ILC CFS BASELINE TECHNICAL REVIEW

GENERAL INTRODUCTION

CONVENTIONAL FACILITIES AND SITING

V. Kuchler

Overview

- Fundamental Design Adjustments Since RDR
- Impact on CFS
- Regional Design Focus

Fundamental Design Adjustments Since RDR

- Mechanical System Value Engineering (Americas Region)
- SB 2009
- Tunnel Comparison Studies (Asian and Americas Region)
- Verification of Single Tunnel Life Safety Viability
- Regionally Specific Mechanical and Electrical Design for Asian and Americas Regions (all Based on Full Power Operation)

Impact on CFS

- Single Excavated Main Linac Tunnel
- Further Understanding of Japanese Mountain Site Requirements
- Adjustments to HLRF Systems (RDR vs KCS)
- Reduction of Damping Ring Circumference
- 2-Stage to 1-Stage to 2-Stage Bunch Compressor
- Adjustments to Main Linac Length
- Adjustments for Half Bunch (Low Power) Operation
- Adjustments to Area System Electrical and Mechanical Loads
- Clarification of Laser Room and Dump Requirements and Locations
- Refinement of Interaction Region Configuration and Requirements
- Agreement for Detector Movement System (Platform)

Regional Design Focus

- **Asian Region**
  - Two Compartment "Kamaboko" Main Linac Tunnel
  - RDR Type HLFR System (Tunnel Level)
  - Full Mechanical and Electrical Design
- **Americas Region**
  - Single Main Linac Tunnel
  - Klystron Cluster HLRF System (Surface Level)
  - Full Mechanical and Electrical Design
- **European Region**
  - Single Main Linac Tunnel
  - Klystron Cluster HLRF System (Surface Level)
  - Global Support for Handling Equipment and Survey and Alignment