

Status and Future of KURRI-FFAG Accelerators



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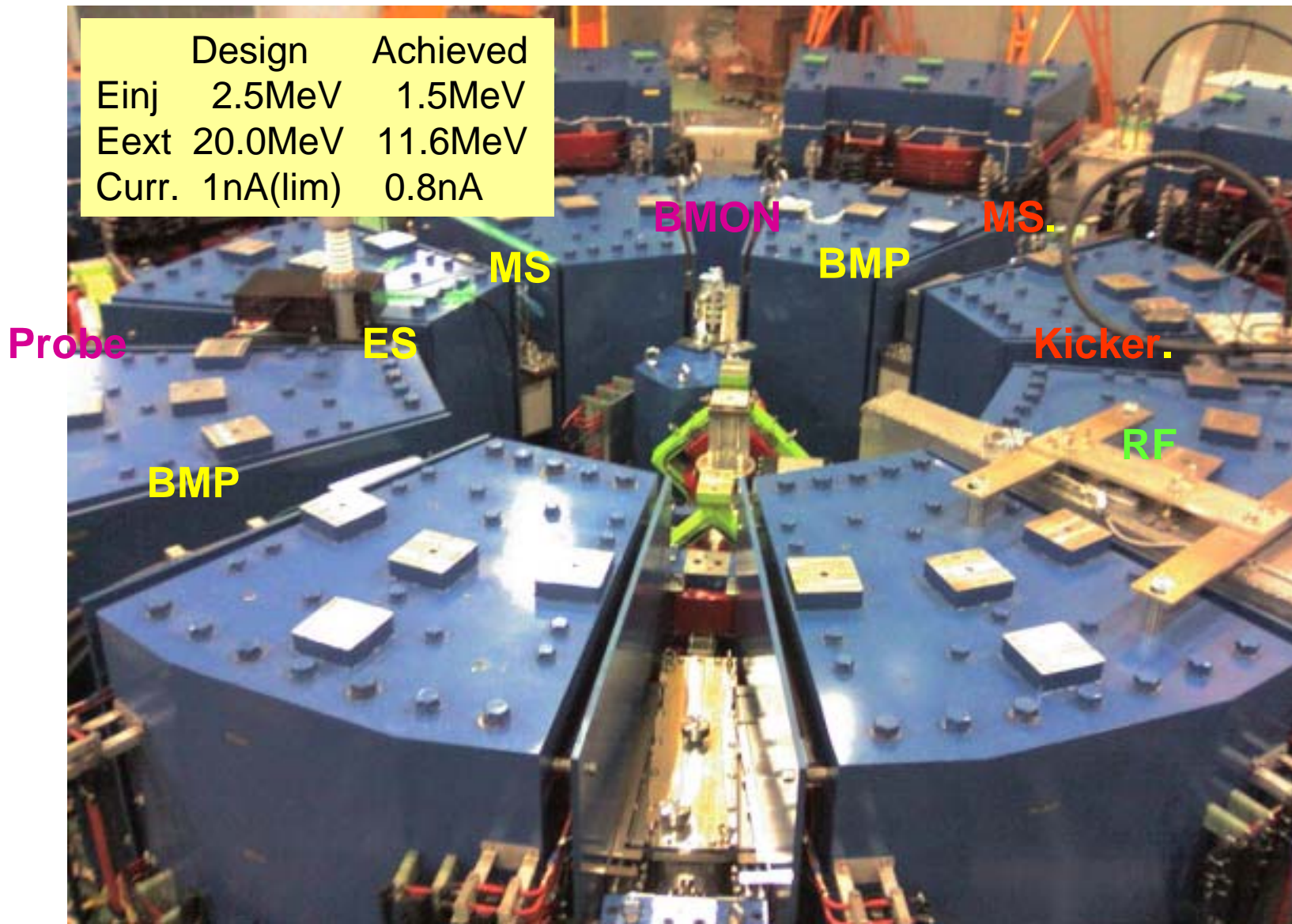
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- Main ring

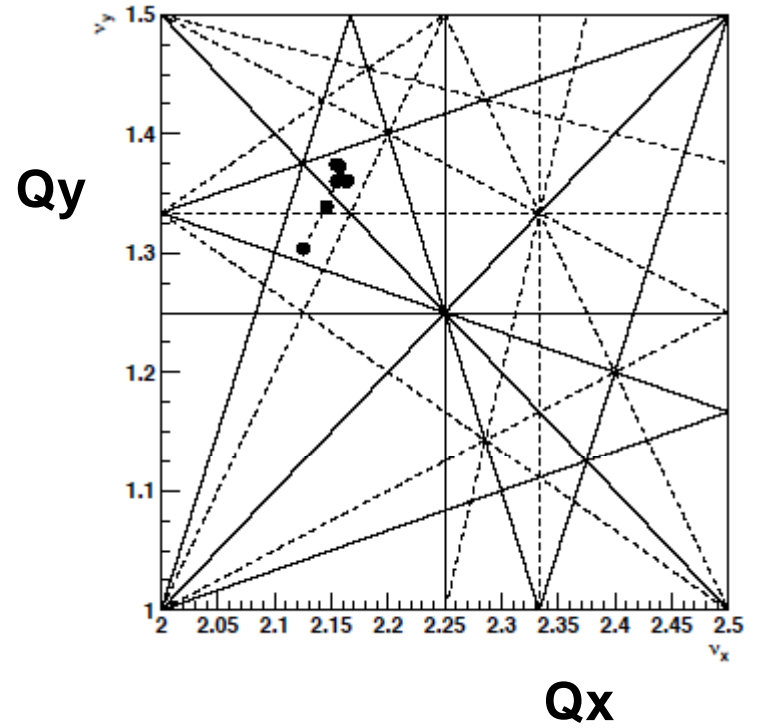
Booster

	Design	Achieved
Einj	2.5MeV	1.5MeV
Eext	20.0MeV	11.6MeV
Curr.	1nA(lim)	0.8nA

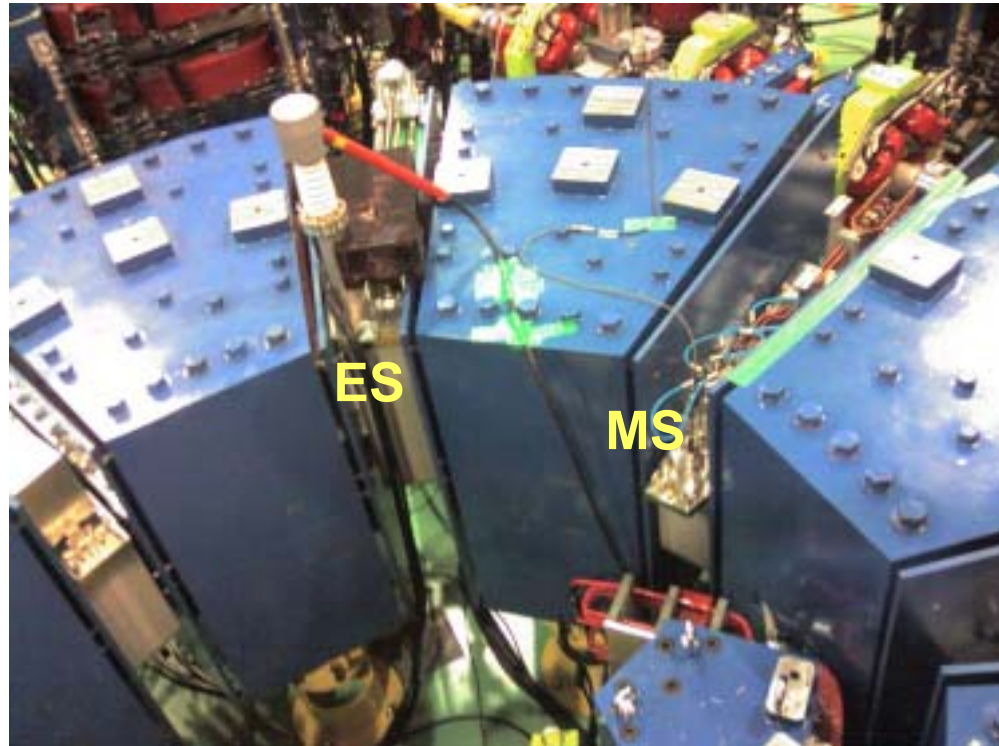


Booster magnets

- DFD*8
- $k=2.5$

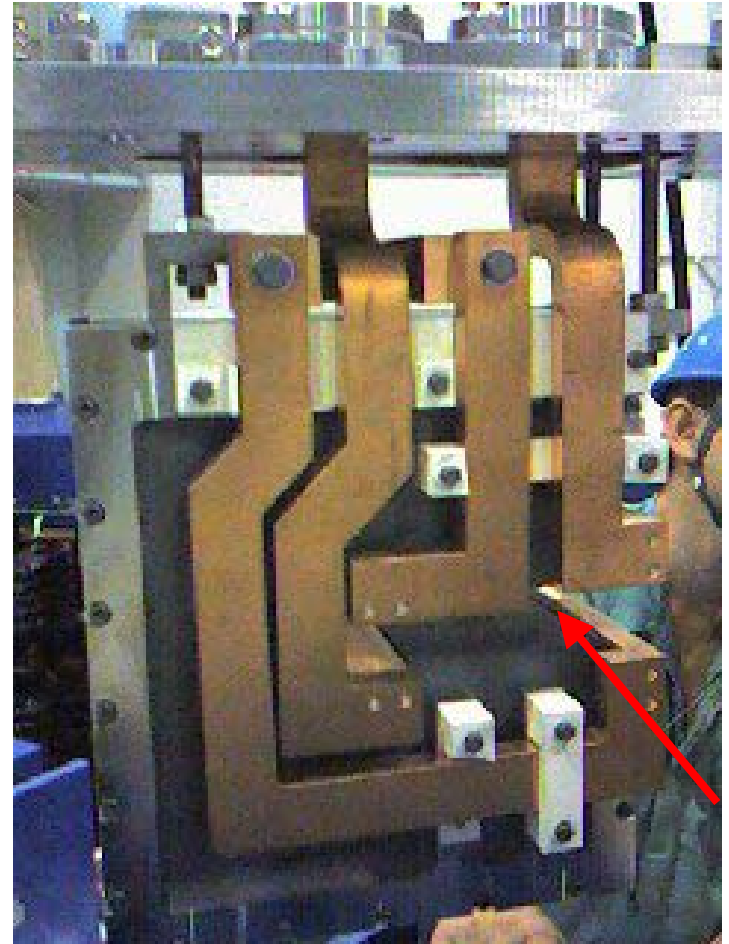


Booster Injection



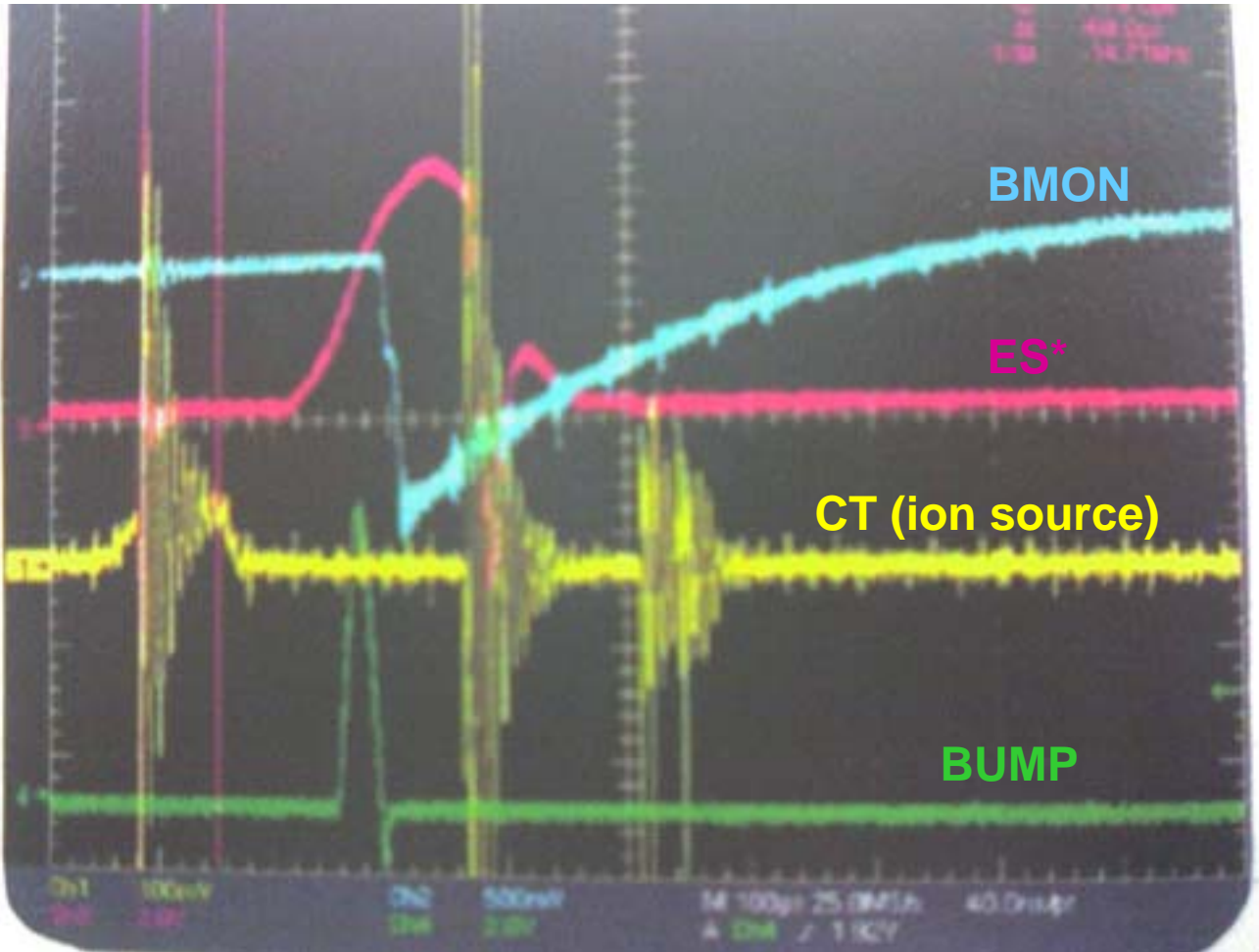


Magnetic septum



Bump magnet

100us/div



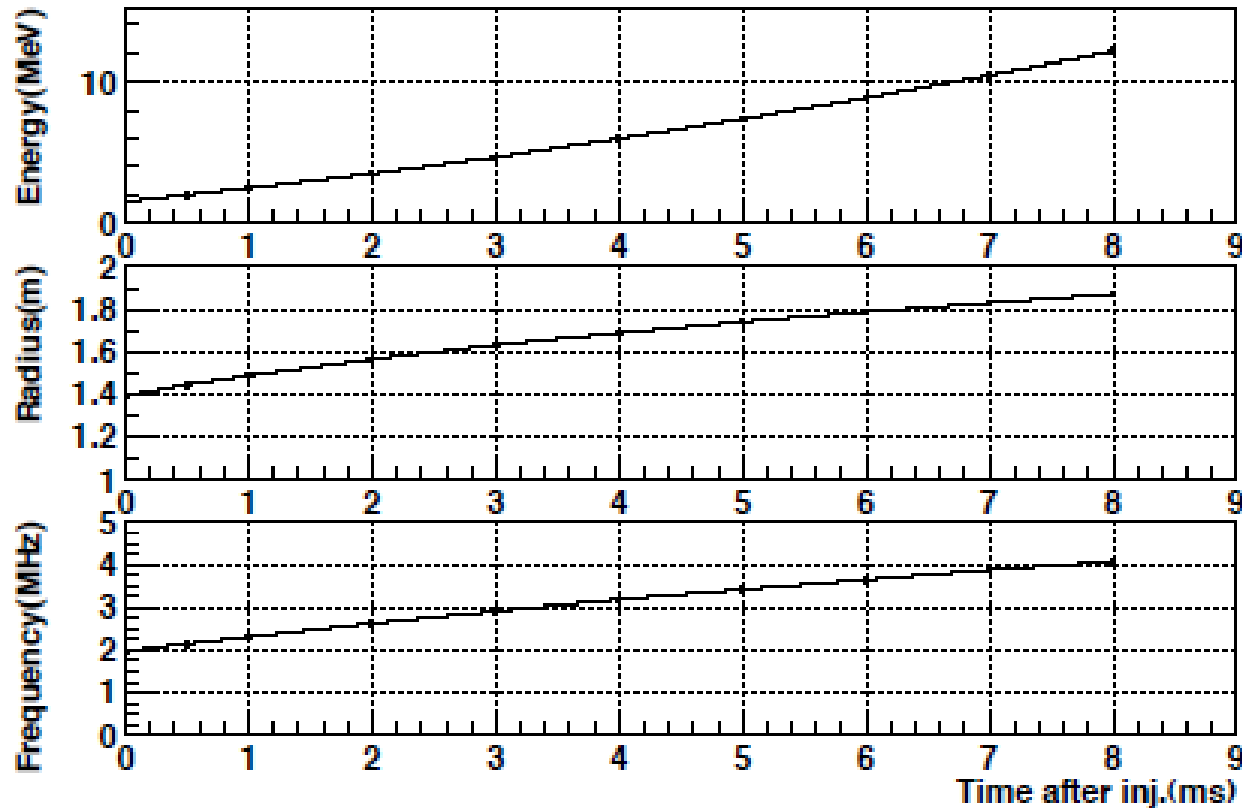
* Monitor delay 40us

RF cavity



Acceleration(2)

- $V_{rf}=1\text{kV}$
- $PHIs=30\text{deg}$

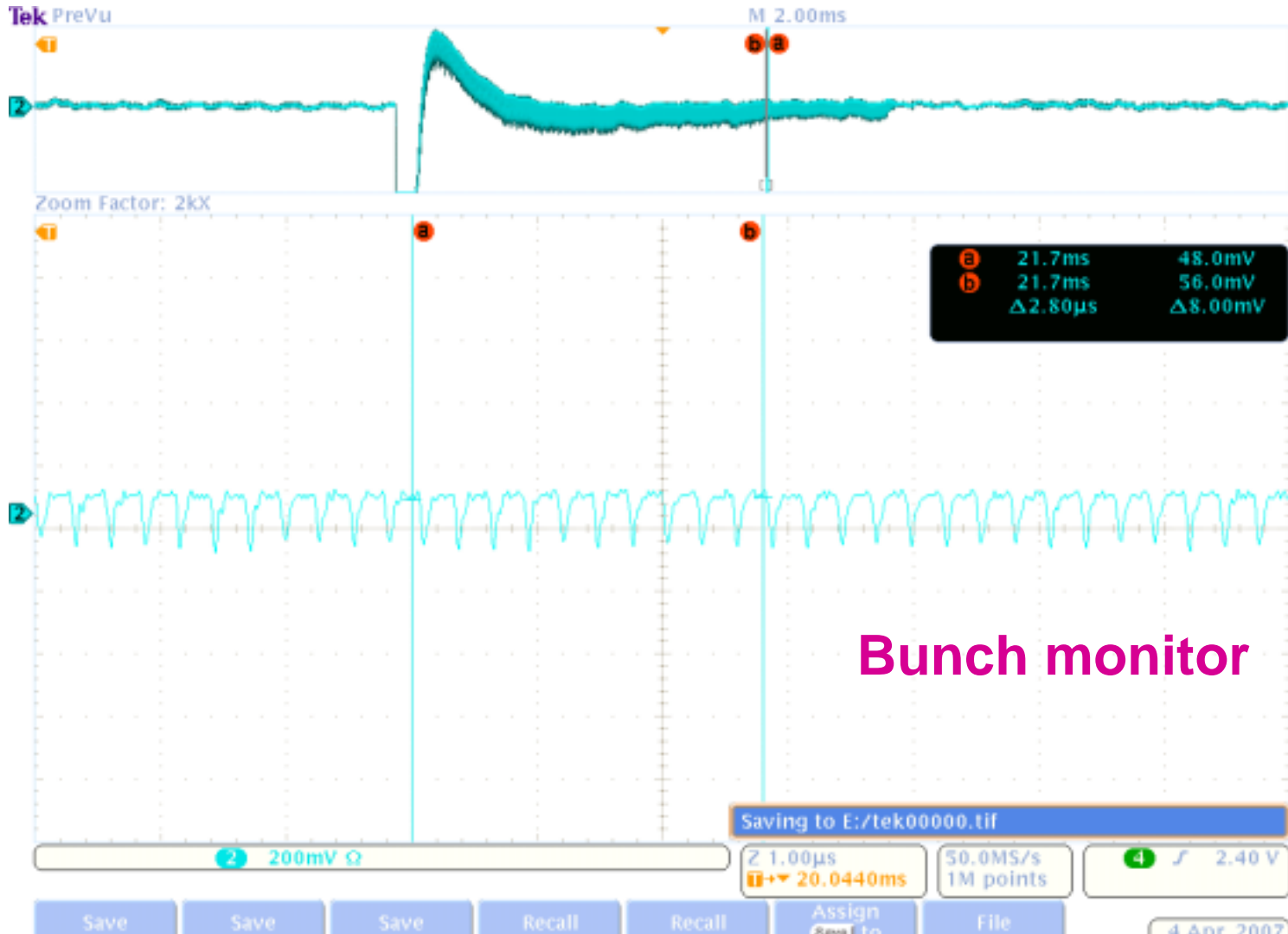


**E: 1.5 - 11.5 MeV
(8msec)**

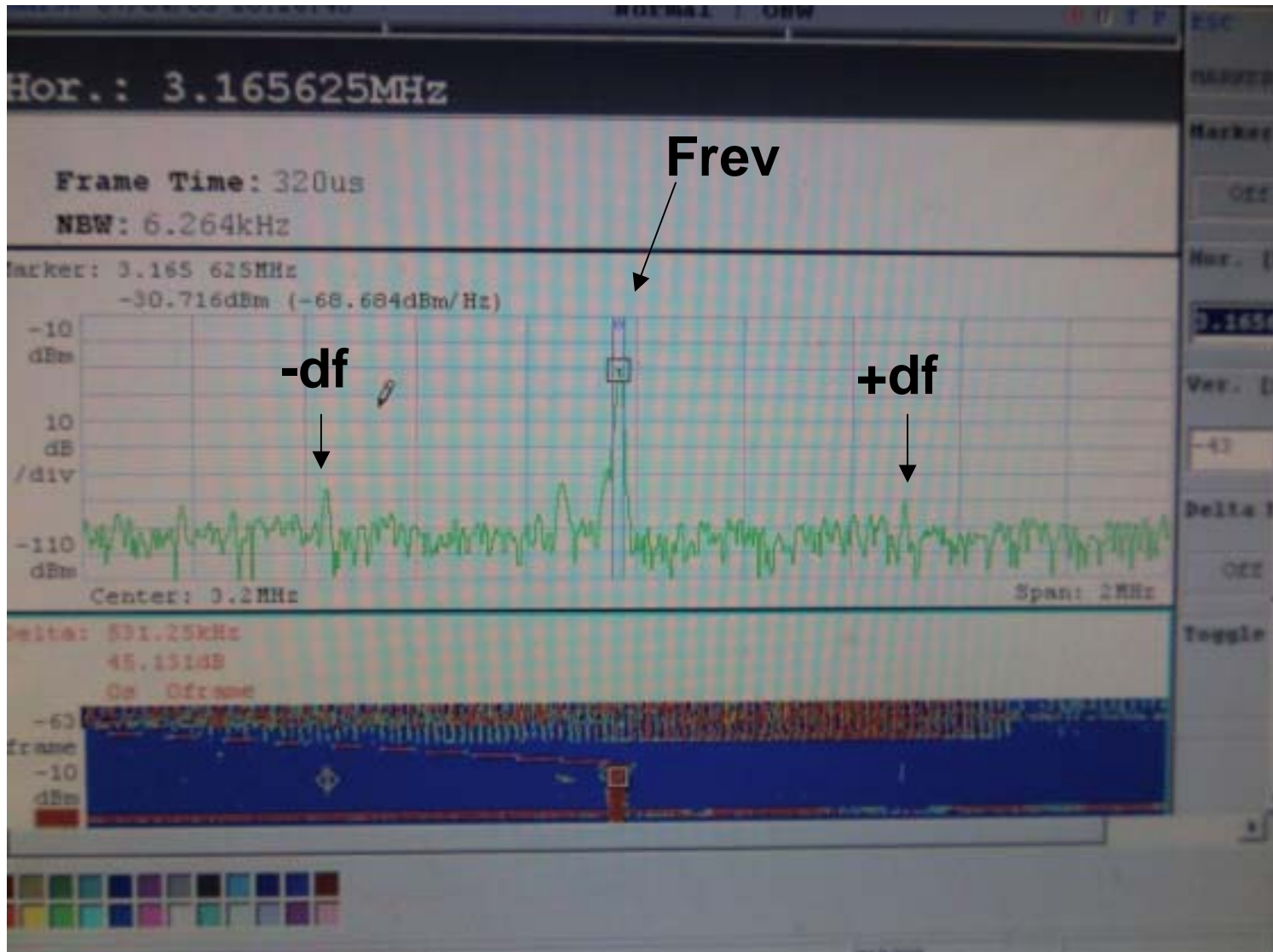
R: 1.4 - 1.9 m

F: 2.0 - 4.0 MHz

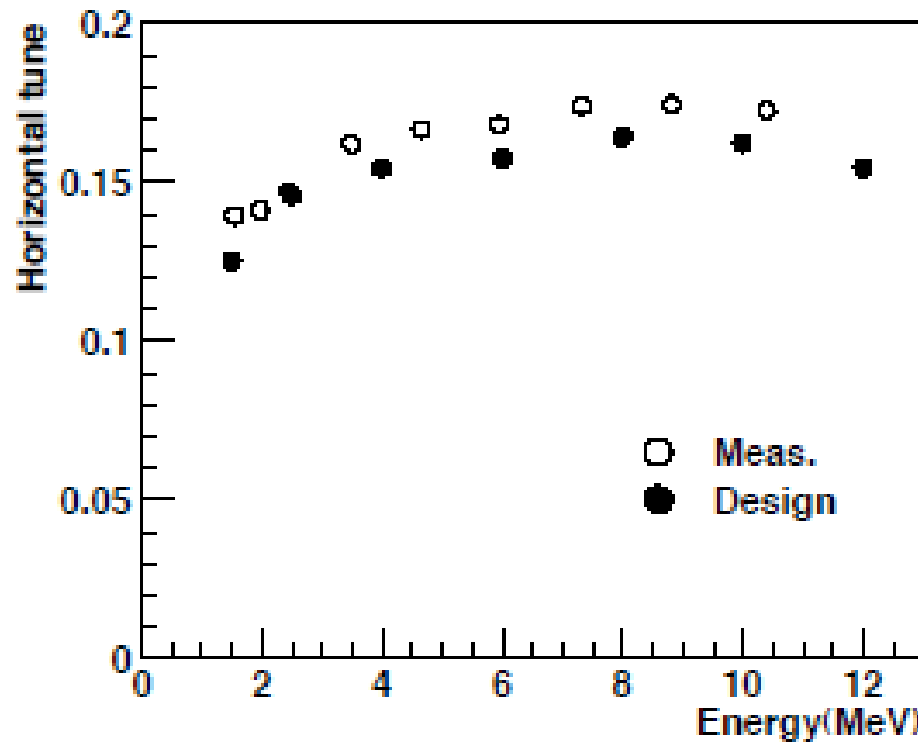
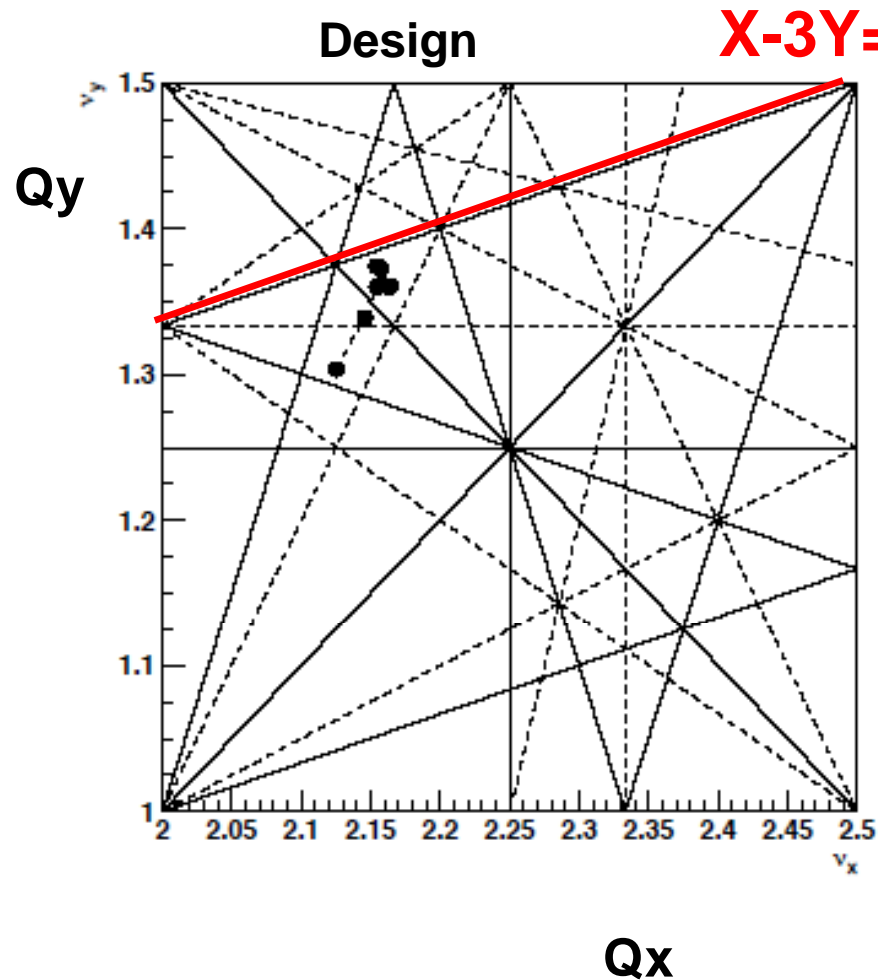
Acceleration(3)



Tune measurement



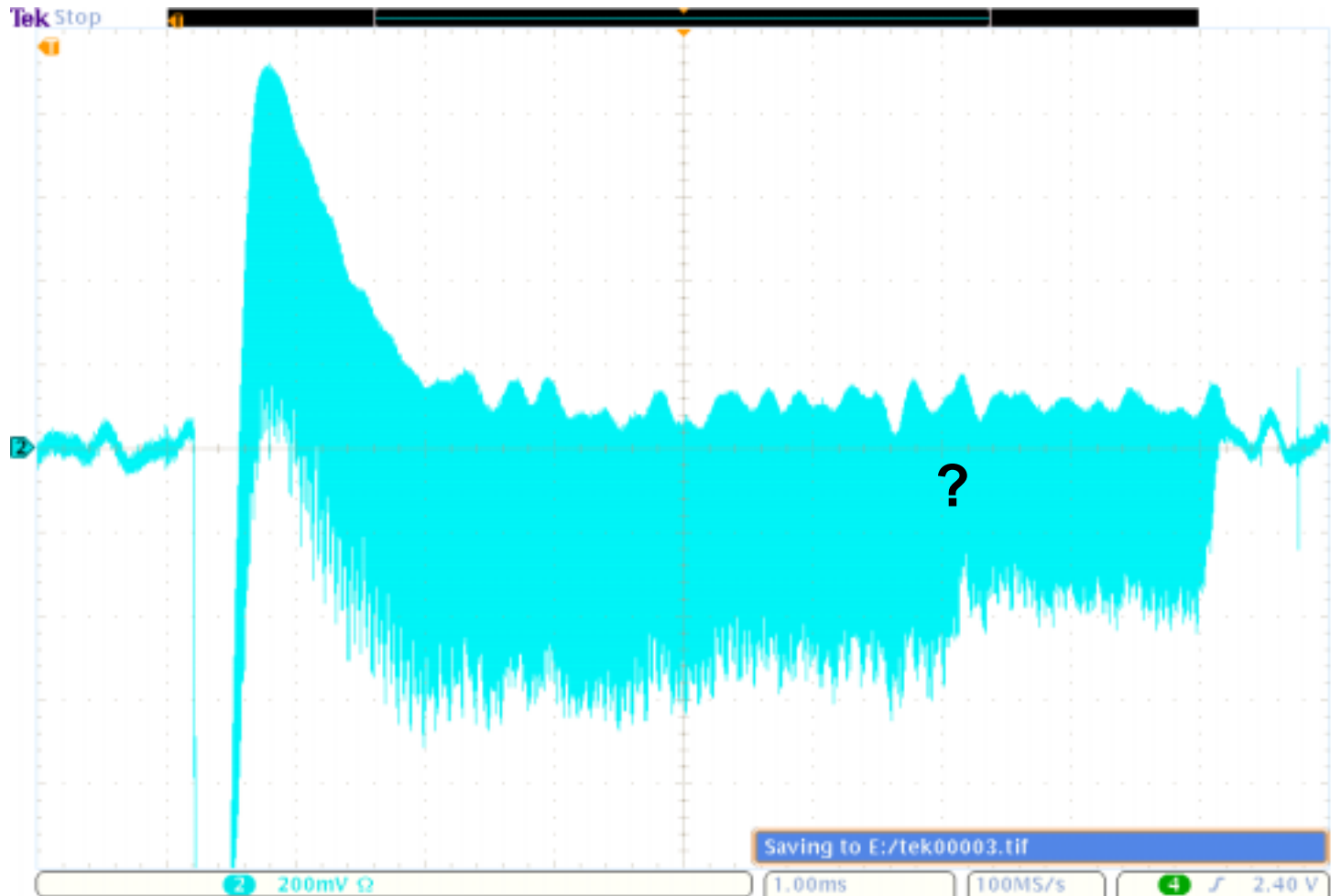
Tune measurement



Measuring vertical tune
needs perturbator !

? Resonant beam loss ?

When D-magnetic field was increased by 10%



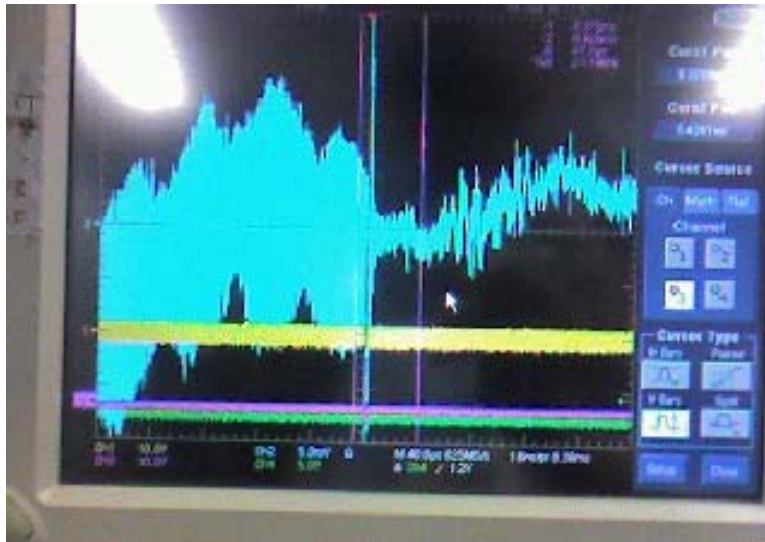
Extraction

Magnetic septum and Kicker

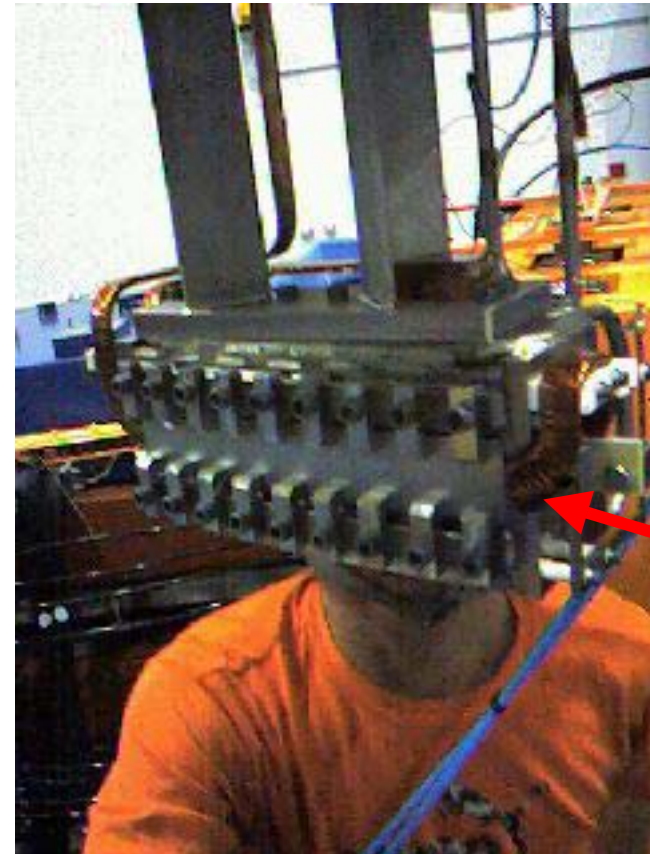
Typical efficiency;

circulating ... 0.8nA

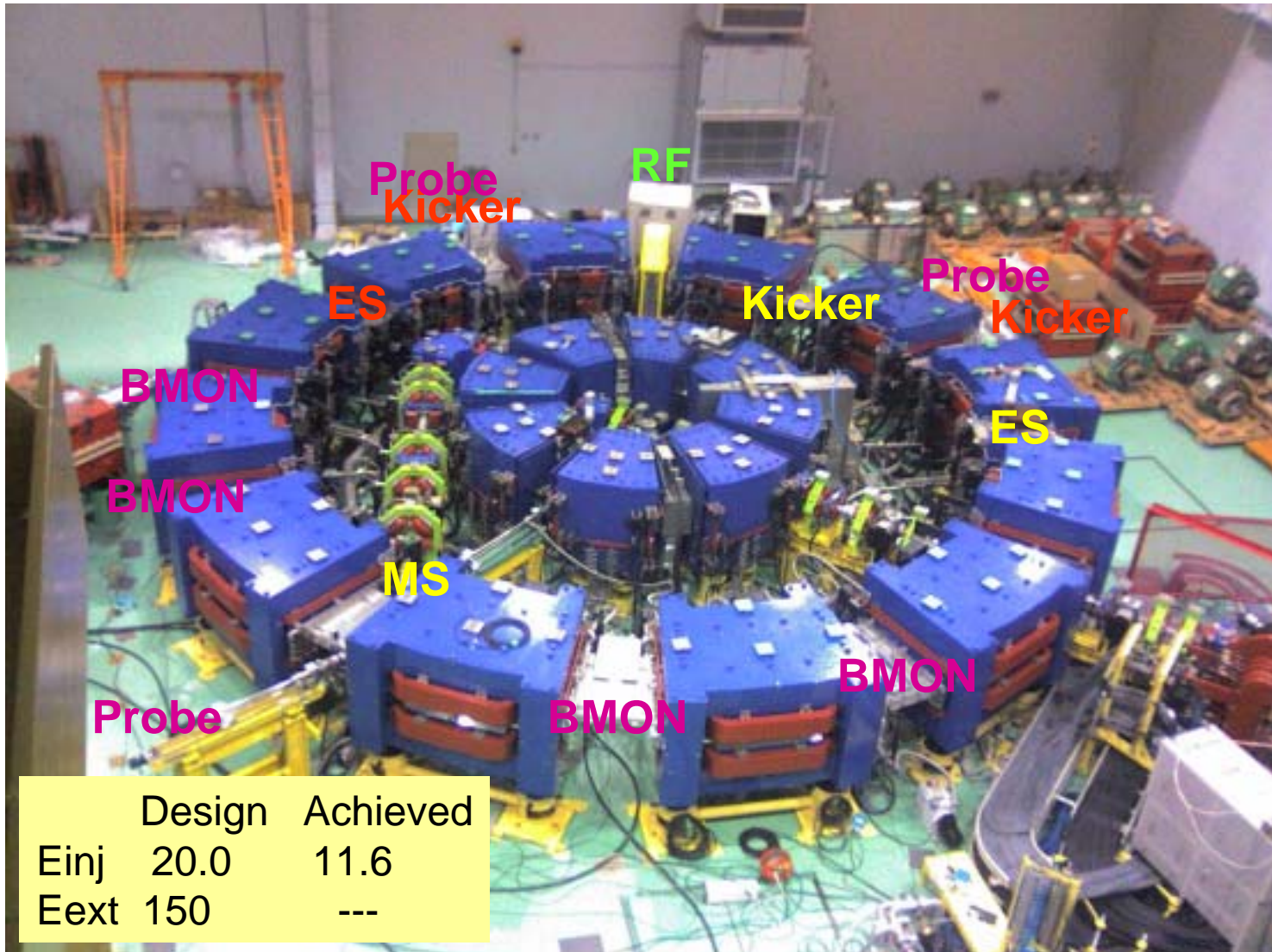
extracted ... 0.7nA



MS



Main Ring



	Design	Achieved
Einj	20.0	11.6
Eext	150	---

SUMMARY

- Booster is very stable under operation with 1.5MeV => 11.6MeV, 59Hz

Extracted beam intensity is ~0.7nA

- Main ring is under commissioning...