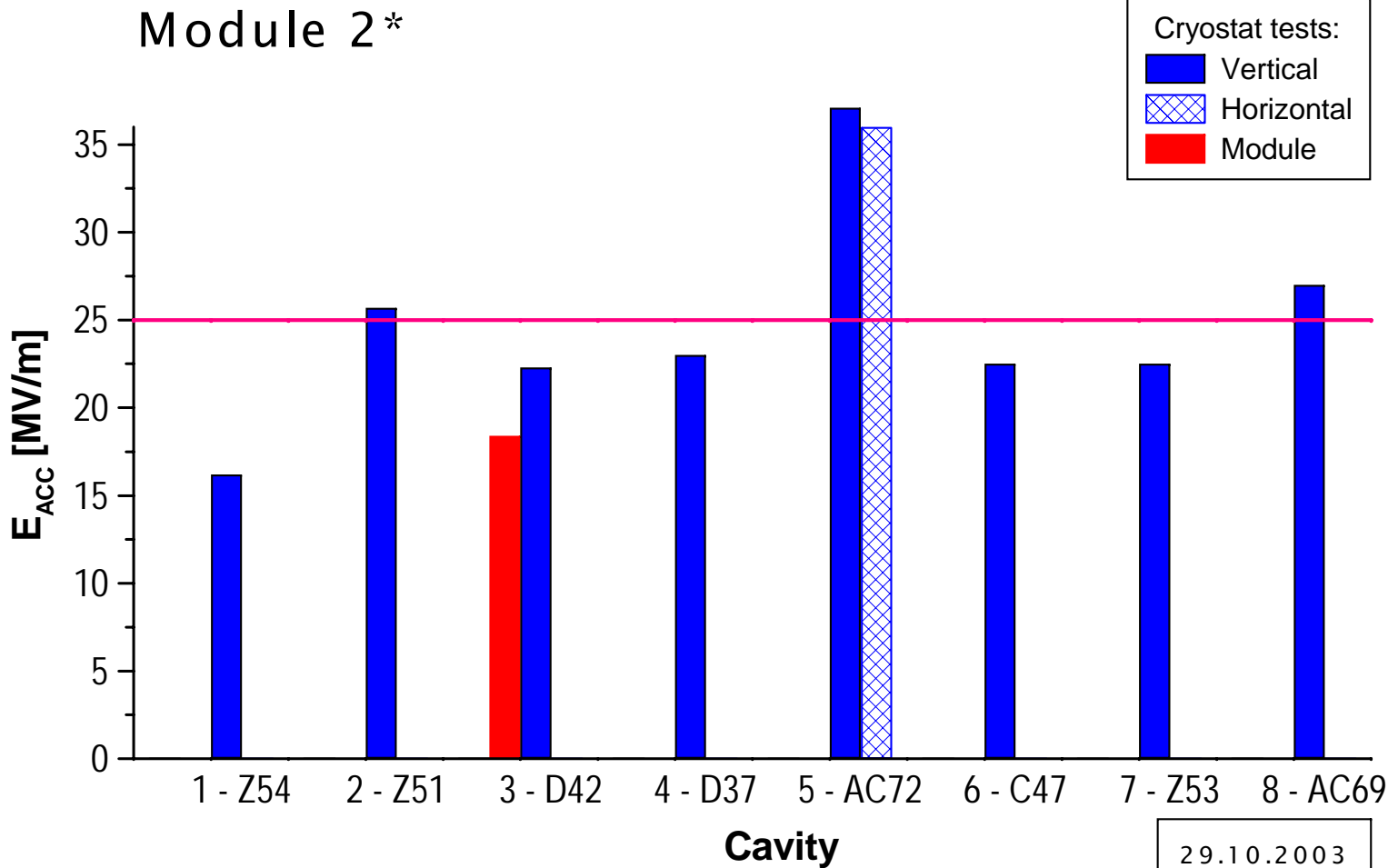


Module 2*



Why high gradient cavity AC72 in Module 2*

- there was no other cavity with a sufficient gradient available at the time of string assembly
- it gives the chance to test a 35 MV/m cavity with beam

in the consequence we need to install an environment to make a high gradient test possible!



What is installed at Ac72 / Cy 5:

- TTF3 power coupler (last generation)
- tuner with a piezo for Lorenz Force detuning compensation
- wave guide system can be split:
 - Klystron 2 for cavity 1-4
 - Klystron 1 for high gradient cavity 5
- requirements and constraints are checked:
 - beam, power, dump, radiation, interlock...



There was a talk, given by Nick Walker at the TESLA Project meeting with all the details of a possible beam test:

35 MV/m Beam Tests in TTF-II

Meeting on 21.10

S. Choroba

F.-R. Kaiser

W.-D. Moller

H. Schlarb

S. Simrock

C. Pagani

N. Walker

Additional input:

S. Schreiber

A. Leuschner

Parts for the Module Planning 2004 - 2005

- we need spare modules for TTF-FEL:
 - 1 old design (bigger vessel diameter, cavities are mechanically connected to the SS pumping pipe →thermal movement)
 - 1 new design (smaller vessel diameter →different He-tank, cavities connected to an Invar rod)
- we want a high gradient module



High Gradient Module

- The high gradient module could be at the same time the new design spare module
- question:
 - Which parts are available?

(Lutz showed the situation on cavities)

Part for two Moduls

parts	availability		remarks
	new design, high gradient	old design	
module tank	yes	from Super Structure	
cold mass	yes	from SS, has to be modified	
cavities	Lutz' list	old cavities with new flanges or new production	if new production, it could be high gradient (EP)
cav. pickup	yes	yes	
cav. hom pickup	yes	yes	
cav. He-tank	yes	yes	raw material available
μ -metal shield	yes	yes	only sheet material
beam vac bellows	yes	yes	



Part for two Modules, cont'

parts	availability		remarks
	new design, high gradient	old design	
tuner	yes	yes	new drive has to be tested
piezo	yes	(yes)	
piezo holder	no	(no)	available Nov. 04
piezo power	no	(no)	available Nov. 04
supply piezo cable feedthrough	no	(no)	available Nov. 04
coupler	yes	yes	have to be tested
quadruple	yes	yes	
BPM/HOM absorber	yes	yes	old



Part for two Modules, cont'

parts	availability		remarks
	new design, high gradient	old design	
gate valves	yes	yes	
cable	yes	yes	
iso vac feedthroughs	yes	yes	from super structure and spares
superinsulation	yes	yes	
coupler vac pumps	yes	yes	
coupler valves			



Conclusion

- all parts needed for the high gradient module (new design spare) are available, the piezo design can be finished by Nov. 04
- the Superstructure has to be reassembled
- for a second high gradient module (old design spare) the cavity He-tanks have to be manufactured