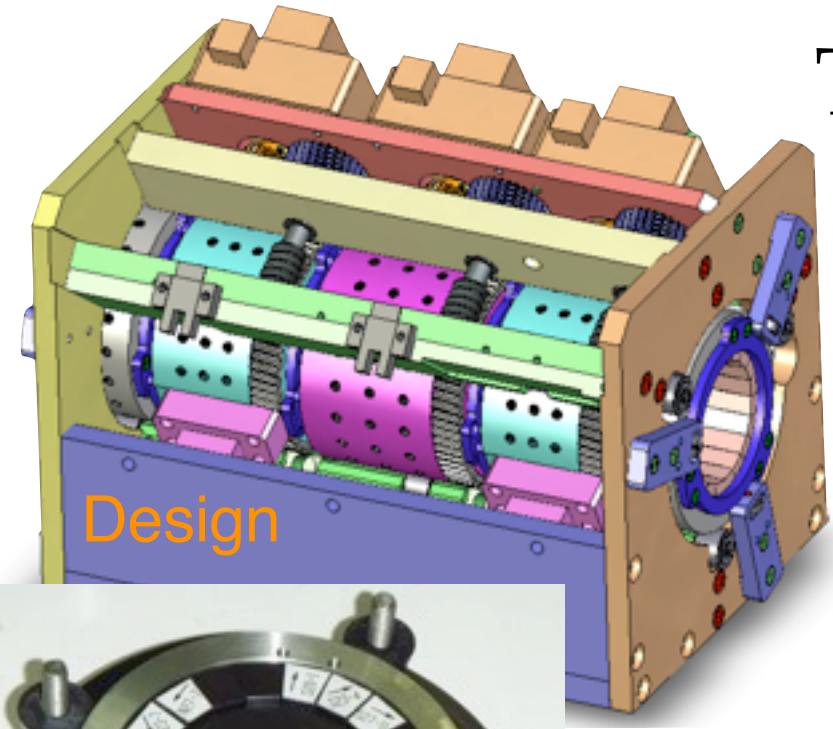
Preparation Status of the Permanent Magnet Quadrupole Test

Kyoto University
Y. Iwashita

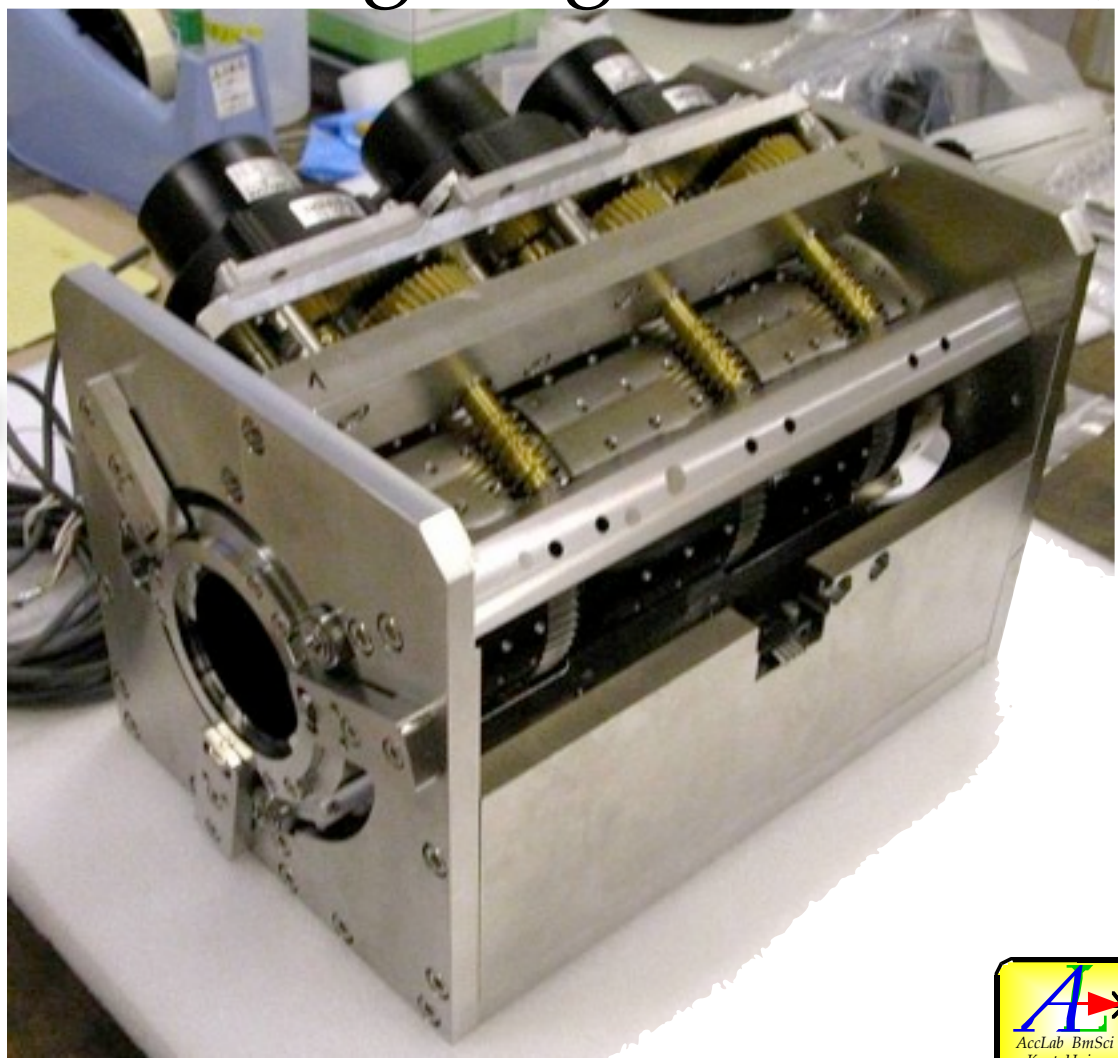
Gluckstern's 5-ring PMQ Singlet(2):

"Continuously Adjustable" PMQ fabricated



Disc(20mm)

The 5-ring singlet PM-FFQ



Initial Test Position at ATF2 Beam Line

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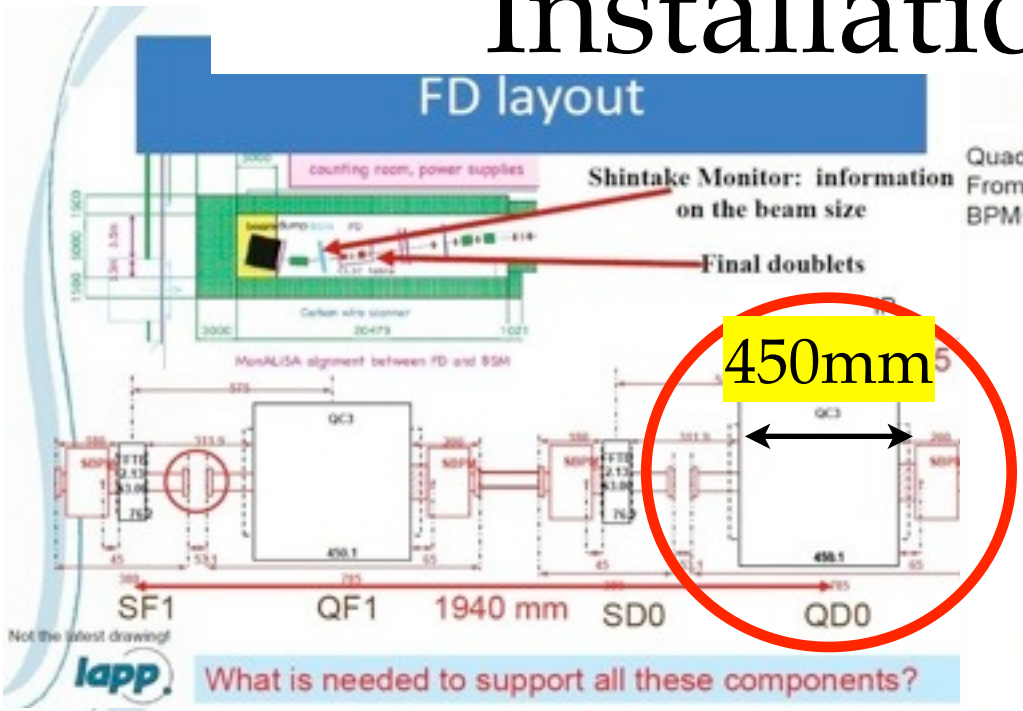
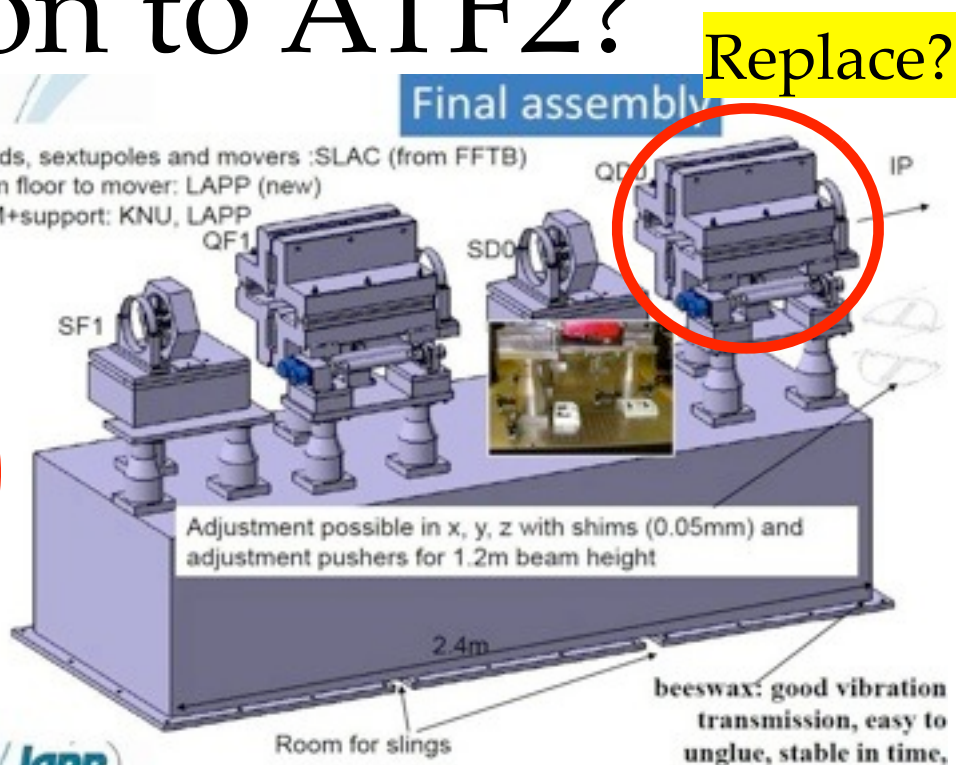
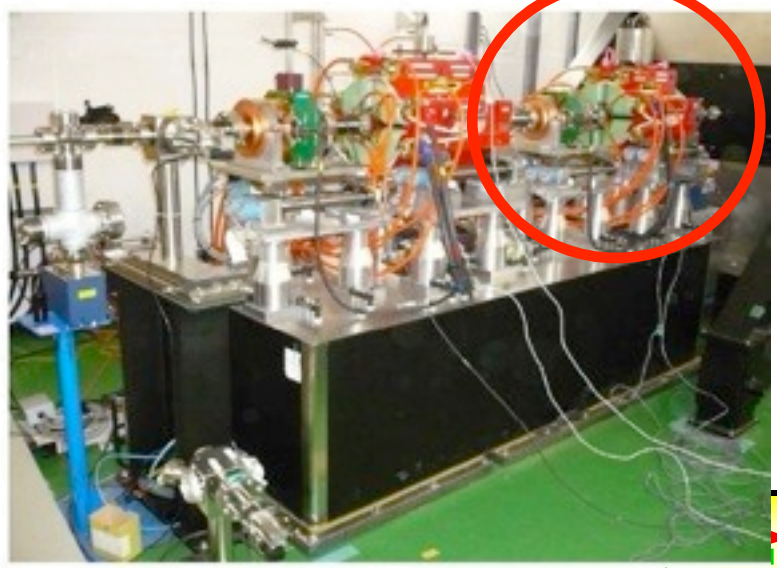
Installation to ATF2?



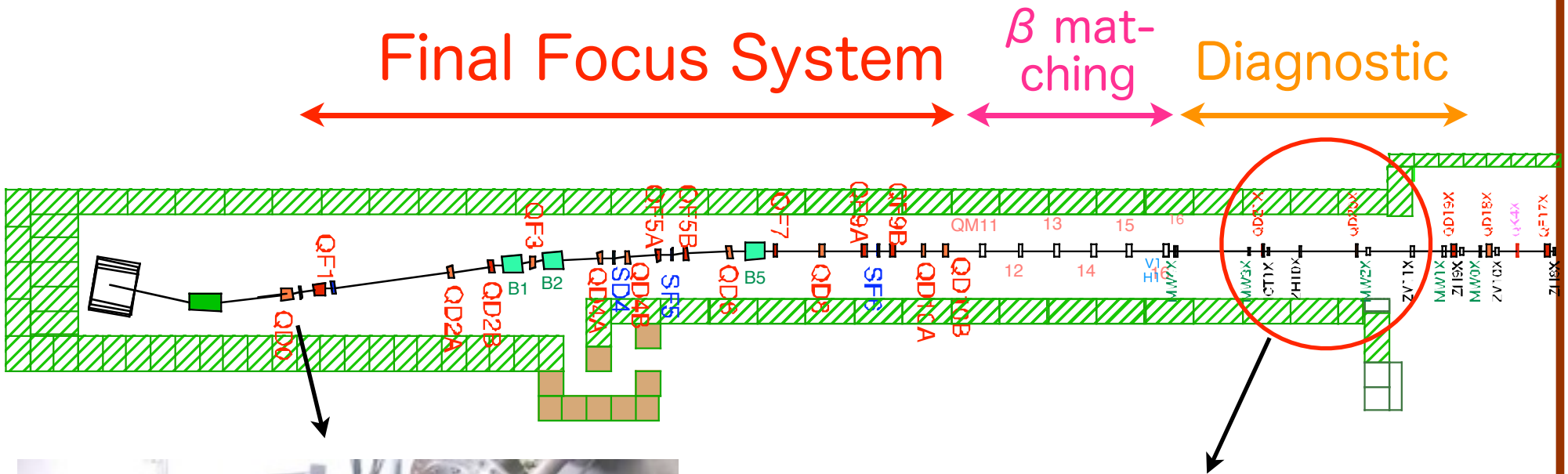


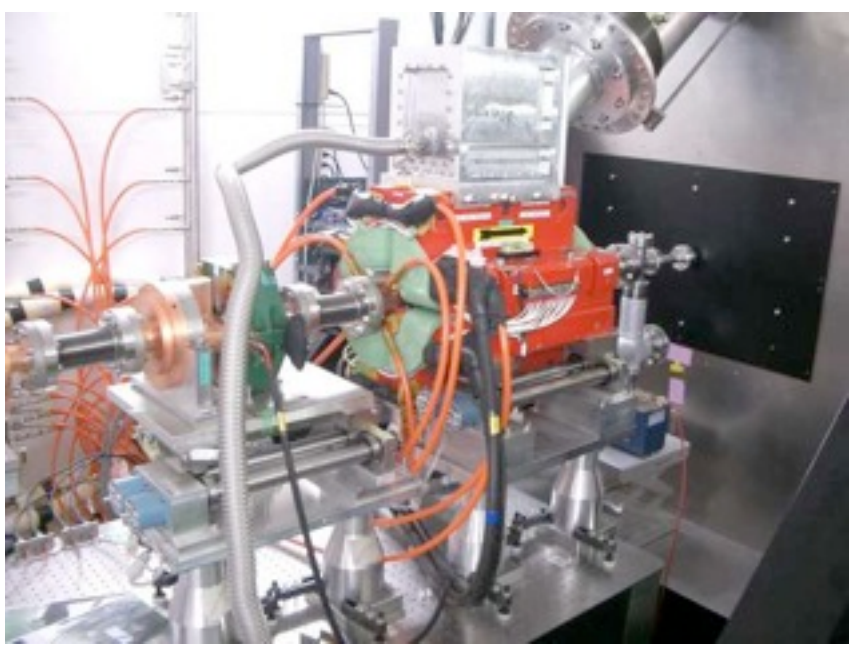
new BPM Needed!

FD mid-november 2008

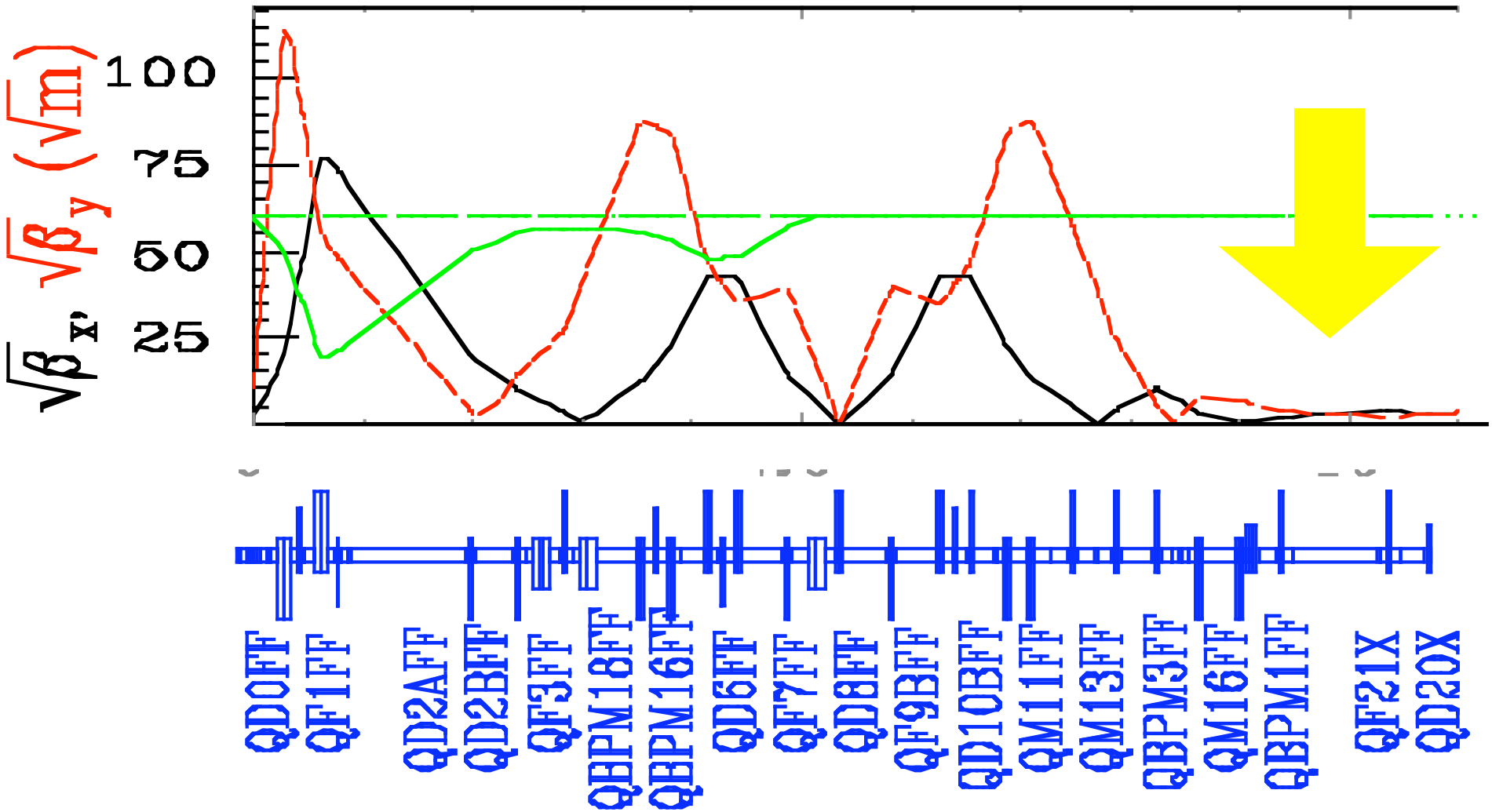


Candidates for PMQ Location





Optics


$\sqrt{\beta_x}, \sqrt{\beta_y}\ (\sqrt{m})$
100
75
50
25
QD0FF
QF1FF
QD2AFF
QD2BFF
QF3FF
QBPM18FF
QBPM16FF
QD6FF
QF7FF
QD8FF
QF9BFF
QD10BFF
QM11FF
QM13FF
QBPM3FF
QM16FF
QBPM1FF
QF21X
QD20X

What can be Tested?

- What can be monitored?
  — Profile (size) by wire scanner
  — Position by BPM
  — (Size by Shintake Monitor downstream)
- Evaluation:
  x-y coupling, high order, stability,
  reproducibility, etc.
- Practical experience:
  handling, installation, stability...

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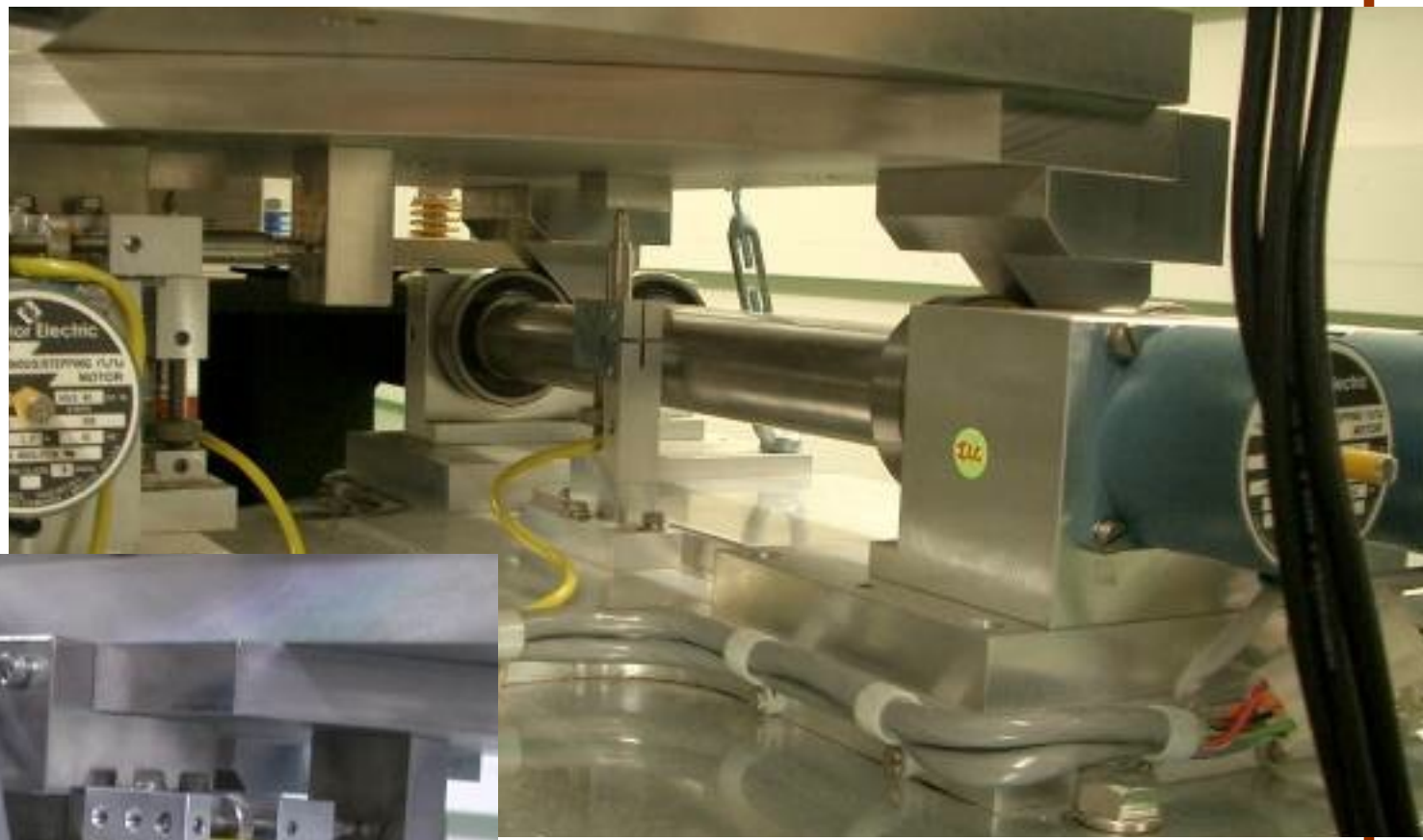
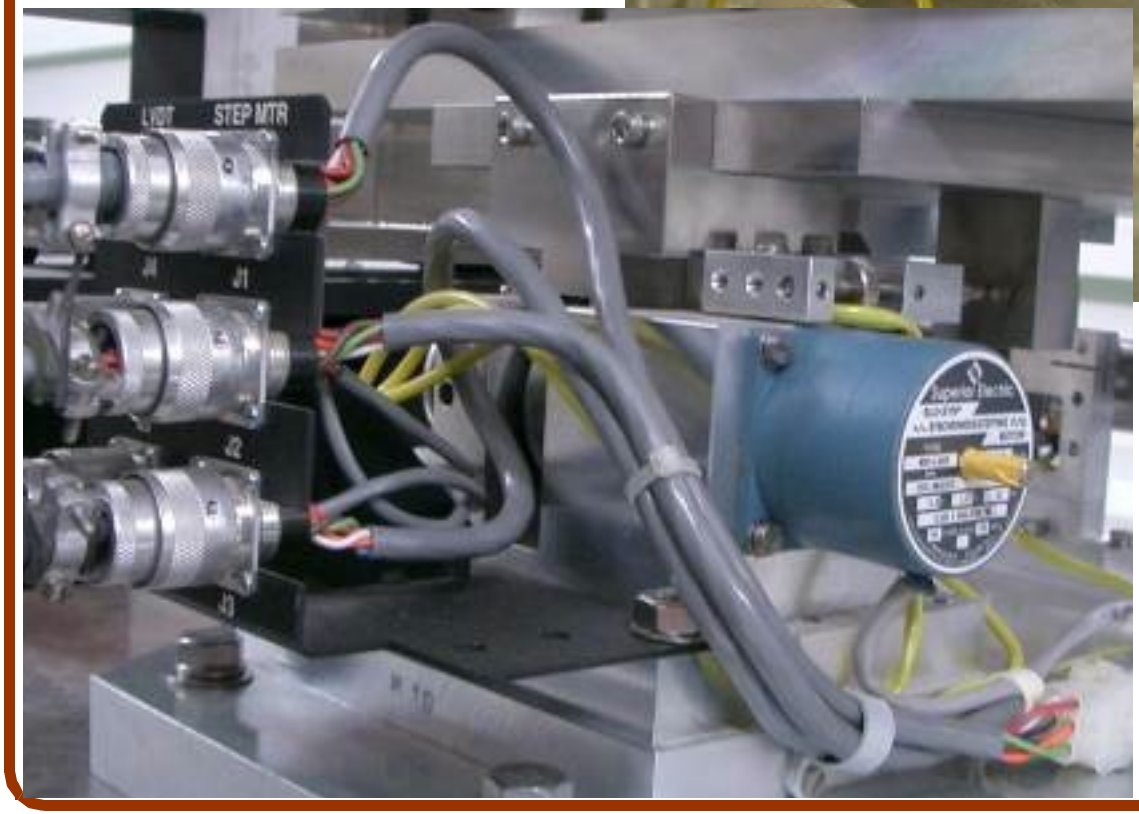
Mover





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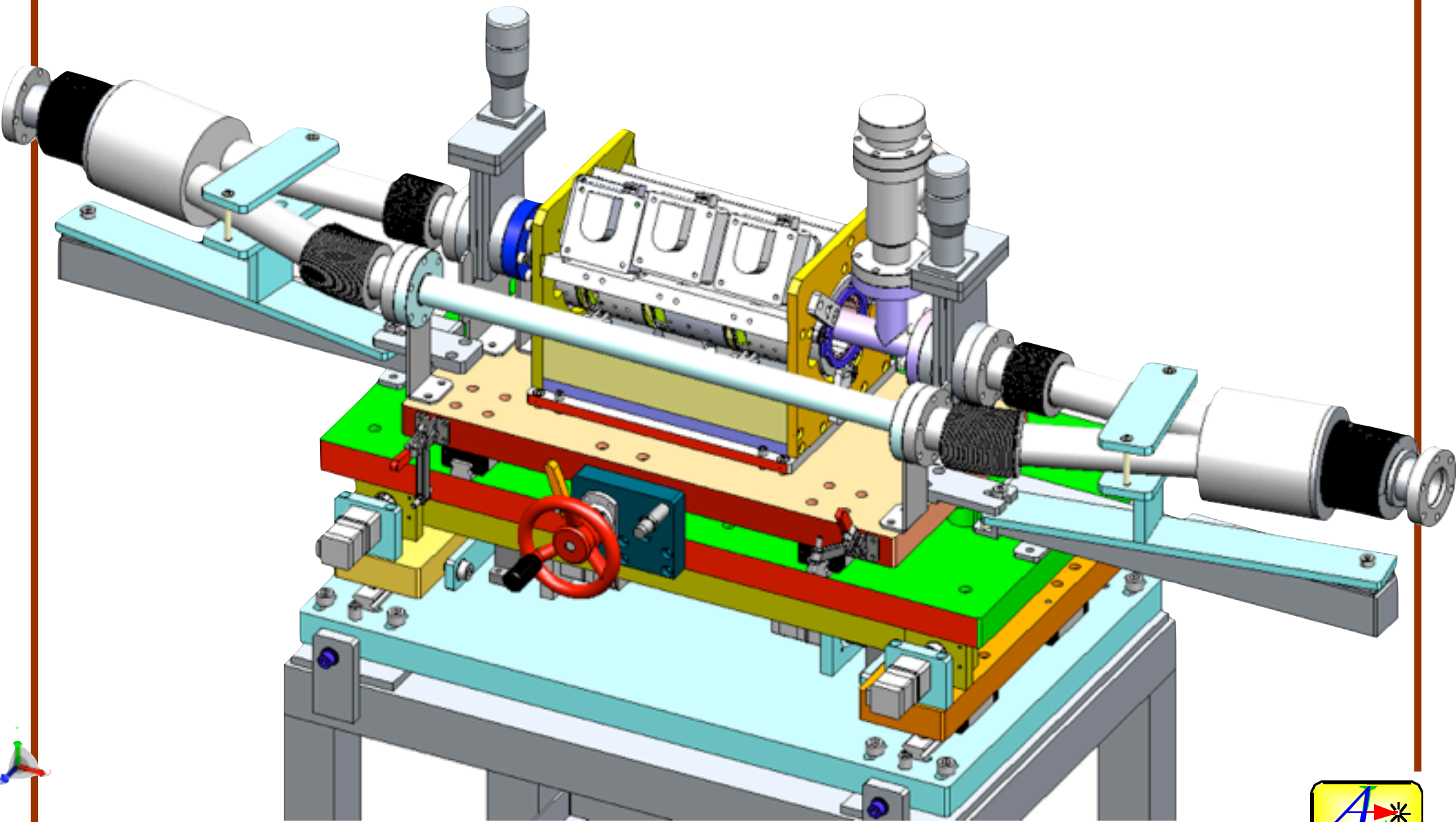
Mover with quick Dismounter



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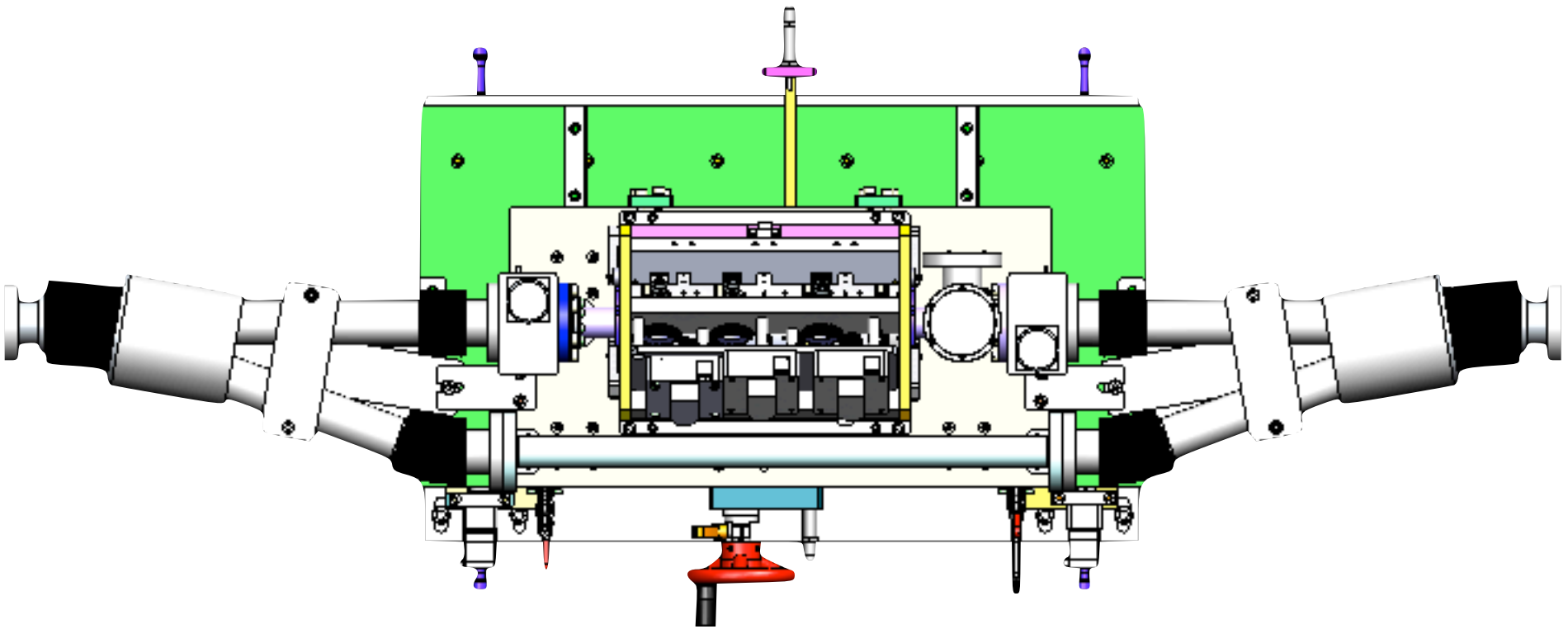
Top View



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Study Plan

- Because the test at QD0 position interferes with the current activity, different position was sought.
- We need experiences in using this new device.
- Practical experience can be taken through operation at the upstream (no interfere with the original QD0)

➡ Vacuum flange has to be fixed to the duct after the fabrication.

➡ Develop easy dismantle method.

➡ Vibration evaluation (<50nm?), etc.

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