Workshop

- Workshop is to "Move beyond the Technical Design Proposal"
  - Many areas where we have to go beyond a design proposal and need to come up with a real design and start implementing it
  - Many areas where we have to freeze the design and set a course of action
    - » Schedule is extremely tight
    - » All parts of the detector affect each other
  - Areas where we have to start filling in all the details
- We'd like to use a workshop as a forum to meet some of these goals
  - Workshop will be a regular occurrence for the Silicon RunIIb group
  - Agenda limited, but focused, to address immediate issues
- Workshop will have a set of goals to be addressed during the meeting
  - Project schedule will be a recurring theme
    - » where should we be according to the schedule
    - » what resources are needed
    - » how we are going to accomplish what we need to accomplish
- Workshop will have a summary to review:
  - needs of various groups within the project
  - items not accomplished at the workshop and to set a timetable to achieve them

Workshop Agenda

- Thursday morning: Sensors
  - 09:30 Layer 1 sensor measurements - *Sergey Korjenevski*
  - 10:30 Break
  - 11:00 ELMA Processing details - *Mikhail Merkin*
  - 11:30 Status Stony Brook Site - *Bob McCarthy*
  - 12:00 Sensor work to be done for PRR - *Regina Demina*

- Thursday afternoon: Readout Electronics
  - 01:30 Summary Current noise issues - *Dan Edmunds*
  - 02:00 Overview Horseshoe area - *Linda Bagby*
  - 02:30 Adapter Card Testing - *Ron Sidwell*
  - 03:00 Mapping - *Eckhard von Thörne*
  - 03:30 Break
  - 04:00 LV Power Supplies - *John Foglesong*
  - 04:30 Status Twisted Pair / Junction Card - *Andrei Nomerotski*
  - 05:00 Cooling Manifolds and Cable Path - *Bill Cooper*
  - 05:30 Break

Workshop Agenda

- Friday Morning: Staves
  - 09:00 Results from Mechanical Staves - *Bill Cooper, Kurt Krempetz, Jim Fast*
  - 10:00 Grounding issues with Staves - *Marvin Johnson*
  - 10:30 Break
  - 11:00 Stave Discussion - *All*

- Friday Afternoon: Testing
  - 01:30 SVX4 Status - *Kazu Hanagaki*
  - 02:00 Electronics Status Report - *Andrei Nomerotski*
  - 02:30 Grounding and Testing L0/1 - *Kazu Hanagaki*
  - 03:00 Hybrid Status and Testing Plans - *Andrei Nomerotski*
  - 03:30 Summary - *Alice / Marcel*
  - 04:00 Wine and Cheese Seminar

Workshop Goals

- Goals
  - Complete comparison ELMA and HPK sensors
  - Filled out sensor vendor evaluation form
  - Decide on vendor ELMA, HPK if possible
  - Determine what is needed for PRR for layer1/0 sensors and set time scale for PRR
  - First pass at measuring specs of outer layer sensors (?)
  - Decide on physical parameters of adapter card
  - Decide on low voltage regulation and separate DVDD and AVDD or combined
  - Agree on mapping scheme for whole detector
  - Complete design of LV system
  - Decide on junction card area location
  - Decide on stave cores: materials and freeze all dimensions
  - Worked out grounding scheme for staves
  - Decide on coherent plan for hybrid production and testing
  - ...

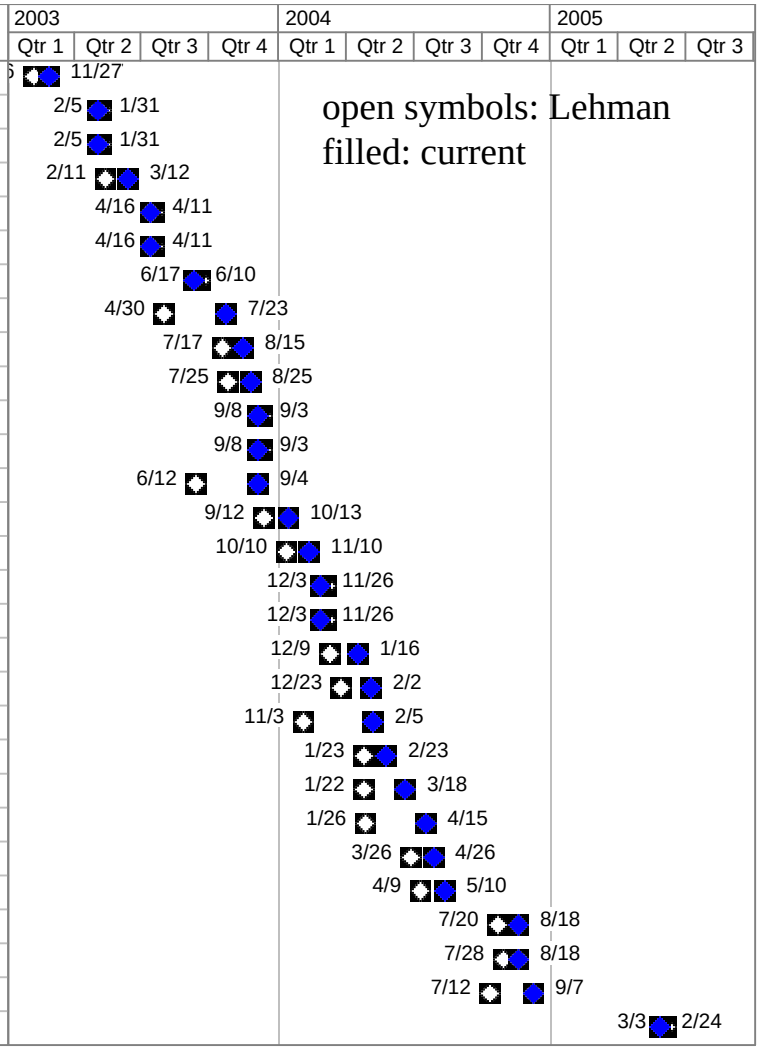
News

- This is the last meeting of the year
- Next year's schedule
  - Silicon meeting on 'off-weeks' Thursday, 10:00-12:00am
    - » allows all geographical sectors to participate at reasonable hours
    - » hopefully this will not change anymore for the remainder of the project
  - Level 3 managers meeting on 'on-weeks' Tuesday, 8:30-10:30am
    - » Meeting dedicated to status, schedule, resources once a month
    - » Progress will be carefully monitored by the Lab's upper management
    - » We should be pro-active in our role to adhere to the schedule
- Next week is the ESAAB meeting at which point a decision will be taken by the Office of High Energy and Nuclear Physics of DoE how to proceed with RunIIb
- After a week of heated arguments, agreement between LBL and Fermilab yesterday to proceed with 'only' two versions of the SVX4 chip, a 'minimal' chip (version A) and a 'better performance' chip (version B) with a likely layout on the reticle of 1:5 for A:B

Schedule Status

- There are 134 milestones in the silicon schedule
- Only look at those shifted with respect to Lehman

ID	WBS	Task Name
15	1.1.1.1.3	Sensor Probing Equipment Setup And Certification Complete
33	1.1.1.2.4	Choose L0 Silicon Sensor Technology
69	1.1.1.3.4	Choose L1 Silicon Sensor Technology
91	1.1.1.4.2.2.2	L2-L5 Silicon Sensors Released For Production
38	1.1.1.2.5.4	L0 Silicon Sensors Released For Production
70	1.1.1.3.5	L1 Silicon Sensors Released For Production
846	1.1.5.2.2	Silicon Cylinders Released for Production
996	1.1.7.4.1.7	Release Silicon Unpacking And Translation Packages
800	1.1.4.22.2.3	Successful Fabrication of an Electrical-grade Pre-production Silicon Stave
679	1.1.4.9.3	Begin 20cm Gang Production
41	1.1.1.2.5.7	1st L0 Silicon Sensor Delivered
71	1.1.1.3.6	1st L1 Silicon Sensor Delivered
1001	1.1.7.4.2.4	Release Silicon Examine Package
97	1.1.1.4.3	25% L2-L5 Silicon Sensors Delivered And Tested
587	1.1.3.14.2.7	Stave Shells For South Silicon Complete
42	1.1.1.2.6	All L0 Silicon Sensors Delivered And Tested
72	1.1.1.3.7	All L1 Silicon Sensors Delivered And Tested
590	1.1.3.14.2.10	Stave Shells For North Silicon Complete
98	1.1.1.4.4	50% L2-L5 Silicon Sensors Delivered And Tested
1017	1.1.7.6.9	Release Silicon Calibration Code Package With Documentation
573	1.1.3.13.2	Stave Cores For South Silicon Complete
958	1.1.6.2.2.8	Decide On Final Radiation Monitoring System
1023	1.1.7.7.5	Release Silicon Monitoring Code Package With Documentation
577	1.1.3.13.6	Stave Cores For North Silicon Complete
99	1.1.1.4.5	75% L2-L5 Silicon Sensors Delivered And Tested
100	1.1.1.4.6	All L2-L5 Silicon Sensors Delivered And Tested
105	1.1.1.5	All Silicon Sensors Delivered And Tested
962	1.1.6.2.2.12	Radiation Monitoring System Ready For Installation
878	1.1.5.2.7	Silicon Cylinders Ready for Barrel Assembly



Schedule Status

- Only those delayed with respect to Lehman (19)

ID	WBS	Task Name
15	1.1.1.1.3	Sensor Probing Equipment Setup And Certification Complete
91	1.1.1.4.2.2.2	L2-L5 Silicon Sensors Released For Production
996	1.1.7.4.1.7	Release Silicon Unpacking And Translation Packages
800	1.1.4.22.2.3	Successful Fabrication of an Electrical-grade Pre-production Silicon Stave
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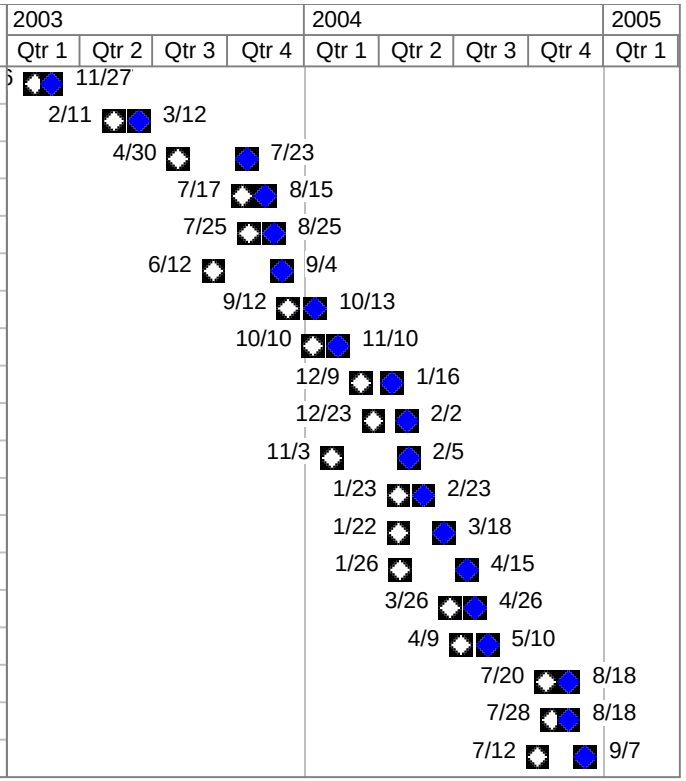
105	1.1.1.5	All Silicon Sensors Delivered And Tested
962	1.1.6.2.2.12	Radiation Monitoring System Ready For Installation



Status

- Focus on:
  - Sensor Probing Equip Setup And CertF. Complete (11/6/02)
    - » Missed
  - Silicon Prototype Mechanical Stave Built (12/16/02)
    - » Major milestone at which point final stave design will be chosen
  - Sensors
    - » Probing and testing of outer layer sensors
    - » Probing and testing of inner layer sensors
    - » Layer 0 design layout
    - » PRR for inner / outer layer sensors
  - Staves
    - » Proceeding as quickly as possible from a mechanical stave to an electrical stave with associated module assembly
  - Testing
    - » Hybrid testing
    - » Vertical slice tests, 1% and 10%
    - » Burn-in stands
  - Radiation monitors and software

R&D Profile

- Cost profile for R&D M&S and Labor funding

Run2b_Si	Cost	R & D	Quarters					
			10/1/2002	1/1/2003	4/1/2003	7/1/2003	10/1/2003	ROW_TOTAL
F	Labor	CMMOperatorSF	$26,622.80	$20,993.20	$3,100.00	$0.00	$0.00	$50,716.00
F	Labor	CMMProgrammerSF	$11,825.20	$14,974.20	$16,816.60	$0.00	$0.00	$43,616.00
F	Labor	CompProfF	$5,113.60	$0.00	$0.00	$0.00	$0.00	$5,113.60
F	Labor	DesignerF	$82,420.80	$30,187.52	$6,688.00	$0.00	$0.00	$119,296.32
F	Labor	ElecEngF	$50,336.00	$58,608.00	$33,880.00	$24,420.00	$880.00	$168,124.00
F	Labor	ElecTechF	$10,264.80	$17,191.20	$16,192.80	$4,680.00	$0.00	$48,328.80
F	Labor	ElecTechSF	$14,411.76	$29,502.00	$3,524.40	$5,610.00	$0.00	$53,048.16
F	Labor	MechEngF	$108,612.49	$47,464.68	$28,692.60	$0.00	$0.00	$184,769.77
F	Labor	MechTechF	$0.00	$637.00	$11,123.00	$0.00	$0.00	$11,760.00
F	Labor	MechTechSF	$63,651.71	$60,615.20	$13,056.00	$0.00	$0.00	$137,322.91
F	Labor	WirebonderSF	$2,192.40	$1,047.60	$1,080.00	$0.00	$0.00	$4,320.00
		MandS	$361,616.00	$328,317.00	$32,960.00	$0.00	$0.00	$722,893.00
		COL_TOTAL	$737,067.56	$609,537.60	$167,113.40	$34,710.00	$880.00	$1,549,308.56
		FY03 Total (Fermi Labor)				$825,535.56		
		CY03 Total (Fermi Labor)					$450,964.00	

- Equipment spending should not prevent you from proceeding with the project