

Memo

LC Study Group Meeting

2003.4.25 at KEK

Y. Okada

To be discussed

- Form working groups and choose conveners.
 - List items to be studied.
 - Decide analysis methods (platform, etc.).
 - List activities involving both theorists and experimentalists.
 - Set up rough schedule of activities.
 - Decide immediate next steps (tutorial school for beginners, etc.)
- etc. etc.

Conveners

- Higgs WG, Y.Yasui(KEK), S.Yamashita(ICEPP)
- New Physics WG, N. Okada(KEK), K.Fujii(KEK)
- Top WG, Y.Sumino(Tohoku), TBA()
- Gamma-gamma, ee, e-gamma WG,
I.Watanabe(Akita-keihou),
T.Takahashi(Hiroshima)
- Luminosity, Y.Kurihara(KEK)
- Overall coordinators, Y. Okada(KEK),
A.Miyamoto(KEK)

Items to be studied

- Higgs Physics
 - SM Higgs self-coupling
 - Top Yukawa coupling
 - MSSM Heavy Higgs boson (A,H) production and branching (LC Map)
 - Charged Higgs boson
 - CP violation in the Higgs sector
 - Anomalous coupling measurements involving the light Higgs boson.
 - Light Higgs boson production at a photon collider.
 - Heavy Higgs boson production at a photon collider.

- SUSY

Stop study.

CP violation in chargino/neutralino production.

LFV search in slepton production/decay.

Non-standard signature (GMSB, AMSB, R-parity violation).

Cascade decay.

Extrapolation to a high energy scale.

Global analysis including the Higgs sector.

- TeV gravity, Extra-dimensions

Single photon production. (number of extra-dimensions, spin of graviton)

Radion physics.

Black hole production.

String states.

- Top

Top threshold total cross section.

Top anomalous coupling measurements at the threshold region.

Top at a photon-photon collider.

- Other scenarios

Measurements of anomalous four fermion interactions, and their interpretations in terms of various new physics scenarios (Extra-dimensions, Warped extra-dimensions, extra gauge bosons, Little Higgs model, ...)

- Gamma-gamma, e-gamma, e-e option
Heavy Higgs boson (A/H).
Top production.
W pair production.
Physics at a higher energy.
(Collaboration/cooperation with other
WGs)

discussions

- Keep in mind the LHC/LC connection in physics study.
- Create new mailing lists (overall, subgroup, conveners).
- Improve the Web page.
- Post minutes of this meeting in hecforum and sg-l.
- Tutorial school, (week of 5/19, 2-3 days, tool guidance + physics lecture, to be determined)
- Discuss analysis tools among conveners.
- Cooperate with people working for LHC.