

# Thoughts concerning the diagnostics

## **LEBT:**

Do we want a needle scanner/ tomographic beam reconstruction to inject into the RFQ? Does that contribute to the injection into the RFQ/ commissioning (no emittance scanner anymore!??)

## **MEBT:**

- How do we want to commission all the MEBT pieces? Can we allow a movable “diagnostics vessel” which moves with the beam dump along the installation ?

Would that be the right place for a RAL PD profile scanner?

- If so, what do we want to install? BPM, Toroid, .....?
- How do we commission the RFQ? With a magnet spectrometer or ....? If a momentum spectrometer, do we need a beam scraper? (I think, yes)
- @Simon, RHUL (?): BPM input, how many? what kind? schedule?

# Diagnostics/ MEBT links

We urgently must define certain parameters (base-line, technically as well beam dynamics) otherwise I don't see much a point to talk about diagnostics.....

By now, everyone should accept that we do not match the beam into a not existing DTL but to the beam dump & diagnostics. To understand the beam transport some variation needs to be possible (DIPAC 2009, 'diagnostics beam line')

→ Dublet – buncher – Triplet ??; even skewed QUAD is interesting for a 'diagnostics beam line' !

I know everything is possible, also rotating the beam BUT we should acknowledge the after RFQ and chopper x and y are different. The PD-EMI performs only vertical best, all other planes are plagued with less good resolution.

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