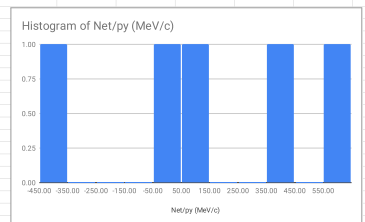
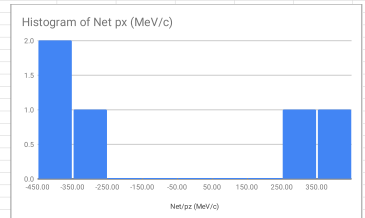
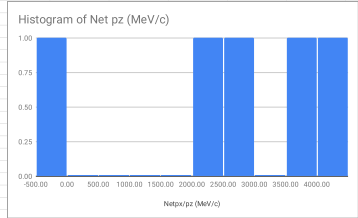


Numbers initially seen in Rows 6-9, Columns C-N are placeholders only. Please overwrite them as you enter actual data.

Cells below (Columns O, P, and Q) contain formulas. Do not overwrite!

| merged Tuple | Background (enter a 1) | Signal Event Slice No. | Muon KE (MeV) | v/c | px (MeV/c) | py (MeV/c) | pz (MeV/c) | Proton KE (MeV) | v/c | px (MeV/c) | py (MeV/c) | pz (MeV/c) | Net px (MeV/c) | Net py (MeV/c) | nu-beam pz (MeV/c) | | |
|--------------|------------------------|------------------------|---------------|---------|------------|------------|------------|-----------------|-----|------------|------------|------------|----------------|----------------|--------------------|---------|---------|
| 1 | 0 | | 8 | 3.90091 | 0.99966 | | | | | | | | 333.07 | -404.93 | -449.96 | 4.28365 | |
| 1 | 1 | | | | | | | | | 149.72 | -618.13 | 3,950.59 | 113.23 | -404.93 | 168.17 | | |
| 1 | 2 | | | | | | | | | | | | | | 322.42 | 0.91 | -105.89 |
| 1 | 3 | | | | | | | | | | | | | | | | |
| 1 | 4 | 4 | | | | | | | | | | | | | | | |
| 1 | 5 | | 9 | | | | | | | | | | | | | | |
| 1 | 6 | | | | | | | | | | | | | | | | |
| 1 | 7 | | | | | | | | | | | | | | | | |
| 1 | 8 | | | | | | | | | | | | | | | | |
| 1 | 9 | | | | | | | | | | | | | | | | |
| 1 | 10 | | | | | | | | | | | | | | | | |
| 1 | 11 | | | | | | | | | | | | | | | | |
| 1 | 12 | | 4 | | | | | | | | | | | | | | |
| 1 | 13 | | | | | | | | | | | | | | | | |
| 1 | 14 | 1 | | | | | | | | | | | | | | | |
| 1 | 15 | 1 | 2 | | | | | | | | | | | | | | |
| 1 | 16 | | | | | | | | | | | | | | | | |
| 1 | 17 | | | | | | | | | | | | | | | | |
| 1 | 18 | | | | | | | | | | | | | | | | |
| 1 | 19 | | 6 | | | | | | | | | | | | | | |
| 1 | 20 | | | | | | | | | | | | | | | | |
| 1 | 21 | | | | | | | | | | | | | | | | |
| 1 | 22 | | | | | | | | | | | | | | | | |
| 1 | 23 | | | | | | | | | | | | | | | | |
| 1 | 24 | | | | | | | | | | | | | | | | |
| 1 | 25 | | | | | | | | | | | | | | | | |
| 1 | 26 | | | | | | | | | | | | | | | | |
| 1 | 27 | | | | | | | | | | | | | | | | |
| 1 | 28 | | | | | | | | | | | | | | | | |
| 1 | 29 | | | | | | | | | | | | | | | | |
| 1 | 30 | | | | | | | | | | | | | | | | |
| 1 | 31 | | | | | | | | | | | | | | | | |
| 1 | 32 | | | | | | | | | | | | | | | | |
| 1 | 33 | | | | | | | | | | | | | | | | |
| 1 | 34 | | | | | | | | | | | | | | | | |
| 1 | 35 | | | | | | | | | | | | | | | | |
| 1 | 36 | | | | | | | | | | | | | | | | |
| 1 | 37 | | | | | | | | | | | | | | | | |
| 1 | 38 | | | | | | | | | | | | | | | | |
| 1 | 39 | | | | | | | | | | | | | | | | |
| 1 | 40 | | | | | | | | | | | | | | | | |
| 1 | 41 | | | | | | | | | | | | | | | | |
| 1 | 42 | | | | | | | | | | | | | | | | |
| 1 | 43 | | | | | | | | | | | | | | | | |
| 1 | 44 | | | | | | | | | | | | | | | | |
| 1 | 45 | | | | | | | | | | | | | | | | |
| 1 | 46 | | | | | | | | | | | | | | | | |
| 1 | 47 | | | | | | | | | | | | | | | | |
| 1 | 48 | | | | | | | | | | | | | | | | |
| 1 | 49 | | | | | | | | | | | | | | | | |
| 1 | 50 | | | | | | | | | | | | | | | | |
| 2 | 0 | | | | | | | | | | | | | | | | |
| 2 | 1 | | | | | | | | | | | | | | | | |
| 2 | 2 | | | | | | | | | | | | | | | | |
| 2 | 3 | | | | | | | | | | | | | | | | |
| 2 | 4 | | | | | | | | | | | | | | | | |
| 2 | 5 | | | | | | | | | | | | | | | | |
| 2 | 6 | | | | | | | | | | | | | | | | |
| 2 | 7 | | | | | | | | | | | | | | | | |
| 2 | 8 | | | | | | | | | | | | | | | | |
| 2 | 9 | | | | | | | | | | | | | | | | |
| 2 | 10 | | | | | | | | | | | | | | | | |
| 2 | 11 | | | | | | | | | | | | | | | | |
| 2 | 12 | | | | | | | | | | | | | | | | |
| 2 | 13 | | | | | | | | | | | | | | | | |
| 2 | 14 | | | | | | | | | | | | | | | | |
| 2 | 15 | | | | | | | | | | | | | | | | |
| 2 | 16 | | | | | | | | | | | | | | | | |
| 2 | 17 | | | | | | | | | | | | | | | | |
| 2 | 18 | | | | | | | | | | | | | | | | |
| 2 | 19 | | | | | | | | | | | | | | | | |
| 2 | 20 | | | | | | | | | | | | | | | | |
| 2 | 21 | | | | | | | | | | | | | | | | |
| 2 | 22 | | | | | | | | | | | | | | | | |
| 2 | 23 | | | | | | | | | | | | | | | | |
| 2 | 24 | | | | | | | | | | | | | | | | |
| 2 | 25 | | | | | | | | | | | | | | | | |
| 2 | 26 | | | | | | | | | | | | | | | | |
| 2 | 27 | | | | | | | | | | | | | | | | |
| 2 | 28 | | | | | | | | | | | | | | | | |
| 2 | 29 | | | | | | | | | | | | | | | | |
| 2 | 30 | | | | | | | | | | | | | | | | |
| 2 | 31 | | | | | | | | | | | | | | | | |
| 2 | 32 | | | | | | | | | | | | | | | | |
| 2 | 33 | | | | | | | | | | | | | | | | |
| 2 | 34 | | | | | | | | | | | | | | | | |
| 2 | 35 | | | | | | | | | | | | | | | | |
| 2 | 36 | | | | | | | | | | | | | | | | |
| 2 | 37 | | | | | | | | | | | | | | | | |
| 2 | 38 | | | | | | | | | | | | | | | | |
| 2 | 39 | | | | | | | | | | | | | | | | |
| 2 | 40 | | | | | | | | | | | | | | | | |
| 2 | 41 | | | | | | | | | | | | | | | | |
| 2 | 42 | | | | | | | | | | | | | | | | |
| 2 | 43 | | | | | | | | | | | | | | | | |
| 2 | 44 | | | | | | | | | | | | | | | | |
| 2 | 45 | | | | | | | | | | | | | | | | |
| 2 | 46 | | | | | | | | | | | | | | | | |
| 2 | 47 | | | | | | | | | | | | | | | | |
| 2 | 48 | | | | | | | | | | | | | | | | |
| 2 | 49 | | | | | | | | | | | | | | | | |
| 2 | 50 | | | | | | | | | | | | | | | | |
| 3 | 0 | | | | | | | | | | | | | | | | |
| 3 | 1 | | | | | | | | | | | | | | | | |
| 3 | 2 | | | | | | | | | | | | | | | | |
| 3 | 3 | | | | | | | | | | | | | | | | |
| 3 | 4 | | | | | | | | | | | | | | | | |
| 3 | 5 | | | | | | | | | | | | | | | | |
| 3 | 6 | | | | | | | | | | | | | | | | |
| 3 | 7 | | | | | | | | | | | | | | | | |
| 3 | 8 | | | | | | | | | | | | | | | | |
| 3 | 9 | | | | | | | | | | | | | | | | |
| 3 | 10 | | | | | | | | | | | | | | | | |
| 3 | 11 | | | | | | | | | | | | | | | | |
| 3 | 12 | | | | | | | | | | | | | | | | |
| 3 | 13 | | | | | | | | | | | | | | | | |
| 3 | 14 | | | | | | | | | | | | | | | | |
| 3 | 15 | | | | | | | | | | | | | | | | |
| 3 | 16 | | | | | | | | | | | | | | | | |
| 3 | 17 | | | | | | | | | | | | | | | | |
| 3 | 18 | | | | | | | | | | | | | | | | |
| 3 | 19 | | | | | | | | | | | | | | | | |
| 3 | 20 | | | | | | | | | | | | | | | | |
| 3 | 21 | | | | | | | | | | | | | | | | |
| 3 | 22 | | | | | | | | | | | | | | | | |
| 3 | 23 | | | | | | | | | | | | | | | | |
| 3 | 24 | | | | | | | | | | | | | | | | |
| 3 | 25 | | | | | | | | | | | | | | | | |
| 3 | 26 | | | | | | | | | | | | | | | | |
| 3 | 27 | | | | | | | | | | | | | | | | |
| 3 | 28 | | | | | | | | | | | | | | | | |
| 3 | 29 | | | | | | | | | | | | | | | | |
| 3 | 30 | | | | | | | | | | | | | | | | |
| 3 | 31 | | | | | | | | | | | | | | | | |
| 3 | 32 | | | | | | | | | | | | | | | | |



No. bkg events = 7

| | | | |
|---|----------------------|---|----------------------|
| delta px (MeV/c) (FWHM2) = | <input type="text"/> | delta py (MeV/c) (FWHM2) = | <input type="text"/> |
| delta x (fm) (simple calc) = #DIV/0! | | delta y (fm) (simple calc) = #DIV/0! | |
| delta x (fm) (Fermi gas) = #DIV/0! | | delta y (fm) (Fermi gas) = #DIV/0! | |

| Numbers initially seen in Rows 6-9. Columns C-N are placeholders only. Please overwrite them as you enter actual data. | | | | | | | | | | | | | Cells below (Columns O, P, and Q) contain formulas. Do not overwrite! | | | | |
|--|-------|------------------------|--------------|---------------|---------|------------|------------|------------|-----------------|------|------------|------------|---|----------------|----------------|--------------------|--|
| merged Tuple | Entry | Background (enter a 1) | Signal Event | Muon KE (MeV) | v/c | px (MeV/c) | py (MeV/c) | pz (MeV/c) | Proton KE (MeV) | v/c | px (MeV/c) | py (MeV/c) | pz (MeV/c) | Net px (MeV/c) | Net py (MeV/c) | nu-beam pz (MeV/c) | |
| 26 | 0 | | 11 | 4.928.58 | 0.99977 | 61.89 | 574.73 | 4.898.48 | 1.427.80 | 0.92 | 27.30 | 253.10 | 2.156.90 | 89.19 | 827.83 | 7.055.38 | |
| 26 | 1 | | | | | | | | | | | | | | | | |
| 26 | 2 | | | | | | | | | | | | | | | | |
| 26 | 3 | | | | | | | | | | | | | | | | |
| 26 | 4 | | | | | | | | | | | | | | | | |
| 26 | 5 | | | | | | | | | | | | | | | | |
| 26 | 6 | | | | | | | | | | | | | | | | |
| 26 | 7 | | | | | | | | | | | | | | | | |
| 26 | 8 | | | | | | | | | | | | | | | | |
| 26 | 9 | | | | | | | | | | | | | | | | |
| 26 | 10 | | | | | | | | | | | | | | | | |
| 26 | 11 | | | | | | | | | | | | | | | | |
| 26 | 12 | | | | | | | | | | | | | | | | |
| 26 | 13 | | | | | | | | | | | | | | | | |
| 26 | 14 | | | | | | | | | | | | | | | | |
| 26 | 15 | | | | | | | | | | | | | | | | |
| 26 | 16 | | | | | | | | | | | | | | | | |
| 26 | 17 | | | | | | | | | | | | | | | | |
| 26 | 18 | | | | | | | | | | | | | | | | |
| 26 | 19 | | | | | | | | | | | | | | | | |
| 26 | 20 | | | | | | | | | | | | | | | | |
| 26 | 21 | | | | | | | | | | | | | | | | |
| 26 | 22 | | | | | | | | | | | | | | | | |
| 26 | 23 | | | | | | | | | | | | | | | | |
| 26 | 24 | | | | | | | | | | | | | | | | |
| 26 | 25 | | | | | | | | | | | | | | | | |
| 26 | 26 | | | | | | | | | | | | | | | | |
| 26 | 27 | | | | | | | | | | | | | | | | |
| 26 | 28 | | | | | | | | | | | | | | | | |
| 26 | 29 | | | | | | | | | | | | | | | | |
| 26 | 30 | | | | | | | | | | | | | | | | |
| 26 | 31 | | | | | | | | | | | | | | | | |
| 26 | 32 | | | | | | | | | | | | | | | | |
| 26 | 33 | | | | | | | | | | | | | | | | |
| 26 | 34 | | | | | | | | | | | | | | | | |
| 26 | 35 | | | | | | | | | | | | | | | | |
| 26 | 36 | | | | | | | | | | | | | | | | |
| 26 | 37 | | | | | | | | | | | | | | | | |
| 26 | 38 | | | | | | | | | | | | | | | | |
| 26 | 39 | | | | | | | | | | | | | | | | |
| 26 | 40 | | | | | | | | | | | | | | | | |
| 26 | 41 | | | | | | | | | | | | | | | | |
| 26 | 42 | | | | | | | | | | | | | | | | |
| 26 | 43 | | | | | | | | | | | | | | | | |
| 26 | 44 | | | | | | | | | | | | | | | | |
| 26 | 45 | | | | | | | | | | | | | | | | |
| 26 | 46 | | | | | | | | | | | | | | | | |
| 26 | 47 | | | | | | | | | | | | | | | | |
| 26 | 48 | | | | | | | | | | | | | | | | |
| 26 | 49 | | | | | | | | | | | | | | | | |
| 26 | 50 | | | | | | | | | | | | | | | | |
| 27 | 0 | | | | | | | | | | | | | | | | |
| 27 | 1 | | | | | | | | | | | | | | | | |
| 27 | 2 | | | | | | | | | | | | | | | | |
| 27 | 3 | | | | | | | | | | | | | | | | |
| 27 | 4 | | | | | | | | | | | | | | | | |
| 27 | 5 | | | | | | | | | | | | | | | | |
| 27 | 6 | | | | | | | | | | | | | | | | |
| 27 | 7 | | | | | | | | | | | | | | | | |
| 27 | 8 | | | | | | | | | | | | | | | | |
| 27 | 9 | | | | | | | | | | | | | | | | |
| 27 | 10 | | | | | | | | | | | | | | | | |
| 27 | 11 | | | | | | | | | | | | | | | | |
| 27 | 12 | | | | | | | | | | | | | | | | |
| 27 | 13 | | | | | | | | | | | | | | | | |
| 27 | 14 | | | | | | | | | | | | | | | | |
| 27 | 15 | | | | | | | | | | | | | | | | |
| 27 | 16 | | | | | | | | | | | | | | | | |
| 27 | 17 | | | | | | | | | | | | | | | | |
| 27 | 18 | | | | | | | | | | | | | | | | |
| 27 | 19 | | | | | | | | | | | | | | | | |
| 27 | 20 | | | | | | | | | | | | | | | | |
| 27 | 21 | | | | | | | | | | | | | | | | |
| 27 | 22 | | | | | | | | | | | | | | | | |
| 27 | 23 | | | | | | | | | | | | | | | | |
| 27 | 24 | | | | | | | | | | | | | | | | |
| 27 | 25 | | | | | | | | | | | | | | | | |
| 27 | 26 | | | | | | | | | | | | | | | | |
| 27 | 27 | | | | | | | | | | | | | | | | |
| 27 | 28 | | | | | | | | | | | | | | | | |
| 27 | 29 | | | | | | | | | | | | | | | | |
| 27 | 30 | | | | | | | | | | | | | | | | |
| 27 | 31 | | | | | | | | | | | | | | | | |
| 27 | 32 | | | | | | | | | | | | | | | | |
| 27 | 33 | | | | | | | | | | | | | | | | |
| 27 | 34 | | | | | | | | | | | | | | | | |
| 27 | 35 | | | | | | | | | | | | | | | | |
| 27 | 36 | | | | | | | | | | | | | | | | |
| 27 | 37 | | | | | | | | | | | | | | | | |
| 27 | 38 | | | | | | | | | | | | | | | | |
| 27 | 39 | | | | | | | | | | | | | | | | |
| 27 | 40 | | | | | | | | | | | | | | | | |
| 27 | 41 | | | | | | | | | | | | | | | | |
| 27 | 42 | | | | | | | | | | | | | | | | |
| 27 | 43 | | | | | | | | | | | | | | | | |
| 27 | 44 | | | | | | | | | | | | | | | | |
| 27 | 45 | | | | | | | | | | | | | | | | |
| 27 | 46 | | | | | | | | | | | | | | | | |
| 27 | 47 | | | | | | | | | | | | | | | | |
| 27 | 48 | | | | | | | | | | | | | | | | |
| 27 | 49 | | | | | | | | | | | | | | | | |
| 27 | 50 | | | | | | | | | | | | | | | | |
| 28 | 0 | | | | | | | | | | | | | | | | |
| 28 | 1 | | | | | | | | | | | | | | | | |
| 28 | 2 | | | | | | | | | | | | | | | | |
| 28 | 3 | | | | | | | | | | | | | | | | |
| 28 | 4 | | | | | | | | | | | | | | | | |
| 28 | 5 | | | | | | | | | | | | | | | | |
| 28 | 6 | | | | | | | | | | | | | | | | |
| 28 | 7 | | | | | | | | | | | | | | | | |
| 28 | 8 | | | | | | | | | | | | | | | | |
| 28 | 9 | | | | | | | | | | | | | | | | |
| 28 | 10 | | | | | | | | | | | | | | | | |
| 28 | 11 | | | | | | | | | | | | | | | | |
| 28 | 12 | | | | | | | | | | | | | | | | |
| 28 | 13 | | | | | | | | | | | | | | | | |
| 28 | 14 | | | | | | | | | | | | | | | | |
| 28 | 15 | | | | | | | | | | | | | | | | |
| 28 | 16 | | | | | | | | | | | | | | | | |
| 28 | 17 | | | | | | | | | | | | | | | | |
| 28 | 18 | | | | | | | | | | | | | | | | |
| 28 | 19 | | | | | | | | | | | | | | | | |
| 28 | 20 | | | | | | | | | | | | | | | | |
| 28 | 21 | | | | | | | | | | | | | | | | |
| 28 | 22 | | | | | | | | | | | | | | | | |
| 28 | 23 | | | | | | | | | | | | | | | | |
| 28 | 24 | | | | | | | | | | | | | | | | |
| 28 | 25 | | | | | | | | | | | | | | | | |
| 28 | 26 | | | | | | | | | | | | | | | | |
| 28 | 27 | | | | | | | | | | | | | | | | |
| 28 | 28 | | | | | | | | | | | | | | | | |
| 28 | 29 | | | | | | | | | | | | | | | | |
| 28 | 30 | | | | | | | | | | | | | | | | |
| 28 | 31 | | | | | | | | | | | | | | | | |
| 28 | 32 | | | | | | | | | | | | | | | | |

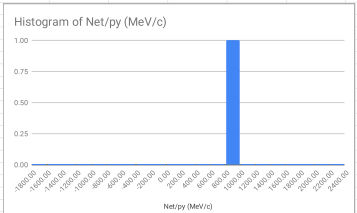
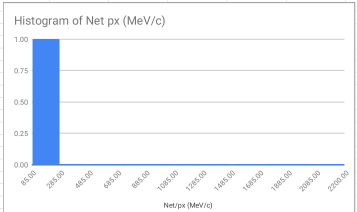
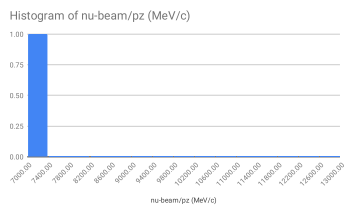
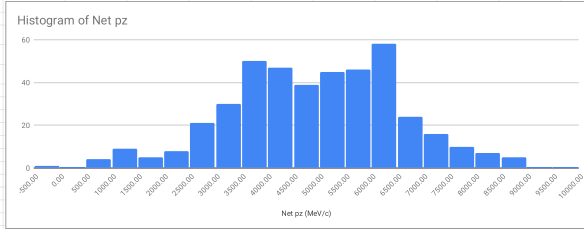
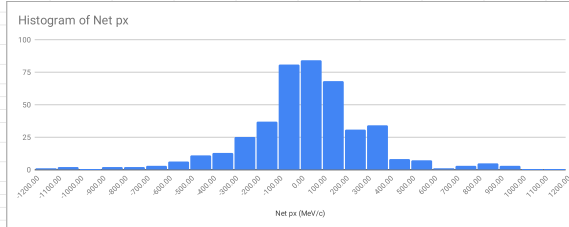


Table with columns: merged, tuple, background, signal, muon, proton, net, nu-beam. Includes headers for KE (MeV), v/c, px (MeV/c), py (MeV/c), v/c, px (MeV/c), py (MeV/c), Net px (MeV/c), Net py (MeV/c), nu-beam pz (MeV/c). Contains numerical data for various tuple entries.

| px | py | pz |
|-----------|-----------|-----------|
| 267.20 | -67.35 | 5,426.61 |
| 91.15 | -66.71 | 3,591.44 |
| -169.21 | 298.42 | 5,482.88 |
| 111.72 | 35.48 | 5,428.97 |
| -168.35 | -3.30 | 5,949.31 |
| -7.89 | 12.45 | 6,247.78 |
| 127.37 | -455.37 | 2,728.80 |
| 37.83 | 279.91 | 6,485.25 |
| 198.42 | -1.22 | 5,426.60 |
| -344.05 | 236.90 | 2,888.82 |
| 182.19 | -80.82 | 3,760.46 |
| 254.07 | -67.55 | 4,115.82 |
| 149.47 | -115.29 | 5,450.94 |
| -158.61 | | 6,764.61 |
| 7.64 | 24.94 | 3,885.33 |
| 39.61 | -76.85 | 4,217.83 |
| -227.78 | -490.15 | 6,566.85 |
| -74.53 | -115.68 | 4,536.27 |
| -78.49 | | 5,239.21 |
| 12.87 | -131.89 | 4,437.59 |
| -84.09 | 185.62 | 6,385.91 |
| 84.60 | -222.94 | 5,540.20 |
| 15.05 | 189.54 | 4,345.71 |
| 158.48 | 421.12 | 1,652.62 |
| 47.78 | -54.93 | 5,842.54 |
| -198.64 | -288.88 | 7,220.83 |
| -397.88 | 159.89 | 4,877.73 |
| 352.81 | -31.57 | 6,436.23 |
| -7.89 | -96.50 | 6,694.94 |
| 358.82 | -453.59 | 1,393.96 |
| -1,149.77 | -1,476.10 | 6,973.58 |
| -357.80 | 682.96 | 6,838.84 |
| 9.11 | 245.76 | 6,435.55 |
| -473.42 | 1,889.73 | 3,615.83 |
| -1.86 | 121.25 | 3,178.68 |
| 379.55 | -621.68 | 8,342.65 |
| -534.82 | -1,236.42 | 8,599.15 |
| 977.51 | -383.64 | 6,467.87 |
| -585.27 | -288.36 | 7,248.89 |
| 890.54 | -801.19 | 4,838.30 |
| 690.59 | 9.31 | 6,581.48 |
| 283.40 | -688.27 | 8,782.17 |
| -882.51 | -488.52 | 4,566.94 |
| 298.76 | 45.42 | 3,863.65 |
| 375.32 | 71.32 | 13,838.87 |
| 293.62 | -12.46 | 8,815.84 |
| 395.27 | -447.69 | 8,527.44 |
| -21.68 | -692.96 | 7,523.00 |
| -347.33 | -725.88 | 8,395.32 |
| 487.53 | 680.59 | 7,353.10 |
| -269.88 | -853.46 | 6,188.72 |
| -425.45 | -411.59 | 5,187.11 |
| -1,089.26 | 88.75 | 5,228.25 |
| -70.88 | -831.88 | 6,288.22 |
| -343.31 | 878.84 | 7,139.25 |
| 763.68 | 185.41 | 8,134.75 |
| 931.59 | 81.47 | 6,812.83 |
| 528.75 | 219.85 | 8,583.71 |
| 561.43 | 794.81 | 4,473.65 |
| -238.15 | -1,827.88 | 7,884.81 |
| 976.58 | 328.86 | 7,588.88 |
| 873.86 | 219.98 | 7,468.85 |
| -641.81 | 512.57 | 5,972.81 |
| -265.61 | -572.83 | 7,399.39 |
| 467.71 | -854.83 | 4,866.42 |
| -620.46 | 333.74 | 6,188.88 |
| 848.14 | 228.58 | 7,568.85 |
| -44.28 | -785.81 | 5,938.41 |
| 533.76 | 714.91 | 5,864.48 |
| -257.88 | -273.21 | 6,822.28 |
| 315.91 | -188.84 | 2,787.87 |
| 77.23 | 11.45 | 4,322.44 |
| -216.93 | 73.83 | 3,526.37 |
| 182.83 | 233.57 | 4,712.21 |
| 27.76 | 88.23 | 4,257.63 |
| -438.38 | -337.95 | 3,389.75 |
| -1.32 | 244.98 | 3,435.79 |
| 58.19 | -79.55 | 6,382.87 |
| 127.94 | -248.21 | 789.46 |
| -181.25 | 86.72 | 6,159.32 |
| -148.71 | -85.84 | 5,818.21 |
| 152.53 | 3.68 | 4,575.15 |
| -63.86 | 148.18 | 5,985.49 |
| 9.95 | -81.78 | 5,421.21 |



Avg pz = 4,956.82 MeV
 Med pz = 4,981.63 MeV
 StdDev= 1689.829 MeV

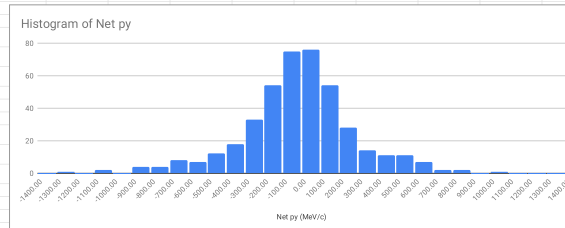


Calculated:
 Std Dev = 289.03 MeV/c
 delta-x = 0.35 fm (Heisenberg)
 delta-x = 1.04 fm (Fermi Gas)

$$\Delta x \Delta p \geq \frac{\hbar}{4\pi}$$

Δx = uncertainty in position
 Δp = uncertainty of momentum
 \hbar = Planck's constant
 π = pi

Visual: (FWHM/2) =
 Std Dev =
 delta-x = #DIV/0! fm (Heisenberg)
 delta-x = #DIV/0! fm (Fermi Gas)



Calculated:
 Std Dev = 310.96 MeV/c
 delta-y = 0.32 fm (Heisenberg)
 delta-y = 0.96 fm (Fermi Gas)

Visual: (FWHM/2) =
 Std Dev =
 delta-y = #DIV/0! fm (Heisenberg)
 delta-y = #DIV/0! fm (Fermi Gas)

| | | | |
|---------|---------|----------|--|
| | | | |
| | | | |
| 77.26 | -107.65 | 4,073.31 | |
| | | | |
| | | | |
| 87.64 | 153.73 | 6,487.28 | |
| | | | |
| 186.01 | -480.04 | 6,498.08 | |
| 183.12 | 118.45 | 3,328.27 | |
| 134.12 | 0.49 | 6,427.04 | |
| | | | |
| -64.37 | -83.32 | 7,206.06 | |
| 46.27 | 138.27 | 5,868.59 | |
| -17.33 | 166.28 | 3,899.30 | |
| | | | |
| | | | |
| | | | |
| 127.73 | -176.86 | 6,572.02 | |
| -65.35 | -124.81 | 6,371.66 | |
| | | | |
| | | | |
| -4.84 | -133.95 | 4,667.45 | |
| | | | |
| 173.91 | 177.83 | 2,871.42 | |
| 85.91 | 184.13 | 6,082.65 | |
| -8.05 | 97.94 | 4,214.85 | |
| | | | |
| -100.15 | 91.05 | 3,533.20 | |
| 194.76 | 16.40 | 2,952.59 | |
| 113.37 | -221.71 | 4,366.62 | |
| -387.47 | -392.54 | 758.88 | |
| -248.43 | 189.93 | 1,407.43 | |
| | | | |
| -340.56 | -697.79 | 3,821.39 | |
| -45.06 | 186.28 | 7,424.89 | |
| | | | |
| 143.35 | 185.15 | 3,522.82 | |
| | | | |
| 145.63 | -194.46 | 5,016.62 | |
| 419.92 | -60.82 | 8,371.62 | |
| 278.26 | 381.82 | 6,161.36 | |
| 189.87 | 146.88 | 2,806.32 | |
| 299.71 | 241.22 | 5,013.93 | |
| -199.17 | -201.86 | 5,781.58 | |
| -27.32 | 6.56 | 2,069.11 | |
| -510.91 | 425.33 | 6,759.97 | |
| | | | |
| 112.70 | 93.83 | 6,282.00 | |
| -433.86 | -323.32 | 4,529.65 | |
| | | | |
| 106.92 | 115.39 | 6,181.73 | |
| 317.04 | 61.91 | 5,583.00 | |
| | | | |
| | | | |
| | | | |
| -133.87 | -113.93 | 6,107.67 | |
| -181.28 | -552.73 | 4,144.21 | |
| | | | |
| 258.89 | -61.53 | 2,797.27 | |
| 344.52 | -82.40 | 5,093.58 | |
| 31.24 | -380.42 | 3,729.34 | |
| 43.53 | 122.79 | 3,313.66 | |
| 80.37 | -193.45 | 4,637.43 | |
| | | | |
| | | | |
| 152.27 | -222.25 | 5,854.42 | |
| 352.17 | 501.87 | 3,801.06 | |
| -29.20 | 161.10 | 6,029.12 | |
| -47.10 | -246.89 | 5,246.74 | |
| 84.82 | -74.29 | 6,261.49 | |
| -161.26 | 176.14 | 3,548.36 | |
| -190.07 | 52.82 | 7,037.16 | |
| -266.14 | 2.24 | 1,236.95 | |
| 45.40 | -13.93 | 5,796.18 | |
| | | | |
| 182.22 | -175.95 | 2,971.86 | |
| 91.33 | -42.76 | 5,031.38 | |
| -261.35 | 19.30 | 4,695.99 | |
| 7.37 | -125.82 | 4,840.26 | |
| 303.20 | -241.26 | 6,180.86 | |
| -220.06 | 522.97 | 4,000.47 | |
| -275.96 | -129.79 | 5,098.81 | |
| | | | |
| | | | |
| 299.39 | 10.27 | 5,777.36 | |
| 170.36 | 178.27 | 6,362.36 | |
| 80.25 | -95.91 | 3,458.71 | |
| | | | |
| 225.44 | 181.58 | 4,251.23 | |
| 3.62 | 235.40 | 3,529.92 | |
| 352.17 | 501.87 | 3,801.06 | |
| -117.44 | 42.07 | 2,885.16 | |
| | | | |

| | | |
|-----------|-----------|-----------|
| 45.71 | -83.03 | 6,578.05 |
| -8.93 | 92.05 | 6,149.54 |
| 92.45 | -71.67 | 7,168.27 |
| -1,045.57 | 641.75 | 5,175.61 |
| -131.15 | -65.22 | 4,106.42 |
| -493.45 | 433.14 | 3,736.34 |
| 49.39 | 49.25 | 3,955.66 |
| 307.05 | 88.95 | 1,491.82 |
| 89.98 | 174.89 | 6,806.45 |
| 126.95 | -49.62 | 5,385.62 |
| 314.86 | 58.19 | 5,473.16 |
| -76.59 | 454.76 | 6,294.77 |
| -59.64 | -158.18 | 4,876.85 |
| 158.03 | 38.95 | 3,711.61 |
| 48.01 | -15.86 | 5,293.92 |
| -68.08 | -135.93 | 3,121.93 |
| -64.46 | -172.38 | 6,463.76 |
| -118.92 | -99.12 | 5,719.78 |
| -53.82 | 335.04 | 3,471.96 |
| 174.13 | 184.89 | 3,786.88 |
| 284.58 | 58.19 | 3,862.63 |
| 169.53 | -16.01 | 3,348.68 |
| -6.31 | -48.23 | 2,548.18 |
| -221.94 | -138.26 | 1,787.89 |
| -6.23 | -146.25 | 3,675.66 |
| 167.95 | -285.19 | 3,834.14 |
| 46.46 | 88.69 | 4,686.98 |
| -526.14 | -187.29 | 3,433.81 |
| 148.87 | -154.63 | 3,679.18 |
| -89.27 | 3.48 | 7,295.74 |
| 289.17 | 229.89 | 5,142.61 |
| 331.86 | -163.61 | 4,963.51 |
| -425.99 | -174.42 | 4,966.64 |
| 118.38 | 381.98 | 4,787.46 |
| 72.23 | -187.88 | 4,381.35 |
| 168.19 | 55.12 | 5,676.59 |
| 185.75 | 98.84 | 3,752.49 |
| -11.87 | -111.14 | 2,668.76 |
| 74.38 | -184.14 | 4,747.65 |
| 888.54 | -38.66 | 7,428.89 |
| 32.19 | -599.97 | 4,644.24 |
| 368.81 | 378.83 | 3,998.97 |
| -186.55 | 82.11 | 5,871.78 |
| 546.98 | -1,038.93 | 3,296.18 |
| -329.12 | -284.01 | 10,138.16 |
| 161.72 | -289.83 | 6,319.38 |
| 383.84 | -23.66 | 6,442.39 |
| -26.26 | -65.94 | 6,434.64 |
| 289.56 | -298.86 | 5,415.86 |
| -14.48 | 496.88 | 6,688.85 |
| -78.64 | 328.77 | 3,641.12 |
| 345.13 | -388.87 | 3,281.71 |
| -417.46 | -488.22 | 5,982.28 |
| -281.27 | -197.63 | 3,864.89 |
| -53.67 | -54.47 | 4,886.72 |
| -73.89 | 92.93 | 5,962.48 |
| 55.86 | -5.81 | 5,992.17 |
| 382.84 | -232.89 | 4,287.16 |
| -46.31 | -45.38 | 3,828.19 |
| 133.78 | 86.73 | 952.97 |
| -21.38 | 325.37 | 4,112.58 |
| -368.68 | 681.29 | 4,871.93 |
| -29.68 | -87.42 | 2,959.65 |
| -518.48 | 169.98 | 1,288.69 |
| 257.13 | -523.72 | 4,128.17 |
| 146.86 | 395.37 | 6,135.95 |
| 328.99 | 161.11 | 7,636.22 |
| -318.17 | 178.38 | 5,373.88 |
| -184.28 | 4.49 | 4,943.88 |
| -141.49 | 143.12 | 3,871.27 |
| 26.19 | 548.88 | 3,785.65 |
| -892.71 | 286.17 | 3,744.48 |
| 368.33 | 1.68 | 3,348.97 |
| 358.65 | -566.88 | 4,244.85 |
| -259.98 | 563.18 | 6,895.89 |
| -11.79 | -1.38 | 5,157.38 |
| 188.86 | 581.58 | 7,893.57 |

