

TITAN collaboration meeting June 10 & 11 2005

The experimental program

- collinear laser spectroscopy of radioactive isotopes, cooled & bunched
- x-ray spectroscopy on series of isotopes, extending to radioactive species
- g-factor measurements (needs extra trap)
- laser spectroscopy on trapped ions (needs extra trap)
- mass measurements on radioactive isotopes

The mass measurement program

- first experiments on radioactive isotopes on singly charged species, problem: isobaric contamination, no mass selective cooler trap!
- measurements on charge breed isotopes allow for additional selection with Wien-filter and by tuning the EBIT (e-gun energy to threshold of ionization of closed atomic shells)
- LIMITS: production requirements are $\sim 100 - 1000$ ions/s

Life-time requirements are \sim few 10 ms

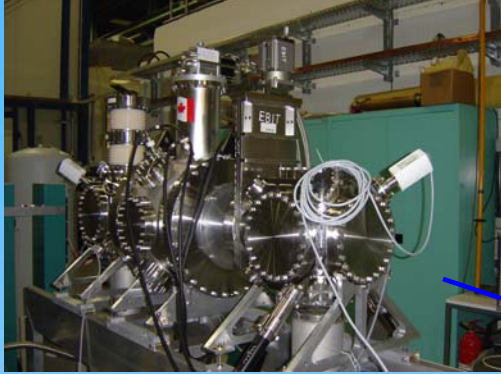
We need to establish this first experimentally !

The experimental program

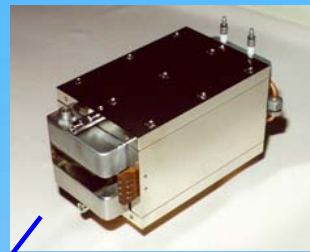
- IDEA : Capitalize on isotopes where the production at ISAC is higher than elsewhere
- UC target needed for n-rich species
- ion sources ? (Pierre will tell more)

- PLAN: try to make some concrete EEC proposals!

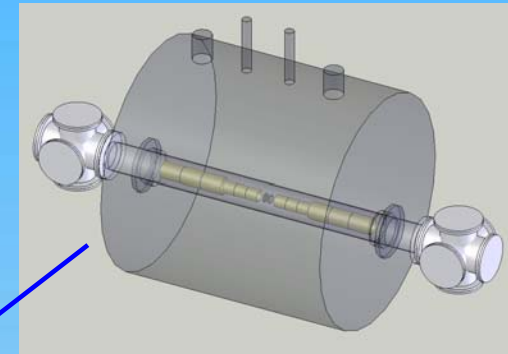
I will contact you with a draft of proposal, if we think the experiment is feasible.



EBIT under testing at MPI-HD.

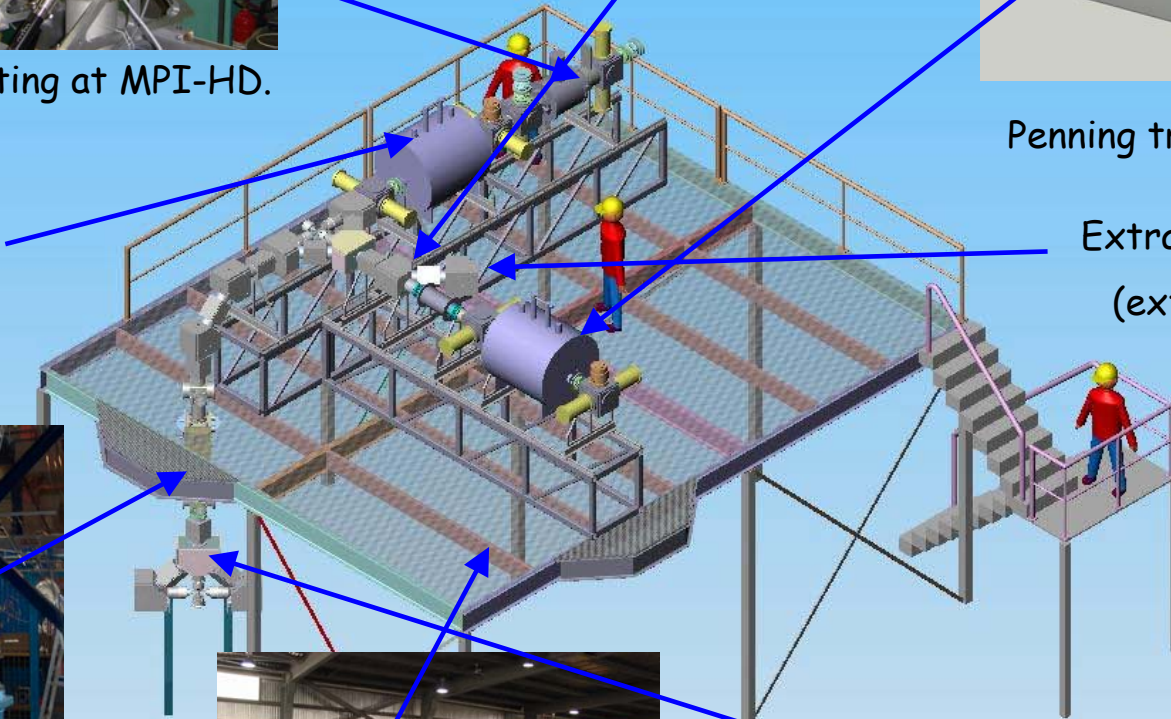


Wien filter
($R=500$)



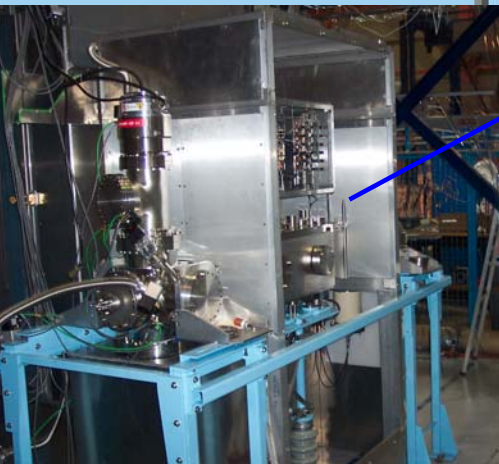
Penning trap

NEW: Cooler trap for HCI

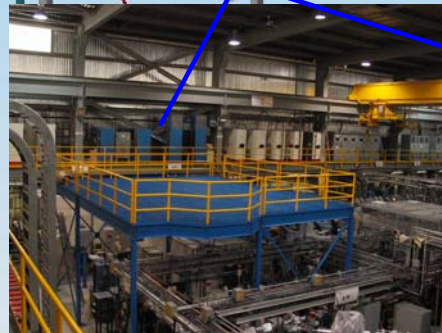


Extra beam line
(extra trap)

Collinear laser line



RFQ operational on test bench

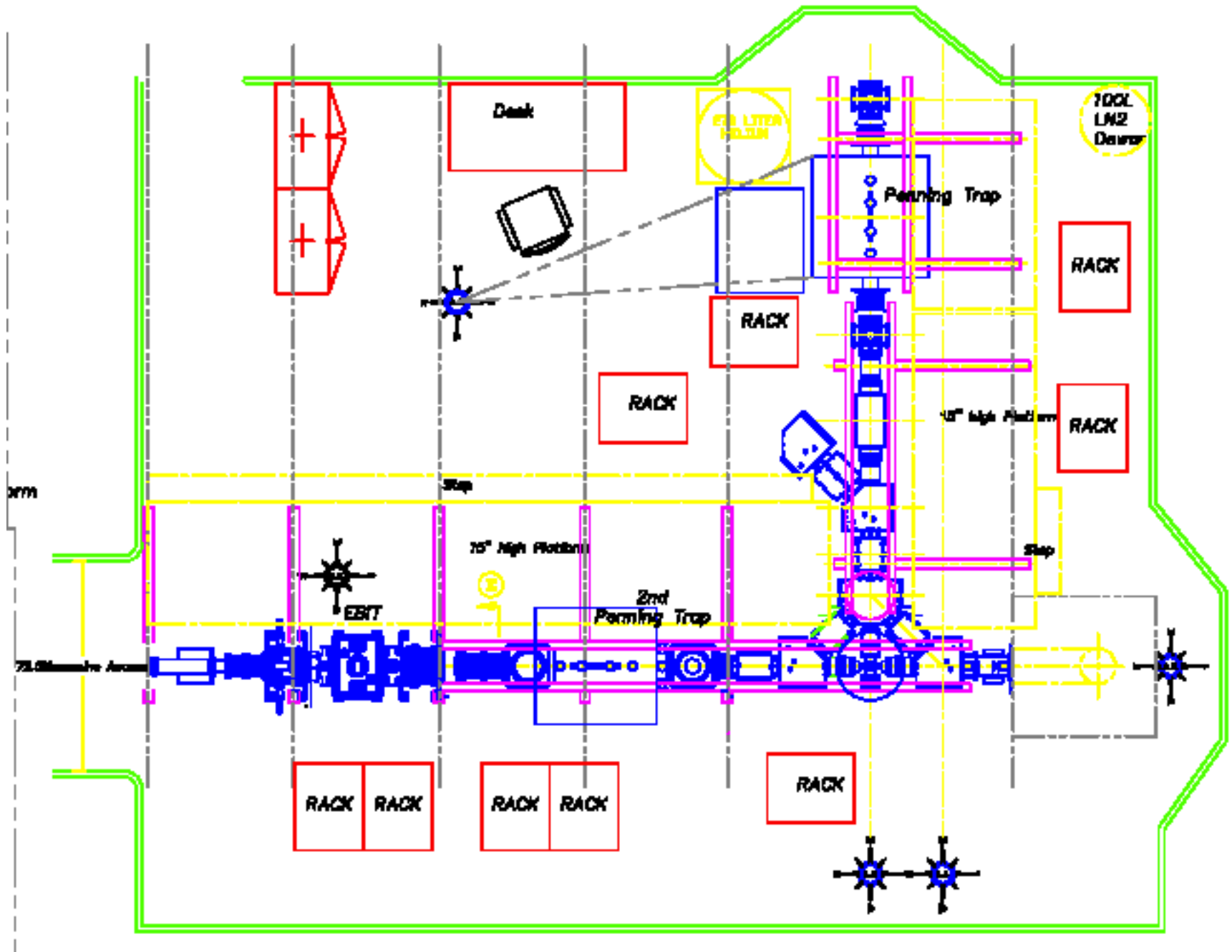


TITAN platform finished at ISAC

TRIUMF



ISAC



Saturday, June 11, 2005

9:00	Jens Dilling	10	Mass measurements
9:10	Pierre Bricault	20	Introduction to ISAC
9:30	Gordon Ball	20+10	Mass measurements for Vud
10:00	Jac Caggiano	10+5	Al, Si mass measurements for Nuclear Astrophysics
10:15	Rituparna Kanungo	10+5	C19 measurements
10: XX	Fred Sarazin	10 + 5	Halo isotopes
10:30	<i>Coffee</i>	15	
10:45	Carlo Barbieri	20+10	Constraining Fermi matrix elements with nucleon-nucleus scattering
11:15	John Crawford	20+10	Collinear laser spectroscopy on bunched beams
11:45	Vladimir Ryjkov	20+10	g-factor measurements of Ba isotopes
12:15	<i>Lunch</i>	1:15	
13:30	Gordon Drake	20+10	Charge radius of halo nuclei
14:00	Matthew Pearson	20+10	Laser spectroscopy at TITAN
14:30	Johannes Braun	20+10	x-ray spectroscopy for isotope shift measurements on series of radioactive isotopes
15:00	Zoltan Harman	20+10	Theory for isotope shifts in x-ray spectra
15:30	<i>Coffee</i>	15	
15:45	General discussion		
17:00	Conclusions		