

Data that used for:

- Signal (MC)

`/data/scratch/userspace/pretz/scrappy-platypus-optimization/
datafiles/energy.sweets-dec20.xcd`

- Background (Real data)

`/data/scratch/userspace/pretz/scrappy-platypus-optimization/
datafiles/energy.dec20.run005481.xcd`

Events used in each stage:

◆ Training:

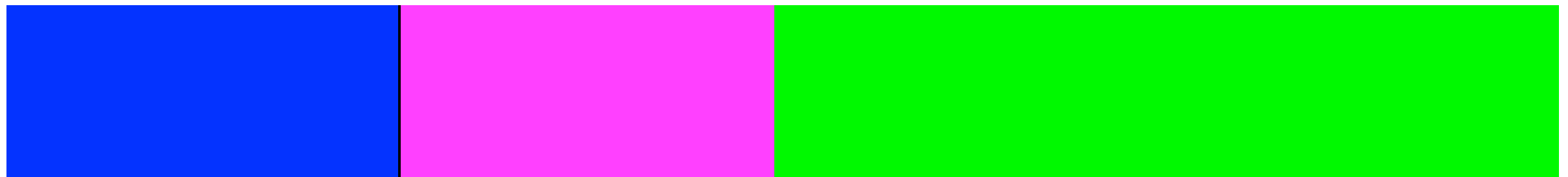
25 %

◆ Verification:

25%

◆ Testing:

50 %



- `rec.angleFitStatus==0`
- `rec.coreFitStatus==0`
- `rec.nChAvail>=700`

- `rec.coreFiduScale<=100`
- `rec.delAngle < Opt Angle`

Input parameters:

- Compactness = $n\text{HitSP20} / CxPE40$
- PINCness

Using a TMVA:

- Neural network (NN)

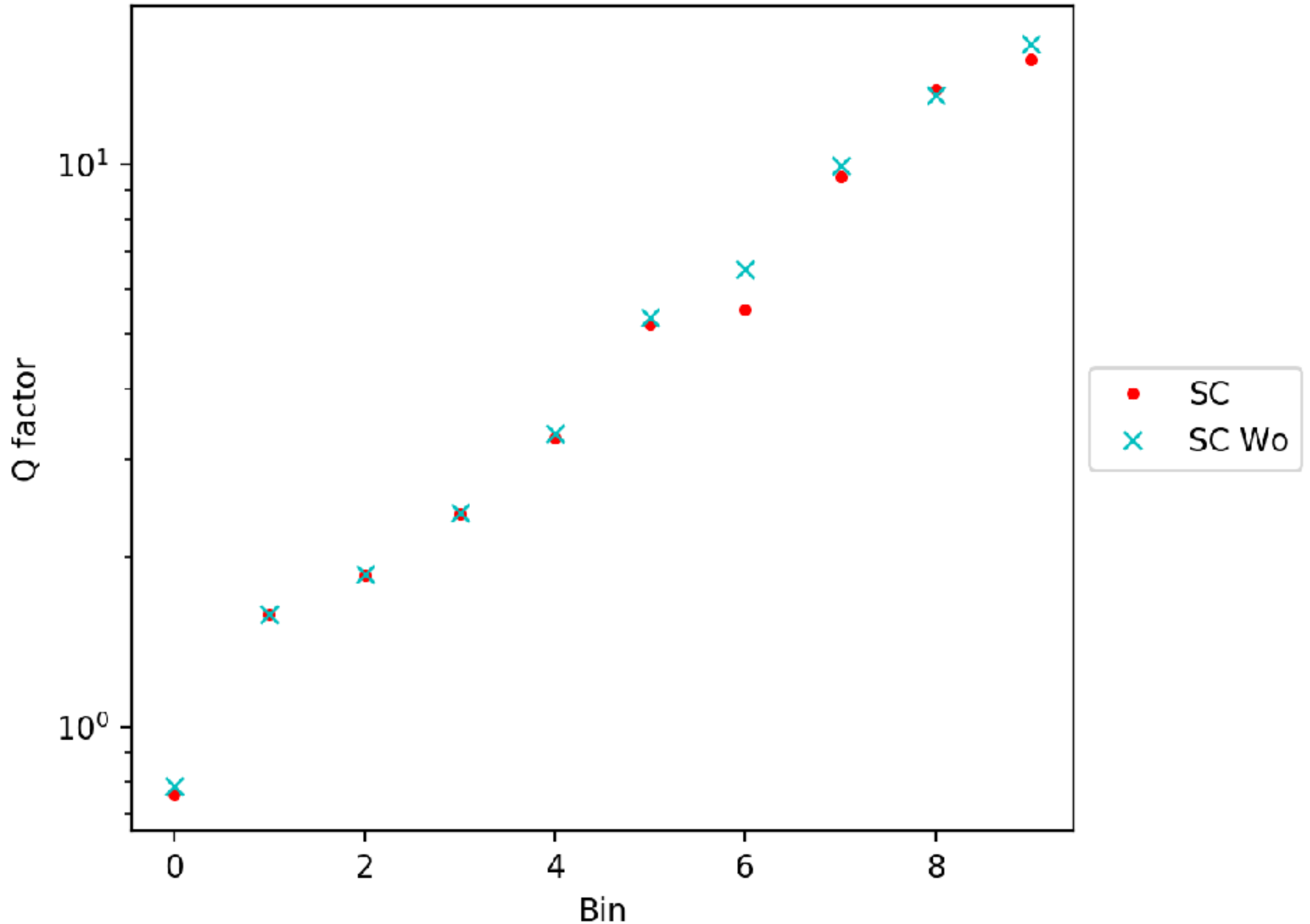
Architecture: 2:10:10:1

- Rectangular cuts (RC)

Method used: MC

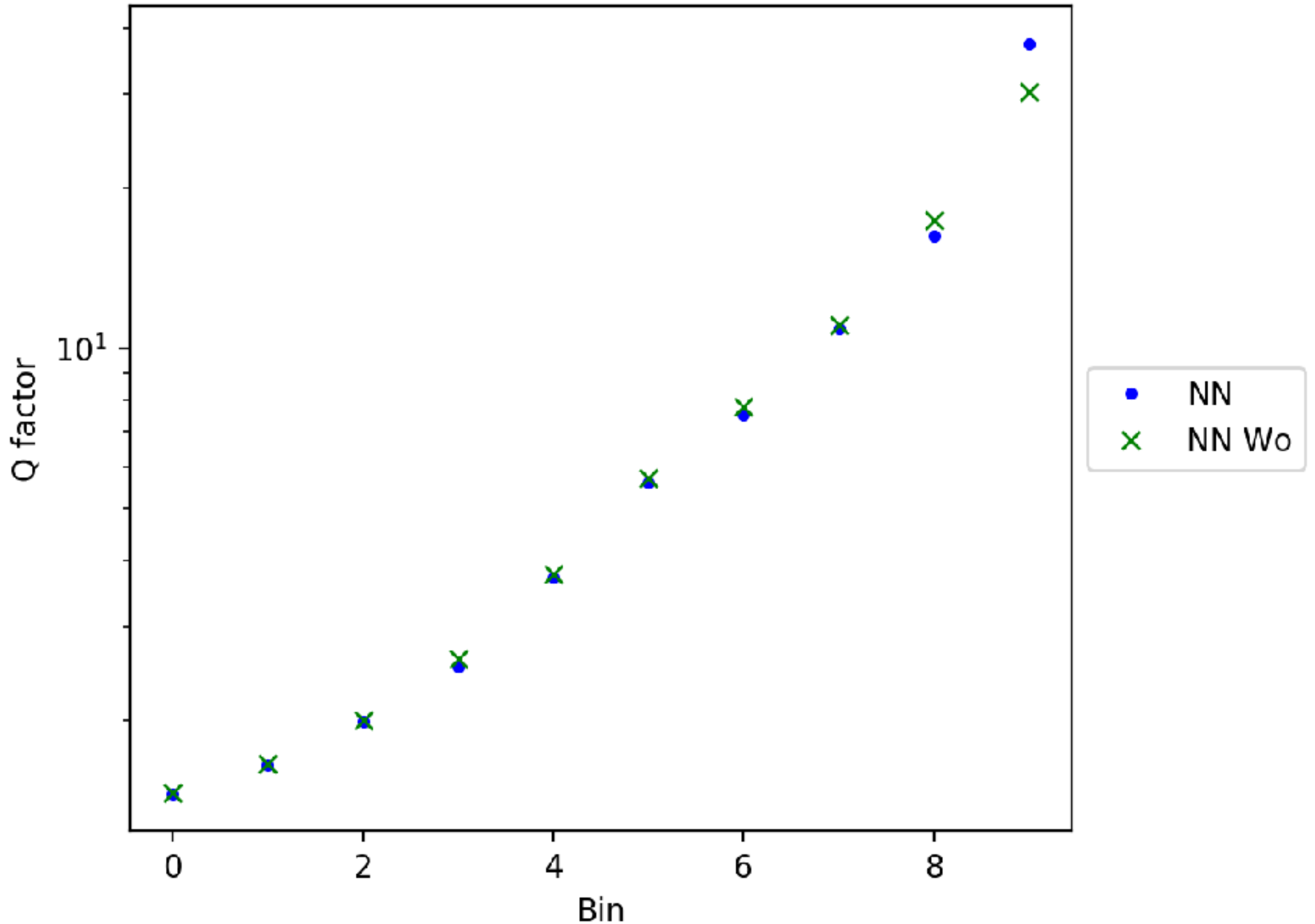
Test data set

C and P



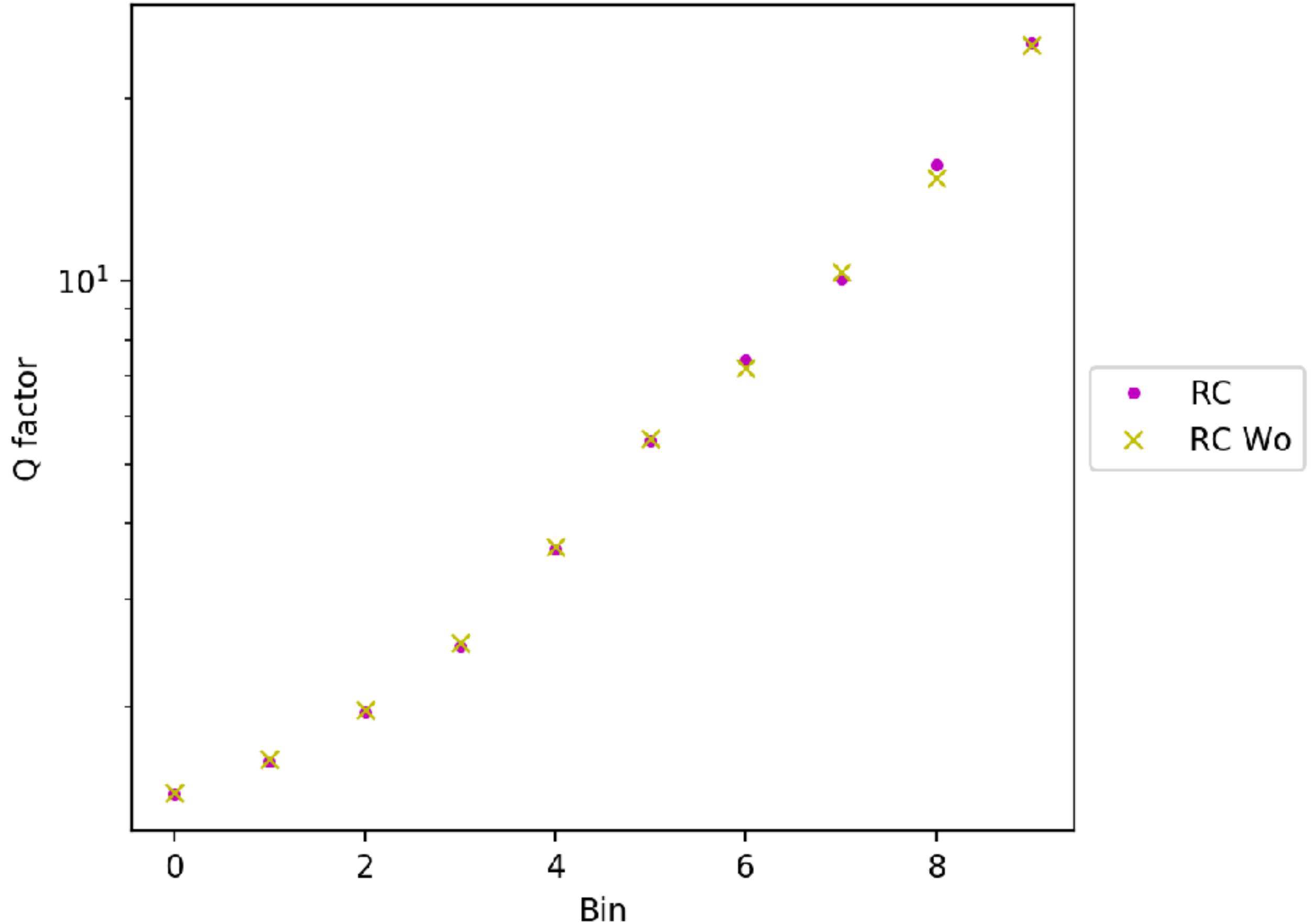
Test data set

C and P



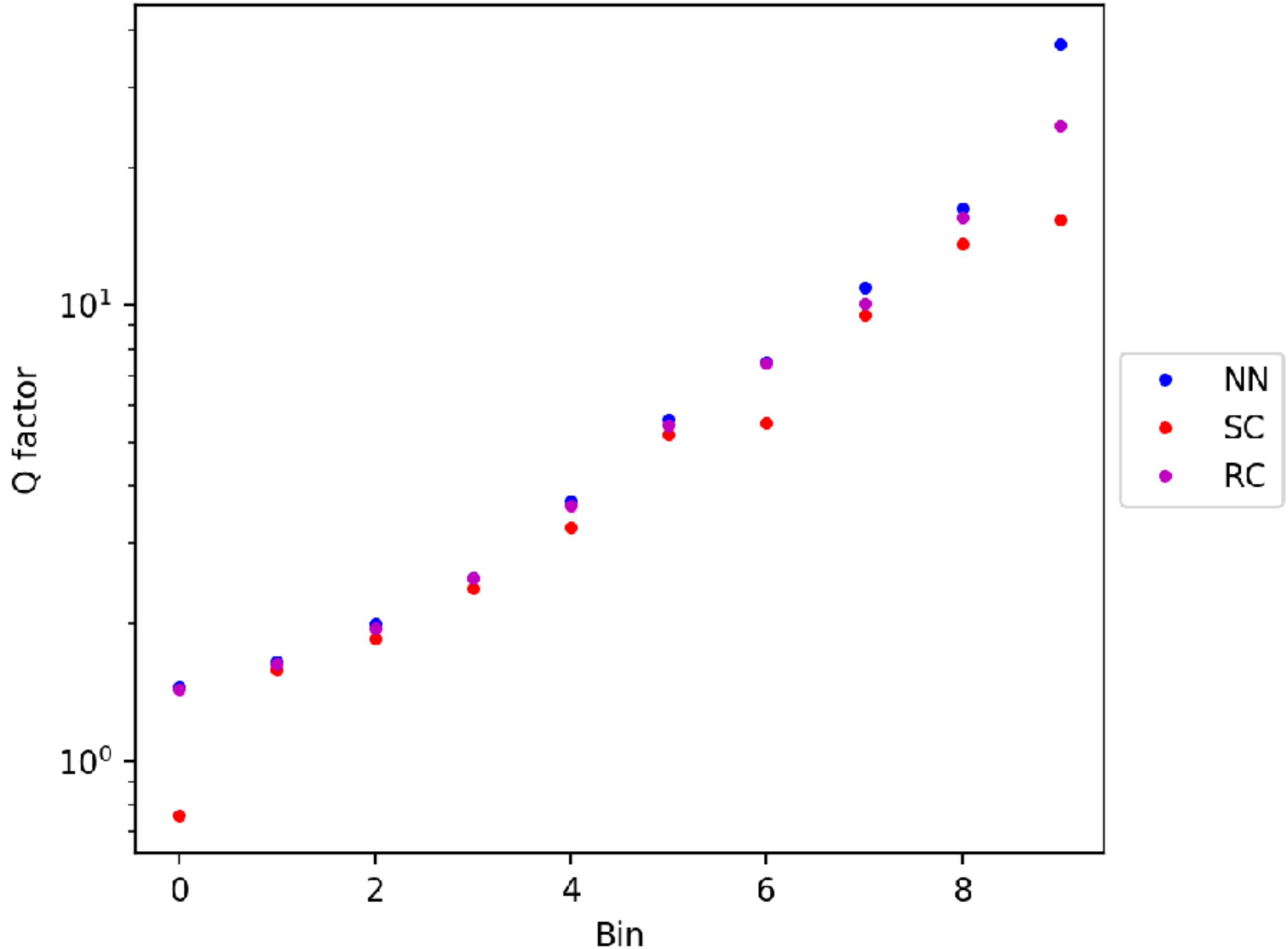
Test data set

C and P



Test data set

C and P



Back Slide

liff-MakeOptApertures -d 22.02

-i /data/archive/hawcroot/maps/maps-20170630/liff/
response_aerie_svn_27754_systematics_best_mc_test_nobroadpulse_10pctlogchargesmearin
g_0.63qe_25kHzNoise_run5481_curvature0_index3.root

Bin	fhit min	fhit max	opt del angle
0	0.044	0.067	0.02356
1	0.067	0.105	0.01627
2	0.105	0.162	0.01143
3	0.162	0.247	0.00861
4	0.247	0.356	0.00642
5	0.356	0.485	0.00478
6	0.485	0.618	0.00422
7	0.618	0.740	0.00356
8	0.740	0.840	0.00302
9	0.840	1.010	0.00269

Standard cut		
Bin	C	P
0	16.0	1.4
1	7.0	2.2
2	9.0	3.0
3	11.0	2.3
4	15.0	1.9
5	18.0	1.9
6	17.0	1.7
7	15.0	1.8
8	15.0	1.8
9	3.0	1.6