Laboratoire d'Annecy-le-Vieux
de Physique des Particules

FD status
on September 24 2008

A.Jeremie, B.Bolzon, F.Peltier at KEK

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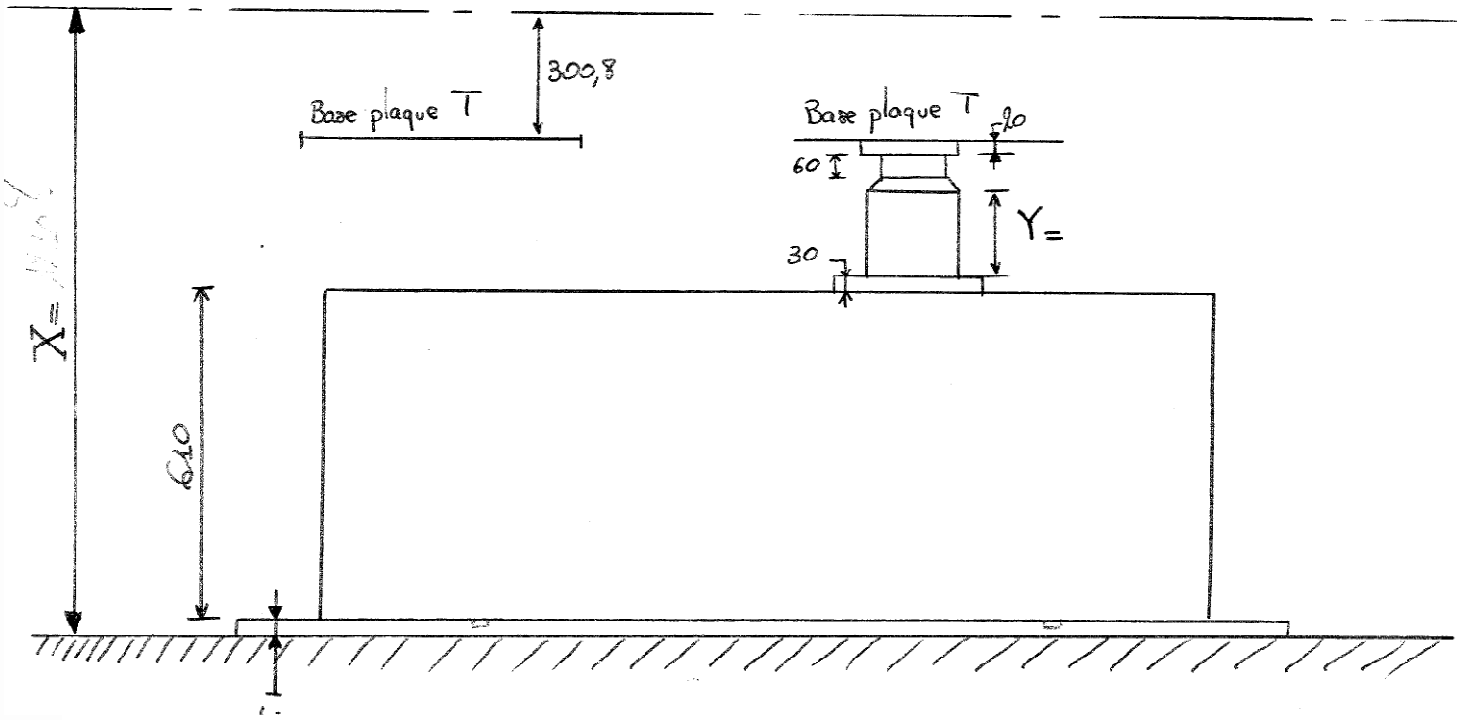
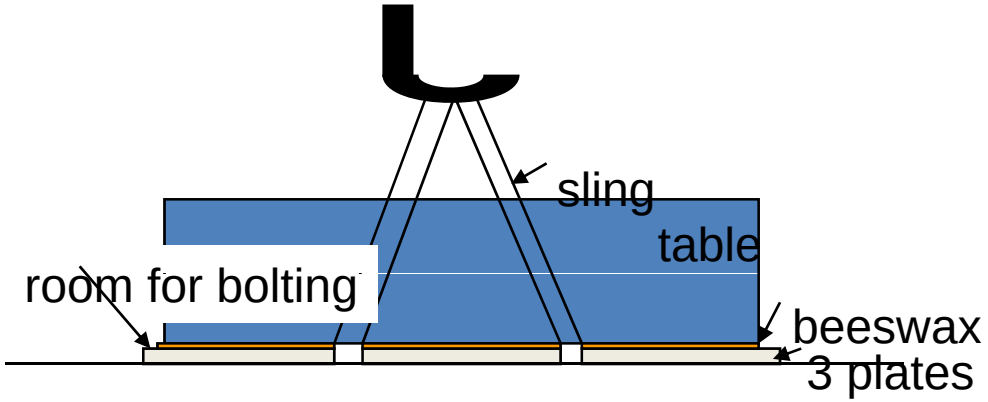
CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE

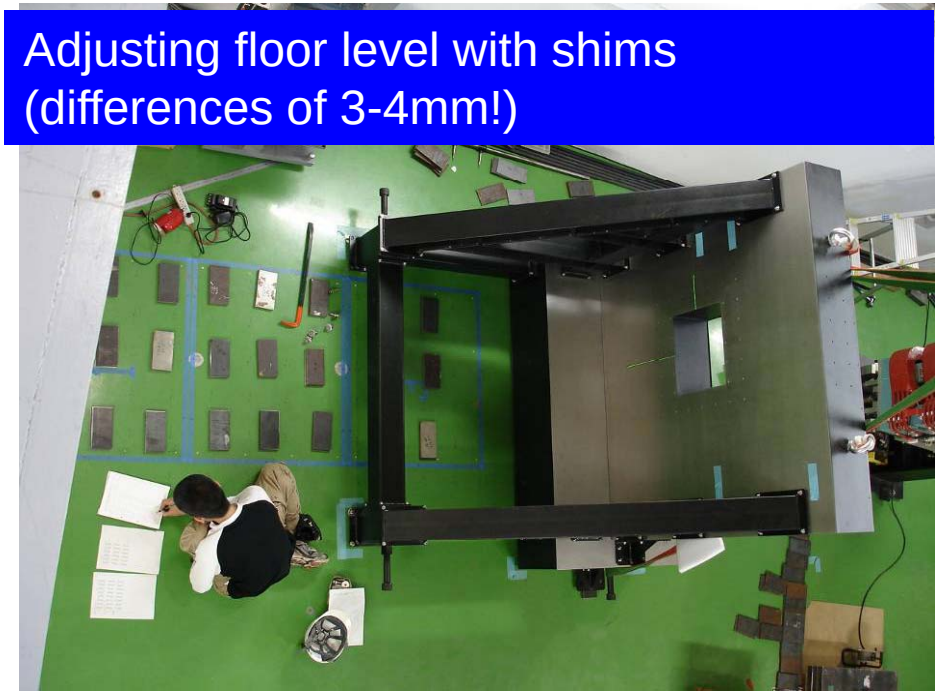
IN2P3
INSTITUT NATIONAL DE PHYSIQUE NUCLÉAIRE ET DE PHYSIQUE DES PARTICULES

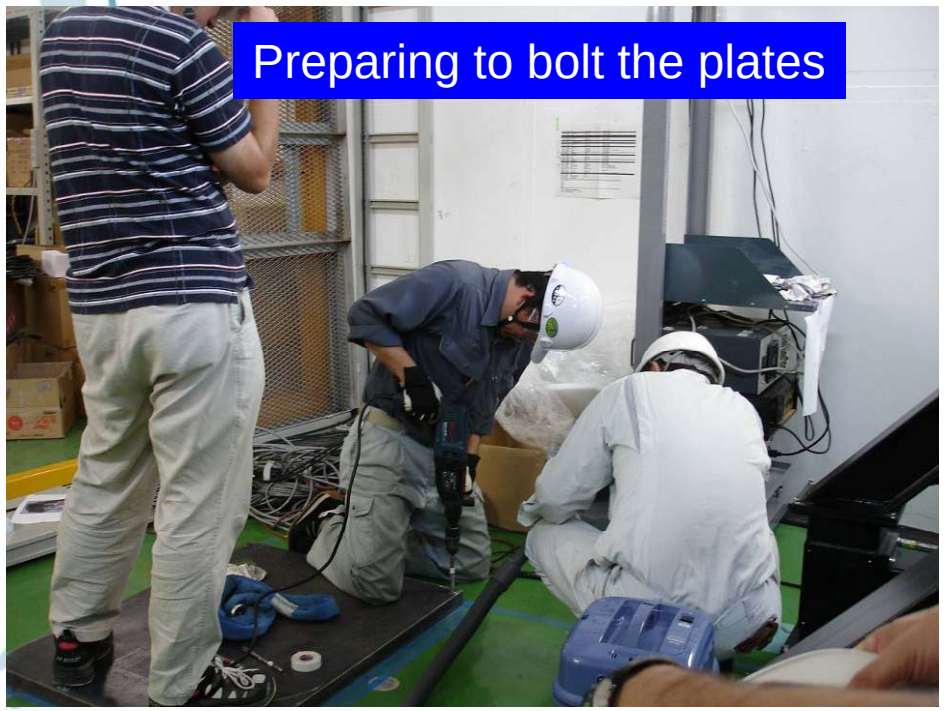
UNIVERSITE CHAMBERY ANNECY SAVOIE

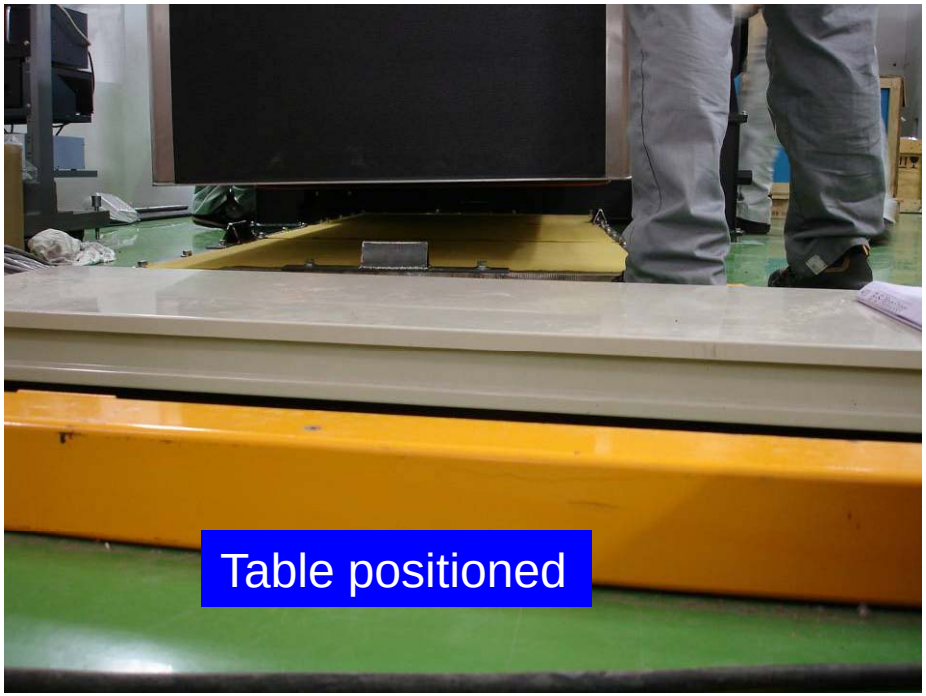

300,8
Base plaque T
Base plaque T
20
60
Y=
30
X=
610

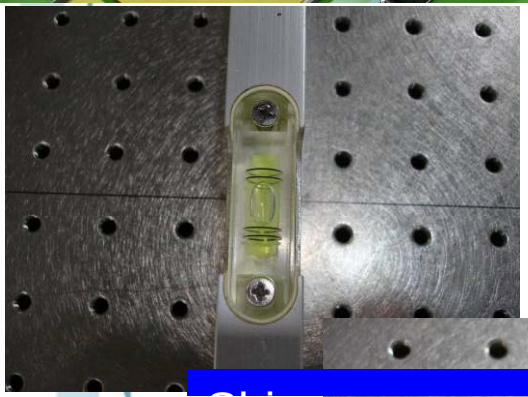

sling
table
room for bolting
beeswax
3 plates

Adjusting floor level with shims
(differences of 3-4mm!)



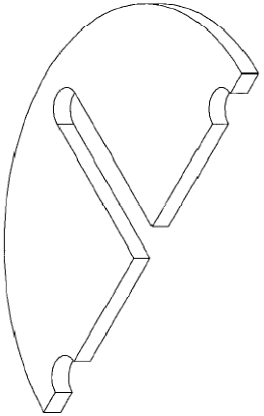






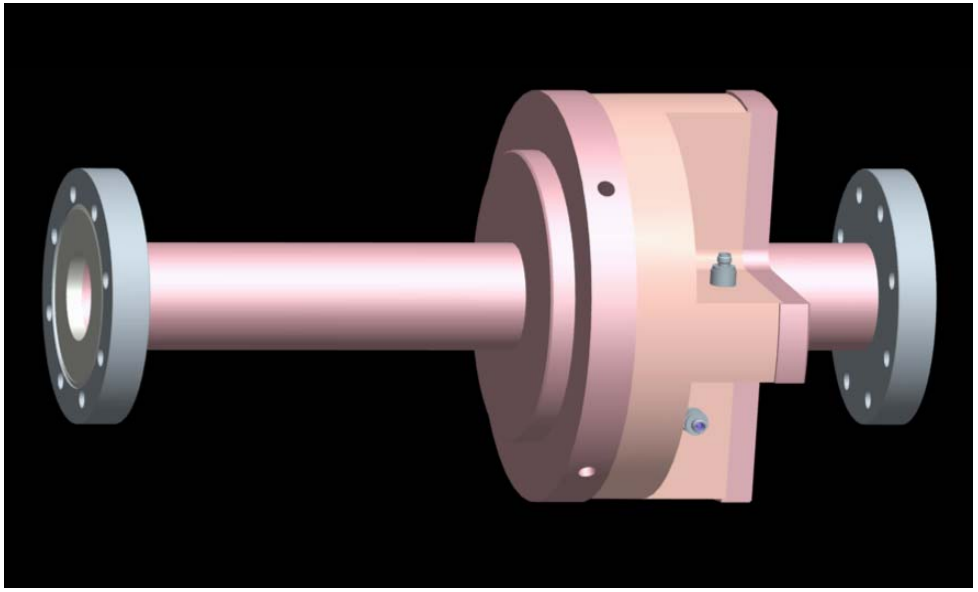
Shims ensure a levelled table

QD0 and QF1 adjusted in height with shims (smallest 0.05mm) with movers at “minimum” position (single cam flat on top and double cam with flats at 45°) plus 0.8mm

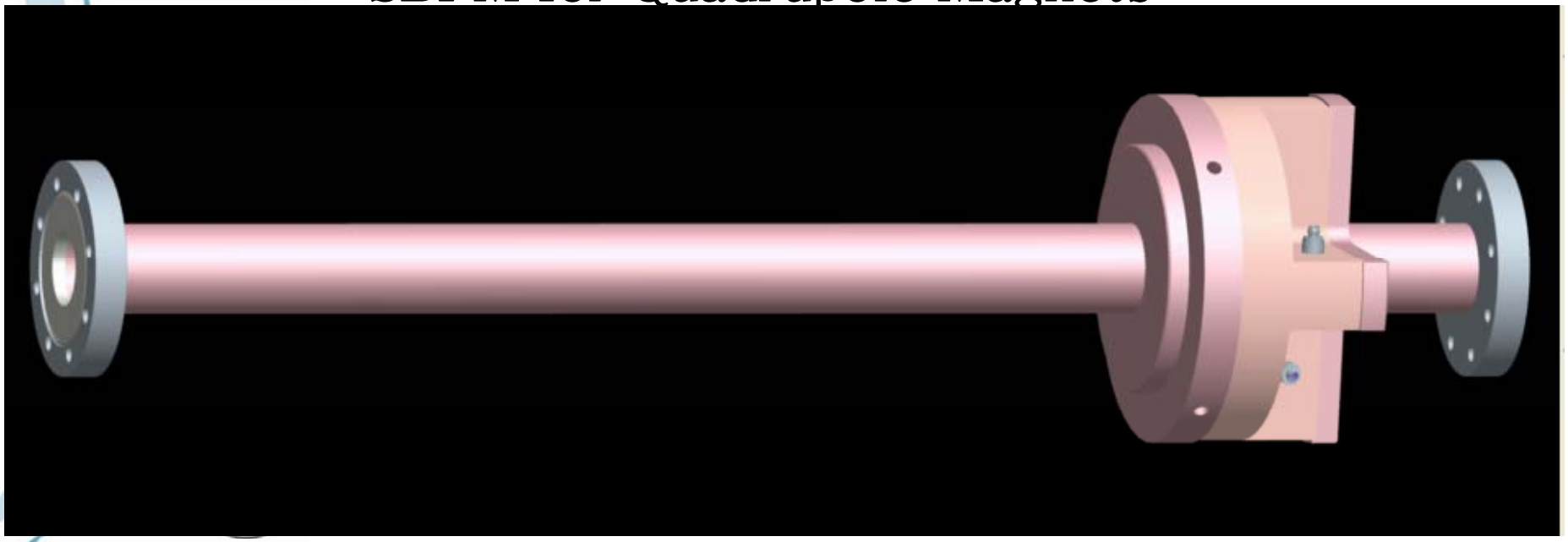


Quad poletips have been measured with micrometer (gauge blocks are still in the machine shop): globally OK within 0.02mm, but not sure if the two measurement results can be easily compared

SBPM for Sextupole Magnets



SBPM for Quadrupole Magnets

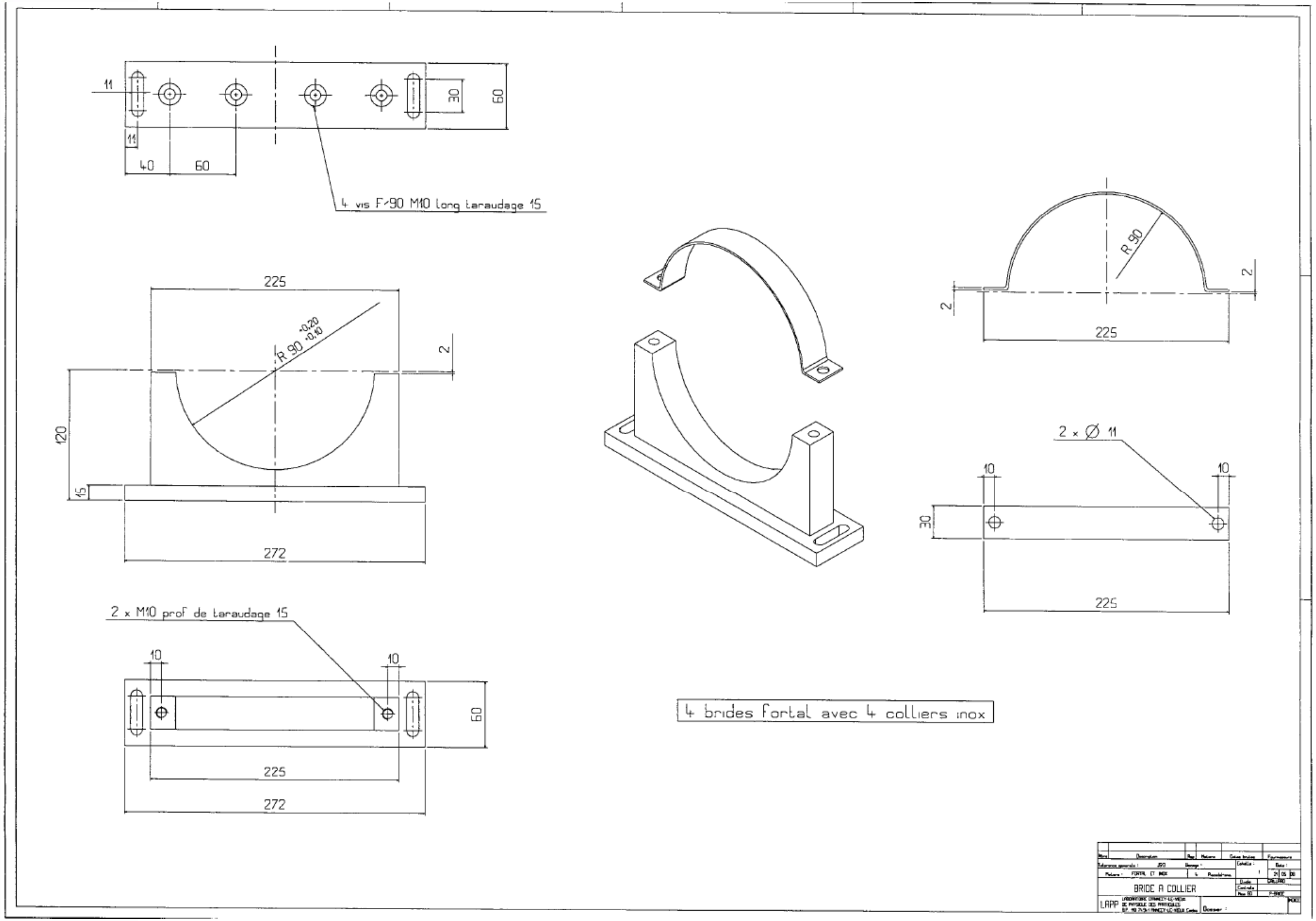


The beam chambers were brazed this way:

We checked with KEK, Korean and LAPP colleagues and the current BPM support still works (only one hole has to be elongated for the sextupoles)

However, the readout point will be farther away than initially planned (still need to make sure these numbers are correct):

- Quadrupole: 25+12+68+10.5=115.5mm instead of 65mm
- Sextupole: 20+12+68+10.5=110.5mm instead of 45mm


4 vis F/90 M10 long taraudage 15
40
60
11
30
60
225
R 90 +0,20 +0,10
2
120
15
272
2 x M10 prof de taraudage 15
10
10
60
225
272
4 brides fortal avec 4 colliers inox
R 90
2
2
225
2 x Ø 11
10
10
30
225
BRIDE A COLLIER
LAPP

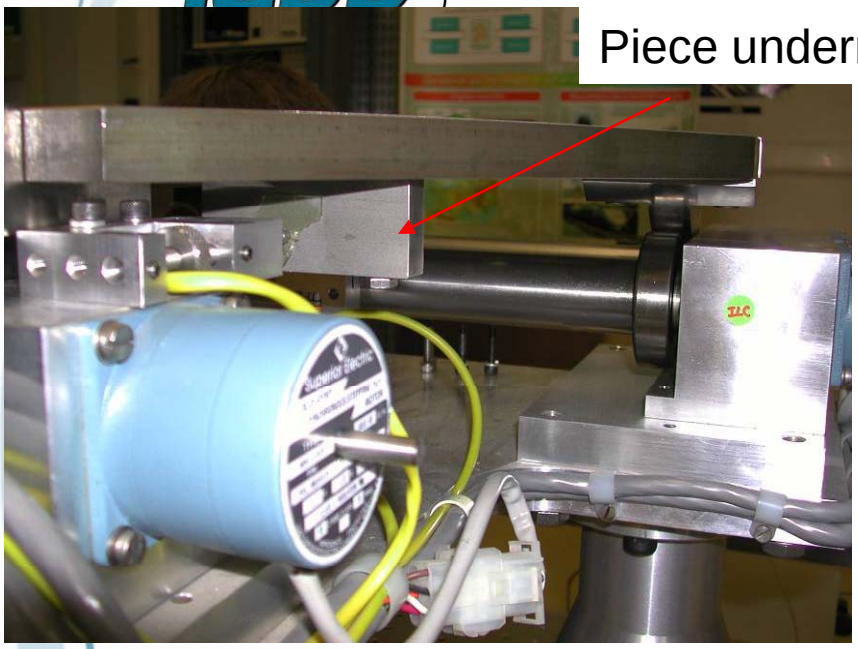
Still to be done

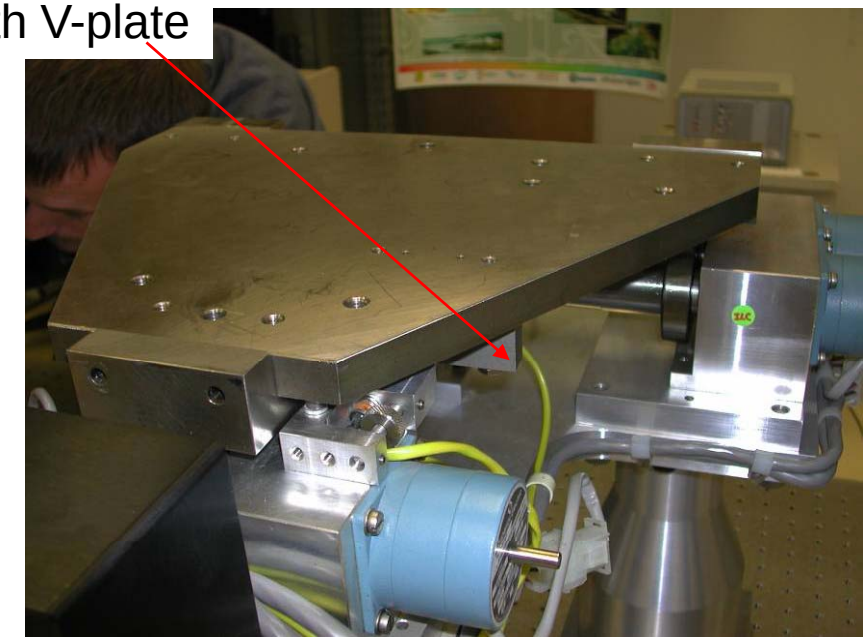
- Align Q in x-y, S in x-y-z
- Insert BPMs in magnets (open, insert, close, measure and adjust pole-tips…)
- Decide what support will go on the other end of BPM beam chamber
- Give the “mover team” the new LVDT positions : some needed to be moved because they didn’t fit anymore! with new C- and V-blocks, V-plate
- Order new LVDTs (one “stuck”, one spare)

extra

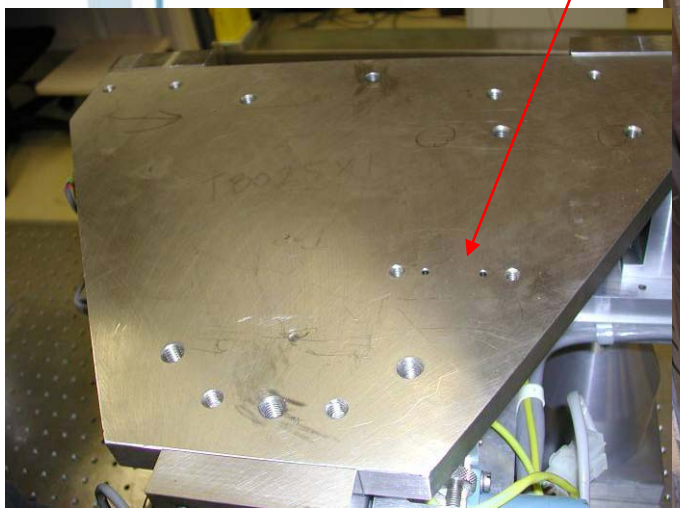
Problem 1

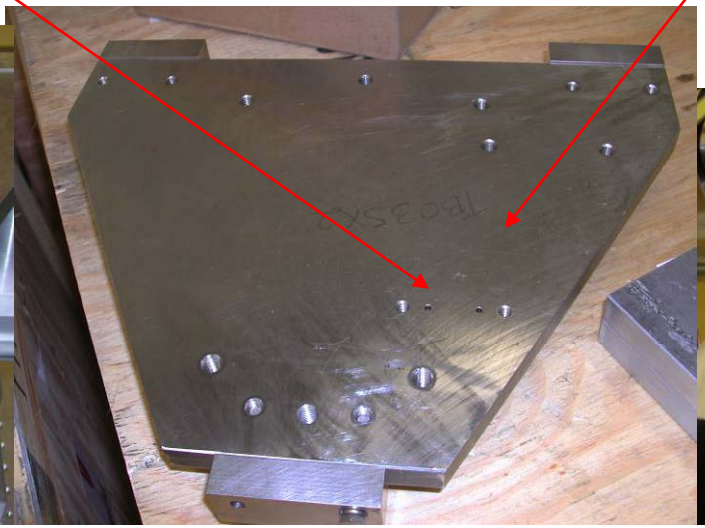
Piece underneath V-plate



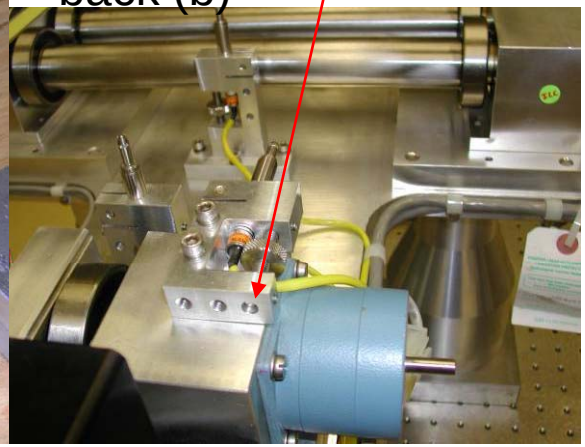


Piece not at same position



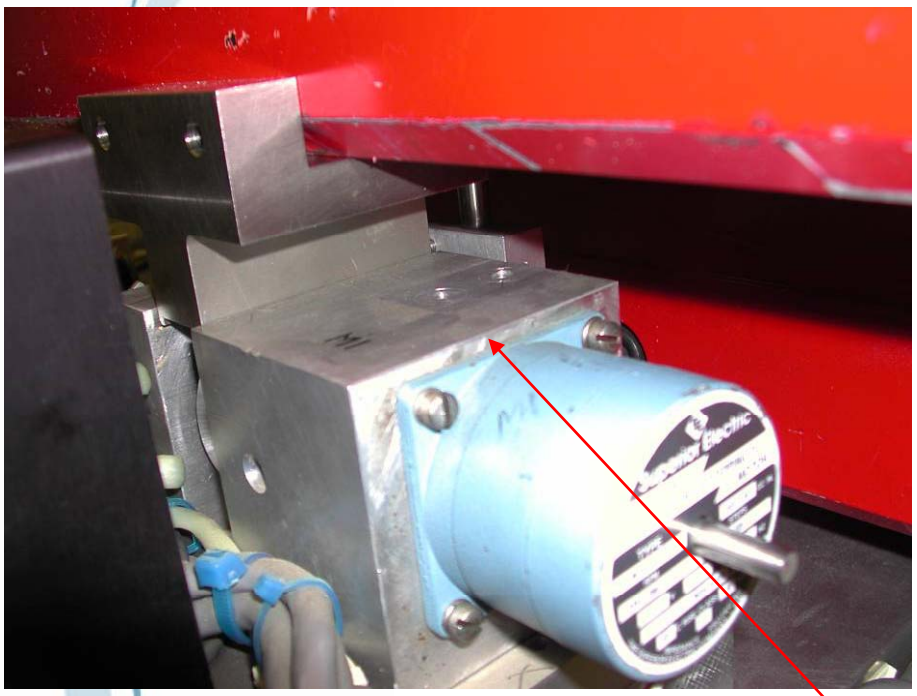


Drill new holes in V-plate (a) or move LVDT back (b)

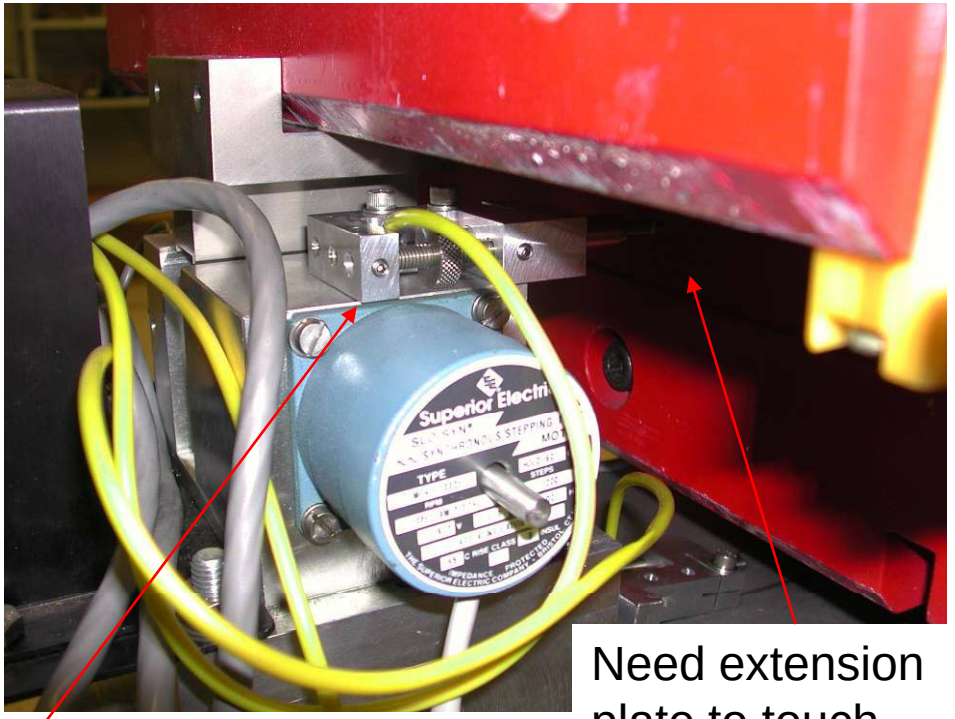


Problem 2

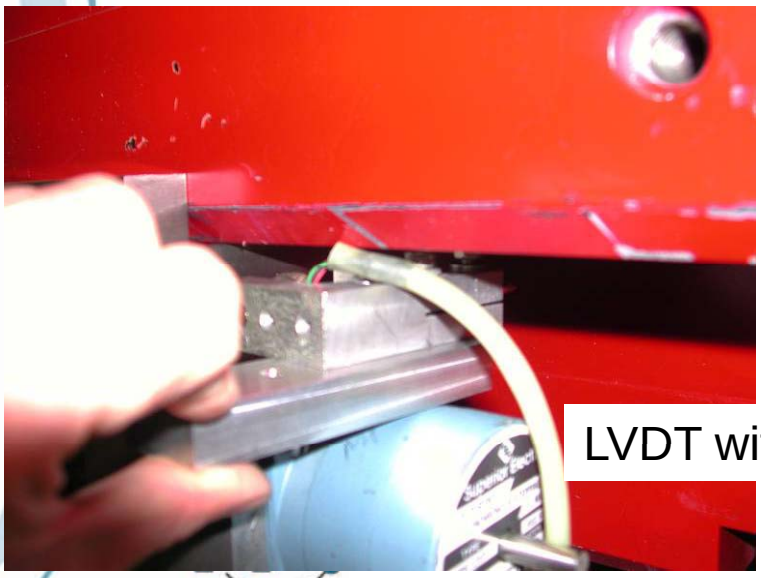
Original large mover



New mover

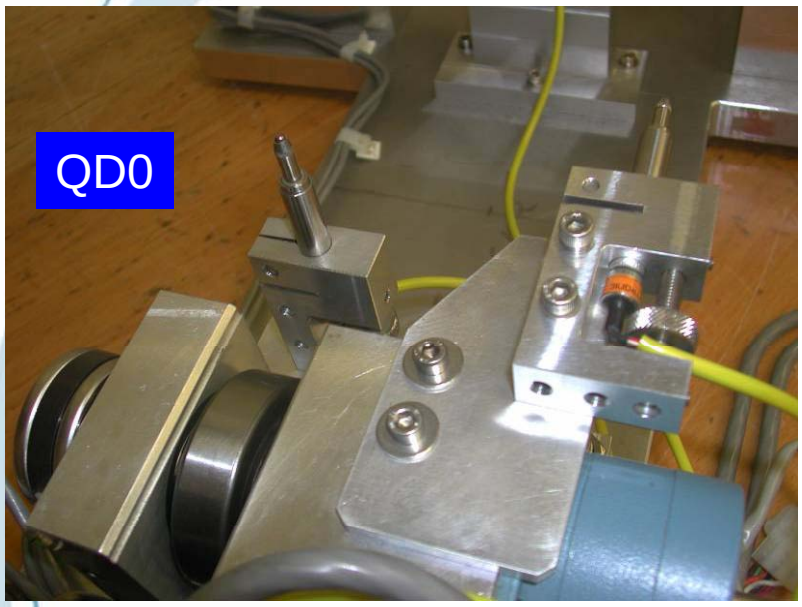


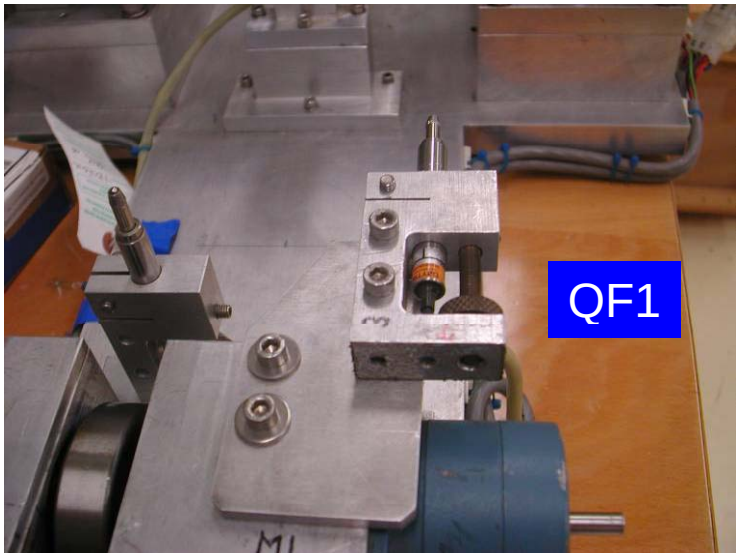
Need extension plate to touch the quad

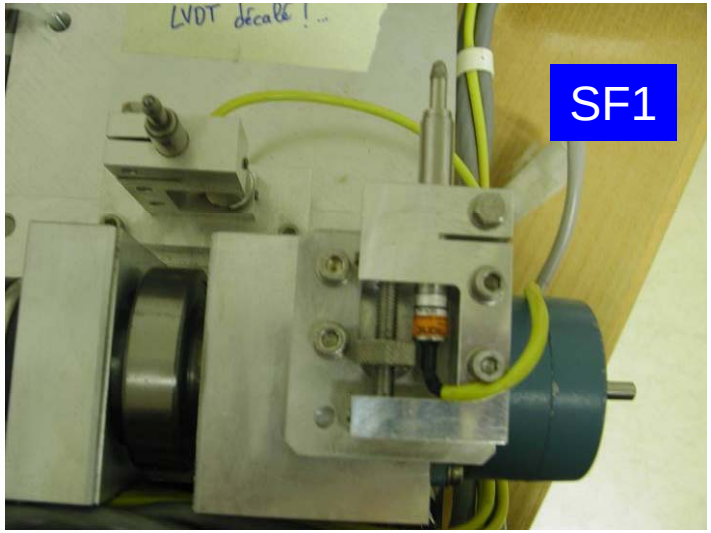


Notice the 3mm difference in cam-motor position in block

LVDT with extension plate doesn't fit







Extra plates to fix the LVDT in such a way that it fits under the magnet (new C- and V-blocks) and on the special V-plate