

International Collaboration on a Linear Collider

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Linear Collider Retreat

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Paths Joining to an International Linear Collider

- Forming a Consensus of the World's Particle Physics Communities
- Organizing the Particle Physics Effort Worldwide
- Convincing Individual Nations
- Bringing Governments Together

Forming a Consensus of the World's Particle Physics Communities

- In 2001, the particle physics communities of Europe, Asia, and the U.S. all came to a consensus that the next major accelerator is a high-energy electron-positron linear collider through the reports of ACFA, ECFA, and the HEPAP Subpanel on Long-Range Planning

From the HEPAP Subpanel

Recommendation #3

We recommend that the highest priority of the U.S. program be a high-energy, high-luminosity, electron-positron linear collider, wherever it is built in the world. This facility is the next major step in the field and should be designed, built and operated as a fully international effort.

We also recommend that the U.S. take a leadership position in forming the international collaboration needed to develop a final design, build and operate this machine. The U.S. participation should be undertaken as a partnership between DOE and NSF, with the full involvement of the entire particle physics community. We urge the immediate creation of a steering group to coordinate all U.S. efforts toward a linear collider.

Organizing the Particle Physics Effort Worldwide

- Establishment of the U.S. Linear Collider Steering Group and its Executive Committee (Spring 2002)
- Establishment of the European Linear Collider Steering Group (Spring 2002)
- Formation of a working group chaired by Maury Tigner by ICFA (February 2002) to draw up a proposal for an International Linear Collider Steering Committee. The ILCSC is to be established in July 2002.

Convincing Individual Nations

- JLC organization and TESLA proposal in Japan and Germany, respectively.
- Establishment of the HEPAP Communication and Outreach Group in the U.S. to put forward to other scientific communities, the government, and the public the twenty-year vision for particle physics contained in the Subpanel report.

Bringing Governments Together - The Global Science Forum

- We must develop a successful model for an international project of this scale.
- One path being pursued through the Organisation for Economic Co-operation and Development
Global Science Forum
- Consultative Group on High-Energy Physics established in June 2000 to exchange views on the future directions of HEP particularly in regards to large facilities; governments nominated their own delegation

The Global Science Forum (con't)

- Four meetings of the Consultative Group in DESY, CERN, KEK, and SLAC
 - Final report presented to the GSF in June 2002.
 - The Consultative Group concurs with the worldwide consensus of the scientific community that a high-energy electron-positron linear collider is the next facility on the Road Map; there should be a significant period of concurrent running of the LHC and the LC ... consultations among interested countries should begin at a suitably-chosen time in the near future.
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LHC

SPS, Hera, Tevatron

Extra dimensions

Susy

Higgs

Top

Z

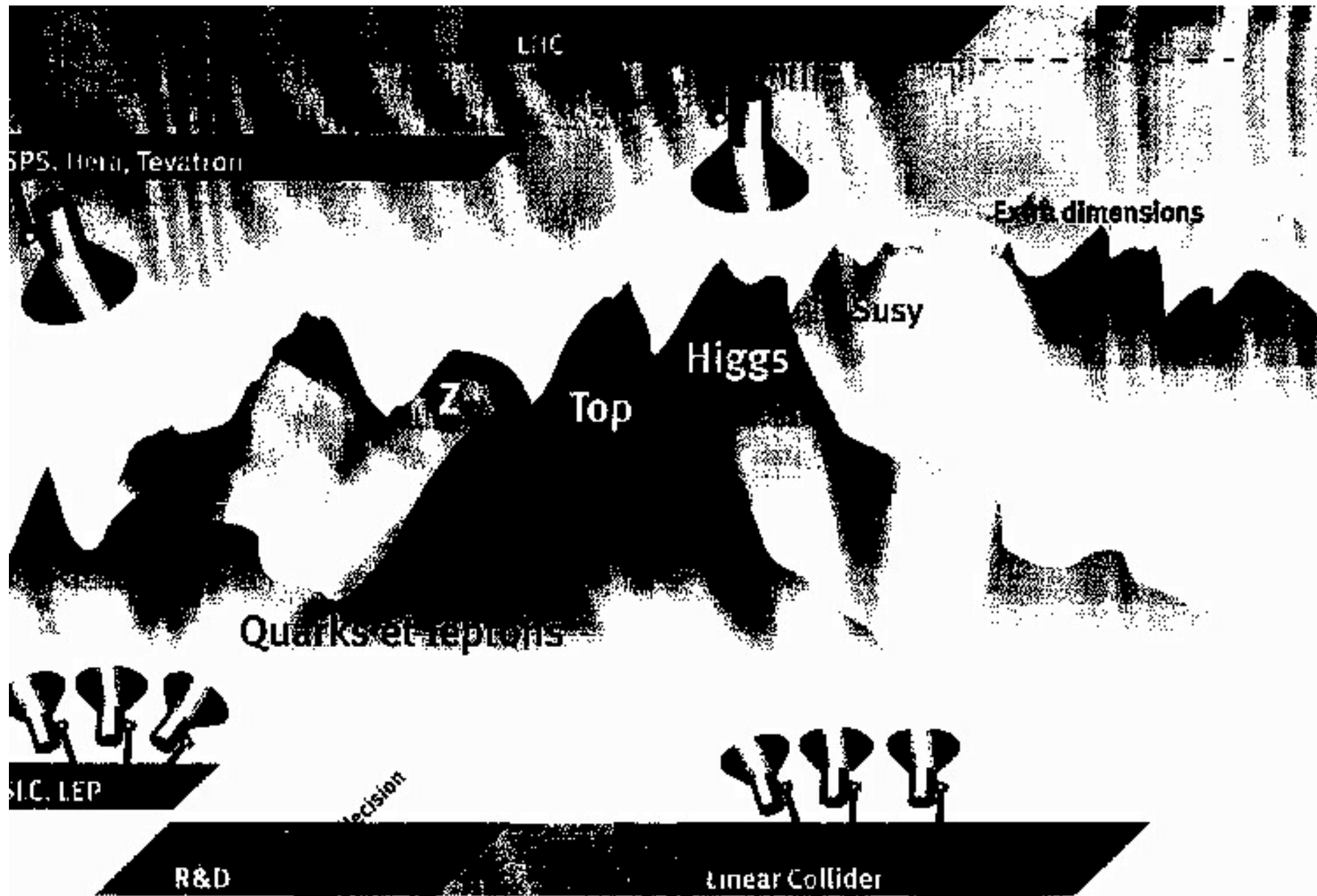
Quarks et leptons

SLC, LEP

Decision

R&D

Linear Collider



Global Science Forum (con't)

- The Consultative Group sees collaborations on targeted and effective LC R&D for selecting the technologies and conceptual designs; and diverse accelerator R&D for the long-term vitality of the field
 - The Consultative Group set forth generic issues needed for international agreement for a large collider project and discussed models for initiating the LC negotiation process, construction, operation, and management.
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Conclusion

- We have made rapid and dramatic progress in the last two years in forming a consensus of the world's particle physics communities and in organising the particle physics effort worldwide.
- We have only begun the steps needed in convincing individual nations (and in particular the U.S.) and in bringing governments together.