



SiD resource needs

A first draft

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Notes on input

Not criticism; just facts

Basis for a very first draft

Sent out request for input ~ 12 days ago to SiD Advis plus.

Ask for:

	2010 needs	2010 have	2011 needs	2011 have	2012 needs	2012 have
Staff						
Postdocs						
Engineers						
M&S						

Added students; not sub divide by under- and graduate students
Did not have technicians; assumed under staff.....??

Put in spreadsheet with separate sheets for sub detectors

"Subsystems"

Subsystems intended to cover

VTX
Tracker
ECAL
HCAL
Forward
Solenoid
Muon
Mech. Integration
MDI
Electronics/DAQ
Sim/Recon/Algo
PFA
Benchmarking
Cost

13

So far have:

Tracker
ECAL
HCAL
Forward

Mech. Integration

Benchmarking

6 (<50%)

Subsystems--- details--Tracker

Tracker: tried to be realistic and somewhat modest

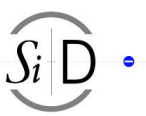
Tracker	2010		2011		2012	
	Need	Have	Need	Have	Need	Have
Staff	1.25	0.5	1.25	0.5	1.25	0.5
Postdoc	0.5	0	0.5	0	0.5	0
Engineering	0.75	0	0.75	0	0.75	0
Student	0	0	0	0	0	0
M&S(k\$)	50	0	50	0	50	0

Guess for the resources that are needed for a CDR on the time scale of 2012.

This covers simulation and sensor work. It also includes some work on mechanical stability. We listed that as 0.75 engineer, but it is more a combination of engineer, technician, physicist.

We tried to keep the request realistic. Even what we listed is already beyond reach as far as we can tell. Also note that no effort for alignment and power options is included.

Engineering double counted?



Subsystem---Details--ECAL

ECAL -- summary from M.Stanitzki

		2010		2011		2012	
		Need	Have	Need	Have	Need	Have
SI-W (baseline)	Staff	1		1		1	
	Postdoc	1		1		1	
	Engineering	1		1		1	
	Student						
	M&S(k\$)	200		140		120	
MAPS	Staff	1	2	1	2	1	2
	Postdoc	1	0.5	1	0.5	1	0.5
	Engineering	0.5	1	0.5	1	0.5	1
	Student						
	M&S(k\$)	50	150	100	200	50	50
Mechanics	Staff	1		1		1	
	Postdoc						
	Engineering	1		1		1	
	Student						
	M&S(k\$)	50		40		10	
Testbeam	Staff	1		1		1	
	Postdoc						
	Engineering	0.2		0.2		0.2	
	Student						
	M&S(k\$)	30		30		30	
PFA & Optimization	Staff	1		1		1	
	Postdoc						
	Engineering						
	Student						
	M&S(k\$)	10		10		10	

Quite detailed -- good

Non baseline ?
Engineering
Testbeam
Simulation ?

Summary

		2010		2011		2012	
ECAL		Need	Have	Need	Have	Need	Have
ECAL	Staff	3	2	3	2	3	2
	Postdoc	4	0.5	4	0.5	4	0.5
	Engineering	2.7	1	2.7	1	2.7	1
	Student	0	0	0	0	0	0
	M&S(k\$)	340	150	320	200	220	50

Subsystem---Details ---HCAL

		2010		2011		2012	
		Need	Have	Need	Have	Need	Have
Scintillator	Staff	2	0.5	2		2	
	Postdoc	1	0.5	1	0.5	1	0.5
	Engineering	1		1		1	
	Student						
	M&S(k\$)	100	15	100		50	
GEMs	Staff	2	1	2	1	2	1
	Postdoc	2	1	2.5		2.5	
	Engineering	0.2	0	0.3		0.3	0
	Student						
	M&S(k\$)	100	48	150		150	
RPC	Staff	2	2	2	2	1	1
	Postdoc			1		0.5	
	Engineering	1	1	0.4	0.4	0.4	0.4
	Student	2	2	1.5	1.5	1	1
	M&S(k\$)	400	400	100	100	100	100

Several inputs

Like ECAL: baseline only?

Priorities?

Engineering

Total Absorption Crystal Calorimeter ?

Summary

		2010		2011		2012	
HCAL		Need	Have	Need	Have	Need	Have
HCAL	Staff	6	3.5	6	3	5	2
	Postdoc	3	1.5	4.5	0.5	4	0.5
	Engineering	2.2	1	1.7	0.4	1.7	0.4
	Student	2	2	1.5	1.5	1	1
	M&S(k\$)	600	463	350	100	300	100

Large----

FCAL		2010		2011		2012	
		Need	Have	Need	Have	Need	Have
FCAL	Staff	0.7	0	0.2	0	0	0
	Postdoc	1	0	1	0	1.9	0
	Engineering	1	0	1	0	1	0
	Student	0	0	0	0	0	0
	M&S(k\$)	20	0	250	0	70	0

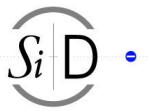
Detailed input

Effort in units of weeks

Includes:

Rad Hard BeamCal Sensor
 Make BeamCal Petal & Lumi Petal
 BeamCal Readout Development: FCAL Chip

Only part of FCAL
 system or ?



Subsystem- Details - Mech integration

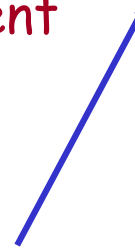
Engineering		2010		2011		2012	
		Need	Have	Need	Have	Need	Have
Engineering	Staff	3	0	4	0	4	0
	Postdoc	0	0	0	0	0	0
	Engineering	4	0	5	0	6	0
	Student	0	0	0	0	0	0
	M&S(k\$)	200	0	300	0	350	0

Summary from KK.

Summary from KK. MDI,
Tracker, Muon, Solenoid, HCAL,
ECAL, Forward Detectors,
Management

Overlap with other efforts ?

Detailed description of tasks for each.



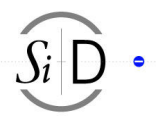


Subsystem- Details -Benchmark

Benchmark		2010		2011		2012	
		Need	Have	Need	Have	Need	Have
Benchmark	Staff	0.3	0	0.5	0	2	0
	Postdoc	0	0	0.5	0	3	0
	Engineering	0	0	0	0	0	0
	Student	0	0	0.5	0	3	0
	M&S(k\$)	0	0	0	0	0	0

Conversation with A.N.

Made up for time line



Subsystem- Details - Summary SiD

So far on one page...

		2010		2011		2012	
		Need	Have	Need	Have	Need	Have
Tracker	Staff	1.25	0.5	1.25	0.5	1.25	0.5
	Postdoc	0.5	0	0.5	0	0.5	0
	Engineering	0.75	0	0.75	0	0.75	0
	Student	0	0	0	0	0	0
	M&S(k\$)	50	0	50	0	50	0
ECAL	Staff	3	2	3	2	3	2
	Postdoc	4	0.5	4	0.5	4	0.5
	Engineering	2.7	1	2.7	1	2.7	1
	Student	0	0	0	0	0	0
	M&S(k\$)	340	150	320	200	220	50
HCAL	Staff	6	3.5	6	3	5	2
	Postdoc	3	1.5	4.5	0.5	4	0.5
	Engineering	2.2	1	1.7	0.4	1.7	0.4
	Student	2	2	1.5	1.5	1	1
	M&S(k\$)	600	463	350	100	300	100
FCAL	Staff	0.73	0	0.15	0	0	0
	Postdoc	1	0	1	0	1.92	0
	Engineering	1	0	1	0	1	0
	Student	0	0	0	0	0	0
	M&S(k\$)	20	0	250	0	70	0
Engineering	Staff	3	0	4	0	4	0
	Postdoc	0	0	0	0	0	0
	Engineering	4	0	5	0	6	0
	Student	0	0	0	0	0	0
	M&S(k\$)	200	0	300	0	350	0
Benchmark	Staff	0.3	0	0.5	0	2	0
	Postdoc	0	0	0.5	0	3	0
	Engineering	0	0	0	0	0	0
	Student	0	0	0.5	0	3	0
	M&S(k\$)	0	0	0	0	0	0



Subsystems--Summary SiD

SiD all		2010		2011		2012	
		Need	Have	Need	Have	Need	Have
SiD all	Staff	14.3	6.0	14.9	5.5	15.3	4.5
	Postdoc	8.5	2.0	10.5	1.0	13.4	1.0
	Engineering	10.7	2.0	11.2	1.4	12.2	1.4
	Student	2.0	2.0	2.0	1.5	4.0	1.0
	M&S(k\$)	1210.0	613.0	1270.0	300.0	990.0	150.0

This is about half of needs....
Profile correct ?



Summary--resources

Have just started

Initial numbers

Needs more work

Engineering/mechanical integration, where ?

Students

Technicians?

Others ?

Is this right approach ?