How well can BPM be calibrated to a QUAD survey?

Want $\Delta x \sim 0$
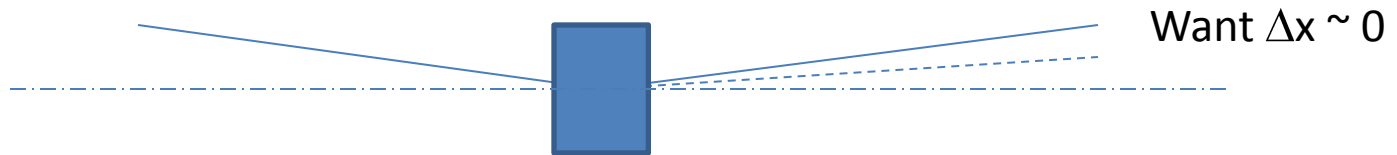
$$\begin{pmatrix} x \\ x' \end{pmatrix}_{final} = \begin{bmatrix} 1 & d \\ 0 & 1 \end{bmatrix} \begin{bmatrix} 1 & 0 \\ -1/f & 1 \end{bmatrix} \begin{pmatrix} x \\ x' \end{pmatrix}_{initial}$$
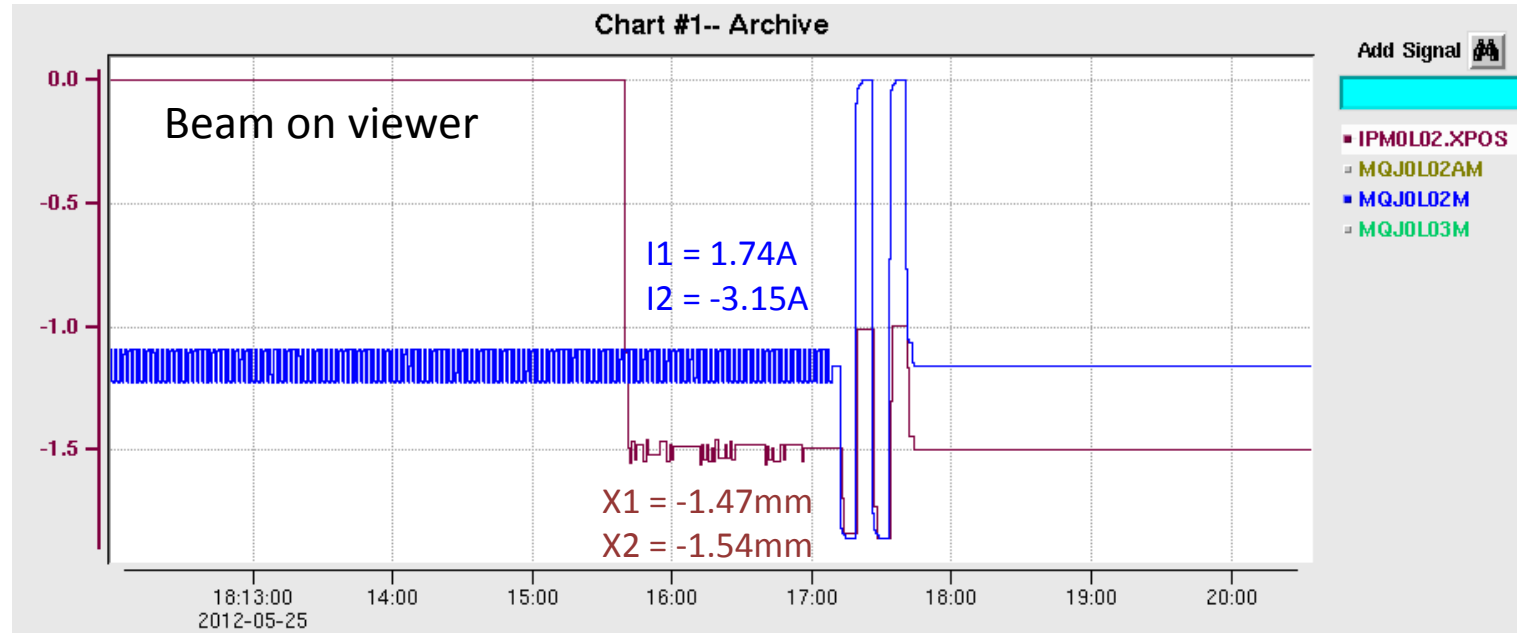
No info on angle (so don't care about x'), just address x

For two currents (1) and (2) in quad minimize and measure position.

$\Delta x = x_2 - x_1 = [(1\text{-}d/f_1) \cdot x_0 + d \cdot x'_0] - [(1\text{-}d/f_2) \cdot x_0 + d \cdot x'_0] = (1/f_2 - 1/f_1) \cdot d \cdot x_0$

PEPPo example with MQJ0L02 and IPM0L02

MQJ quad makes 594G @ 10A at a radius of (1cm or 1.835cm) and is 15cm long
This leads either to a strength of 0.486T or 0.891T, respectively (still to find out)

MQJ0L02 and IPM0L02 are 267mm apart

Assuming 0.486T value then Δx = 70 micron

Assuming 0.891T value then Δx = 38 micron