```
In [11]: %runfile '/Users/catacisneros/Library/CloudStorage/OneDrive-
Personal/FIU/Fall 2025/Intermediate Physics Lab/PracticeExam/
ComptonData/PracticeTest.py' --wdir
gen_fit kwargs =  {}
gen_fit.fit kwargs =  {}
Calculate numerical parameter derivatives with diff_step = 0.001
--------------------------------------------------------------------
Fit results:
A  =  5333.32728517083  +/-  25.389168601612944
mean  =  132.30331690555627  +/-  0.0243416432499209
sigma  =  6.057416767208668  +/-  0.02383462790792127
Chi square =  399.96110138205614
Chi sq./DoF =  18.180050062820733
--------------------------------------------------------------------
gen_fit kwargs =  {}
gen_fit.fit kwargs =  {}
Calculate numerical parameter derivatives with diff_step = 0.001
--------------------------------------------------------------------
Fit results:
A  =  859.0316525227809  +/-  8.86637634542006
mean  =  229.38235809757737  +/-  0.10055856639020294
sigma  =  9.909652171374615  +/-  0.13407710243227075
Chi square =  80.58811139456209
Chi sq./DoF =  3.099542745944696
--------------------------------------------------------------------
gen_fit kwargs =  {}
gen_fit.fit kwargs =  {}
Calculate numerical parameter derivatives with diff_step = 0.001
--------------------------------------------------------------------
Fit results:
A  =  667.670817991596  +/-  8.42832368734646
mean  =  260.04025655778435  +/-  0.11512457957445578
sigma  =  8.75266779749045  +/-  0.15909852400621516
Chi square =  33.30902815059364
Chi sq./DoF =  1.5861441976473163
--------------------------------------------------------------------
chisq/dof =  1.7620257306465904e-06
offset  =  -0.033389880571203484  +/-  0.0030160427356682963
slope =  0.005255643163395137  +/-  1.4075567730981259e-05
gen_fit kwargs =  {}
gen_fit.fit kwargs =  {}
Calculate numerical parameter derivatives with diff_step = 0.001
--------------------------------------------------------------------
Fit results:
A  =  299.29515244285056  +/-  15.130519385468645
mean  =  0.5624309794485278  +/-  0.0024500693675140587
sigma  =  0.04505935794740525  +/-  0.002396153927910696
Chi square =  50.55701710970918
Chi sq./DoF =  1.1234892691046485
--------------------------------------------------------------------
```

```
gen_fit kwargs =  {}
gen_fit.fit kwargs =  {}
Calculate numerical parameter derivatives with diff_step = 0.001
----------------------------------------------------------------
Fit results:
A   =  284.0951302625165  +/-  13.763400075715516
mean  =  0.4994954549879141  +/-  0.0026596980253331608
sigma  =  0.04237669535029218  +/-  0.0030329164648254473
Chi square =  36.4735286448006
Chi sq./DoF =  0.8105228587733467
----------------------------------------------------------------
gen_fit kwargs =  {}
gen_fit.fit kwargs =  {}
Calculate numerical parameter derivatives with diff_step = 0.001
----------------------------------------------------------------
Fit results:
A   =  454.8645571273567  +/-  18.756180313983897
mean  =  0.39783937609426423  +/-  0.0019431665847604912
sigma  =  0.03763768922879935  +/-  0.002181867232766341
Chi square =  41.818070331876854
Chi sq./DoF =  0.9504106893608376
----------------------------------------------------------------
gen_fit kwargs =  {}
gen_fit.fit kwargs =  {}
Calculate numerical parameter derivatives with diff_step = 0.001
----------------------------------------------------------------
Fit results:
A   =  469.80349799927035  +/-  19.94615588915875
mean  =  0.31509308012976606  +/-  0.0015455279226512329
sigma  =  0.03204563339852531  +/-  0.0015710390299358942
Chi square =  38.113227884351915
Chi sq./DoF =  0.8469606196522648
----------------------------------------------------------------
[1.17649992 1.32473678 1.66323406 2.10001438]
chisq/dof =  7.44006212293729e-05
offset  =  1.0054672297259393  +/-  0.008060131378959029
slope =  1.3236381242930848  +/-  0.01607578048807398
Electron mass m_e = 0.500 ± 0.006 MeV
Offset = 1.005 ± 0.008 (expected ≈ 1.000)
```

In [12]: