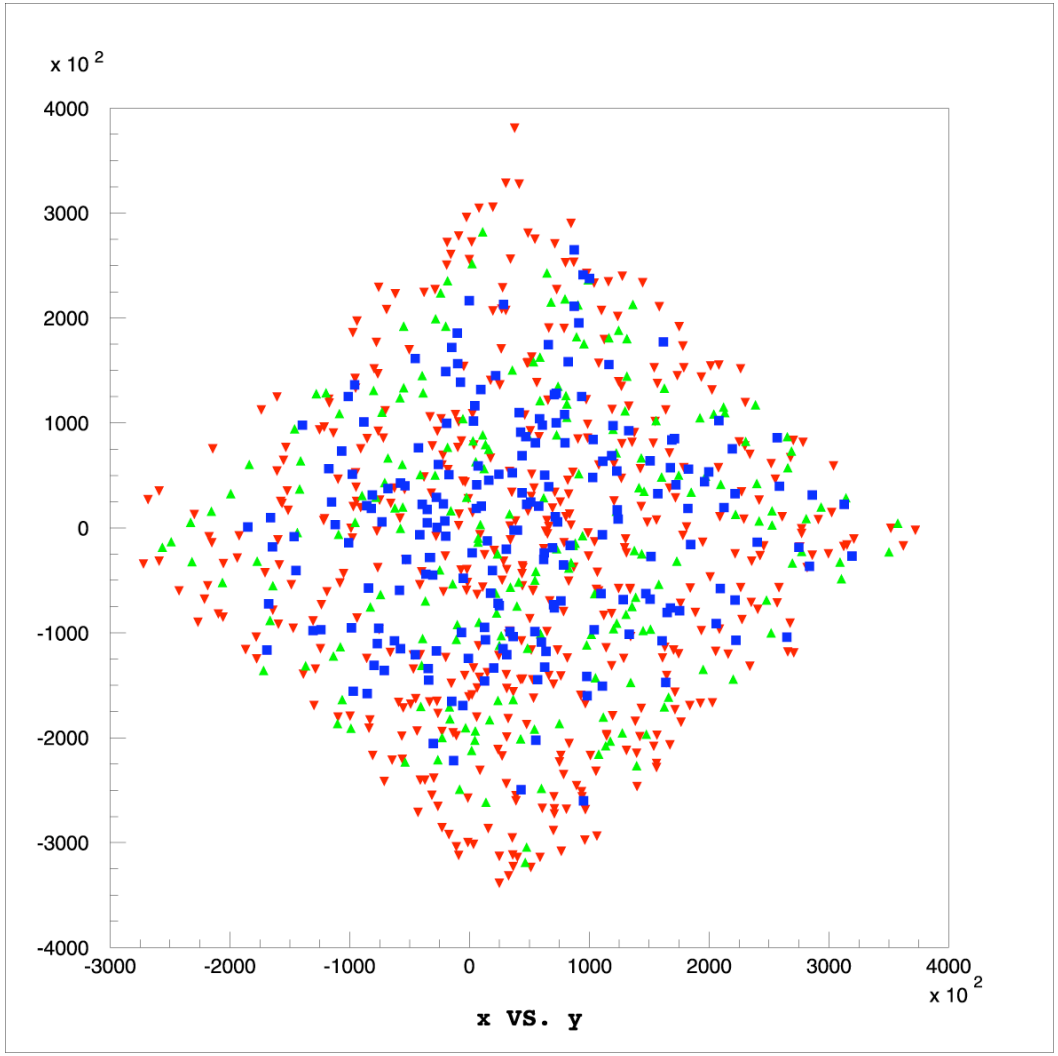
# Data Summary *ntuple*

- fnbblx1:
  - ~rameika/anal/evt_summary.dat
  - ~rameika/anal/trk_summary.dat
  - read_sum.kumac
  - define_kumac.txt
- Includes :
  - mu, run, event, x, y, z, station, module, zrel, nmat, nemul, nlong, ecal, psum, pmu, dphi, emel, emhad, phase, enu, wgt, intr, typ

# Vertex Location

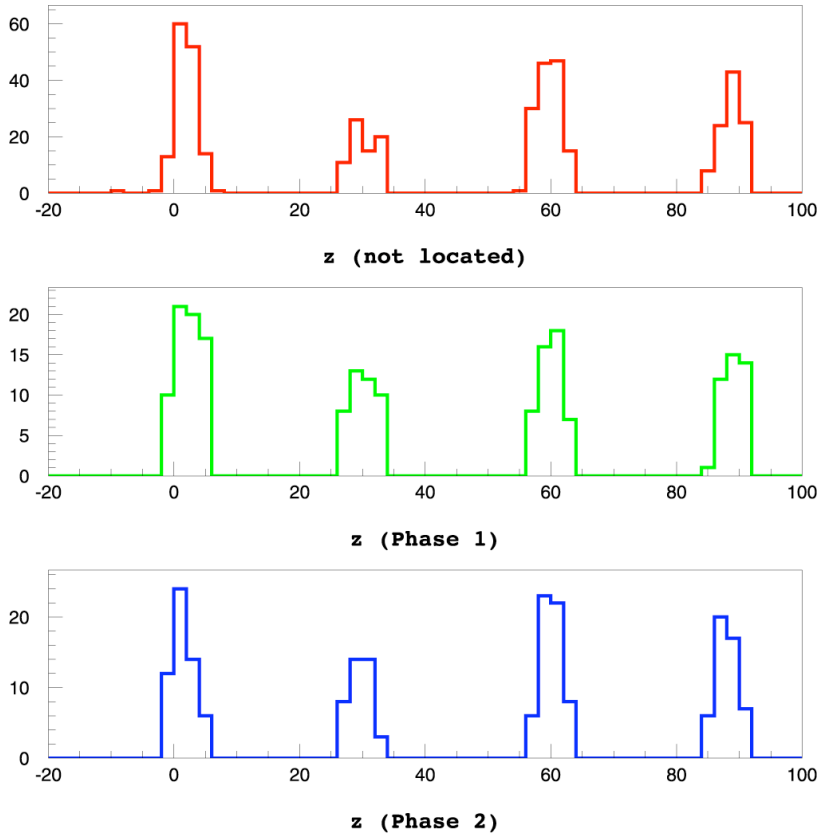


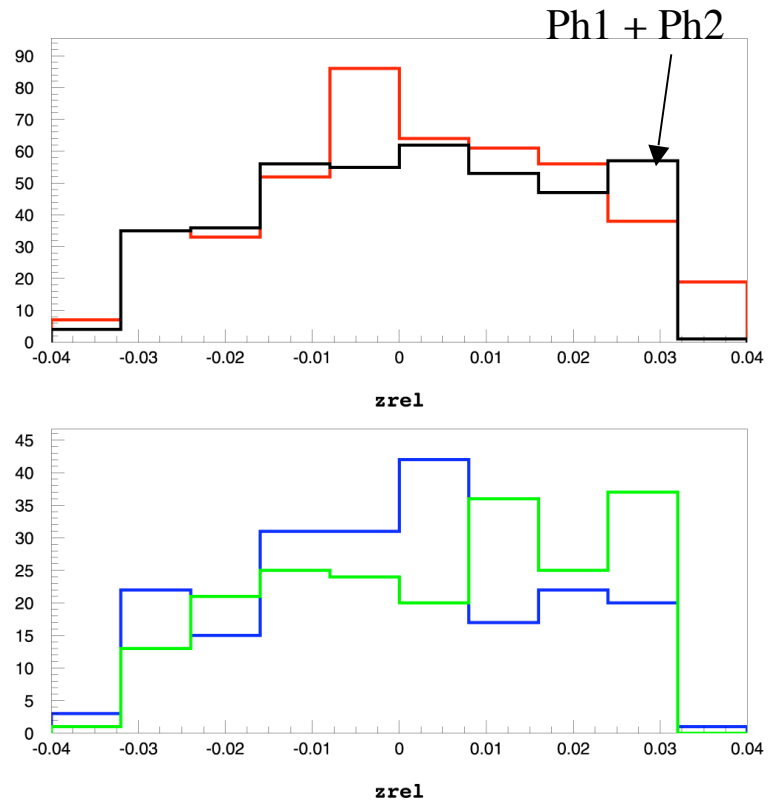

Not located

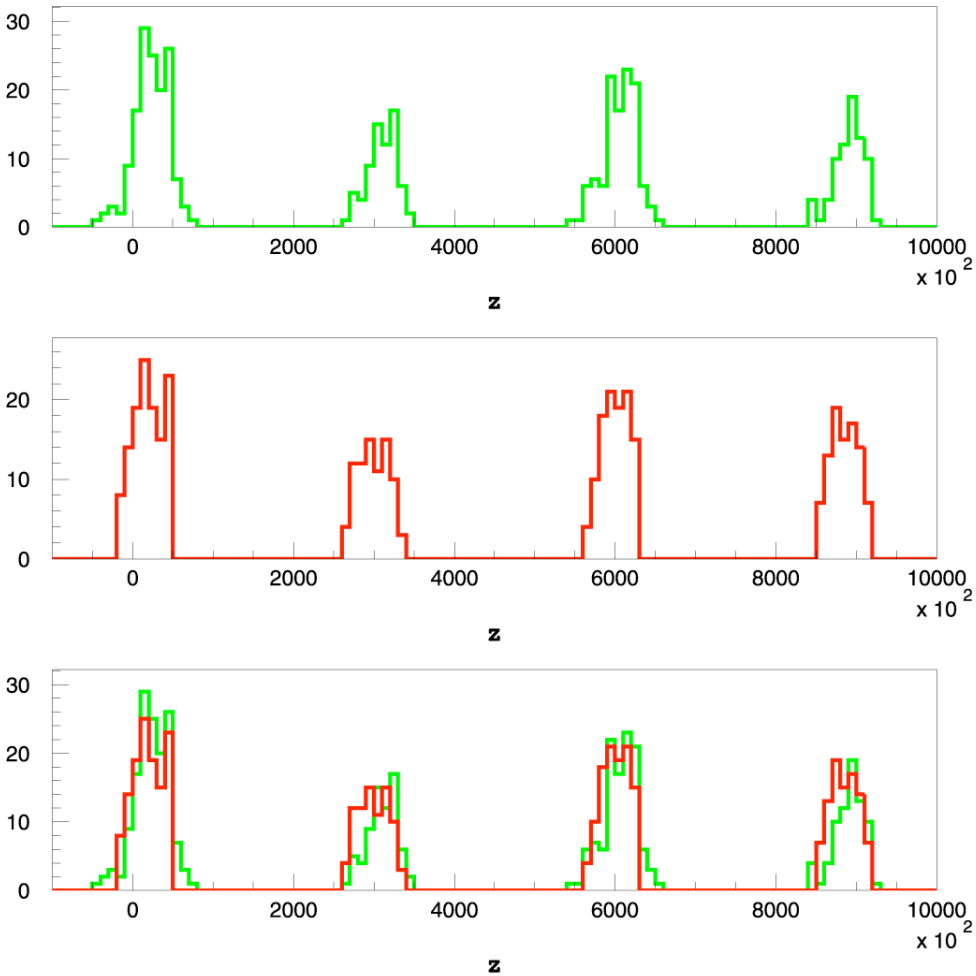
Phase 1

Phase 2

# Z-Vertex Distributions

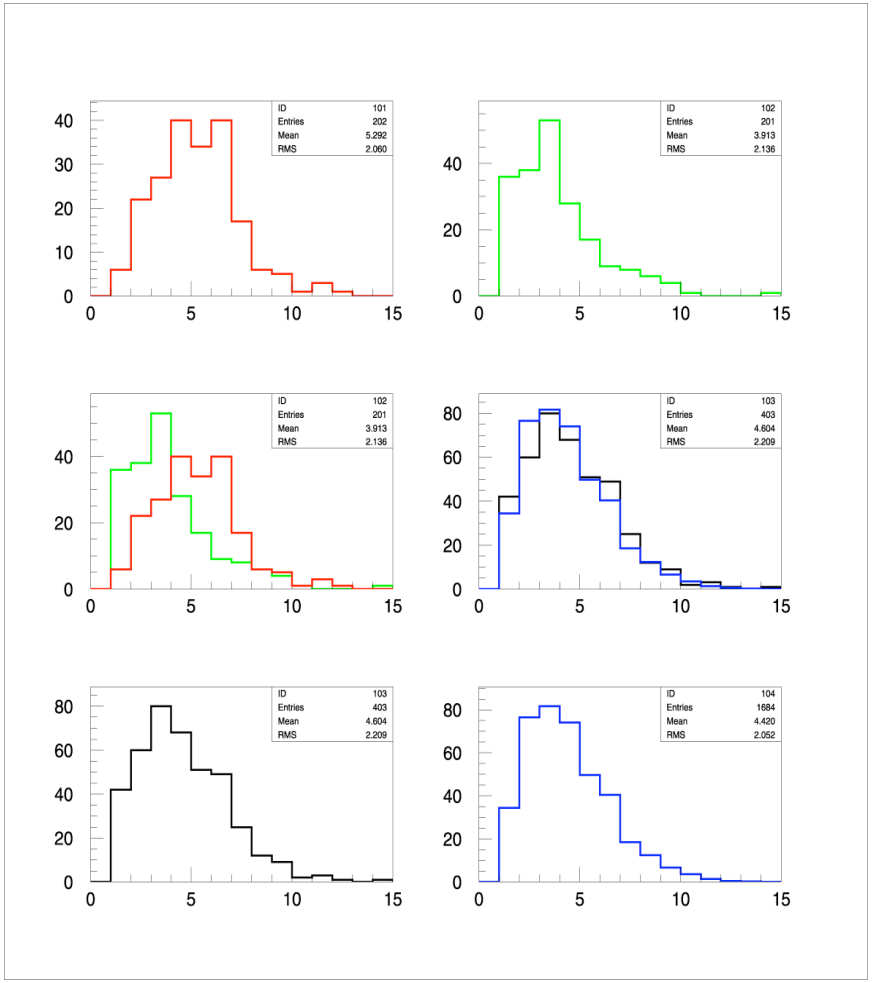


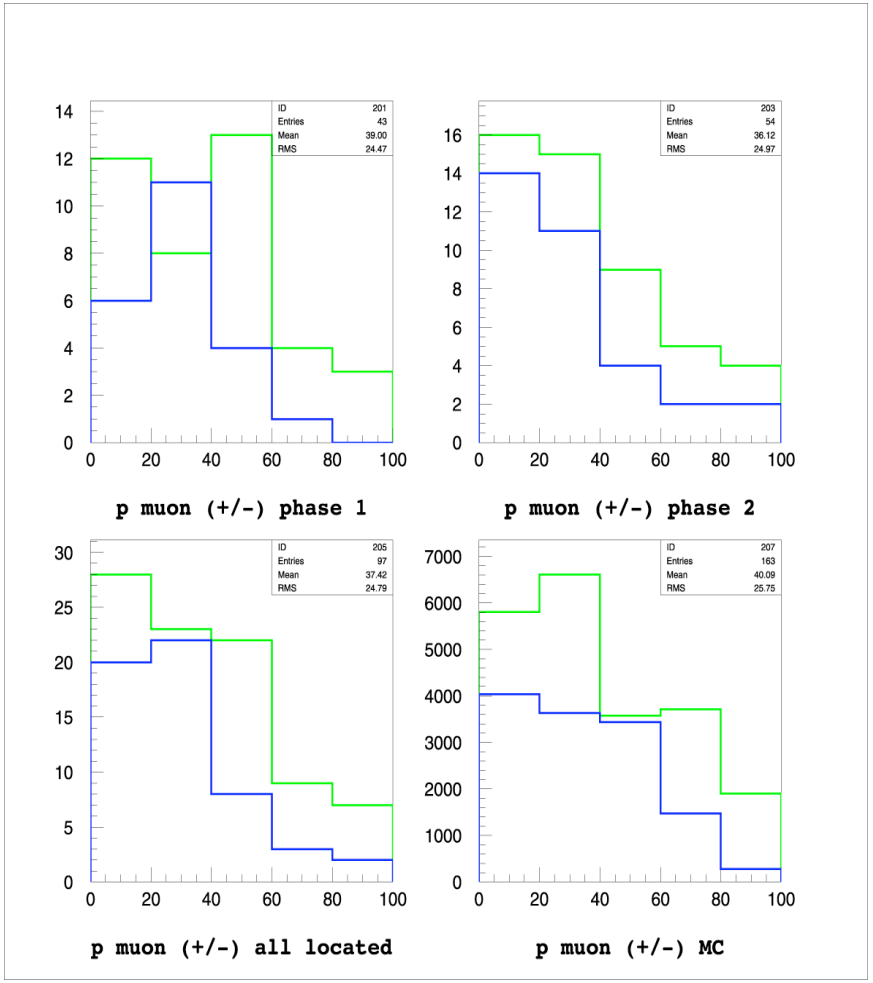

30
20
10
0
0
2000
4000
6000
8000
10000
x 10 2
z
20
10
0
0
2000
4000
6000
8000
10000
x 10 2
z
30
20
10
0
0
2000
4000
6000
8000
10000
x 10 2
z

# Primary Multiplicity Distributions

Phase 1
Phase 2
All
MC



# Muon CC events



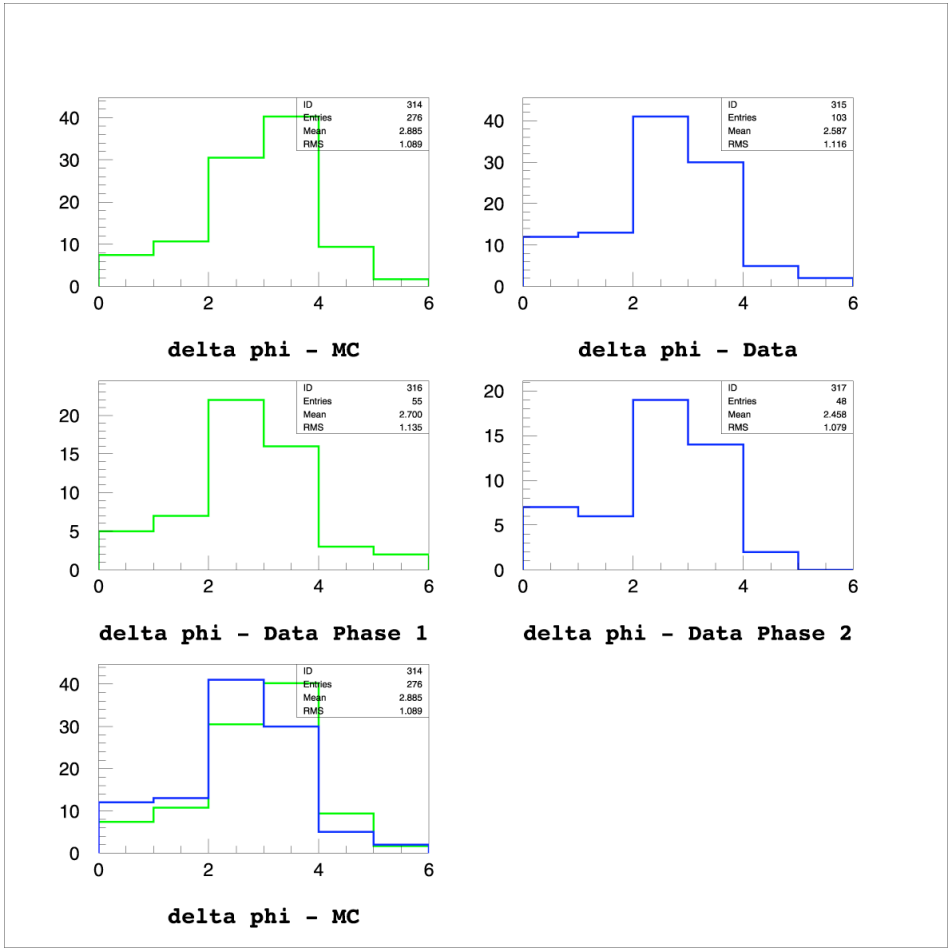

Phase 1 : 70/202 = 35%
n(-) : 43
n(+) : 25
n(-)/n(+) = 1.72

Phase 2 : 93/202 = 46%
n(-) : 54
n(+ ) : 36
n(-)/n(+) = 1.5

Ph1+Ph2: 163/404 = 40%
n(-) : 97
n(+) : 61
n(-)/n(+) = 1.6

Momentum analysis requires abs(p) < 100.

# □□ for muon CC events

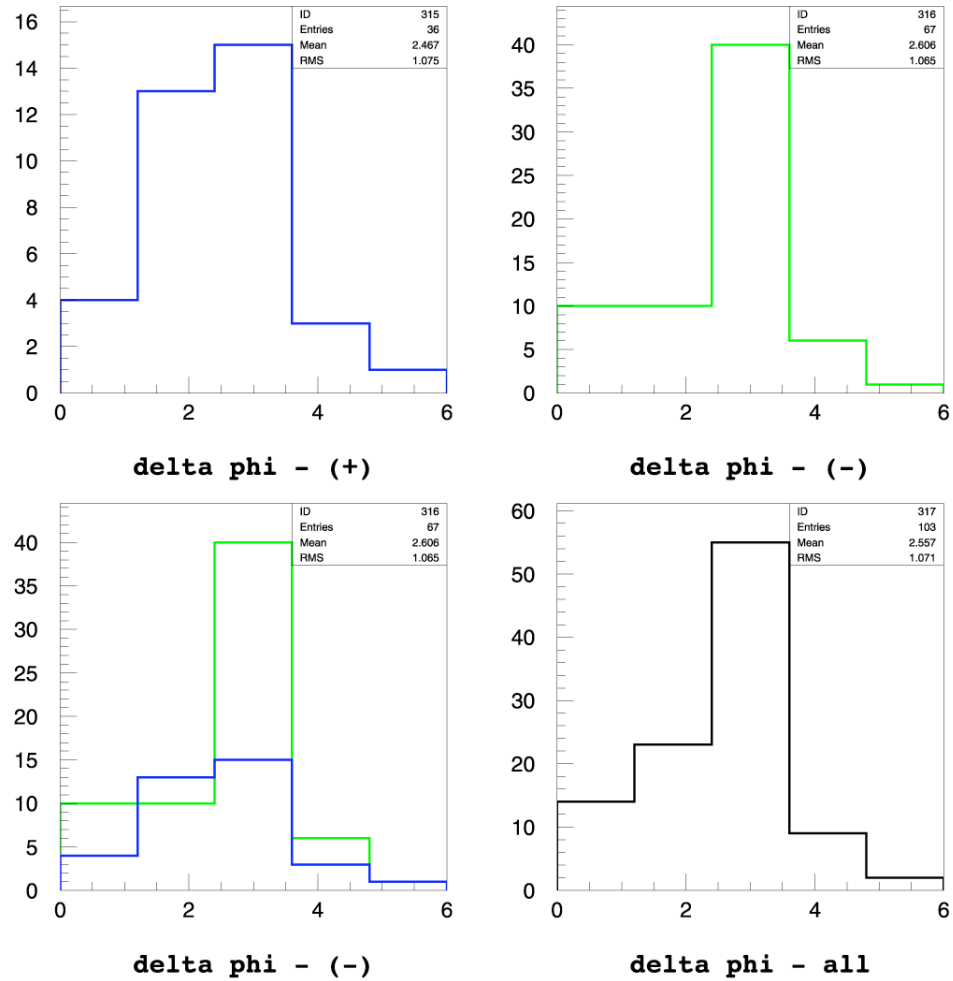



Requirements :

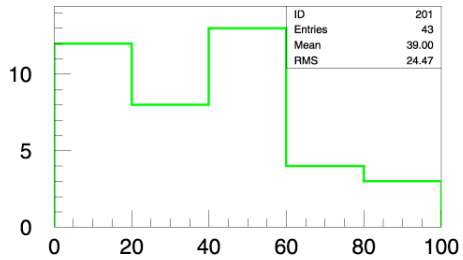
muon tag

long multiplicity > 3

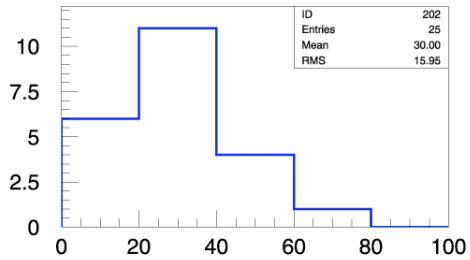
# Re-binned □□


ID 315
Entries 36
Mean 2.467
RMS 1.075
delta phi - (+)
ID 316
Entries 67
Mean 2.606
RMS 1.065
delta phi - (-)
ID 316
Entries 67
Mean 2.606
RMS 1.065
delta phi - (-)
ID 317
Entries 103
Mean 2.557
RMS 1.071
delta phi - all

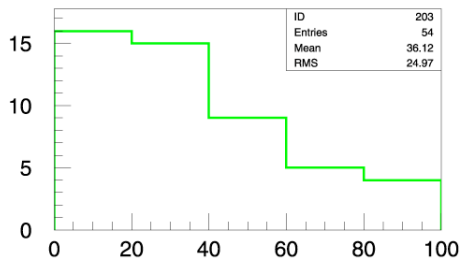
# CC mu momentum



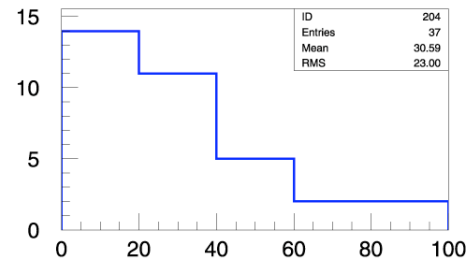

p muon (-) phase 1



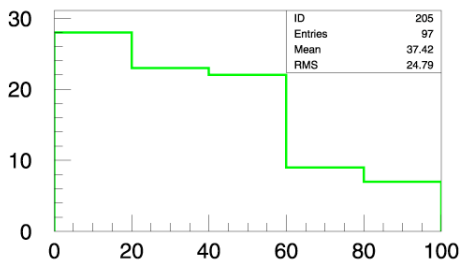

p muon (+) phase 1



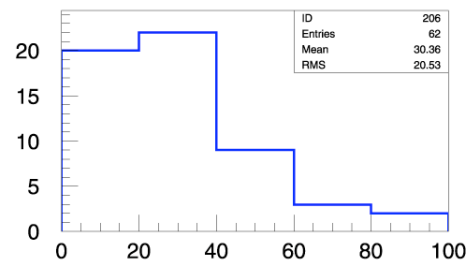

p muon (-) phase 2




p muon (+) phase 2

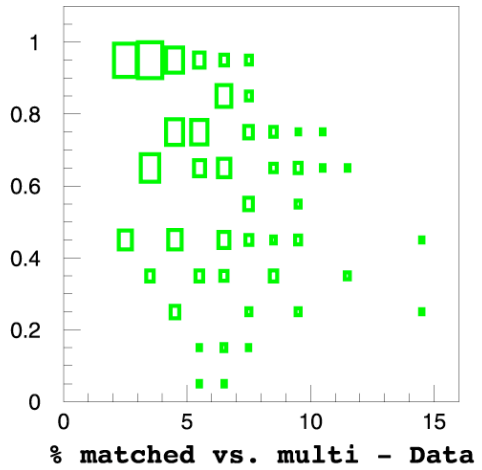


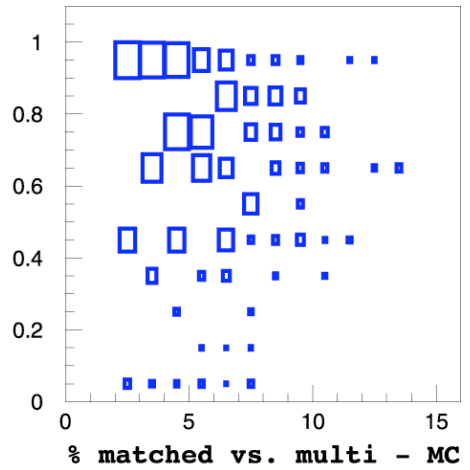

p muon (-) all

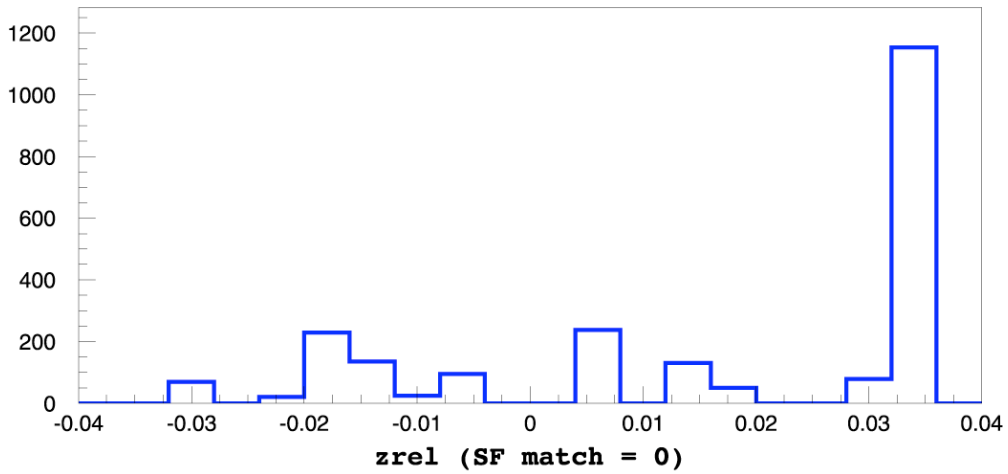



p muon (+) all

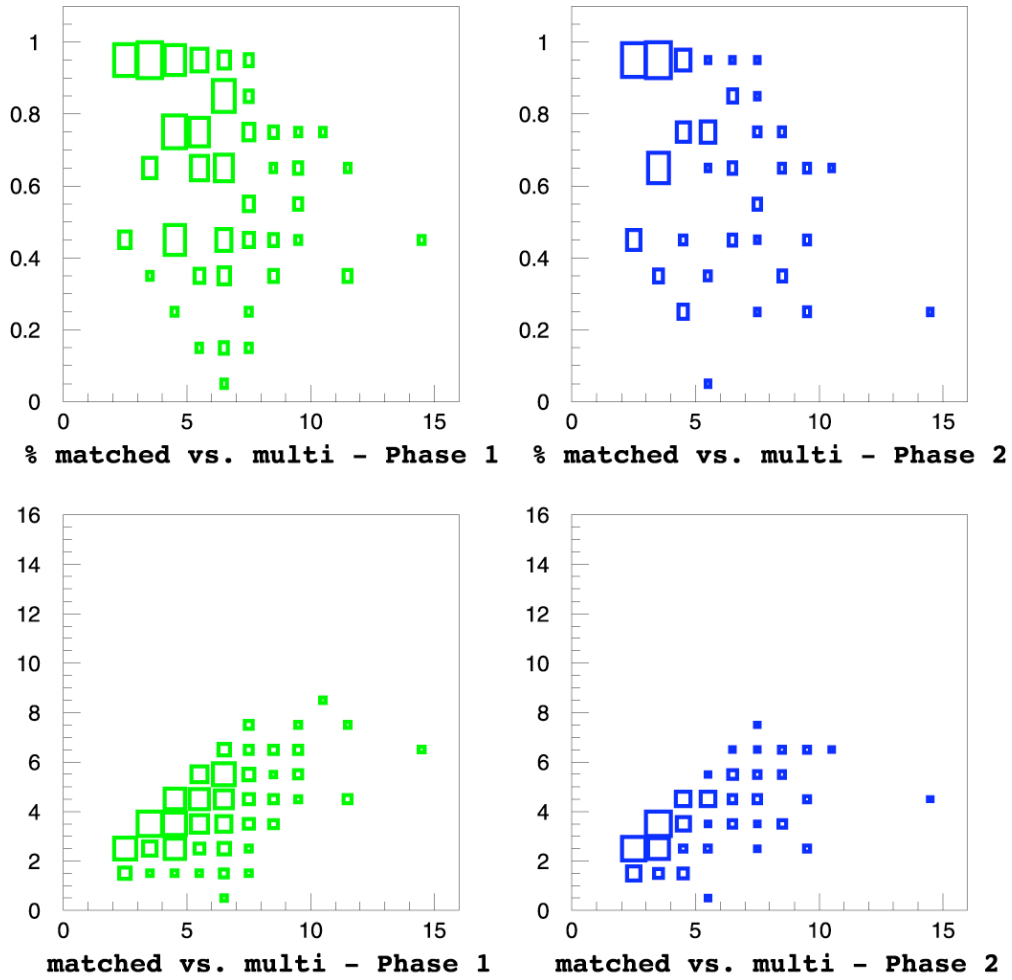
# SF Matching to Validate Location



# SF Matching


% matched vs. multi - Phase 1
% matched vs. multi - Phase 2
matched vs. multi - Phase 1
matched vs. multi - Phase 2