Higgs BR study status

ILC Physics and software meeting

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Current situation of Zh analysis

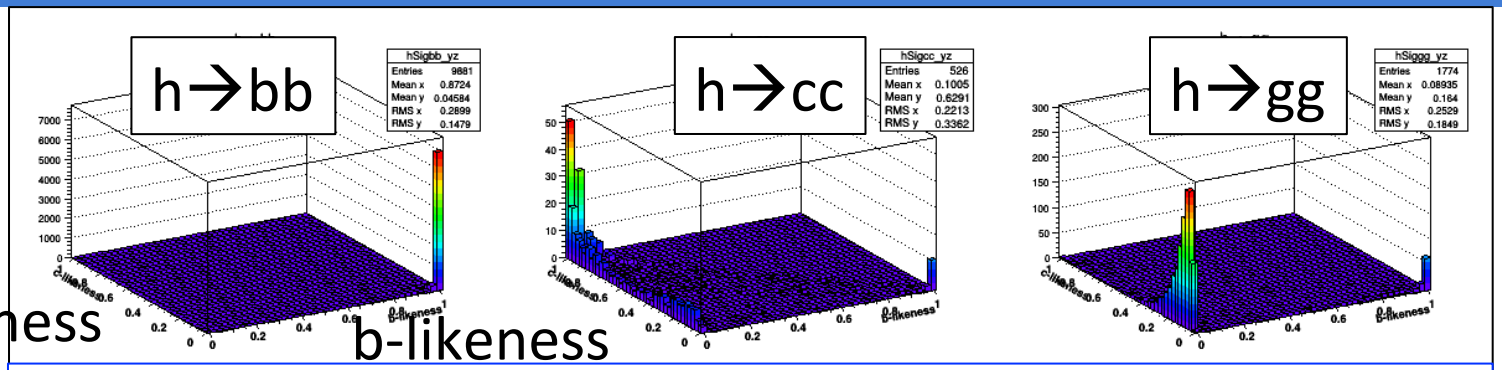
- Test with different flavor definition

- qqh @250 GeV
  kt jet clustering with “exclude 6 jet R=1.5”
  → Re-clustered into 4 jets
  now under processing

- 350 GeV Zh/WW-fusion separate analysis

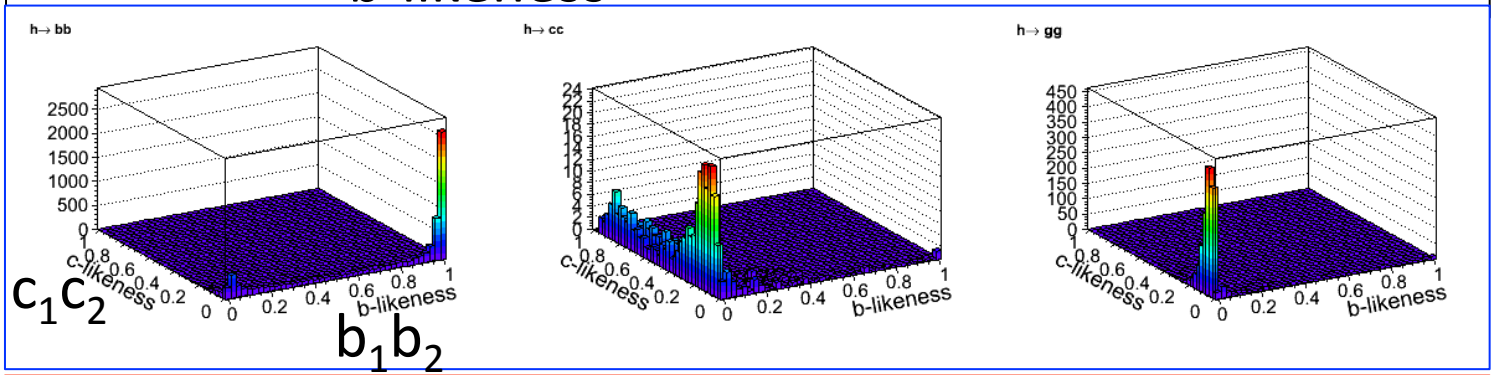
Different flavor definition

Current



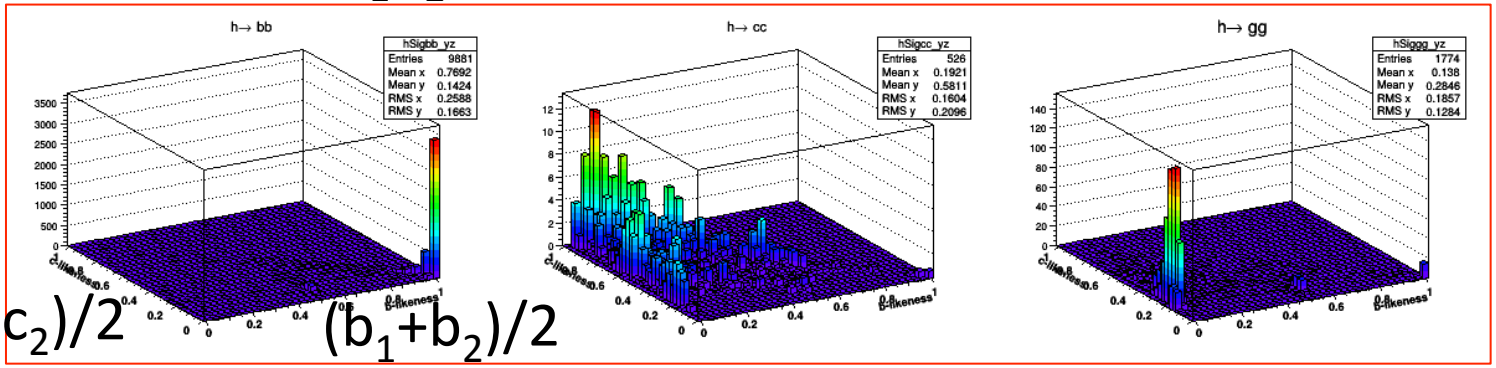
Product

$x_1 * x_2$



Sum

$(x_1+x2)/2$



Test with new flavor likeness

Only nnh and qqh @250 GeV are tested

nnh+qqh combined 250 GeV	Current	$x_1 * x_2$	$(x_1+x_2)/2$
h→bb	1.1%	1.1%	1.1%
h→cc	12.6%	11.8%	11.3%
h→gg	8.6%	8.5%	7.7%

Both nnh and qqh, line sum definition looks better than current definition on the template fitting.

h→cc, gg channel looks effective this difference.

Still worse than extrapolation, updating cut variables again