Little Higgs T-parity @ILC

Optimization meeting

2011.04.15 Eriko Kato

Current status on calculation environment

■ Laptop

- Now capable of running cxx generators and analyzing them.
- Currently adjusting environment so that Fortran generators can run as well.

■ Tohoku PC

- It might take a while to build an environment for ILC analysis in Tohoku Univ. Plan to negotiate with Nagamine san.

Status and plan

- Mostly finished with mass extraction and parameter extraction study.
- Moving on to studying LHT cross section measurement with dependence to polarization.
  - Events which will be studied:

    $e_H e_H$, $Z_H Z_H$, $\nu_{eH}\nu_{eH}$, $\nu_{\mu H}\nu_{\mu H}$, $W_H W_H$, $Z_H A_H$

    total of 6 analysis modes.

cross section vs polarization

■ AIM

- Want to make data samples for 3 different polarization points.

■ Minimum required date space

➢ **<u>event generation & simulation</u>**

- WW 16G, tt 2G, eeWW 4G ,LHT 1G × 6(for sim.C)
- 35G × 3(polerization point)=105G
- 110G,120G will be needed at least.
- Close to laptop capacity limit.

➢ <u>Start studying with laptop for now.</u>

$e^+e^- \rightarrow W_H W_H$

Make 6 of these