

weekly

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H $\rightarrow$ Z γ 750GeV

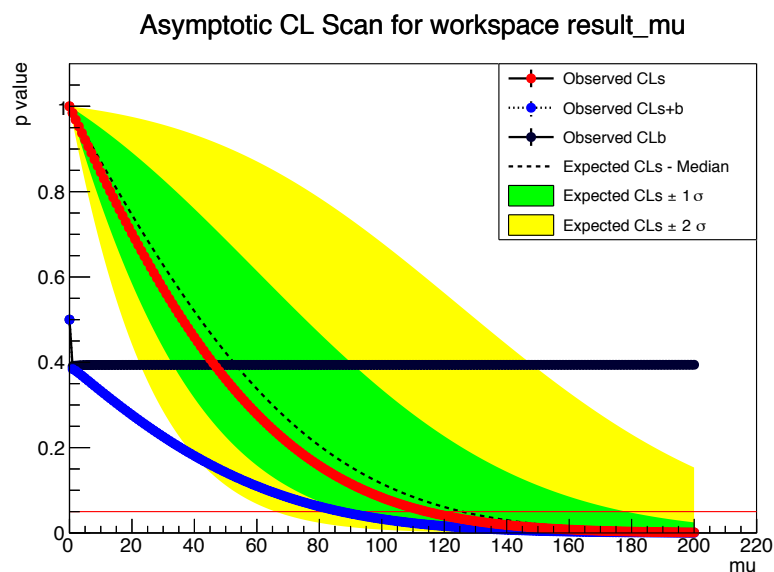
- 2 datasets mcdata 16576 entries no signal in data;
 pseudodata 425698 entries median; asimovdata;
 mcdata_binned 100 bins; default binning;
 pseudodata_binned 490 bins; (width=4GeV)
- Observables: X mass, (640-3000)
- POI: mu, (abs)CrossSection, (0~500)
- Use StandardHypotestIncDemo.C to calc the limits
 - Asymptotic methods
 - Profile Likelihood one sided
 - POI Fit range:0~200
 - Use Npoints=201 (μ :0~200, step 1)
 - CLs=0.95;

mcddata

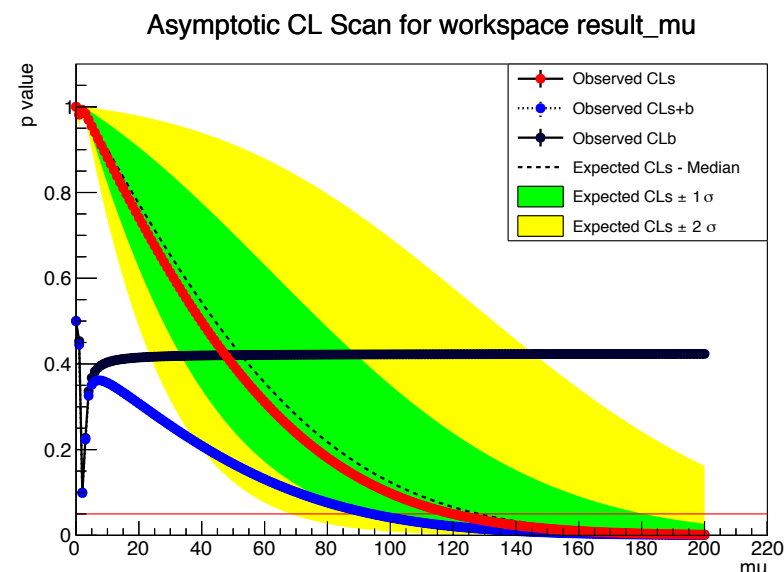
Which means, we can say under certain conditions, the upper limit of CrossX of H(750GeV)->Z γ is 114/119 fb, with 95% confidence

	Mc unbinned	Mc binned
computed upper limit	114.413	119.805
expected limit (median)	125.716	128.144
expected limit (-1 sig)	89.3649	91.7375
expected limit (+1 sig)	178.255	180.759
expected limit (-2 sig)	65.9849	68.3264
expected limit (+2 sig)	230.46	231.835

Unbinned



Binned

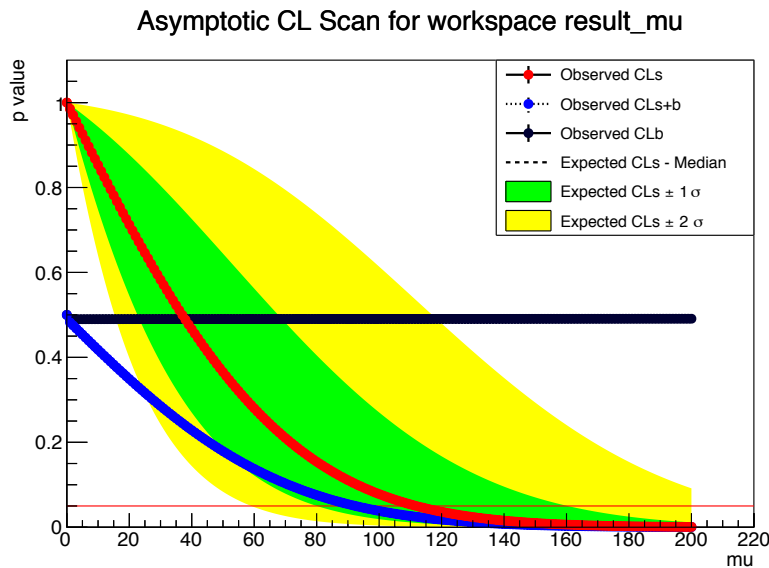


pseudodata

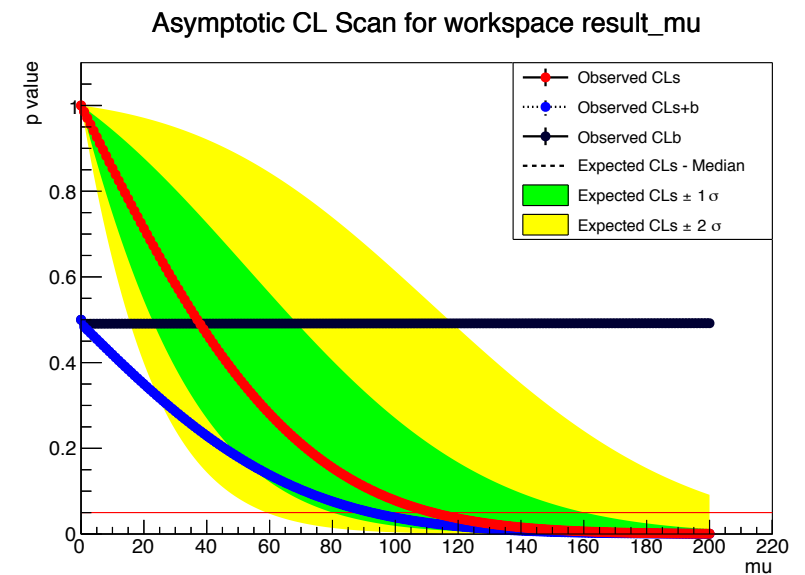
Very Little
difference in
median data;

	Pseudo unbinned	Pseudo binned
computed upper limit	111.88	111.971
expected limit (median)	112.827	112.827
expected limit (-1 sig)	80.0683	80.068
expected limit (+1 sig)	160.348	160.348
expected limit (-2 sig)	59.059	59.0587
expected limit (+2 sig)	216.22	216.219

Unbinned



Binned



Further Plan

- CEPC combination
- Combination for ICHEP with Xiaohu
- QFT && Stats study