



NPS/CPS Meeting
3 February 2020

SWEEP MAGNET MAPPING DATA

CHARLES HYDE

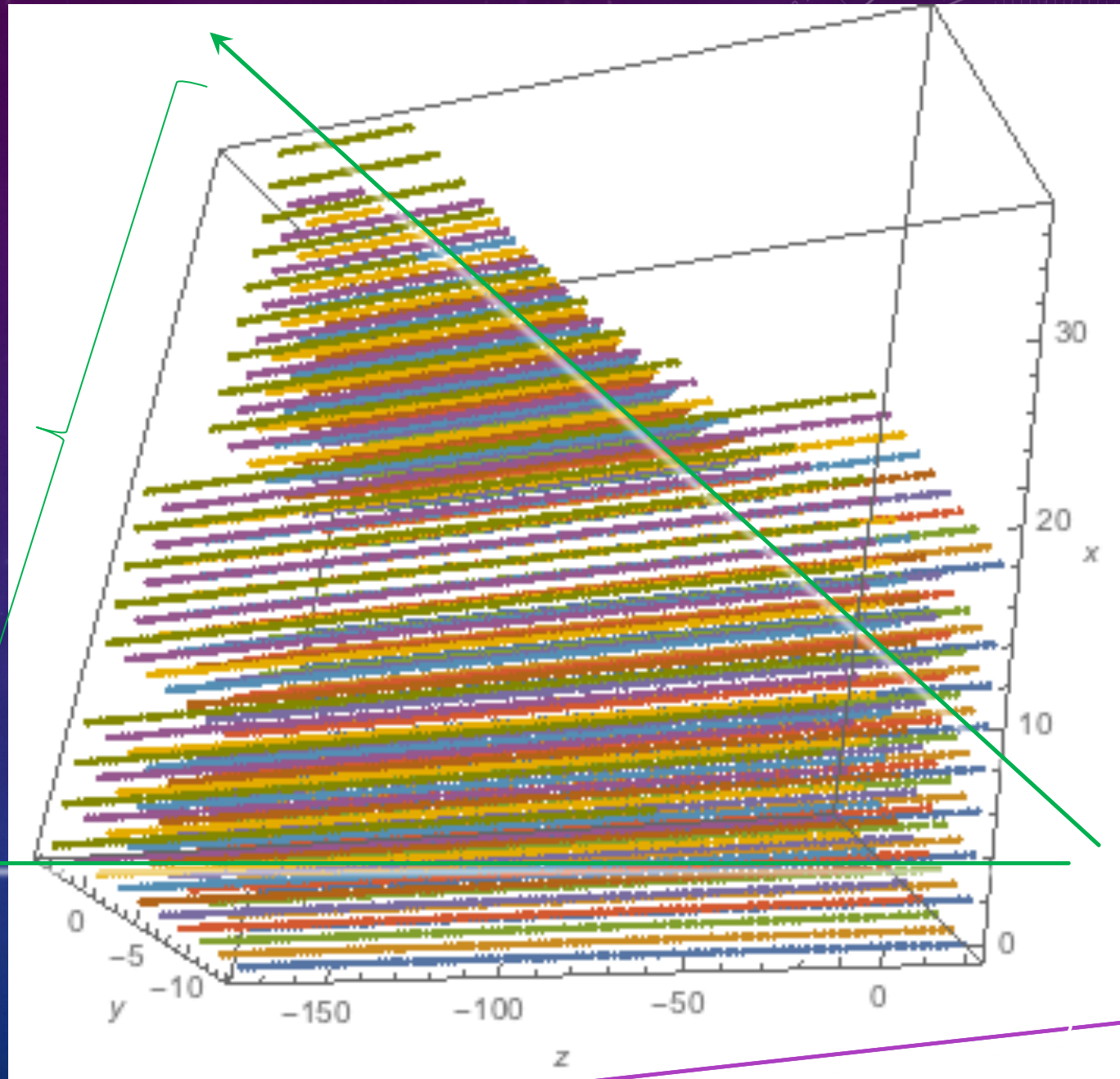
OLD DOMINION UNIVERSITY

Mitch Kerver, Software
Tom Hartlove, Mechanical

MAGNET MAPPER

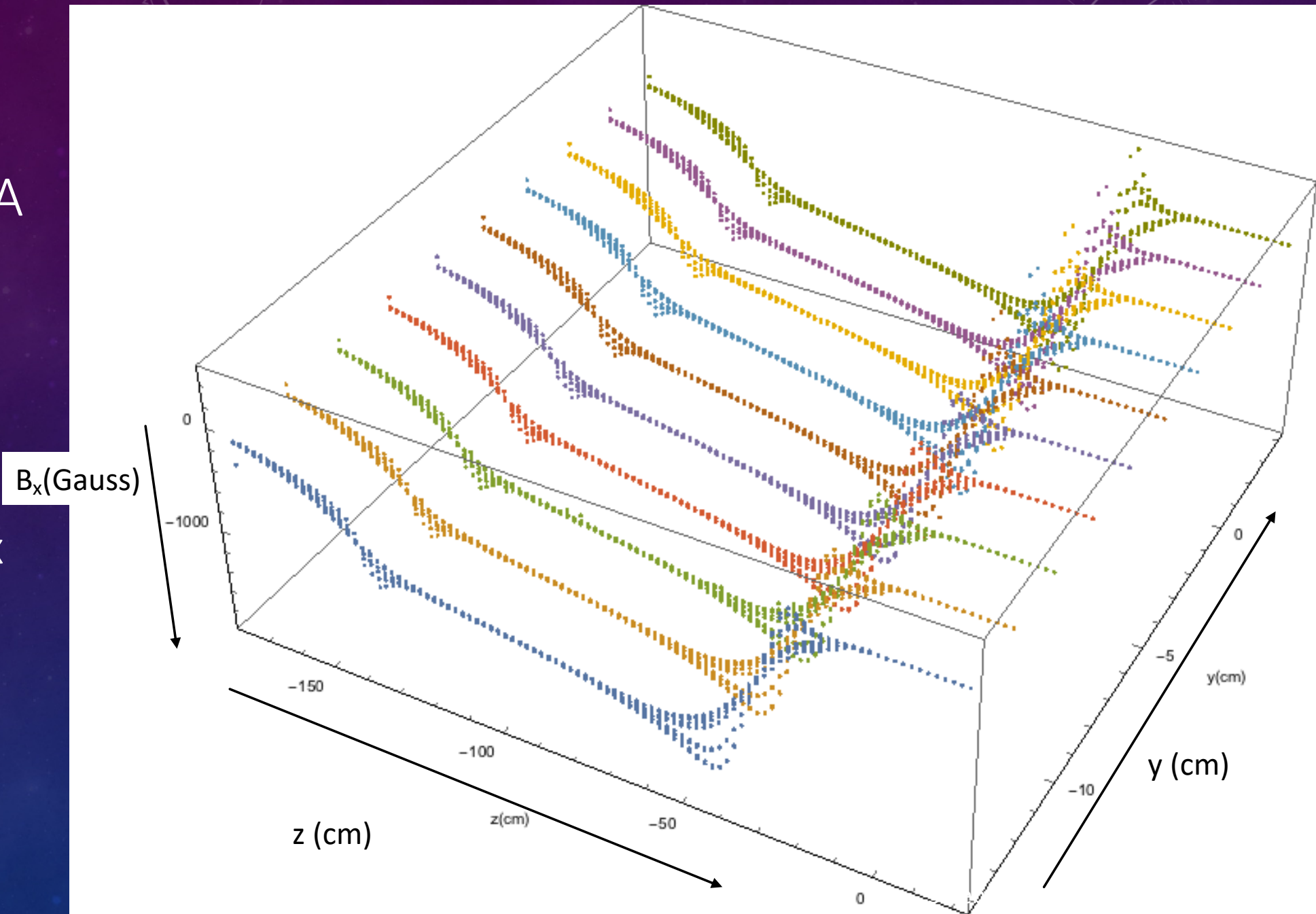
- 3-D Coverage
 - +z towards target
 - +y down
 - +x horizontal away from beamline
- View from below

*Gamma
and
background*



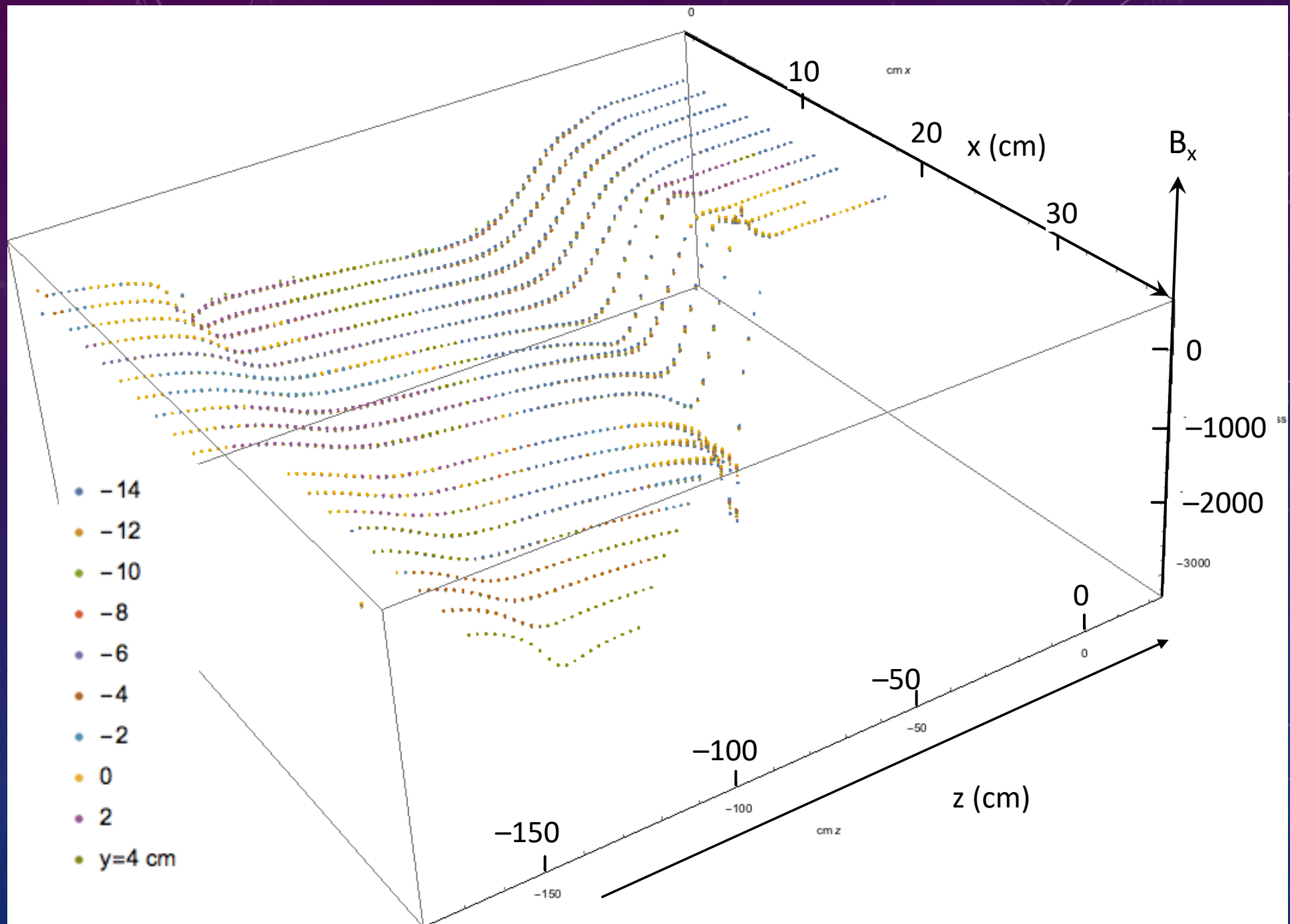
HORIZONTAL FIELD AT 250 A

- Front trim coil off
- Field uniform in x and y at center of z-range



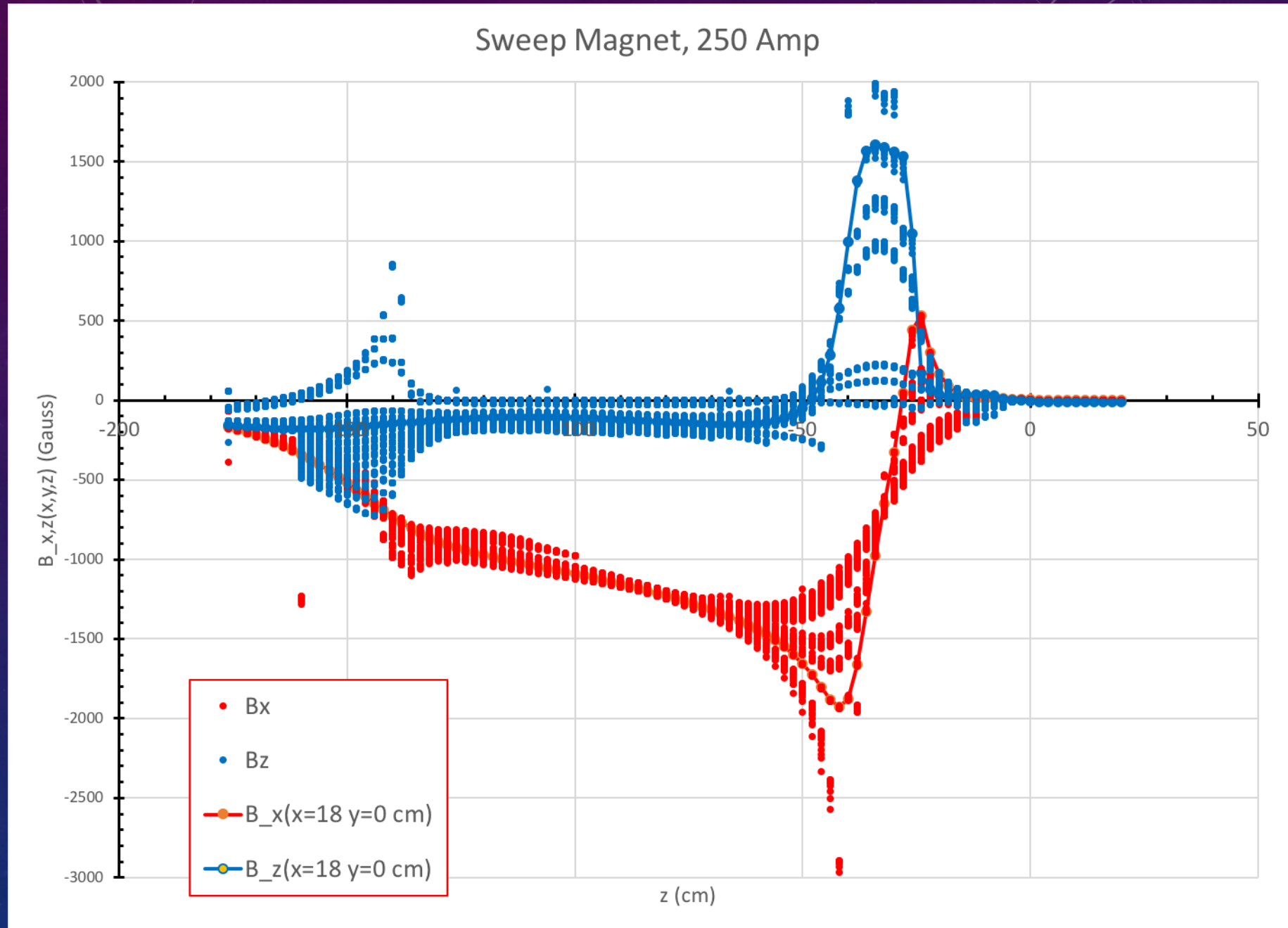
B_x (Gauss)

- Central Field ≈ -1100 Gauss
- Color = various y -values



B_x, B_z

- Various x,y values



SUMMARY

- B_x , B_y , B_z data available in full magnet volume
- Beamline data available
- Future work:
 - Check data with 3D calculations by Bogdan W.
 - Local Interpolation to test consistency
 - $\nabla \cdot B = 0?$
 - $\nabla \times B = 0?$
 - Prepare for full power (~ 700 A + Trim coil) tests on Hall C floor