# Higgs BR study status

ILC Physics & software meeting

2013. Dec. 13
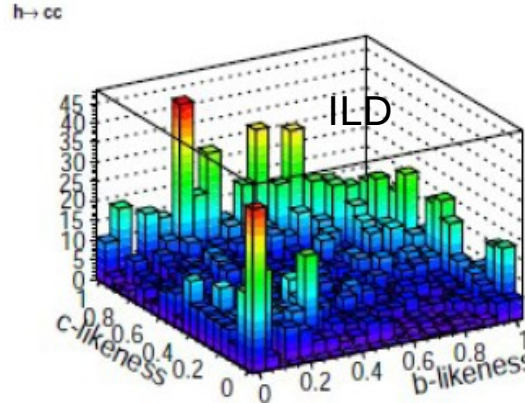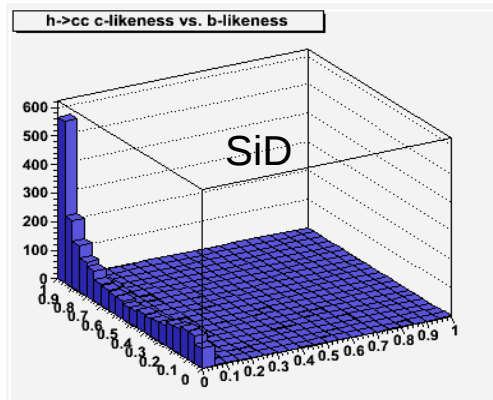
H. Ono

# Current status

- Distinguish h→cc analysis discrepancy between SiD and ILD at vvh @ 1 TeV analysis

- Template shape difference is mentioned
  →Different variable was used by mistake instead of pure "x-likeness"
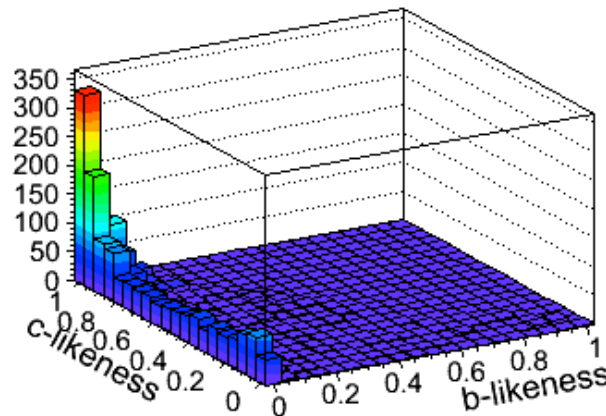  →Re-check using pure "x-likeness" variable

# SiD test with flavor template

h→cc channel templates



ILD

Conversion was applied by mistake to put into template from x-likeness

Discrepancy on h→cc template is mentioned → Miss conversion is found



pure c-likeness vs b-likeness

Re-check with corrected templates

# Measurement accuracy of σxBR

vvh 1 TeV with L=500 fb$^{-1}$          Preliminary result with pure x-likeness

| Hiiggs decay channel | ΔσBR/σBR (correct) | DBD result | SiD new |
|---|---|---|---|
| h→bb | 0.53% | 0.54% | 0.66% |
| h→cc | 6.0% | 5.6% | 8.8% |
| h→gg | 4.2% | 3.9% | 4.6% |

Small difference is observed but it can not explain
the difference between SiD and ILD result

Keep investigate this reason between SiD and ILD
→Compare with SiD cut reduction, backgrounds again
(Contacting SiD analysis person)