

r6978

898 keV (884-908)

Gaus Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	3.14608e+02	1.92416e+01	6.72368e-02	3.71618e-05
2	Mean	8.97411e+02	5.86829e-02	4.27919e-04	7.50604e-03
3	Sigma	1.31074e+00	5.57907e-02	2.93711e-05	1.23632e-01

Pol1 Fit:

Minimizer is Linear

Chi2	=	442.151		
NDF	=	10		
p0	=	253.571	+/-	119.349
p1	=	-0.266927	+/-	0.13301

Gaus+Pol1 Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	p0	2.56727e+02	1.19590e+02	3.42540e-01	-1.59965e-08
2	p1	-2.74308e-01	1.33282e-01	-3.81758e-04	-2.15380e-05
3	p2	3.04200e+02	fixed		
4	p3	8.97407e+02	6.12917e-02	1.14264e-05	3.80371e-07
5	p4	1.21432e+00	4.04809e-02	1.38700e-06	-2.02833e-06

Sub Fit (Gaus):

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	2.92500e+02	5.46247e+00	6.28120e-04**	at limit **
2	Mean	8.97416e+02	5.66999e-02	4.27921e-04	-2.70233e-03
3	Sigma	1.12141e+00	3.13788e-02	7.17795e-05	1.42949e-03

sub1	
Entries	330
Mean	897.5 ± 0.04042
RMS	0.8086 ± 0.02858
Underflow	1.194e+05
Overflow	4454
Integral(w)	853.8
Kurtosis	-17.09 ± 0.2449
$\chi^2 / \text{ndf}$	21.03 / 2
Prob	2.714e-05
Constant	292.5 ± 5.5
Mean	897.4 ± 0.1
Sigma	1.121 ± 0.031

### 1836.1 keV (1830-1846)

#### Gaus Fit:

EXT PARAMETER NO.	NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	1.89000e+02	8.08210e+00	7.14211e-04**	at limit **
2	Mean	1.83760e+03	7.35920e-02	8.76235e-04	-4.42211e-03
3	Sigma	1.25873e+00	4.83622e-02	8.06647e-05	-9.00288e-04

#### Pol1 Fit:

Minimizer is Linear

Chi2	=	291.471			
Ndf	=	5			
p0	=	527.572	+/-	257.777	
p1	=	-0.284586	+/-	0.140014	

#### Gaus+Pol1 Fit:

EXT PARAMETER NO.	NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	p0	6.95478e+01	2.66083e+02	-1.18651e+00	1.65234e-07
2	p1	-3.67690e-02	1.44497e-01	6.44374e-04	2.48920e-04
3	p2	1.87000e+02	fixed		
4	p3	1.83759e+03	7.46455e-02	-3.46831e-05	-2.19895e-05
5	p4	1.22267e+00	5.16545e-02	6.02324e-05	1.34965e-05

#### Sub Fit (Gaus):

EXT PARAMETER NO.	NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	1.85000e+02	5.20102e+00	5.25409e-04**	at limit **
2	Mean	1.83760e+03	7.10571e-02	8.76237e-04	6.34940e-04
3	Sigma	1.19410e+00	4.38549e-02	6.71192e-05	-1.14651e-03

sub1	
Entries	208
Mean	1838 ± 0.05331
RMS	0.8992 ± 0.0377
Underflow	1.242e+05
Overflow	288.8
Integral(w)	587.5
Kurtosis	-36.11 ± 0.2905
$\chi^2 / \text{ndf}$	9.201 / 4
Prob	0.05627
Constant	185 ± 5.2
Mean	1838 ± 0.1
Sigma	1.194 ± 0.044

r6980

898 keV

Gaus Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	4.55880e+03	2.98950e+01	2.95061e-02**	at limit **
2	Mean	8.95488e+02	1.63822e-02	4.27002e-04	-3.19395e-03
3	Sigma	1.51041e+00	1.13639e-02	2.27343e-04	-4.12608e-02

Pol1 Fit:

Minimizer is Linear

Chi2	=	6820.02		
Ndf	=	10		
p0	=	1606.02	+/-	548.538
p1	=	-1.47705	+/-	0.611959

Gaus+Pol1 Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	p0	6.26402e+02	5.50810e+02	7.04735e+00	-2.17357e-08
2	p1	-4.66126e-01	6.14437e-01	-7.86144e-03	-1.09744e-05
3	p2	4.34800e+03	fixed		
4	p3	8.95472e+02	1.76283e-02	1.86650e-05	-2.08328e-05
5	p4	1.35626e+00	1.20334e-02	-4.78434e-06	-3.71973e-05

Sub Fit (Gaus):

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	4.13250e+03	3.92334e+00	8.27503e-04**	at limit **
2	Mean	8.95417e+02	1.60758e-02	4.26968e-04	-3.50736e-02
3	Sigma	1.19573e+00	8.29609e-03	1.09588e-04	-1.64626e-01

sub1	
Entries	1406
Mean	895.4 ± 0.008881
RMS	0.6566 ± 0.00628
Underflow	3.493e+05
Overflow	6.788e+04
Integral(w)	1.27e+04
Kurtosis	-245.9 ± 0.06626
$\chi^2 / \text{ndf}$	756 / 3
Prob	0
Constant	4132 ± 3.9
Mean	895.4 ± 0.0
Sigma	1.196 ± 0.008

### 1836.1 keV (1820-1850)

#### Gaus Fit:

EXT	PARAMETER			STEP	FIRST
NO.	NAME	VALUE	ERROR	SIZE	DERIVATIVE
1	Constant	2.20510e+03	9.85845e+00	9.63379e-04**	at limit **
2	Mean	1.83347e+03	2.60904e-02	8.74264e-04	8.92469e-05
3	Sigma	1.90073e+00	1.52006e-02	1.08828e-04	1.83398e-03

#### Pol1 Fit:

Minimizer is Linear

Chi2	=	5085.64			
Ndf	=	13			
p0	=	672.505	+/-	256.138	
p1	=	-0.348491	+/-	0.139492	

#### Gaus+Pol1 Fit:

EXT	PARAMETER			STEP	FIRST
NO.	NAME	VALUE	ERROR	SIZE	DERIVATIVE
1	p0	7.33522e+01	2.57572e+02	4.92158e-03	-9.49450e-05
2	p1	-2.89860e-02	1.40258e-01	2.68027e-06	-1.93179e-01
3	p2	2.18500e+03	fixed		
4	p3	1.83346e+03	2.68910e-02	8.74262e-04	1.52951e-02
5	p4	1.84934e+00	1.58953e-02	5.08981e-05	-2.02965e-02

#### Sub Fit (Gaus):

EXT	PARAMETER			STEP	FIRST
NO.	NAME	VALUE	ERROR	SIZE	DERIVATIVE
1	Constant	2.16090e+03	3.21702e+00	5.25316e-04**	at limit **
2	Mean	1.83339e+03	2.51844e-02	8.74229e-04	1.85985e-03
3	Sigma	1.72362e+00	1.19612e-02	8.12100e-05	1.54113e-03

sub1	
Entries	4678
Mean	1833 ± 0.02367
RMS	1.681 ± 0.01674
Underflow	4.211e+05
Overflow	4228
Integral(w)	1.021e+04
Kurtosis	-1.687 ± 0.06901
$\chi^2 / \text{ndf}$	193.3 / 5
Prob	7.753e-40
Constant	2161 ± 3.2
Mean	1833 ± 0.0
Sigma	1.724 ± 0.012

r7022

898 keV (884-908)

Gaus Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	4.01000e+02	2.38987e+01	3.27675e-03**	at limit **
2	Mean	8.97248e+02	4.66918e-02	4.27841e-04	-1.82355e-02
3	Sigma	1.03683e+00	2.60375e-02	1.72847e-04	3.75651e-03

Pol1 Fit:

Minimizer is Linear  
 Chi2 = 438.824  
 NDF = 10  
 p0 = -91.566 +/- 172.425  
 p1 = 0.128066 +/- 0.192494

Gaus+Pol1 Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	p0	1.71513e+01	1.72788e+02	2.84768e-03	1.34161e-04
2	p1	1.85989e-03	1.92910e-01	3.17914e-06	1.20690e-01
3	p2	3.81300e+02	fixed		
4	p3	8.97292e+02	5.69220e-02	4.27862e-04	-4.83240e-02
5	p4	9.44450e-01	3.19722e-02	6.04482e-05	-1.85586e-02

Sub Fit (Gaus):

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	3.62700e+02	3.12045e+00	7.37387e-04**	at limit **
2	Mean	8.97481e+02	4.05048e-02	4.27952e-04	-1.92125e-04
3	Sigma	7.50439e-01	1.90044e-02	7.43011e-05	-8.90971e-04

sub1	
Entries	22
Mean	897.4 ± 0.06686
RMS	1.167 ± 0.04728
Underflow	1.161e+05
Overflow	6035
Integral(w)	751.6
Kurtosis	-19.56 ± 0.2807
χ <sup>2</sup> / ndf	65.08 / 2
Prob	7.387e-15
Constant	362.7 ± 3.1
Mean	897.5 ± 0.0
Sigma	0.7504 ± 0.0190

### 1836.1 keV (1822-1850)

#### Gaus Fit:

EXT	PARAMETER			STEP	FIRST
NO.	NAME	VALUE	ERROR	SIZE	DERIVATIVE
1	Constant	1.77500e+02	1.05403e+01	1.19224e-03**	at limit **
2	Mean	1.83772e+03	8.23394e-02	8.76294e-04	8.79567e-04
3	Sigma	1.34057e+00	5.43669e-02	1.22204e-04	2.46393e-03

#### Pol1 Fit:

Minimizer is Linear

Chi2	=	303.441			
Ndf	=	12			
p0	=	-39.1997	+/-	73.8303	
p1	=	0.0223839	+/-	0.0402337	

#### Gaus+Pol1 Fit:

EXT	PARAMETER			STEP	FIRST
NO.	NAME	VALUE	ERROR	SIZE	DERIVATIVE
1	p0	-1.51294e+01	7.39354e+01	5.98716e-04	-1.63453e-05
2	p1	8.99005e-03	4.02924e-02	3.26270e-07	2.40203e-02
3	p2	1.76200e+02	fixed		
4	p3	1.83771e+03	8.31577e-02	8.76289e-04	-5.01627e-06
5	p4	1.30546e+00	5.49147e-02	8.23377e-05	4.39417e-05

#### Sub Fit (Gaus):

EXT	PARAMETER			STEP	FIRST
NO.	NAME	VALUE	ERROR	SIZE	DERIVATIVE
1	Constant	1.74200e+02	5.94808e+00	6.28068e-04**	at limit **
2	Mean	1.83772e+03	8.08419e-02	8.76291e-04	8.01237e-04
3	Sigma	1.28517e+00	5.10516e-02	8.05389e-05	3.87678e-03

sub1	
Entries	282
Mean	1838 ± 0.071
RMS	1.22 ± 0.05021
Underflow	1.225e+05
Overflow	454.4
Integral(w)	600.6
Kurtosis	-1.307 ± 0.2851
$\chi^2 / \text{ndf}$	10.97 / 3
Prob	0.01189
Constant	174.2 ± 5.9
Mean	1838 ± 0.1
Sigma	1.285 ± 0.051

r7023

898 keV (884-908)

Gaus Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	1.33560e+03	2.20148e+00	6.59318e-02**	at limit **
2	Mean	8.96911e+02	2.67301e-02	4.27681e-04	1.82067e-03
3	Sigma	1.14260e+00	1.61250e-02	1.70889e-04	1.27199e-04

Pol1 Fit:

Minimizer is Linear

Chi2	=	1587.57		
NDF	=	10		
p0	=	-28.6797	+/-	270.986
p1	=	0.105058	+/-	0.30246

Gaus+Pol1 Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	p0	1.84187e+02	2.71632e+02	5.06834e-03	-2.75420e-04
2	p1	-1.48602e-01	3.03206e-01	5.65702e-06	-2.55844e-01
3	p2	1.28435e+03	fixed		
4	p3	8.96904e+02	2.99577e-02	4.27677e-04	2.95031e-02
5	p4	1.07334e+00	1.65833e-02	3.50208e-05	-1.36933e-02

Sub Fit (Gaus):

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	1.23220e+03	8.96088e+00	2.39290e-02**	at limit **
2	Mean	8.96893e+02	2.73944e-02	4.27672e-04	4.16604e-03
3	Sigma	1.00875e+00	1.37422e-02	6.86653e-05	8.74697e-03

sub1	
Entries	274
Mean	896.8 ± 0.01127
RMS	0.4072 ± 0.00797
Underflow	9.609e+04
Overflow	1.861e+04
Integral(w)	2969
Kurtosis	-534 ± 0.1356
$\chi^2 / \text{ndf}$	104 / 2
Prob	2.597e-23
Constant	1232 ± 9.0
Mean	896.9 ± 0.0
Sigma	1.009 ± 0.014

### 1836.1 keV (1830-1850)

#### Gaus Fit:

EXT	PARAMETER	VALUE	ERROR	STEP	FIRST
NO.	NAME			SIZE	DERIVATIVE
1	Constant	5.30200e+02	5.81881e+00	1.05612e-03**	at limit **
2	Mean	1.83600e+03	5.06064e-02	8.75473e-04	-1.37421e-02
3	Sigma	1.74815e+00	3.43751e-02	1.71763e-04	-4.58227e-03

#### Pol1 Fit:

Minimizer is Linear

Chi2	=	1153.81			
NDF	=	13			
p0	=	144.763	+/-	141.528	
p1	=	-0.0731424	+/-	0.0770909	

#### Gaus+Pol1 Fit:

EXT	PARAMETER	VALUE	ERROR	STEP	FIRST
NO.	NAME			SIZE	DERIVATIVE
1	p0	1.55393e+02	1.41718e+02	2.35568e-03	-2.14739e-04
2	p1	-8.06490e-02	7.71945e-02	1.28316e-06	-4.27294e-01
3	p2	5.22900e+02	fixed		
4	p3	1.83601e+03	5.19483e-02	8.75478e-04	-9.68542e-06
5	p4	1.68828e+00	3.49580e-02	9.54608e-05	-9.11842e-03

#### Sub Fit (Gaus):

EXT	PARAMETER	VALUE	ERROR	STEP	FIRST
NO.	NAME			SIZE	DERIVATIVE
1	Constant	5.15500e+02	3.43015e+00	7.26876e-04**	at limit **
2	Mean	1.83602e+03	4.88150e-02	8.75481e-04	-1.90917e-03
3	Sigma	1.63517e+00	2.88393e-02	1.27921e-04	1.12078e-02

■  $\chi^2/ndf: 82.08/12$

Prob: 1.654e-12

Integral: 1089



r7107

898 keV (804-908)

Gaus Fit:

EXT PARAMETER NO.	NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	1.58000e+02	9.40668e+00	1.28338e-02**	at limit **
2	Mean	8.97502e+02	8.90893e-02	4.72089e-04	1.27103e-02
3	Sigma	1.54162e+00	6.37148e-02	3.37529e-04	7.19391e-03

Pol1 Fit:

Minimizer is Linear

Chi2	=	205.987		
Ndf	=	10		
p0	=	298.665	+/-	143.082
p1	=	-0.313706	+/-	0.159502

Gaus+Pol1 Fit:

EXT PARAMETER NO.	NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	p0	3.23534e+02	1.43756e+02	1.47489e-03	1.95786e-05
2	p1	-3.45539e-01	1.60267e-01	1.64414e-06	-5.67954e-03
3	p2	1.44800e+02	fixed		
4	p3	8.97497e+02	1.00076e-01	4.27960e-04	-3.80473e-04
5	p4	1.28707e+00	6.91803e-02	7.96211e-05	2.35859e-04

Sub Fit (Gaus):

EXT PARAMETER NO.	NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	1.30500e+02	3.26020e+00	9.36303e-04**	at limit **
2	Mean	8.97581e+02	8.11016e-02	4.28000e-04	1.77003e-04
3	Sigma	1.09091e+00	4.65448e-02	1.36906e-04	2.15008e-04

sub1	
Entries	7
Mean	897.9 ± 0.122
RMS	1.374 ± 0.08626
Underflow	9.773e+04
Overflow	4575
Integral(w)	342.8
Kurtosis	-21.24 ± 0.4348
$\chi^2 / \text{ndf}$	35.43 / 2
Prob	2.03e-08
Constant	130.5 ± 3.3
Mean	897.6 ± 0.1
Sigma	1.091 ± 0.047

### 1836.1 keV (1824-1850)

#### Gaus Fit:

EXT	PARAMETER			STEP	FIRST
NO.	NAME	VALUE	ERROR	SIZE	DERIVATIVE
1	Constant	7.50000e+01	2.97177e+00	9.15514e-04**	at limit **
2	Mean	1.83843e+03	1.25525e-01	8.76634e-04	-2.42244e-03
3	Sigma	1.46445e+00	7.30068e-02	1.58831e-04	-1.61151e-03

#### Pol1 Fit:

Minimizer is Linear

Chi2	=	143.674		
Ndf	=	9		
p0	=	-125.432	+/-	109.712
p1	=	0.0695643	+/-	0.0597212

#### Gaus+Pol1 Fit:

EXT	PARAMETER			STEP	FIRST
NO.	NAME	VALUE	ERROR	SIZE	DERIVATIVE
1	p0	-1.07776e+02	1.10123e+02	7.65629e-04	4.72335e-04
2	p1	5.95069e-02	5.99449e-02	4.16769e-07	8.42757e-01
3	p2	7.33800e+01	fixed		
4	p3	1.83842e+03	1.32073e-01	8.76629e-04	1.43389e-02
5	p4	1.39927e+00	7.75217e-02	1.17526e-04	-1.06928e-02

#### Sub Fit (Gaus):

EXT	PARAMETER			STEP	FIRST
NO.	NAME	VALUE	ERROR	SIZE	DERIVATIVE
1	Constant	7.18000e+01	2.16828e+00	7.79570e-04**	at limit **
2	Mean	1.83856e+03	1.37581e-01	8.76691e-04	5.90152e-05
3	Sigma	1.22172e+00	5.78246e-02	1.02126e-04	-6.21743e-06

sub1	
Entries	147
Mean	1838 ± 0.06501
RMS	0.7377 ± 0.04597
Underflow	1.025e+05
Overflow	365.1
Integral(w)	274.4
Kurtosis	-142.2 ± 0.4317
$\chi^2 / \text{ndf}$	19.89 / 4
Prob	0.0005258
Constant	71.8 ± 2.2
Mean	1839 ± 0.1
Sigma	1.222 ± 0.058

r7108

898 keV (884-908)

Gaus Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	8.33100e+02	3.87850e+00	1.24971e-01**	at limit **
2	Mean	8.97589e+02	4.15721e-02	4.37667e-04	-1.16419e-02
3	Sigma	1.78552e+00	3.01088e-02	3.15545e-04	-1.86298e-02

Pol1 Fit:

Minimizer is Linear

Chi2	=	1307.46		
NDF	=	10		
p0	=	-605.465	+/-	301.024
p1	=	0.770938	+/-	0.336164

Gaus+Pol1 Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	p0	8.26422e+01	3.04990e+02	5.86408e-03	-3.36043e-06
2	p1	-2.23200e-02	3.40737e-01	6.54863e-06	-1.73732e-03
3	p2	7.70600e+02	fixed		
4	p3	8.97599e+02	4.62993e-02	4.28009e-04	-1.92176e-03
5	p4	1.53027e+00	3.24478e-02	6.58390e-05	-6.73363e-04

Sub Fit (Gaus):

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	7.07850e+02	2.46260e+00	8.73922e-04**	at limit **
2	Mean	8.97483e+02	4.12567e-02	4.27953e-04	-9.26321e-05
3	Sigma	1.24805e+00	2.03380e-02	1.43497e-04	-5.85877e-05

sub1	
Entries	256
Mean	897.5 ± 0.02944
RMS	0.9243 ± 0.02082
Underflow	1.23e+05
Overflow	2.197e+04
Integral(w)	2391
Kurtosis	-84.87 ± 0.1561
$\chi^2 / \text{ndf}$	228.9 / 3
Prob	0
Constant	707.8 ± 2.5
Mean	897.5 ± 0.0
Sigma	1.248 ± 0.020

### 1836.1 keV (1824-1850)

#### Gaus Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	4.25450e+02	4.55320e+00	2.46142e-03**	at limit **
2	Mean	1.83807e+03	6.73551e-02	8.76458e-04	5.41599e-05
3	Sigma	2.21274e+00	4.50567e-02	2.16617e-04	-4.09336e-04

#### Pol1 Fit:

Minimizer is Linear

Chi2	=	982.202		
Ndf	=	11		
p0	=	-135.632	+/-	246.891
p1	=	0.0844191	+/-	0.134424

#### Gaus+Pol1 Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	p0	5.66525e+01	2.49622e+02	3.04544e-03	-3.72956e-04
2	p1	-2.45740e-02	1.35929e-01	1.65814e-06	-6.91987e-01
3	p2	4.14300e+02	fixed		
4	p3	1.83803e+03	7.12494e-02	8.76443e-04	1.51381e-03
5	p4	2.05891e+00	4.89528e-02	1.10017e-04	-1.07122e-02

#### Sub Fit (Gaus):

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	4.02000e+02	8.02366e+00	1.30362e-03**	at limit **
2	Mean	1.83812e+03	6.80330e-02	8.76482e-04	-7.27063e-03
3	Sigma	1.87659e+00	3.52689e-02	1.45802e-04	1.61893e-04

sub1	
Entries	699
Mean	1838 ± 0.02776
RMS	0.8207 ± 0.01963
Underflow	1.447e+05
Overflow	2419
Integral(w)	1922
Kurtosis	-427.7 ± 0.1657
$\chi^2 / \text{ndf}$	88.23 / 7
Prob	2.862e-16
Constant	402 ± 8.0
Mean	1838 ± 0.1
Sigma	1.877 ± 0.035

r7203

898 keV (870-930)

Gaus Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	2.46535e+01	1.74756e+00	5.25475e-03	2.08642e-04
2	Mean	9.02352e+02	8.87670e-01	4.05422e-03	3.18298e-05
3	Sigma	1.61091e+01	1.20686e+00	8.03242e-05	1.58631e-02

Pol1 Fit:

Minimizer is Linear

Chi2	=	148.69		
NDF	=	28		
p0	=	-39.048	+/-	30.8571
p1	=	0.0583611	+/-	0.0343405

Gaus+Pol1 Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	p0	-2.38649e+01	3.48228e+01	2.67767e-03	1.63347e-04
2	p1	3.69262e-02	3.89520e-02	2.97995e-06	1.46797e-01
3	p2	2.13572e+01	2.51600e+00	7.82292e-03	2.21423e-05
4	p3	9.00894e+02	1.14331e+00	3.48395e-03	1.36518e-04
5	p4	7.67875e+00	1.08142e+00	2.41852e-03	9.06190e-05

Sub Fit (Gaus):

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	1.74328e+01	2.55388e+00	7.14319e-03	-1.99004e-04
2	Mean	8.97352e+02	5.30942e-01	1.57317e-03	-2.37540e-04
3	Sigma	2.97881e+00	3.06784e-01	1.02784e-04	-1.57627e-02

sub1	
Entries	8
Mean	897.1 ± 0.285
RMS	2.514 ± 0.2015
Underflow	9.76e+04
Overflow	3559
Integral(w)	177.2
Kurtosis	-2.254 ± 0.5552
$\chi^2 / \text{ndf}$	41.07 / 5
Prob	9.068e-08
Constant	17.43 ± 2.55
Mean	897.4 ± 0.5
Sigma	2.979 ± 0.307

### 1836.1 keV (1800-1880)

#### Gaus Fit:

EXT	PARAMETER			STEP	FIRST
NO.	NAME	VALUE	ERROR	SIZE	DERIVATIVE
1	Constant	7.77842e+00	1.25368e+00	2.49210e-03	1.71953e-05
2	Mean	1.83904e+03	1.22971e+00	3.60522e-03	2.12457e-04
3	Sigma	1.02840e+01	1.55074e+00	7.97576e-05	5.59487e-03

#### Pol1 Fit:

Minimizer is Linear

Chi2	=	69.6549		
Ndf	=	30		
p0	=	10.6042	+/-	16.9194
p1	=	-0.00470156	+/-	0.00918038

#### Gaus+Pol1 Fit:

EXT	PARAMETER			STEP	FIRST
NO.	NAME	VALUE	ERROR	SIZE	DERIVATIVE
1	p0	5.14499e+00	1.73042e+01	6.07512e-04	6.67975e-04
2	p1	-2.12520e-03	9.38922e-03	3.29632e-07	1.52133e+00
3	p2	7.74244e+00	1.30191e+00	2.61238e-03	1.43995e-04
4	p3	1.83920e+03	1.21192e+00	2.91551e-03	-6.18488e-04
5	p4	7.20056e+00	1.09048e+00	1.99888e-03	2.24088e-04

#### Sub Fit (Gaus):

EXT	PARAMETER			STEP	FIRST
NO.	NAME	VALUE	ERROR	SIZE	DERIVATIVE
1	Constant	6.75824e+00	1.30782e+00	3.00933e-03	-2.55309e-04
2	Mean	1.83905e+03	8.77369e-01	2.41339e-03	-1.44594e-04
3	Sigma	4.91678e+00	6.67419e-01	9.34339e-05	1.26357e-03

sub1	
Entries	46
Mean	1838 ± 0.7365
RMS	5.823 ± 0.5208
Underflow	1.013e+05
Overflow	321.8
Integral(w)	135.2
Kurtosis	-2.609 ± 0.6196
$\chi^2 / \text{ndf}$	32.61 / 13
Prob	0.001952
Constant	6.758 ± 1.308
Mean	1839 ± 0.9
Sigma	4.917 ± 0.667

r7204

898 keV (878-902)

Gaus Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	5.57000e+02	1.80839e+00	7.17145e-03	6.43236e-03
2	Mean	8.90671e+02	5.62170e-02	7.01125e-04	8.58791e-03
3	Sigma	-1.91961e+00	4.97174e-02	6.20037e-04	-1.05308e-02

Pol1 Fit:

Minimizer is Linear

Chi2	=	639.297		
Ndf	=	11		
p0	=	1000.12	+/-	283.796
p1	=	-1.01523	+/-	0.317511

Gaus+Pol1 Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	p0	3.07037e+02	2.88310e+02	6.35662e-03	-2.23373e-05
2	p1	-2.59169e-01	3.22380e-01	7.11179e-06	-1.66994e-02
3	p2	4.82200e+02	fixed		
4	p3	8.90685e+02	6.18065e-02	4.24712e-04	-1.21932e-03
5	p4	1.39389e+00	4.73602e-02	5.25596e-05	-1.34404e-03

Sub Fit (Gaus):

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	3.09000e+02	1.23786e+00	1.10455e-03**	at limit **
2	Mean	9.03990e+02	5.47547e-02	4.75535e-04	-7.17699e-03
3	Sigma	1.06558e+00	2.95106e-02	2.56295e-04	4.01870e-03

sub1

Entries	1345
Mean	903.6 ± 0.2719
RMS	3.781 ± 0.1923
Underflow	1.331e+05
Overflow	2.067e+04
Integral(w)	800.7
Kurtosis	-6.191 ± 0.3523
χ <sup>2</sup> / ndf	317.9 / 4
Prob	0
Constant	309 ± 1.2
Mean	904 ± 0.1
Sigma	1.066 ± 0.030

### 1836.1 keV (1800-1850)

#### Gaus Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	2.51200e+02	1.64489e+02	1.04626e-02**	at limit **
2	Mean	1.82417e+03	8.29718e-02	8.69832e-04	-3.90455e-03
3	Sigma	2.07872e+00	6.62424e-02	5.72805e-04	3.65543e-03

#### Pol1 Fit:

Minimizer is Linear

Chi2	=	597.784		
Ndf	=	23		
p0	=	-607.128	+/-	83.1684
p1	=	0.341138	+/-	0.0457335

#### Gaus+Pol1 Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	p0	-5.26173e+02	8.34252e+01	3.05965e-03	-1.79252e-04
2	p1	2.95440e-01	4.58812e-02	1.68247e-06	-2.82199e-01
3	p2	2.38750e+02	fixed		
4	p3	1.82413e+03	8.66926e-02	8.69811e-04	1.37752e-02
5	p4	1.85356e+00	6.48152e-02	2.61222e-04	-1.13845e-02

#### Sub Fit (Gaus):

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	2.26500e+02	2.33889e+00	6.89191e-04**	at limit **
2	Mean	1.82415e+03	7.78647e-02	8.69820e-04	-1.06424e-04
3	Sigma	1.66372e+00	4.72035e-02	1.55270e-04	8.03251e-04

sub1	
Entries	182
Mean	1824 ± 0.05019
RMS	1.117 ± 0.03549
Underflow	1.535e+05
Overflow	2425
Integral(w)	1057
Kurtosis	-65.08 ± 0.2201
$\chi^2 / \text{ndf}$	47.06 / 6
Prob	1.82e-08
Constant	226.5 ± 2.3
Mean	1824 ± 0.1
Sigma	1.664 ± 0.047



r7235

898 keV (888-914)

Gaus Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	1.06200e+02	3.30444e+00	9.90413e-03**	at limit **
2	Mean	9.03232e+02	1.10634e-01	5.26070e-04	9.65865e-04
3	Sigma	-1.50238e+00	9.63906e-02	4.58329e-04	4.58796e-04

Pol1 Fit:

Minimizer is Linear  
 Chi2 = 113.813  
 NDF = 9  
 p0 = 339.165 +/- 146.163  
 p1 = -0.358666 +/- 0.161635

Gaus+Pol1 Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	p0	2.82736e+02	1.47072e+02	1.36716e-03	-2.35055e-05
2	p1	-2.99602e-01	1.62613e-01	1.51189e-06	-1.77852e-02
3	p2	9.41000e+01	fixed		
4	p3	9.03242e+02	1.29257e-01	4.30699e-04	-1.64125e-04
5	p4	-1.19875e+00	8.50514e-02	9.35624e-05	3.41150e-04

Sub Fit (Gaus):

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	8.14000e+01	6.20980e+00	1.36688e-03**	at limit **
2	Mean	9.03390e+02	9.75185e-02	2.58919e-04	5.64266e-03
3	Sigma	9.52662e-01	5.24423e-02	1.27924e-04	-2.05555e-03

sub1	
Entries	185
Mean	922.2 ± 40.33
RMS	29.72 ± 28.52
Underflow	9.816e+04
Overflow	3717
Integral(w)	20.81
Kurtosis	-5.131 ± 6.649
$\chi^2 / \text{ndf}$	95.26 / 8
Prob	3.961e-17
Constant	81.4 ± 6.2
Mean	903.4 ± 0.1
Sigma	0.9527 ± 0.0524

### 1836.1 keV (1830-1860)

#### Gaus Fit:

EXT	PARAMETER			STEP	FIRST
NO.	NAME	VALUE	ERROR	SIZE	DERIVATIVE
1	Constant	3.60000e+01	4.75909e+00	1.68583e-03**	at limit **
2	Mean	1.84991e+03	1.94285e-01	8.82106e-04	1.52004e-05
3	Sigma	1.50302e+00	1.18805e-01	2.50962e-04	1.23752e-03

#### Pol1 Fit:

Minimizer is Linear

Chi2	=	51.3915		
Ndf	=	9		
p0	=	-541.259	+/-	137.368
p1	=	0.295541	+/-	0.0746927

#### Gaus+Pol1 Fit:

EXT	PARAMETER			STEP	FIRST
NO.	NAME	VALUE	ERROR	SIZE	DERIVATIVE
1	p0	-2.81948e+02	1.68504e+02	-6.29772e-01	1.40269e-06
2	p1	1.54287e-01	9.16776e-02	3.42638e-04	2.60162e-03
3	p2	3.25000e+01	fixed		
4	p3	1.84997e+03	2.43824e-01	1.69530e-04	4.98062e-06
5	p4	1.23216e+00	1.96383e-01	-4.14953e-04	-1.79159e-05

#### Sub Fit (Gaus):

EXT	PARAMETER			STEP	FIRST
NO.	NAME	VALUE	ERROR	SIZE	DERIVATIVE
1	Constant	2.89000e+01	1.94163e+00	1.02762e-03**	at limit **
2	Mean	1.85002e+03	1.88455e-01	8.82160e-04	-7.68432e-04
3	Sigma	1.13536e+00	1.16760e-01	2.26167e-04	-6.35863e-04

sub1	
Entries	93
Mean	1850 ± 0.3218
RMS	1.703 ± 0.2276
Underflow	1.02e+05
Overflow	371
Integral(w)	82.97
Kurtosis	-15.72 ± 0.9261
$\chi^2 / \text{ndf}$	15.11 / 2
Prob	0.0005237
Constant	28.9 ± 1.9
Mean	1850 ± 0.2
Sigma	1.135 ± 0.117

r7236

898 keV (890-920)

Gaus Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	6.93200e+02	5.60757e+00	6.91874e-03**	at limit **
2	Mean	9.05705e+02	4.76374e-02	7.11719e-04	-8.21191e-04
3	Sigma	1.89298e+00	3.88926e-02	5.81066e-04	-7.84809e-04

Pol1 Fit:

Minimizer is Linear

Chi2	=	941.942		
Ndf	=	13		
p0	=	-415.732	+/-	255.928
p1	=	0.575767	+/-	0.282928

Gaus+Pol1 Fit:

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	p0	-2.19879e+02	2.57057e+02	8.36578e-03	-6.62429e-06
2	p1	3.39331e-01	2.84233e-01	9.24836e-06	-6.90461e-03
3	p2	6.06000e+02	fixed		
4	p3	9.05678e+02	5.47084e-02	4.31861e-04	-1.17948e-02
5	p4	1.46568e+00	4.03874e-02	1.19318e-04	4.88729e-04

Sub Fit (Gaus):

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	5.19000e+02	fixed		
2	Mean	9.05750e+02	4.05197e-02	6.24537e-04	1.59842e-03
3	Sigma	1.09901e+00	2.25521e-02	3.47607e-04	1.39414e-02

sub1	
Entries	1259
Mean	899.9 ± 14.98
RMS	31.19 ± 10.59
Underflow	1.796e+05
Overflow	2.647e+04
Integral(w)	-178.8
Kurtosis	-2.683 ± 2.353
$\chi^2 / \text{ndf}$	1018 / 13
Prob	0
Mean	905.8 ± 0.0
Sigma	1.099 ± 0.023

### 1836.1 keV (1840-1870)

#### Gaus Fit:

EXT PARAMETER NO.	NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	4.02000e+02	2.54545e+00	1.93721e-03**	at limit **
2	Mean	1.85466e+03	6.61688e-02	8.84370e-04	-4.08140e-03
3	Sigma	1.94139e+00	4.74914e-02	2.77921e-04	1.21021e-02

#### Pol1 Fit:

Minimizer is Linear

Chi2	=	805.157		
Ndf	=	14		
p0	=	53.7265	+/-	160.709
p1	=	-0.0207585	+/-	0.0866728

#### Gaus+Pol1 Fit:

EXT PARAMETER NO.	NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	p0	9.77438e+01	1.61074e+02	2.73692e-03	-2.24004e-04
2	p1	-4.68562e-02	8.68731e-02	1.47606e-06	-3.75915e-01
3	p2	3.91000e+02	fixed		
4	p3	1.85468e+03	6.87881e-02	8.84380e-04	-1.65130e-03
5	p4	1.80896e+00	5.03234e-02	1.32631e-04	-7.38293e-03

#### Sub Fit (Gaus):

EXT PARAMETER NO.	NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	Constant	3.79500e+02	2.35163e+01	2.37155e-03**	at limit **
2	Mean	1.85444e+03	7.04110e-02	8.84264e-04	5.92913e-03
3	Sigma	1.94463e+00	4.16391e-02	1.95080e-04	-8.39693e-03

sub1	
Entries	486
Mean	1855 ± 0.1346
RMS	3.234 ± 0.09517
Underflow	2.054e+05
Overflow	3273
Integral(w)	1672
Kurtosis	-21.21 ± 0.2039
$\chi^2 / \text{ndf}$	91.35 / 10
Prob	2.893e-15
Constant	379.5 ± 23.5
Mean	1854 ± 0.1
Sigma	1.945 ± 0.042