

# Report form Physics Analysis

- Higgs Physics
  - Higgs decay branch ration measurement
    - Higgs to bb/cc/gg bb/cc/gg estimated via template fit, combined  $\nu\nu H, qqH$  and  $llH$  channel, the precision for bb/cc/gg Br was estimated as 0.2%, 2% and 3%.
    - Higgs to WW( Liao Libo)
      - $ZH \rightarrow \nu\nu qqqq / \mu\mu l\nu qq / \mu\mu l\nu l\nu / ee l\nu qq / ee l\nu l\nu$ : Br(H $\rightarrow$ WW) precision 0.47%(stat.), extrapolate to Higgs width 2.48%
    - Higgs to tautau (Yu Dan, Li Ke), tau-tag studied via  $\mu\mu H \rightarrow \mu\mu t\text{autau}$  sample.(See Like's talk <http://indico.ihep.ac.cn/event/6772/session/1/contribution/7/material/slides/0.pdf>)
    - Higgs to  $\mu\mu/ee$ (Cui Zhengwei, Wang Lei) : optimized in  $ZH \rightarrow \nu\nu\mu\mu(4.4\sigma)$ ,  $\mu\mu\mu\mu(0.85\sigma)$ ,  $ee\mu\mu(0.62\sigma)$  channel
    - t-channel  $\nu\nu H \rightarrow \nu\nu qq$ :(Liang Hao) in progress, see <http://indico.ihep.ac.cn/event/6609/session/1/material/0/0.pdf>