

# HLRF Meeting

August 31, 2006

# Agenda

- Single Tunnel Status Update
  - Submitted opinions from last meeting
  - Meetings in progress at KEK
- Racks
  - W-C Rack Profiles
    - Assume 10 kW rack after Knurr design
  - Rack Count
    - Detail profiles to get actual count
    - Current estimate 6-8 racks
  - Rack Features
    - Fans, heat exchangers, controls, plenums for air and cables, power distribution option
    - 34 HU user space

Sub-unit rack												
Module	Sub-module	V(Load)	I(Load)	Power (Load)	Power (Module)	fraction to air (%)	VA	Comment	Required (VA)	Power ends up in air	Cooling	
Modulator control rack (S.Fukuda)												
	PLC Communication Fiber Link NIM or CAMAC BIN BNC Box Relay Sequence Box				2000VA	100			2000	2000	Air Cooling	
Klystron Support Rack 1 (S.Fukuda)												
	Ion Pump Power Supply	5kV	5mA Max		100VA	100	100VA	Thales		100		
	Digital Meter Relay				100VA	100	100VA			100		
	Wave Monitor				150VA	150	150VA			150		
	NIM or CAMAC BIN				150VA	150	150VA		4500	150	Air Cooling	
	Heater Power Supply	9.5V	43.5A	413VA	180VA	30	600VA	Thales		180		
	DC Core Reset Power	300V	5A Max	1500VA	500VA	25	2000VA	KEK PT		500		
Klystron Support Rack2 (S.Fukuda)												
	Magnet P/S Controller				300VA	100	300VA			300		
	Magnet power Supply	50V	70A	3500VA	500VA	12.5	4000VA	Thales	7000	500	Air Cooling	
	RF fault detectors/arc detectors interlocks connecting to modulator				200VA	100	200VA			200		
					200VA	200	200VA			200		
LLRF (S. Michizono)												
	ATCA				500VA	100	500VA			500		
	Piezo Driver					0	0					
	RF Amplifier			500VA	300VA	37.5	800VA		3000	300	Air Cooling	
	Power Supply for ATAC				750VA	100	750VA			750		
Motor Controller (H. Hayano/02272006)												
	pulse motor controller for ATT/Stub-tuner			1470VA	630VA	30	2100VA		4000	630	Air Cooling	
	timing reference line/controller/distributor			350VA	150VA	30	500VA			150		
	High Power Attenuator Motor			700VA	300VA	30	1000VA			300		
Cavity (H. Hayano/02272006)												
	pulse motor controller for input coupler/tuner			895VA	405VA	30	1350VA	24ch+24ch	3000	405	Air Cooling	
	Piezo tuner controller			1120VA	480VA	30	1600VA	48ch		480		
	HOM monitor cables							0 48ch				
cryogenics (H. Hayano/02272006)												
	Vacuum cryogenics monitors (temp, pressure, liquid level)			700VA	300VA	30	1000VA	24cg+24ch		300		
	Pump PS/controller			530VA	270VA	30	900VA	9ch	1500	270	Air Cooling	
	gauges				200VA	100	200VA	9ch		200		
BPM (H. Hayano/02272006)												
	control BPM signal process electronics with CPU/LAN				1000VA	100	1000VA	3ch		1000		
	interface-bus unit with CPU/LAN				500VA	100	500VA			500		
	acc. Safty & MPS interface unit with optical link				500VA	100	500VA		5000	500	Air Cooling	
Magnet (H. Hayano/02272006)												
	Q-mag PS			800VA	200VA	20	1000VA	6U		200		
	corrector PS			1600VA	400VA	20	2000VA	6U+6U=12		400		
									30000	11265		

# Klystron Rack Profiles

NI

34		34
33		33
32		32
31		31
30		30
29		29
29	<b>Digital Meter Relay(4ch)</b>	29
27	<b>KEK</b> version 483Wx88Hx100D	27
26	<b>Wave Monitor/Scope</b>	26
25	<b>Tektronix RN300+</b>	25
24	<b>Tektronix TDS3014B</b>	24
23	482Wx177Hx400D	23
22	<b>NIM-BIN</b>	22
21	Not Special Unit Here	21
20	482Wx220Hx500D	20
19		19
18		18
17	<b>Ion Pump PS(2ch)</b>	17
16	<b>Toshiba VT-69085</b>	16
15	482Wx177Hx290D	15
14		14
13	<b>Heater PS/Controller</b>	13
12	<b>Takasago AP-VC1</b> 50.5H	12
11	<b>Heater PS</b>	11
10	<b>Stabilized AC PS/1kVA</b>	10
9	Takasago(Japan)	9
8	Model TAC-102	8
7	430Wx200Hx400D	7
6		6
5	<b>DC Core Reset PS</b>	5
4	200Vx5A <b>Inverter PS(OK?)</b>	4
3	Takasago(Japan) Model	3
2	483Wx199Hx690D	2
1		1

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15		15
14		14
13	<b>NIM-BIN</b>	13
12	<b>Including rf fault detector/</b>	12
11	<b>arc detector, this can go to</b>	11
10	<b>rf rack. Communication</b>	10
9	482Wx220Hx500D	9
8	<b>Magnet Controller</b>	8
7	<b>Custom Made</b>	7
6	*483Wx110Hx400	6
5	<b>Magnet Power Supply</b>	5
4	<b>Stabilized DC PS</b>	4
3	EMI(USA) 10KW-100-100	3
2	483Wx221.4Hx559D	2
1		1

ILC HLRF RACK PROFILE ID/TITLE:  
**Klystron Support Rack 1**

By Shigeki Fukuda Date 2006/08/31

ILC HLRF RACK PROFILE ID/TITLE:  
**Klystron Support Rack 2**

By Shigeki Fukuda Date 2006/08/31

# Other Business

- Note of ART WBS effort
- Topics for next meeting – RDR Writing Plan