



Introduction

Tobias Haas
Technical Meeting
13 April 2012

Homework from last time



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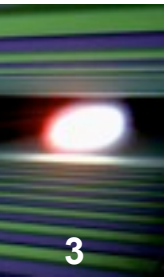
■ Lab Access

- 13 Apr: Labs should have doors to the outside to move in bulky pieces of equipment
 - J Metzen to include doors to the outside in the floor plan where possible
 - I would like to take this out. It does not seem reasonable

■ All labs

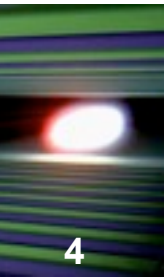
- 13 Apr: Are all labs requested actually included in the floor plan
 - C. Schulz to circulate floor plan and current state of lab list and check plan against list
 - Will happen next week!

Homework from last time cont'd



- Power in the SPB Optics Hutch:
 - 13 Apr: The power requirements in the SPB optics hutch needs to be specified
 - A. Aquila to write down power in the optics hutch
 - see presentation
- Consistency of power numbers
 - 13 Mar: Need to check that the power numbers from A. Aquila and C. Youngman are consistent.
 - Compare A. Aquila's and C. Youngman's power numbers
 - see presentation

Homework from last time cont'd



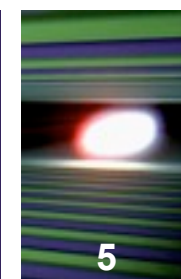
■ DAQ and Control needs

- 13 April: The DAQ and control needs need to be estimated for other instruments
 - M. Meyer and C. Youngman to evaluate SQS next in order to also get a reasonable estimate for the soft X-ray beam lines

■ Beam port Allocation

- 13 April: Which branch beam line should be used for FXE needs to be decided:
 - N. Saaristo to make 3D model of a mirror-imaged assignment in order to identify space problems
 - C. Bressler and T. Tschentscher to discuss the advantages and disadvantages for FXE on the two respective beam lines

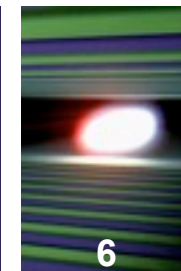
Infrastructure Cost for Instruments



- List from instrument scientists with estimates made by me

11	X-Ray Hutch		348 k€	400 k€
12	X-Ray Hutch Interlocks, utilities		313 k€	360 k€
13	Laser Hutch Interlocks		44 k€	50 k€
14	X-Ray Hutch interior		22 k€	25 k€
15	Ctrl Room		100 k€	115 k€
16	Ctrl Room Interior		25 k€	29 k€
17	Cables (+special plugs)		315 k€	362 k€
18	Controls (Beckhoff + more)		152 k€	175 k€
19	Computing, Interface, Data Storage		0 k€	0 k€
20	Programming of controls + DAQ *	2000 hrs (I use 36 €/hr)	69 k€	79 k€
21	R&D		174 k€	200 k€
22	XHQ lab spending (instrument lab + more)		96 k€	110 k€
23				
24	Total to be spent		1,658 k€	1,905 k€

Itemization



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32	X-Ray Hutch	(< 250 m2 x 19mm Pb, including hutch door (FXE). Estimate based on P01 hutch (3-30 keV))	348 k€	400 k€				
33								
34								
35	X-Ray Hutch Interlocks, utilities		313 k€	360 k€	50 k€	WP34, Air conditioning)		
36	Water + piping		17 k€	20 k€				
37	Gas bottle and gas line infrastructure		17 k€	20 k€				
38	Air conditioning		174 k€	200 k€				
39	Water cooling + pipes		44 k€	50 k€				
40	Electricity, lighting, related utilities		44 k€	50 k€				
41	Cable trays, chicanes (through hutch wall)		17 k€	20 k€				
42	Experiment interlock			60 k€	60 k€	WP 38, Interlocks)		
43								
44	X-Ray + Laser Hutch Interlocks, utilities		44 k€	50 k€				
45	E.g., the one with those silly photodiodes (DESY-style)							
46	All those safety boxes around laser+FEL safety							
47								
48	X-Ray Hutch interior		22 k€	25 k€				
49	Toolbox, BNC cables, mechanical parts		4 k€	5 k€				
50	Work Bench(es)		4 k€	5 k€				
51	Cabinet(s)		9 k€	10 k€				
52	Video cameras/Web cams (not sample-related)		4 k€	5 k€				
53								
54	Ctrl Room		100 k€	115 k€				
55	Hutch		26 k€	30 k€				
56	Electricity		26 k€	30 k€				
57	Lighting		4 k€	5 k€				
58	Air conditioning/Ventilation		44 k€	50 k€				
59	Acoustic insulation							
60								

61	Ctrl Room Interior		25 k€	29 k€						
62	10-15 Chairs		13 k€	15 k€						
63	10m2 Tables		2 k€	2 k€						
64	10 50" Flatscreens		9 k€	10 k€						
65	Water cooler (drinking water)		0 k€	0 k€						
66	Coffee machine and free coffee supply		0 k€	1 k€						
67	5 Whiteboards		1 k€	1 k€						
68										
69	Cables (+special plugs)		315 k€	362 k€						
70	1000 m type x	20€/m	17 k€	20 k€						
71	2000 m type y		35 k€	40 k€						
72	400 plugs	30 € per plug	10 k€	12 k€						
73	15 CY racks	6k€ per rack	78 k€	90 k€						
74	200 uTCA crates	1k€ per crate	174 k€	200 k€						
75										
76	Controls (Beckhoff+more)		152 k€	175 k€						
77	250 Beckhoffs	0.5 k€/axis	109 k€	125 k€						
78	100 others?	0.5 k€/axis	44 k€	50 k€						
79										
80	Computing, Interface, Data Storage	I think this is all allocated in WP76 but I need to check	0 k€	0 k€						
81	Fast data lines									
82	50 Tbyte local storage									
83	10 PByte total instrument storage									
84										
85	Programming of controls + DAQ * ...		69 k€	79 k€						
86	Trigger definition and masterclocking	100 hrs (I think this is underestimated by a factor 2. I use my numbers and 36 €/hr)		7 k€						
87	Motor control interfacing to beamline controls	500 hrs (I think this is underestimated by a factor 2)		36 k€						
88	Advanced instrument programming and control work	500 hrs (I think this is underestimated by a factor 2)		36 k€						
89										
90	R&D		174 k€	200 k€						
91										
92	XHQ lab spending (instrument lab + more)		96 k€	110 k€						
93	Toolbox, BNC cables, mechanical parts		17 k€	20 k€						
94	Work Bench(es)		17 k€	20 k€						
95	Cabinet(s)		17 k€	20 k€						
96	Extra instrument-science related items		44 k€	50 k€						
97										

More details in attached spreadsheet

