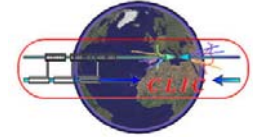


# ***CLIC 08 WORKSHOP***

## ***ILC UNDERGROUND CONSIDERATIONS AND GENERAL COLLABORATION Clic/cfs AND ILC/CFS EFFORTS***

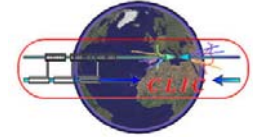
### ***ILC CONVENTIONAL FACILITIES AND SITING GROUP***

***V. Kuchler***



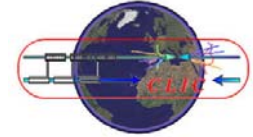
## **OVERVIEW**

- ***Current ILC Conventional Facilities and Siting (CFS) Efforts***
- ***ILC CLIC Collaboration***
- ***Future Planning Efforts***



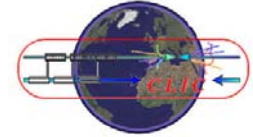
## Current ILC CFS Status

- ***Fiscal Year 2008 Funding Issues (Particularly in the United States) Interrupted the Momentum of the ILC Technical Design Phase Effort***
- ***Value Engineering of the RDR Design was the Primary Focus for FY 2008***
  - ***Process Cooling Water Systems***
  - ***Underground Tunnel Configuration***
  - ***Electrical Distribution***
  - ***Surface Building Design***
  - ***Cost Analysis of all Alternatives Considered***
- ***Progress was Made on the Review of the Process Cooling Water System Including the Klystron Cluster Alternative***



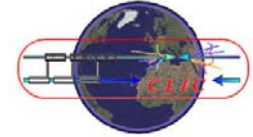
## **Current ILC CFS Status cont.**

- ***Information Regarding the CLIC Process Cooling Water Design will also be Included in this Analysis***
- ***A Complete Presentation of the Process Cooling Review will be Provided at the November ILC 08 Meeting in Chicago***
- ***Current Focus will now Shift to the Issue of Underground Tunnel Configuration***
- ***In Addition, CFS will also Begin Work on the Minimum Machine Design Alternatives and Their Impact on CFS Design***



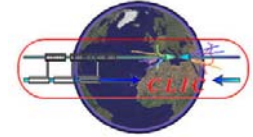
## Underground Tunnel Configurations

- **Aspects of the Underground Tunnel Configuration Analysis**
  - **RDR Twin Tunnel w/Vertical Shafts (Americas/Europe)**
  - **RDR Twin Tunnel w/Horizontal Access (Asia)**
  - **RDR Twin Tunnel (DESY)**
  - **RDR Variation on Twin Tunnel (JINR/Dubna)**
  - **Single Tunnel Shallow (DESY/XFEL)**
  - **Single Tunnel Deep (CLIC)**
  - **Single Cut and Cover Enclosure w/ Continuous Surface Gallery (FNAL/Project X)**
  - **Twin Cut and Cover Enclosures w/ Clustered Surface Buildings**
  - **Complete Surface Construction**
- **A Good Deal of Work has been Accomplished on Many of These Alternatives Already**



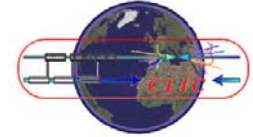
## Overview of ILC GDE Goals for CFS

- *Position on Process Cooling Water Baseline Design will be Established at the ILC 08 Meeting in November, 2008*
- *Status of Underground Tunnel Configuration Review will be Presented at the Accelerator Advisory Panel Review in April, 2009*
- *Minimum Machine Design Review and Analysis will be Completed in 2009*
- *Technical Design Phase I, to be Completed in Mid-2010, will Result in a New Baseline Design*
- *Technical Design Phase II, To be Completed in Mid-2012, will Include a Revised ILC Project Cost Estimate (Based on the Phase I Design Criteria) and A Technical Design Report*



## **ILC CFS/CLIC CES Collaboration**

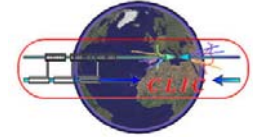
- ***A Good Collaborative Effort has Already been Established Between the ILC/CFS Group and the CLIC/CES Group***
- ***Monthly Meetings Continue and Information Exchange has Begun***
- ***Technical Differences Aside, There are Many Areas Common to the Conventional Facilities Design for the CLIC and ILC Machines***
- ***Even if Conventional Design Criteria and Schemes Differ, Analysis of Alternative Designs are Always Helpful to Any Design Effort***



## Specific Areas of Common Interest

- *Underground Configuration*
- *Process Cooling*
- *Heating, Ventilation and A/C*
- *Access Egress and Life Safety*
- *Survey and Alignment*
- *Radiation Requiriements*
- *Cost Estimating for Conventional Facilities*
- *Others as Identified*





## Summary

- ***A Strong Conventional Facilities Collaboration has been Established and is Working Well***
- ***Many Common Areas of Interest have Already been Identified and Collaborative Work will Continue***
- ***ILC CFS is also Establishing Collaborative Efforts with the XFEL Project and Project X***
- ***Good Participation at CLIC 08 at CERN and Expected at ILC 08 in Chicago***
- ***A Goal for ILC 08 in Chicago will be to Develop a Longer Range (~1 Year) Plan for Continued CLIC/CES and ILC/CFS Collaboration Efforts***