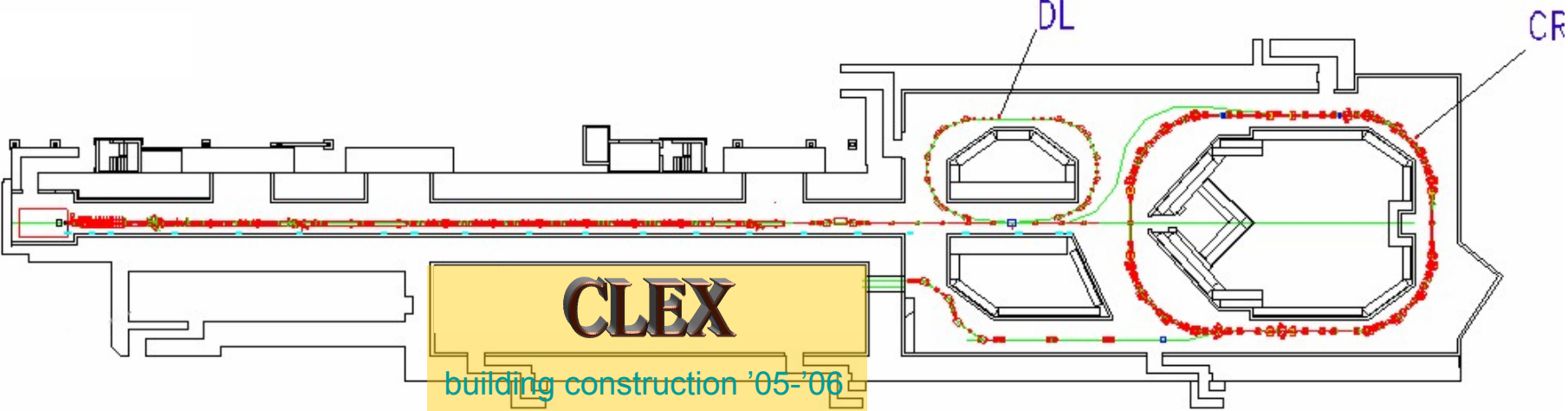


CLEX layout and general remarks

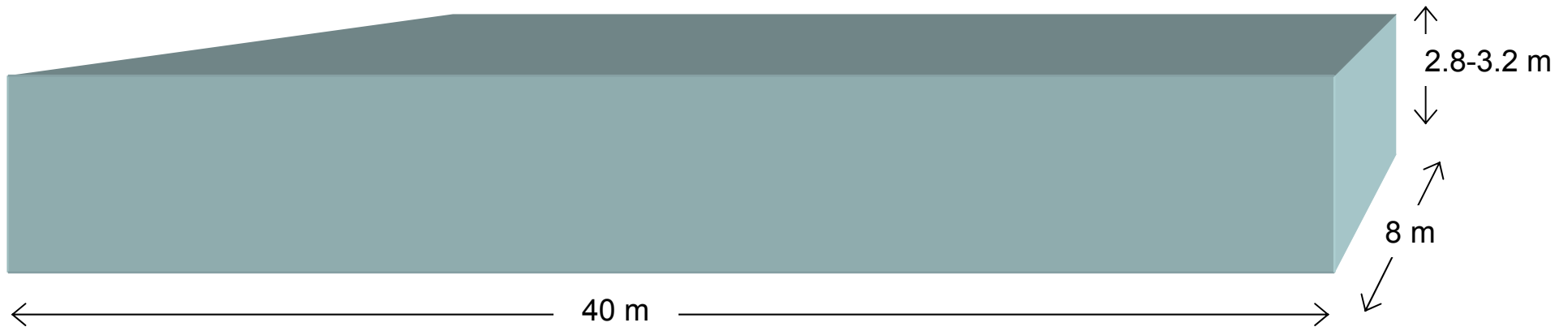
CLEX, where is it ?



CLEX, what do we want to put in it ?

- Probe beam injector
- Two beam test stand
- Test beam line to demonstrate drive beam decelerator feasibility
- Instrumentation test beam line ?

CLEX, what space will be available ?

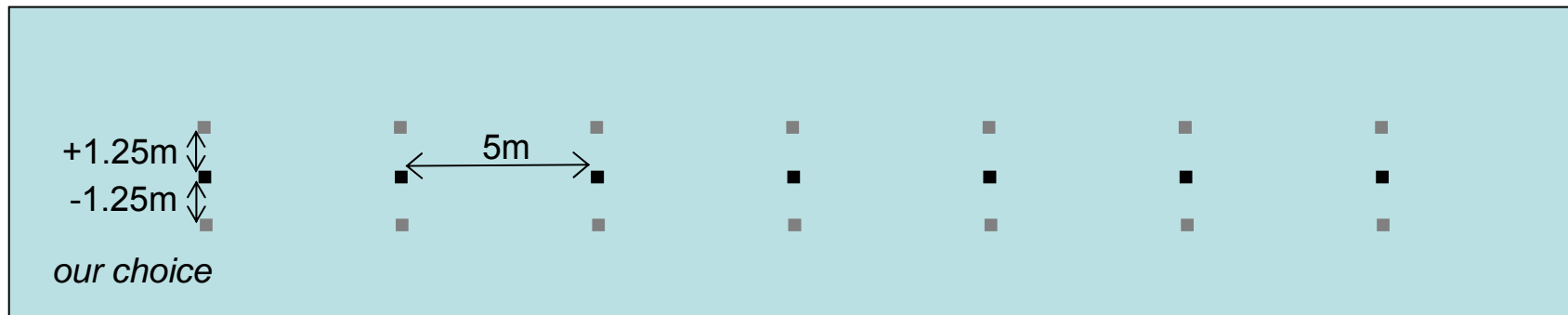


Construction supposed to start summer 2005, we have to make our choices soon.

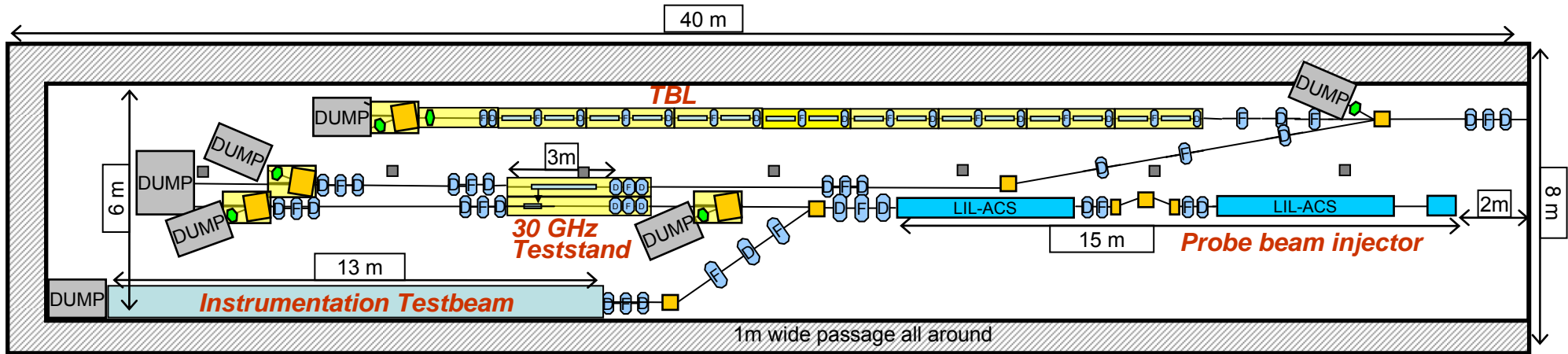
Main open questions

1. Second floor for power supplies, modulators, controls racks, instrumentation racks, probe beam laser
...or another building on neighbouring parking
2. Where to put the pillars ?

location of pillars to support the roof



Very tentative layout for CLEX floor space



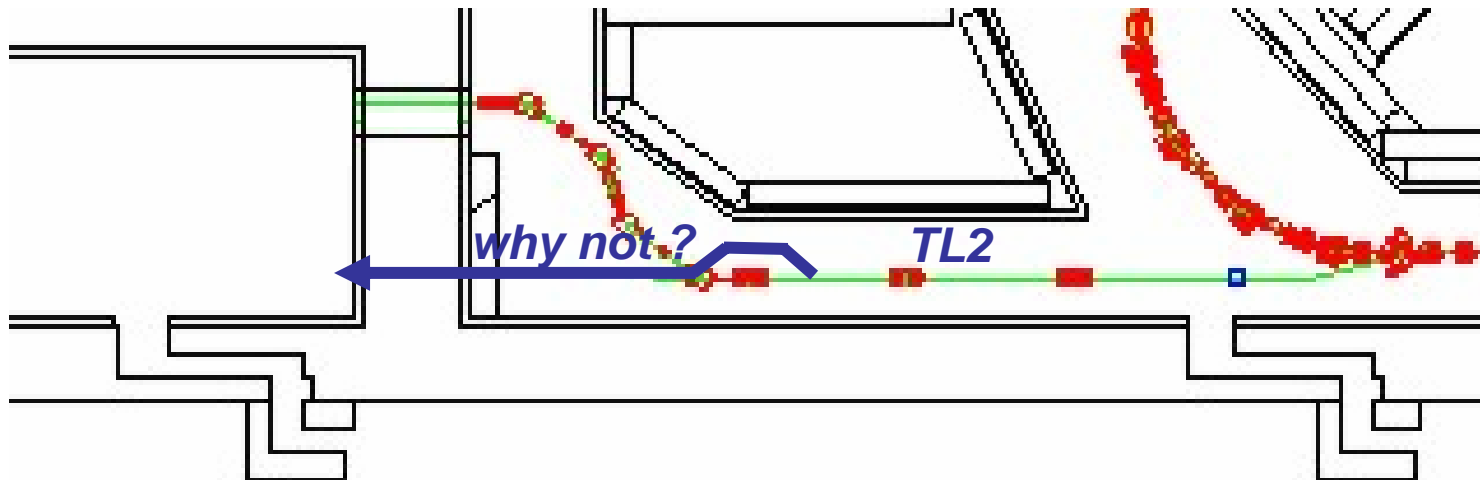
Beam line layout in CLEX is intimately linked with layout and functionality of TL2

TL2 functions

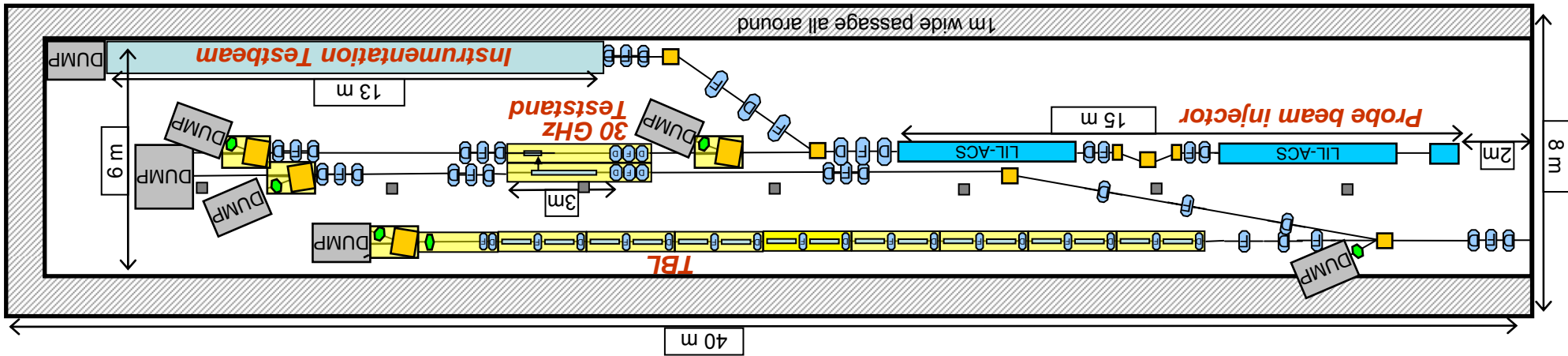
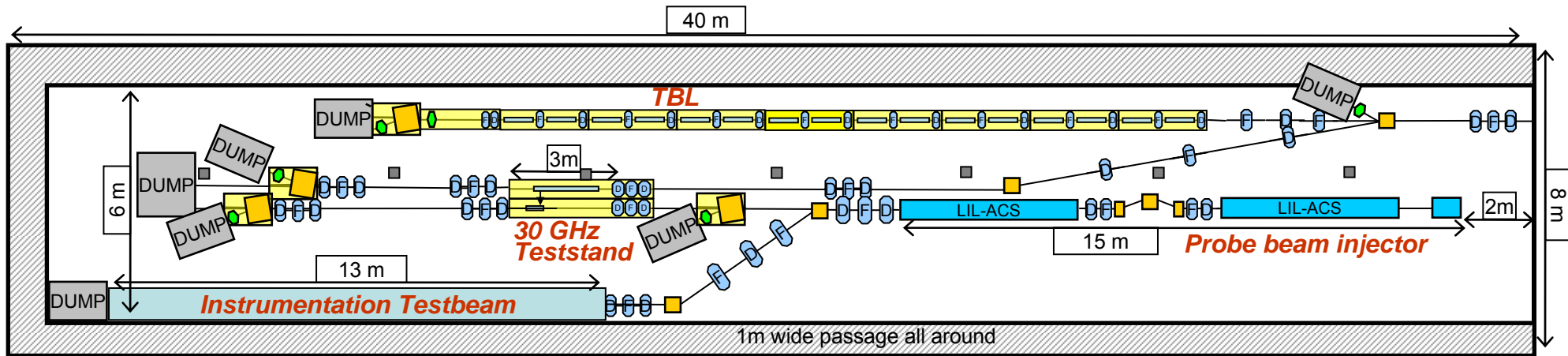
- Transport of drive beam from CR to CLEX with minimal emittance degradation
- Bunch compression
- Possibility to dump the beam before CLEX
- Instrumentation for full beam characterisation (i.e. emittance, energy time structure) ?
... or has this to be done in CLEX ?

The entry point of TL2 into CLEX and the shape of TL2 was long time ago determined by the idea to bring the drive beam into CTF2 building, reusing the CTF2 30 GHz modules and probe beam in the old space.

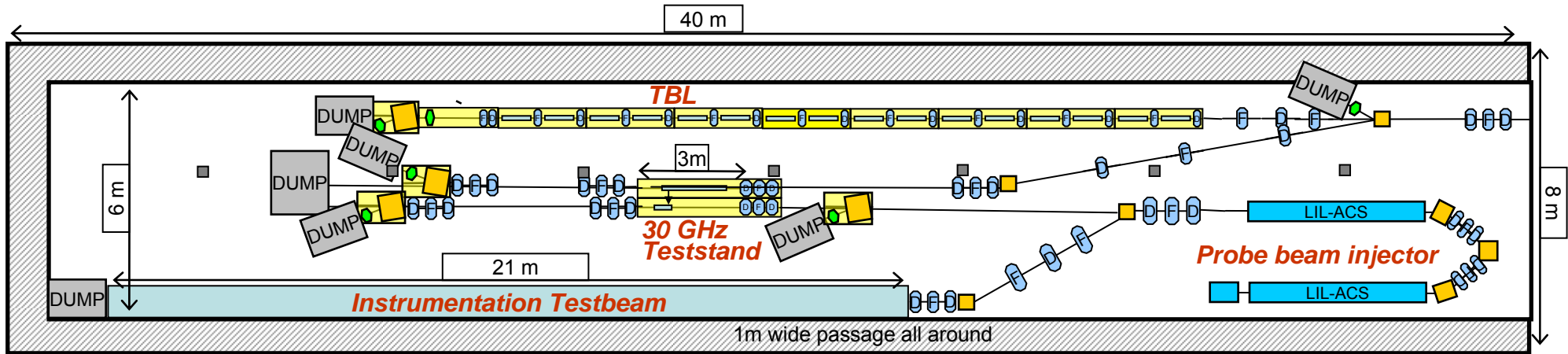
These constraints are obsolete now !



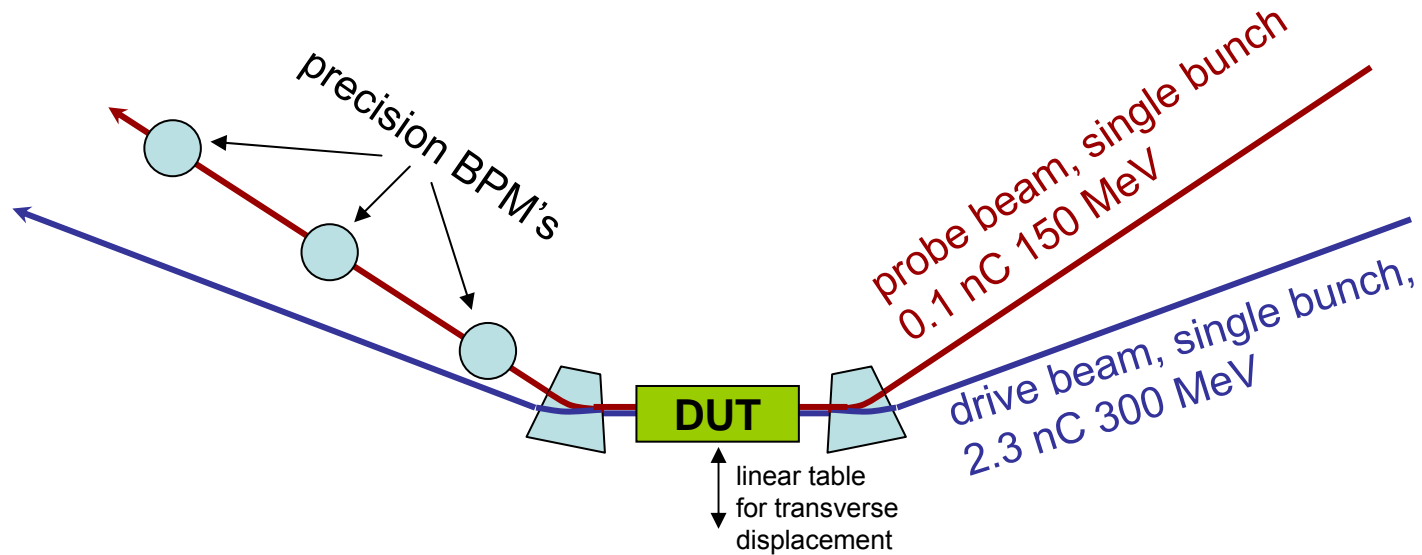
Adapting the CLEX layout to such a TL2 configuration is straightforward !



Space saver variant for probe beam injector



How about a wake field measurement facility à la ASSET in CLEX ?



With BPM's spaced by 4 m, $10 \mu\text{m}$ BPM resolution and 1 mm space to move the DUT
transverse wakepotentials of $\geq 10\mu\text{m}/4\text{m} \cdot 150\text{MeV}/2.3\text{nC}/1\text{mm} =$

0.2 V/pC/mm could be measured !

if desired this need a different layout of the beam lines to allow drive and probe beam to merge at wakefield facility and two-beam teststand