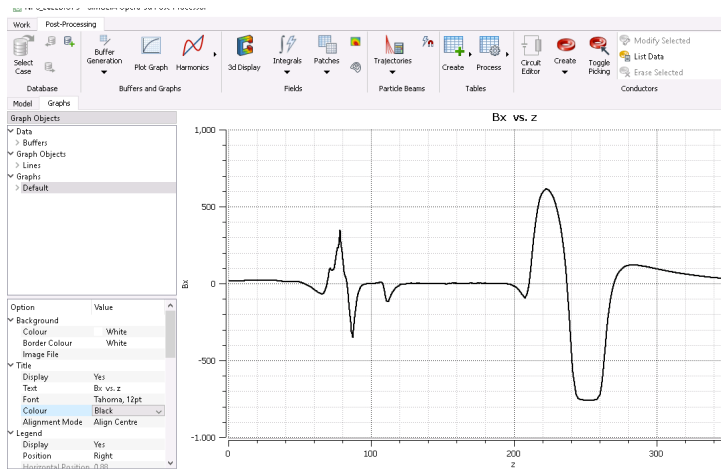


Sweeper currents tuning, Bogdan Wojtsekhowski

Corrector currents for 1000 Amp in Sweeper

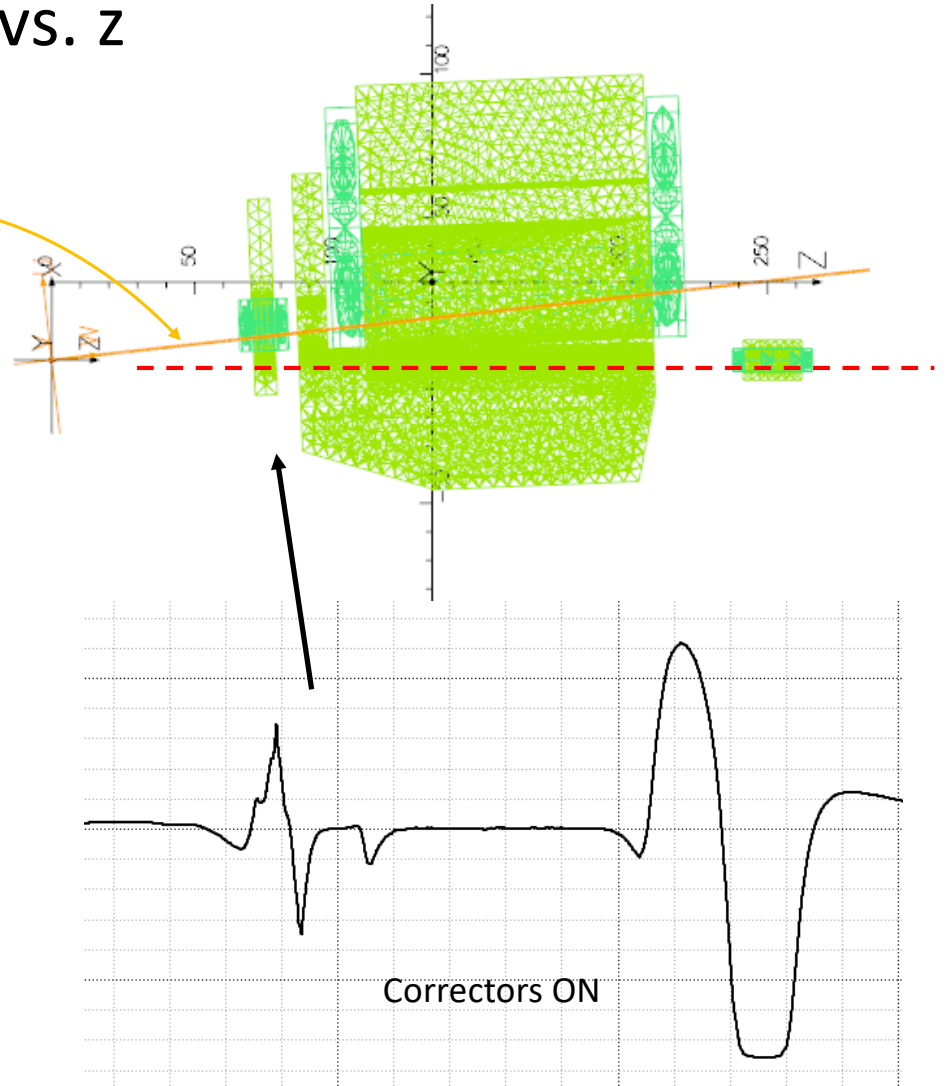
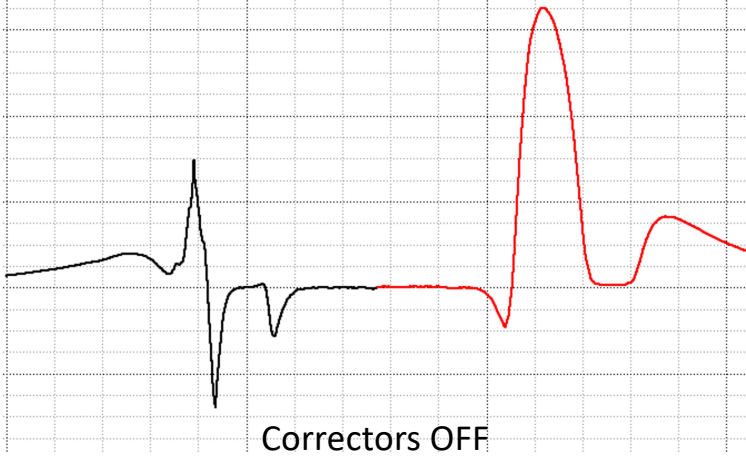
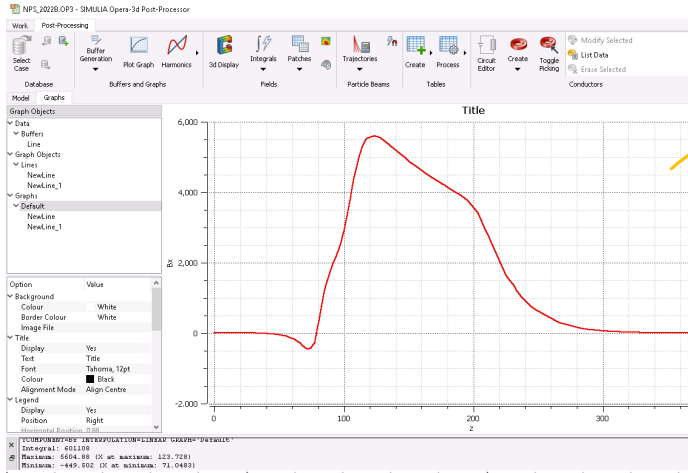


Kinematics	6.3 deg	9.3 deg
Up stream corrector	120 A	260 A
Down stream corrector	90 A	36 A
Bdl in NPS direction Bdl on beam line from Sweeper Bdl with correctors ON	600 kG*cm 4k; 23k kG*cm 0; -1 kG*cm	600 kG*cm 0.1; 1.1 kG*cm

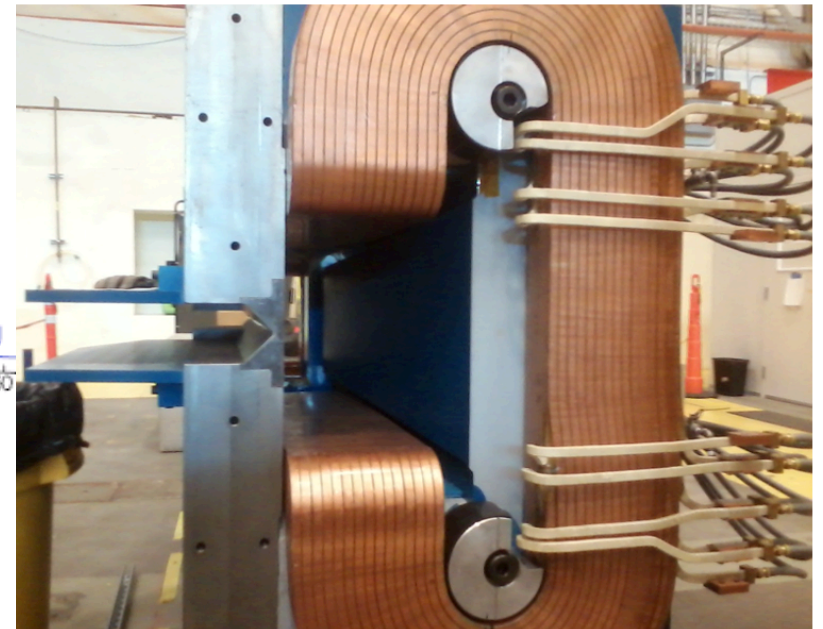
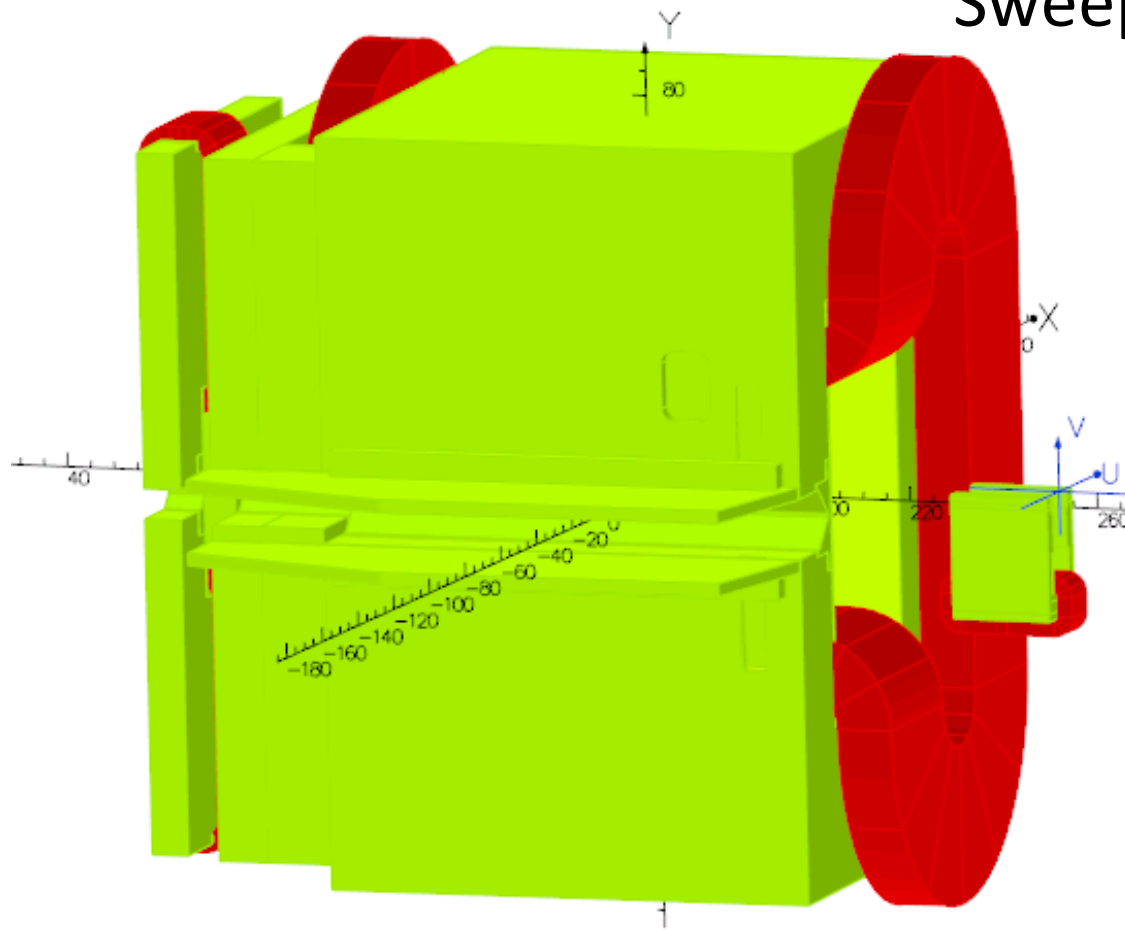
Correctors tuning procedure:

- Put Sweeper current **at 30%** and USC and DSC at 0%; observe deflection at dump (should be **~ 1 cm**)
- Increase (with 5% step) to desirable level and adjust correctors each time to get zero deflection
 - Use USC at the value from the table
 - Tune DSC to get beam at the center at the dump
- Ramp currents to the Sweeper desirable settings (100% corresponds to 0.6 Tesla-meter to the NPS calorimeter)

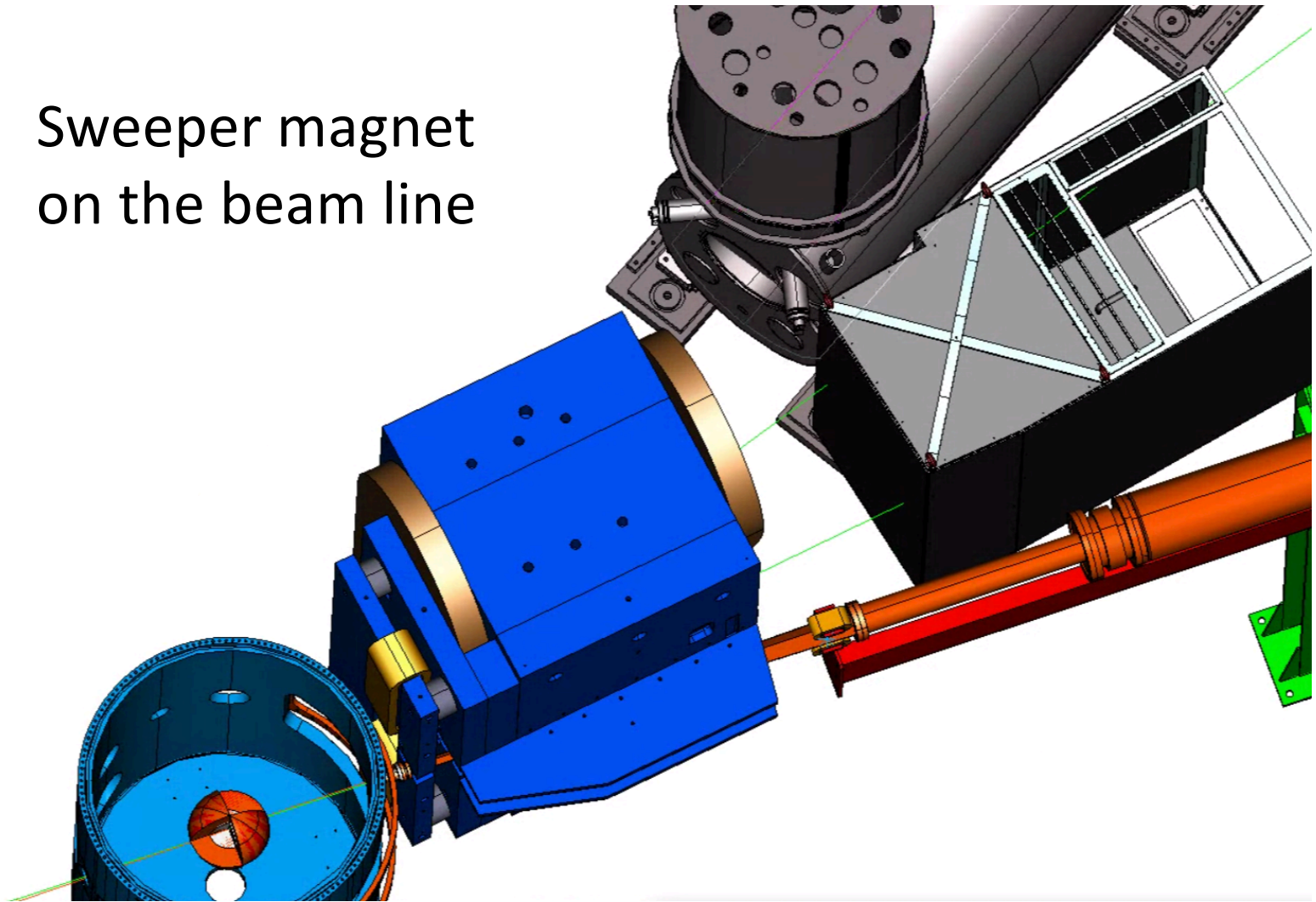
Field vs. \mathbb{Z}



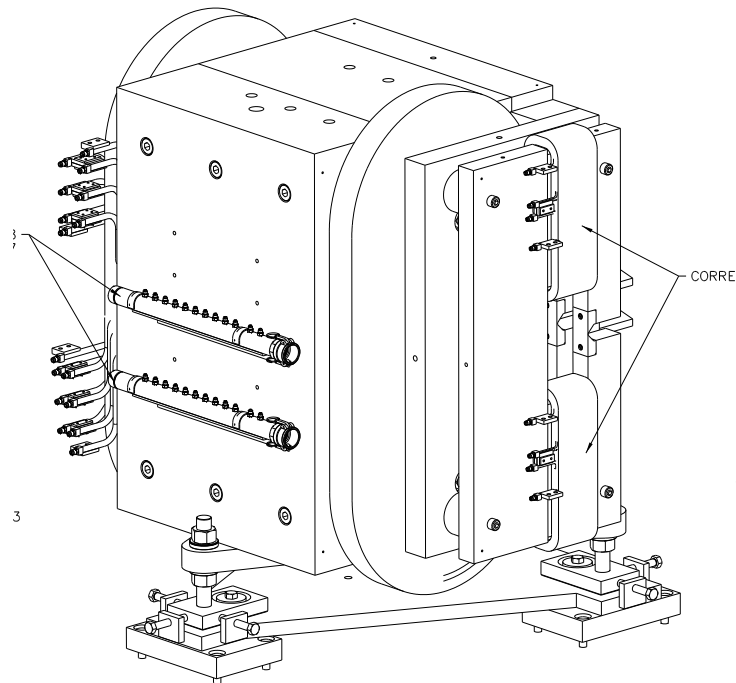
Sweeper magnet



Sweeper magnet
on the beam line



Magnet design



Hall C NPS Sweeper Magnet Yoke

TECHNICAL SPECIFICATION

67508-00004-SPEC

November 5, 2016

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Paul Brindra - Hall C SP Engineer

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