



# Workshop on ILC Interaction Region Engineering Design

SLAC, September 17-21, 2007

<http://www-conf.slac.stanford.edu/ireng07/>

- **Goal:** To review and advance the design of the subsystem of the Interaction Region of ILC, focusing in particular on their integration, engineering design and arrangements for push-pull operation.
- ... goal is to make progress on the design of the ILC IR through **focused preparation before** and during the workshop...
- The International Program and Advisory Committee is being formed. **Its charge includes organization of preparatory work before the workshop** and production of conceptual solutions and drawings that could be further discussed and reviewed at the workshop...
  - **this is an attempt to align the organization of the workshop with EDR WP organization → how to do it optimally?**



# IR Eng. workshop: tentative working groups

Group A	<b>Overall detector design, assembly, detector moving, shielding.</b> Detector design for on-surface assembly and underground assembly procedures. Beamline Pacman shielding, detector shielding design.
Group B	<b>IR magnets design and cryogenics system design.</b> Cryogenic system design, connections, flexible cryo lines, safety issues. IR magnet engineering design, support, integration with IR, masks, Luminosity & Beam calorimeters, design of IR vacuum chamber, connection to elements, assembly-disassembly procedures, integration of near IR masks and overall integration of crab cavity.
Group C	<b>Conventional construction of IR hall and external systems.</b> Lifting equipment, IR electronics hut, cabling plant, services, shafts, service caverns, utilities, movable shielding; design solutions to meet alignment and vibration tolerances
Group D	<b>Accelerator and particle physics requirements.</b> Including masking, collimation, shielding requirements, image charges, wakes, external radiation, accelerator physics & optics design and constraints on IR engineering design, on alignment tolerances and stability for the IR components and IR hall floor.



	9/17/2007	9/18/2007	9/19/2007	9/20/2007	9/21/2007
9:00-10:30	Introduction plenary, Kavli auditorium. Talks: 1) ILC IR and BDS design and workshop goals. 2) Physics requirements to IR design; 3) IR design experience from existing machines (LHC); 4) Experience from D0, CDF, PEP-II, KEK-B;	Plenary, Kavli. Talks: 1-3) Design and assembly of SiD, GLD-LDC, 4th concept; 4) Accelerator physics design of IR; 5) Alternative designs of IR	<div style="background-color: #FFDAB9; padding: 10px; text-align: center;"> <h2 style="margin: 0;">IR Eng. Workshop</h2> <h3 style="margin: 0;">Very tentative schedule</h3> </div>		
10:30-11:00	break	break			
11:00-12:30	Plenary, Kavli. Talks: Continue on IR design from existing machines (IHEP, Frascati, etc).	Parallel working groups, WG-A: Overall detector design; WG-D: Acc and phys requirements. ROB rooms	Parallel working groups, WG-A, WG-C. ROB rooms	WG-A-B-C-D; Working tour to SLD hall	Post-summary work of working groups. ROB rooms or local offices
12:30-13:30	lunch	lunch	lunch	lunch	lunch
13:30-15:00	Plenary, Kavli. Talks: 1) IR conventional facility design 2) IR magnet and cryogenics design	Parallel working groups, WG-A, WG-D. ROB rooms	Parallel working groups, WG-B, WG-C. ROB rooms	Parallel working groups, WG-A-B-C-D, Summary preparation. ROB rooms	Post-summary work of working groups. ROB rooms or local offices
15:00-15:30	break	break	break	break	
15:30-17:00	Parallel working groups, WG-B: IR magnets design and Cryogenics systems. WG-C: IR hall conventional facility design. ROB rooms	Parallel working groups, WG-B, WG-C. ROB rooms	End of the day plenary discussions, Kavli auditorium	Plenary, Kavli. Summary talks, WG-B; WG-A	Reserve
17:00-18:00	Parallel working groups, WG-B: IR magnets design and Cryogenics systems. WG-A: Overall detector design. ROB rooms	End of the day plenary discussions, Kavli auditorium	End of the day plenary discussions, Kavli auditorium	Plenary, Kavli. Summary talks, WG-C; WG-D	Reserve