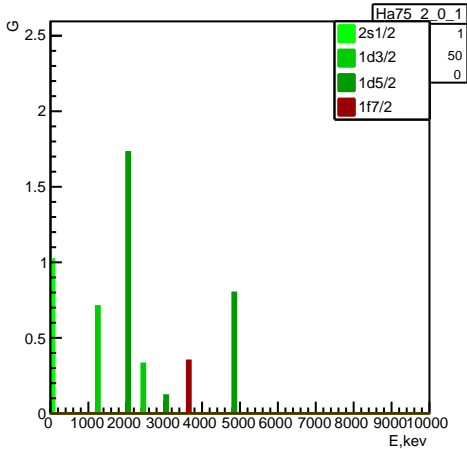
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-6195.74 2s1/2 0.1925 1.185

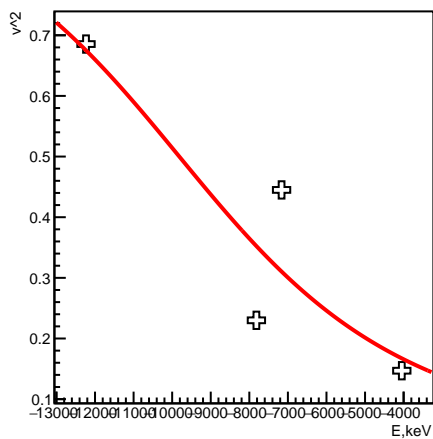
-6766.45 1d3/2 0.07875 1.1325

-11066.7 1d5/2 0.583333 0.39

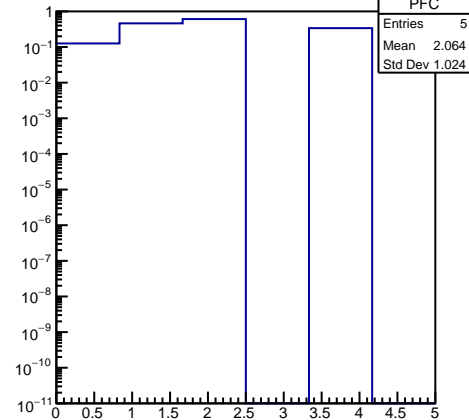
Ha75



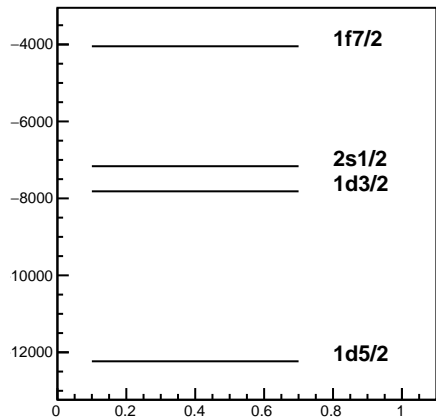
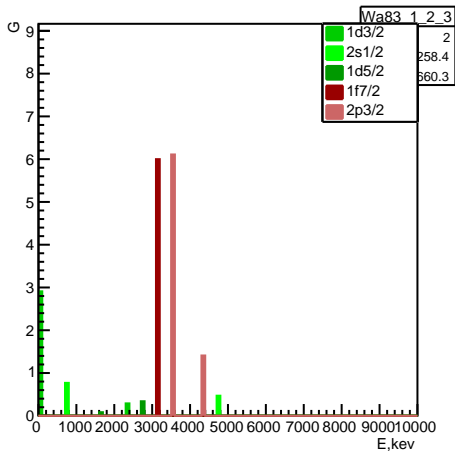
Occupancy



Penalty function components



Wa83



Experiment: Ha75 (7) Wa83 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 E_F : -9815.21 \pm 1218.6 keV Δ : -6468.91 \pm 2838.91 keV

penalty: 0.307019

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

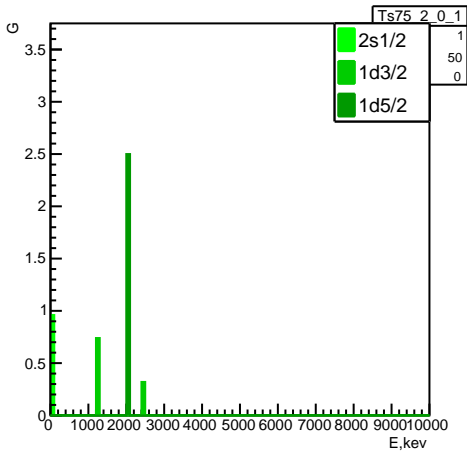
-7163.8 2s1/2 0.445 1.13

-7816.52 1d3/2 0.23 1.06

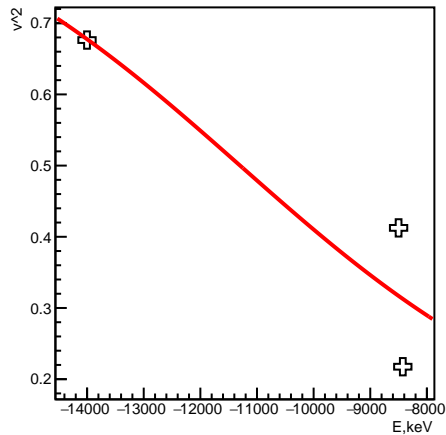
-12233.6 1d5/2 0.6855 0.512333

-4047.17 1f7/2 0.146875 0.79375

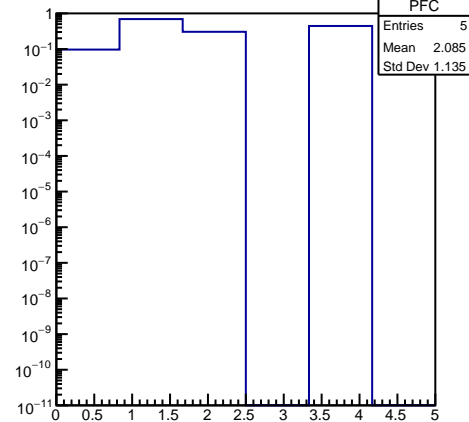
Ts75



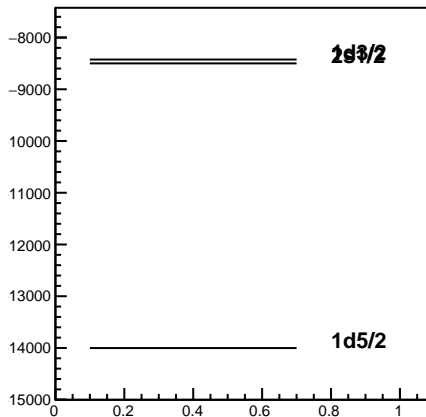
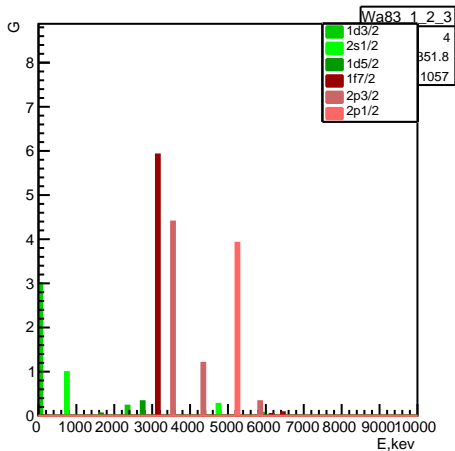
Occupancy



Penalty function components



Wa83



Experiment: Ts75 (4) Wa83 (16)

proton transfer

p separation energy A:13516.9, A+1: 7297.3:

 $E_F: -11298.4 \pm 1461.74 \text{ keV}$ $\Delta: 7113.87 \pm 3717.29 \text{ keV}$

penalty: 0.307367

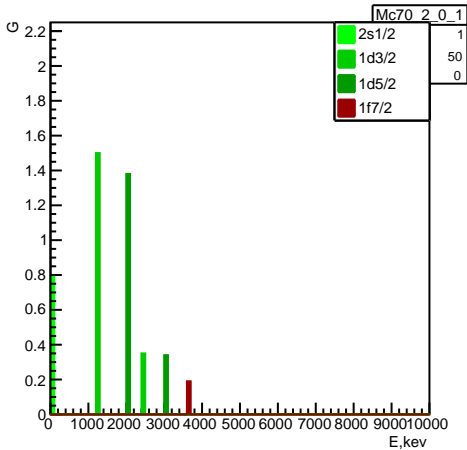
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-8499.94 2s1/2 0.4125 1.135

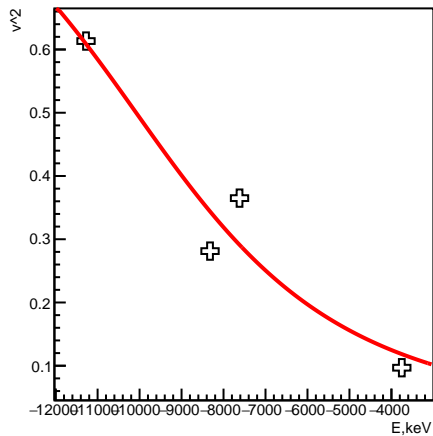
-8425.43 1d3/2 0.2175 1.095

-14001.5 1d5/2 0.676333 0.480667

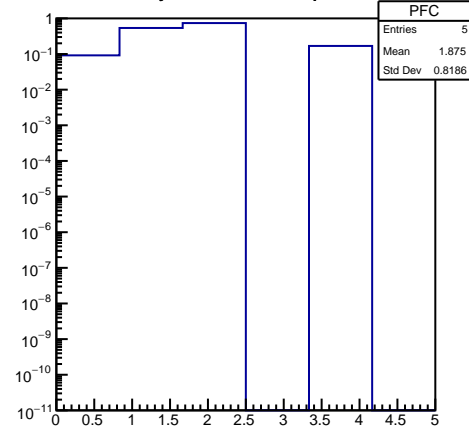
Mc70



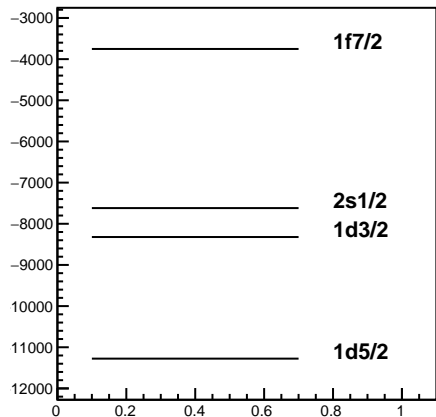
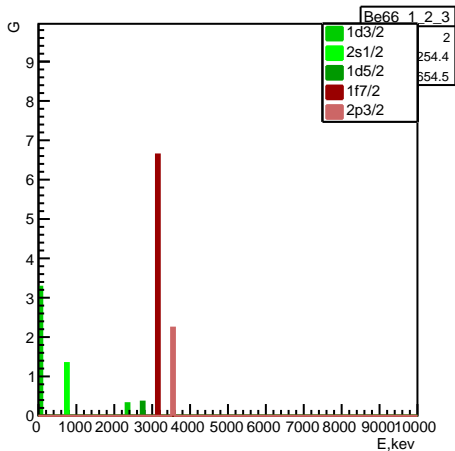
Occupancy



Penalty function components



Be66



Experiment: Mc70 (6) Be66 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -10081.7 ± 560.581 keV

Δ: -5357.74 ± 1412.88 keV

penalty: 0.307604

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

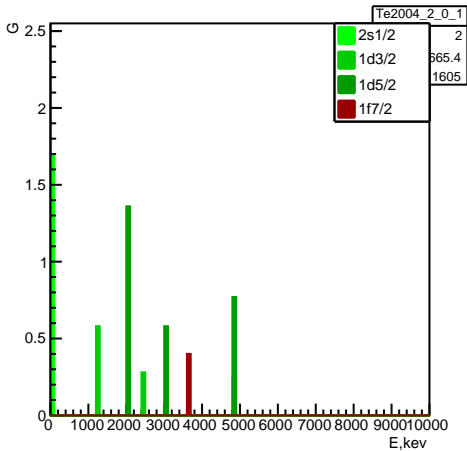
-7618.85 2s1/2 0.365 1.07

-8321.84 1d3/2 0.28125 1.3625

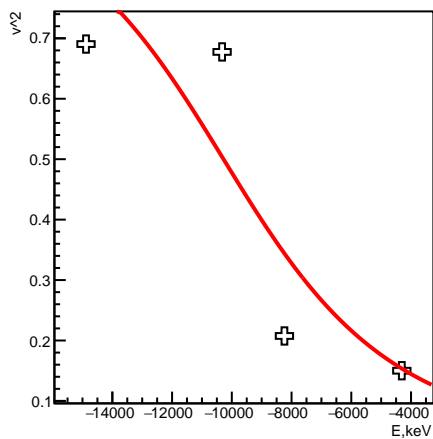
-11276.3 1d5/2 0.613333 0.346667

-3752.93 1f7/2 0.096875 0.85375

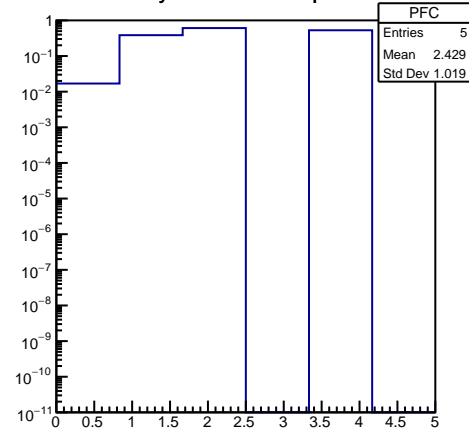
Te2004



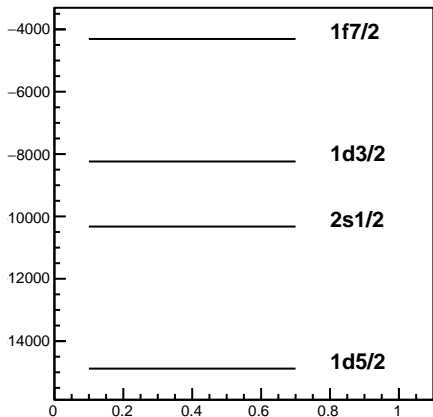
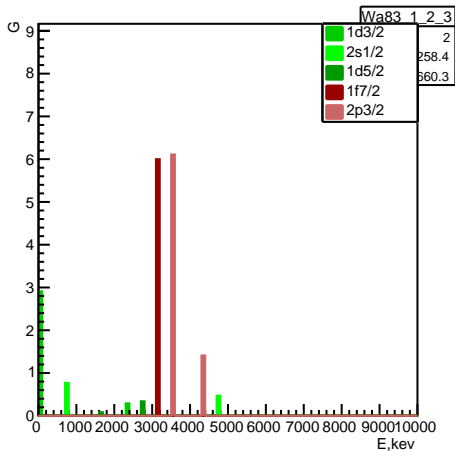
Occupancy



Penalty function components



Wa83



Experiment: Te2004 (8) Wa83 (9)

proton transfer

p separation energy A:13516.9, A+1: 7297.3;

 E_F : -10277.8 ± 1621.69 keV Δ : 6210.3 ± 4426.57 keV

penalty: 0.307726

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

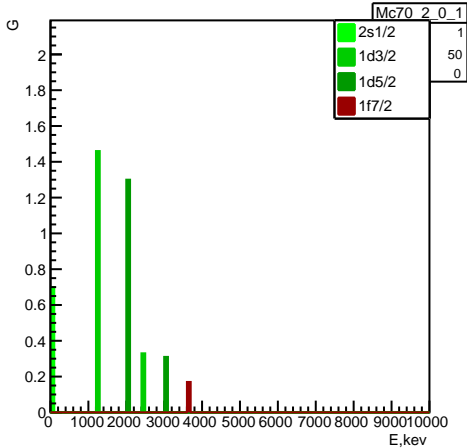
-10325.5 2s1/2 0.6775 1.595

-8238.32 1d3/2 0.2075 1.015

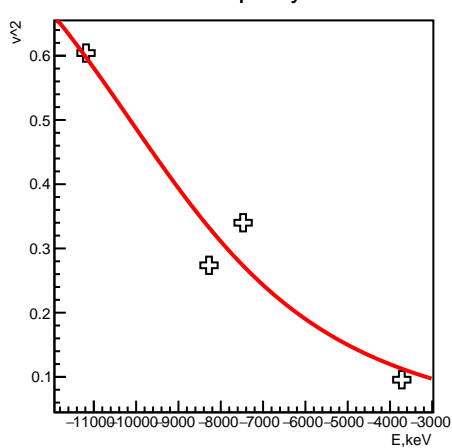
-14881.9 1d5/2 0.6905 0.522333

-4308.55 1f7/2 0.15 0.8

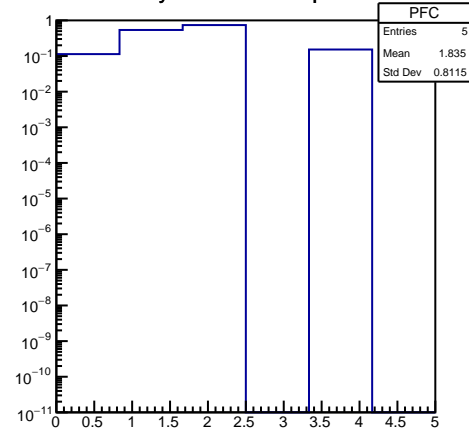
Mc70



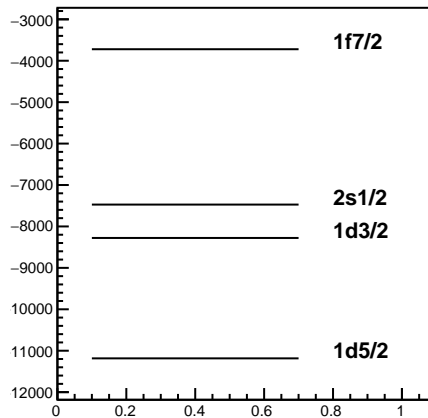
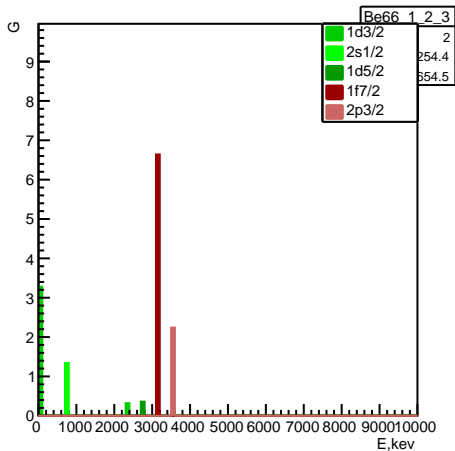
Occupancy



Penalty function components



Be66



Experiment: Mc70 (6) Be66 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -10141.5 \pm 515.21 keV

Δ : 5243.35 \pm 1275.94 keV

penalty: 0.308626

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

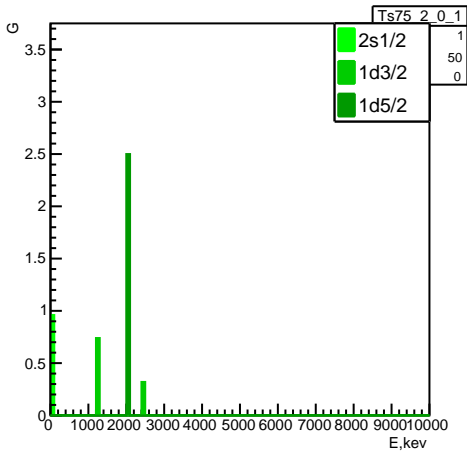
-7472.33 2s1/2 0.34 1.02

-8277.94 1d3/2 0.27375 1.3475

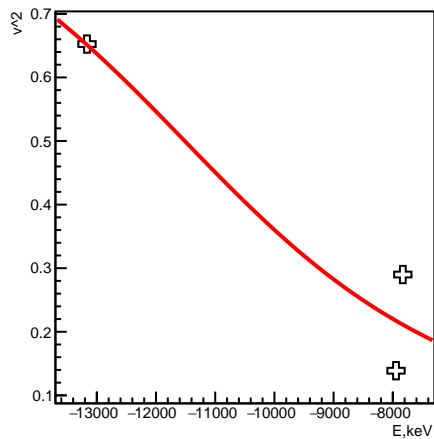
-11184.5 1d5/2 0.604167 0.328333

-3722.16 1f7/2 0.095625 0.85125

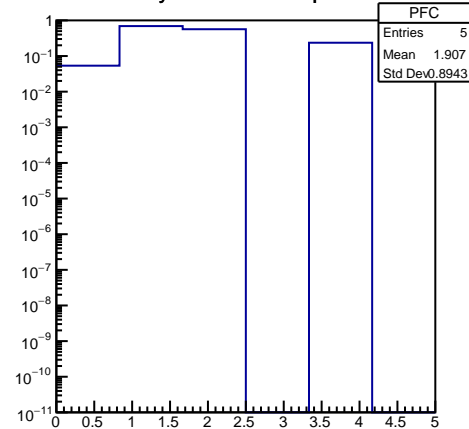
Ts75



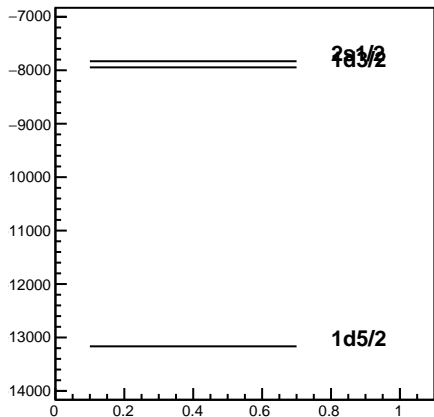
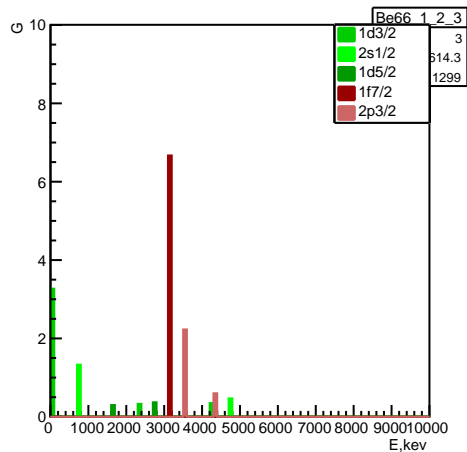
Occupancy



Penalty function components



Be66



Experiment: Ts75 (4) Be66 (10)

proton transfer

p separation energy A:13516.9, A+1: 7297.3:

E_F: -11514.5 \pm 1027.23 keV

Δ : -5205.54 \pm 1977.9 keV

penalty: 0.309448

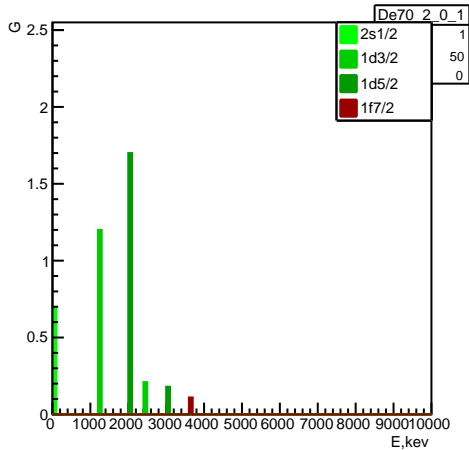
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-7831.04 2s1/2 0.29 1.38

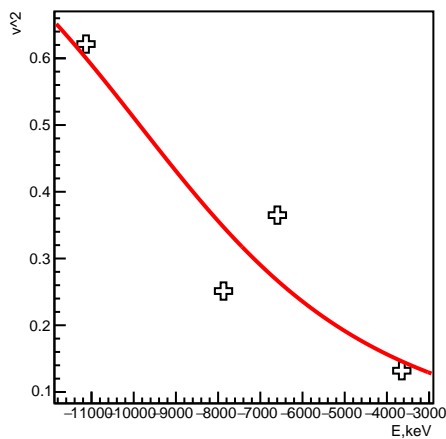
-7945.6 1d3/2 0.13875 1.2525

-13165.8 1d5/2 0.6525 0.528333

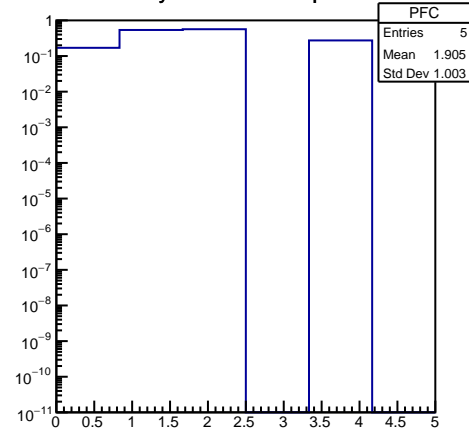
De70



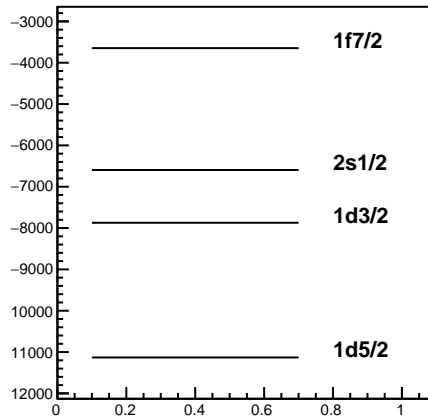
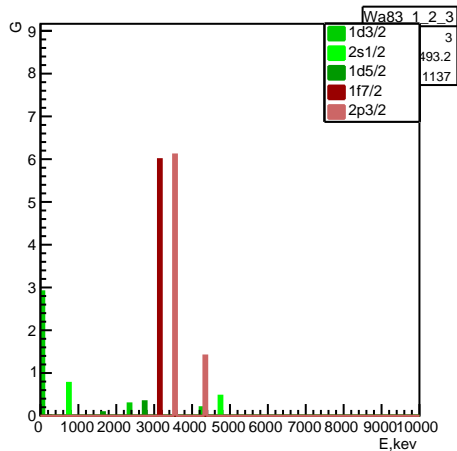
Occupancy



Penalty function components



Wa83



Experiment: De70 (6) Wa83 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9862.17 \pm 913.847 keV

Δ : 6199.62 \pm 2294.89 keV

penalty: 0.309512

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

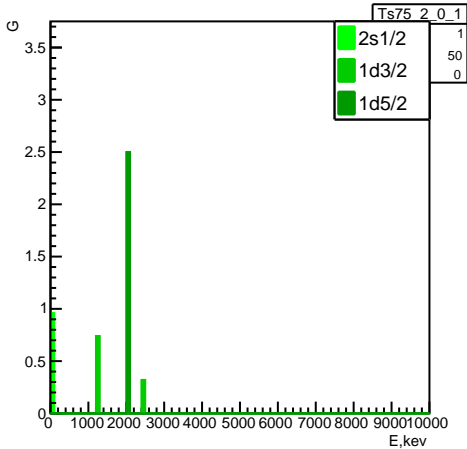
-6595.71 2s1/2 0.365 0.97

-7872.1 1d3/2 0.25125 1.2025

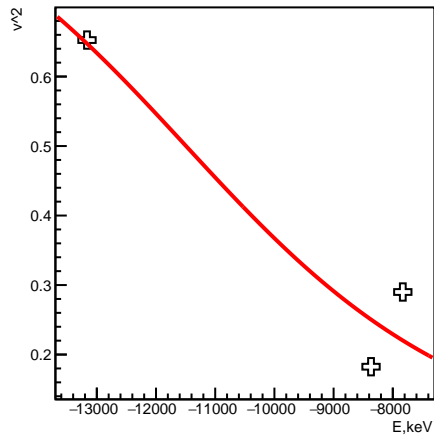
-11130.7 1d5/2 0.621333 0.384

-3647.14 1f7/2 0.131875 0.76375

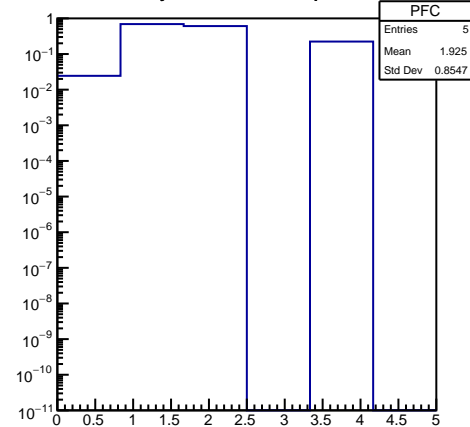
Ts75



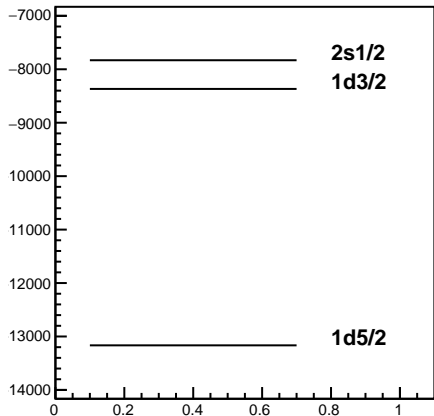
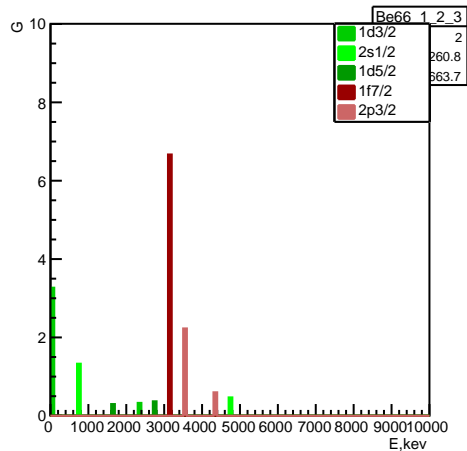
Occupancy



Penalty function components



Be66



Experiment: Ts75 (4) Be66 (9)

proton transfer

p separation energy A:13516.9, A+1: 7297.3:

E_F : -11492.5 ± 898.315 keV

Δ : 5423.4 ± 1874.61 keV

penalty: 0.309844

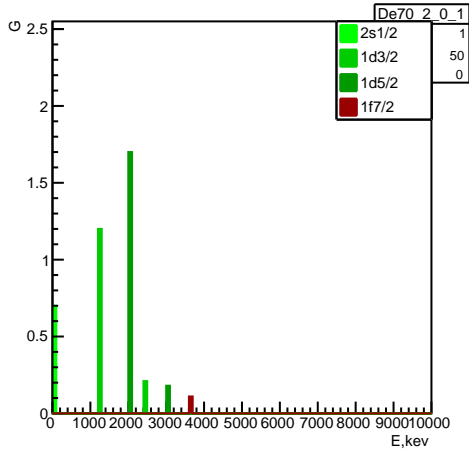
SPE, keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-7831.04 2s1/2 0.29 1.38

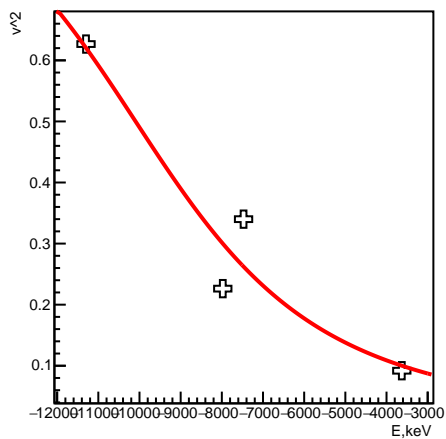
-8367.75 1d3/2 0.1825 1.165

-13165.8 1d5/2 0.6525 0.528333

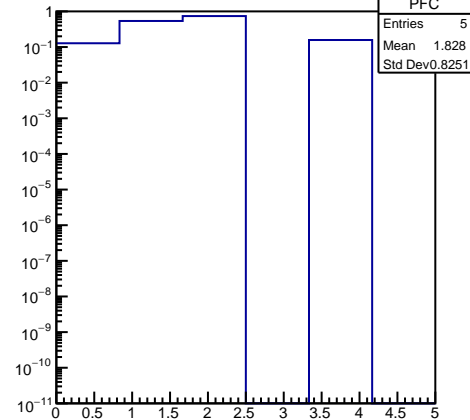
De70



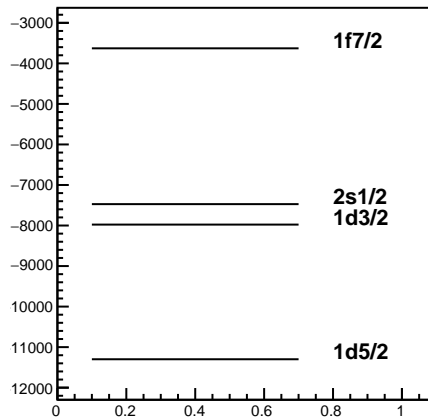
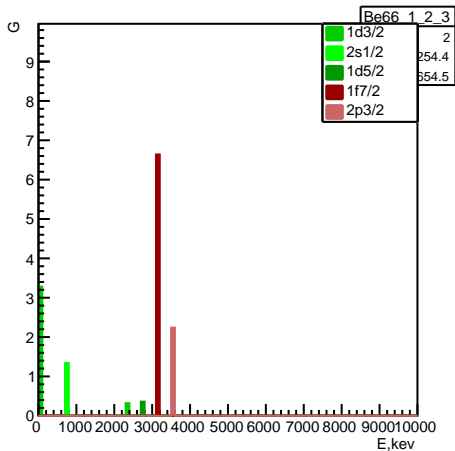
Occupancy



Penalty function components



Be66



Experiment: De70 (6) Be66 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -10095 ± 581.069 keV

Δ: 4853.16 ± 1318.73 keV

penalty: 0.312523

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

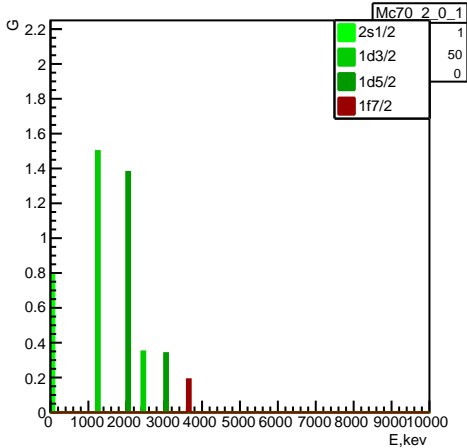
-7472.33 2s1/2 0.34 1.02

-7977.03 1d3/2 0.22625 1.2525

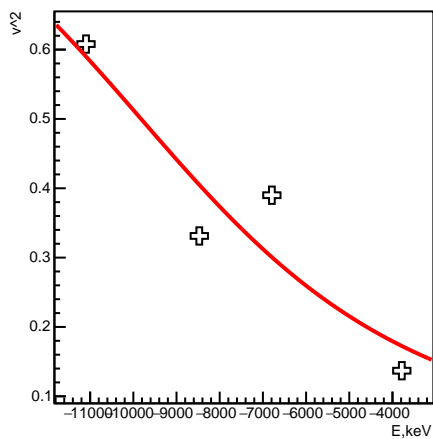
-11299.2 1d5/2 0.626667 0.373333

-3628.74 1f7/2 0.091875 0.84375

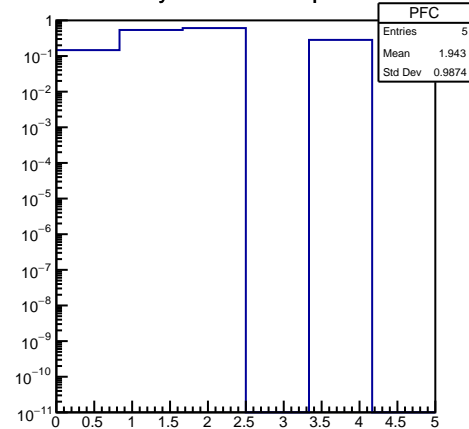
Mc70



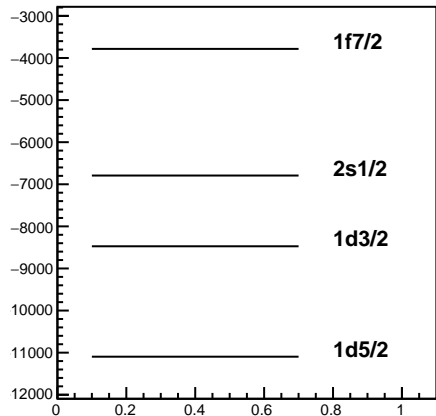
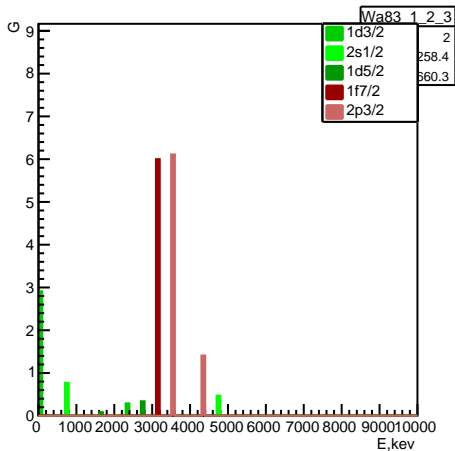
Occupancy



Penalty function components



Wa83



Experiment: Mc70 (6) Wa83 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9820.93 \pm 844.383 keV

Δ : -6966.22 \pm 2374.58 keV

penalty: 0.315443

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

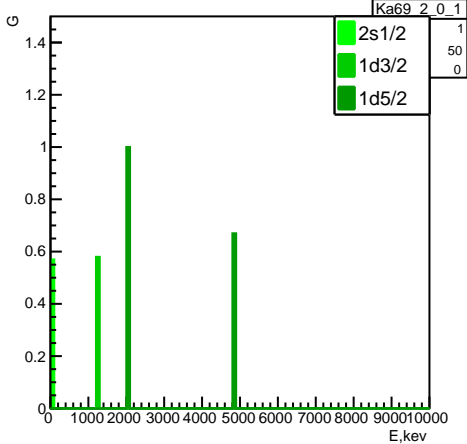
-6792.39 2s1/2 0.39 1.02

-8473.05 1d3/2 0.33125 1.2625

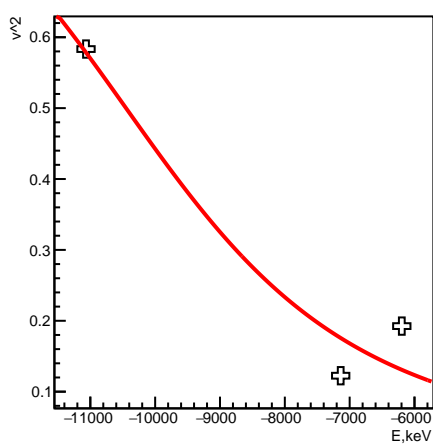
-11095.9 1d5/2 0.608 0.357333

-3783.93 1f7/2 0.136875 0.77375

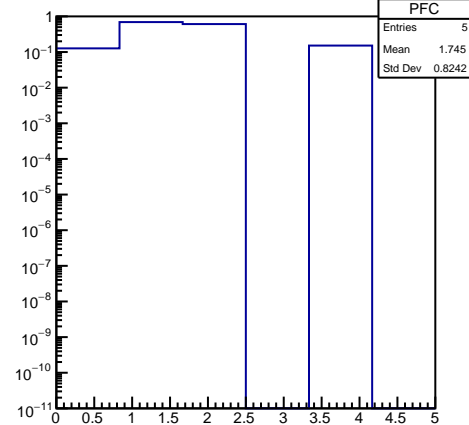
Ka69



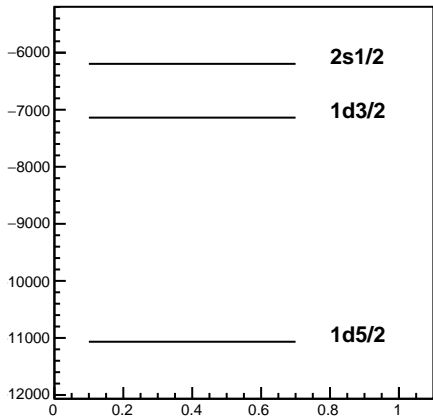
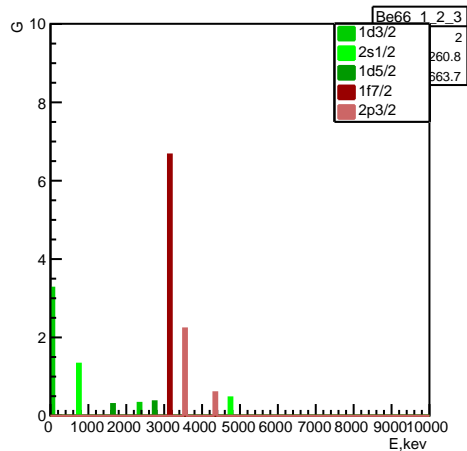
Occupancy



Penalty function components



Be66



Experiment: Ka69 (4) Be66 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -10449.4 ± 583.707 keV

Δ: 3885.91 ± 1271.35 keV

penalty: 0.315886

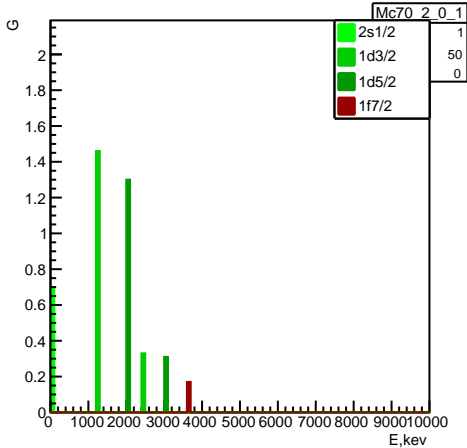
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-6195.74 2s1/2 0.1925 1.185

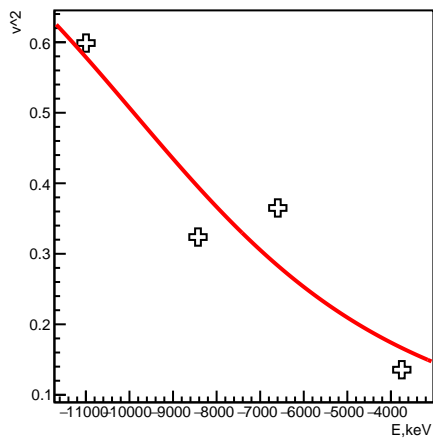
-7138.34 1d3/2 0.1225 1.045

-11066.7 1d5/2 0.583333 0.39

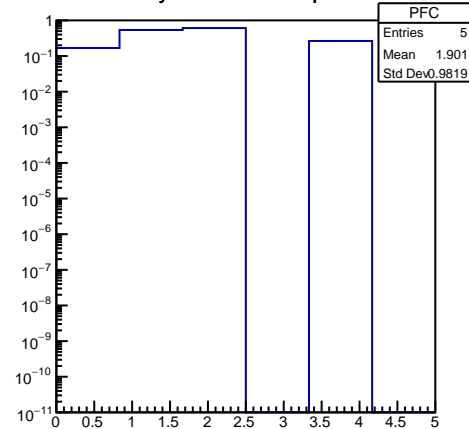
Mc70



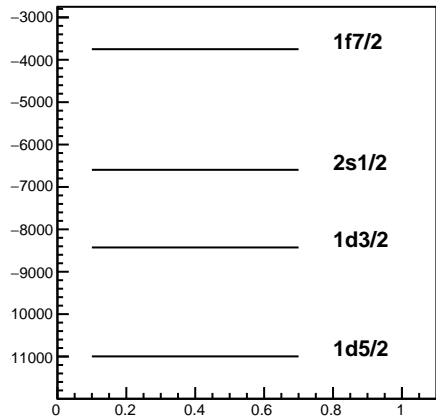
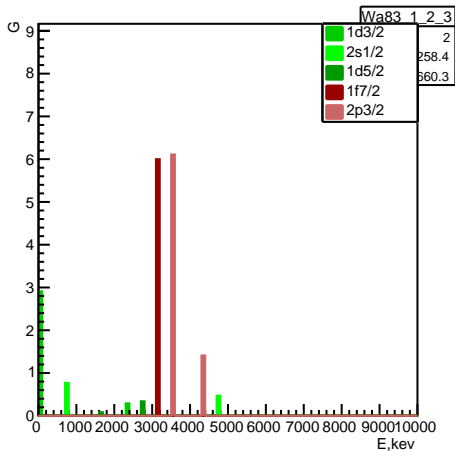
Occupancy



Penalty function components



Wa83



Experiment: Mc70 (6) Wa83 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9903.26 \pm 800.734 keV

Δ : -6872.14 \pm 2216.2 keV

penalty: 0.315954

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

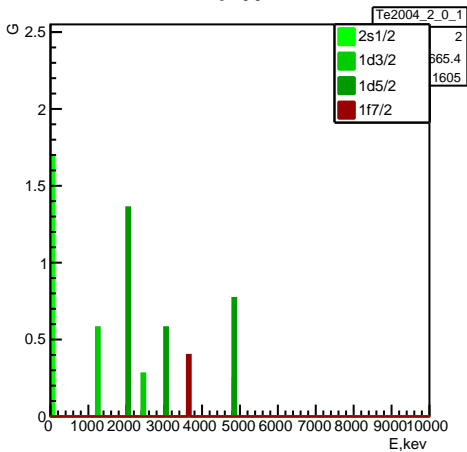
-6595.71 2s1/2 0.365 0.97

-8427.45 1d3/2 0.32375 1.2475

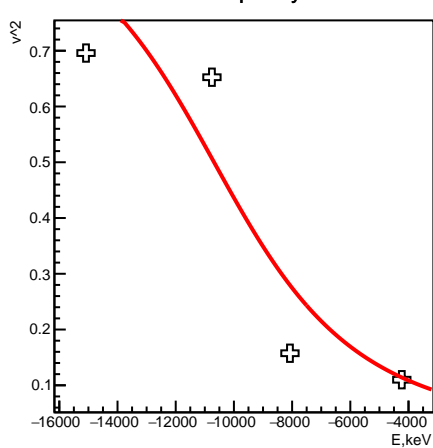
-10997.3 1d5/2 0.598833 0.339

-3750.06 1f7/2 0.135625 0.77125

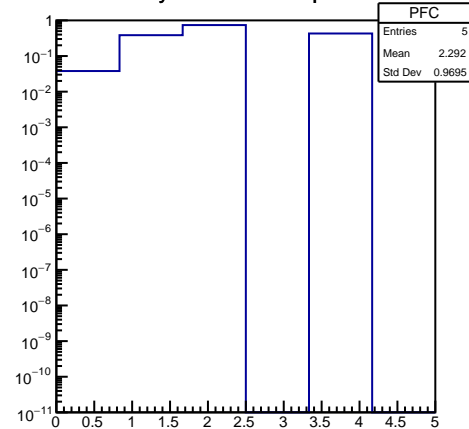
Te2004



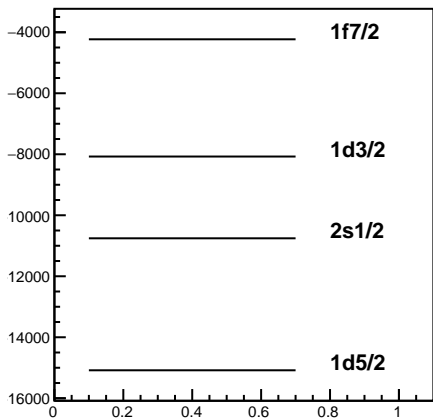
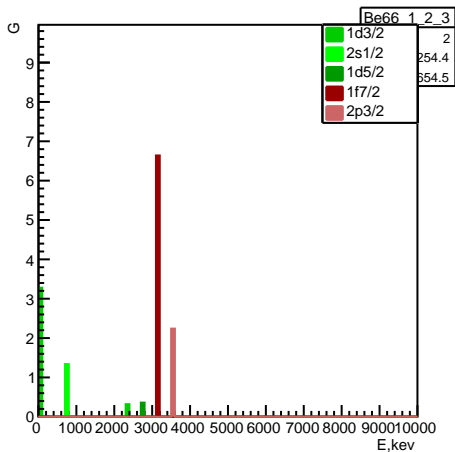
Occupancy



Penalty function components



Be66



Experiment: Te2004 (8) Be66 (6)

proton transfer

p separation energy A:13516.9, A+1: 7297.3:

 $E_F: -10683 \pm 1463.74 \text{ keV}$ $\Delta: 5311.16 \pm 3593.35 \text{ keV}$

penalty: 0.318121

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

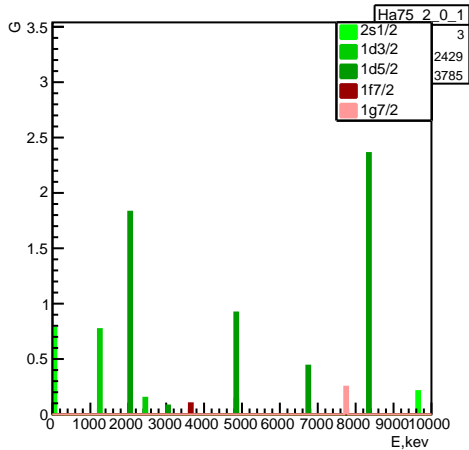
-10755.7 2s1/2 0.6525 1.645

-8074.6 1d3/2 0.1575 1.115

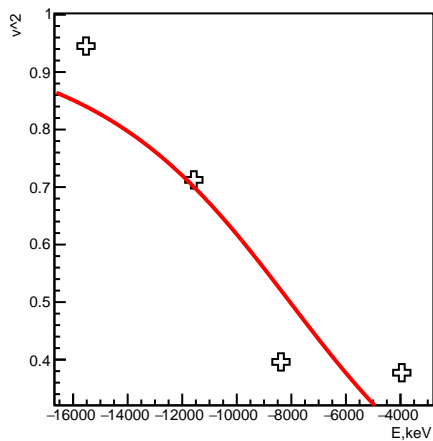
-15083 1d5/2 0.695833 0.511667

-4230.78 1f7/2 0.11 0.88

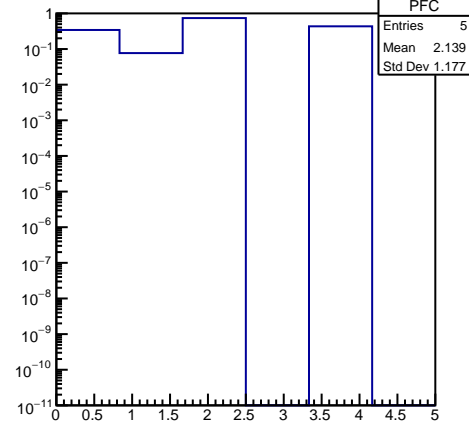
Ha75



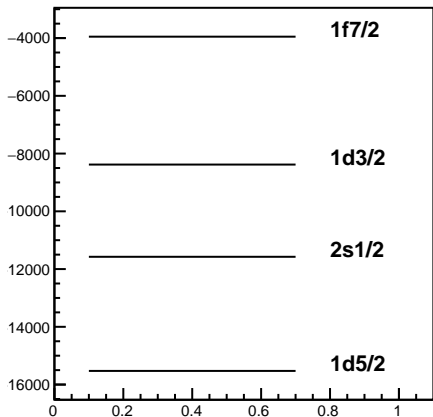
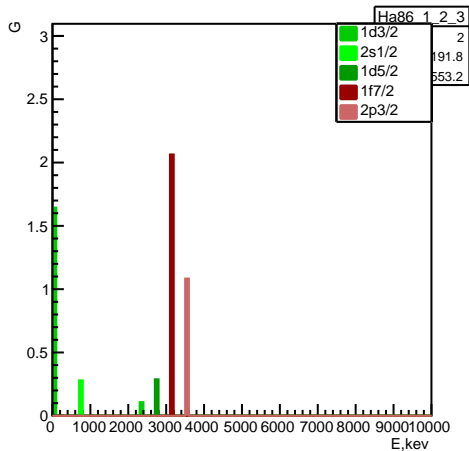
Occupancy



Penalty function components



Ha86



Experiment: Ha75 (12) Ha86 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -8049.2 \pm 1638.46$ keV $\Delta: 8057.85 \pm 3633.82$ keV

penalty: 0.318473

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

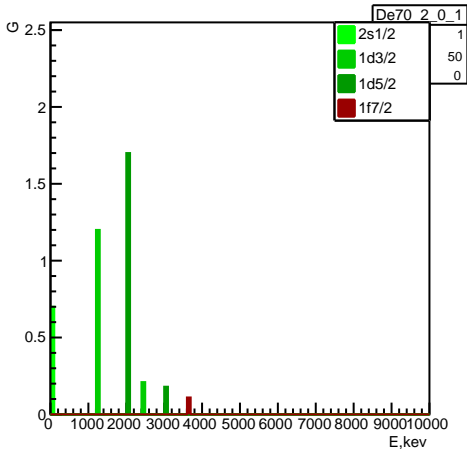
-11574.8 2s1/2 0.7125 0.705

-8380.66 1d3/2 0.396 0.668

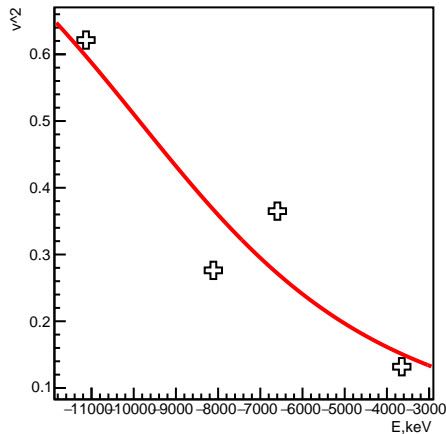
-15527.4 1d5/2 0.945167 0.986333

-3951.17 1f7/2 0.37725 0.2705

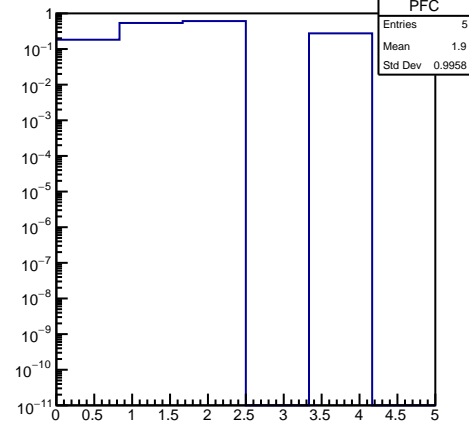
De70



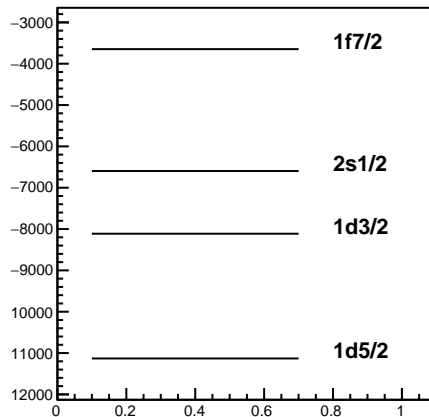
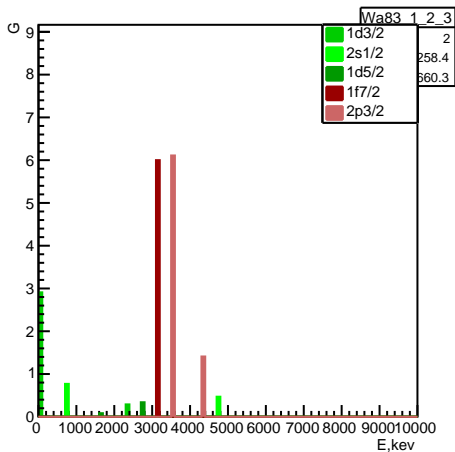
Occupancy



Penalty function components



Wa83



Experiment: De70 (6) Wa83 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -9868.64 \pm 882.437$ keV $\Delta: 6378.09 \pm 2305.79$ keV

penalty: 0.320968

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

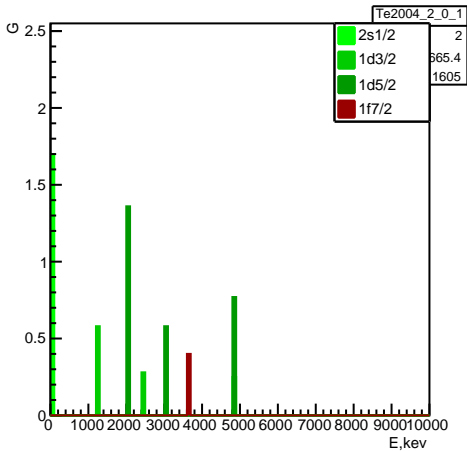
-6595.71 2s1/2 0.365 0.97

-8112.75 1d3/2 0.27625 1.1525

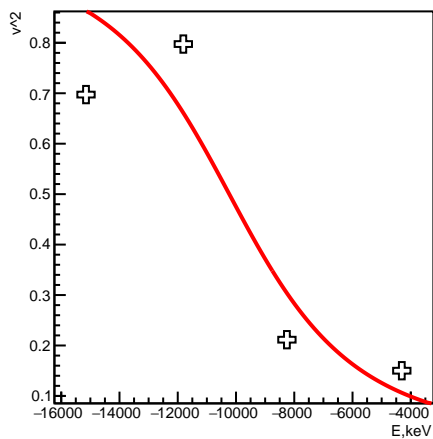
-11130.7 1d5/2 0.621333 0.384

-3647.14 1f7/2 0.131875 0.76375

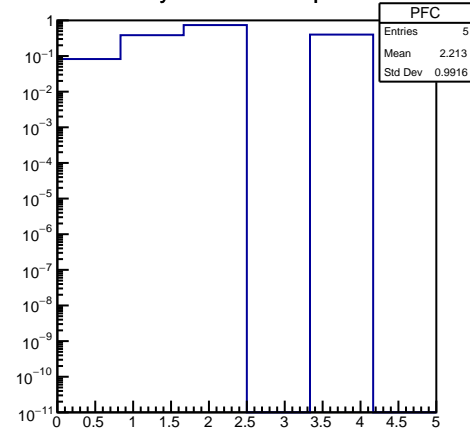
Te2004



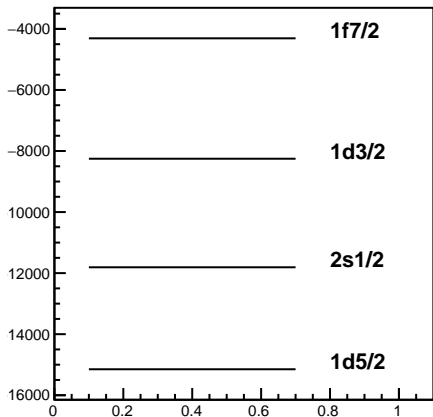
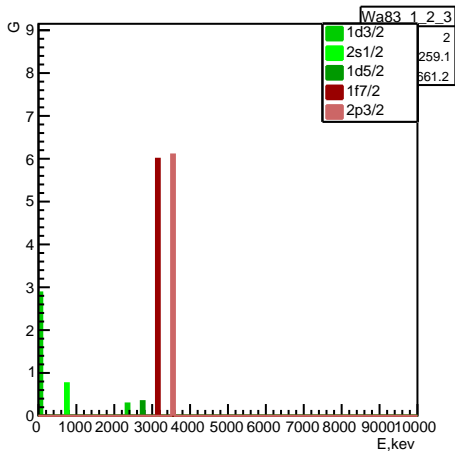
Occupancy



Penalty function components



Wa83



Experiment: Te2004 (8) Wa83 (6)

proton transfer

p separation energy A:13516.9, A+1: 7297.3;

E_F: -10231.1 \pm 1228.92 keV Δ : 4635.9 \pm 3348.33 keV

penalty: 0.321154

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

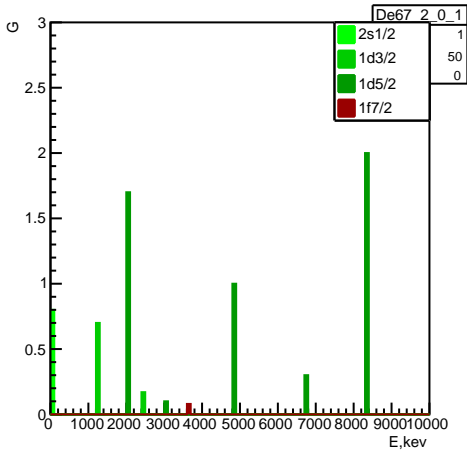
-11808.9 2s1/2 0.7975 1.355

-8252.59 1d3/2 0.2115 1.007

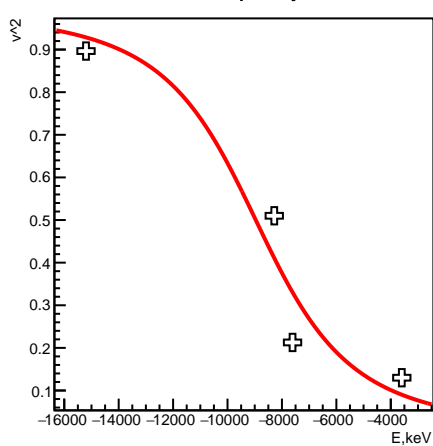
-15149.6 1d5/2 0.697333 0.508667

-4308.55 1f7/2 0.15 0.8

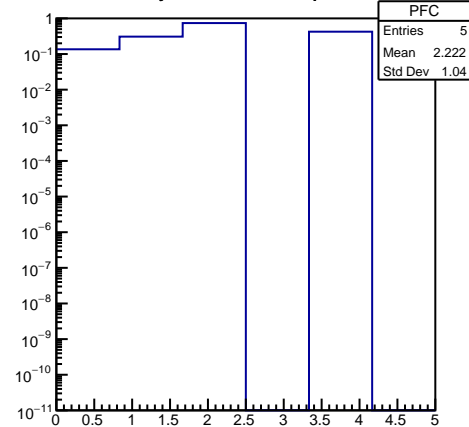
De67



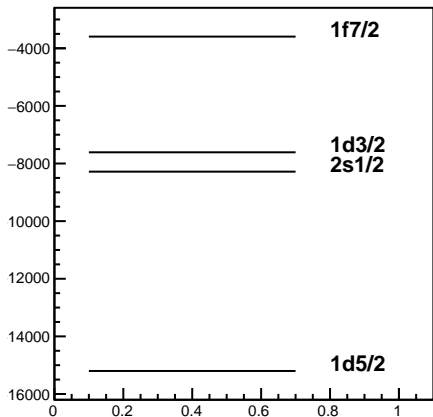
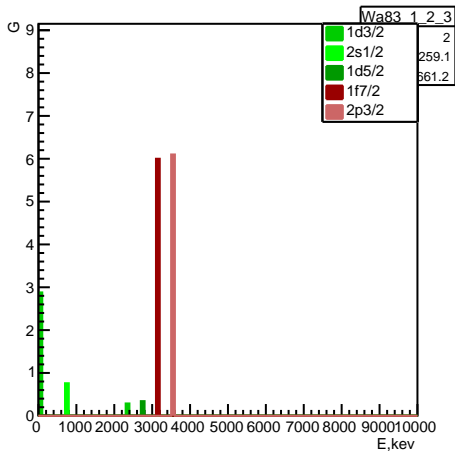
Occupancy



Penalty function components



Wa83



Experiment: De67 (9) Wa83 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -8961.94 \pm 1179.14$ keV $\Delta: -3748.96 \pm 3548.02$ keV

penalty: 0.321246

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

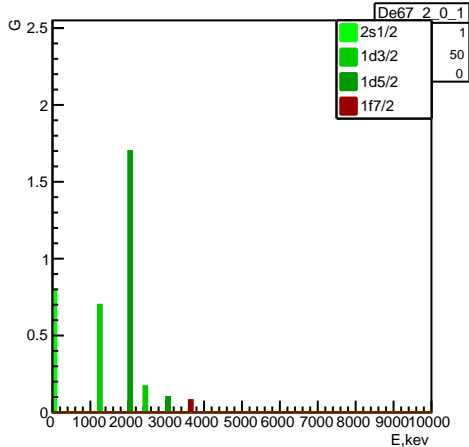
-8282.31 2s1/2 0.51 0.78

-7610.62 1d3/2 0.21275 1.0095

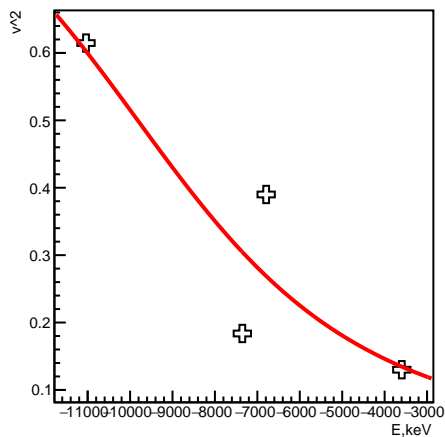
-15201.1 1d5/2 0.8965 0.907

-3594.91 1f7/2 0.13 0.76

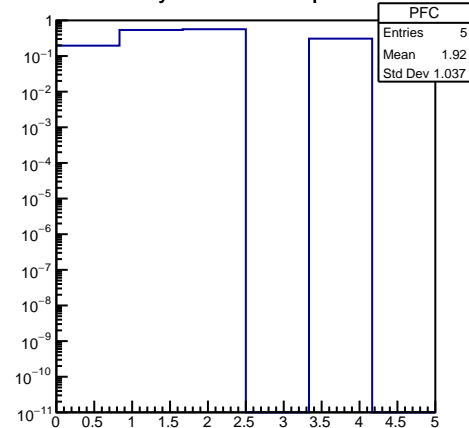
De67



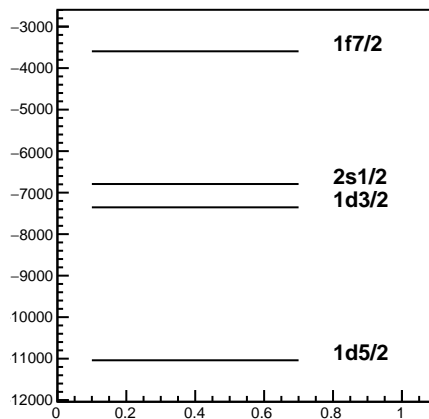
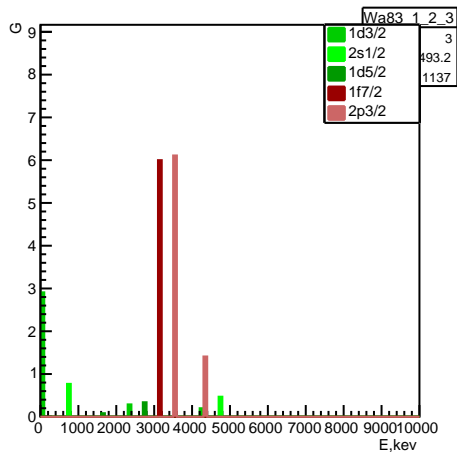
Occupancy



Penalty function components



Wa83



Experiment: De67 (6) Wa83 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -9820.82 \pm 1102.18$ keV $\Delta: 5811.58 \pm 2576.42$ keV

penalty: 0.321337

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

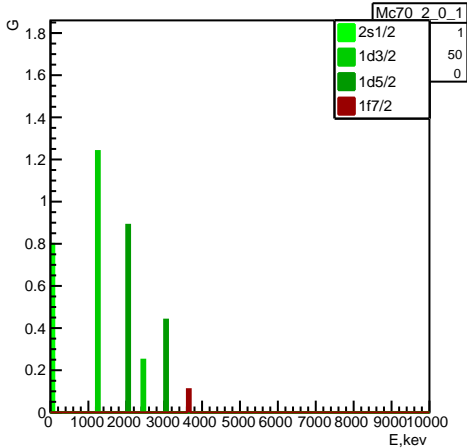
-6792.39 2s1/2 0.39 1.02

-7354.29 1d3/2 0.18375 1.0675

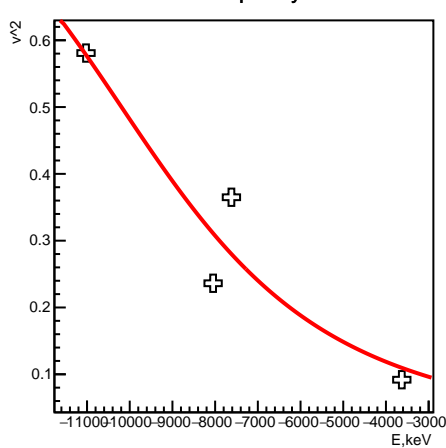
-11039.2 1d5/2 0.614667 0.370667

-3594.91 1f7/2 0.13 0.76

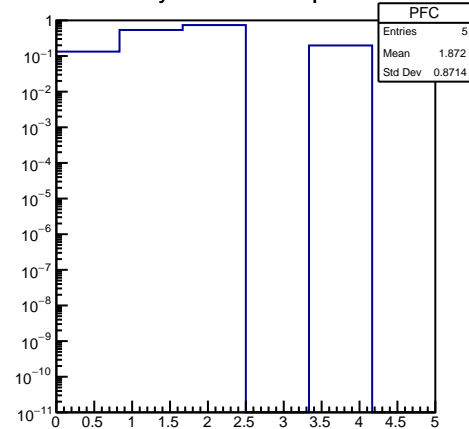
Mc70



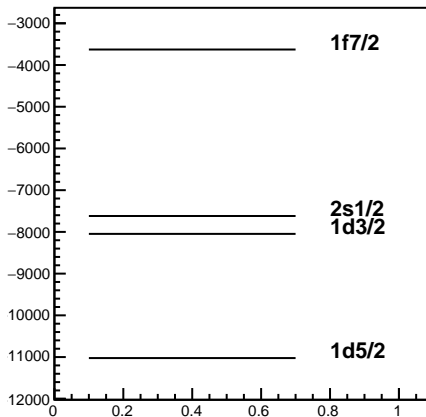
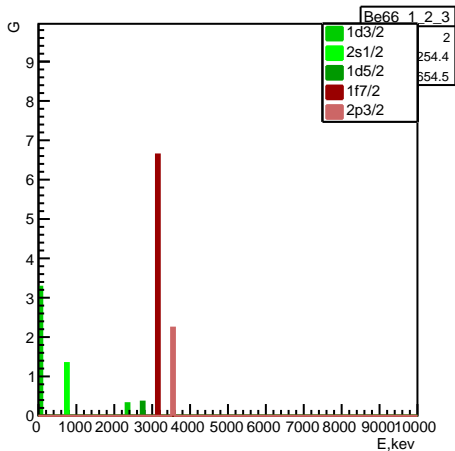
Occupancy



Penalty function components



Be66



Experiment: Mc70 (6) Be66 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -10192.7 \pm 674.275 keV

Δ : 5254.52 \pm 1658.71 keV

penalty: 0.321723

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

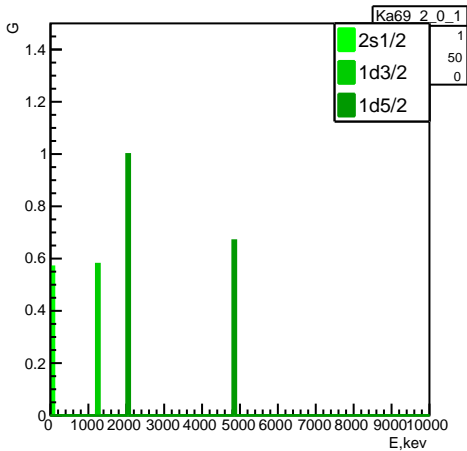
-7618.85 2s1/2 0.365 1.07

-8047.45 1d3/2 0.23625 1.2725

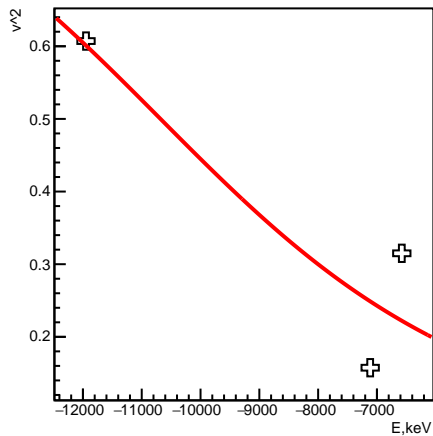
-11024 1d5/2 0.580833 0.281667

-3628.74 1f7/2 0.091875 0.84375

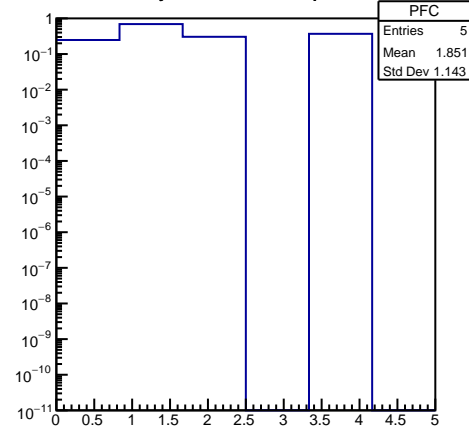
Ka69



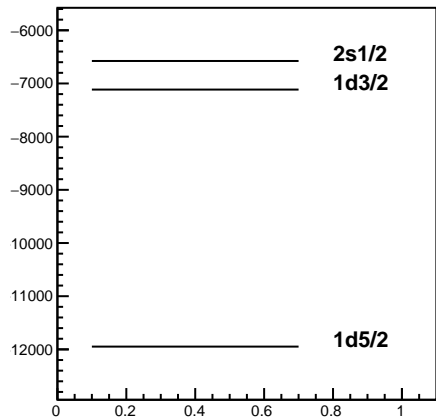
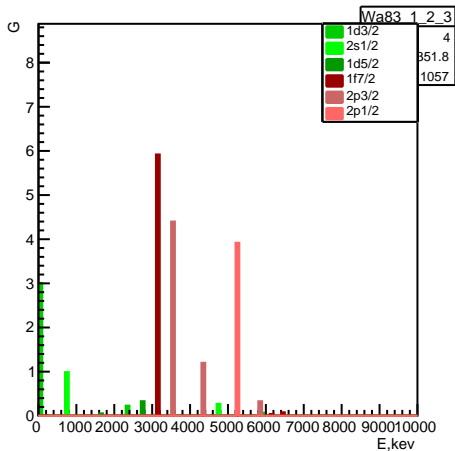
Occupancy



Penalty function components



Wa83



Experiment: Ka69 (4) Wa83 (16)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -10681 \pm 1348.77 \text{ keV}$ $\Delta: 6139.18 \pm 3090.7 \text{ keV}$

penalty: 0.32263

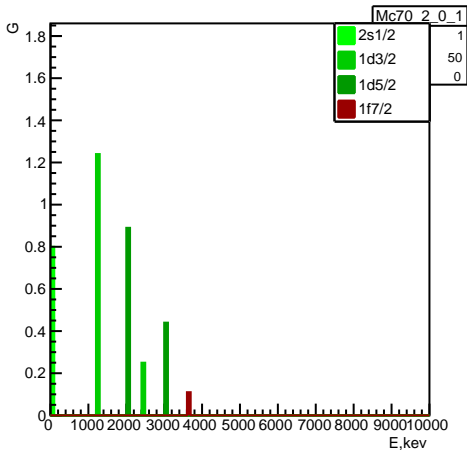
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-6577.18 2s1/2 0.315 0.94

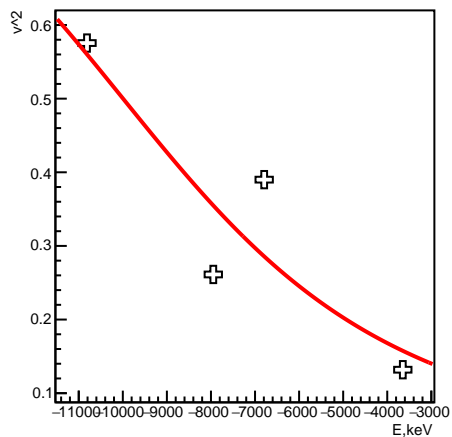
-7114.86 1d3/2 0.1575 0.975

-11947.8 1d5/2 0.607167 0.342333

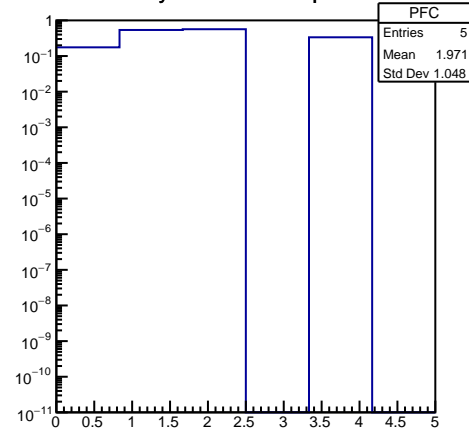
Mc70



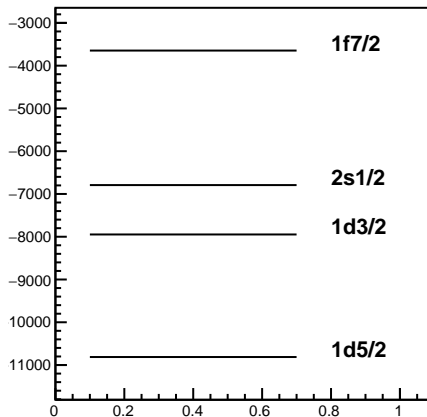
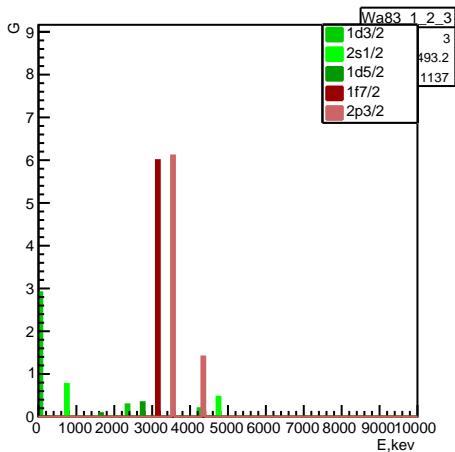
Occupancy



Penalty function components



Wa83



Experiment: Mc70 (6) Wa83 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 E_F : -9994.31 \pm 1053.79 keV Δ : -6751.55 \pm 2810.74 keV

penalty: 0.322911

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

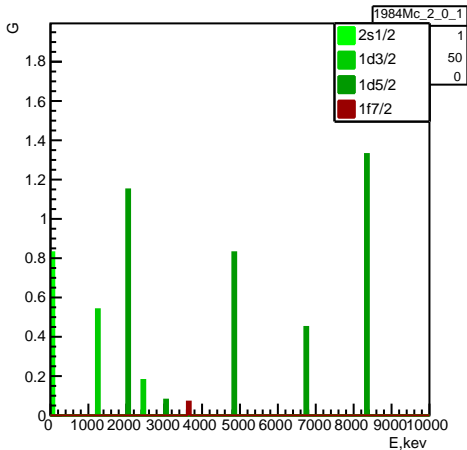
-6792.39 2s1/2 0.39 1.02

-7947.11 1d3/2 0.26125 1.2225

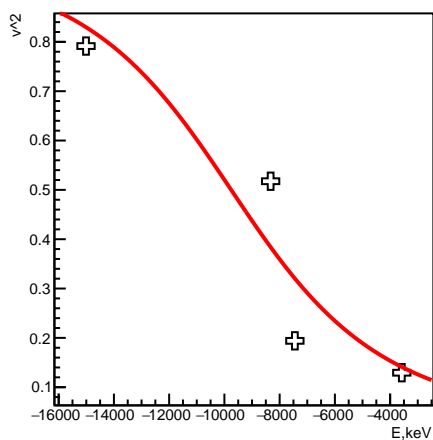
-10812.7 1d5/2 0.5755 0.292333

-3647.14 1f7/2 0.131875 0.76375

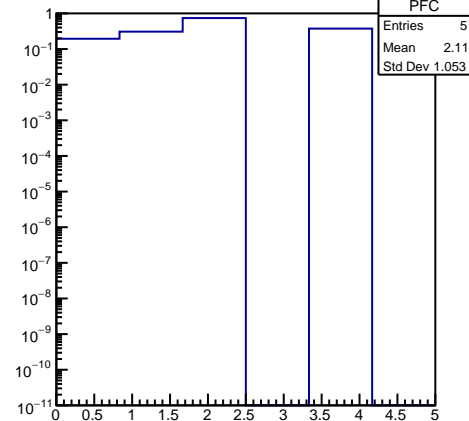
1984Mc



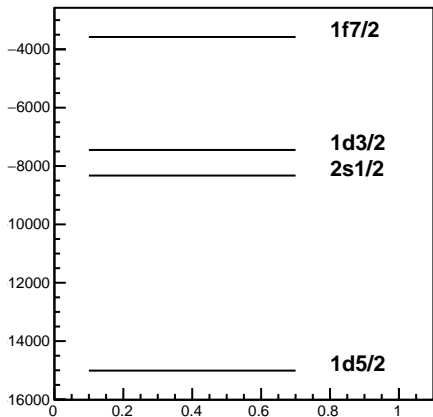
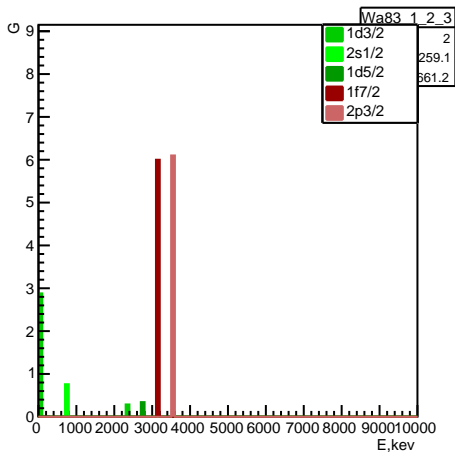
Occupancy



Penalty function components



Wa83



Experiment: 1984Mc (9) Wa83 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 E_F : -9755.02 \pm 1480.03 keV Δ : -5990.67 \pm 3135.36 keV

penalty: 0.323081

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

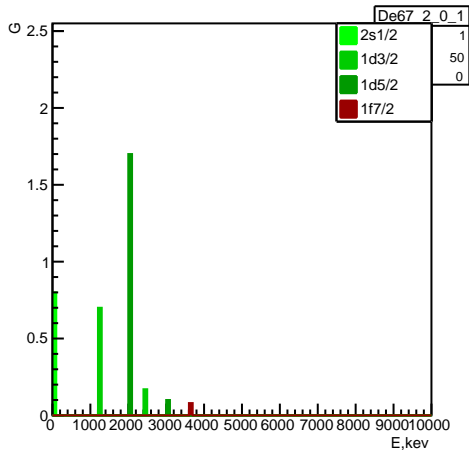
-8326.19 2s1/2 0.5175 0.795

-7448.82 1d3/2 0.194 0.972

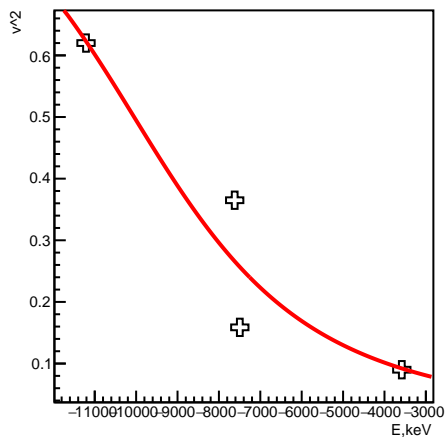
-15010.7 1d5/2 0.7915 0.697

-3577.39 1f7/2 0.129375 0.75875

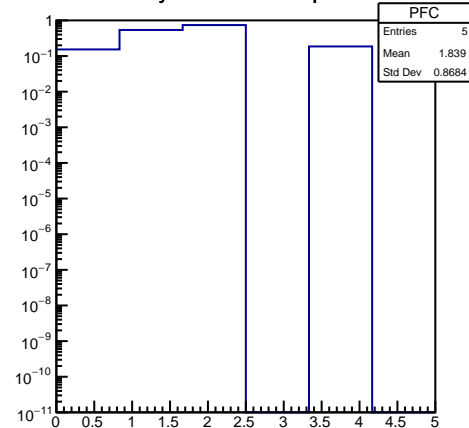
De67



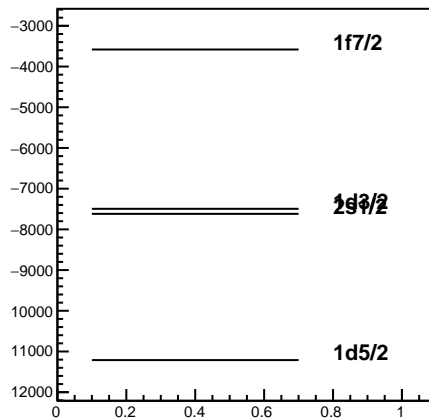
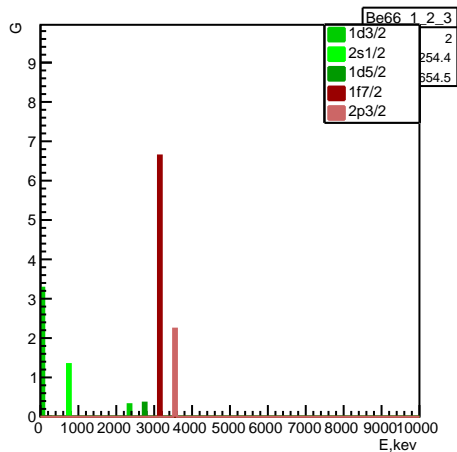
Occupancy



Penalty function components



Be66



Experiment: De67 (6) Be66 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -10048.9 \pm 742.267 \text{ keV}$ $\Delta: 4584.84 \pm 1556.29 \text{ keV}$

penalty: 0.323299

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

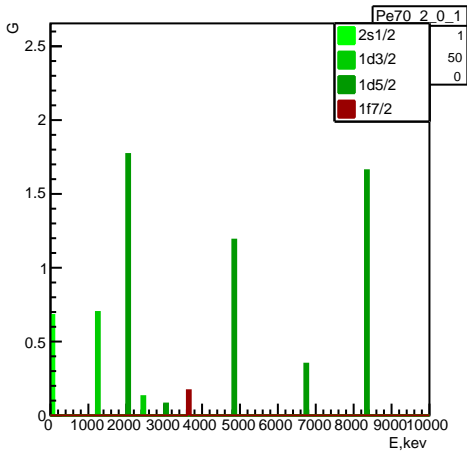
-7618.85 2s1/2 0.365 1.07

-7495.07 1d3/2 0.15875 1.1175

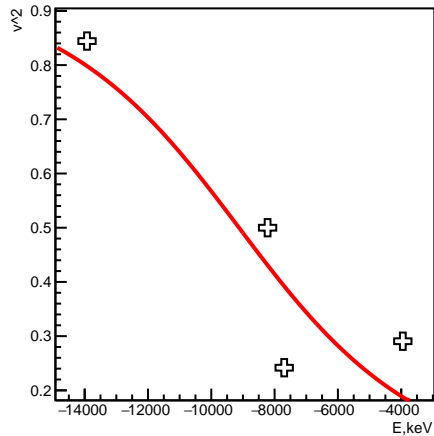
-11211.2 1d5/2 0.62 0.36

-3581.41 1f7/2 0.09 0.84

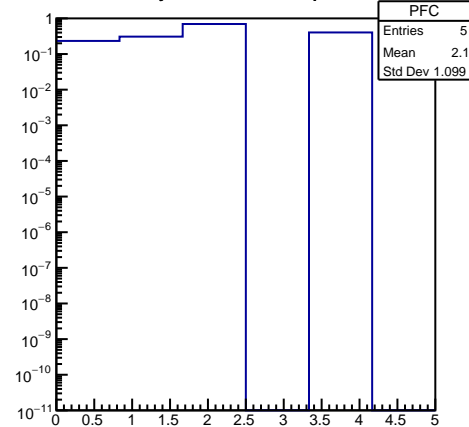
Pe70



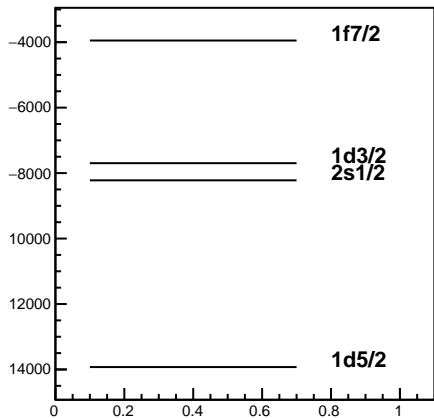
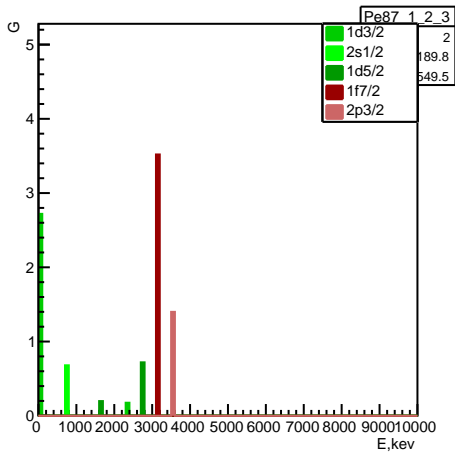
Occupancy



Penalty function components



Pe87



Experiment: Pe70 (9) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -9123.21 \pm 1219.71$ keV $\Delta: 6462.77 \pm 3377.09$ keV

penalty: 0.327923

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

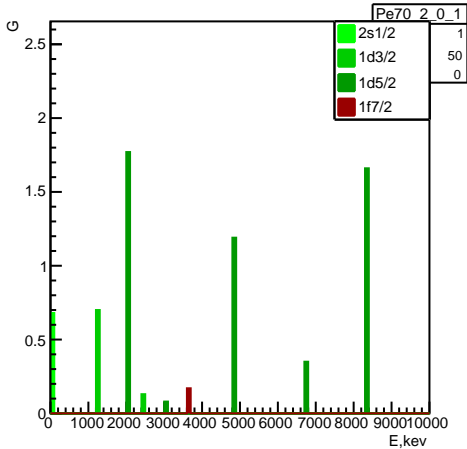
-8221.11 2s1/2 0.5 0.68

-7696.8 1d3/2 0.24175 0.9315

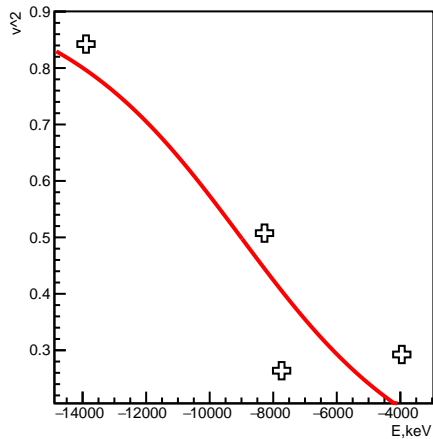
-13926.3 1d5/2 0.844333 0.994667

-3949.65 1f7/2 0.290625 0.46125

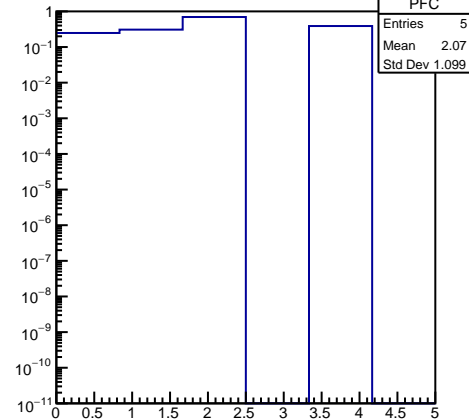
Pe70



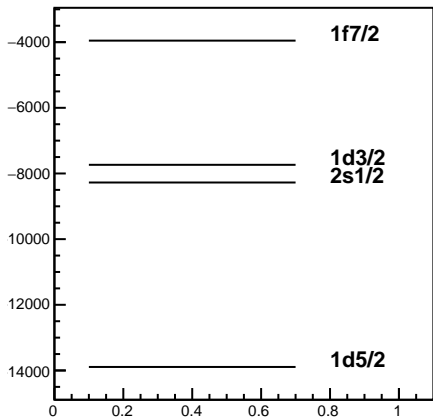
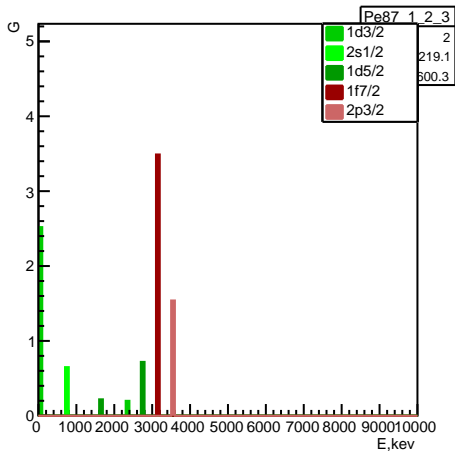
Occupancy



Penalty function components



Pe87



Experiment: Pe70 (9) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -9014.31 \pm 1147.47 \text{ keV}$ $\Delta: 6632 \pm 3253.76 \text{ keV}$

penalty: 0.327933

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

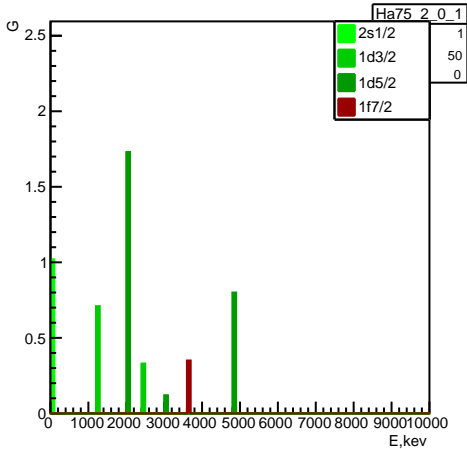
-8274.95 2s1/2 0.5075 0.665

-7736.17 1d3/2 0.26375 0.8875

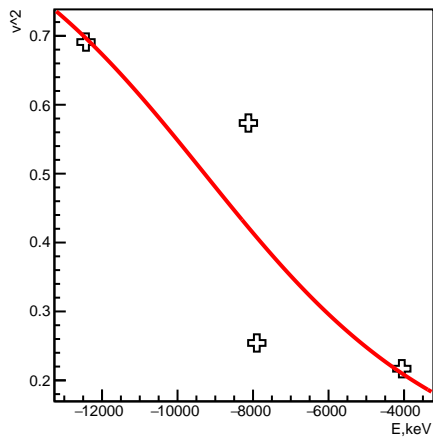
-13893.1 1d5/2 0.8425 0.998333

-3953.72 1f7/2 0.2925 0.4575

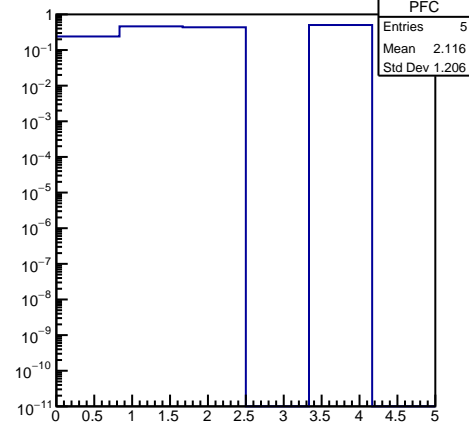
Ha75



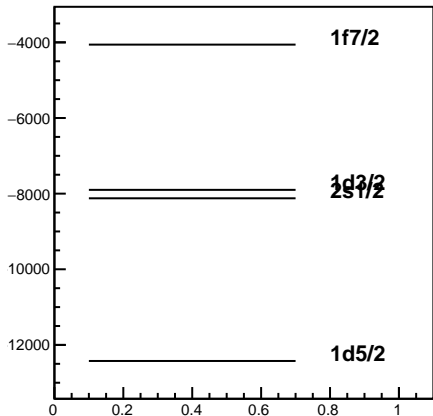
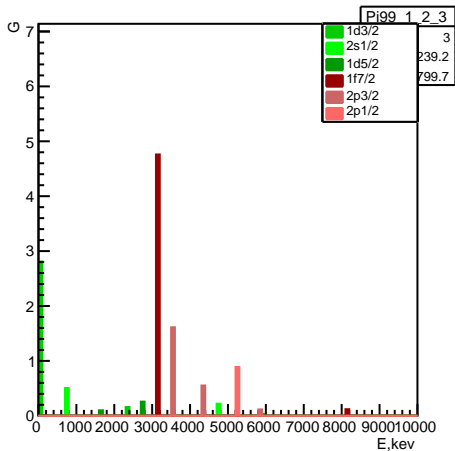
Occupancy



Penalty function components



Pi99



Experiment: Ha75 (7) Pi99 (13)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -9284.66 \pm 1419.43$ keV $\Delta: 7348.25 \pm 4217.09$ keV

penalty: 0.327964

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

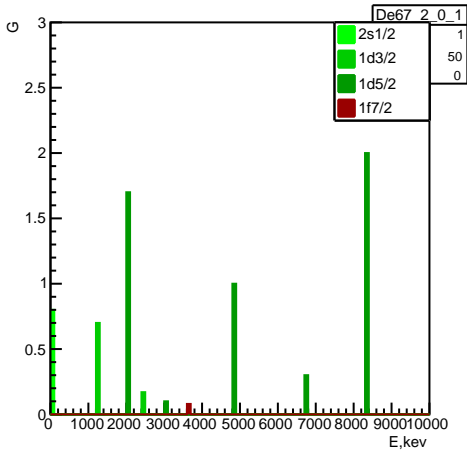
-8123.17 2s1/2 0.5735 0.873

-7899.87 1d3/2 0.25425 1.0115

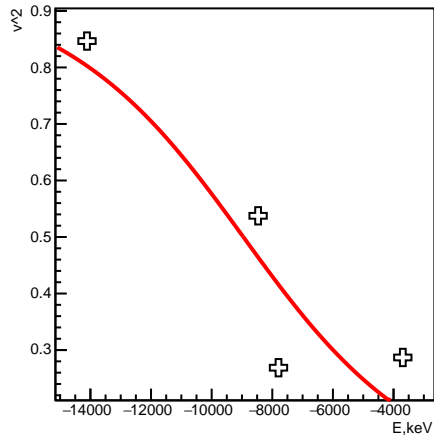
-12424.5 1d5/2 0.691 0.501333

-4059.52 1f7/2 0.216875 0.65375

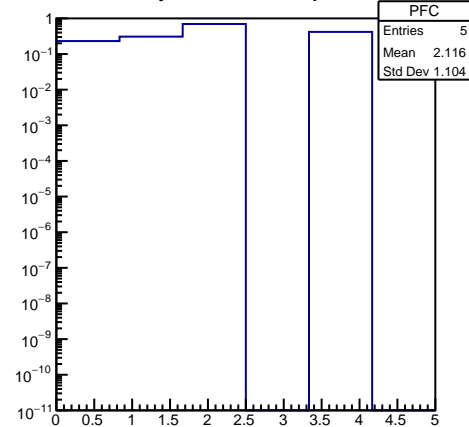
De67



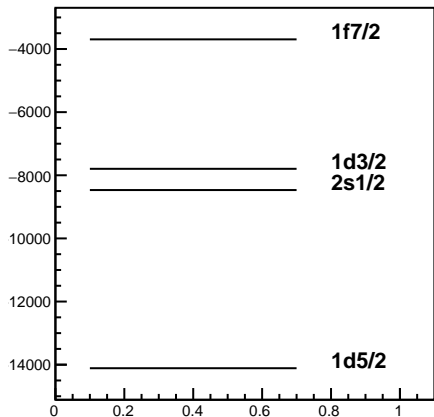
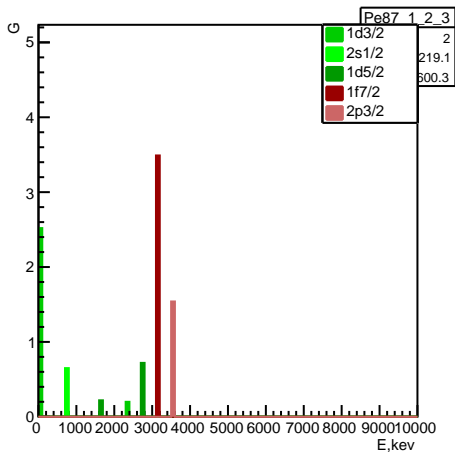
Occupancy



Penalty function components



Pe87



Experiment: De67 (9) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -8953.63 \pm 1198.16 keV

Δ : 6780.4 \pm 3499.79 keV

penalty: 0.330452

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

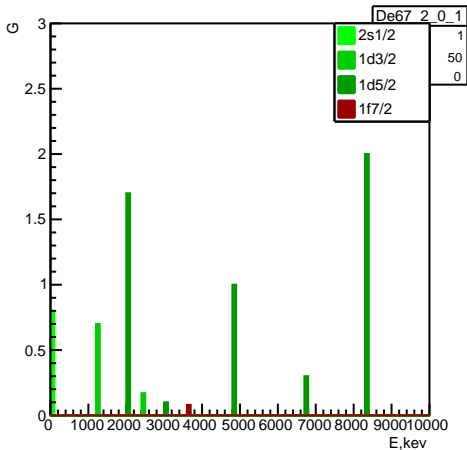
-8468.01 2s1/2 0.5375 0.725

-7795.2 1d3/2 0.26875 0.8975

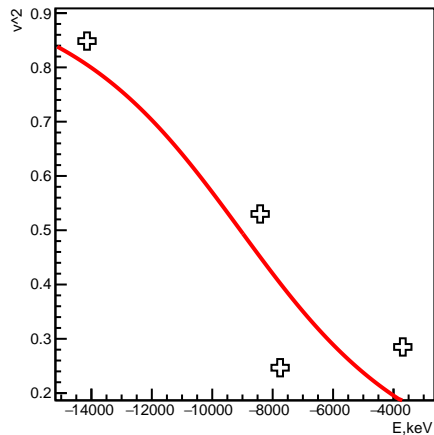
-14112 1d5/2 0.846667 1.00667

-3694.62 1f7/2 0.286875 0.44625

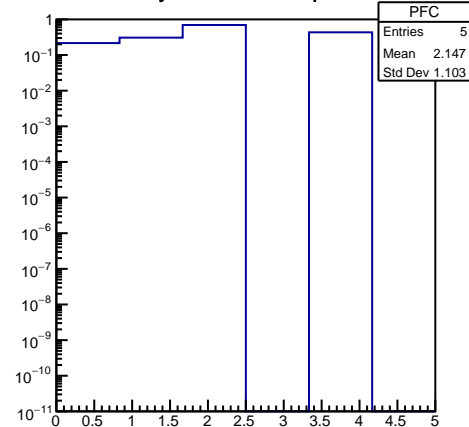
De67



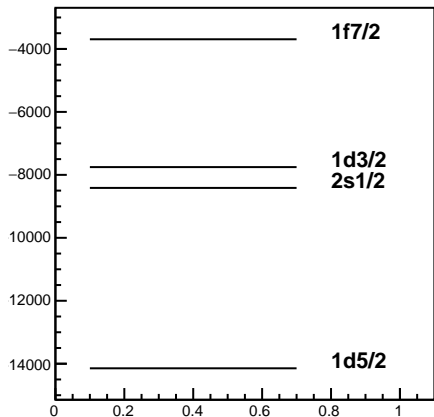
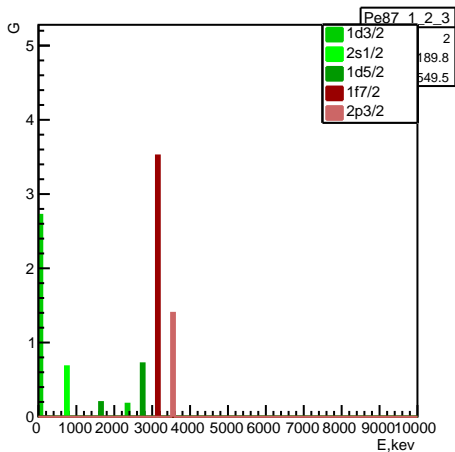
Occupancy



Penalty function components



Pe87



Experiment: De67 (9) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -9067.75 \pm 1264.72$ keV $\Delta: 6600.83 \pm 3632.52$ keV

penalty: 0.330667

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

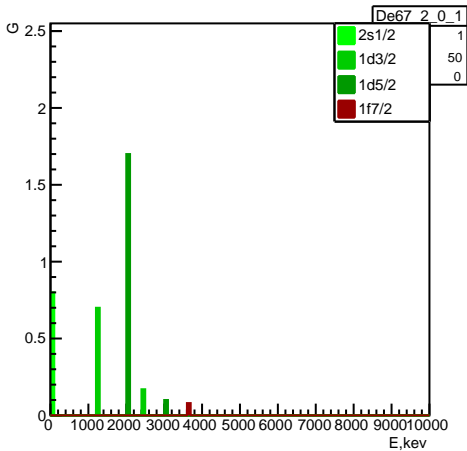
-8414.63 2s1/2 0.53 0.74

-7753.48 1d3/2 0.24675 0.9415

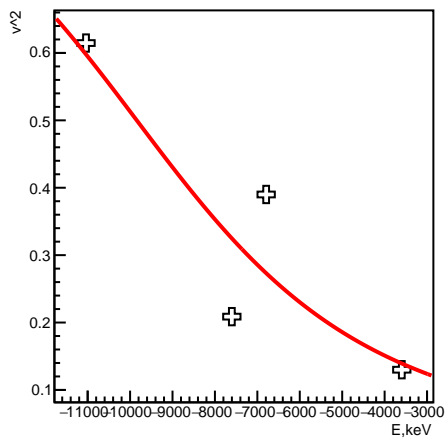
-14145.7 1d5/2 0.8485 1.003

-3692.61 1f7/2 0.285 0.45

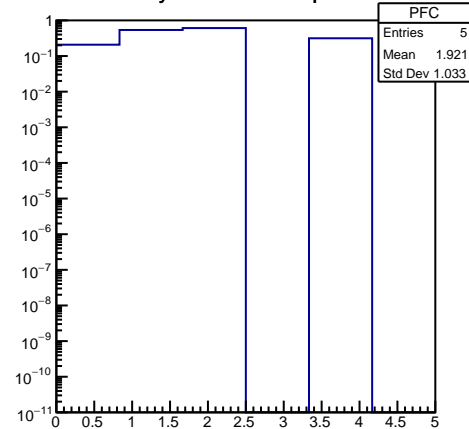
De67



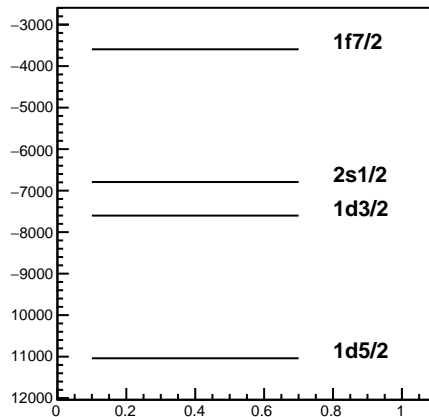
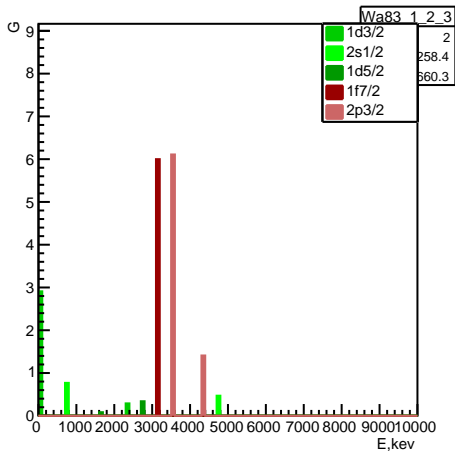
Occupancy



Penalty function components



Wa83



Experiment: De67 (6) Wa83 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9842.72 \pm 1075.05 keV

Δ : 5994.7 \pm 2636.2 keV

penalty: 0.33396

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

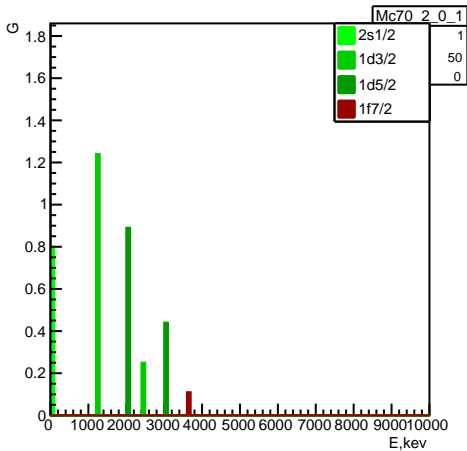
-6792.39 2s1/2 0.39 1.02

-7601.43 1d3/2 0.20875 1.0175

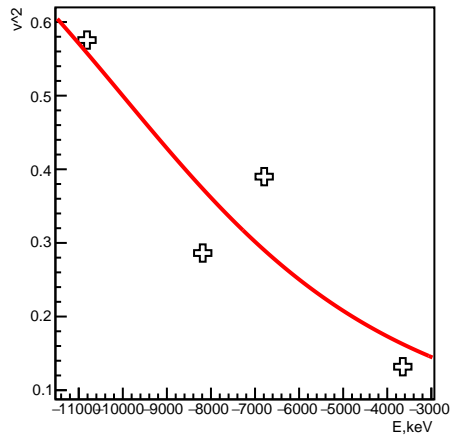
-11039.2 1d5/2 0.614667 0.370667

-3594.91 1f7/2 0.13 0.76

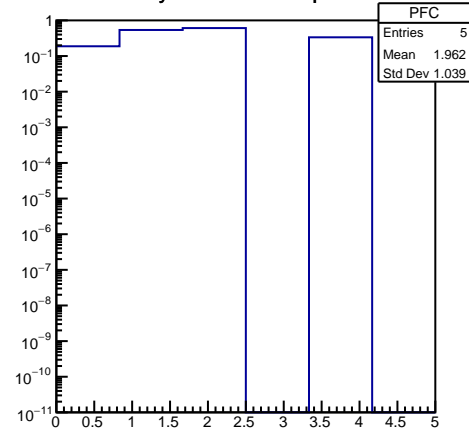
Mc70



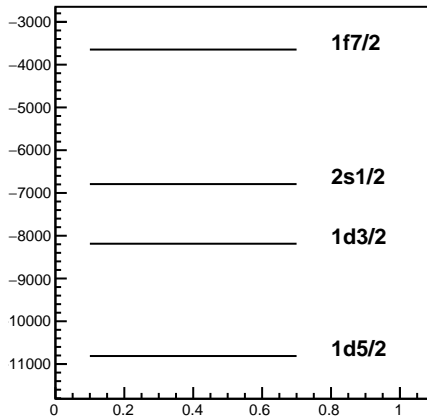
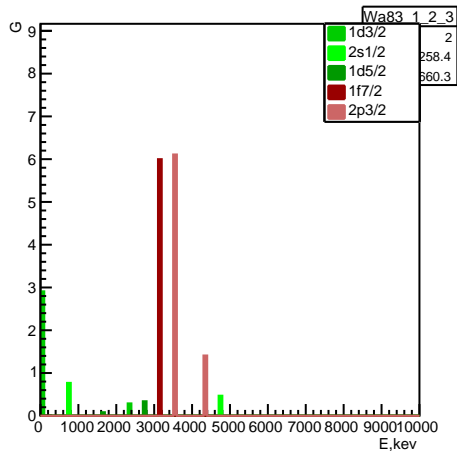
Occupancy



Penalty function components



Wa83



Experiment: Mc70 (6) Wa83 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -10003.7 ± 1018.34 keV

Δ: -6949.79 ± 2808.38 keV

penalty: 0.33405

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

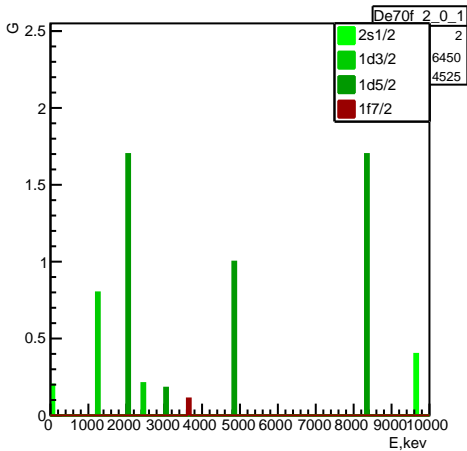
-6792.39 2s1/2 0.39 1.02

-8186.86 1d3/2 0.28625 1.1725

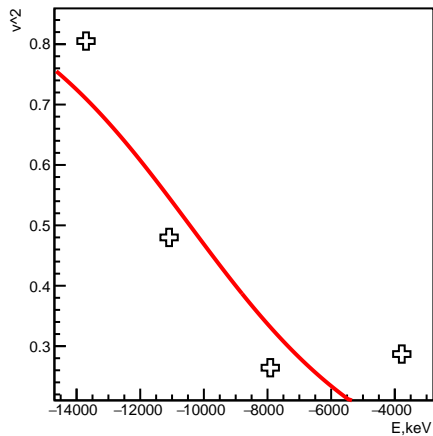
-10812.7 1d5/2 0.5755 0.292333

-3647.14 1f7/2 0.131875 0.76375

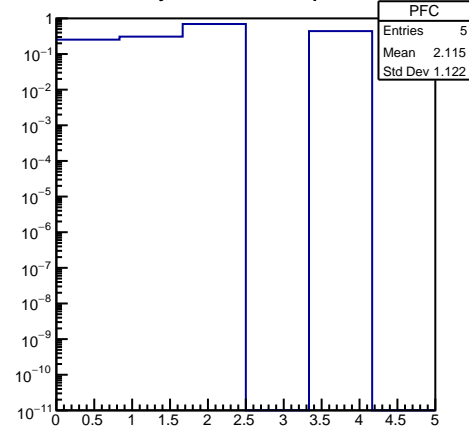
De70f



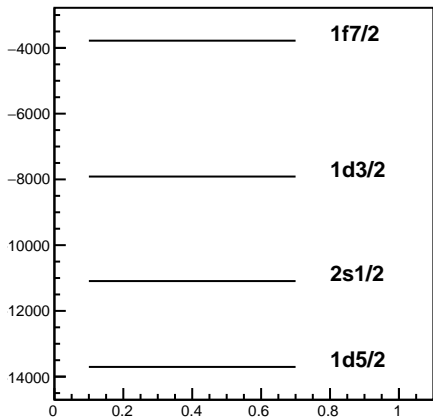
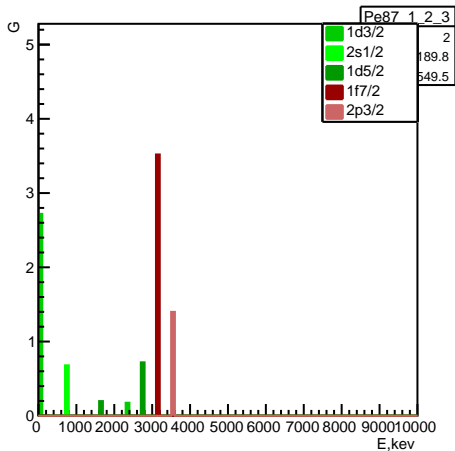
Occupancy



Penalty function components



Pe87



Experiment: De70f (9) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -10441.7 \pm 1205.45$ keV $\Delta: 7068.07 \pm 3684.92$ keV

penalty: 0.339314

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

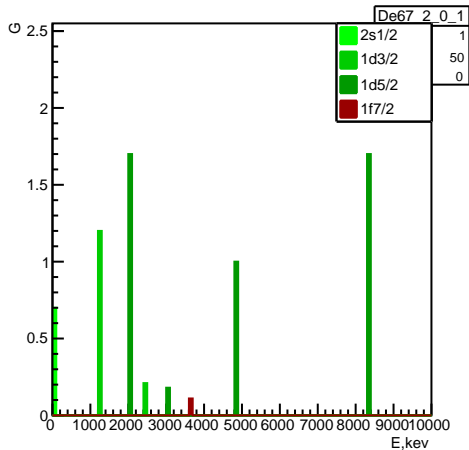
-11092.9 2s1/2 0.48 0.64

-7913.23 1d3/2 0.26425 0.9765

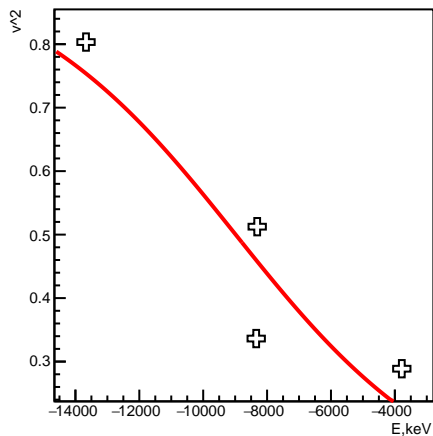
-13704.1 1d5/2 0.805167 0.916333

-3779.71 1f7/2 0.286875 0.45375

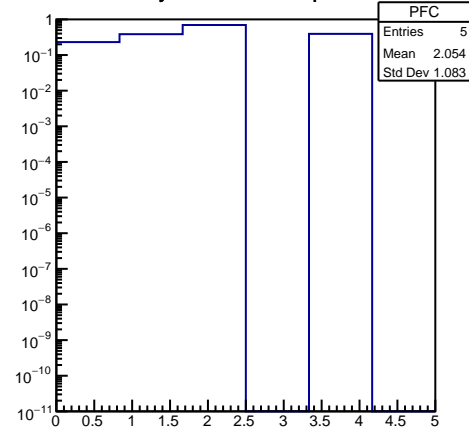
De67



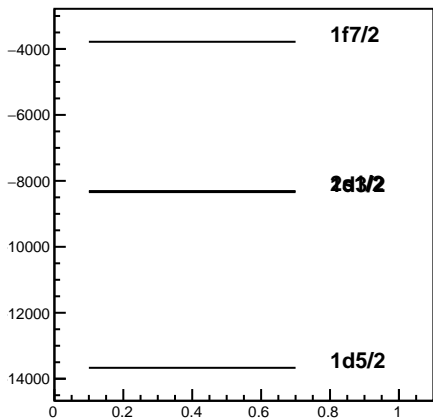
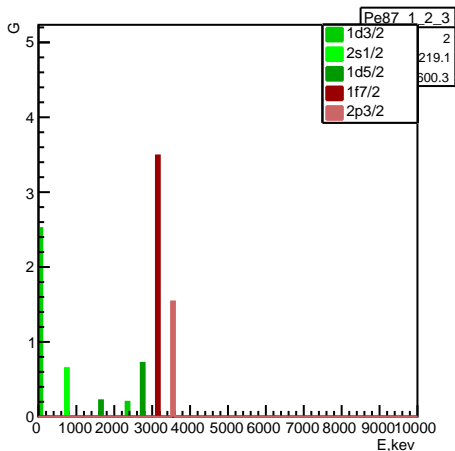
Occupancy



Penalty function components



Pe87



Experiment: De67 (8) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 E_F : -8983.63 \pm 1069.03 keV Δ : 7954.84 \pm 3288.22 keV

penalty: 0.340682

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

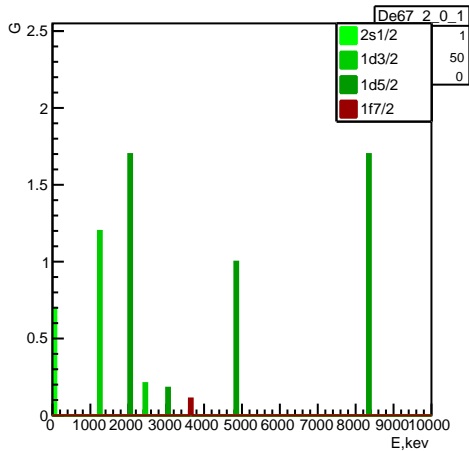
-8309.51 2s1/2 0.5125 0.675

-8340.62 1d3/2 0.33625 1.0325

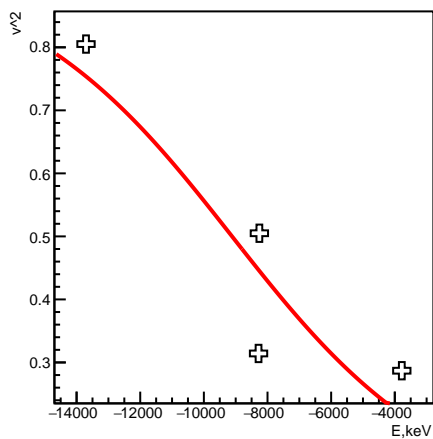
-13669 1d5/2 0.803333 0.92

-3782.43 1f7/2 0.28875 0.45

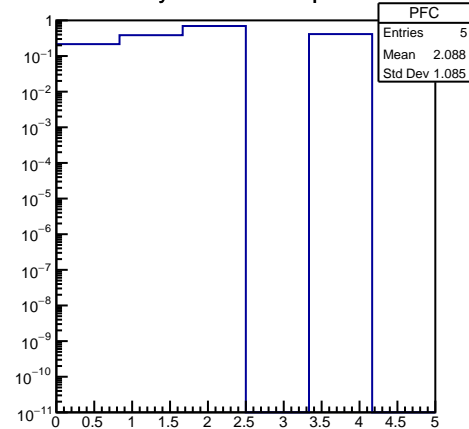
De67



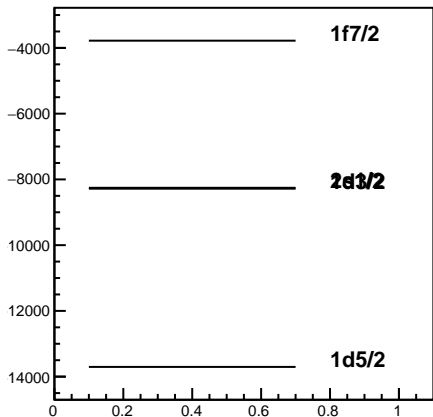
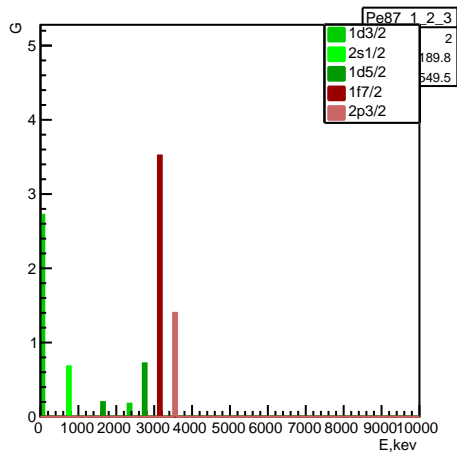
Occupancy



Penalty function components



Pe87



Experiment: De67 (8) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9114.36 \pm 1141.74 keV

Δ : 7787.49 \pm 3458.83 keV

penalty: 0.341801

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

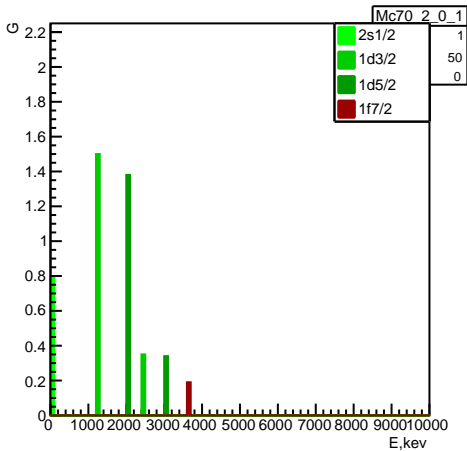
-8255.7 2s1/2 0.505 0.69

-8281.84 1d3/2 0.31425 1.0765

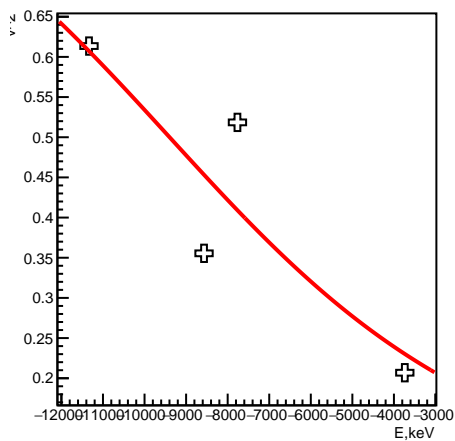
-13704.1 1d5/2 0.805167 0.916333

-3779.71 1f7/2 0.286875 0.45375

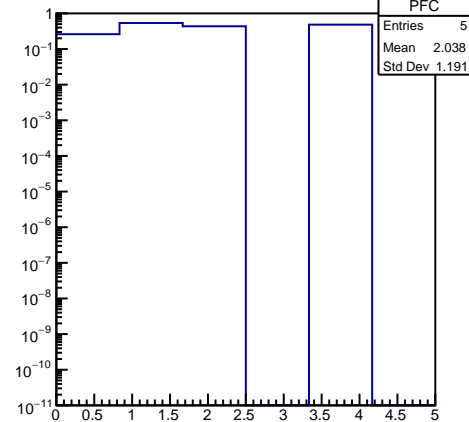
Mc70



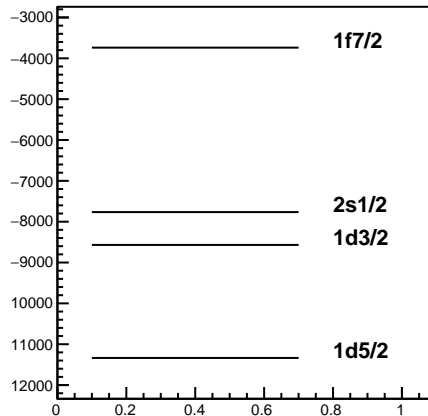
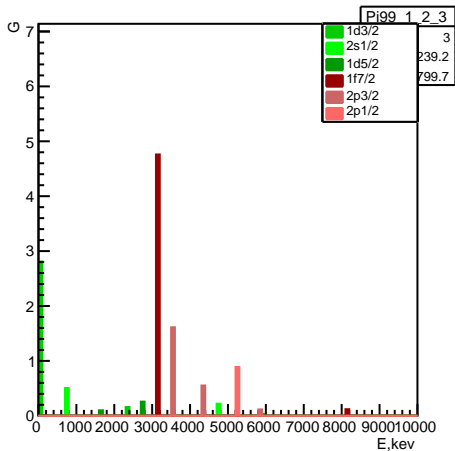
Occupancy



Penalty function components



Pi99



Experiment: Mc70 (6) Pi99 (13)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9397.32 \pm 1128 keV

Δ : 8830.43 \pm 4047.16 keV

penalty: 0.343417

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

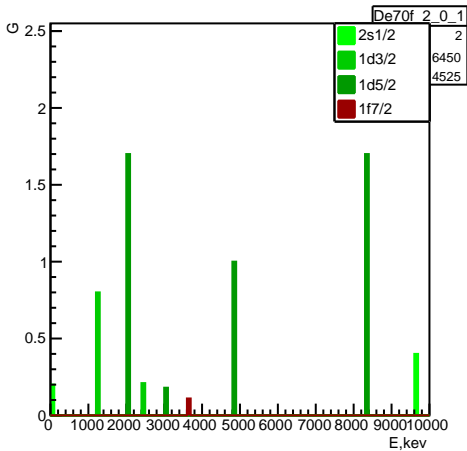
-7764.95 2s1/2 0.5185 0.763

-8568.72 1d3/2 0.3555 1.214

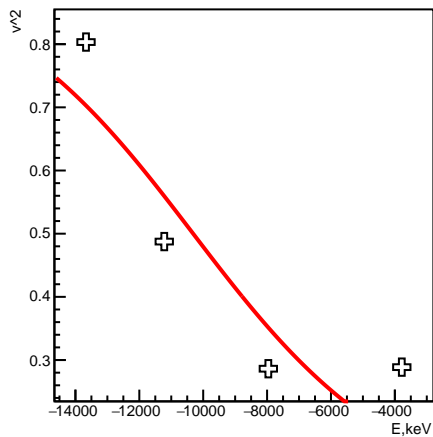
-11336.1 1d5/2 0.6135 0.346333

-3738.52 1f7/2 0.206875 0.63375

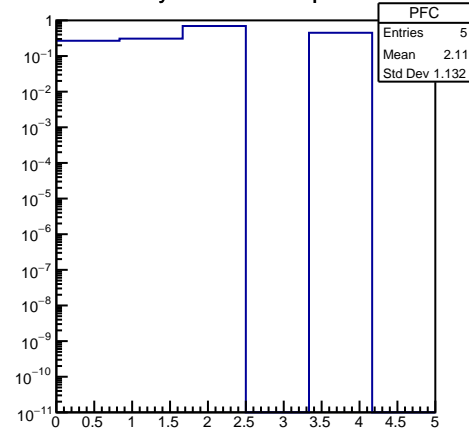
De70f



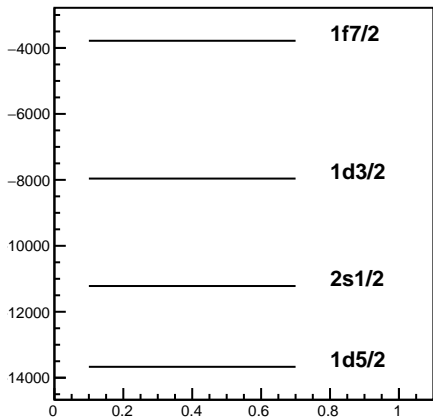
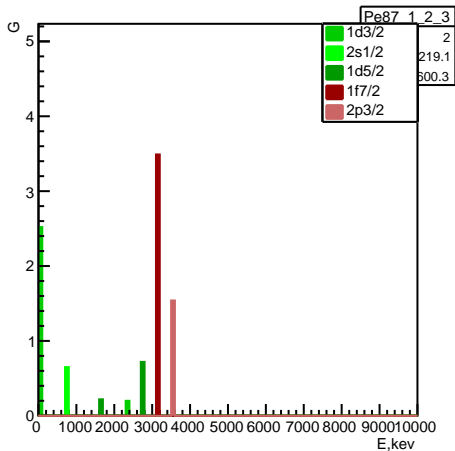
Occupancy



Penalty function components



Pe87



Experiment: De70f (9) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -10314.1 \pm 1231.3 keV Δ : 7558.03 \pm 3763.44 keV

penalty: 0.344143

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

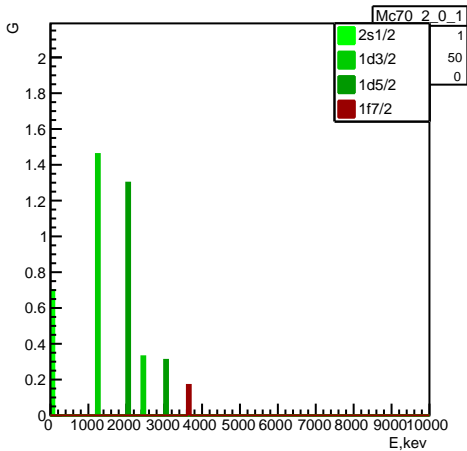
-11219.1 2s1/2 0.4875 0.625

-7960.92 1d3/2 0.28625 0.9325

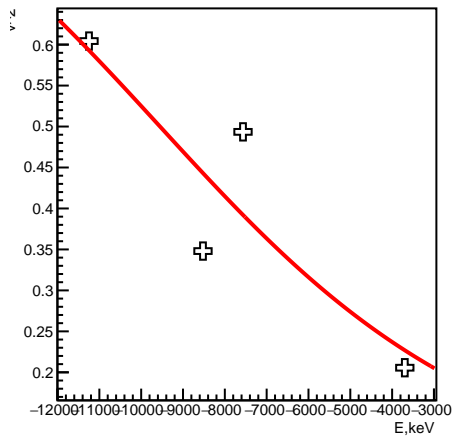
-13669 1d5/2 0.803333 0.92

-3782.43 1f7/2 0.28875 0.45

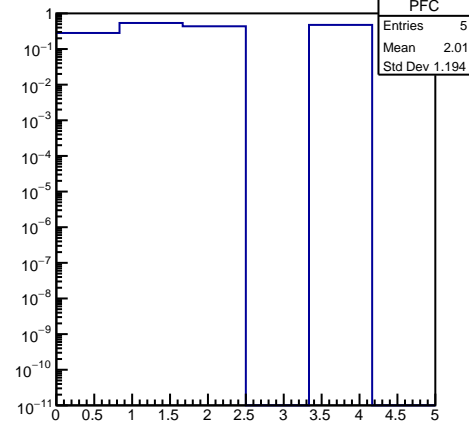
Mc70



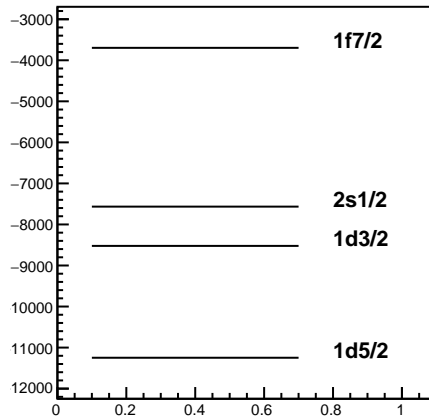
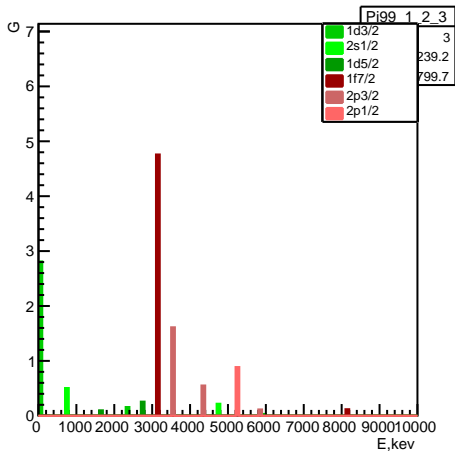
Occupancy



Penalty function components



Pi99



Experiment: Mc70 (6) Pi99 (13)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9549.94 \pm 1123.52 keV

Δ : 8975.82 \pm 3980.93 keV

penalty: 0.346127

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

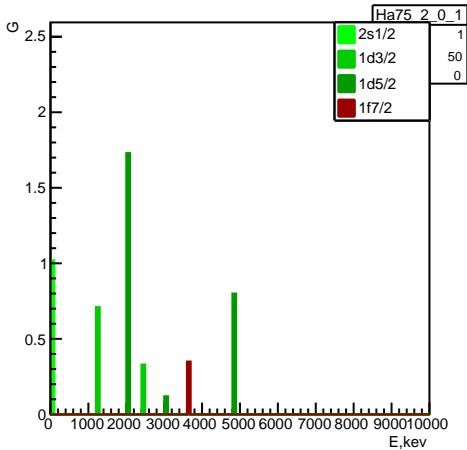
-7565.59 2s1/2 0.4935 0.713

-8522.48 1d3/2 0.348 1.199

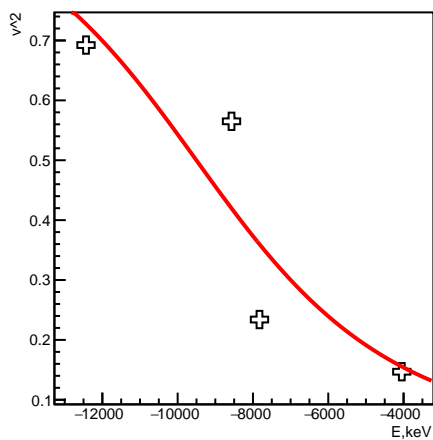
-11247.6 1d5/2 0.604333 0.328

-3696.96 1f7/2 0.205625 0.63125

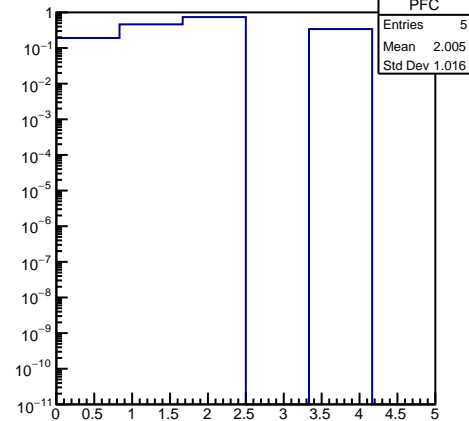
Ha75



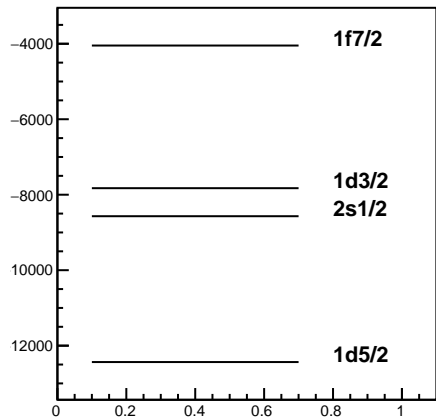
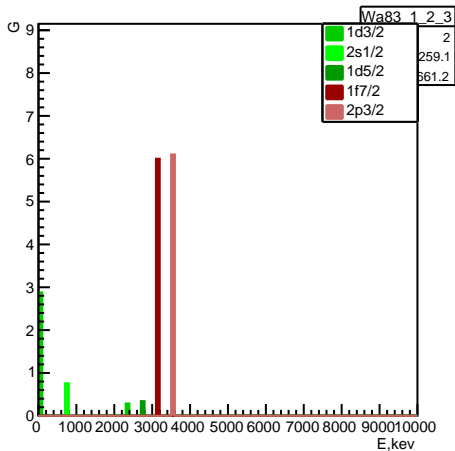
Occupancy



Penalty function components



Wa83



Experiment: Ha75 (7) Wa83 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9502.44 ± 1112.19 keV

Δ: -5737.46 ± 2854.31 keV

penalty: 0.346557

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

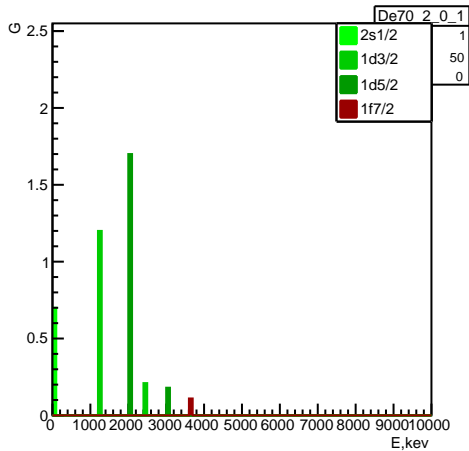
-8569.74 2s1/2 0.565 0.89

-7826.97 1d3/2 0.234 1.052

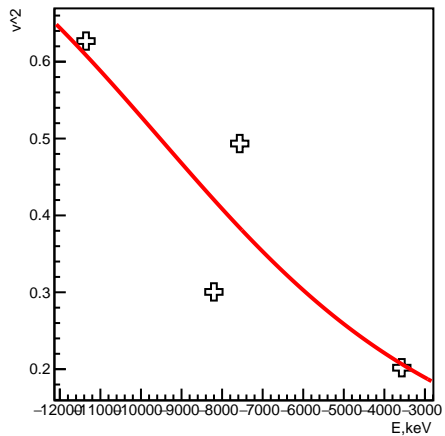
-12434.1 1d5/2 0.692333 0.498667

-4047.17 1f7/2 0.146875 0.79375

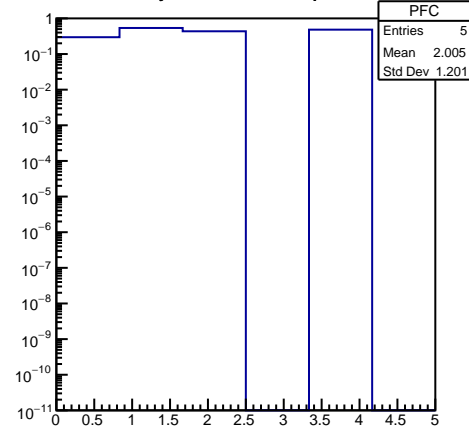
De70



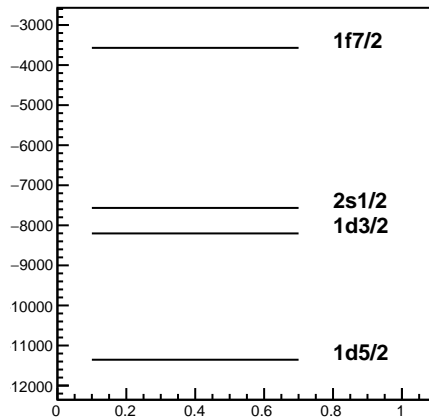
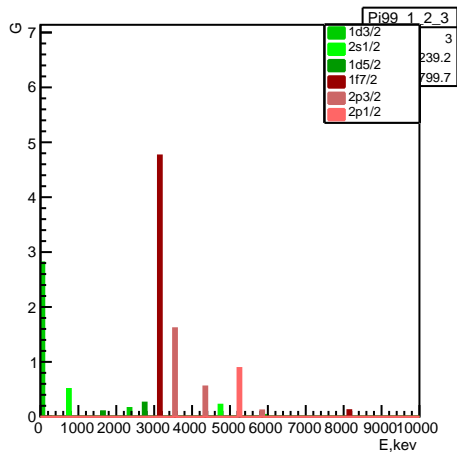
Occupancy



Penalty function components



Pi99



Experiment: De70 (6) Pi99 (13)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -9528.42 \pm 1213.02$ keV $\Delta: 8221.08 \pm 4047.03$ keV

penalty: 0.350581

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

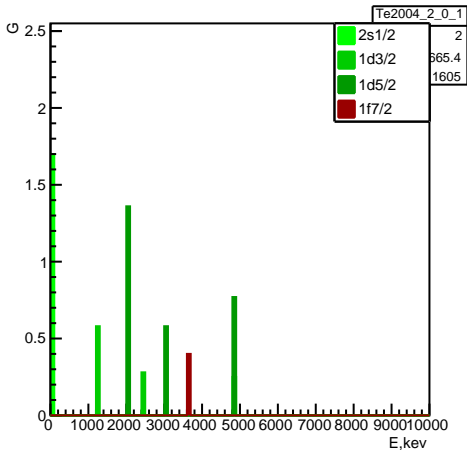
-7565.59 2s1/2 0.4935 0.713

-8202.13 1d3/2 0.3005 1.104

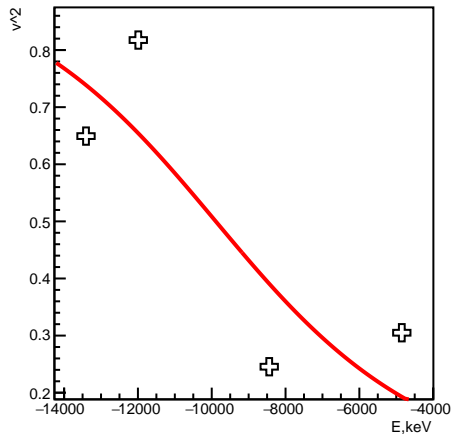
-11354.7 1d5/2 0.626833 0.373

-3570.29 1f7/2 0.201875 0.62375

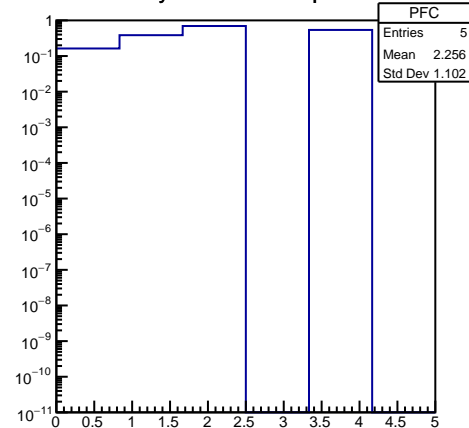
Te2004



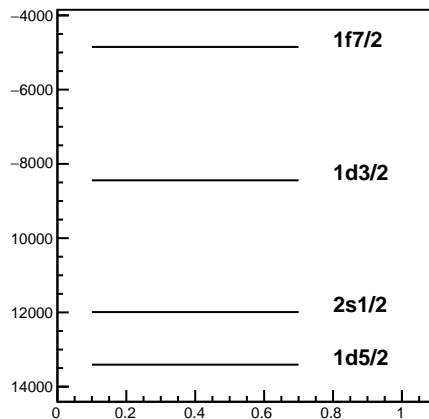
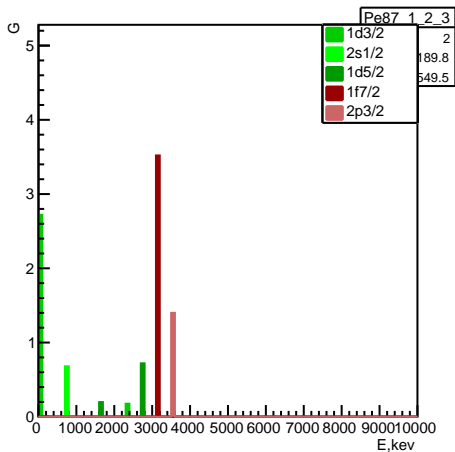
Occupancy



Penalty function components



Pe87



Experiment: Te2004 (8) Pe87 (7)

proton transfer

p separation energy A:13516.9, A+1: 7297.3:

 E_F : -9890.8 \pm 1582.49 keV Δ : -6474.99 \pm 4520.01 keV

penalty: 0.356532

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

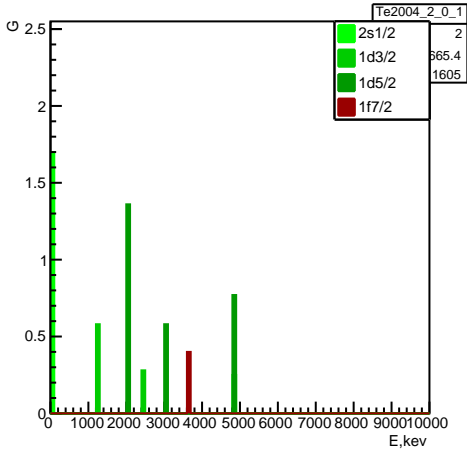
-11990.7 2s1/2 0.8175 1.315

-8442.33 1d3/2 0.2455 0.939

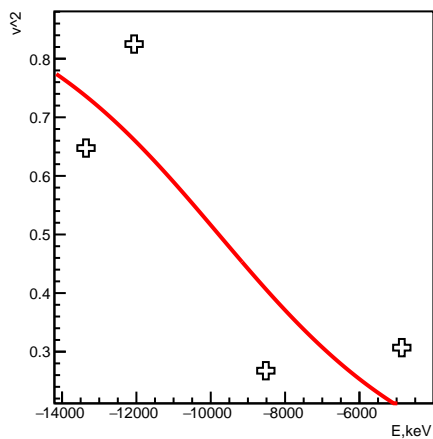
-13407.1 1d5/2 0.649333 0.604667

-4849.76 1f7/2 0.305 0.49

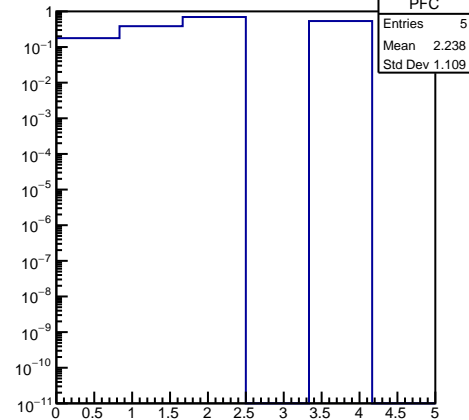
Te2004



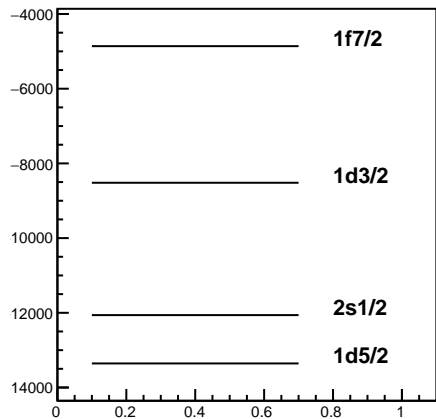
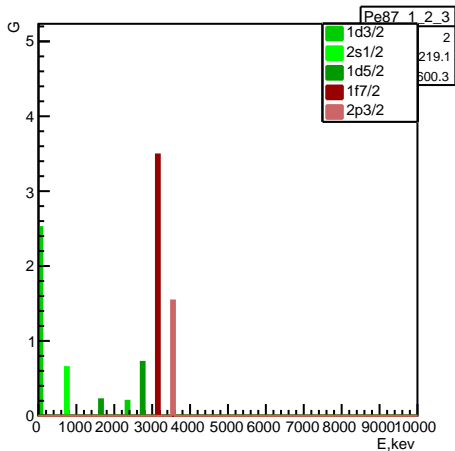
Occupancy



Penalty function components



Pe87



Experiment: Te2004 (8) Pe87 (7)

proton transfer

p separation energy A:13516.9, A+1: 7297.3;

 $E_F: -9784.93 \pm 1584.22$ keV $\Delta: 6672.81 \pm 4489.73$ keV

penalty: 0.358763

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

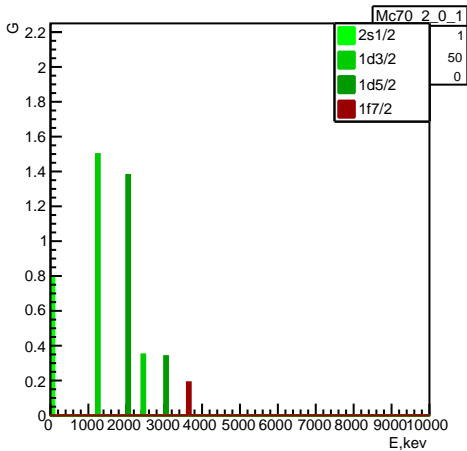
-12061.7 2s1/2 0.825 1.3

-8518.03 1d3/2 0.2675 0.895

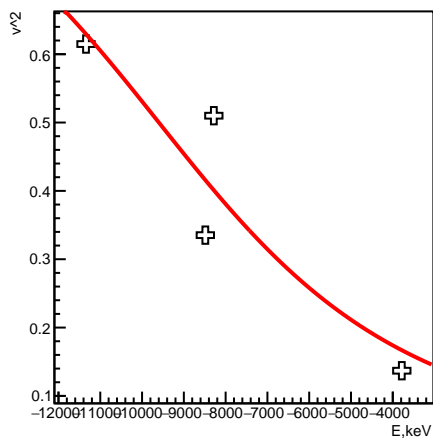
-13355.8 1d5/2 0.6475 0.608333

-4860.53 1f7/2 0.306875 0.48625

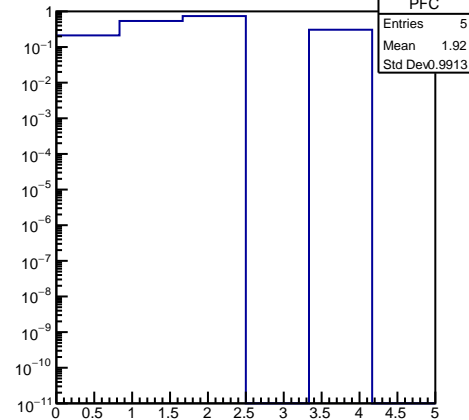
Mc70



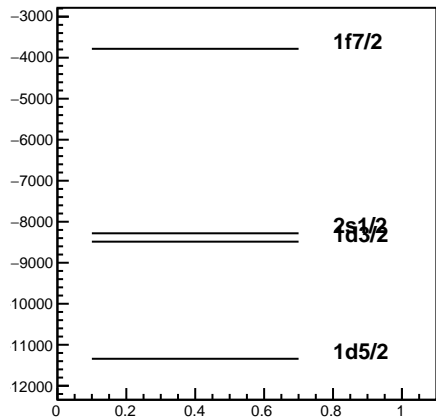
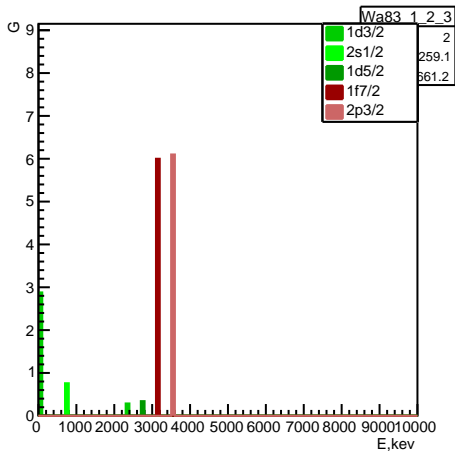
Occupancy



Penalty function components



Wa83



Experiment: Mc70 (6) Wa83 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9597.49 \pm 821.221 keV

Δ : 6506.92 \pm 2560.8 keV

penalty: 0.359059

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

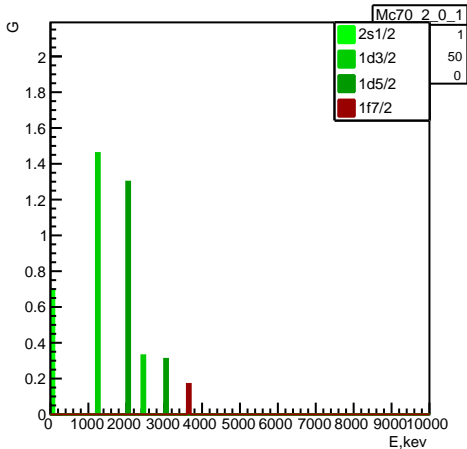
-8282.31 2s1/2 0.51 0.78

-8486 1d3/2 0.33525 1.2545

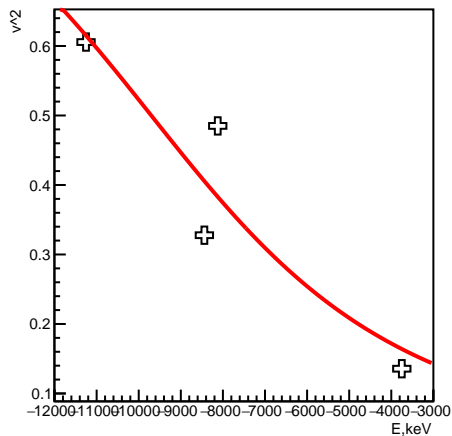
-11341.6 1d5/2 0.614833 0.343667

-3783.93 1f7/2 0.136875 0.77375

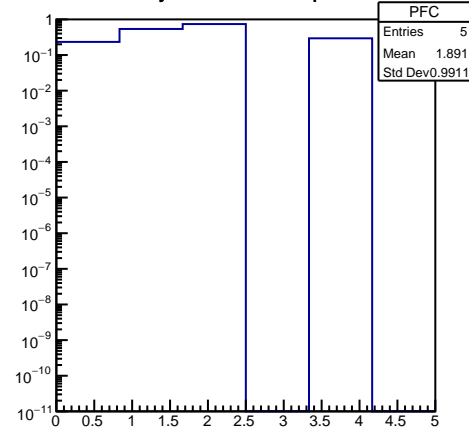
Mc70



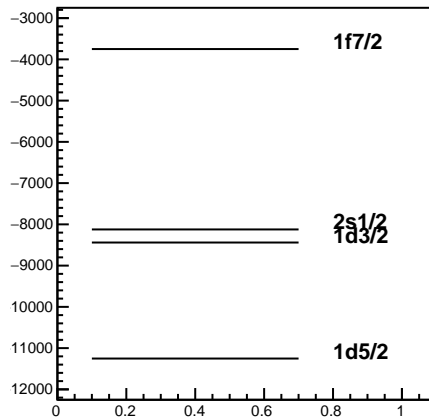
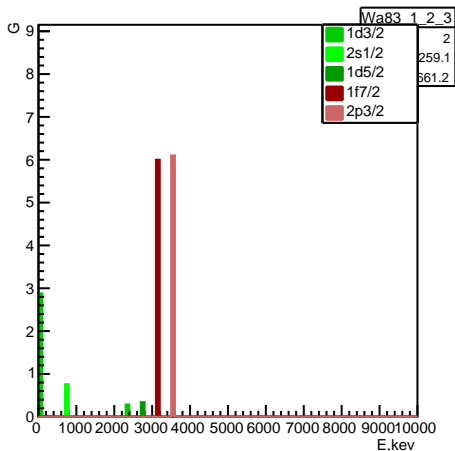
Occupancy



Penalty function components



Wa83



Experiment: Mc70 (6) Wa83 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 E_F : -9702.28 \pm 801.57 keV Δ : 6558.68 \pm 2465.87 keV

penalty: 0.361085

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

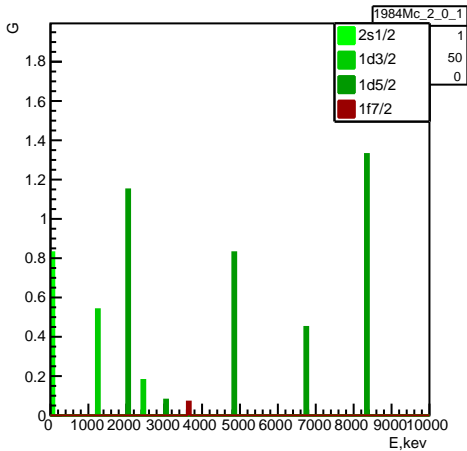
-8123.02 2s1/2 0.485 0.73

-8440.26 1d3/2 0.32775 1.2395

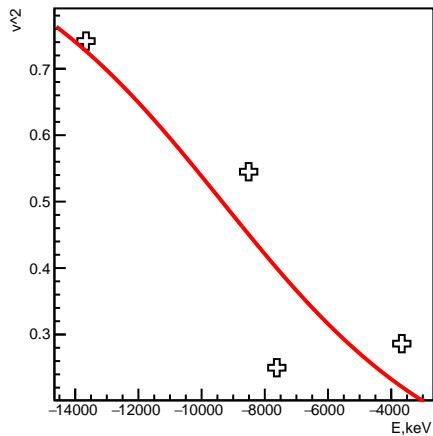
-11252.7 1d5/2 0.605667 0.325333

-3750.06 1f7/2 0.135625 0.77125

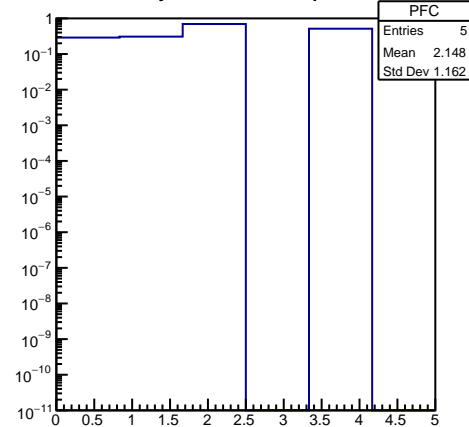
1984Mc



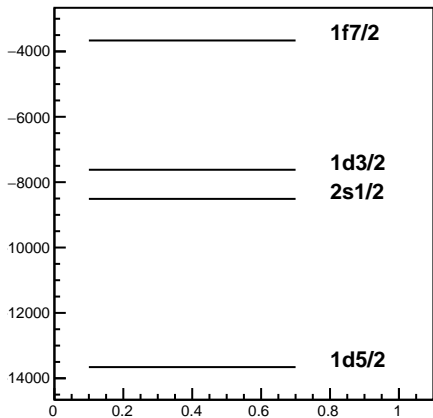
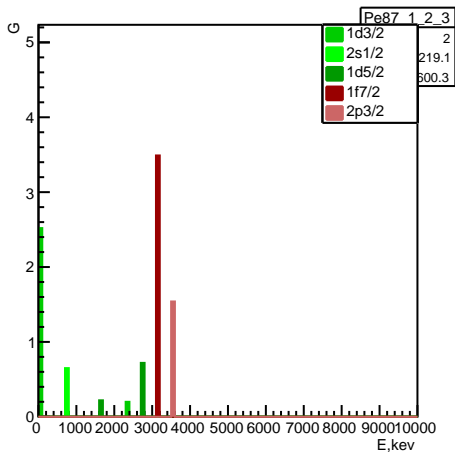
Occupancy



Penalty function components



Pe87



Experiment: 1984Mc (9) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 E_F : -9351.98 ± 1406.45 keV Δ : -8469.3 ± 4304.02 keV

penalty: 0.36134

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

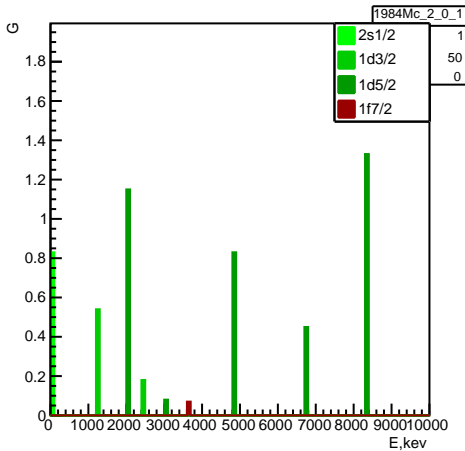
-8511.39 2s1/2 0.545 0.74

-7620.38 1d3/2 0.25 0.86

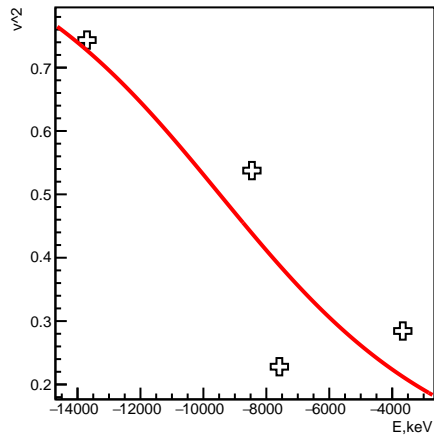
-13658.3 1d5/2 0.741667 0.796667

-3665.03 1f7/2 0.28625 0.445

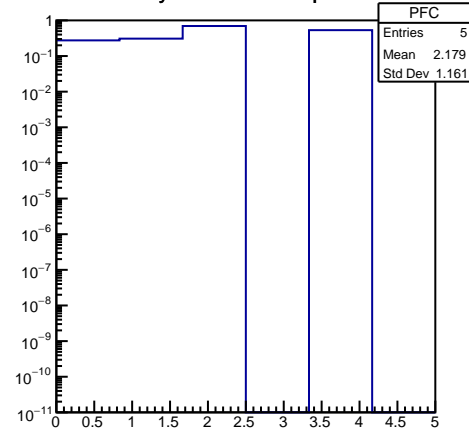
1984Mc



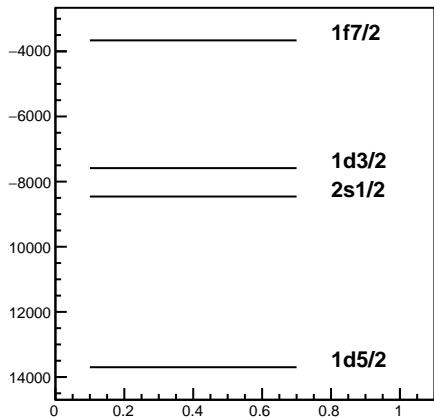
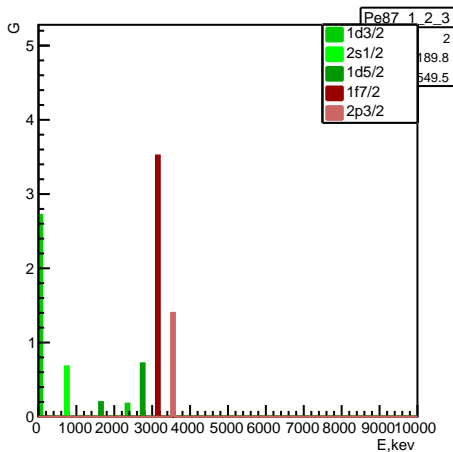
Occupancy



Penalty function components



Pe87



Experiment: 1984Mc (9) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 E_F : -9482.4 ± 1496.02 keV Δ : 8268.21 ± 4459.03 keV

penalty: 0.362087

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

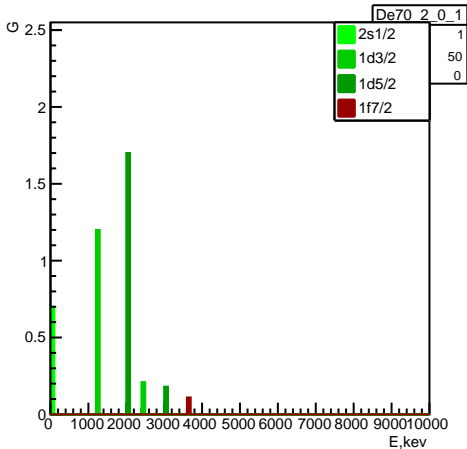
-8458.2 2s1/2 0.5375 0.755

-7585.44 1d3/2 0.228 0.904

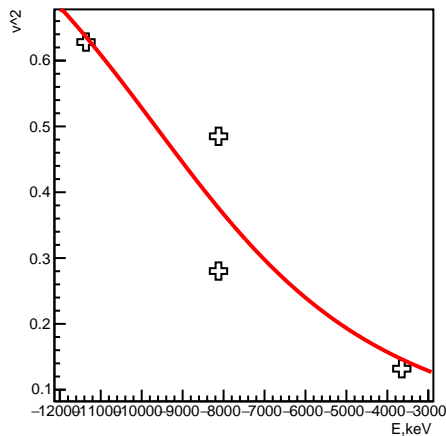
-13698.8 1d5/2 0.7435 0.793

-3663.26 1f7/2 0.284375 0.44875

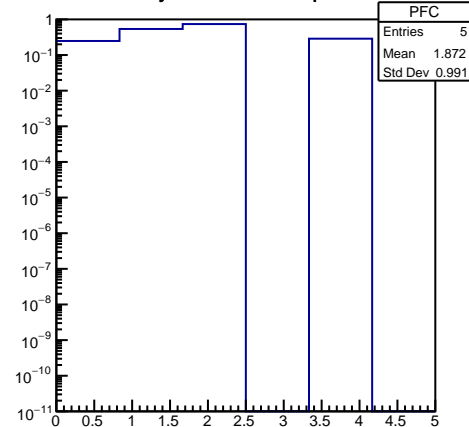
De70



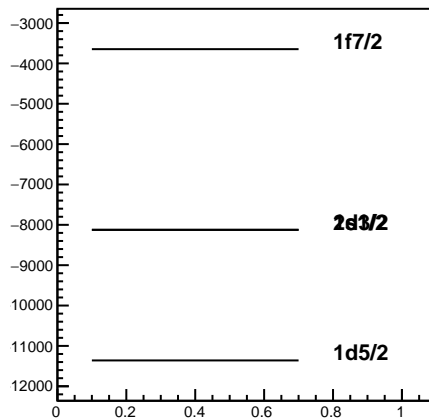
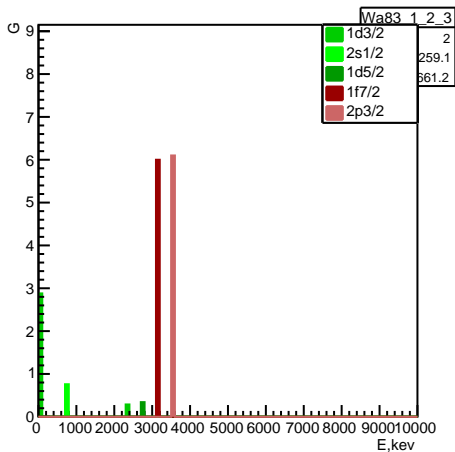
Occupancy



Penalty function components



Wa83



Experiment: De70 (6) Wa83 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9661.13 \pm 838.255 keV

Δ : -6008.4 \pm 2409.45 keV

penalty: 0.362613

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

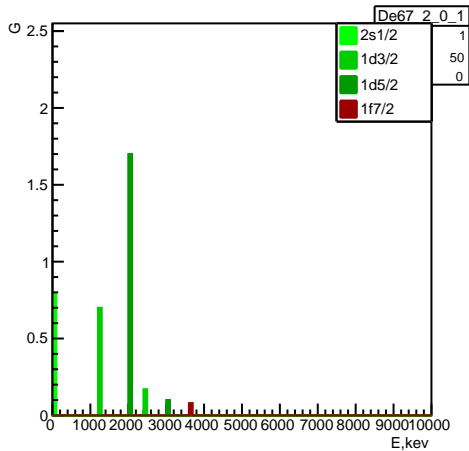
-8123.02 2s1/2 0.485 0.73

-8124.43 1d3/2 0.28025 1.1445

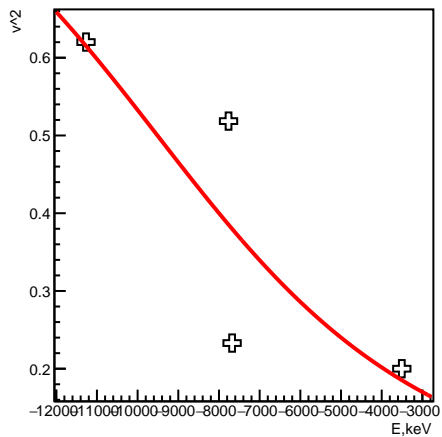
-11360 1d5/2 0.628167 0.370333

-3647.14 1f7/2 0.131875 0.76375

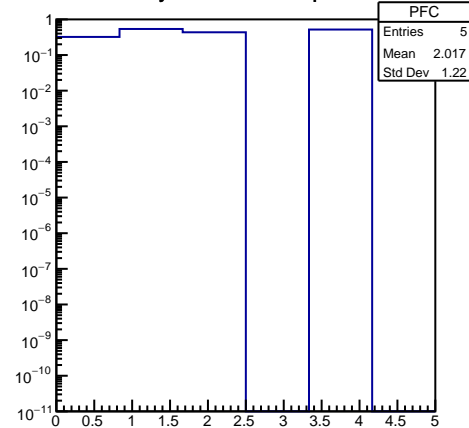
De67



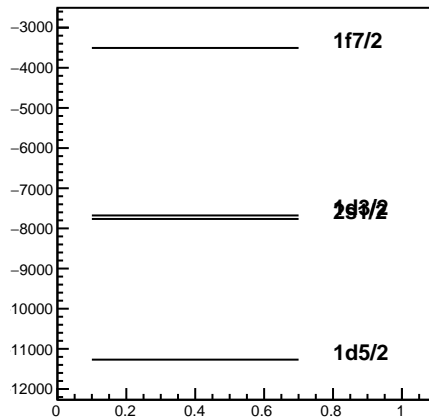
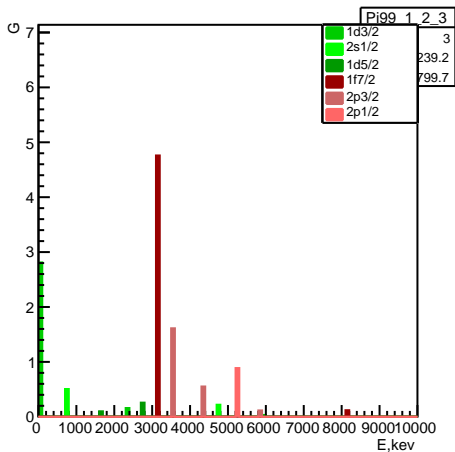
Occupancy



Penalty function components



Pi99



Experiment: De67 (6) Pi99 (13)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -9512.69 \pm 1385.62$ keV $\Delta: 7416.18 \pm 4348.96$ keV

penalty: 0.362893

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

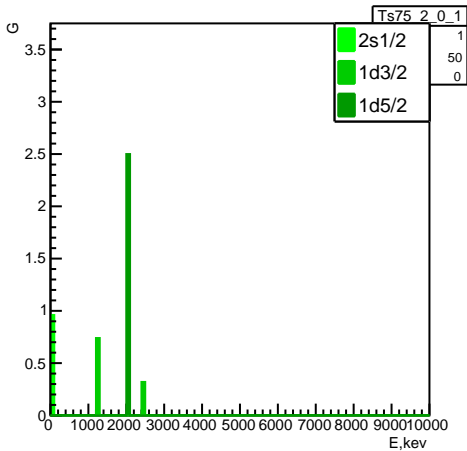
-7764.95 2s1/2 0.5185 0.763

-7677.67 1d3/2 0.233 0.969

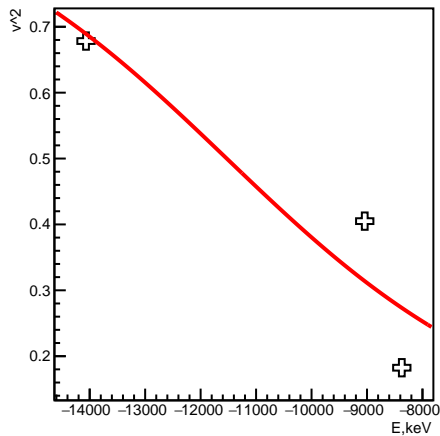
-11268.7 1d5/2 0.620167 0.359667

-3505.81 1f7/2 0.2 0.62

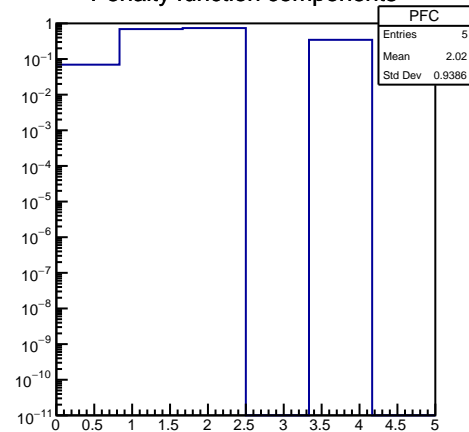
Ts75



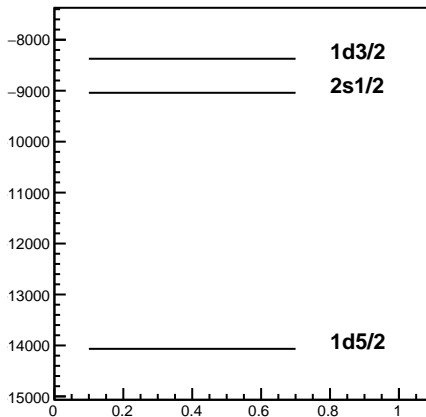
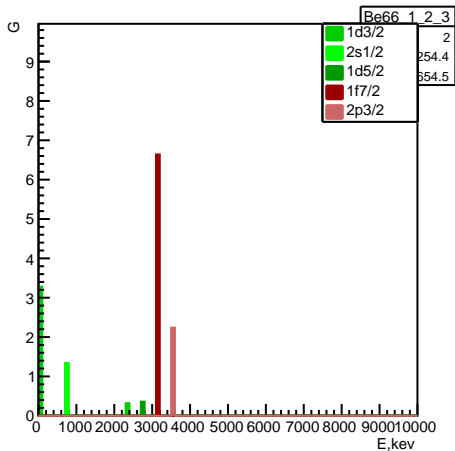
Occupancy



Penalty function components



Be66



Experiment: Ts75 (4) Be66 (6)

proton transfer

p separation energy A:13516.9, A+1: 7297.3:

E_F: -11529.1 \pm 1294.02 keV Δ : 6206.17 \pm 2896.19 keV

penalty: 0.369321

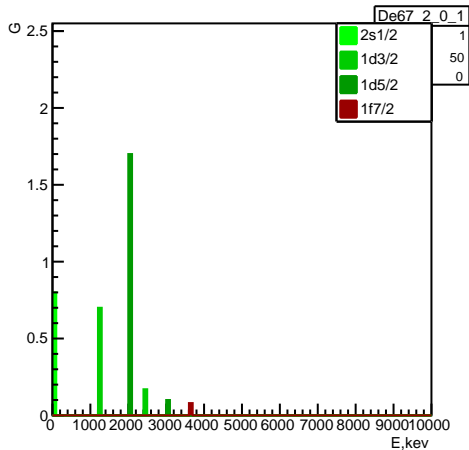
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-9040.99 2s1/2 0.405 1.15

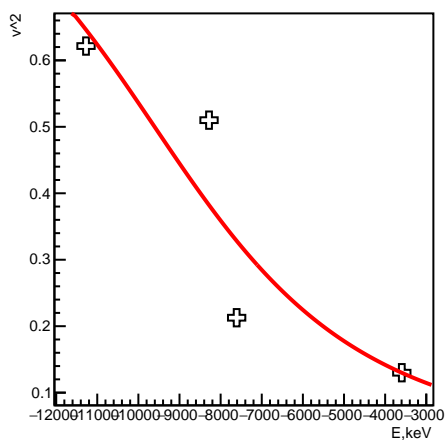
-8372.72 1d3/2 0.1825 1.165

-14066.5 1d5/2 0.678333 0.476667

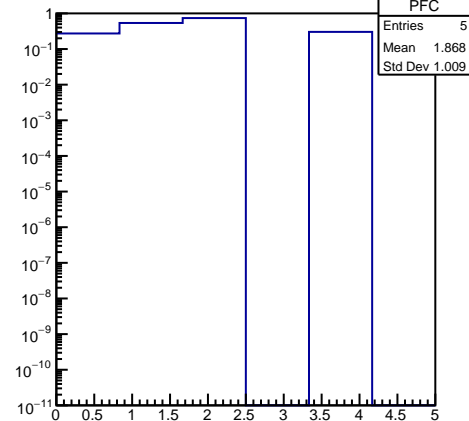
De67



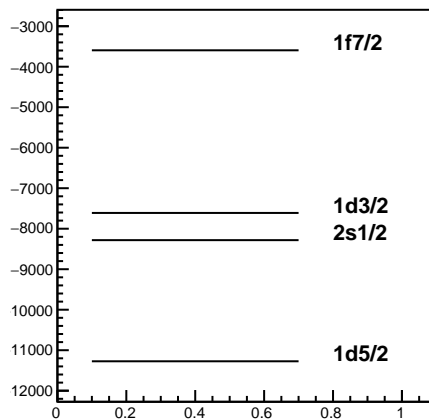
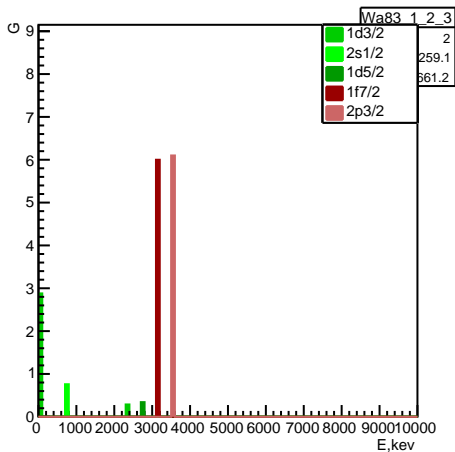
Occupancy



Penalty function components



Wa83



Experiment: De67 (6) Wa83 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -9605.69 \pm 954.292$ keV $\Delta: 5460.22 \pm 2535.69$ keV

penalty: 0.370731

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

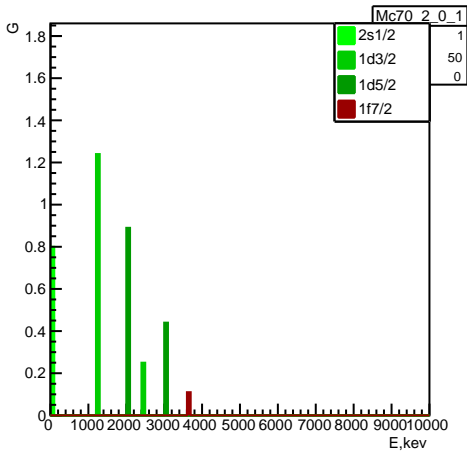
-8282.31 2s1/2 0.51 0.78

-7610.62 1d3/2 0.21275 1.0095

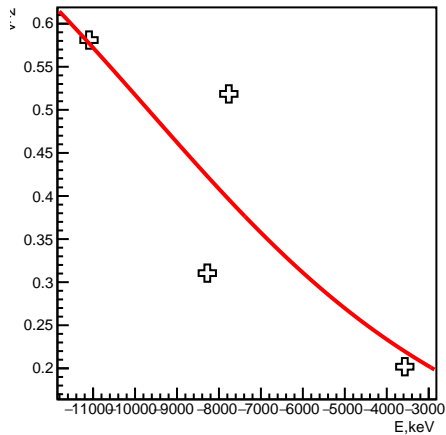
-11273.5 1d5/2 0.6215 0.357

-3594.91 1f7/2 0.13 0.76

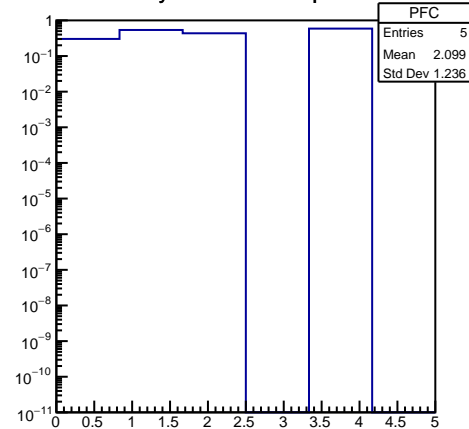
Mc70



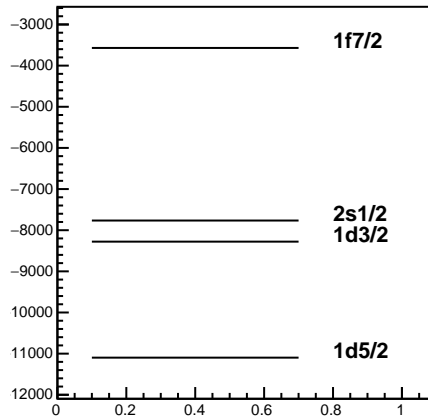
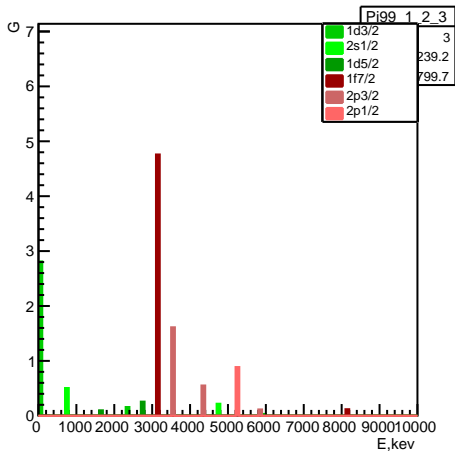
Occupancy



Penalty function components



Pi99



Experiment: Mc70 (6) Pi99 (13)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F : -9684.39 ± 1389.12 keV

Δ : 9028.13 ± 4930.09 keV

penalty: 0.372746

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

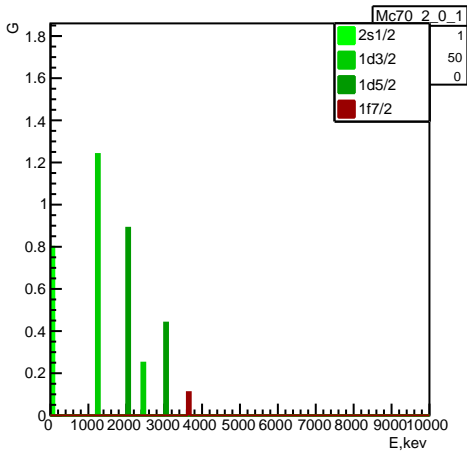
-7764.95 2s1/2 0.5185 0.763

-8277.85 1d3/2 0.3105 1.124

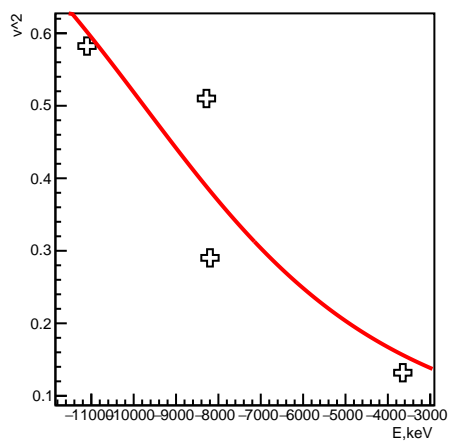
-11097.3 1d5/2 0.581 0.281333

-3570.29 1f7/2 0.201875 0.62375

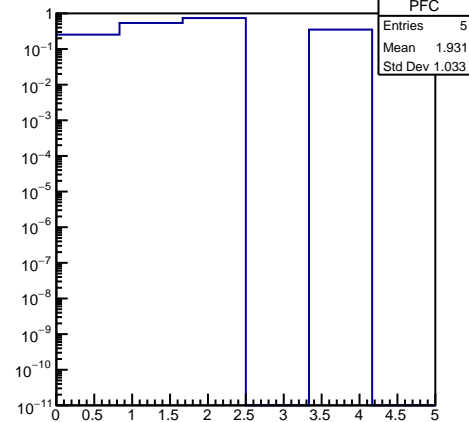
Mc70



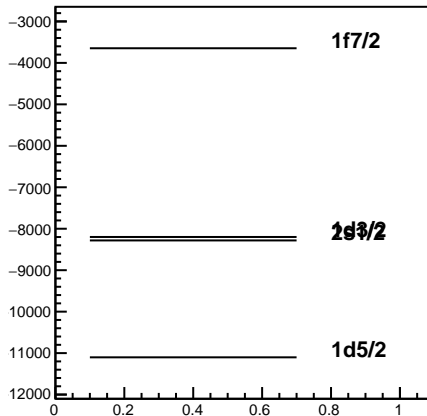
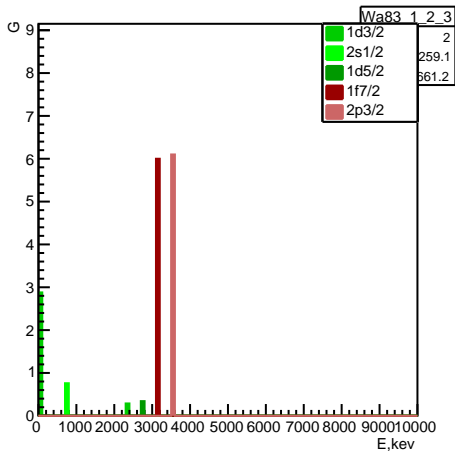
Occupancy



Penalty function components



Wa83



Experiment: Mc70 (6) Wa83 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 E_F : -9757.68 \pm 958.389 keV Δ : 6455.92 \pm 2938.92 keV

penalty: 0.376337

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

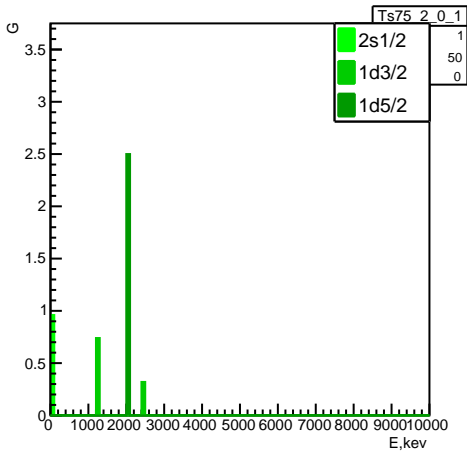
-8282.31 2s1/2 0.51 0.78

-8198.85 1d3/2 0.29025 1.1645

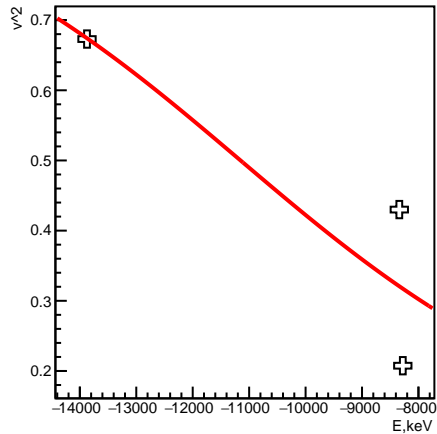
-11101.8 1d5/2 0.582333 0.278667

-3647.14 1f7/2 0.131875 0.76375

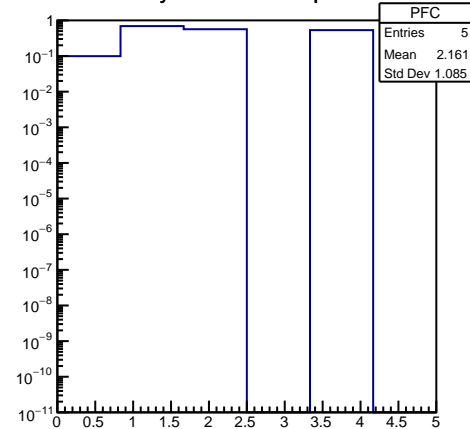
Ts75



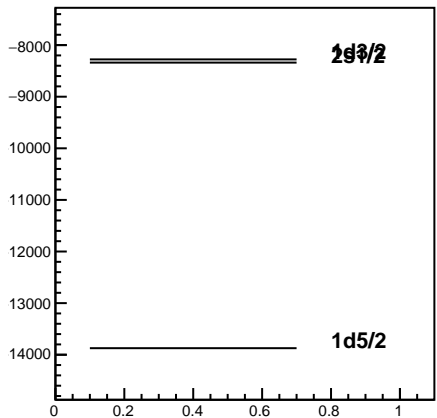
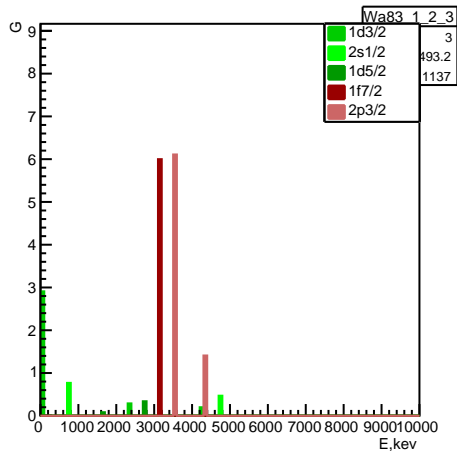
Occupancy



Penalty function components



Wa83



Experiment: Ts75 (4) Wa83 (10)

proton transfer

p separation energy A:13516.9, A+1: 7297.3:

E_F: -11152.2 ± 1710.09 keV

Δ : 7324.48 ± 4468.92 keV

penalty: 0.378041

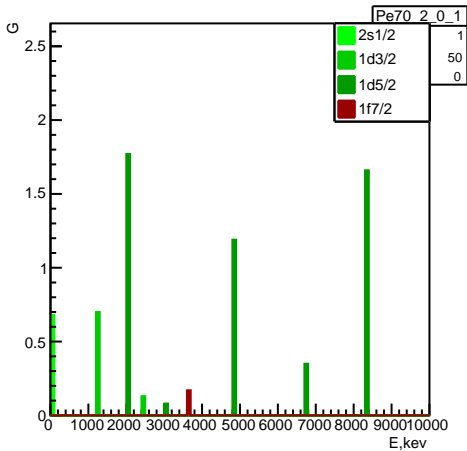
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-8339.28 2s1/2 0.43 1.1

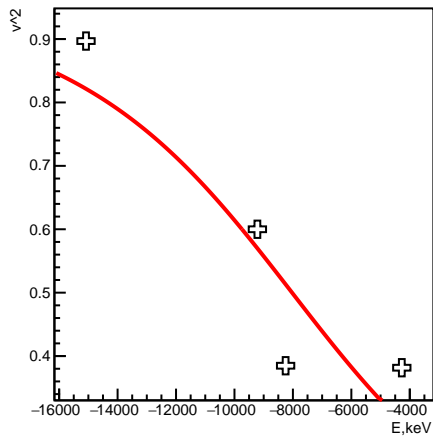
-8277.29 1d3/2 0.2075 1.115

-13873.1 1d5/2 0.673 0.487333

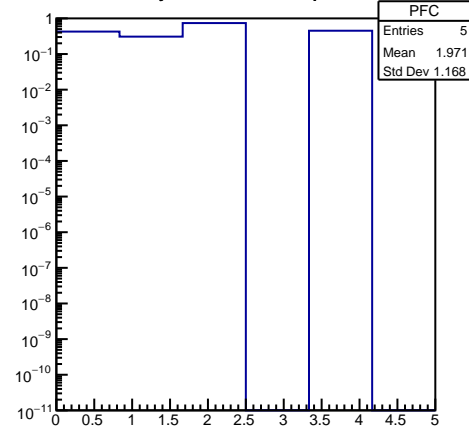
Pe70



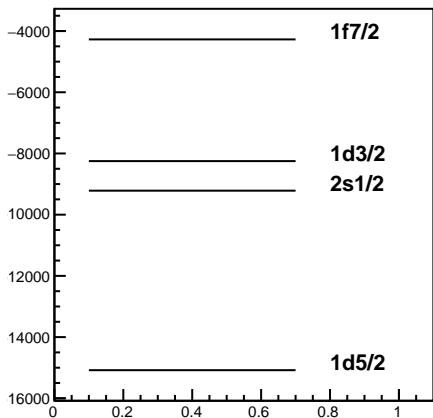
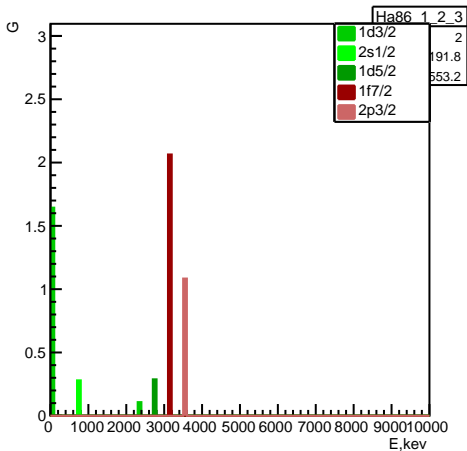
Occupancy



Penalty function components



Ha86



Experiment: Pe70 (9) Ha86 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 E_F : -8029.09 \pm 1303.62 keV Δ : 8399.2 \pm 3776.41 keV

penalty: 0.384802

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

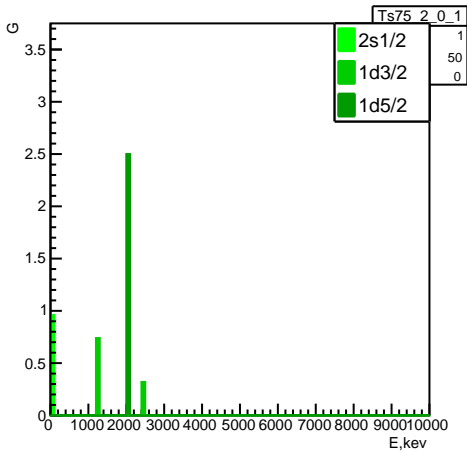
-9215.59 2s1/2 0.6 0.48

-8249.71 1d3/2 0.38475 0.6455

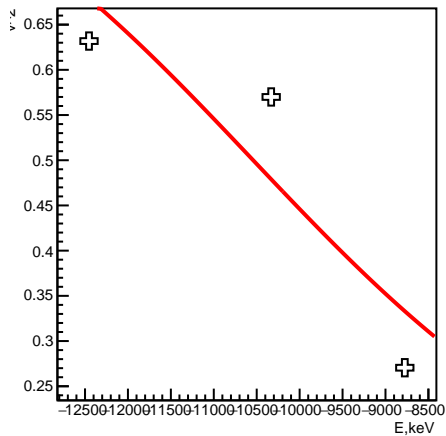
-15081.1 1d5/2 0.896833 0.889667

-4273.28 1f7/2 0.381625 0.27925

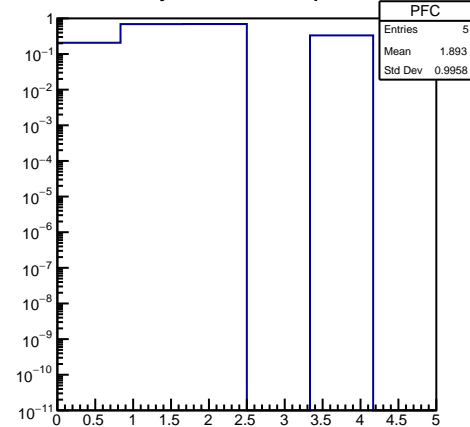
Ts75



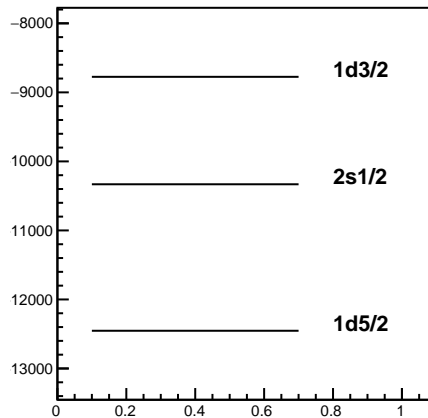
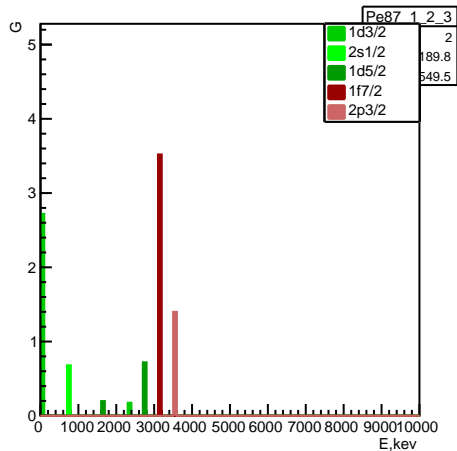
Occupancy



Penalty function components



Pe87



Experiment: Ts75 (4) Pe87 (7)

proton transfer

p separation energy A:13516.9, A+1: 7297.3:

E_F: -10541.4 \pm 788.927 keV

Δ : 4986.14 \pm 2791.61 keV

penalty: 0.385661

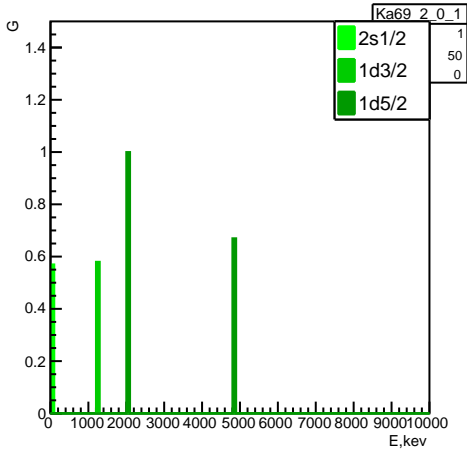
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-10331.5 2s1/2 0.57 0.82

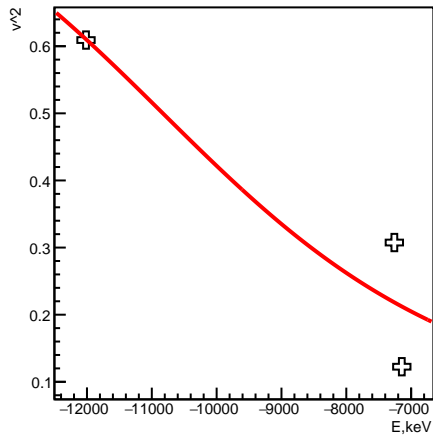
-8774.91 1d3/2 0.2705 0.989

-12453.5 1d5/2 0.631833 0.569667

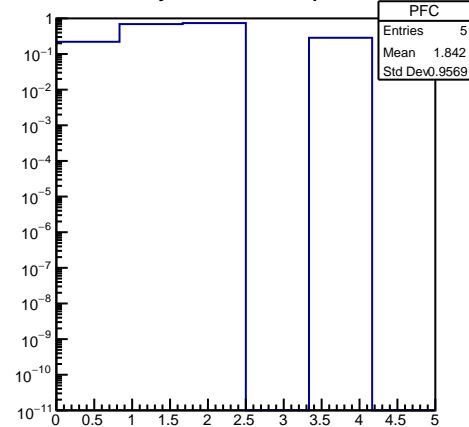
Ka69



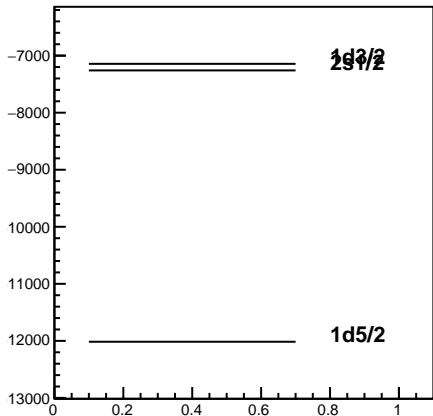
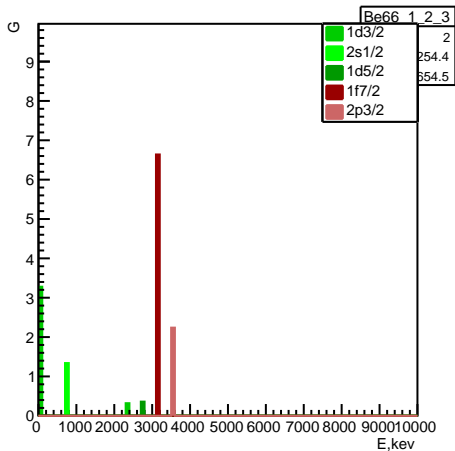
Occupancy



Penalty function components



Be66



Experiment: Ka69 (4) Be66 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -10829.6 \pm 1155.82$ keV $\Delta: 5236.66 \pm 2394.78$ keV

penalty: 0.387572

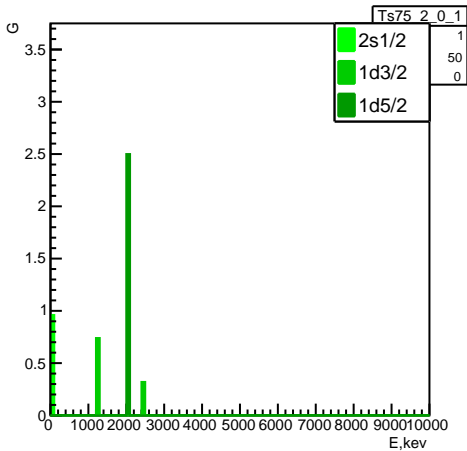
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-7258.91 2s1/2 0.3075 0.955

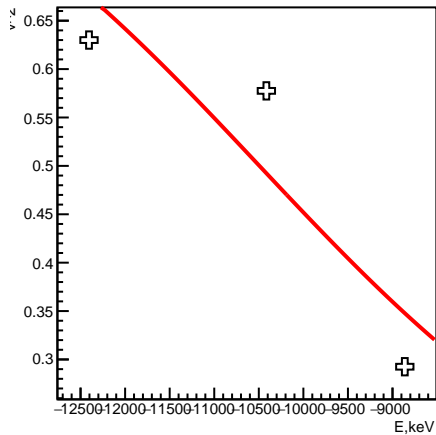
-7143.89 1d3/2 0.1225 1.045

-12015 1d5/2 0.609167 0.338333

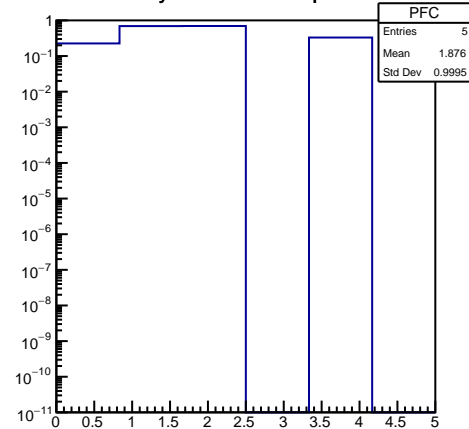
Ts75



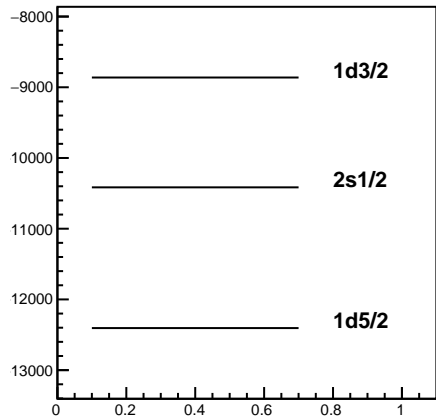
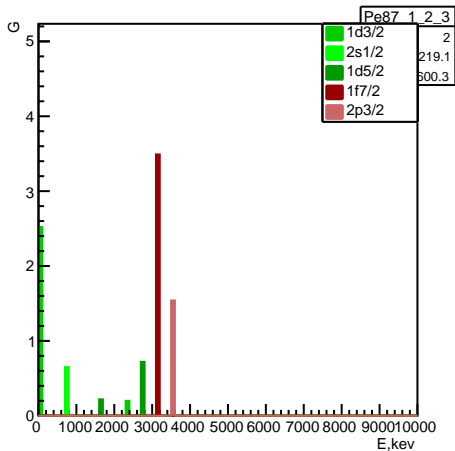
Occupancy



Penalty function components



Pe87



Experiment: Ts75 (4) Pe87 (7)

proton transfer

p separation energy A:13516.9, A+1: 7297.3:

E_F: -10492.9 \pm 731.922 keV Δ : 5102.81 \pm 2767.65 keV

penalty: 0.388778

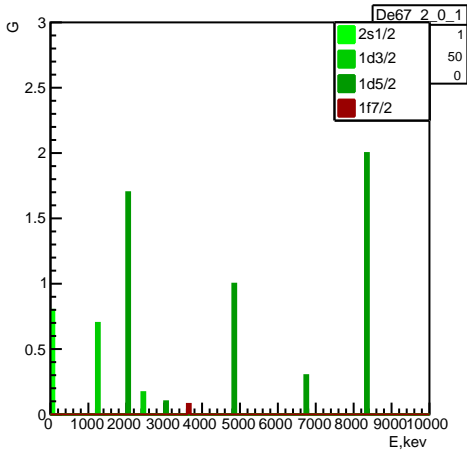
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-10415.3 2s1/2 0.5775 0.805

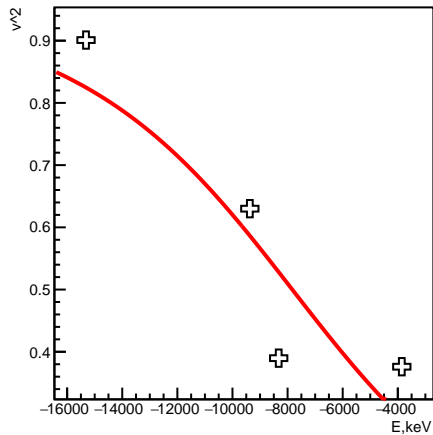
-8862.09 1d3/2 0.2925 0.945

-12405.2 1d5/2 0.63 0.573333

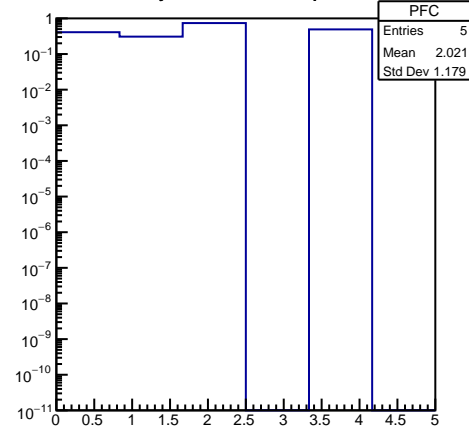
De67



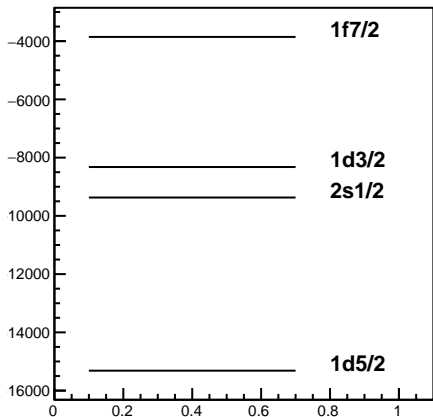
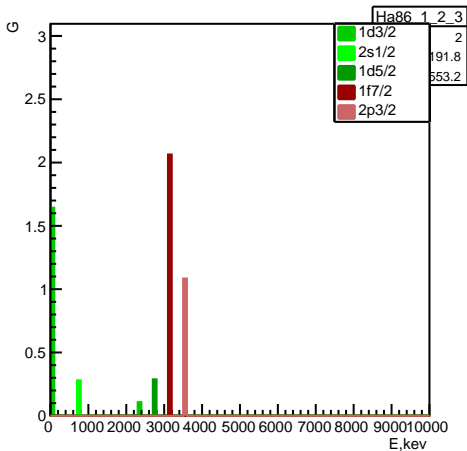
Occupancy



Penalty function components



Ha86



Experiment: De67 (9) Ha86 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -7829.72 \pm 1469.61 keV

Δ : -8764.34 \pm 4113.41 keV

penalty: 0.389494

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

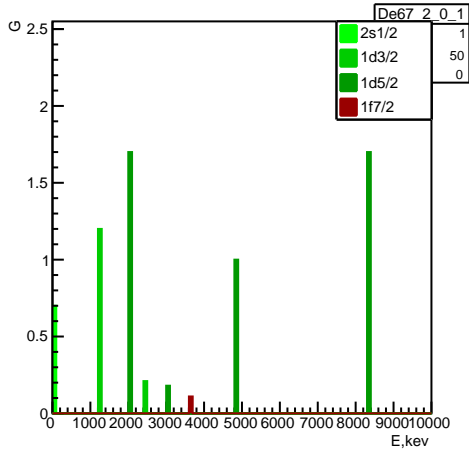
-9370.28 2s1/2 0.63 0.54

-8322.69 1d3/2 0.38975 0.6555

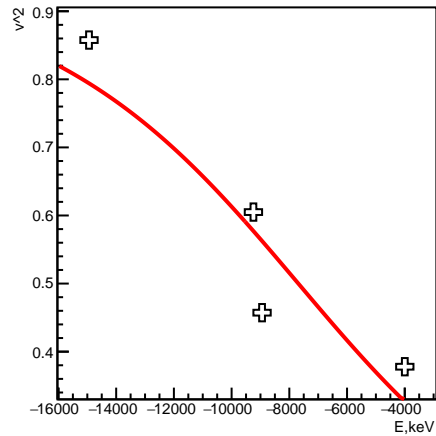
-15315.4 1d5/2 0.901 0.898

-3855.27 1f7/2 0.376 0.268

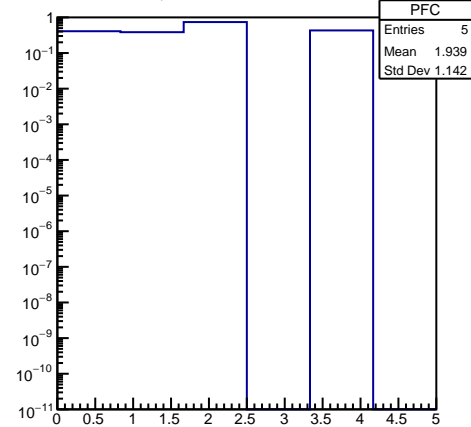
De67



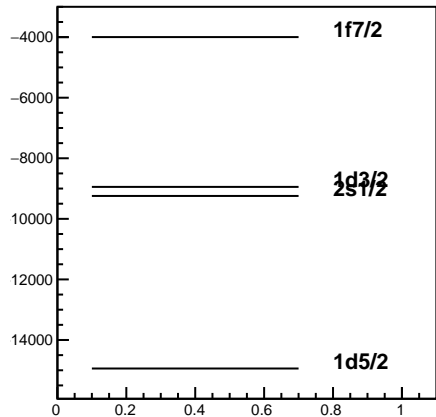
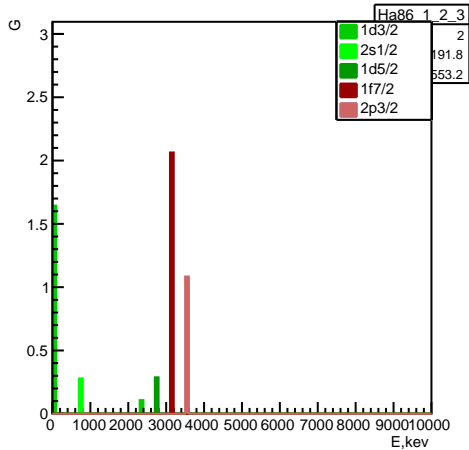
Occupancy



Penalty function components



Ha86



Experiment: De67 (8) Ha86 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -7687.29 \pm 1214.65 keV

Δ : -9972.45 \pm 3609.17 keV

penalty: 0.392736

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

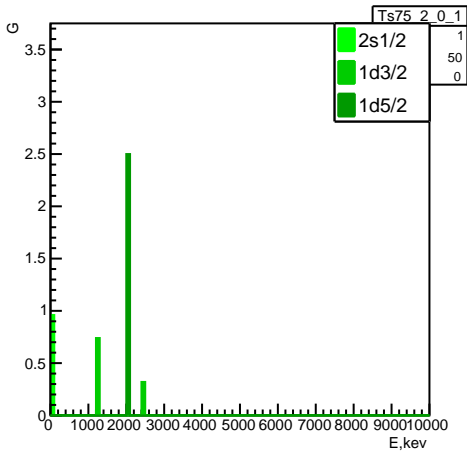
-9244 2s1/2 0.605 0.49

-8945 1d3/2 0.45725 0.7905

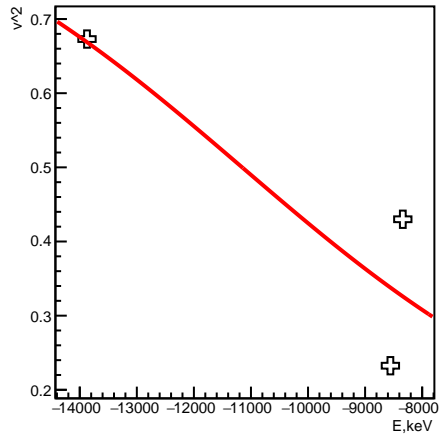
-14941.6 1d5/2 0.857667 0.811333

-3998.45 1f7/2 0.377875 0.27175

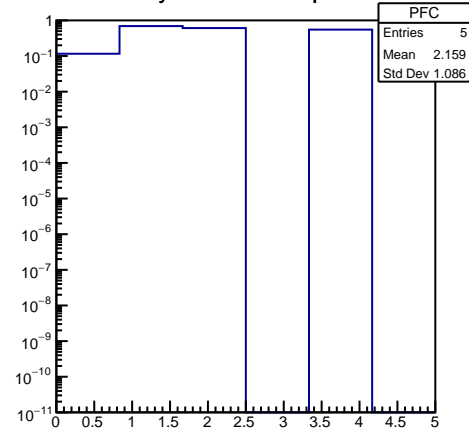
Ts75



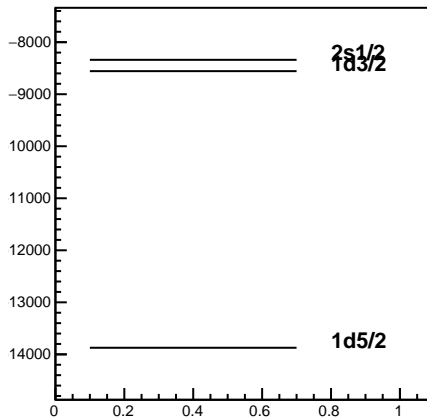
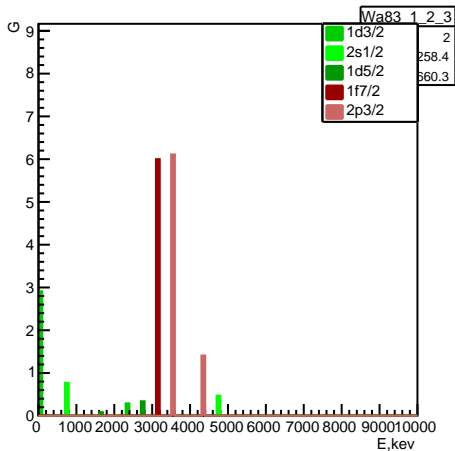
Occupancy



Penalty function components



Wa83



Experiment: Ts75 (4) Wa83 (9)

proton transfer

p separation energy A:13516.9, A+1: 7297.3:

E_F: -11154.3 ± 1639.87 keV

Δ : 7579.67 ± 4615.61 keV

penalty: 0.393572

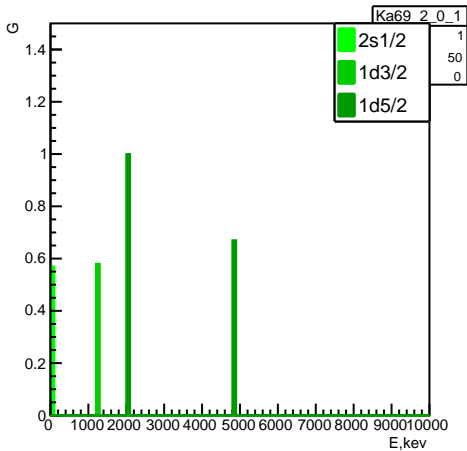
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-8339.28 2s1/2 0.43 1.1

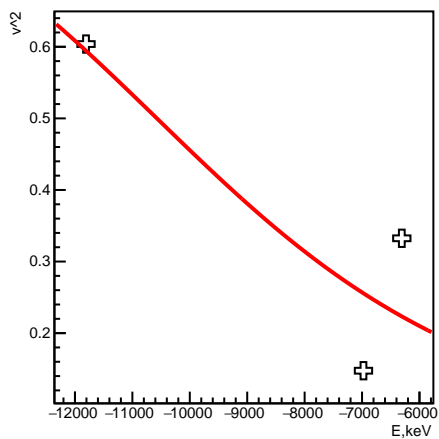
-8556.75 1d3/2 0.2325 1.065

-13873.1 1d5/2 0.673 0.487333

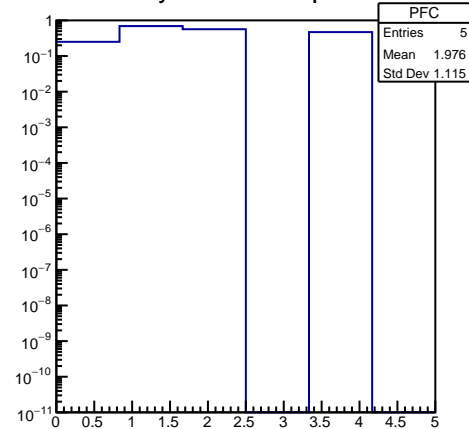
Ka69



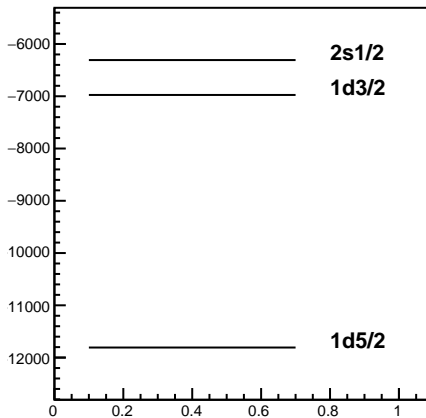
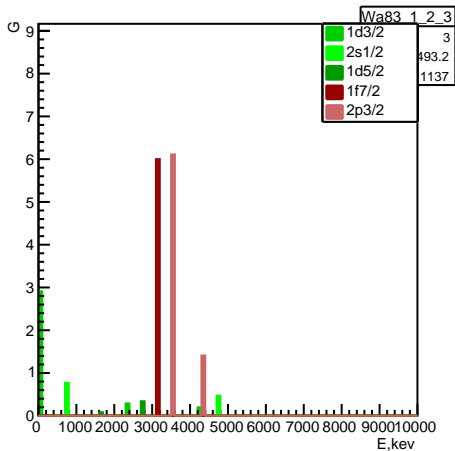
Occupancy



Penalty function components



Wa83



Experiment: Ka69 (4) Wa83 (10)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -10573 \pm 1655.6 keV

Δ : -6421.87 \pm 3931.65 keV

penalty: 0.395436

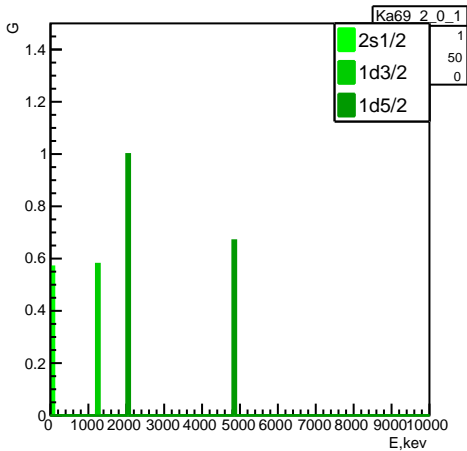
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-6307.55 2s1/2 0.3325 0.905

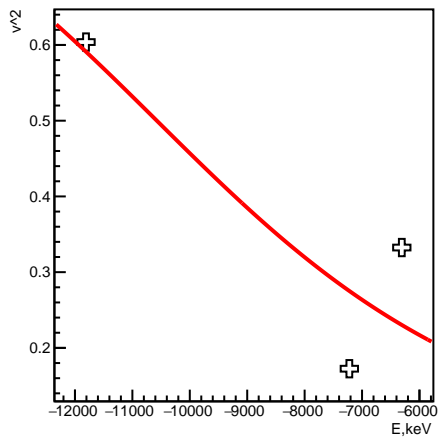
-6975.2 1d3/2 0.1475 0.995

-11807.8 1d5/2 0.603833 0.349

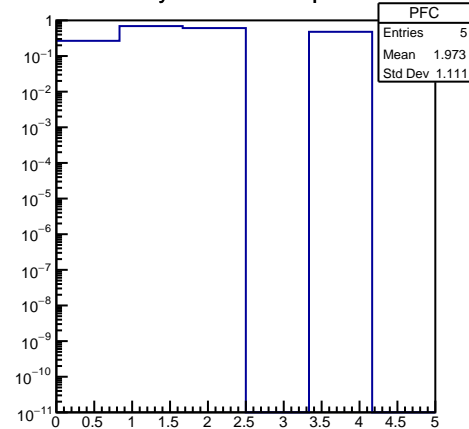
Ka69



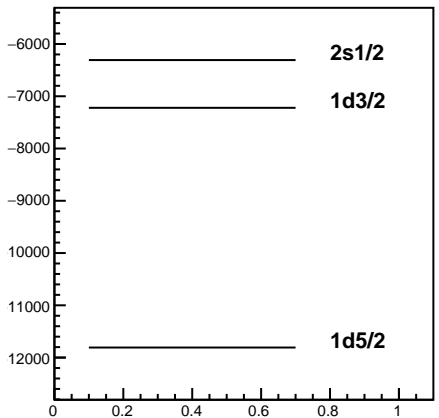
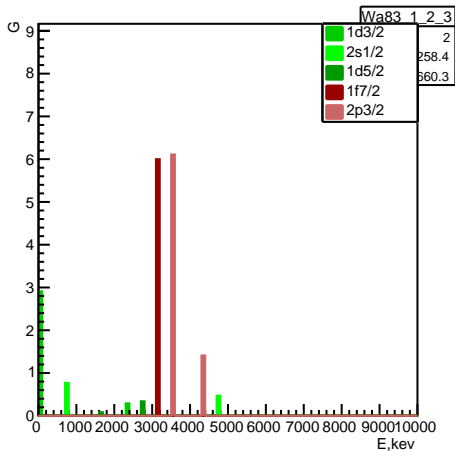
Occupancy



Penalty function components



Wa83



Experiment: Ka69 (4) Wa83 (9)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -10574.4 \pm 1592.12$ keV $\Delta: 6660.07 \pm 4005.75$ keV

penalty: 0.409234

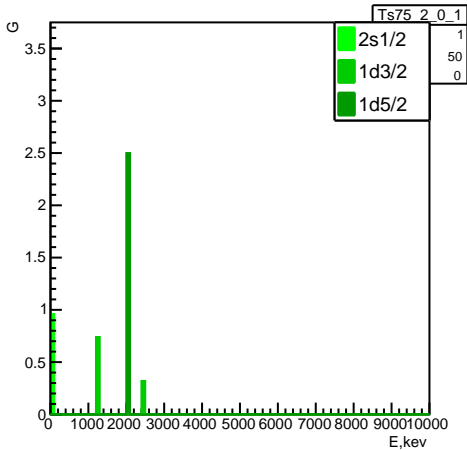
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-6307.55 2s1/2 0.3325 0.905

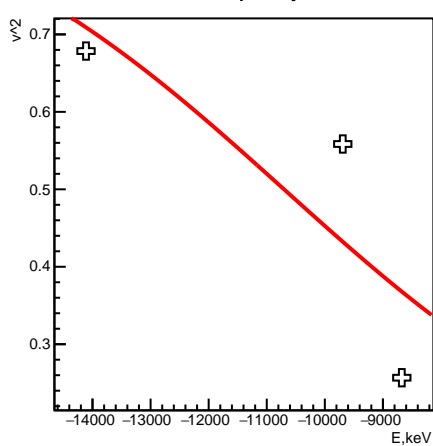
-7221.25 1d3/2 0.1725 0.945

-11807.8 1d5/2 0.603833 0.349

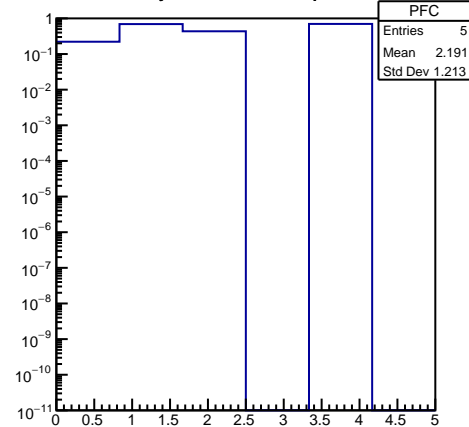
Ts75



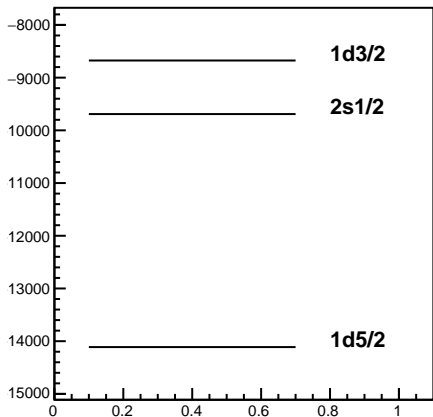
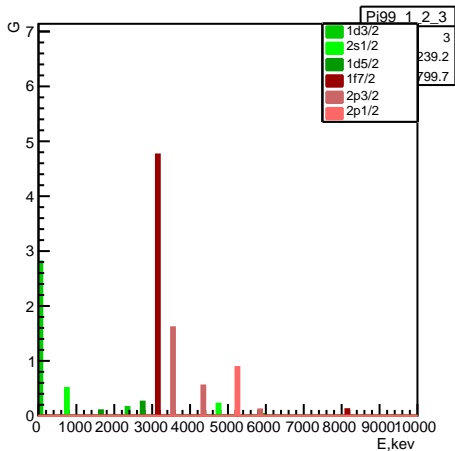
Occupancy



Penalty function components



Pi99



Experiment: Ts75 (4) Pi99 (13)

proton transfer

p separation energy A:13516.9, A+1: 7297.3:

E_F: -10702.6 \pm 1703.18 keV

Δ : 7404.77 \pm 5858.2 keV

penalty: 0.409555

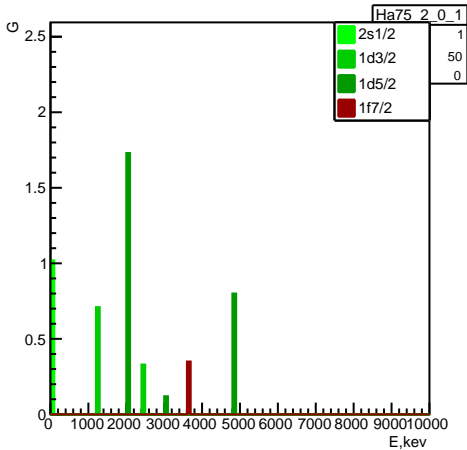
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-9691.15 2s1/2 0.5585 0.843

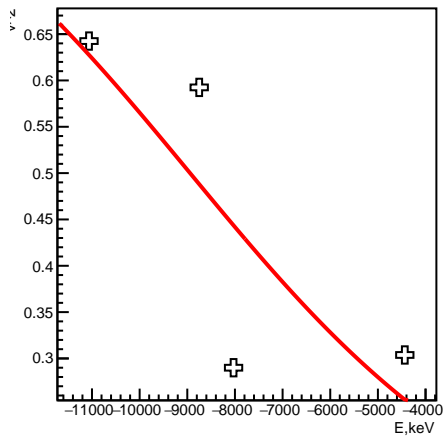
-8675 1d3/2 0.25675 1.0165

-14111.9 1d5/2 0.6785 0.476333

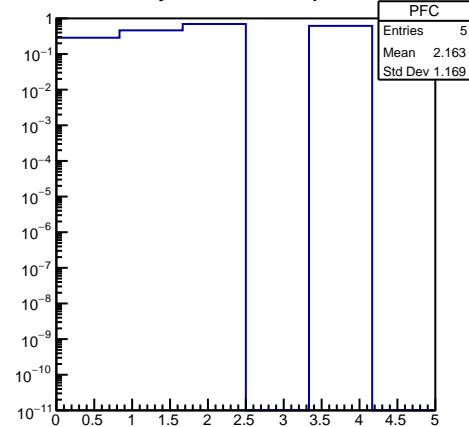
Ha75



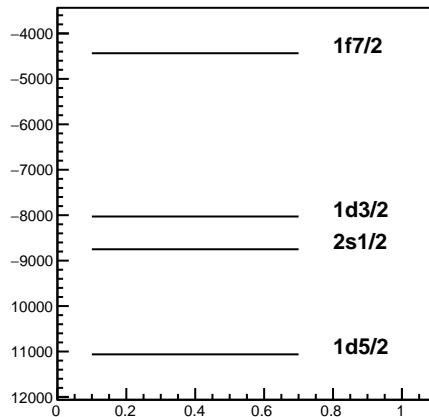
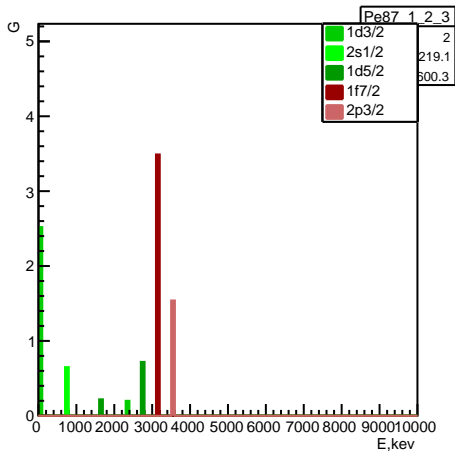
Occupancy



Penalty function components



Pe87



Experiment: Ha75 (7) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -8941.76 \pm 1230.59 \text{ keV}$ $\Delta: 8037.99 \pm 5161.31 \text{ keV}$

penalty: 0.411993

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

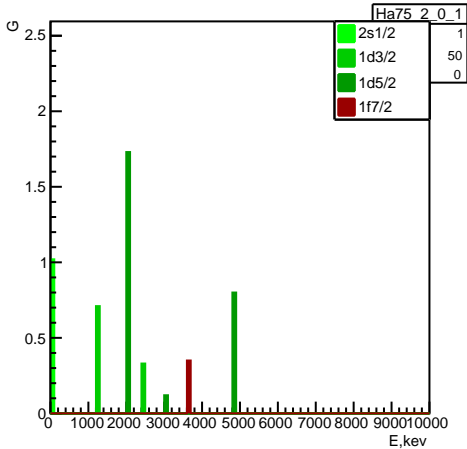
-8749.91 2s1/2 0.5925 0.835

-8028.99 1d3/2 0.29 0.94

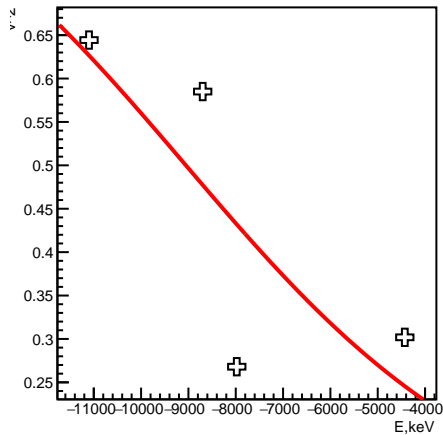
-11062.6 1d5/2 0.6425 0.598333

-4435.49 1f7/2 0.30375 0.48

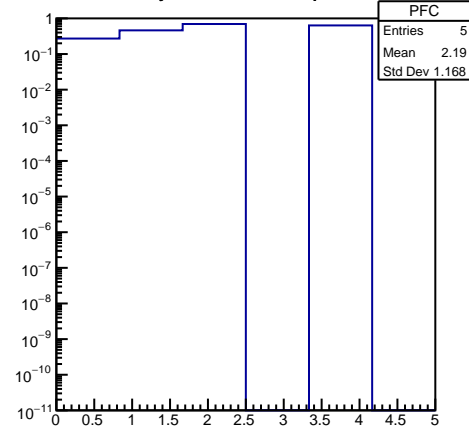
Ha75



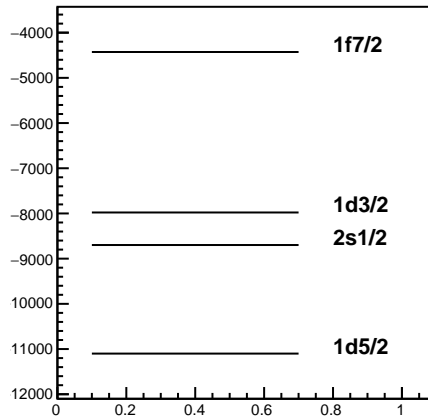
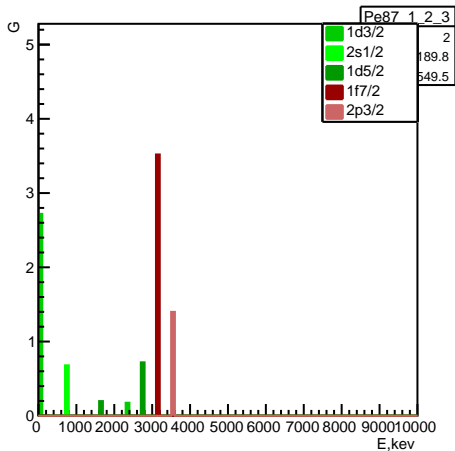
Occupancy



Penalty function components



Pe87



Experiment: Ha75 (7) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9053.67 ± 1294.07 keV

Δ: 7823.97 ± 5317.27 keV

penalty: 0.412762

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

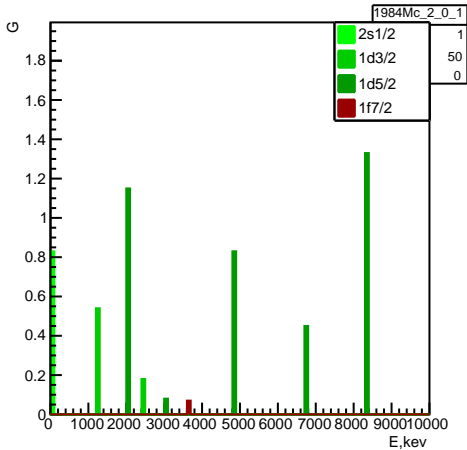
-8698.46 2s1/2 0.585 0.85

-7978.62 1d3/2 0.268 0.984

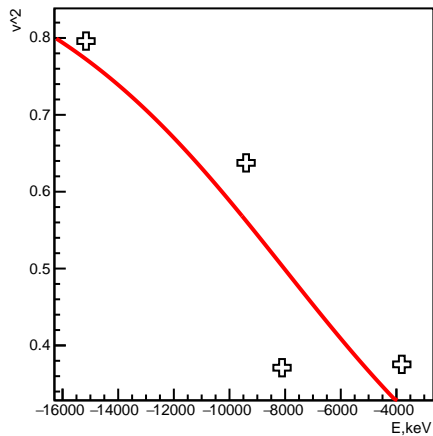
-11100.7 1d5/2 0.644333 0.594667

-4427.87 1f7/2 0.301875 0.48375

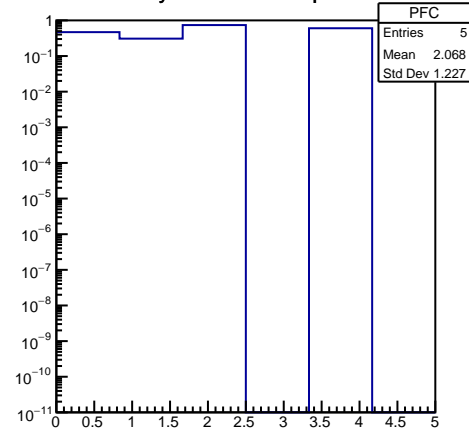
1984Mc



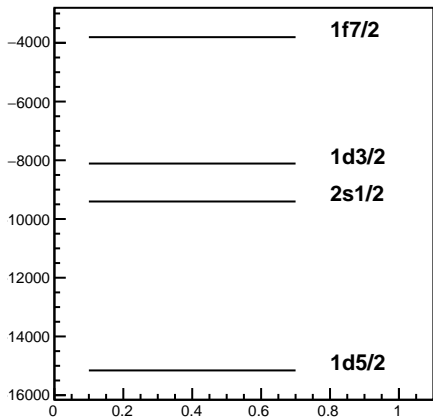
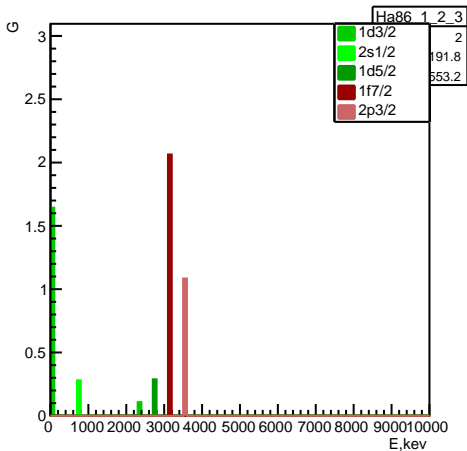
Occupancy



Penalty function components



Ha86



Experiment: 1984Mc (9) Ha86 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -8033.37 \pm 1504.3$ keV $\Delta: 10965 \pm 5043.43$ keV

penalty: 0.423384

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

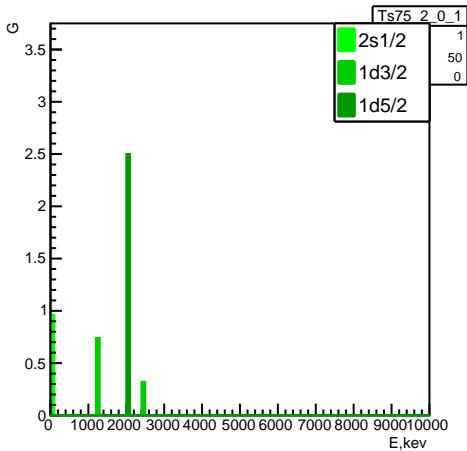
-9403.73 2s1/2 0.6375 0.555

-8111.43 1d3/2 0.371 0.618

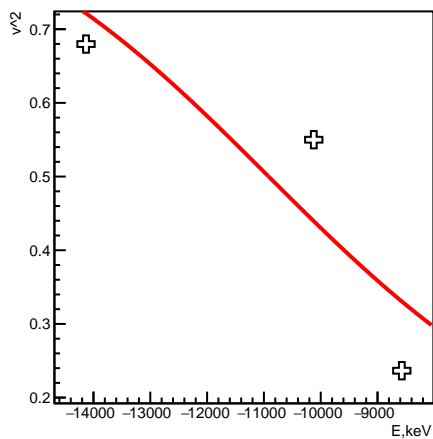
-15157.4 1d5/2 0.796 0.688

-3806.65 1f7/2 0.375375 0.26675

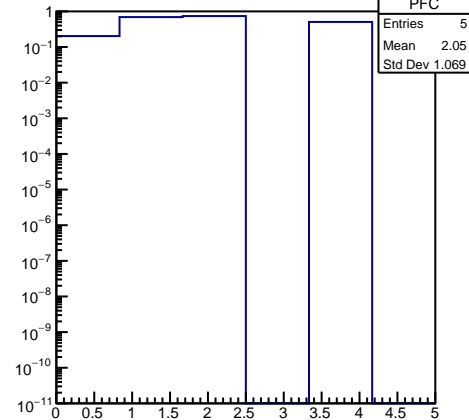
Ts75



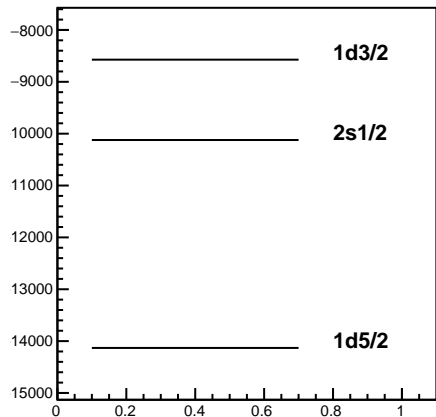
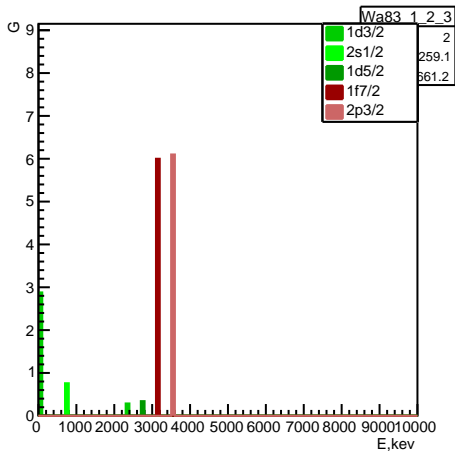
Occupancy



Penalty function components



Wa83



Experiment: Ts75 (4) Wa83 (6)

proton transfer

p separation energy A:13516.9, A+1: 7297.3:

E_F: -10915.8 \pm 1384.27 keV

Δ : 6504.25 \pm 4239.76 keV

penalty: 0.42813

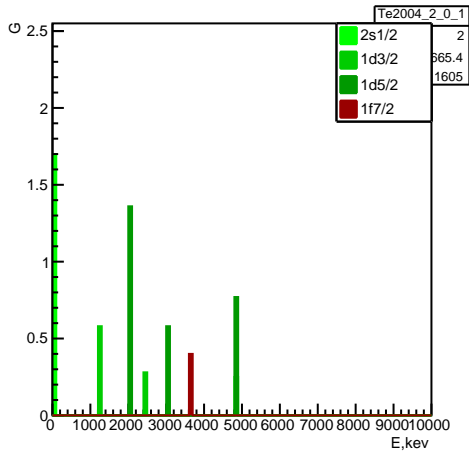
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-10122.3 2s1/2 0.55 0.86

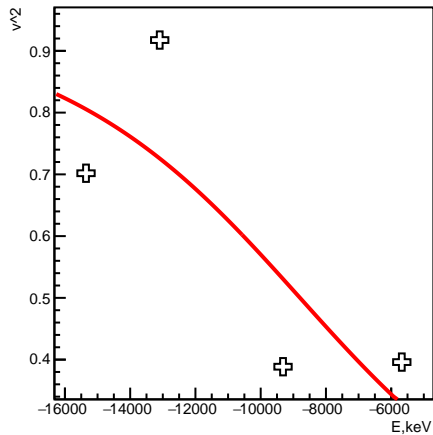
-8572.75 1d3/2 0.2365 1.057

-14131.5 1d5/2 0.679833 0.473667

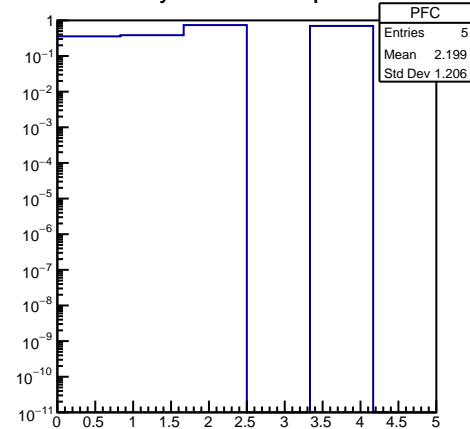
Te2004



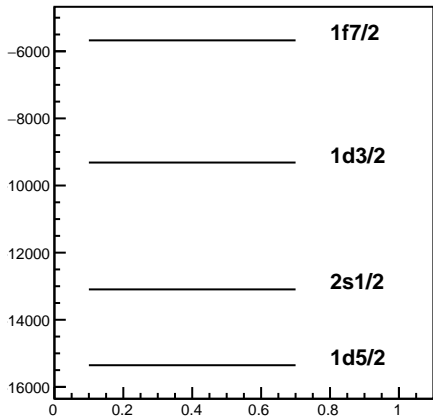
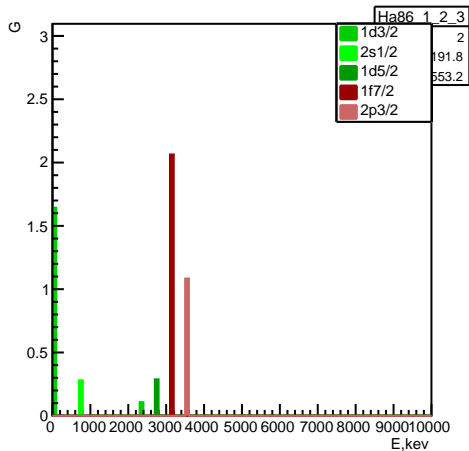
Occupancy



Penalty function components



Ha86



Experiment: Te2004 (8) Ha86 (6)

proton transfer

p separation energy A:13516.9, A+1: 7297.3;

E_F: -8794.44 \pm 2226.64 keV Δ : 8499.02 \pm 5858.86 keV

penalty: 0.435841

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

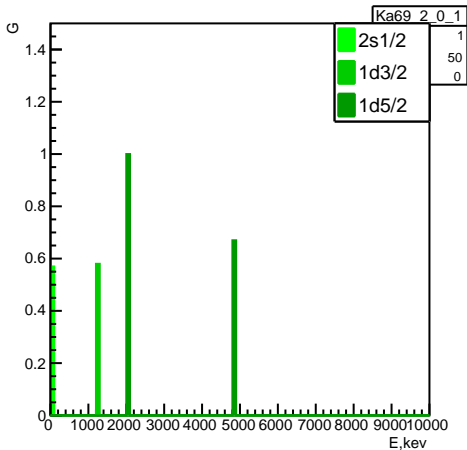
-13094.9 2s1/2 0.9175 1.115

-9315.42 1d3/2 0.3885 0.653

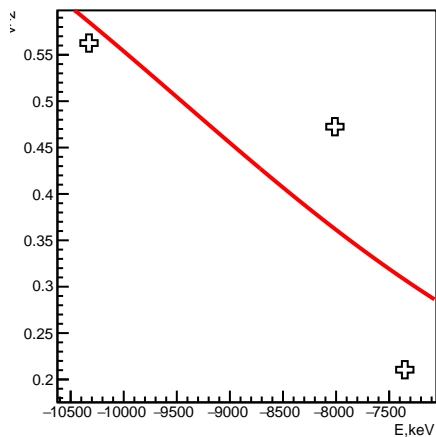
-15354 1d5/2 0.701833 0.499667

-5675.06 1f7/2 0.396 0.308

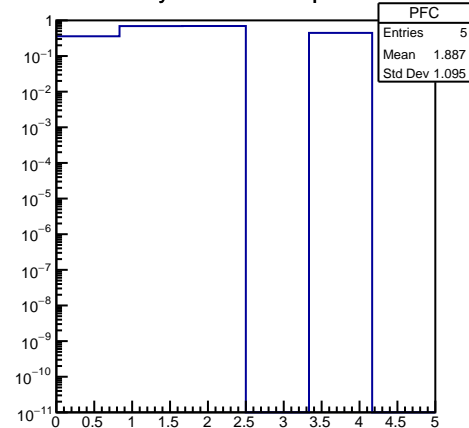
Ka69



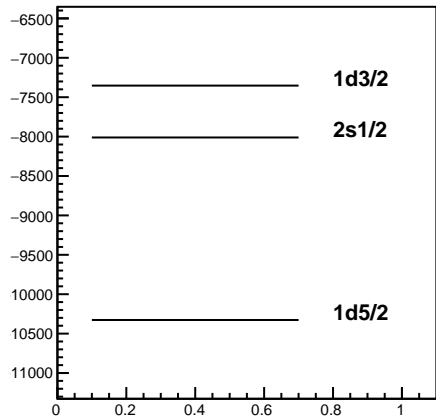
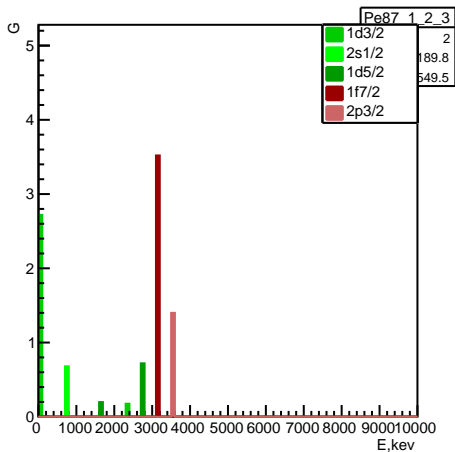
Occupancy



Penalty function components



Pe87



Experiment: Ka69 (4) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -9454.55 \pm 1138.39 \text{ keV}$ $\Delta: 5038.97 \pm 3733.63 \text{ keV}$

penalty: 0.438374

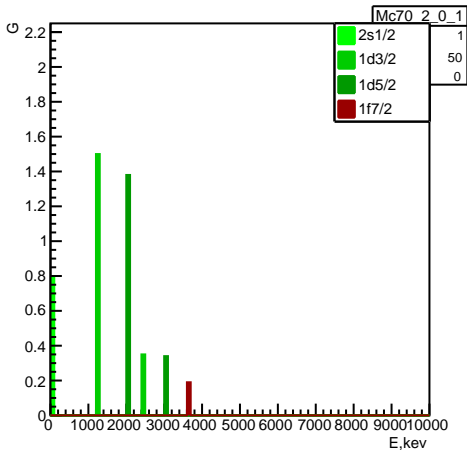
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-8011.08 2s1/2 0.4725 0.625

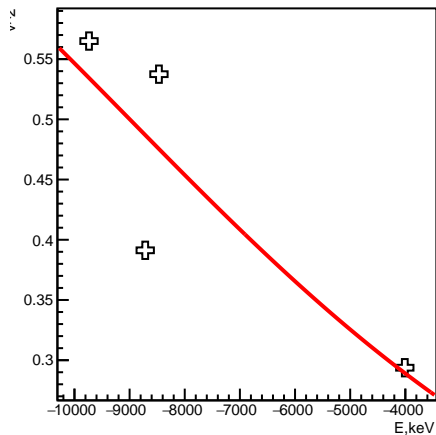
-7352.74 1d3/2 0.2105 0.869

-10327.1 1d5/2 0.562667 0.431333

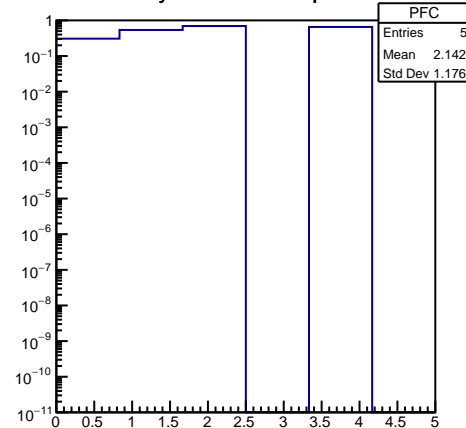
Mc70



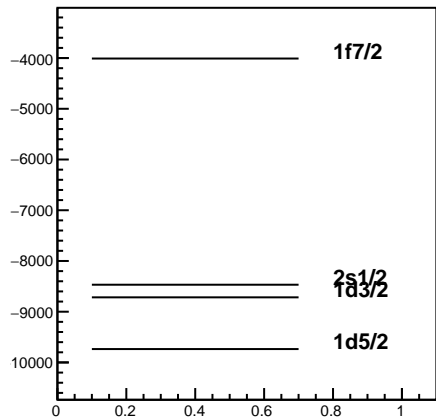
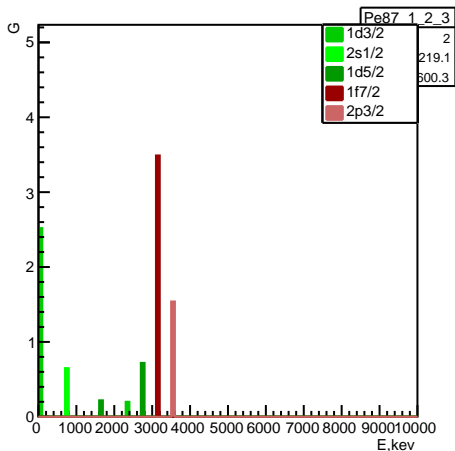
Occupancy



Penalty function components



Pe87



Experiment: Mc70 (6) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -8996.5 ± 1036.25 keV

Δ: 10731.9 ± 5482.42 keV

penalty: 0.439169

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

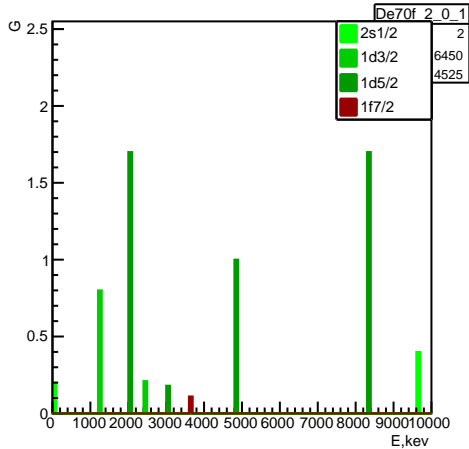
-8468.01 2s1/2 0.5375 0.725

-8716.82 1d3/2 0.39125 1.1425

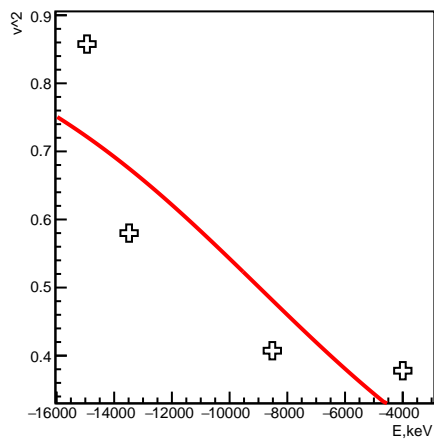
-9736.22 1d5/2 0.565 0.443333

-4009.58 1f7/2 0.29375 0.46

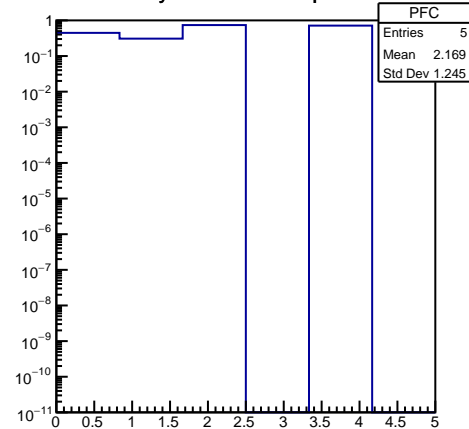
De70f



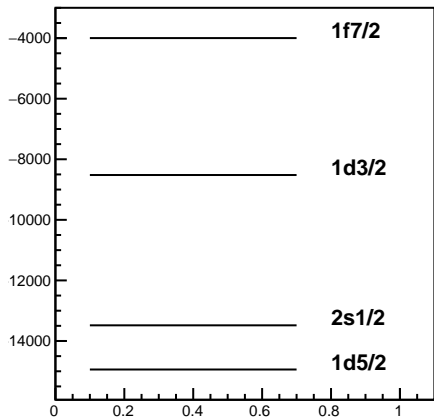
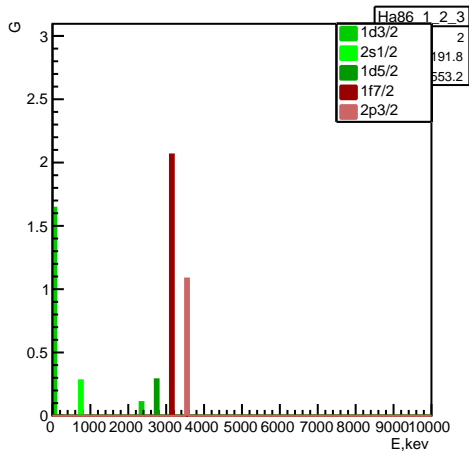
Occupancy



Penalty function components



Ha86



Experiment: De70f (9) Ha86 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 E_F : -8970.39 \pm 2096.76 keV Δ : 12090.1 \pm 5977.68 keV

penalty: 0.441397

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

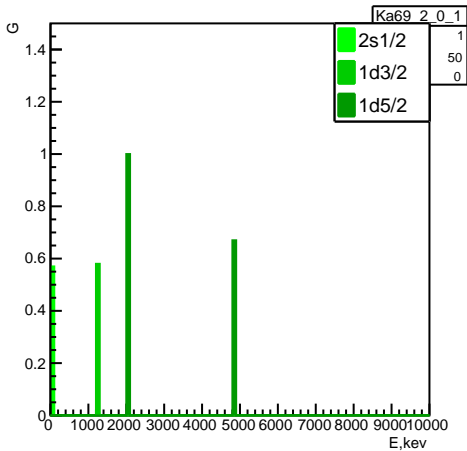
-13483.1 2s1/2 0.58 0.44

-8519.76 1d3/2 0.40725 0.6905

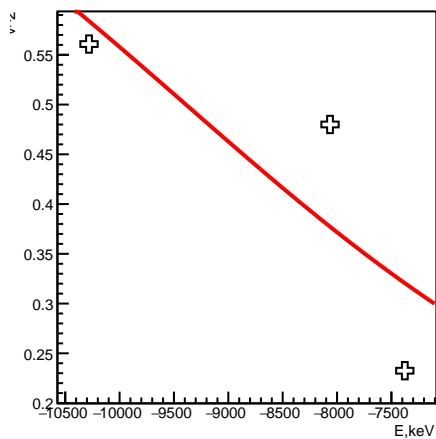
-14941.6 1d5/2 0.857667 0.811333

-3998.45 1f7/2 0.377875 0.27175

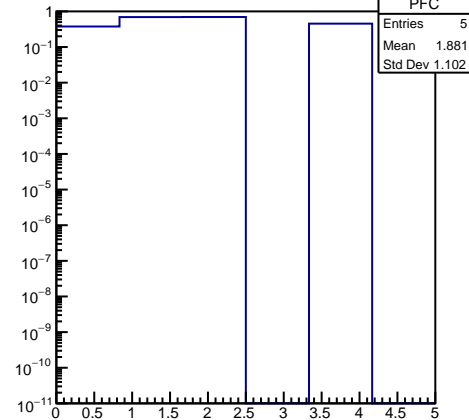
Ka69



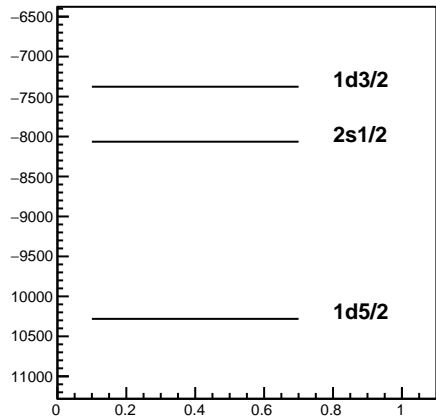
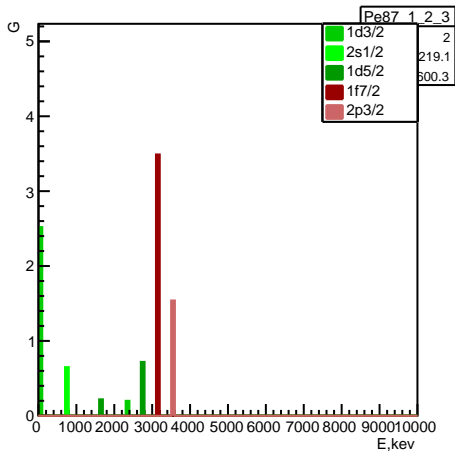
Occupancy



Penalty function components



Pe87



Experiment: Ka69 (4) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -9390.46 \pm 1067.59$ keV $\Delta: 5234.4 \pm 3796.33$ keV

penalty: 0.443559

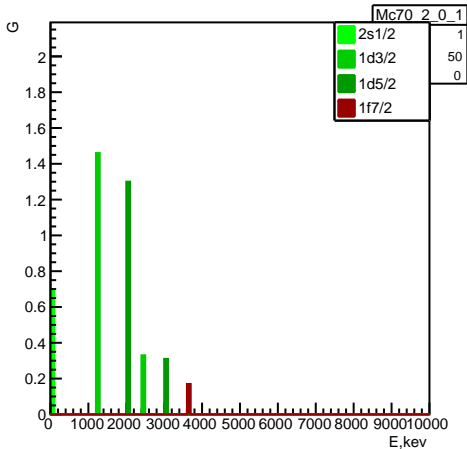
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-8064.6 2s1/2 0.48 0.61

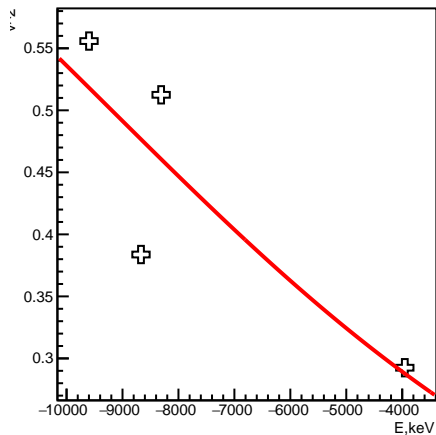
-7376.75 1d3/2 0.2325 0.825

-10281.3 1d5/2 0.560833 0.435

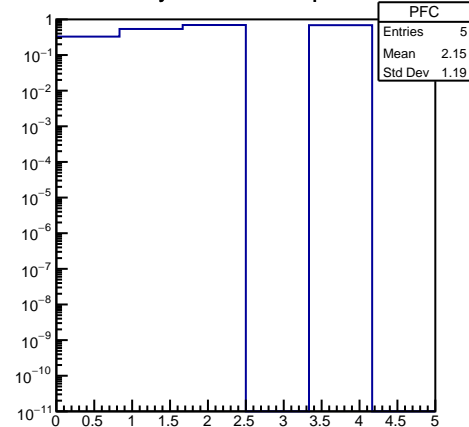
Mc70



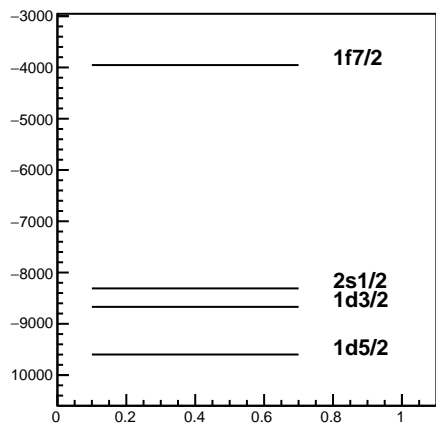
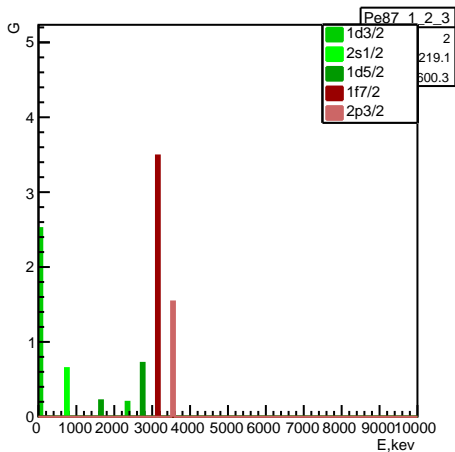
Occupancy



Penalty function components



Pe87



Experiment: Mc70 (6) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9192.23 \pm 1102.43 keV

Δ : 11175.2 \pm 5764.92 keV

penalty: 0.450205

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

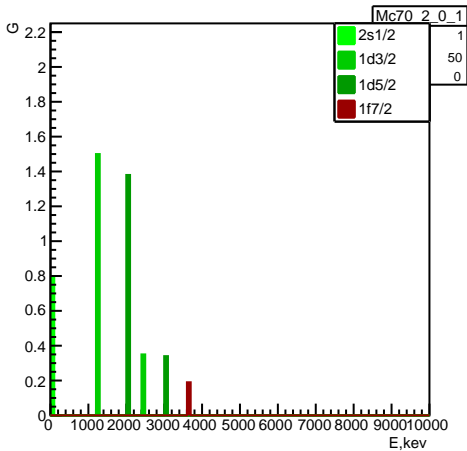
-8309.51 2s1/2 0.5125 0.675

-8669.61 1d3/2 0.38375 1.1275

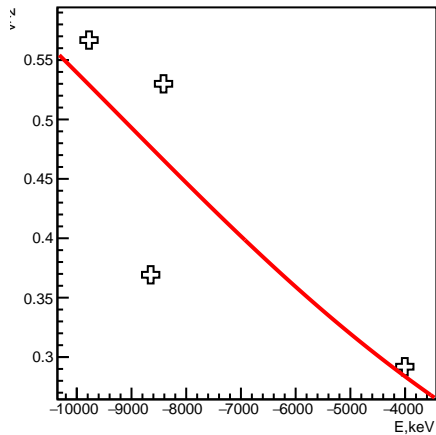
-9598.9 1d5/2 0.555833 0.425

-3953.72 1f7/2 0.2925 0.4575

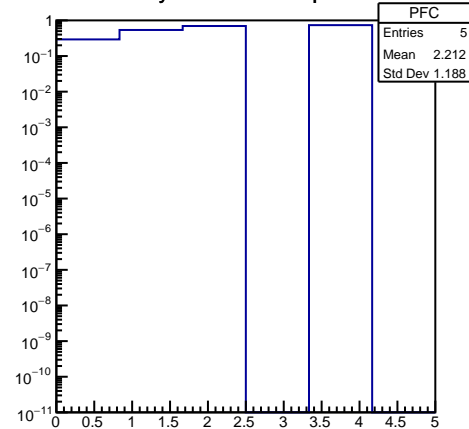
Mc70



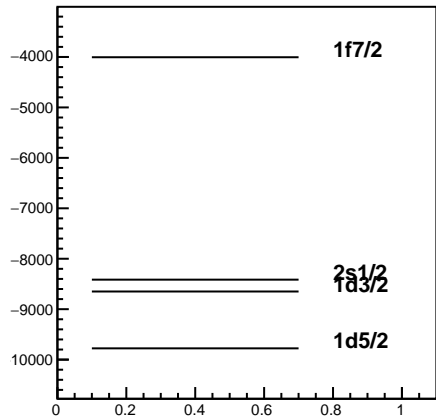
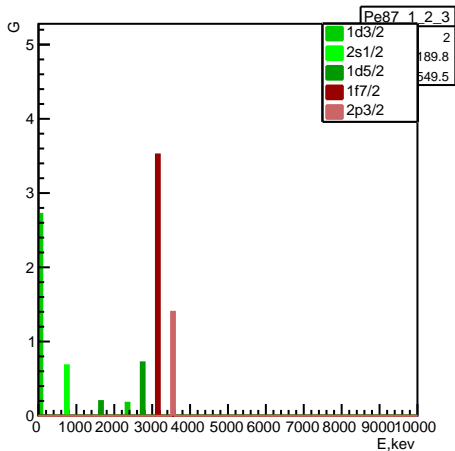
Occupancy



Penalty function components



Pe87



Experiment: Mc70 (6) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 $E_F: -9149.96 \pm 1189.03$ keV $\Delta: 10730 \pm 6163.9$ keV

penalty: 0.452485

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

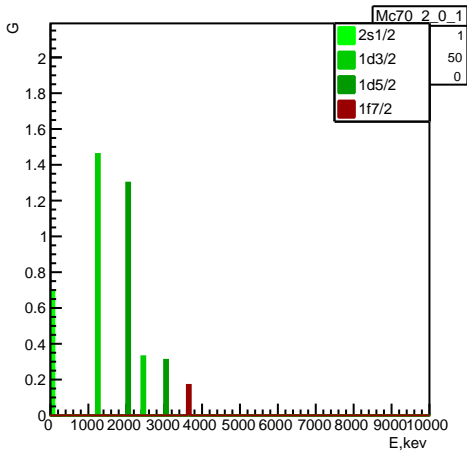
-8414.63 2s1/2 0.53 0.74

-8649.54 1d3/2 0.36925 1.1865

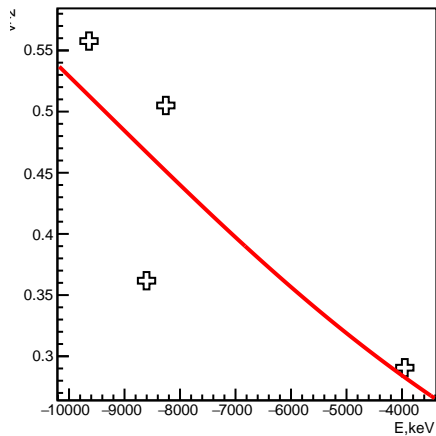
-9776.62 1d5/2 0.566833 0.439667

-4005.08 1f7/2 0.291875 0.46375

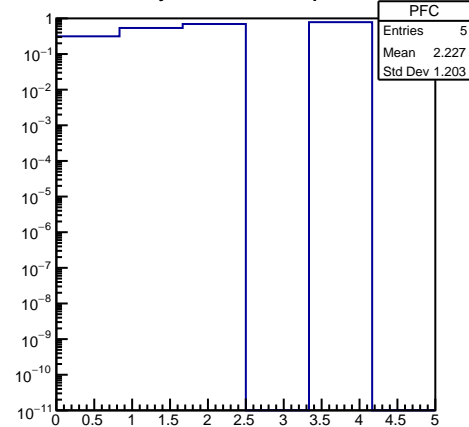
Mc70



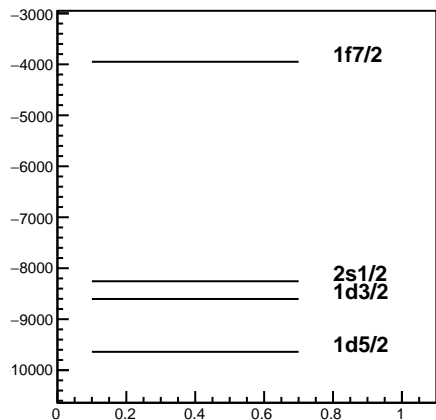
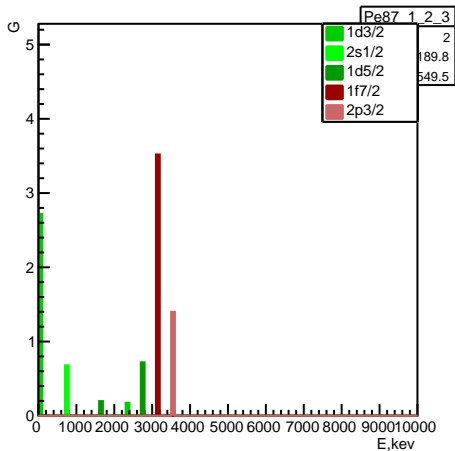
Occupancy



Penalty function components



Pe87



Experiment: Mc70 (6) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9350.35 \pm 1290.25 keV

Δ : -11191.3 \pm 6569.48 keV

penalty: 0.466459

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

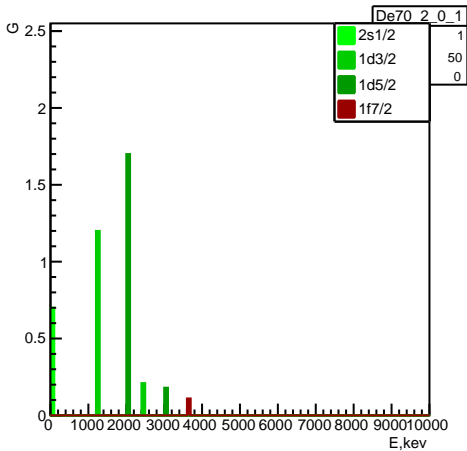
-8255.7 2s1/2 0.505 0.69

-8603.24 1d3/2 0.36175 1.1715

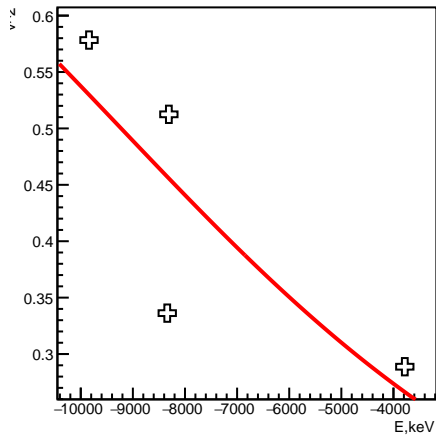
-9639.87 1d5/2 0.557667 0.421333

-3949.65 1f7/2 0.290625 0.46125

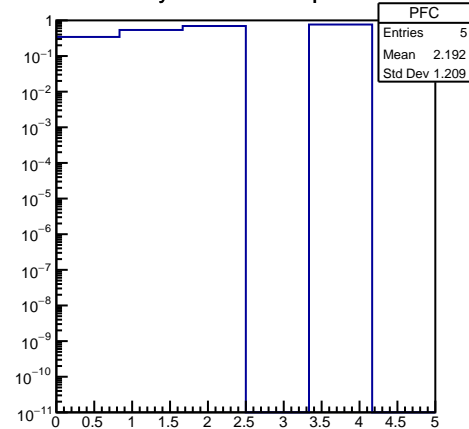
De70



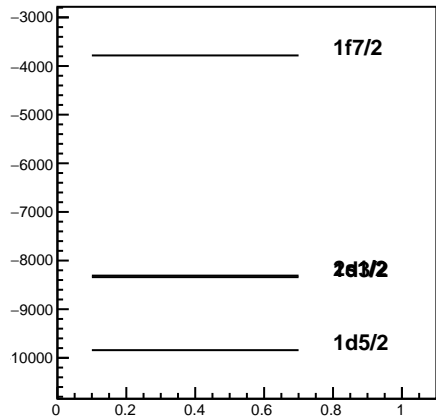
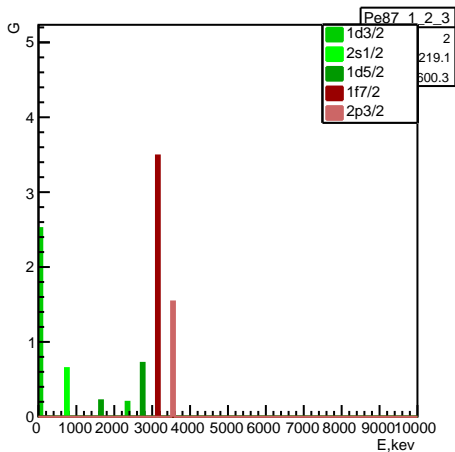
Occupancy



Penalty function components



Pe87



Experiment: De70 (6) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9225.46 \pm 1302.42 keV

Δ : -10295.6 \pm 6412.42 keV

penalty: 0.468539

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

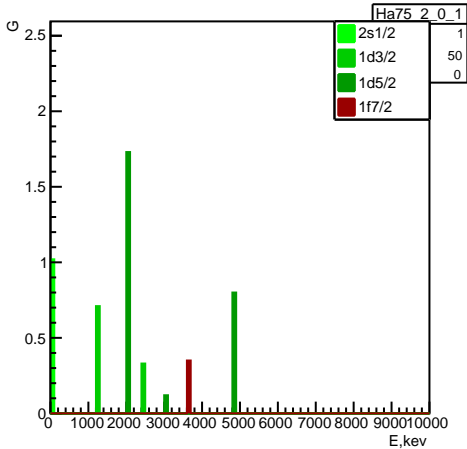
-8309.51 2s1/2 0.5125 0.675

-8340.62 1d3/2 0.33625 1.0325

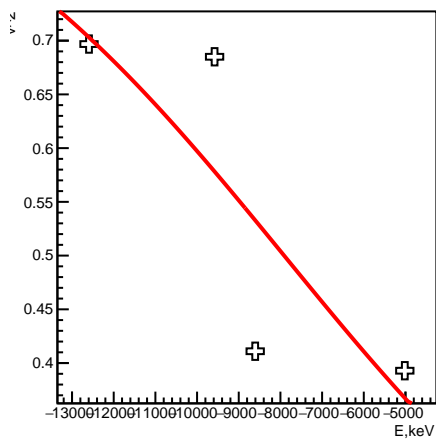
-9841.79 1d5/2 0.578333 0.47

-3782.43 1f7/2 0.28875 0.45

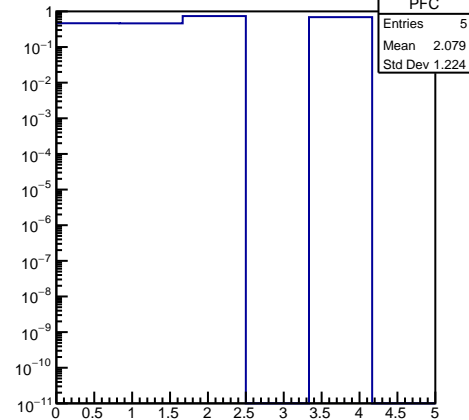
Ha75



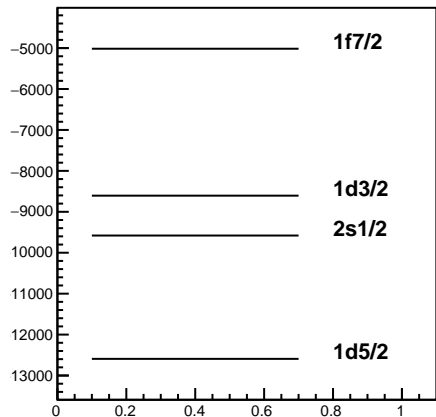
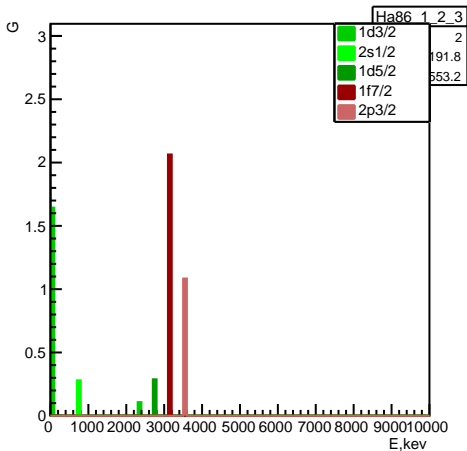
Occupancy



Penalty function components



Ha86



Experiment: Ha75 (7) Ha86 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 E_F : -7911.37 \pm 1424.35 keV Δ : -10536.9 \pm 5777.61 keV

penalty: 0.471098

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

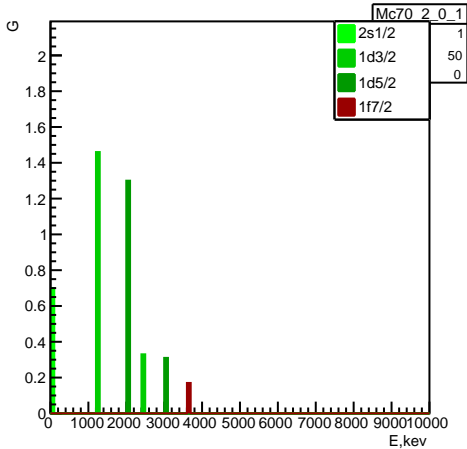
-9579.72 2s1/2 0.685 0.65

-8605.42 1d3/2 0.411 0.698

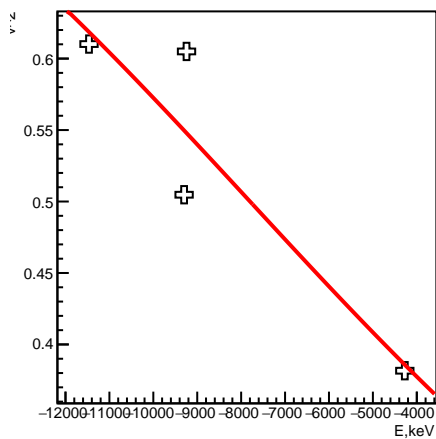
-12592.8 1d5/2 0.696833 0.489667

-5015.81 1f7/2 0.392875 0.30175

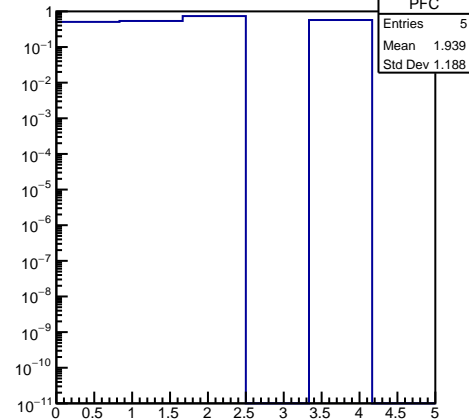
Mc70



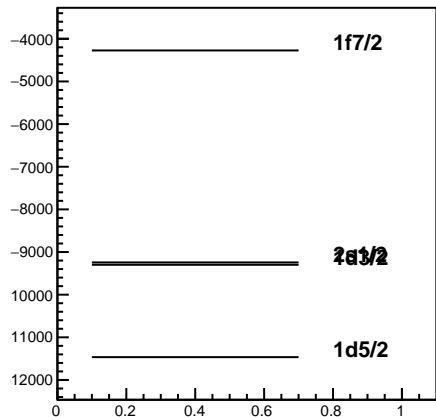
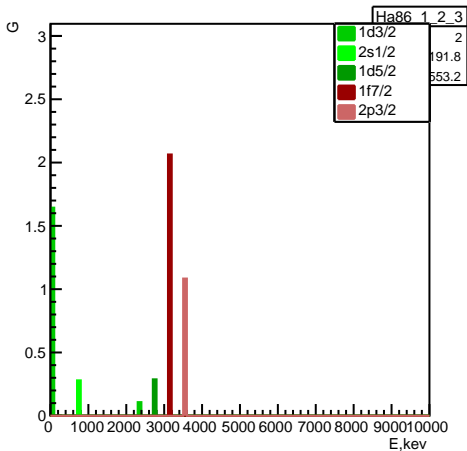
Occupancy



Penalty function components



Ha86



Experiment: Mc70 (6) Ha86 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -7797.54 \pm 854.822 keV

Δ : 15021.5 \pm 4799.61 keV

penalty: 0.471551

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

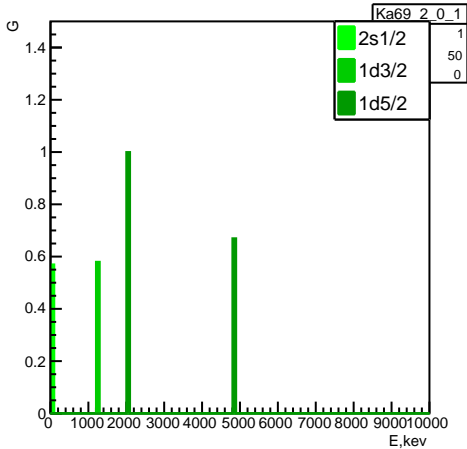
-9244 2s1/2 0.605 0.49

-9299.06 1d3/2 0.50475 0.8855

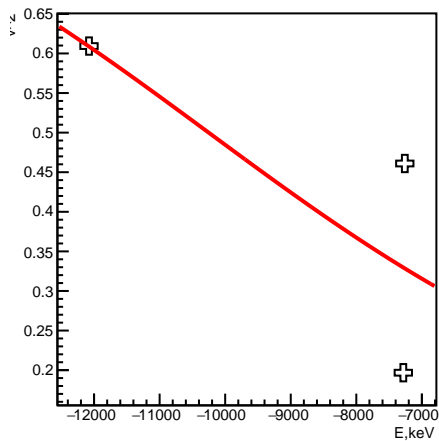
-11464.7 1d5/2 0.610167 0.316333

-4273.28 1f7/2 0.381625 0.27925

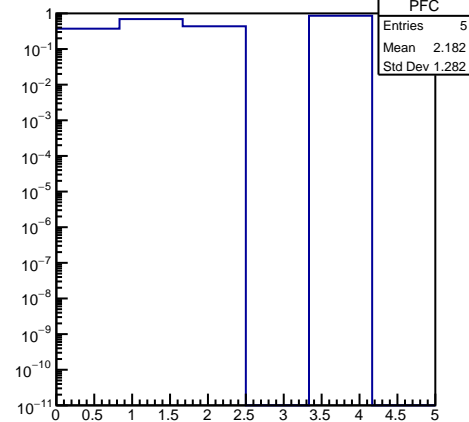
Ka69



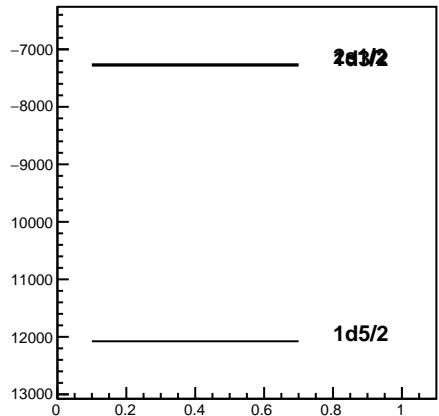
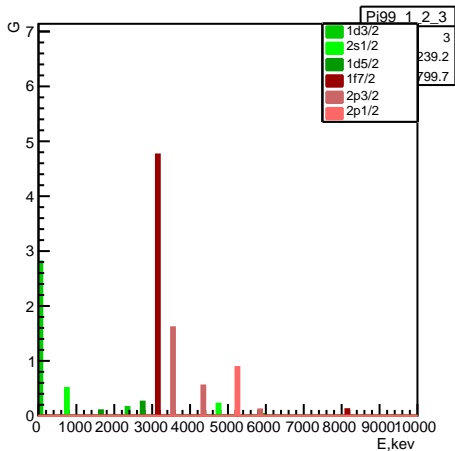
Occupancy



Penalty function components



Pi99



Experiment: Ka69 (4) Pi99 (13)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 $E_F: -10251.8 \pm 2277.43$ keV $\Delta: 8190.28 \pm 7193.24$ keV

penalty: 0.47165

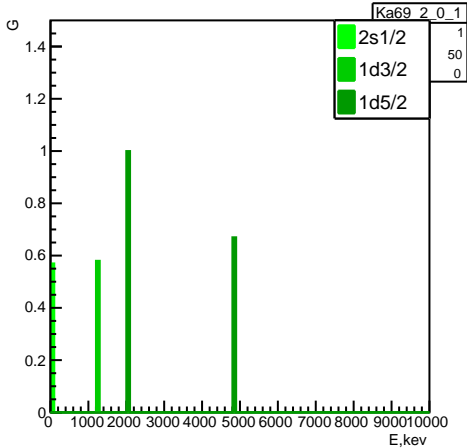
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-7260.43 2s1/2 0.461 0.648

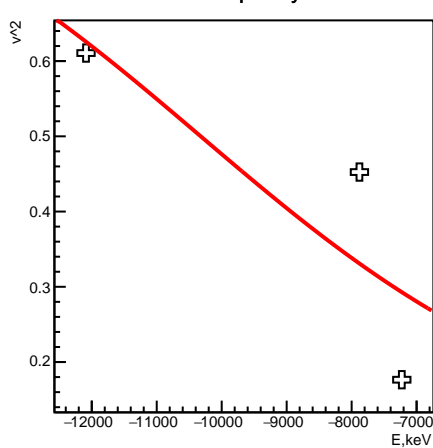
-7283.09 1d3/2 0.19675 0.8965

-12077.1 1d5/2 0.609333 0.338

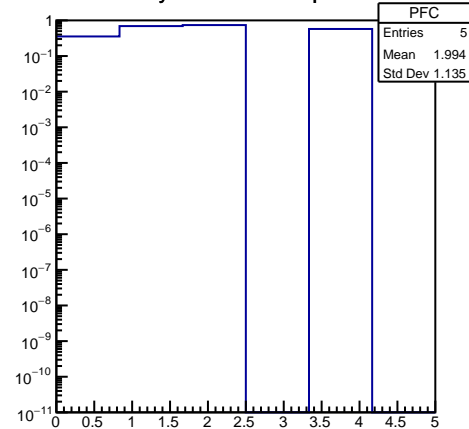
Ka69



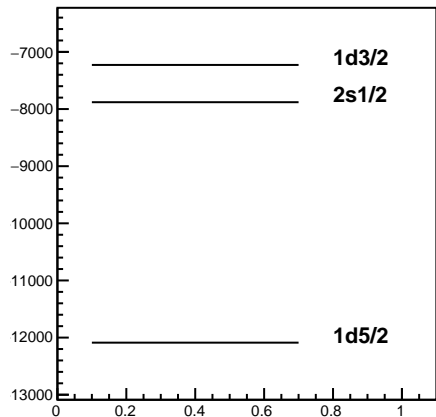
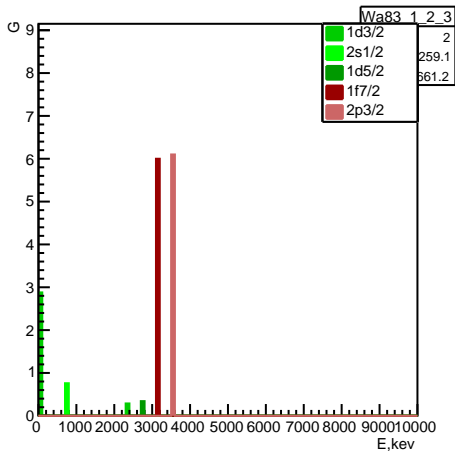
Occupancy



Penalty function components



Wa83



Experiment: Ka69 (4) Wa83 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 E_F : -10323 \pm 1761.95 keV Δ : 6799.66 \pm 4811.27 keV

penalty: 0.471997

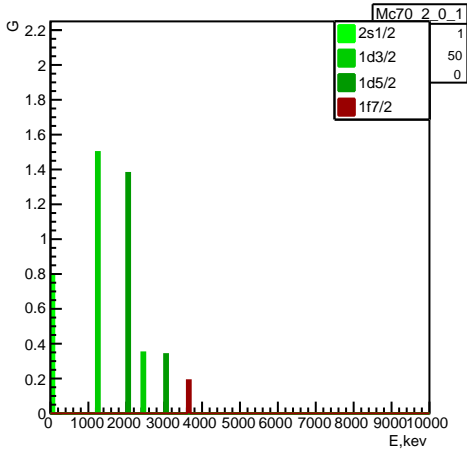
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-7880.15 2s1/2 0.4525 0.665

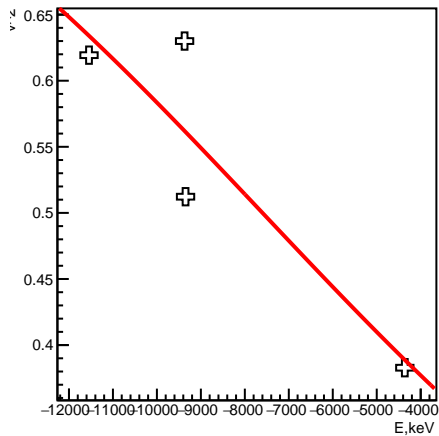
-7227.9 1d3/2 0.1765 0.937

-12088.6 1d5/2 0.610667 0.335333

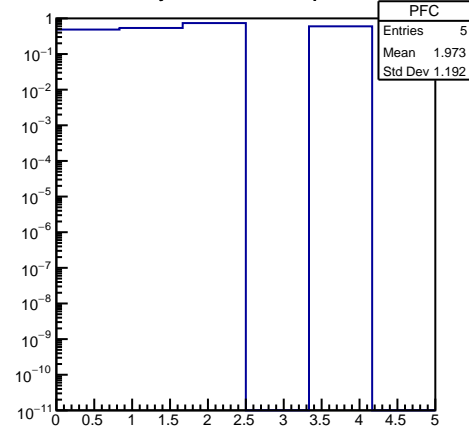
Mc70



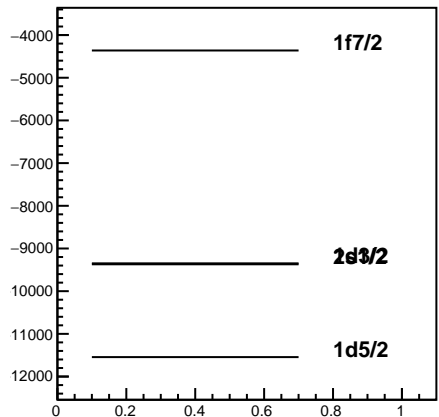
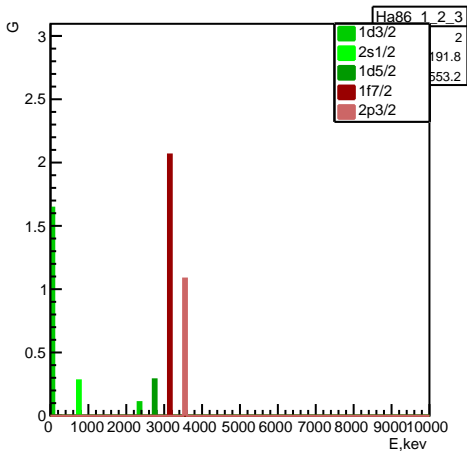
Occupancy



Penalty function components



Ha86



Experiment: Mc70 (6) Ha86 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -7598.21 \pm 975.795 keV

Δ : 14186.6 \pm 5016.77 keV

penalty: 0.472443

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

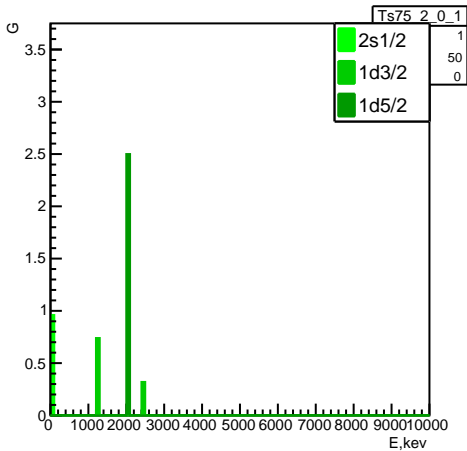
-9370.28 2s1/2 0.63 0.54

-9348.47 1d3/2 0.51225 0.9005

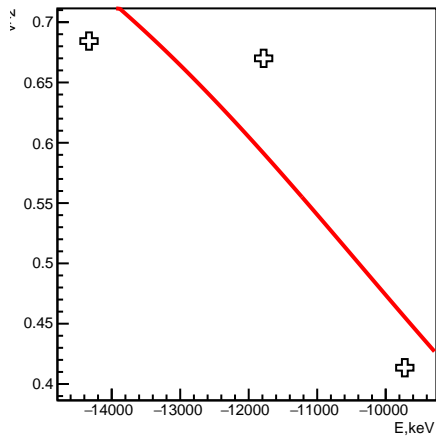
-11544.4 1d5/2 0.619333 0.334667

-4361.64 1f7/2 0.382875 0.28175

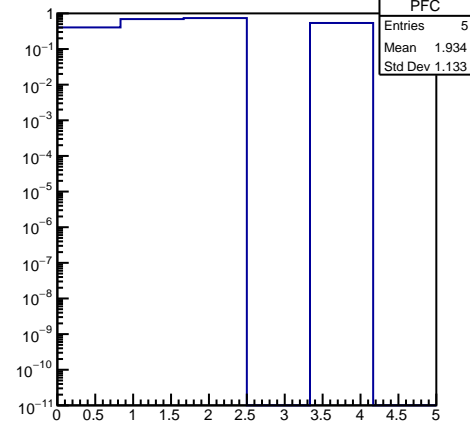
Ts75



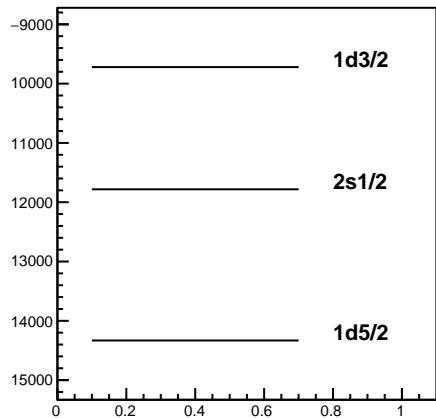
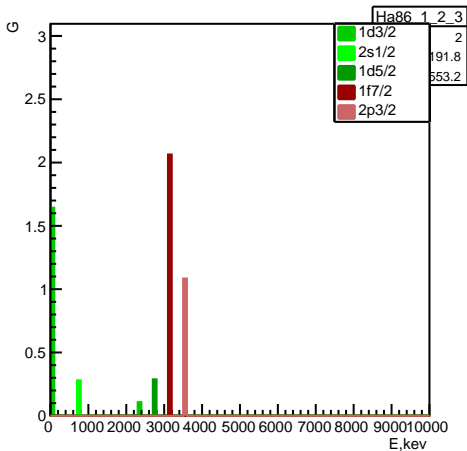
Occupancy



Penalty function components



Ha86



Experiment: Ts75 (4) Ha86 (6)

proton transfer

p separation energy A:13516.9, A+1: 7297.3:

E_F: -10393.2 \pm 1139.48 keV

Δ : 7488.65 \pm 4507.87 keV

penalty: 0.474731

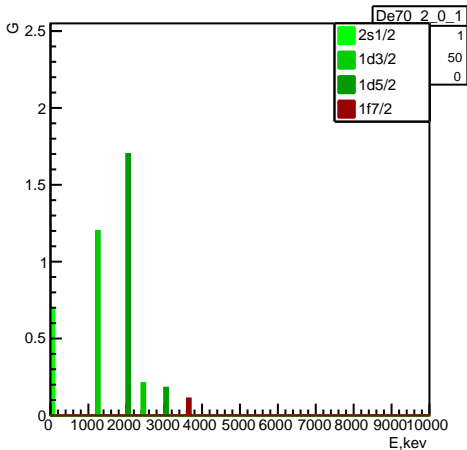
SPE,keV nlj OCC $\frac{G^+ + G^-}{2J+1}$

-11782.1 2s1/2 0.67 0.62

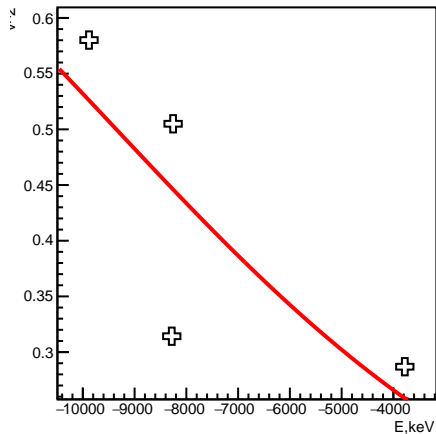
-9721.2 1d3/2 0.4135 0.703

-14331.7 1d5/2 0.684333 0.464667

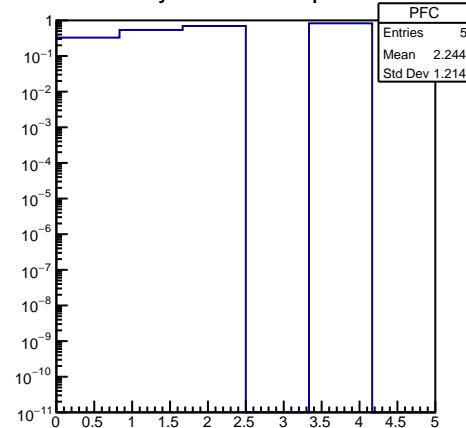
De70



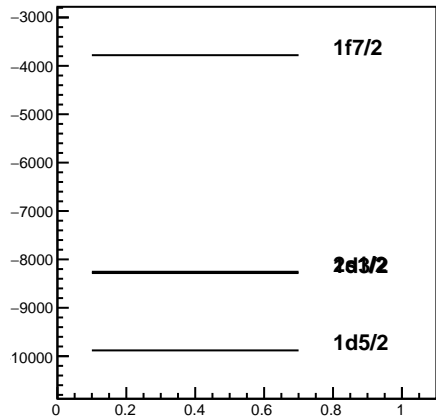
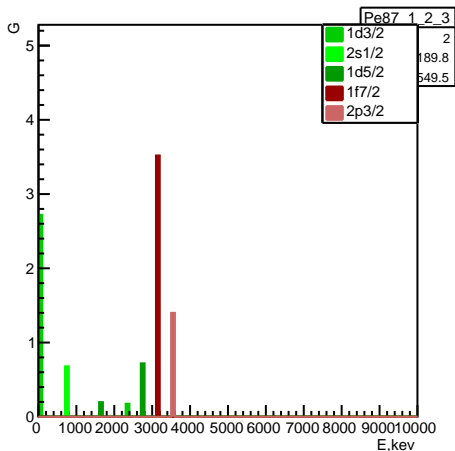
Occupancy



Penalty function components



Pe87



Experiment: De70 (6) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

 E_F : -9352.75 ± 1452.56 keV Δ : -10101.8 ± 6940.11 keV

penalty: 0.478183

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

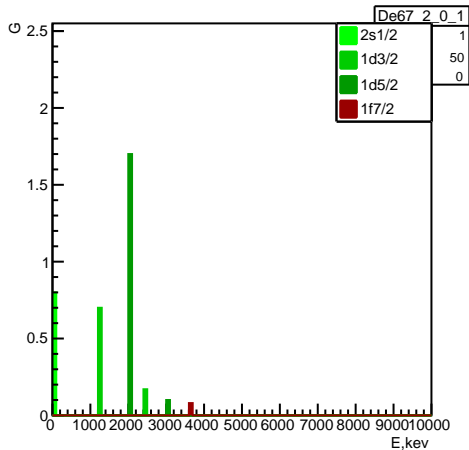
-8255.7 2s1/2 0.505 0.69

-8281.84 1d3/2 0.31425 1.0765

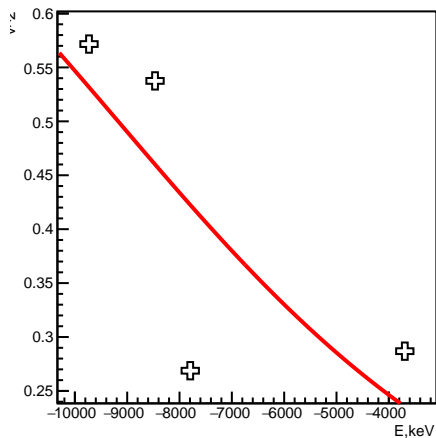
-9880.72 1d5/2 0.580167 0.466333

-3779.71 1f7/2 0.286875 0.45375

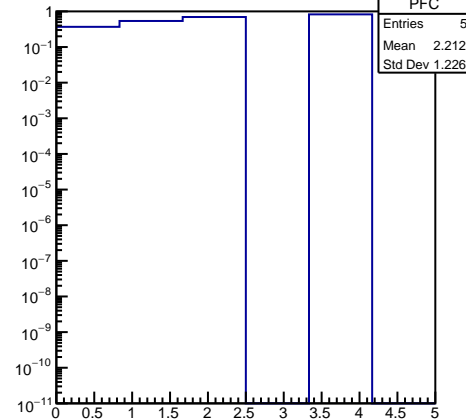
De67



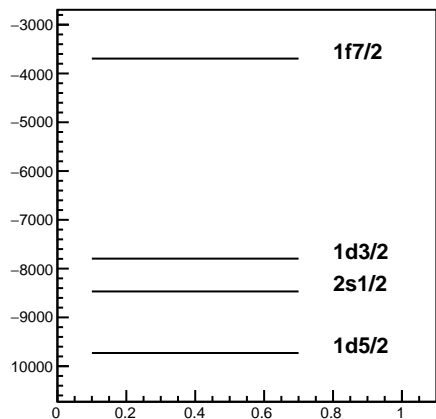
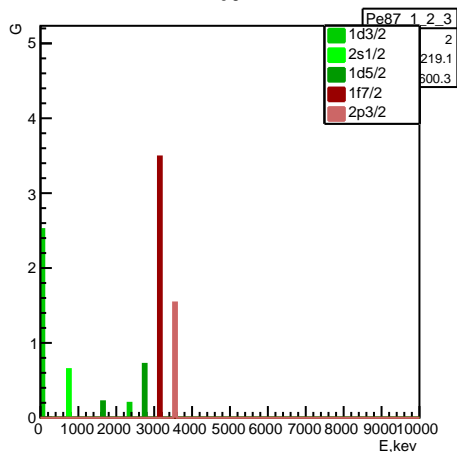
Occupancy



Penalty function components



Pe87



Experiment: De67 (6) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9172.33 \pm 1465.1 keV

Δ : 8784.88 \pm 6910.41 keV

penalty: 0.485532

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

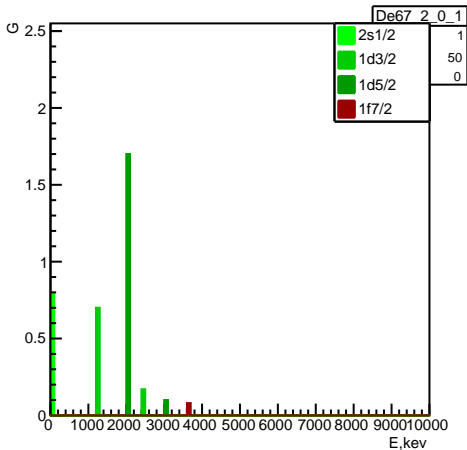
-8468.01 2s1/2 0.5375 0.725

-7795.2 1d3/2 0.26875 0.8975

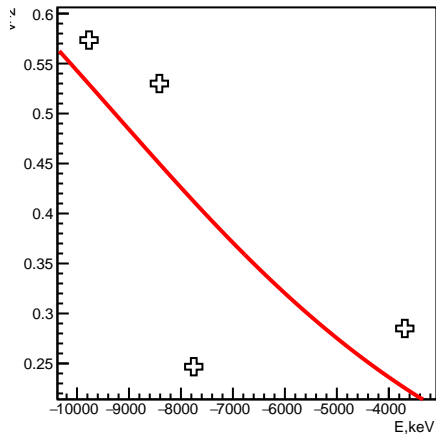
-9729.88 1d5/2 0.571667 0.456667

-3694.62 1f7/2 0.286875 0.44625

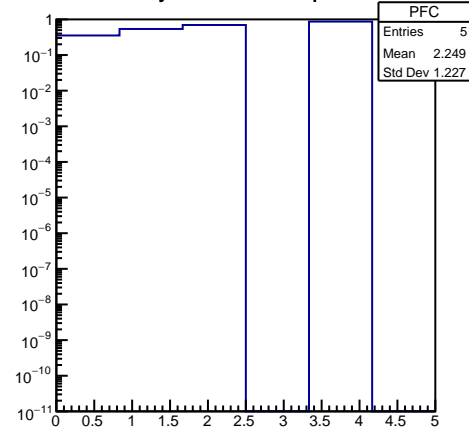
De67



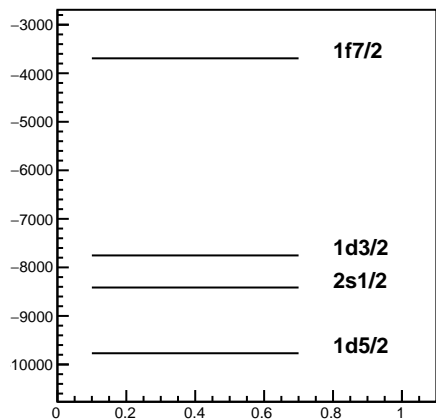
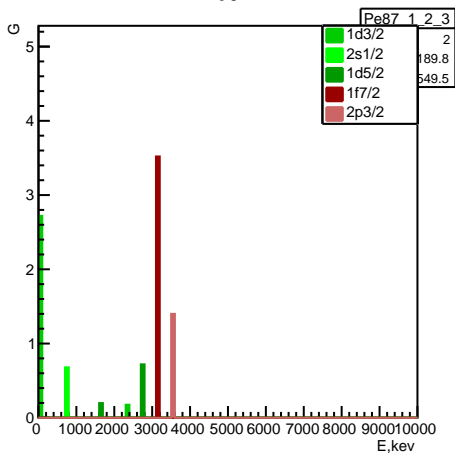
Occupancy



Penalty function components



Pe87



Experiment: De67 (6) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9270.51 \pm 1578.49 keV

Δ : 8488.7 \pm 7268.9 keV

penalty: 0.491136

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

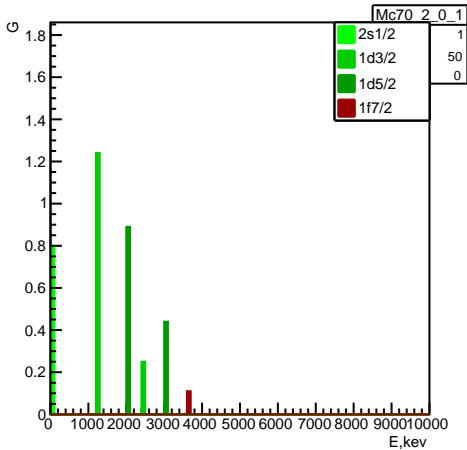
-8414.63 2s1/2 0.53 0.74

-7753.48 1d3/2 0.24675 0.9415

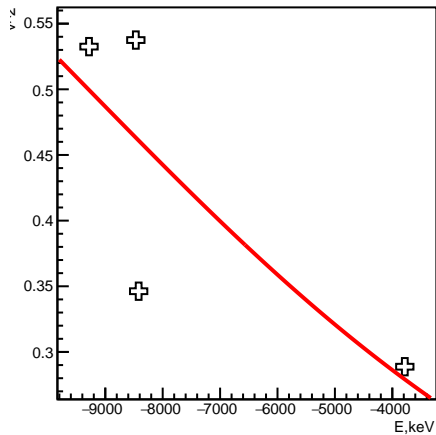
-9769.04 1d5/2 0.5735 0.453

-3692.61 1f7/2 0.285 0.45

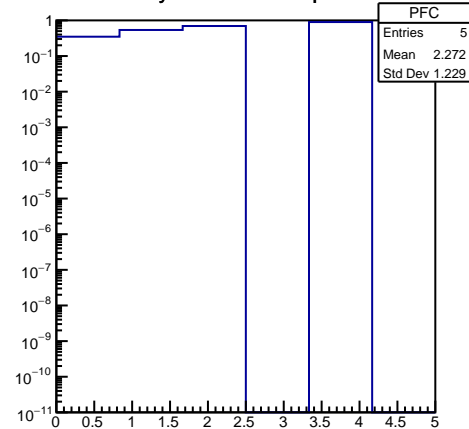
Mc70



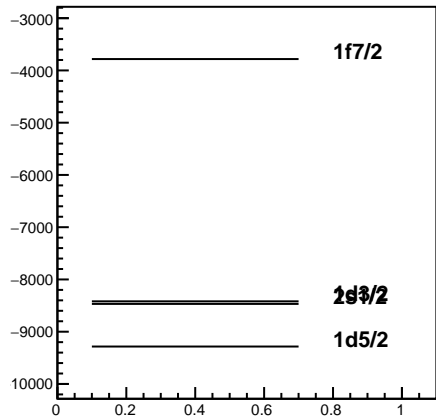
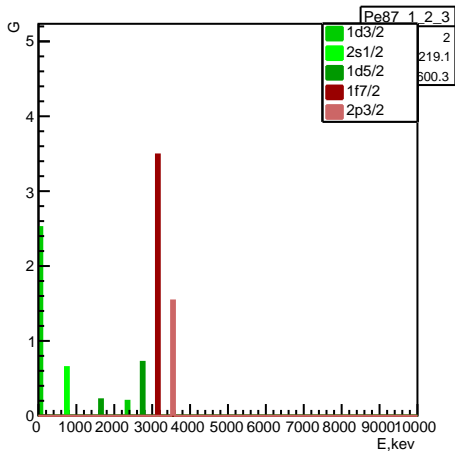
Occupancy



Penalty function components



Pe87



Experiment: Mc70 (6) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5

E_F: -9294.83 \pm 1473.88 keV

Δ : 11194.6 \pm 7523.98 keV

penalty: 0.49616

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

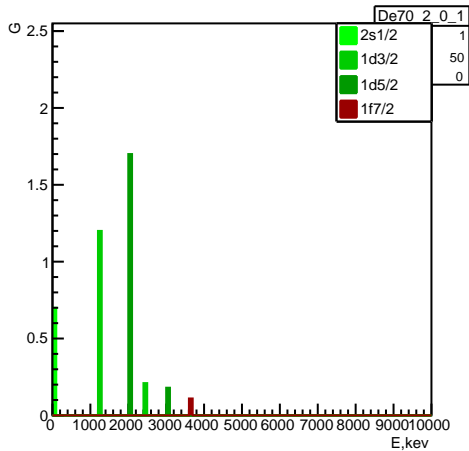
-8468.01 2s1/2 0.5375 0.725

-8418.85 1d3/2 0.34625 1.0525

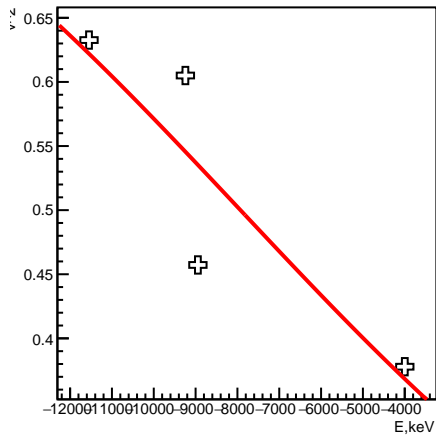
-9283.78 1d5/2 0.5325 0.378333

-3782.43 1f7/2 0.28875 0.45

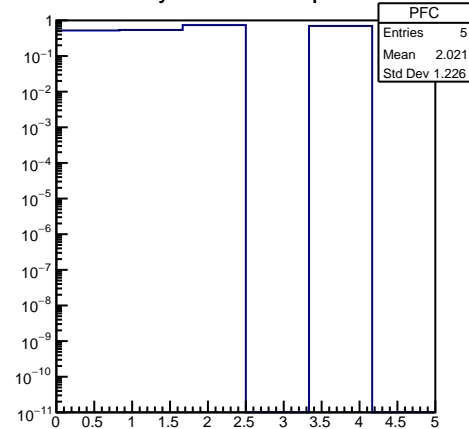
De70



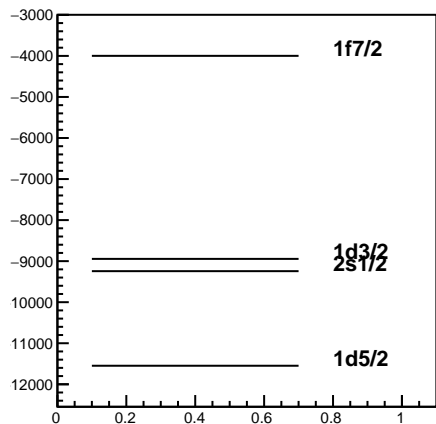
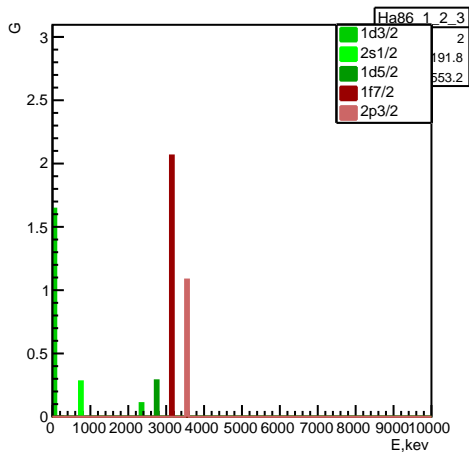
Occupancy



Penalty function components



Ha86



Experiment: De70 (6) Ha86 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -7926.84 \pm 1093.7 keV

Δ : 14391.1 \pm 5848.02 keV

penalty: 0.499456

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

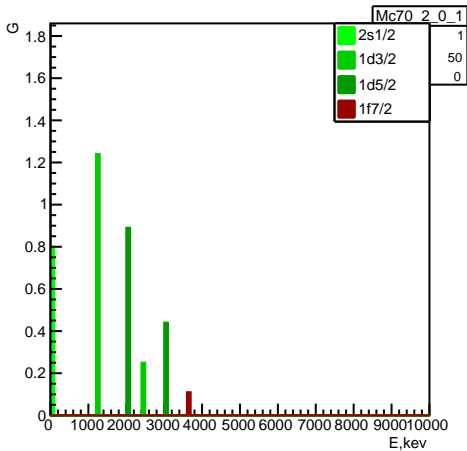
-9244 2s1/2 0.605 0.49

-8945 1d3/2 0.45725 0.7905

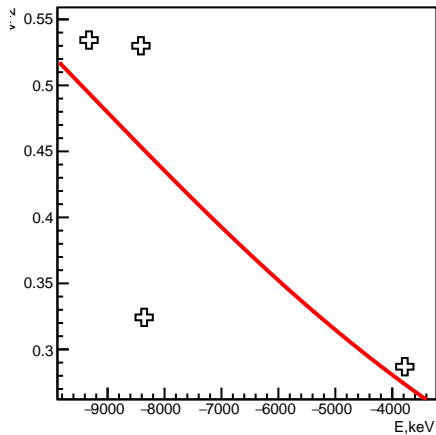
-11548.3 1d5/2 0.632667 0.361333

-3998.45 1f7/2 0.377875 0.27175

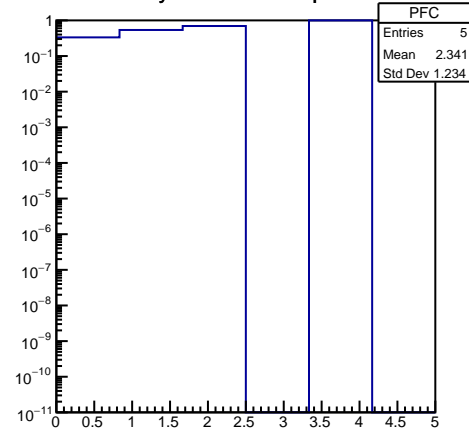
Mc70



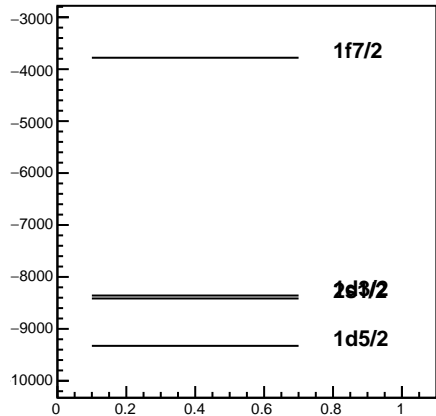
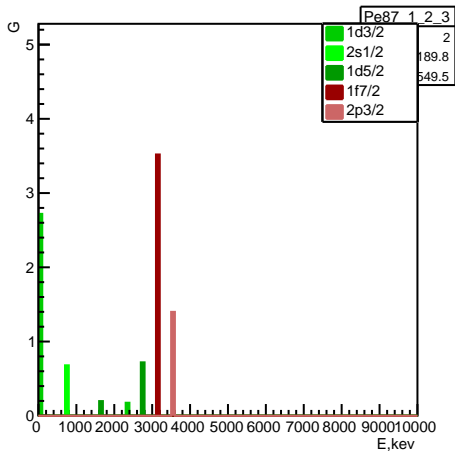
Occupancy



Penalty function components



Pe87



Experiment: Mc70 (6) Pe87 (7)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

 E_F : -9459.74 \pm 1699.44 keV Δ : 11185.9 \pm 8377.27 keV

penalty: 0.513577

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

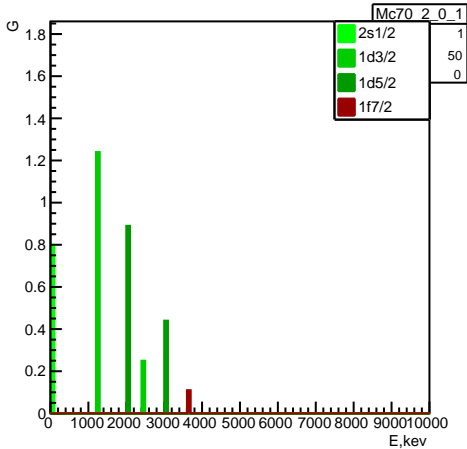
-8414.63 2s1/2 0.53 0.74

-8358 1d3/2 0.32425 1.0965

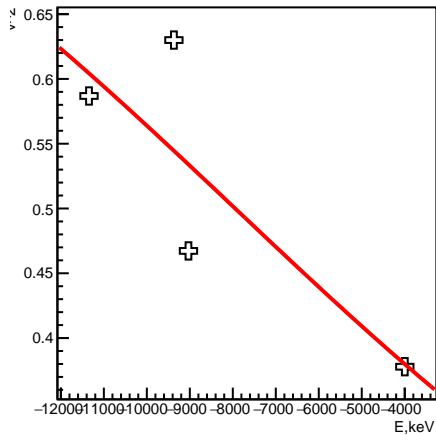
-9326.76 1d5/2 0.534333 0.374667

-3779.71 1f7/2 0.286875 0.45375

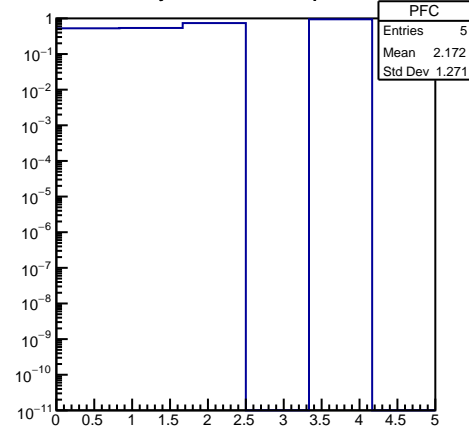
Mc70



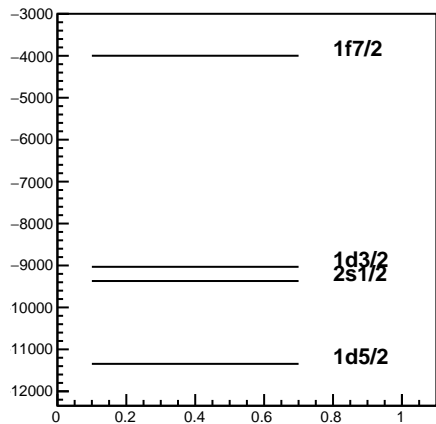
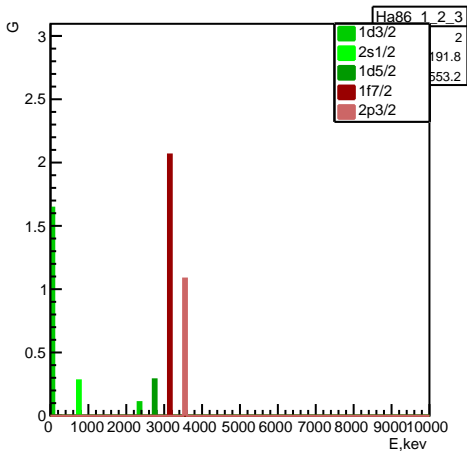
Occupancy



Penalty function components



Ha86



Experiment: Mc70 (6) Ha86 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -7944.81 \pm 1322.77 keV

Δ : 15942.3 \pm 7901.83 keV

penalty: 0.549572

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

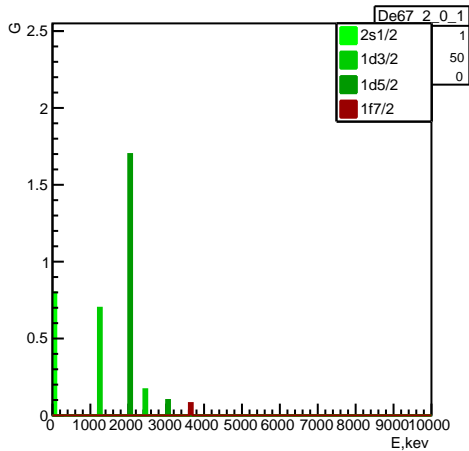
-9370.28 2s1/2 0.63 0.54

-9031.67 1d3/2 0.46725 0.8105

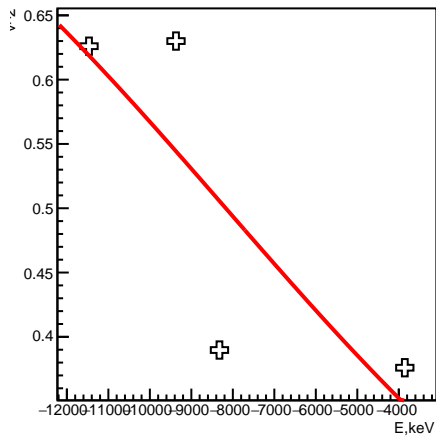
-11345.5 1d5/2 0.586833 0.269667

-3998.45 1f7/2 0.377875 0.27175

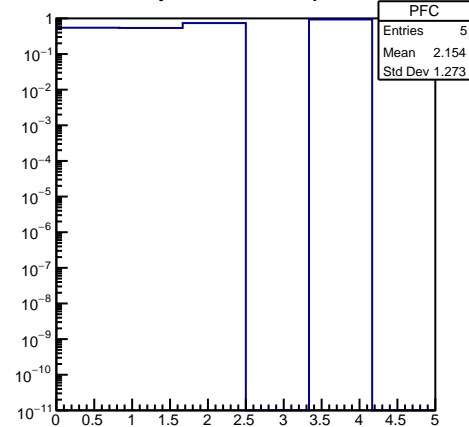
De67



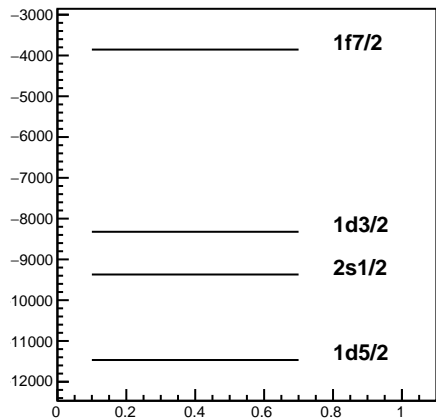
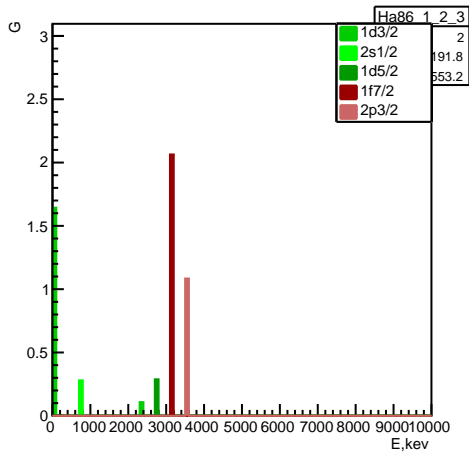
Occupancy



Penalty function components



Ha86



Experiment: De67 (6) Ha86 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -8170.23 \pm 1497.08 keV

Δ : 13487.8 \pm 7814.08 keV

penalty: 0.551498

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

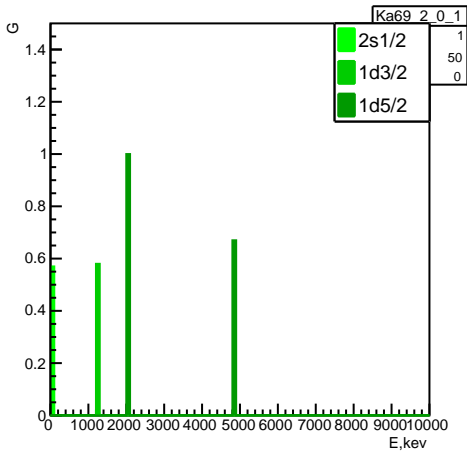
-9370.28 2s1/2 0.63 0.54

-8322.69 1d3/2 0.38975 0.6555

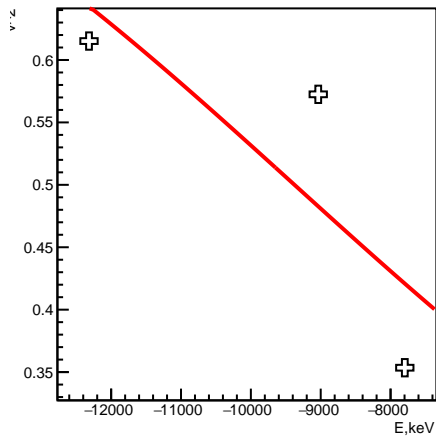
-11466.8 1d5/2 0.626 0.348

-3855.27 1f7/2 0.376 0.268

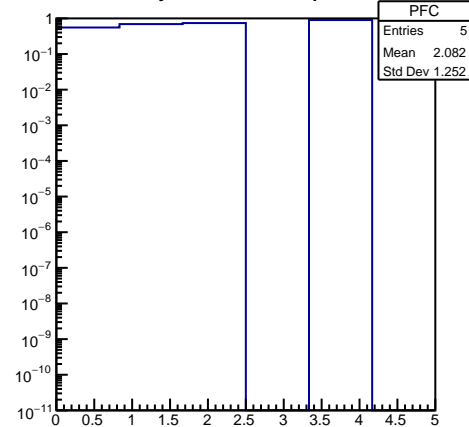
Ka69



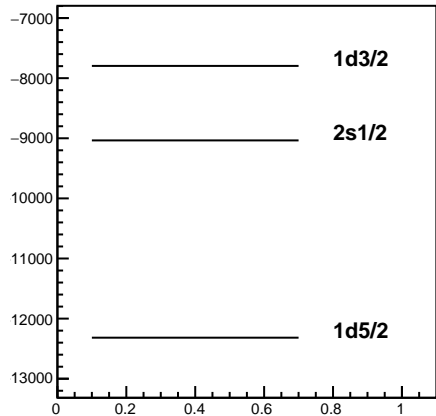
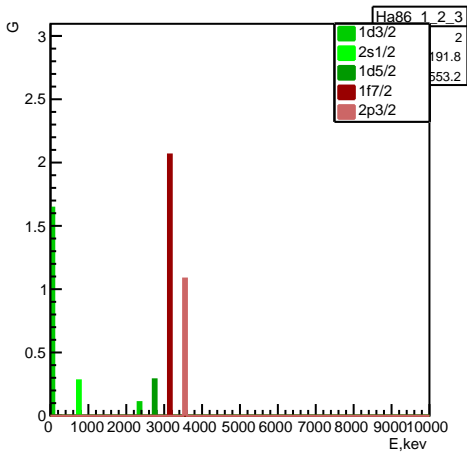
Occupancy



Penalty function components



Ha86



Experiment: Ka69 (4) Ha86 (6)

neutron transfer

n separation energy A:10607.9, A+1: 6586.5!

E_F: -9375.53 \pm 1389.28 keV

Δ : 9856.14 \pm 7528.91 keV

penalty: 0.577078

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

-9035.41 2s1/2 0.5725 0.425

-7796.14 1d3/2 0.3535 0.583

-12317.2 1d5/2 0.615167 0.326333