

Albuquerque GDE 準備

HLRF

- 福田

GDEにおいてやるべきこと

- 技術エリア・ML/HLRFにおいて情報交換 ○
- CFS (Civil Engineering)とのJoint MeetingでDRFS-Single Tunnel案に関する懸案事項を整理する。 ○
- AvTFとのJoint Meetingで今までWebex Meetingで議論したことをFace-to-faceで確認する。 ○
- Cavityグループ/LLRFグループとDRFSについての議論を行う。 ×

Preparation Status of DRFS for ALCPG/GDE

Availability Task Force Meeting, Sept. 9, 2009

(設樂氏のコメント)

- CFS designs for DRFS including tunnel design with 5.2 m diameter are on going and will be presented at Albuquerque (CFS: A. Enomoto)
- Table of heat loads for DRFS was confirmed and sent to Emil (CFS & RF: A. Enomoto, S. Fukuda, S. Michizono)
- Design for MA modulator is evolving and will be presented at Albuquerque (RF: S. Fukuda)
- R&D plan of testing DRFS at S1-Global and STF-2 is being updated, and the updated plan will be presented at Albuquerque (RF & ML: S. Fukuda, H. Hayano)
- MTBF table for DRFS components is being revisited and basic availability issues are being reconsidered based on the Shigeki's DRFS presentation (AvTF-KEK:)

HLRF Working Group 案

SCRF Parallel Sessions at ALCPG09

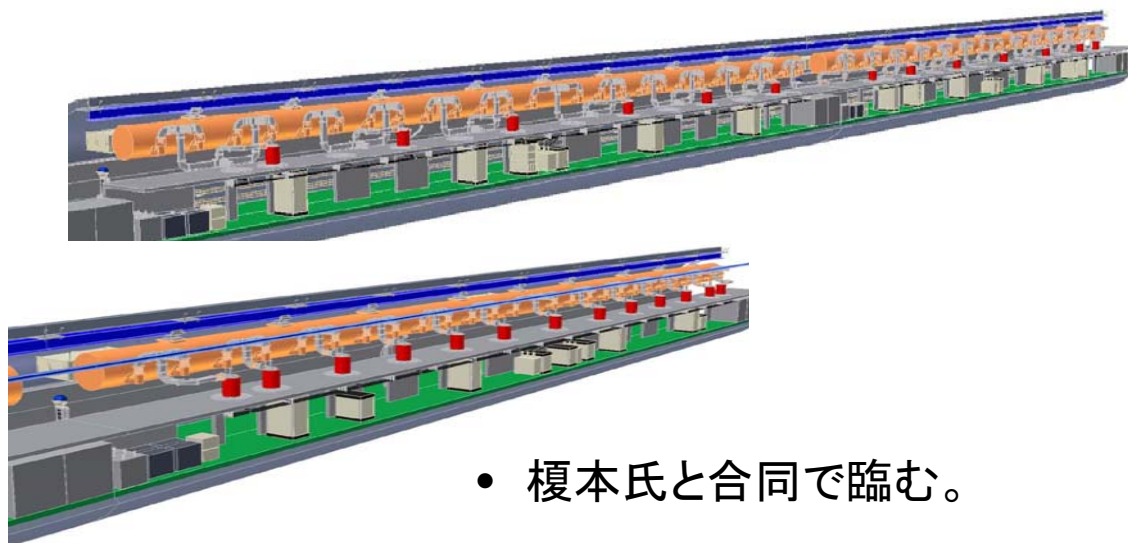
Sep. 29 (Tue)	Sep. 30 (Wed)	Oct. 1 (Thu)	Oct. 2 (Fri)	Oct. 3 (Sat)
9:00 ALCPG/G DE Joint	8:30 ADI	8:30 Main Linac (MLI)	8:30 Joint with Cost Mgmt	8:30 GDE Plenary
10:30 Break	10:00 Break	10:00 Break	10:00 Break	10:00 Break
11:00 ALCPG/G DE Joint	10:30 Main Linac (Cavity)	10:30 Main Linac (MLI)	10:30 Main Linac (HLRF)	10:30 ALCPG/GDE Joint Plenary
12:30 Lunch	12:00 Lunch	12:00 Lunch	12:00 Lunch	12:00 end
14:00 GDE Plenary	13:30 Main Linac (Cryomodule)	13:30 Main Linac (Cavity)	13:30 Lunch	
15:45 Break	15:30 Break	15:30 Break	15:30 Break	
16:15 GDE Plenary	16:00 Main Linac (Cryomodule)	16:00 Main Linac (Cavity)	16:00 ADI	
16:45	17:30	18:00	17:30	

- 1) Chris N - Update of R&D in Support of the Klystron Cluster Scheme / High Power Tests of a Reflection-Free, Remote Controllable Phase Shifter
- 2) Faya Wang - Operational experience with the Marx Modulator, 10 MW Toshiba MBK and SBK Gun
- 3) Shilun Pei - Latest Results on Cavity Gradient Stability at TTF

- (1) Shigeki Fukuda; Update of R&D of DRFS
- (2) Shigeki Fukuda; HLRF plan for S1 global in KEK
- (3) Sergey kazakov; Waveguide Components R&D: Variable Hybrid etc.

Joint with CFS

- Heat Table案——>大体Full Scheme&Low Power Optionについてまとまった。
- DRFSのレイアウト案——>大体まとまった。
- トンネル径——>5.2m案で纏めている。



- 榎本氏と合同で臨む。

Components	Quantity	Per 36m	Location	Total Heat Load (KW)	Average Heat Load (KW)
Non-RF Components					
LCW Skid Pump 2 per 4-ft Slope/Feeder Loss	0.25		Service Tunnel	0.26	0.62
DR Loss and Motor Loss (mco)	1		Service Tunnel	0.04	0.17
Panels (at top Chilled Water) 4.5 hp	2		Service Tunnel	2.88	3.84
Rack Water Skid	0.25		Service Tunnel	0.26	0.26
Lighting			Service Tunnel	1.54	1.54
Lighting Heat Dissipation - 1.5W/ft			Service Tunnel	2.00	2.00
AC Per Transformer 31.5-48 kV	0.26		Service Tunnel	1.00	1.00
Emerg. AC Per Transformer 31.5-48 kV			Service Tunnel	1.00	1.00
RF Components					
--- High Voltage Circuit Breaker (6.6 kV) ---					
		1/76 m	Single Tunnel		
DC Power Supply, 6.6 kV (I), 60 kW, 2 A (OI), 125 kW, 90% eff.		1/76 m	Single Tunnel		12.50
DC Power Supply, 6.6 kV (I), 60 kW, 2 A (OI), 125 kW, 90% eff. (Backup)		1/76 m	Single Tunnel		
Modulating Anode Modulator, 6.6 kV (Shunt 0.5A, then 3 kW heat load)		1/76 m	Single Tunnel		3.00
Modulating Anode Modulator, 6.6 kV (Shunt 0.5A, then 3 kW heat load) (Back-up)		1/76 m	Single Tunnel		
--- AC Transformer to Low Voltage (400/200/100 V) ---					
Heater PIS, 200V, 18A, 4kW		1/76 m	Single Tunnel		0.50
Same as above (Back-up)		1/76 m	Single Tunnel		
Pulse Transformer		None			
Klystron Socket Tank / Gun 6.3 kW X 13		13/76 m	Single Tunnel		3.90
Klystron Focusing x 13 (Permanent Magnet)		13/76 m			0.00
Klystron Collector 4.5 kW X 13		13/76 m	Single Tunnel		58.50
Klystron Body & Windows		13/76 m	Single Tunnel		3.75
--- LLRF Racks ---					
LLRF+amp-int, 200V, 1.5A (5 modules)		Rack 5 1/76 m	Single Tunnel		0.35
LLRF+amp-int, 200V, 1.5A (5 modules)		Rack 6 1/76 m	Single Tunnel		0.35
LLRF+amp-int, 200V, 1.5A (5 modules)		Rack 7 1/76 m	Single Tunnel		0.21
(LLRF+amp-int, 200V, 1.5A (5 modules, for full power op.)		Rack 7			
(LLRF+amp-int, 200V, 1.5A (5 modules, for full power op.)		Rack 8			
(LLRF+amp-int, 200V, 1.5A (5 modules, for full power op.)		Rack 9			
--- Other Racks ---					
Timing, 200V, 0.6kW		Rack 10 1/76 m	Single Tunnel		0.50
Timing, 200V, 0.6kW		Rack 11 1/76 m	Single Tunnel		0.50
Cavity, 200V, 3 kW		Rack 12 1/76 m	Single Tunnel	2.95	2.05
Cavity, 200V, 3 kW		Rack 13 1/76 m	Single Tunnel	2.95	2.05
Cryogenic, 200V, 1.1 kW		Rack 14 1/76 m	Single Tunnel		2.10
Cryogenic, 200V, 1.1 kW		Rack 15 1/76 m	Single Tunnel		2.10
BPM & Mag, 200V, 5 kW		Rack 16 1/76 m	Single Tunnel		5.00
BPM & Mag, 200V, 5 kW		Rack 17 1/76 m	Single Tunnel		5.00
--- RF Loads ---					
Attenuator		None			
Waveguides in service tunnel		None			
Waveguides in penetration		None			
Waveguides in beam tunnel		13/76 m	Single Tunnel		0.80
Circulator with load		None			
RF Loads		13/76 m	Single Tunnel		22.80
--- Other Loads ---					
Pulse motor for input coupler/tuner		(2+1)76 m		1.79	0.00
Vacuum Pumps		(2+1)76 m		1.26	
Subtotal RF unit Only					157.22
Total RF					

Joint with AvTF

- 日程や段取りは不明。
- 要点：
 - Avalismと機器のMTBF
 - より現実性のあるHigh Availability の評価につながる議論がなされると期待。