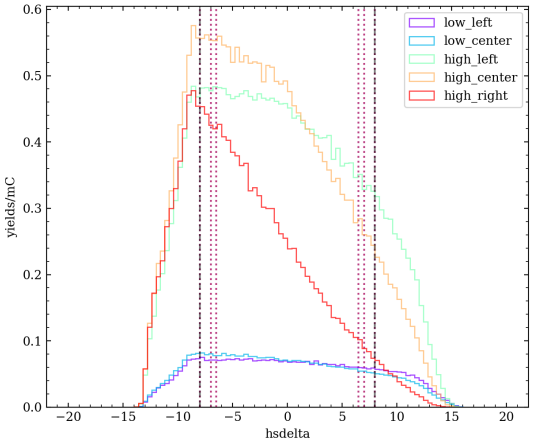
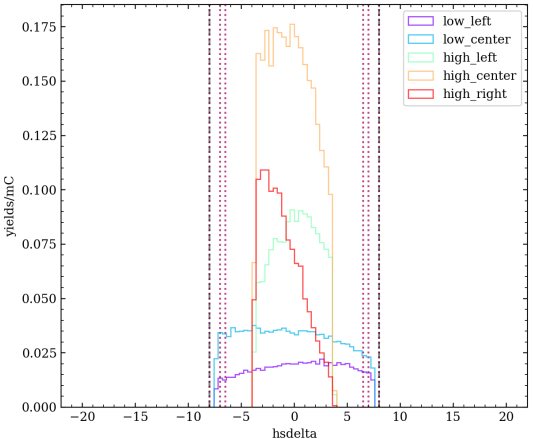
SIMC systematic (usual cut)

- $Q^2 = 4.4, W = 2.74$
- Diamond cut
- nominal acceptance
- Hgcer hole
- $M_X \in (1.10, 1.14)$
- $t \in (t_{\min}, t_{\max})$ from binning

Acceptance hsdelta

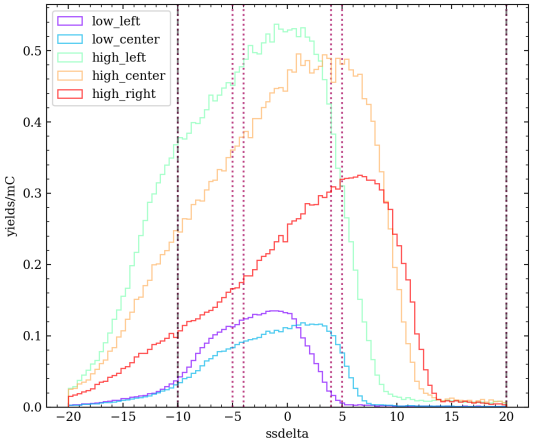


- No cut at all.

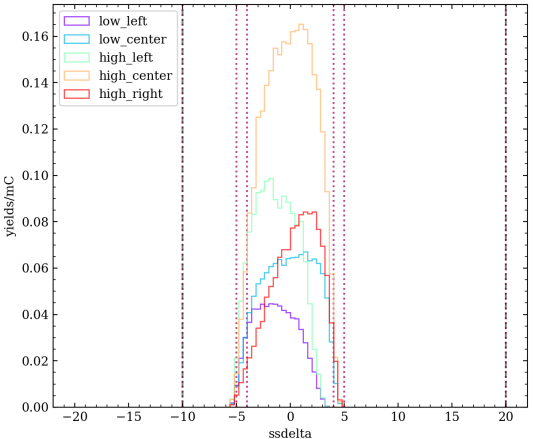


- Only no acceptance cut.

Acceptance ssdelta

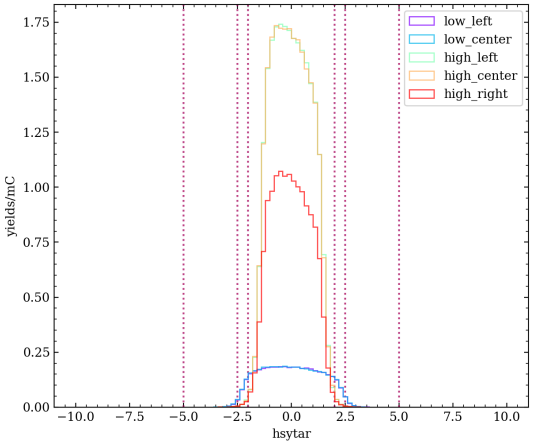


- No cut at all.

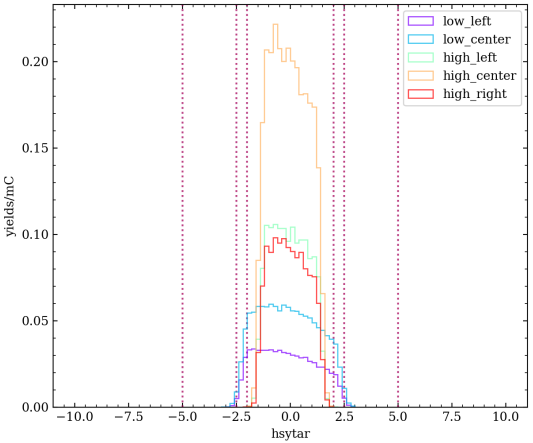


- Only no acceptance cut.

Acceptance hsytar

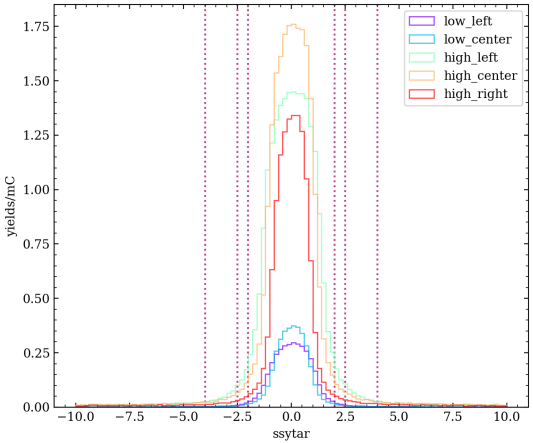


- No cut at all.

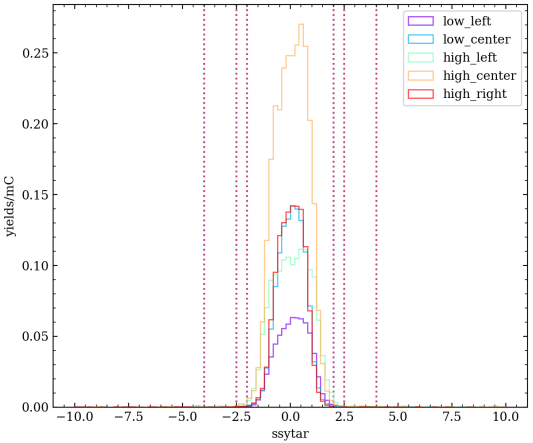


- Only no acceptance cut.

Acceptance ssytar

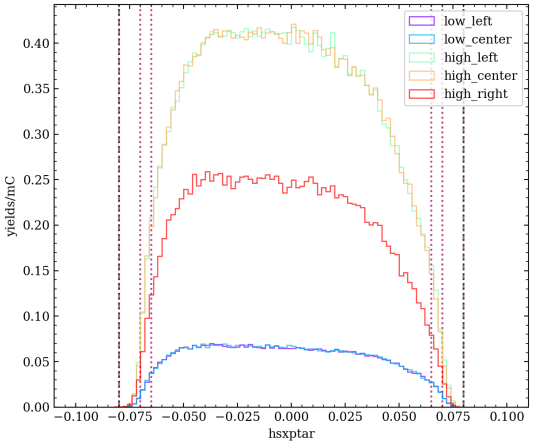


- No cut at all.

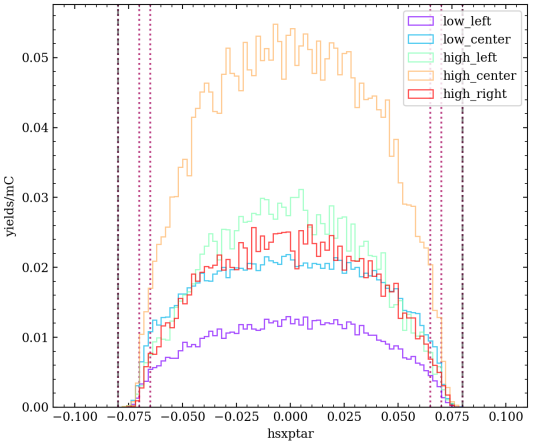


- Only no acceptance cut.

Acceptance hsxptar

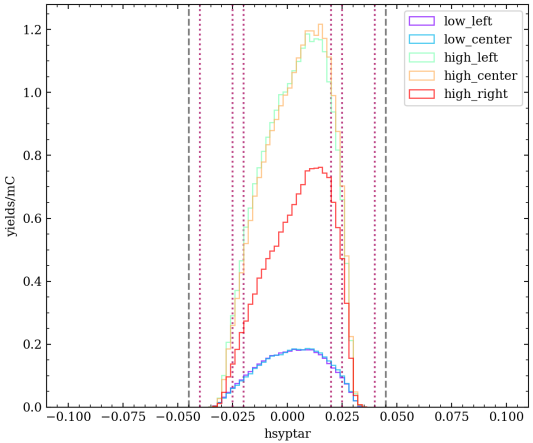


- No cut at all.

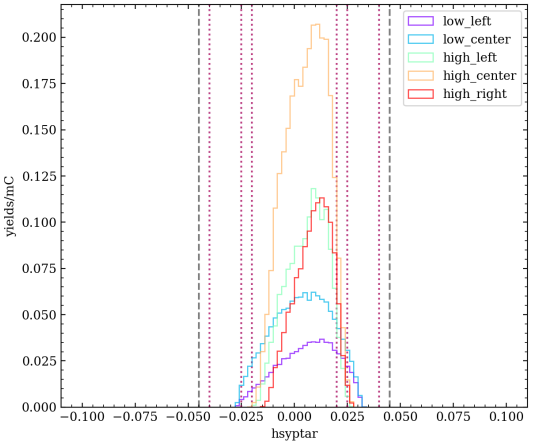


- Only no acceptance cut.

Acceptance hsyptar

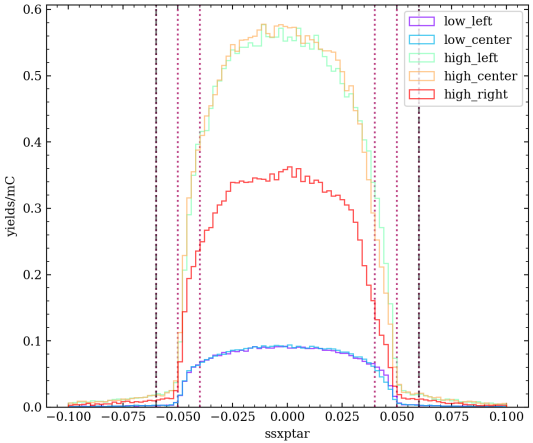


- No cut at all.

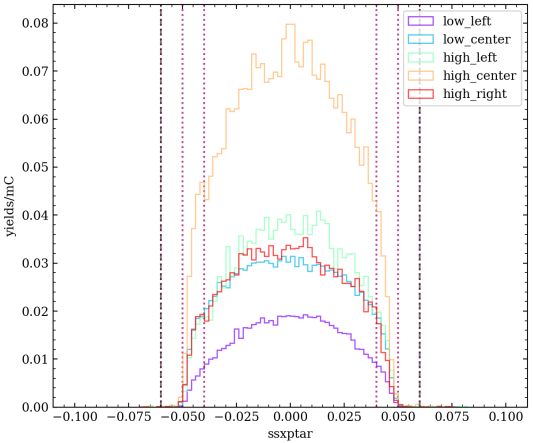


- Only no acceptance cut.

Acceptance ssxptar

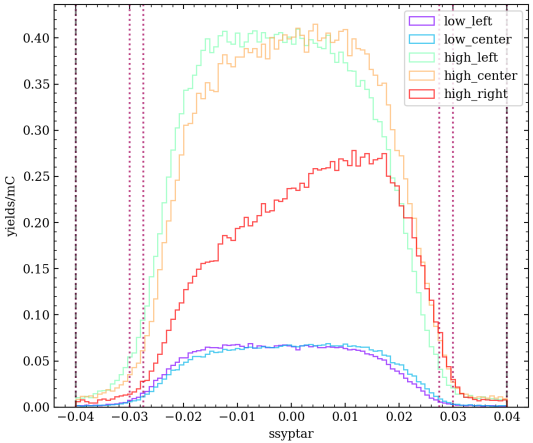


- No cut at all.

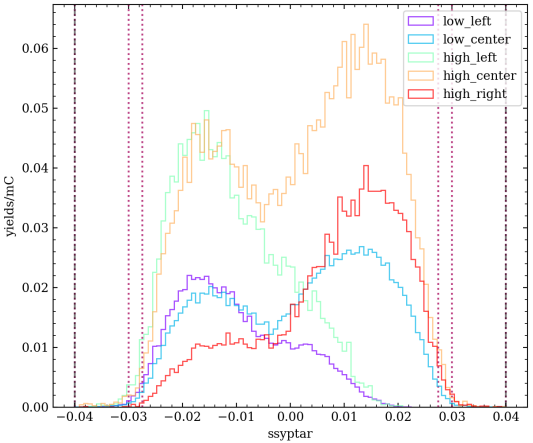


- Only no acceptance cut.

Acceptance ssyptar



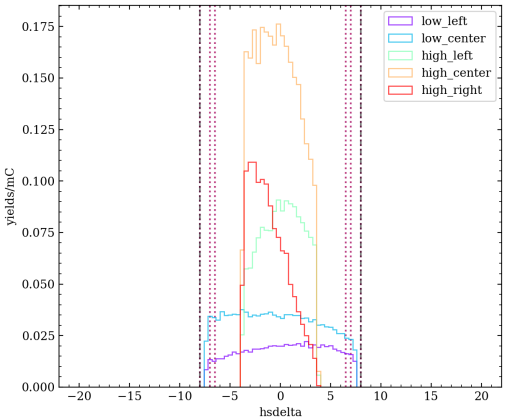
- No cut at all.

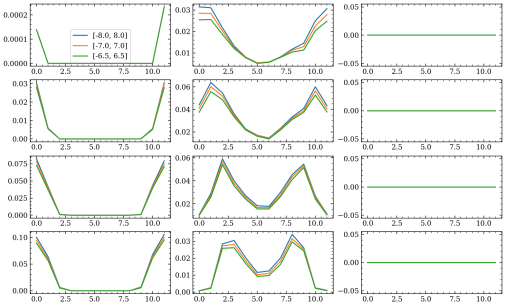


- Only no acceptance cut.

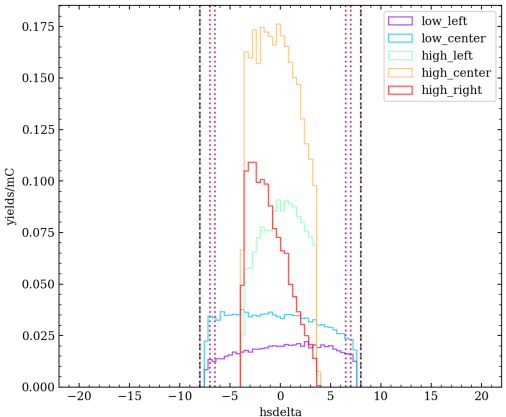
Next, systematic uncertainty in SIMC yields from different acceptance

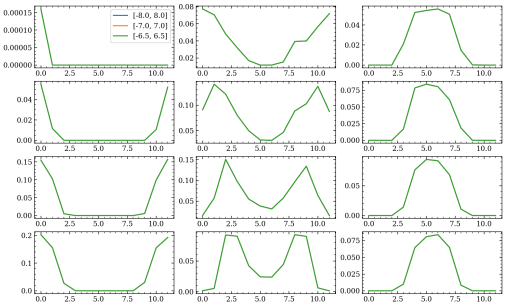
hsdelta (low ϵ)



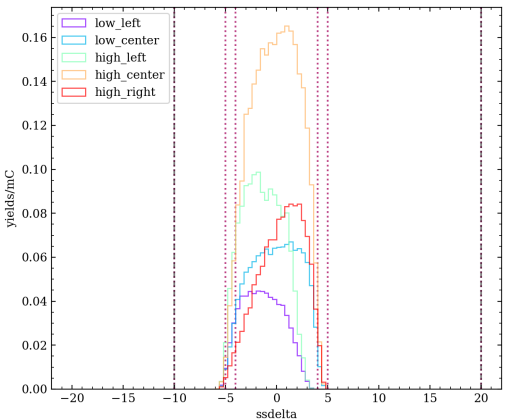


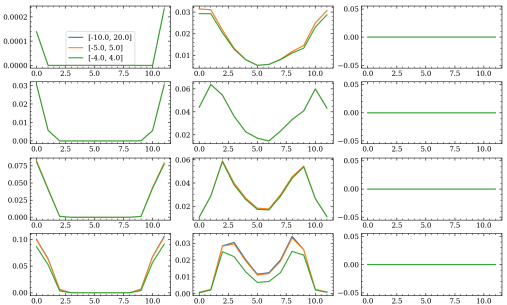
hsdelta (high ϵ)



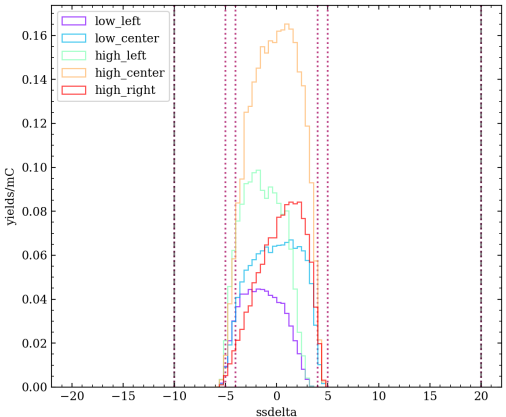


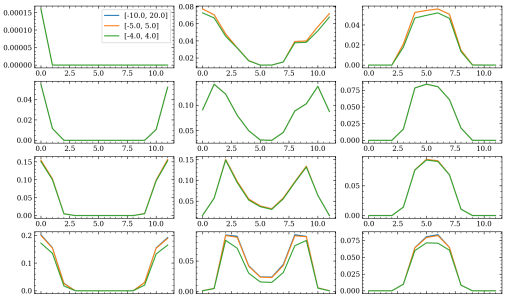
ssdelta (low ϵ)



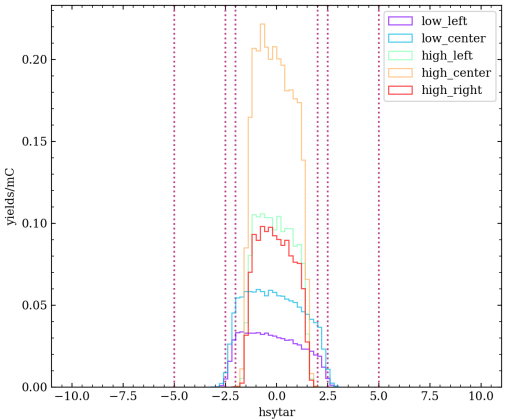


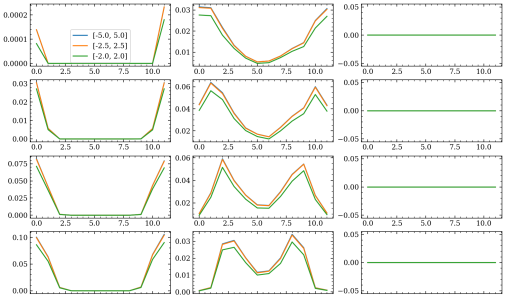
ssdelta (high ϵ)



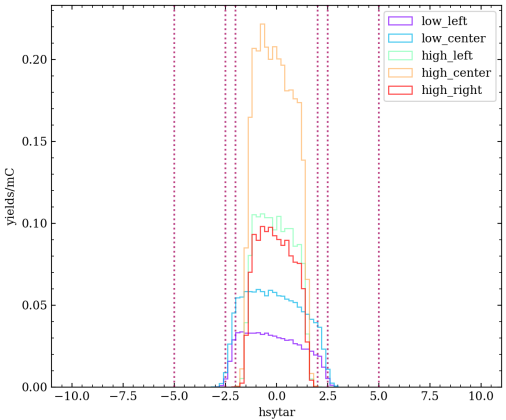


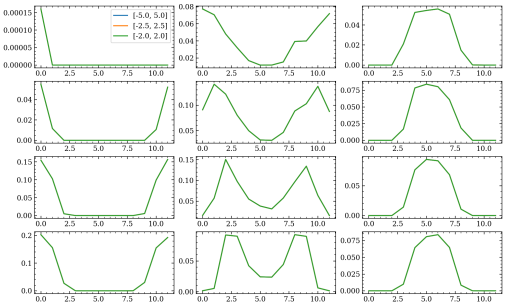
hsytar (low ϵ)



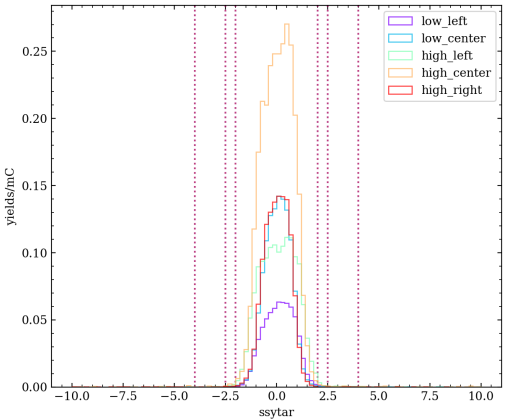


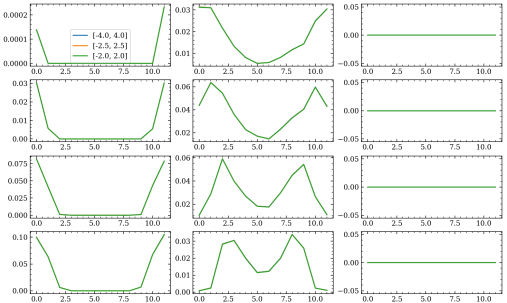
hsytar (high ϵ)



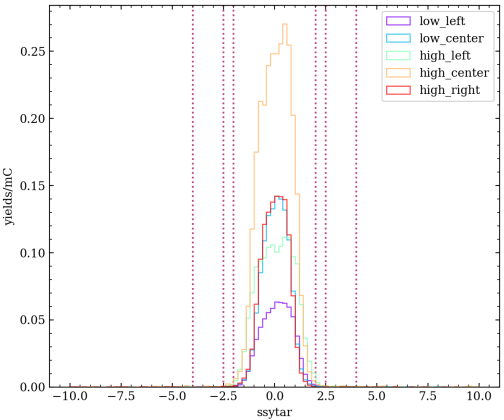


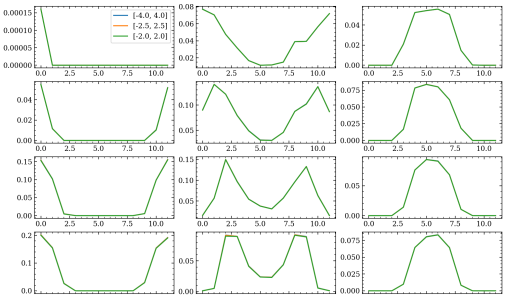
ssytar (low ϵ)



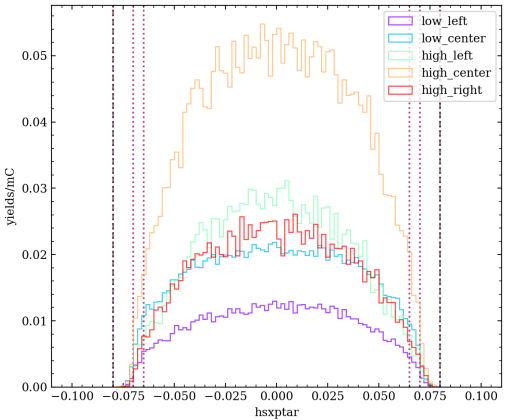


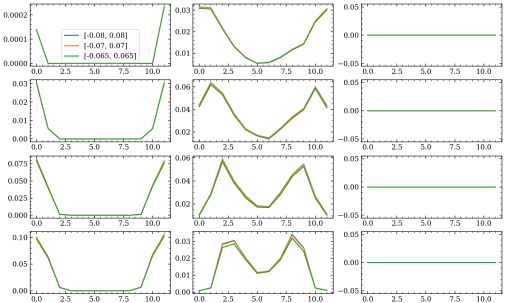
ssytar (high ϵ)



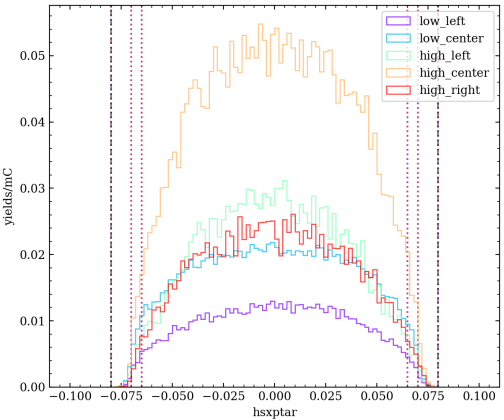


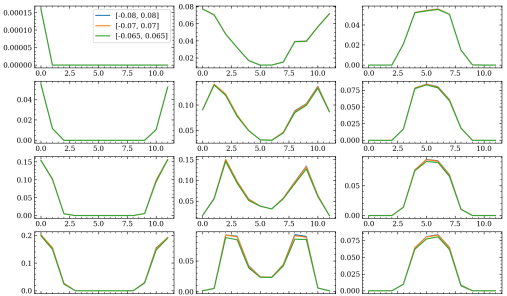
hsxptar (low ϵ)



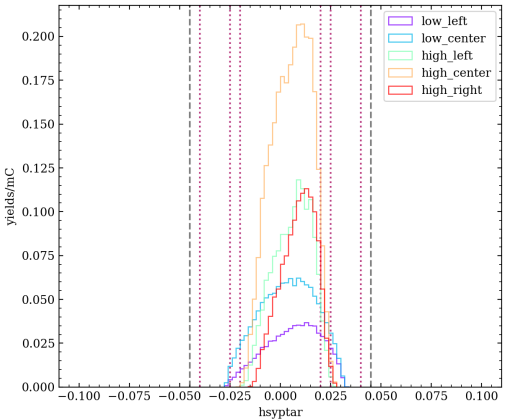


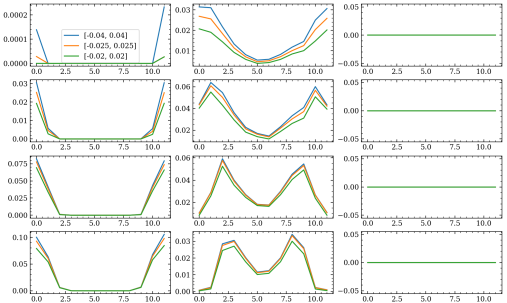
hsxptar (high ϵ)



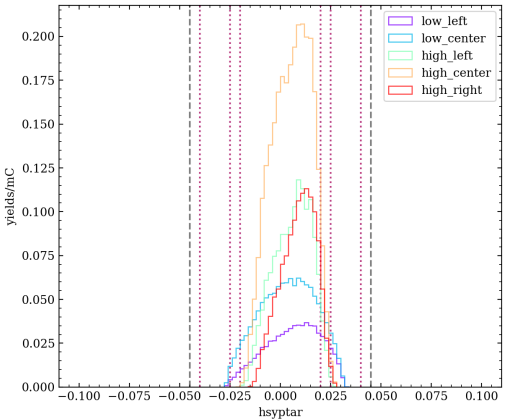


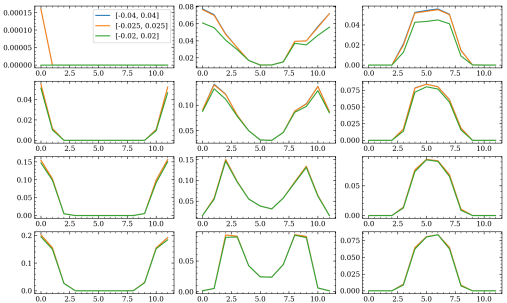
hsyptar (low ϵ)



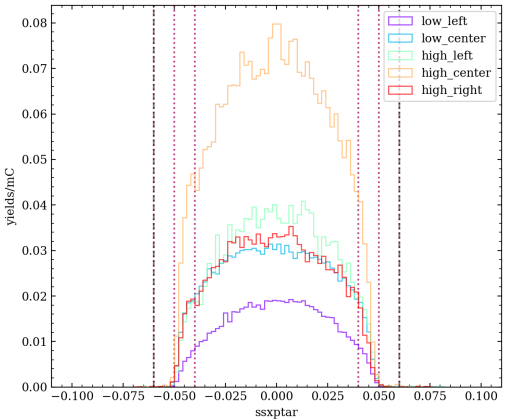


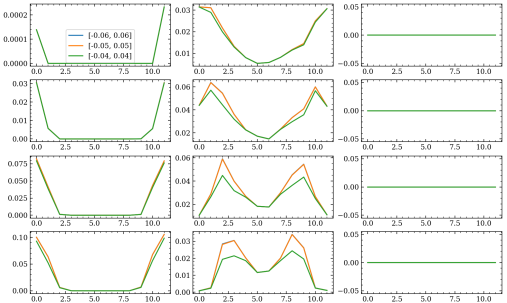
hsyptar (high ϵ)



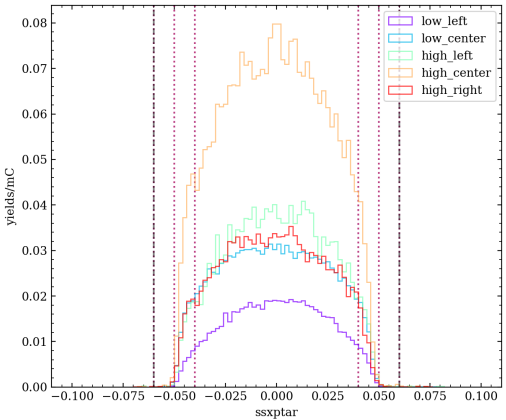


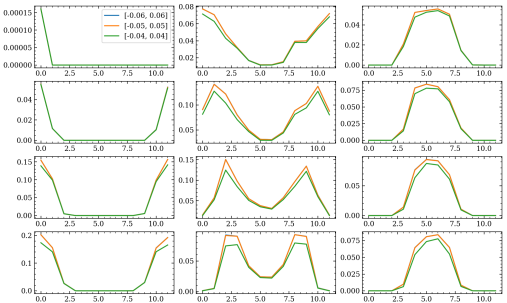
ssxptar (low ϵ)



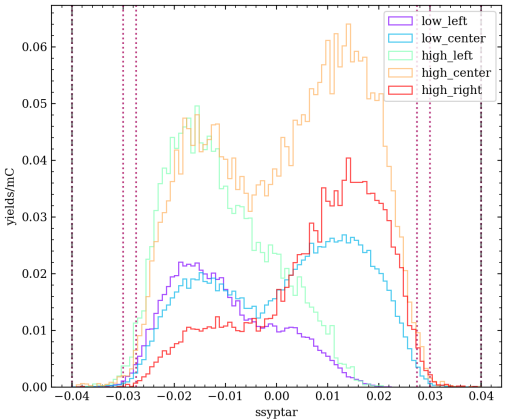


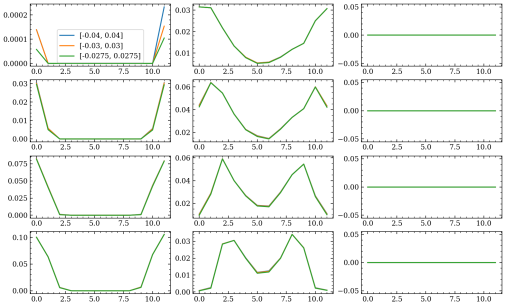
ssxptar (high ϵ)



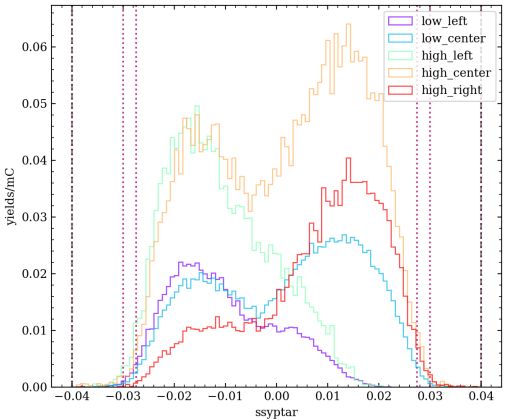


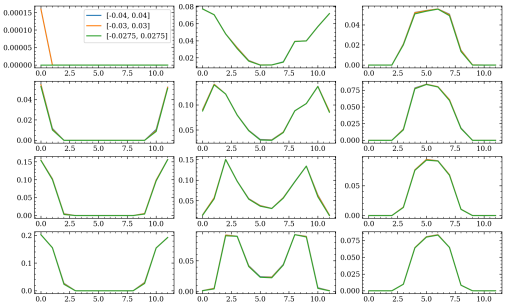
ssyptar (low ϵ)





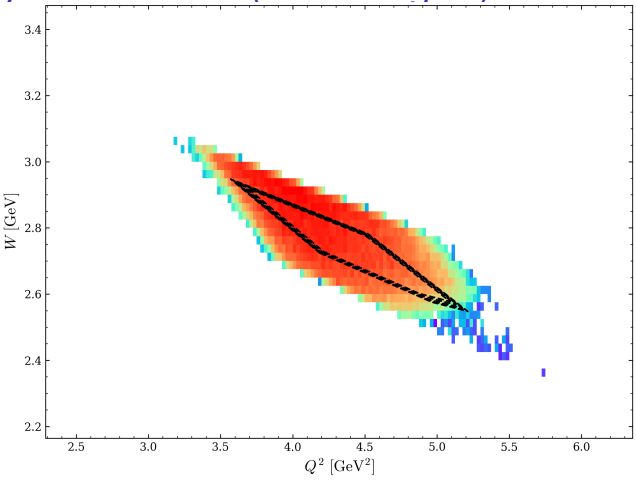
ssyptar (high ϵ)





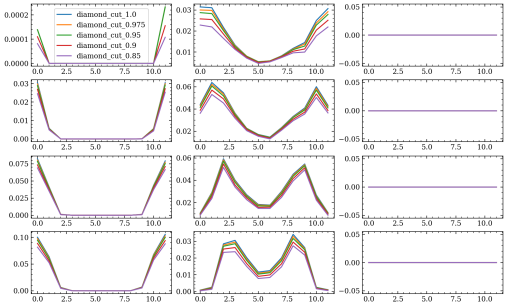
Diamond cuts systematic

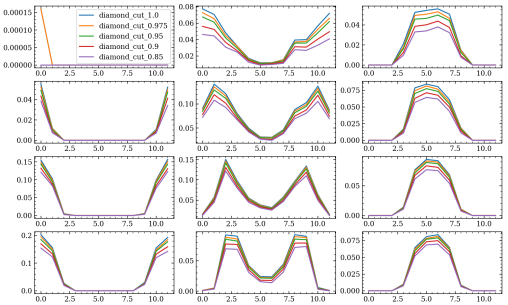
vary diamond cut (center high ϵ)



- decrease polygon size by $2.5, 5.0, 10.0, 15.0\%$
- take centroid, then scale the vertices by the above factors

yields


diamond_cut_1.0
diamond_cut_0.975
diamond_cut_0.95
diamond_cut_0.9
diamond_cut_0.85


diamond_cut_1.0
diamond_cut_0.975
diamond_cut_0.95
diamond_cut_0.9
diamond_cut_0.85