

Newly Developed 6mm Buttons for the BPMs in the ESRF Low-Emittance-Ring

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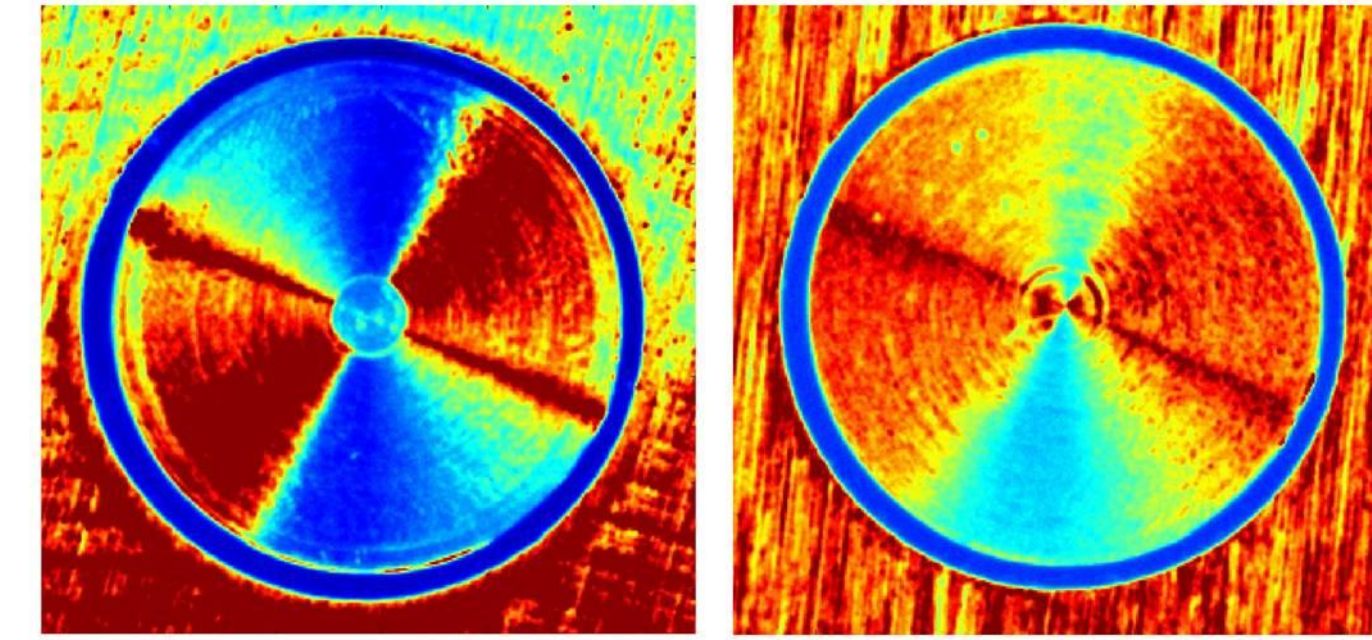
the Test-BPM-Chamber in the ID-25 straight section

the 6mm button main features :

- no skirt around the button
- male sma connector
- center pin Molybdenum
- 3 versions of button material :
 - Steel
 - Copper
 - Molybdenum

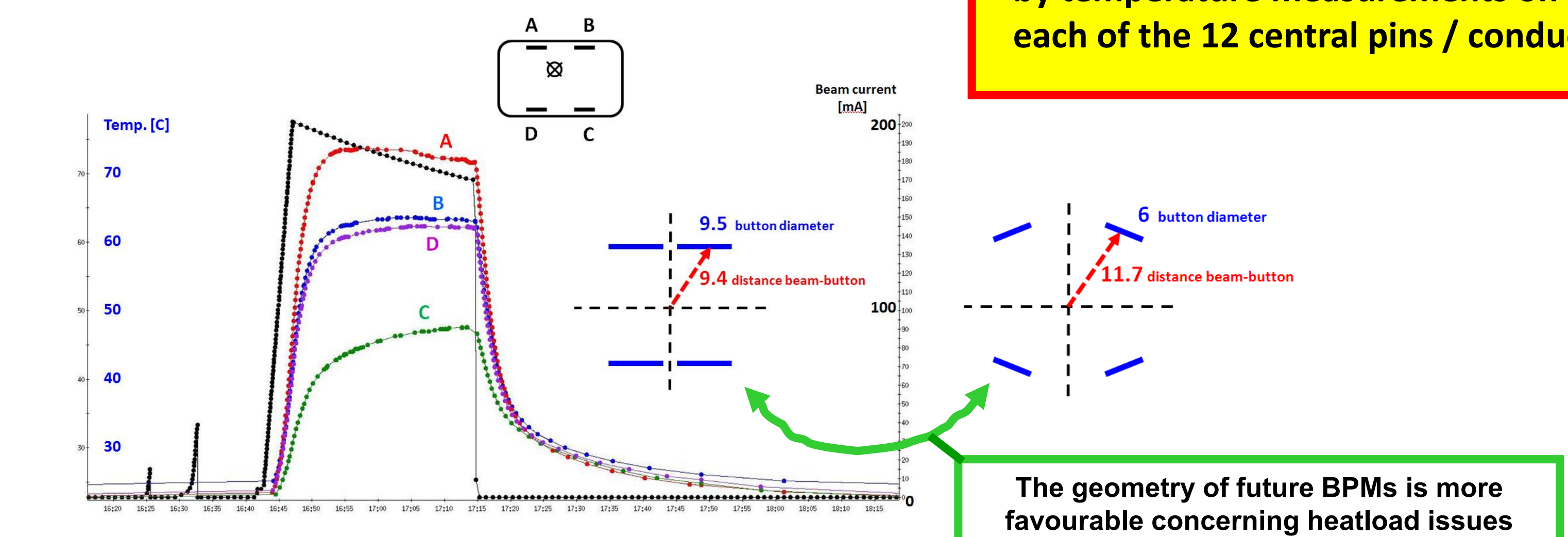
15 and 12 prototypes realised by :
PMB-ALCEN (France) and
KYOCERA (Japan)

button diameter = 6mm
gap = 250um
non-concentricity <50um



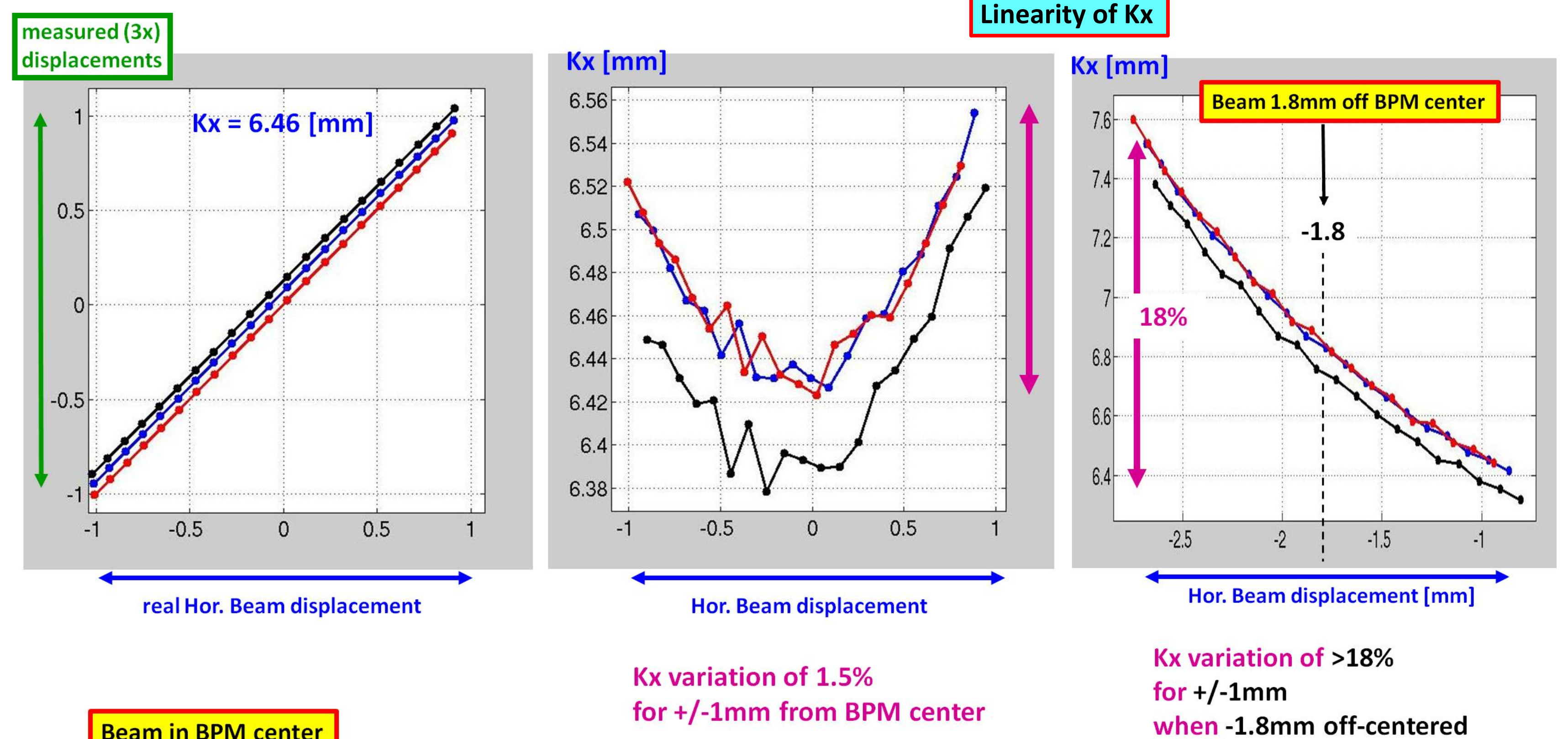
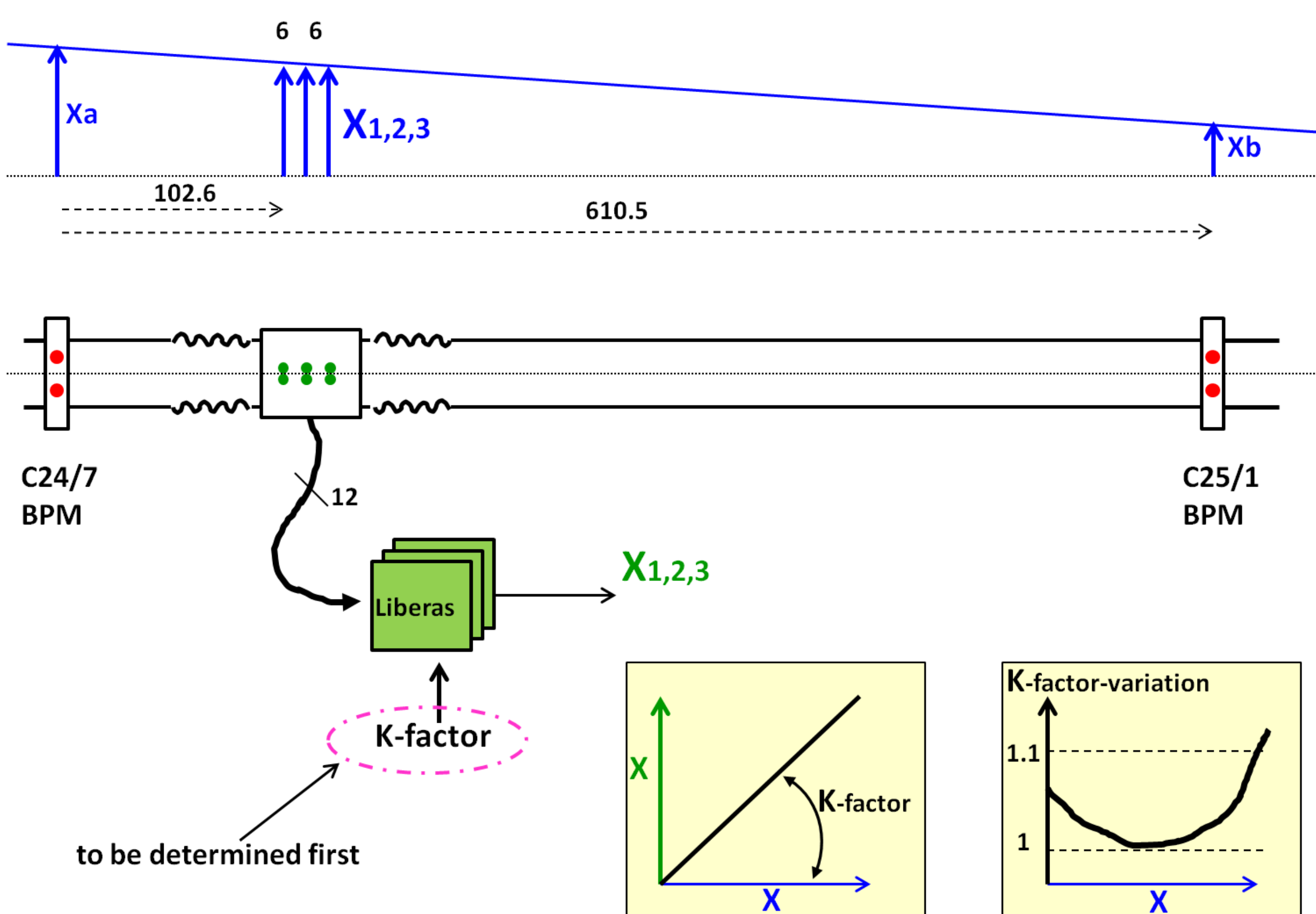
NO HEATLOAD ISSUES MEASURABLE !!

by temperature measurements on
each of the 12 central pins / conductors

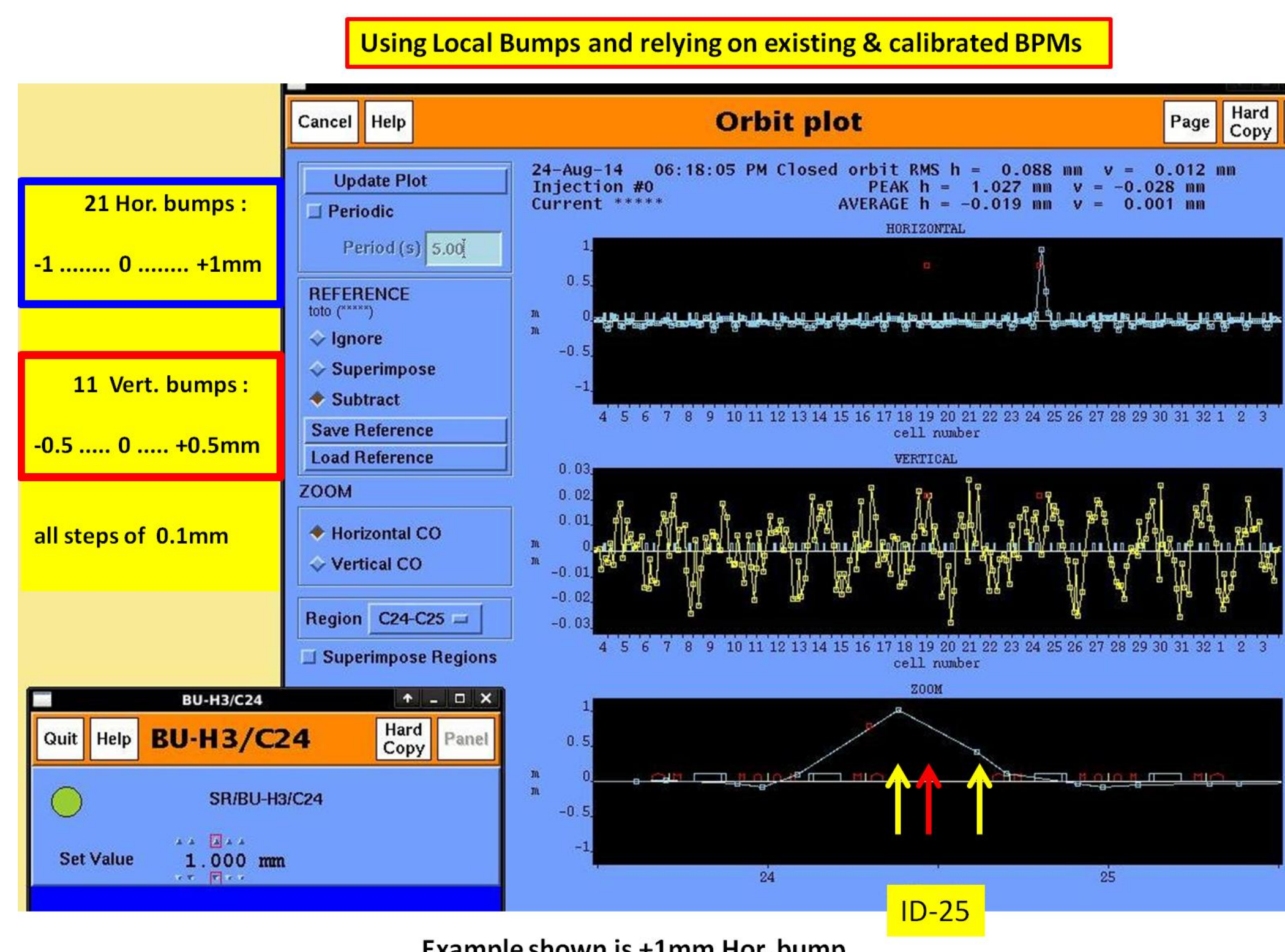


21 bumps = 21 data points

Using Local Bumps and relying on existing & calibrated BPMs



Cross talk / coupling : from Hor. to Vert.



$$X = Kx \times \frac{A + D - B - C}{A + D + B + C}$$

