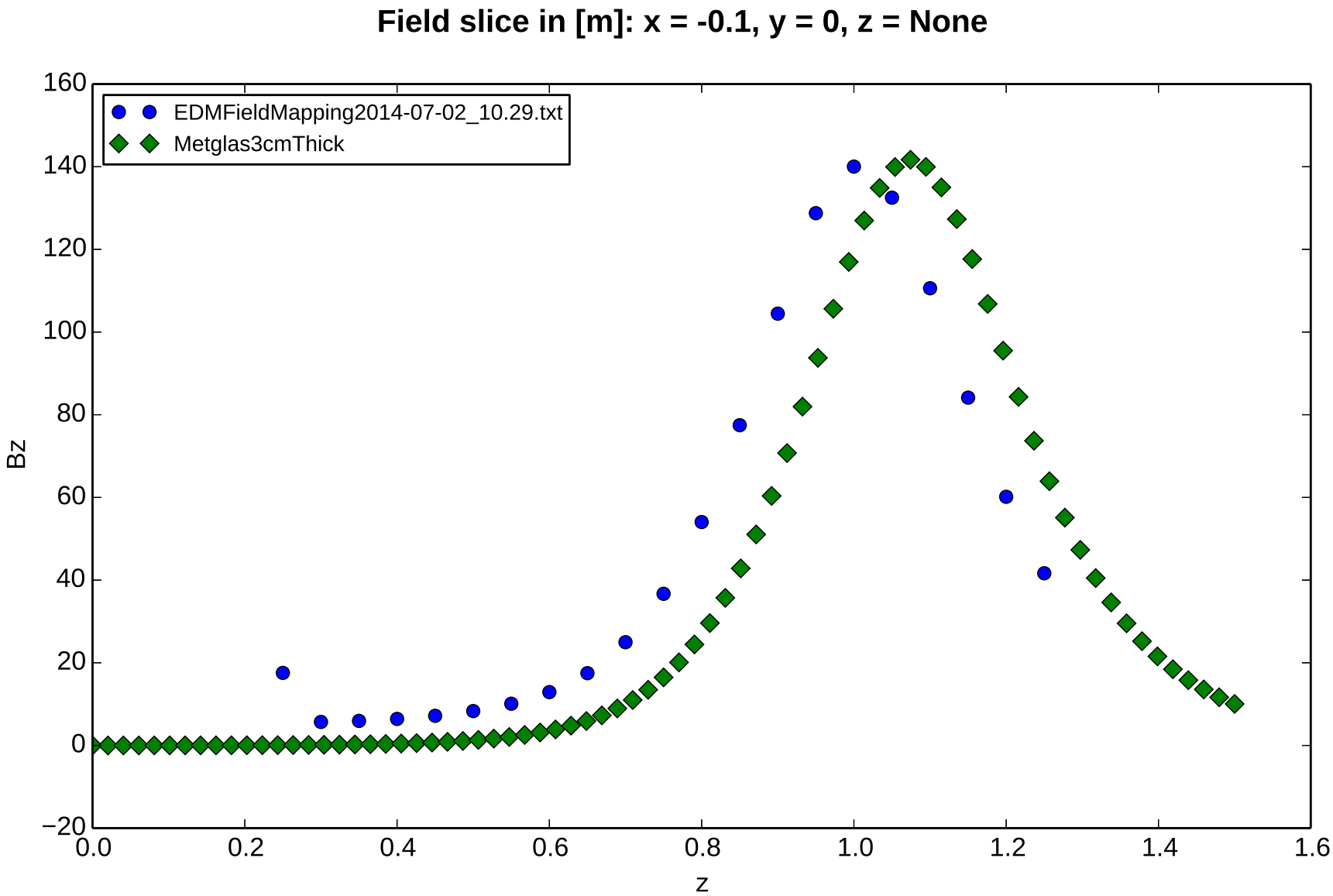
Week 2

July 17, 2014

`plotter` script

- 324 sloc
- reads `RotationShield` and FieldMapping VI input
- uses new normalization method
  - average of data points near $(0, 0, 0)$ vs. polynomial fit
  - calculates desired normalization level - average B_x of measured maps
- handles custom field slices
- to-do: field gradients, interpolation, smooth plots

10 cm offset between map & simulation



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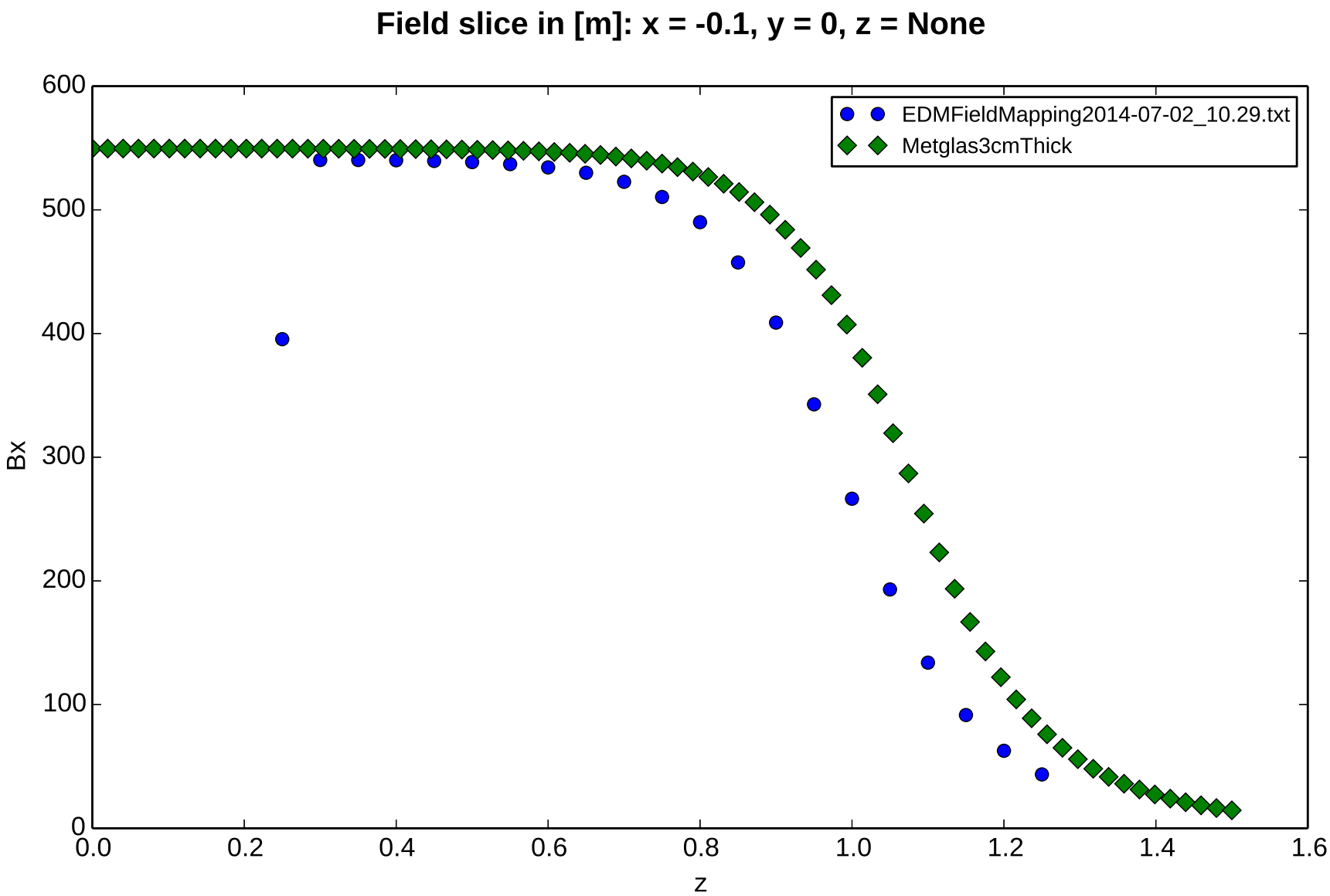

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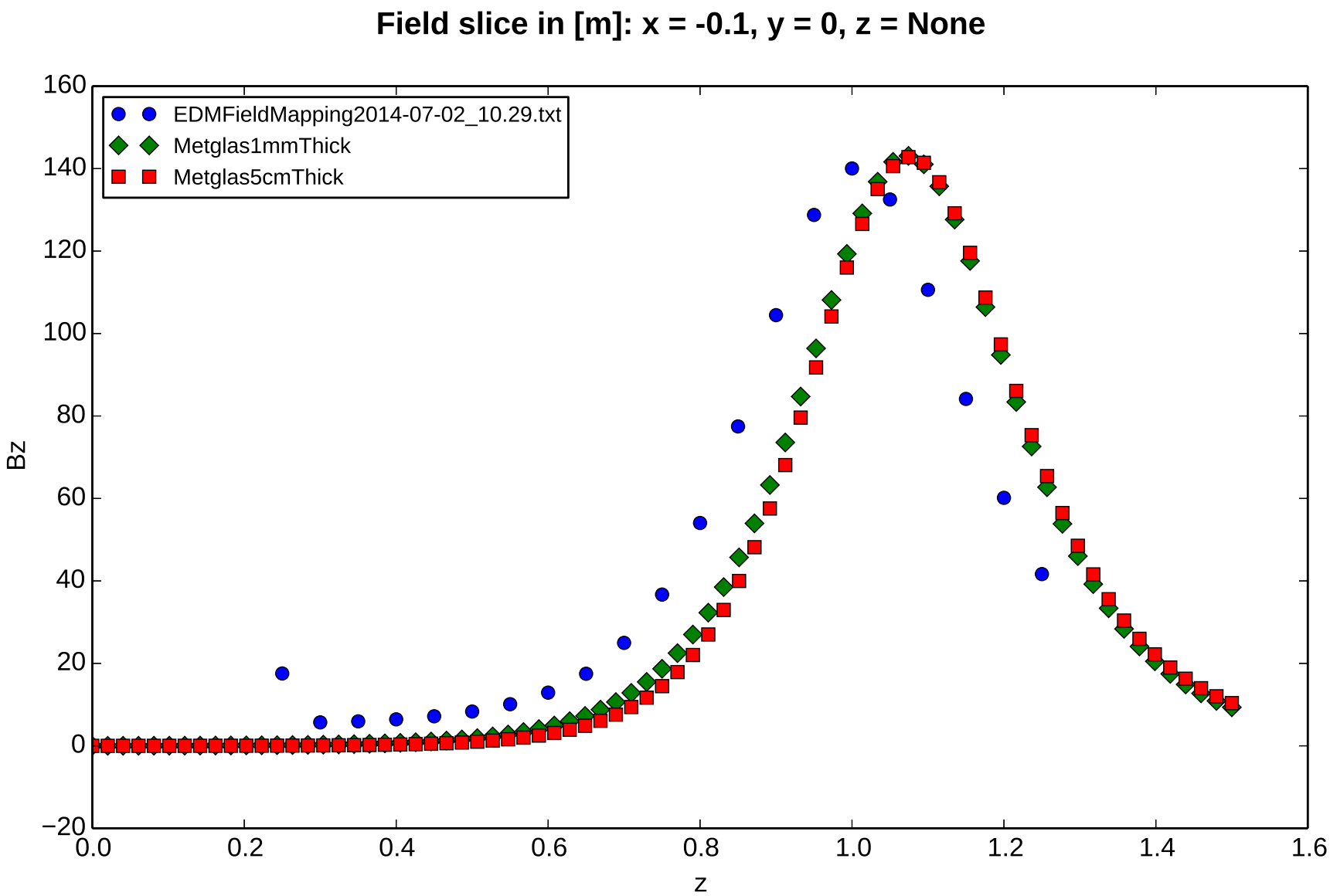
- extended metglas far (10 cm) above B_0 coil to highlight effects

varying thickness: small change in B magnitude, no shift



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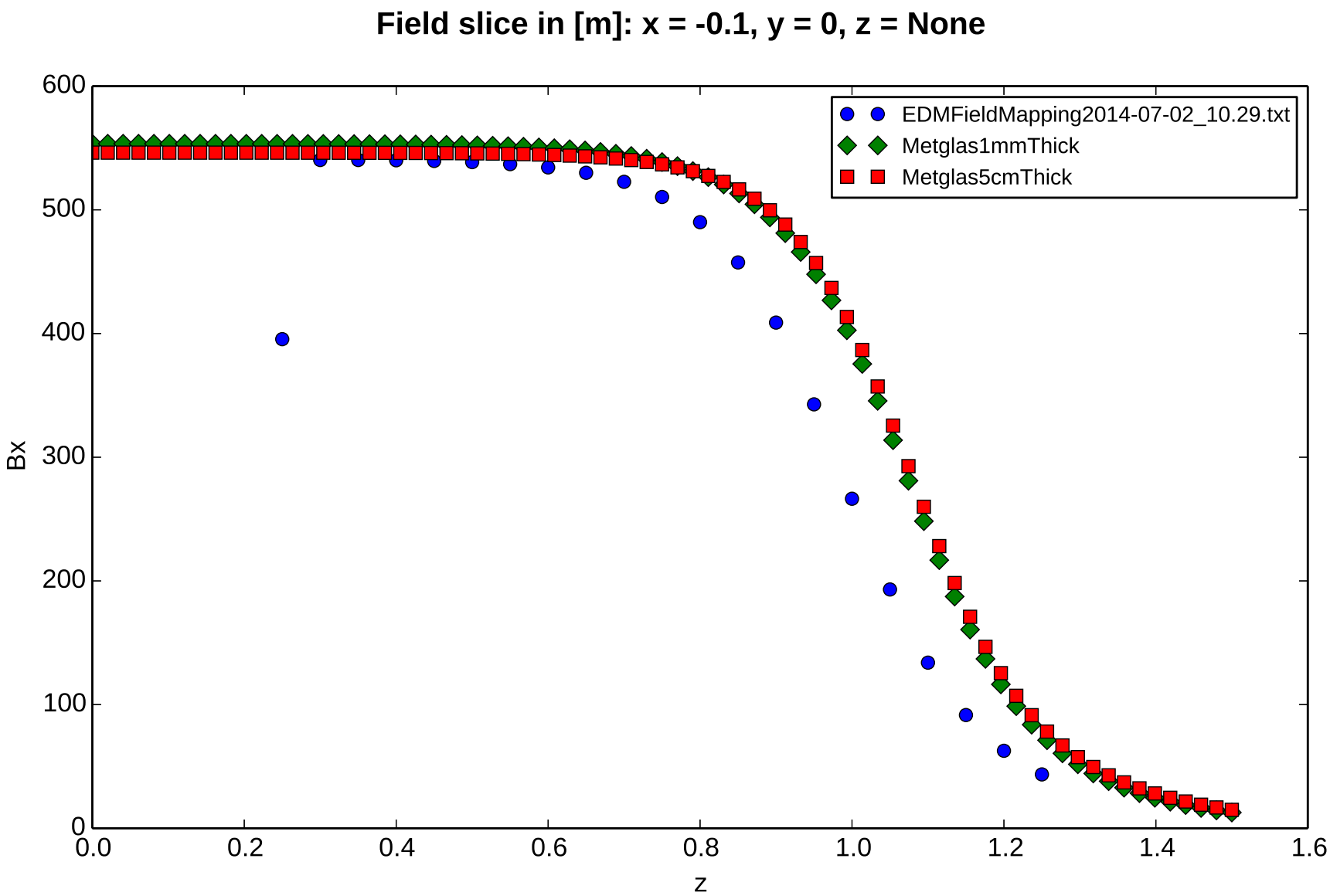
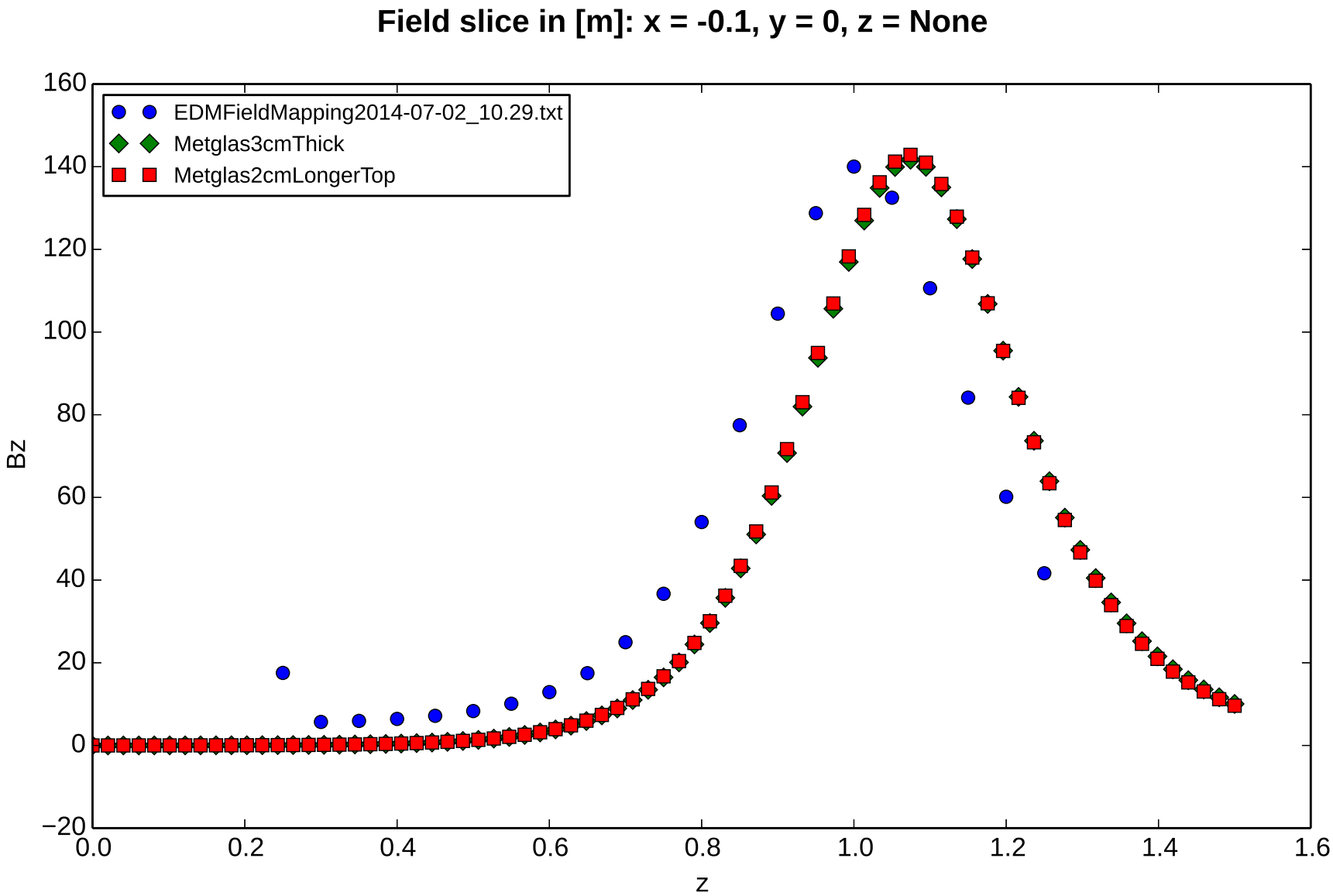


2 cm longer on top: small magnitude change



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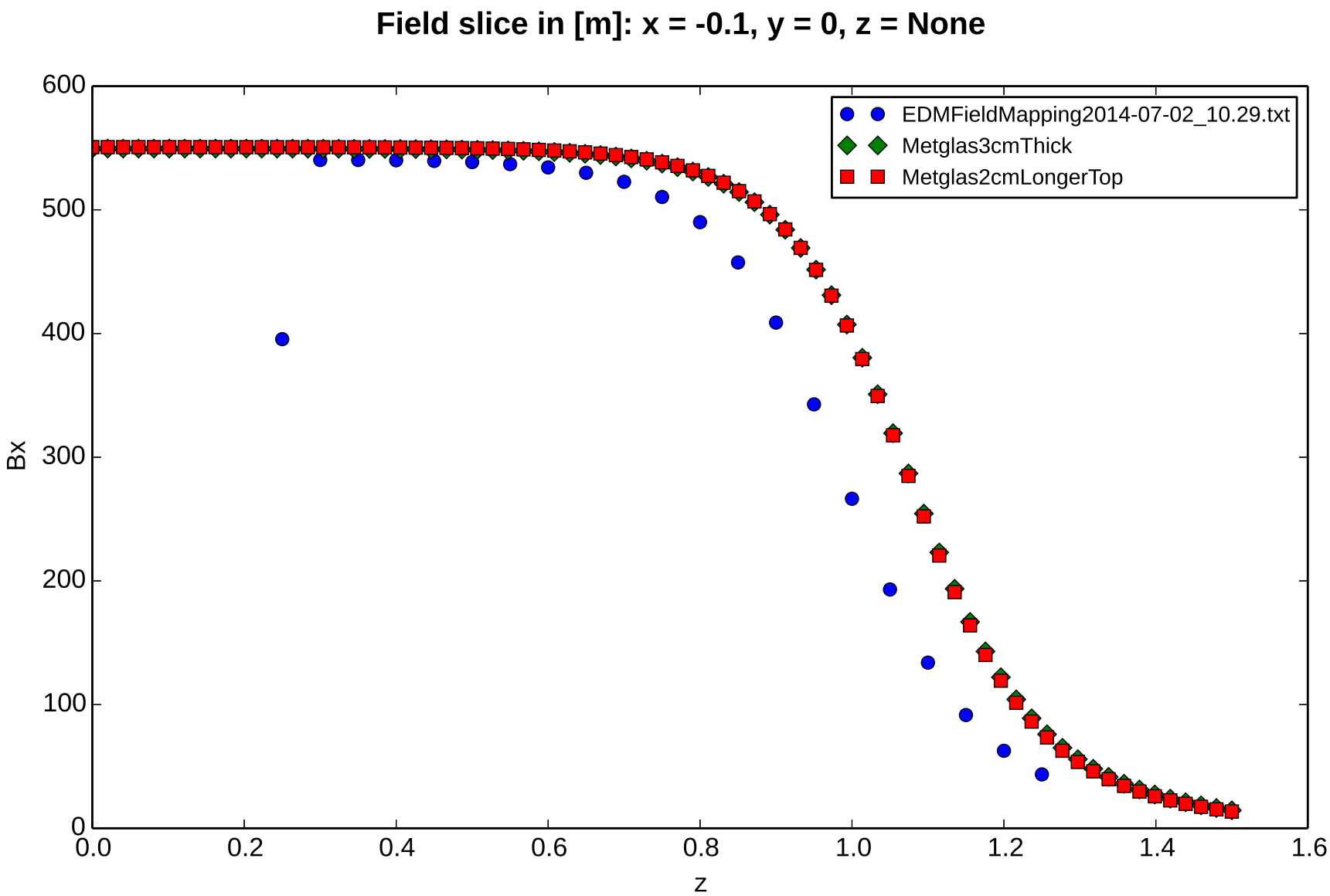
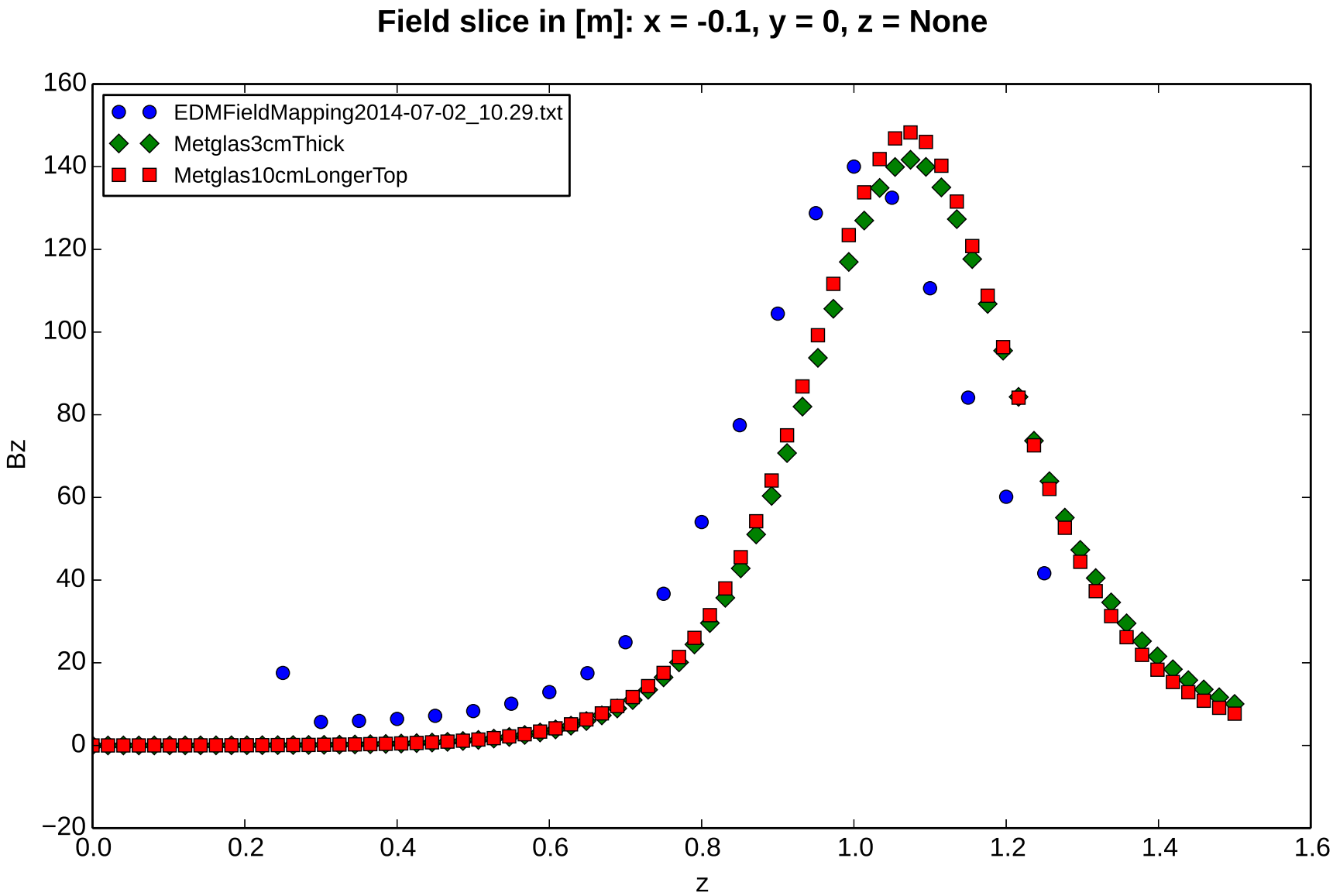


10 cm longer on top: confirms magnitude change



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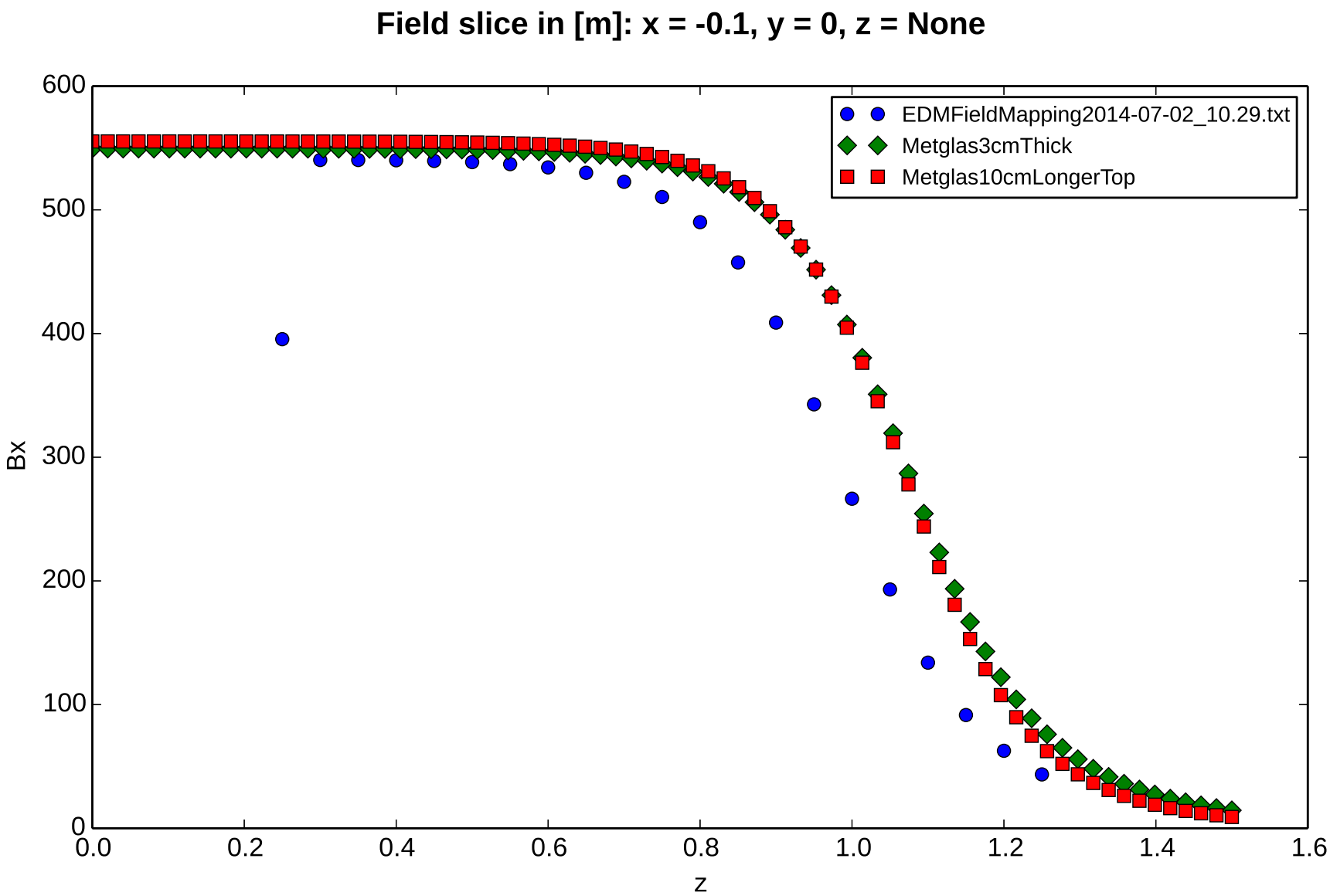

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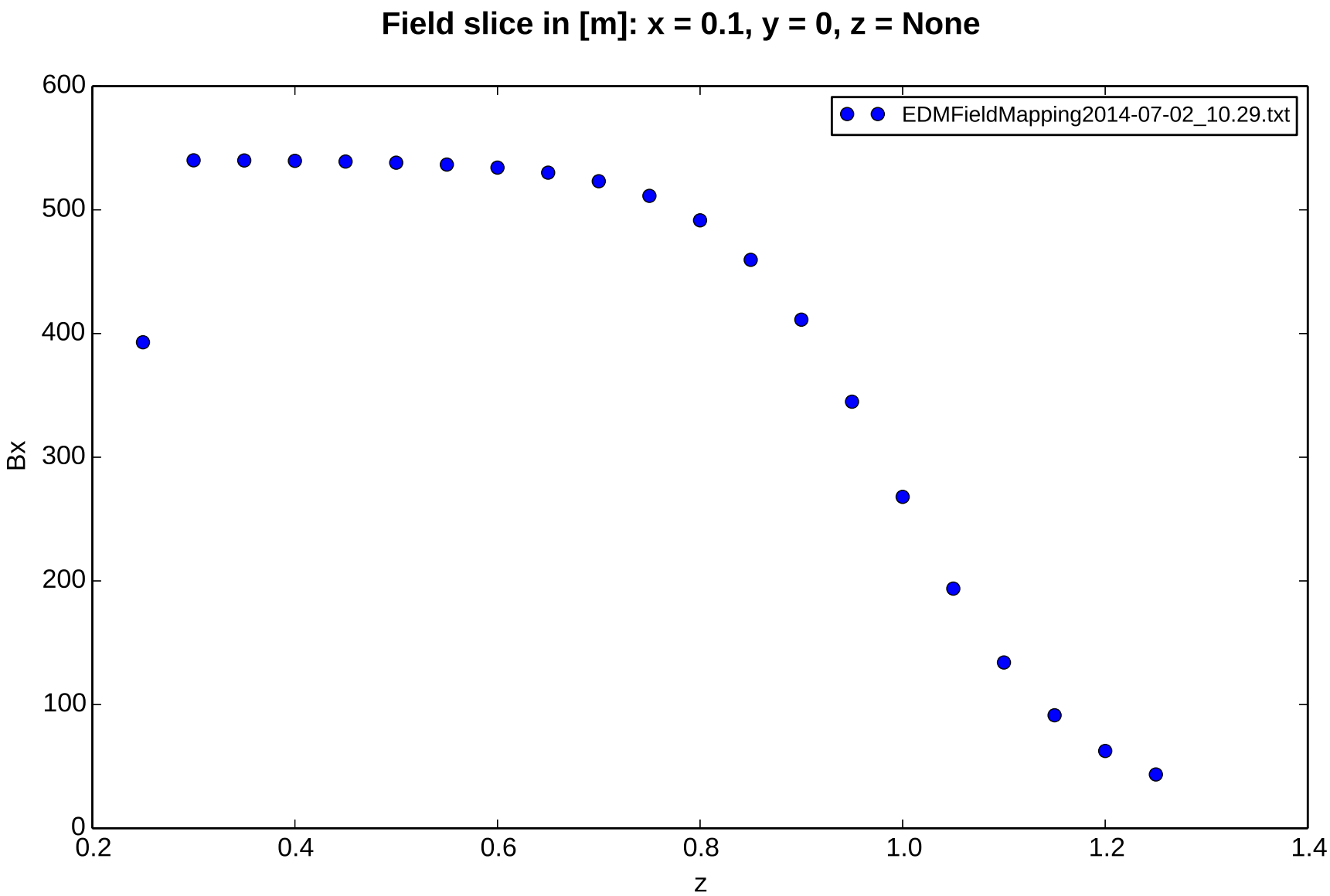
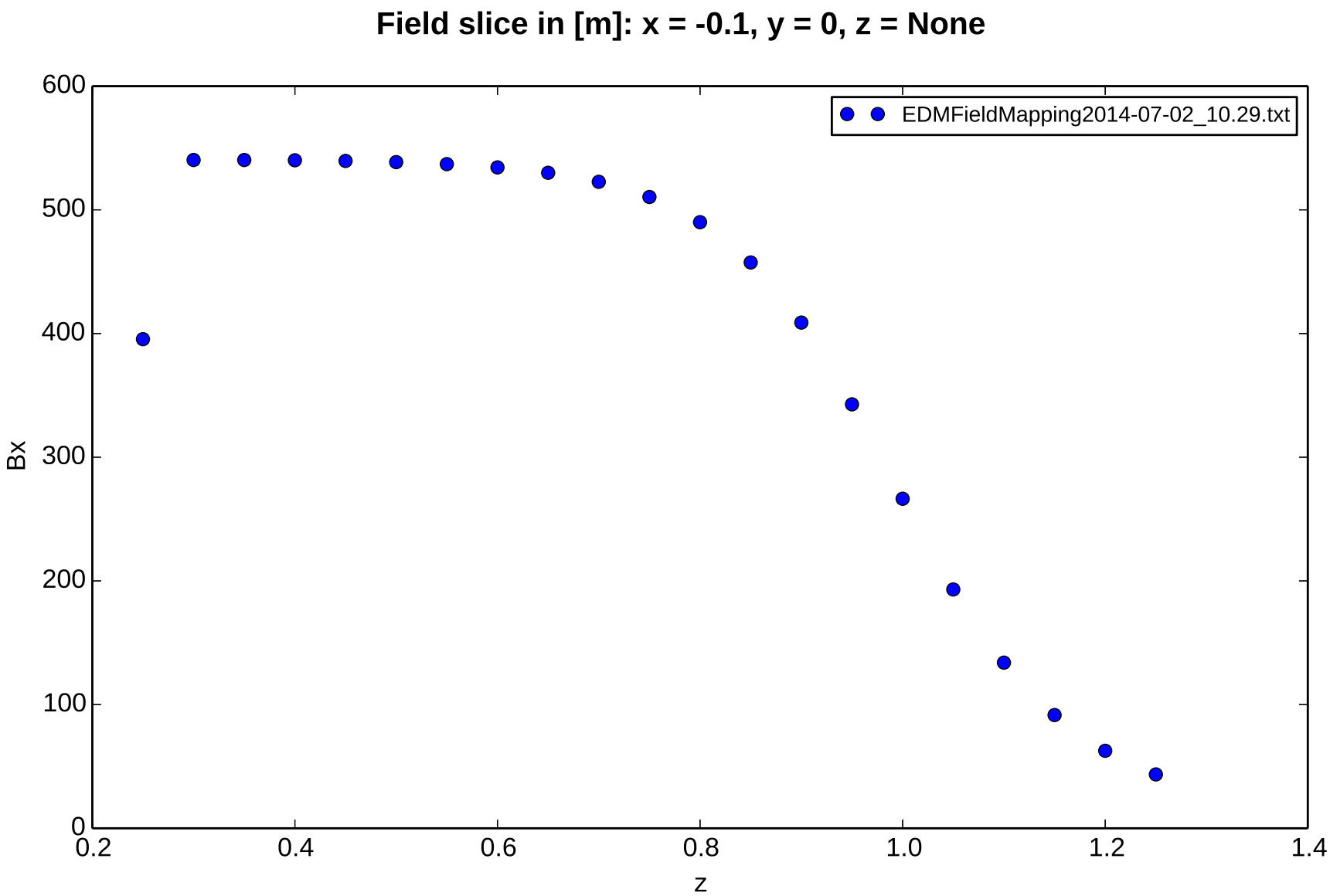
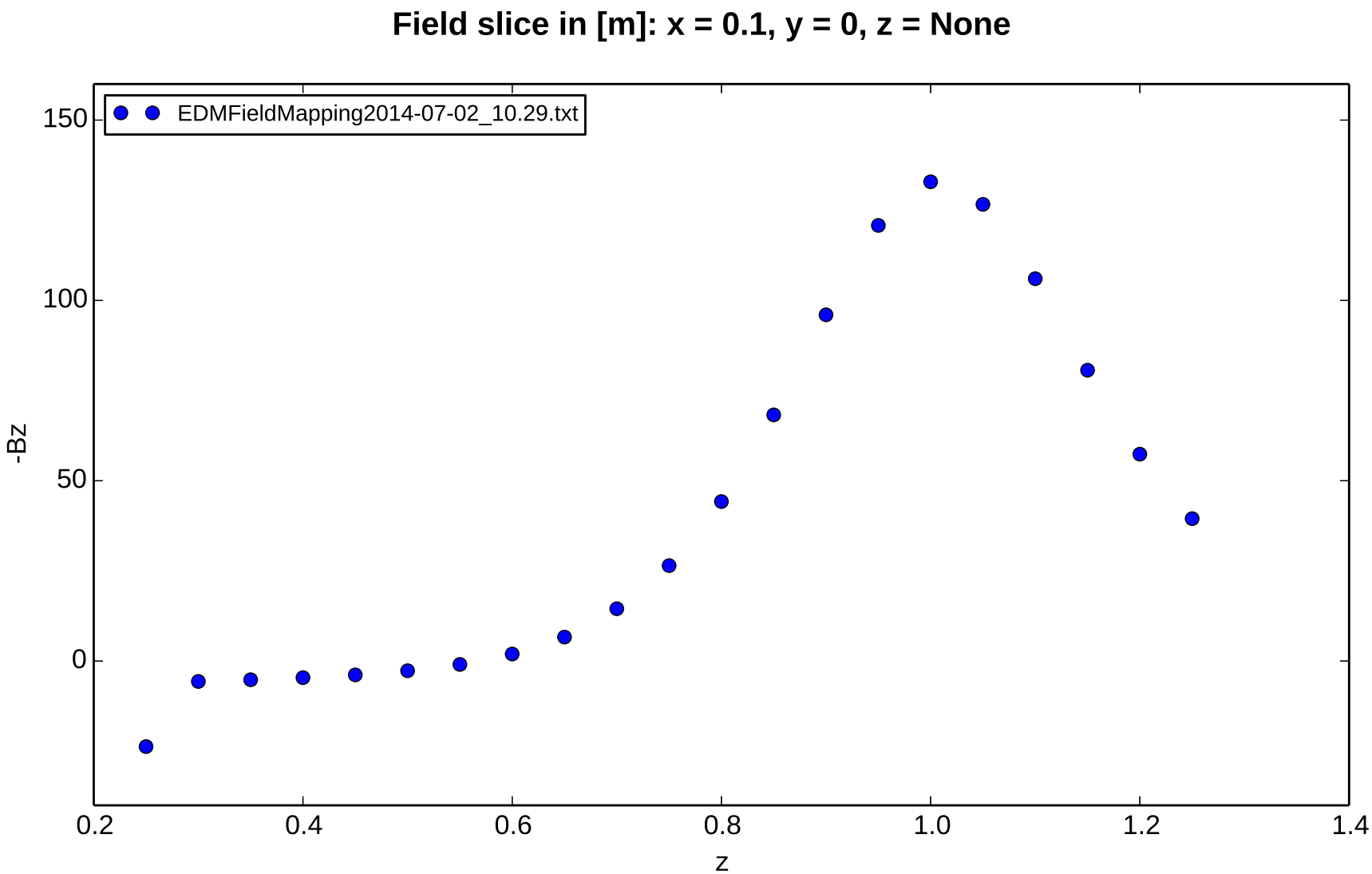
azimuthal symmetry: 0°



azimuthal symmetry: 180°



azimuthal symmetry: 0°, B_z axis flipped



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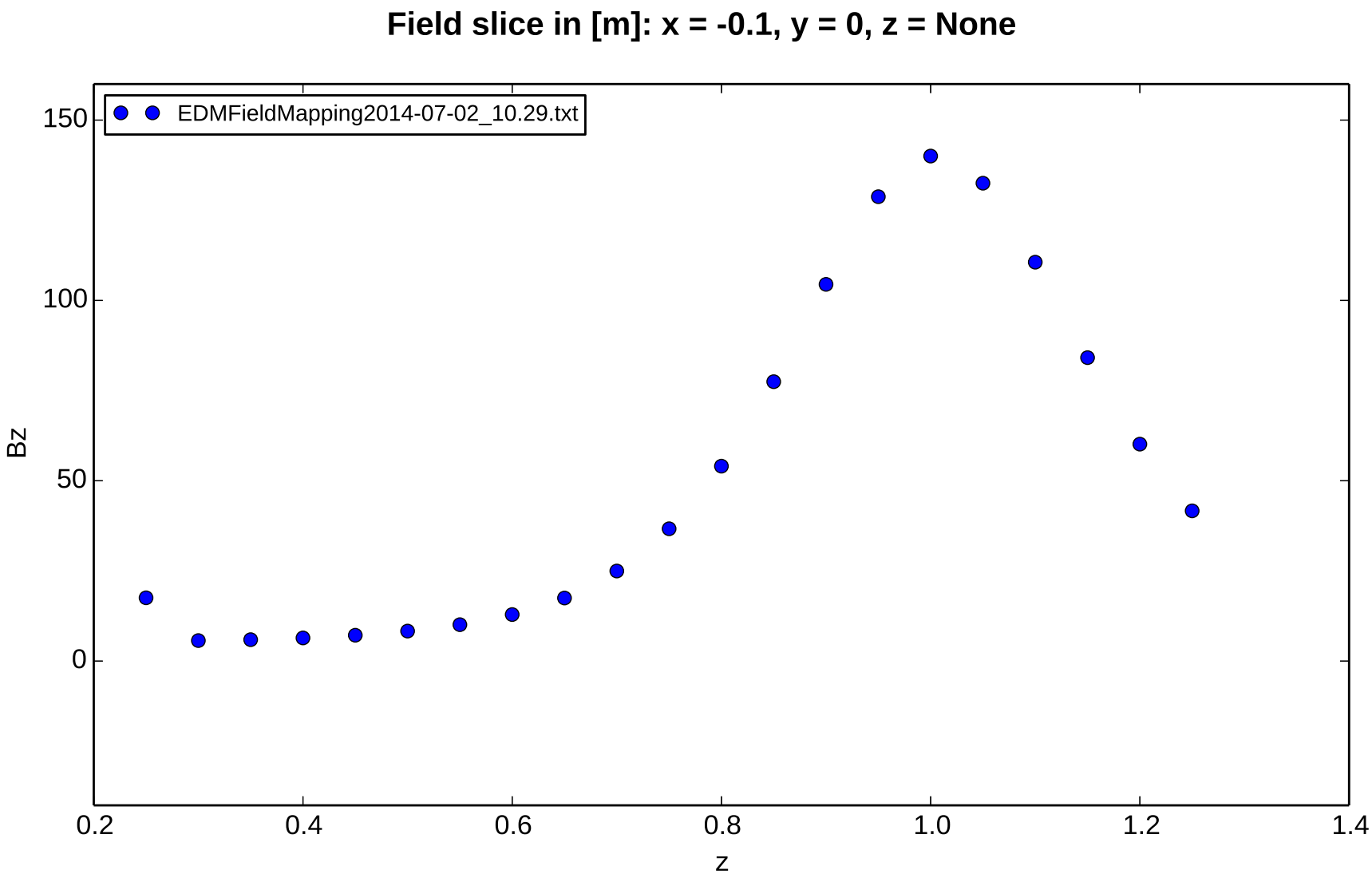

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- rigorously check centering, dimensions of experimental setup