Input Coupler

Spec. profile for Plug Compatibility

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Spec. Profile Table @Mar.2008 GDE meeting/Sendai

specification items	condition	Rough guess	unit and comments		
Power requirements	Operation	>400	kW for 1600 us		
	Proccessing	>1000	kW upto 400 us	need after vac break, cool-down	
		>600	kW larger than 400 us	need after vac break, cool-down	
	Processing with reflection mode	>600	kW for 1600us	in Test stand	
Processing time	warm	<50	hours	after installation	need clear definition of power/pulse_width target
	cold	<30	hours	after installation	need clear definition of power/pulse_width target
Heat loads /coupler	2K static	<0.1	W		should get Tom&Norihito's number later
	5K static	<0.5	W	depend on tunability	should get Tom&Norihito's number later
	80 K static	<3	W		should get Tom&Norihito's number later
	5K dynamic	<0.3	W		should get Tom&Norihito's number later
	80K dynamic	<3	W		should get Tom&Norihito's number later
Cavity vacuum integrety		2	# of windows		
		yes	bias capablity		
RF Properties	Qext	Yes/No	tunable	decide later	
	Tuning range	1-10	10^6 if tunable	decide later	
Physical envelope	Position		compatible to TTF-III	decide later	
	Flange		compatible to TTF-III	decide later	to cavity, to cryostat
	waveguide		compatible to TTF-III	decide later	
	support		compatible to TTF-III	decide later	
Instrumentation					
vacuum level		>1			
spark detection		0	at window		
electron current detection		>1	at coax		
temperature		>1	at window		
					*comment: yellow boxes indicate change/discuss

Major spec. items not yet agreed

- <u>Qext tunable or fixed</u>

  The baseline is 'TTF-III' coupler with 'Qext tunable', however, there is a discussion to be Qext fixed for costing and simple installation procedure.

Plan for developing Coupler Work Package

- Finalize spec. profile table, today.

  22 April, ILC-GDE meeting at FNAL

- Upload to EDMS team workspace now.
- Revise any spec. in any time, if it is inconsistent.

- Develop pros/cons table for tunability.
- Write and develop 'recommendation of tunability' according to the past presentations, report it to PM, by the next FNAL meeting.