# Dispersion Measurements at VUV-FEL

## FEL R&D Program – Weeks 47 & 48

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# Dispersion measurements 19-11-05
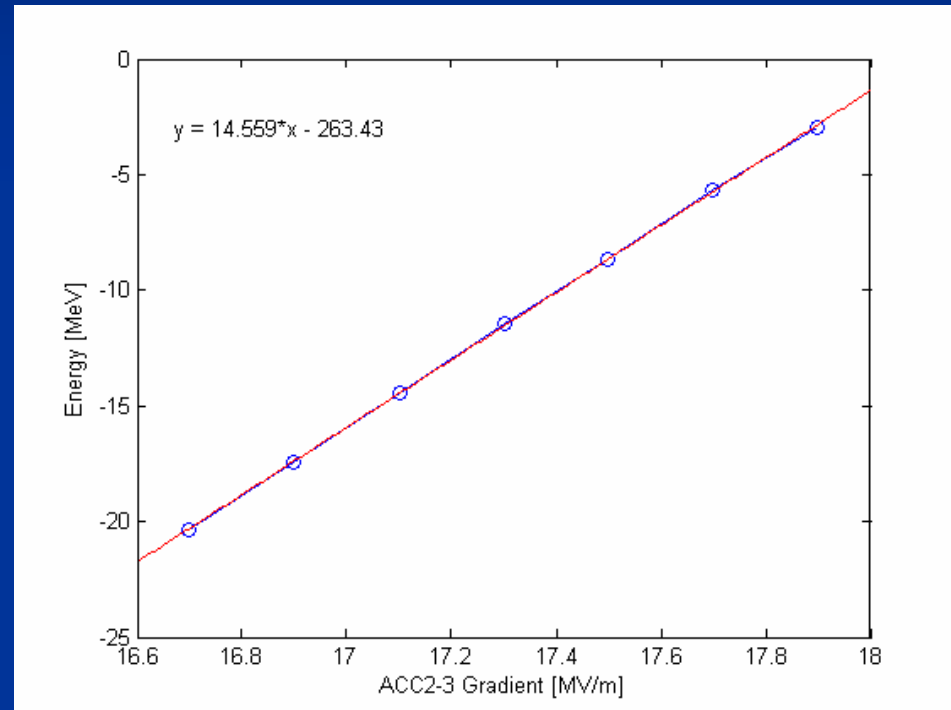
*What we did:*

Dispersion measurements downstream ACC2-3

-Energy calibration of ACC2-3 module
-Change RF gradient in ACC2-3 (applying existing orbit feed-back of ACC2-3)
-Read BPM positions downstream ACC2-3
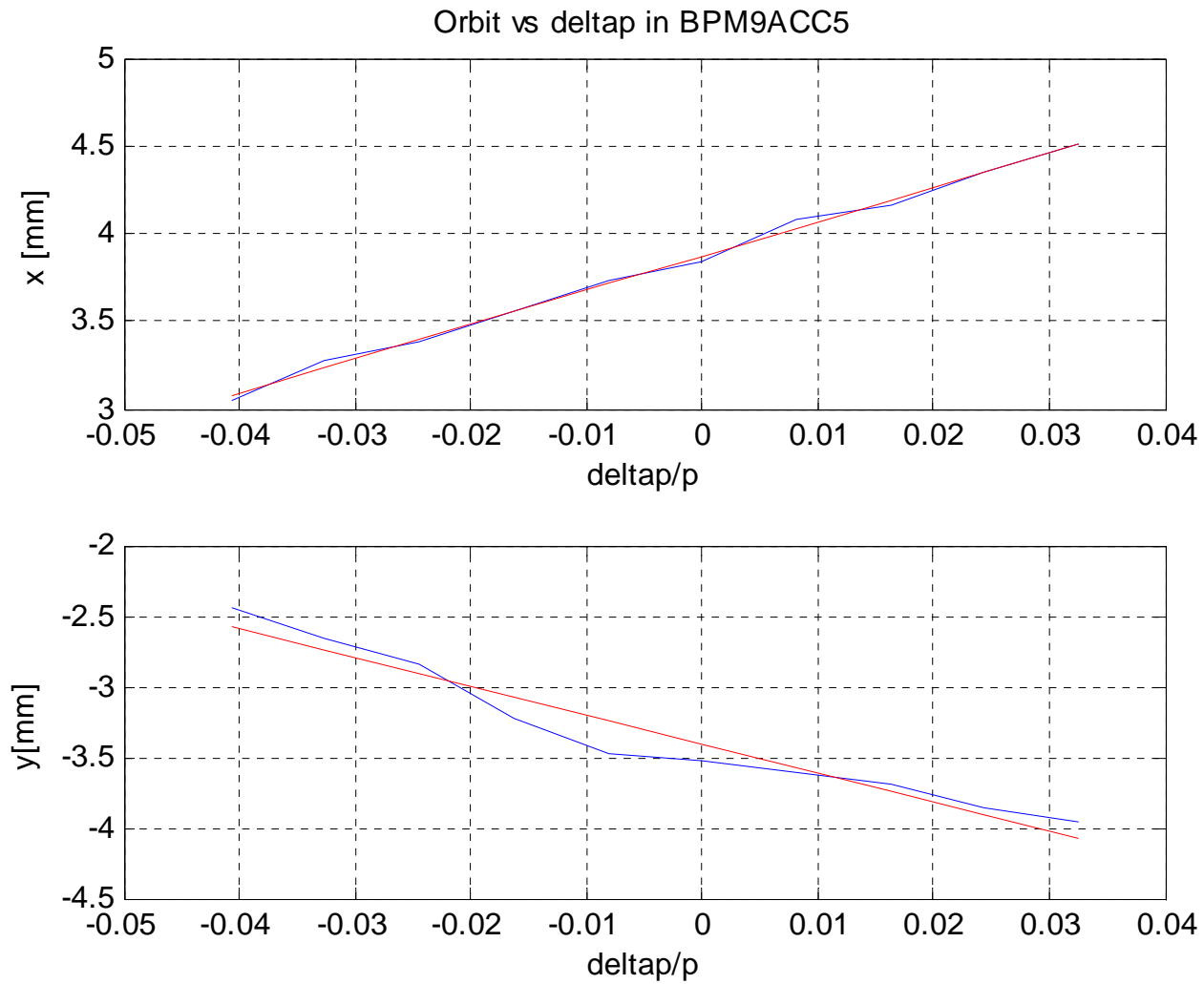
# Energy calibration of ACC2-3

We changed RF gradient from ACC2-3 and we looked at the screen 11DBC3

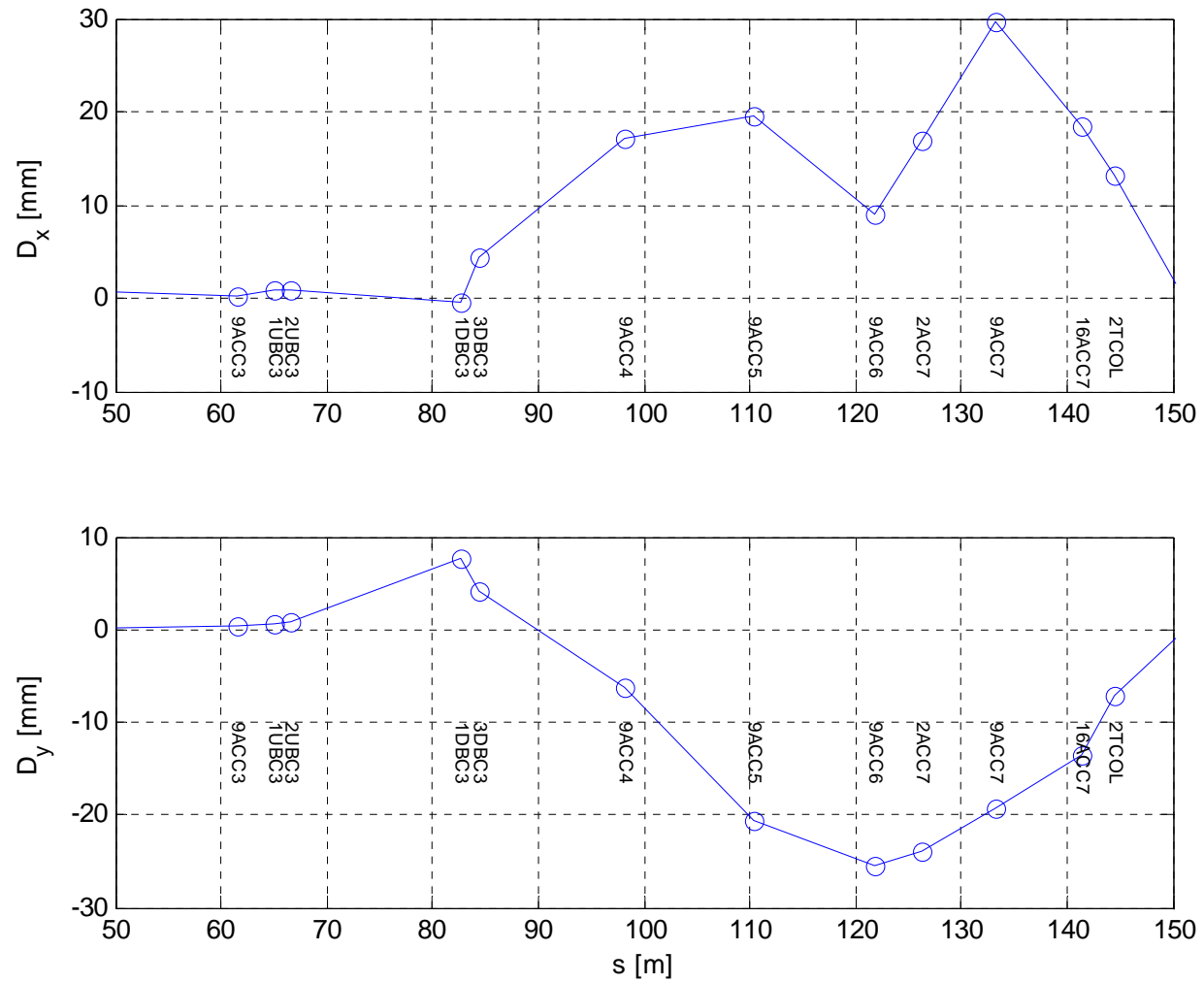We trusted in a previous calibration of the screen (-0.0376MeV/pixel)

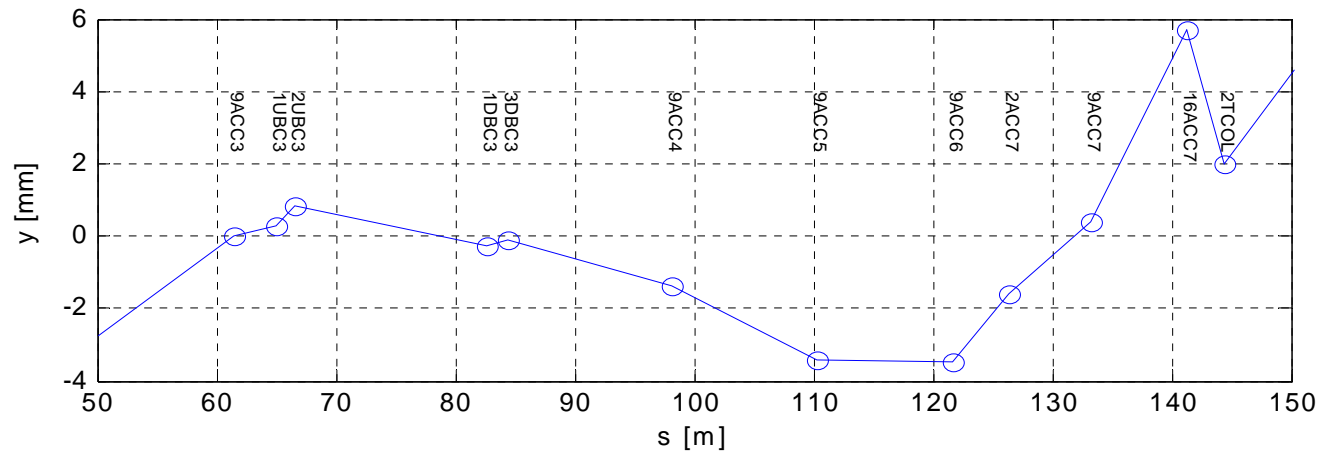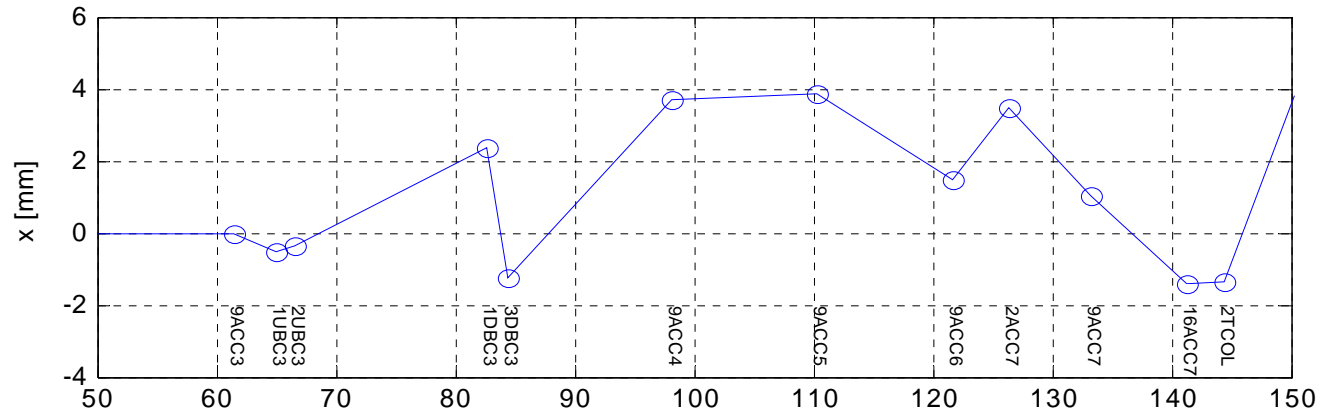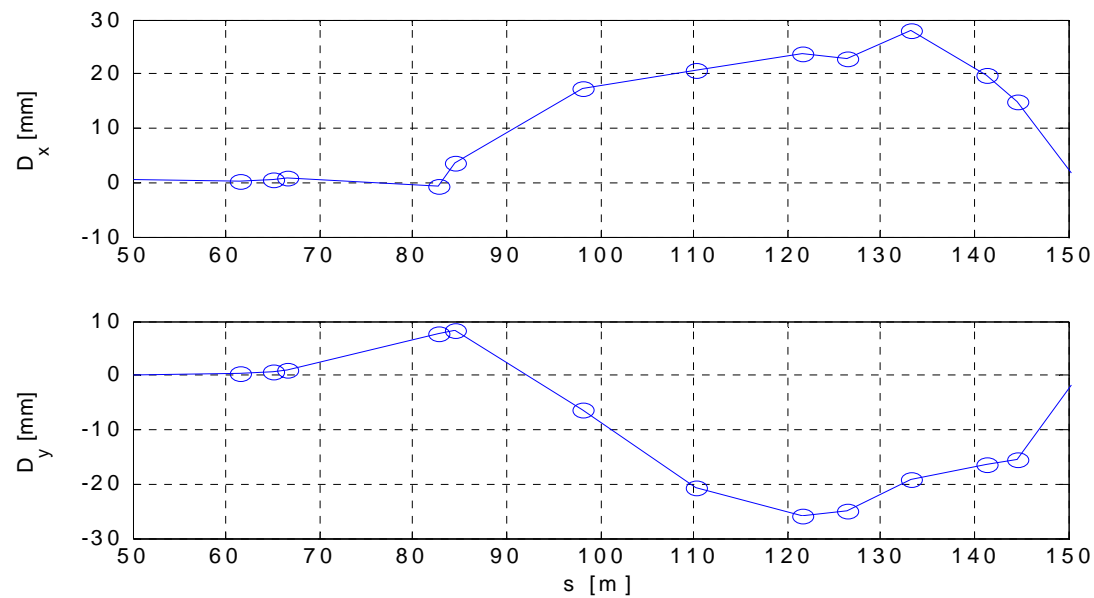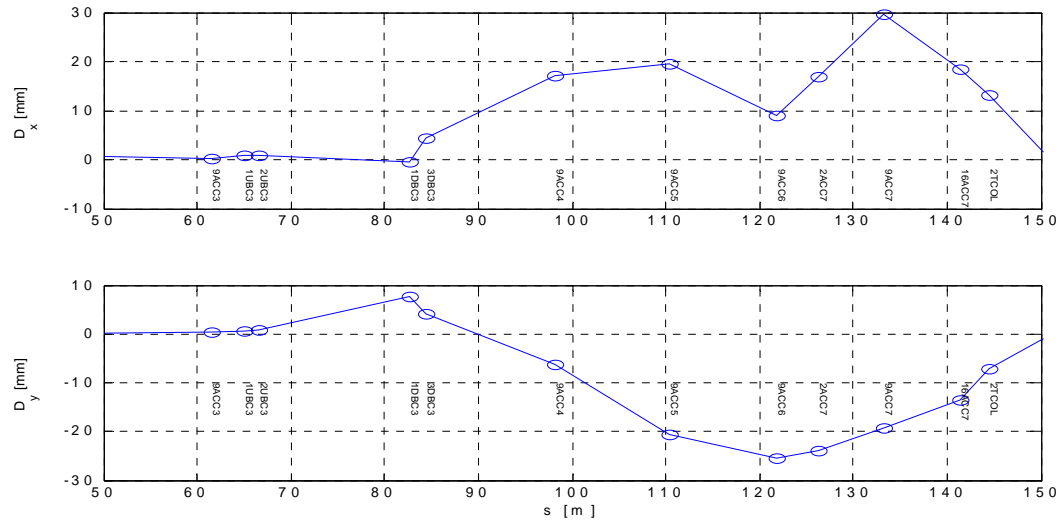$$\Delta E[\text{MeV}] = 14.559 * \Delta V_{23}[\text{MV/m}]$$

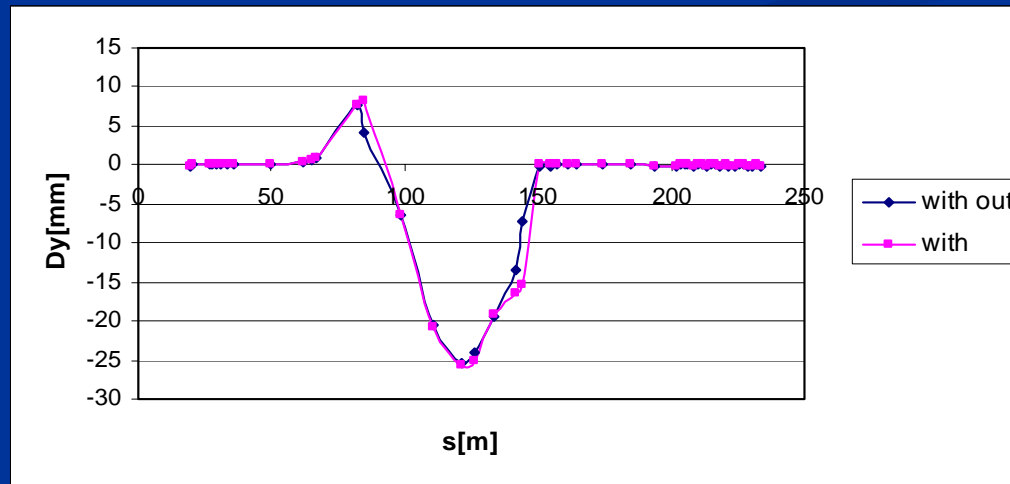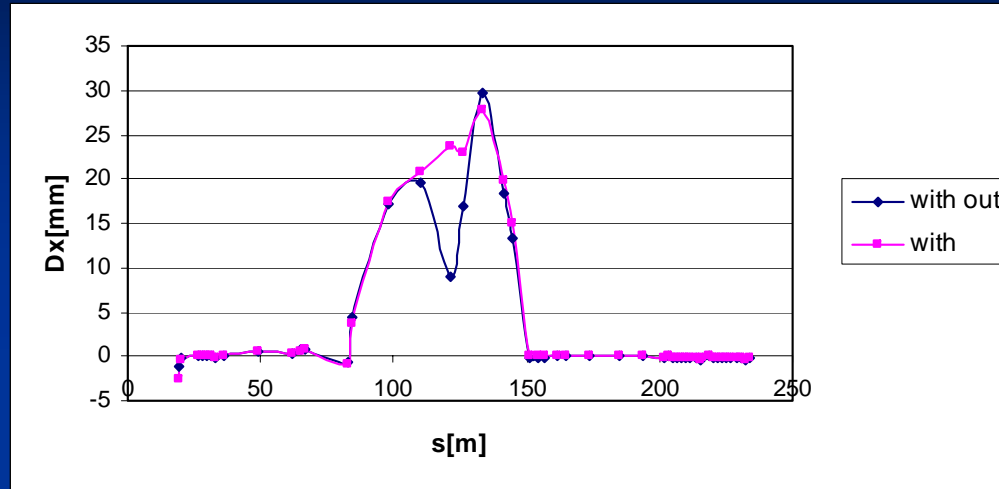# Results: Orbit vs deltap in BPM9ACC5

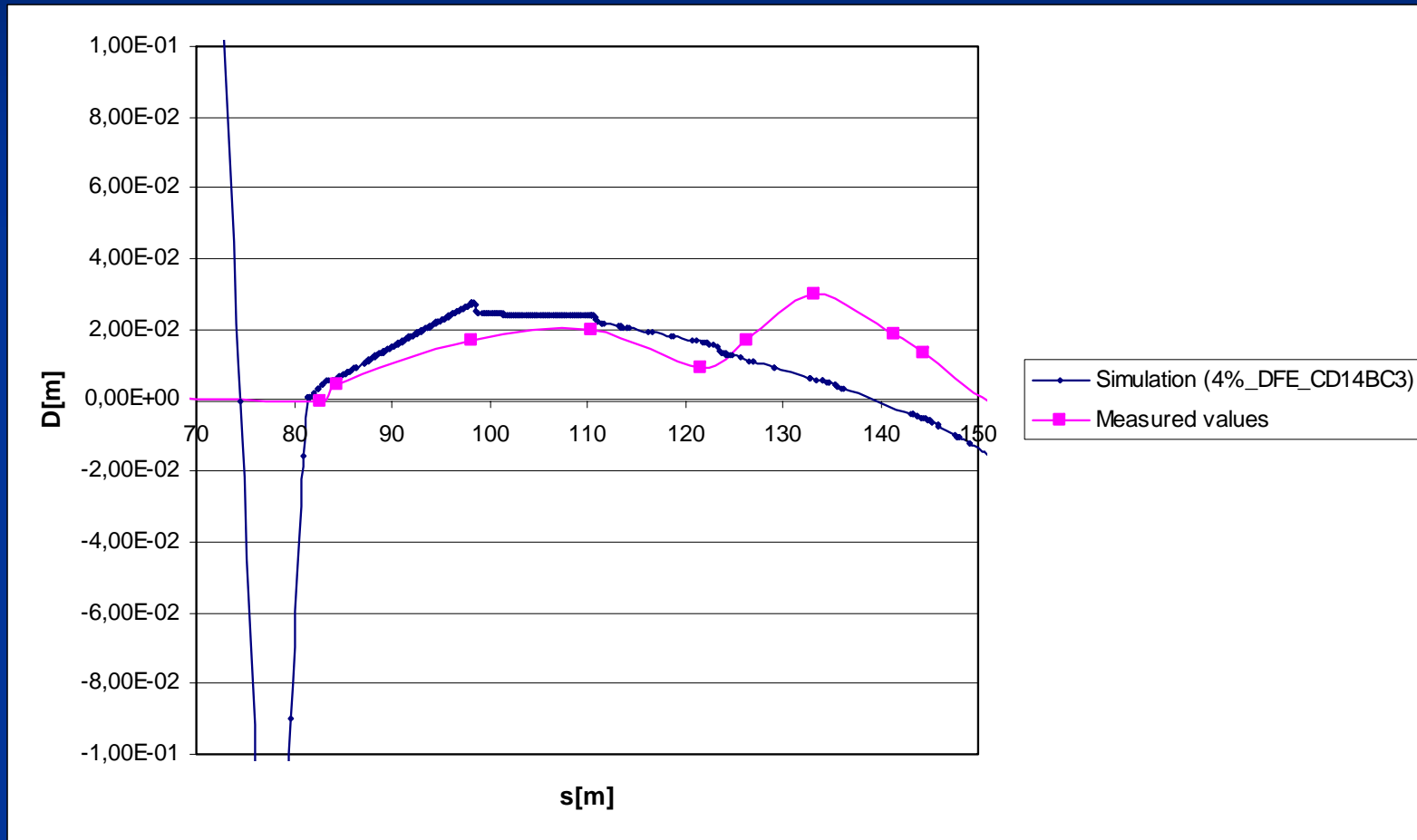# Results: Dispersion

# Results: Orbit
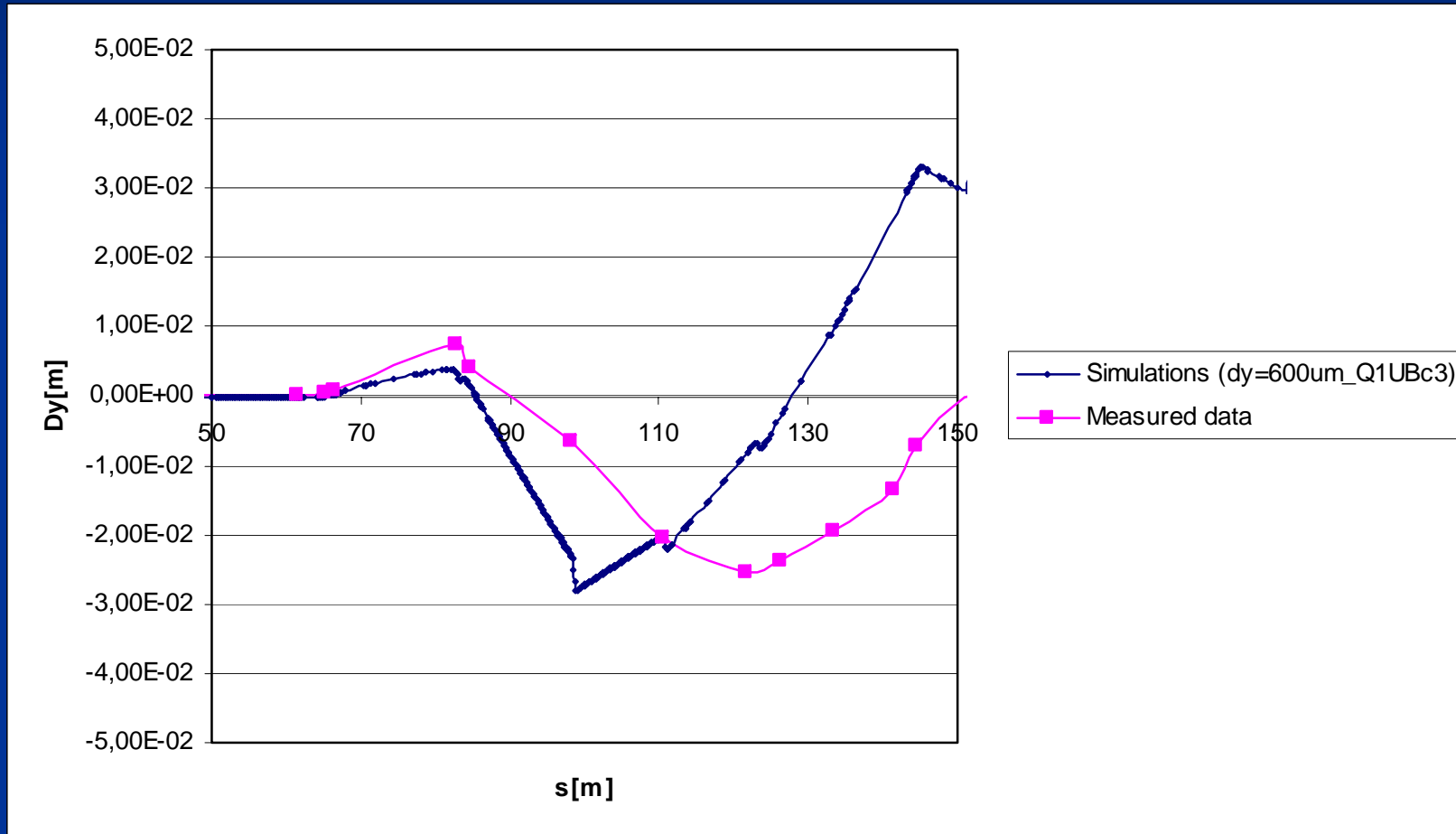
# Results using look-up tables

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# Simulations with elegant

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# Measurements of next Thursday

*What we would like to do:*

Dispersion measurements downstream ACC4-5
(after the dog-leg and in the undulator)

-Repeat dispersion measurements downstream ACC2-3
-Energy calibration of ACC4-5 module
-Change RF gradient in ACC4-5 (applying orbit feed-back from Winni)
-Read BPM positions after the dog-leg and in the undulator

Thank you!