

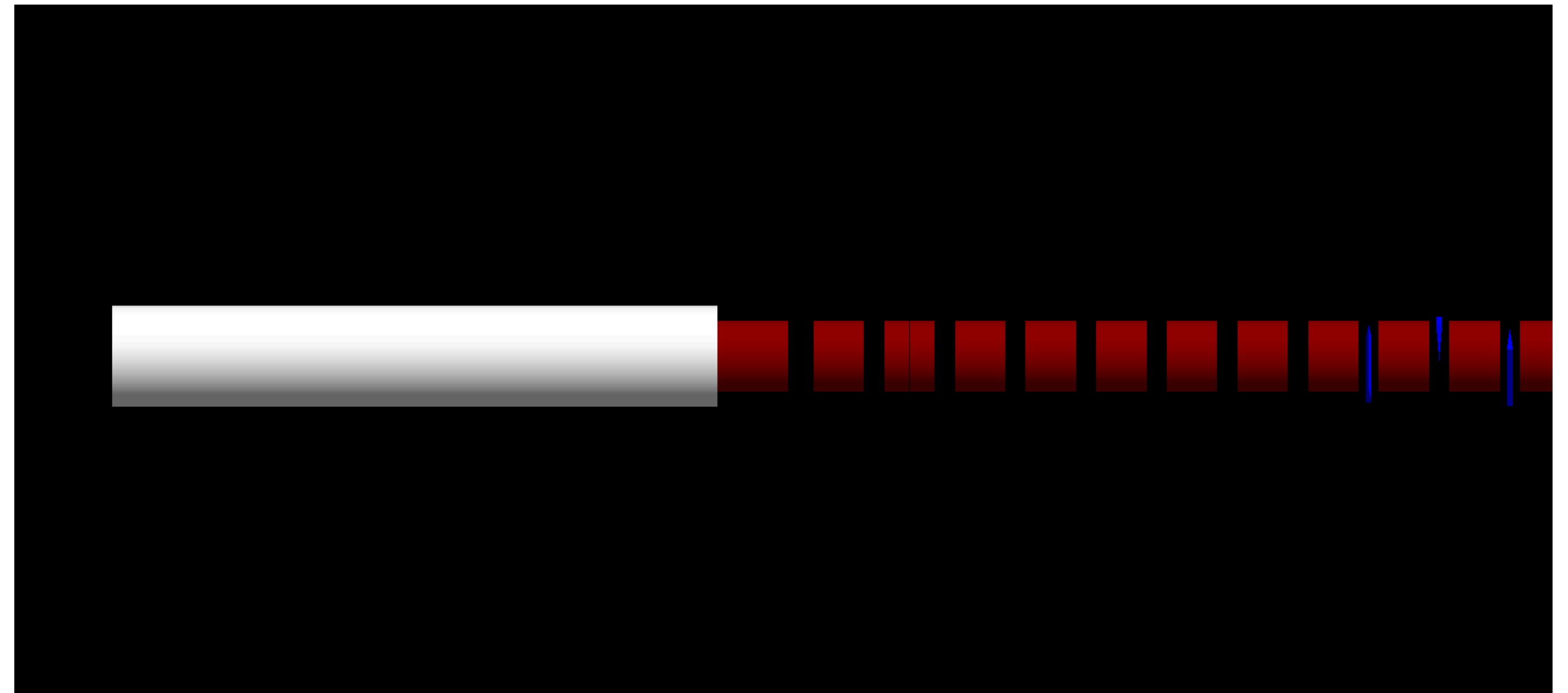
Update **Muon cooling**

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11 June 2025

HFOFO – matching section

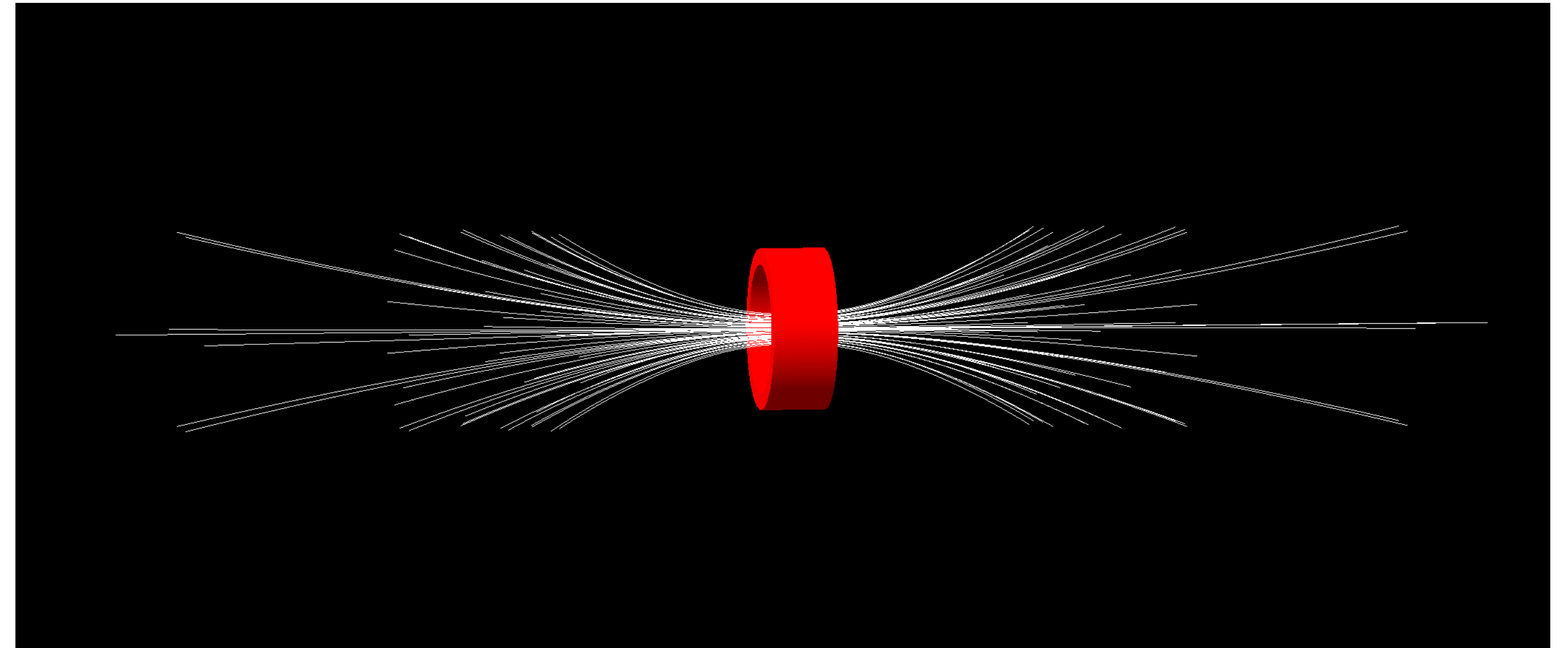
- Trying to replicate original work
- Pitch, roll, etc. varied for each solenoid
- Net → cancellation of individual solenoid effects to produce matched final phase space
 - Twiss parameter periodicity in the main cooling channel



Start of HFOFO channel — g4bl visualization

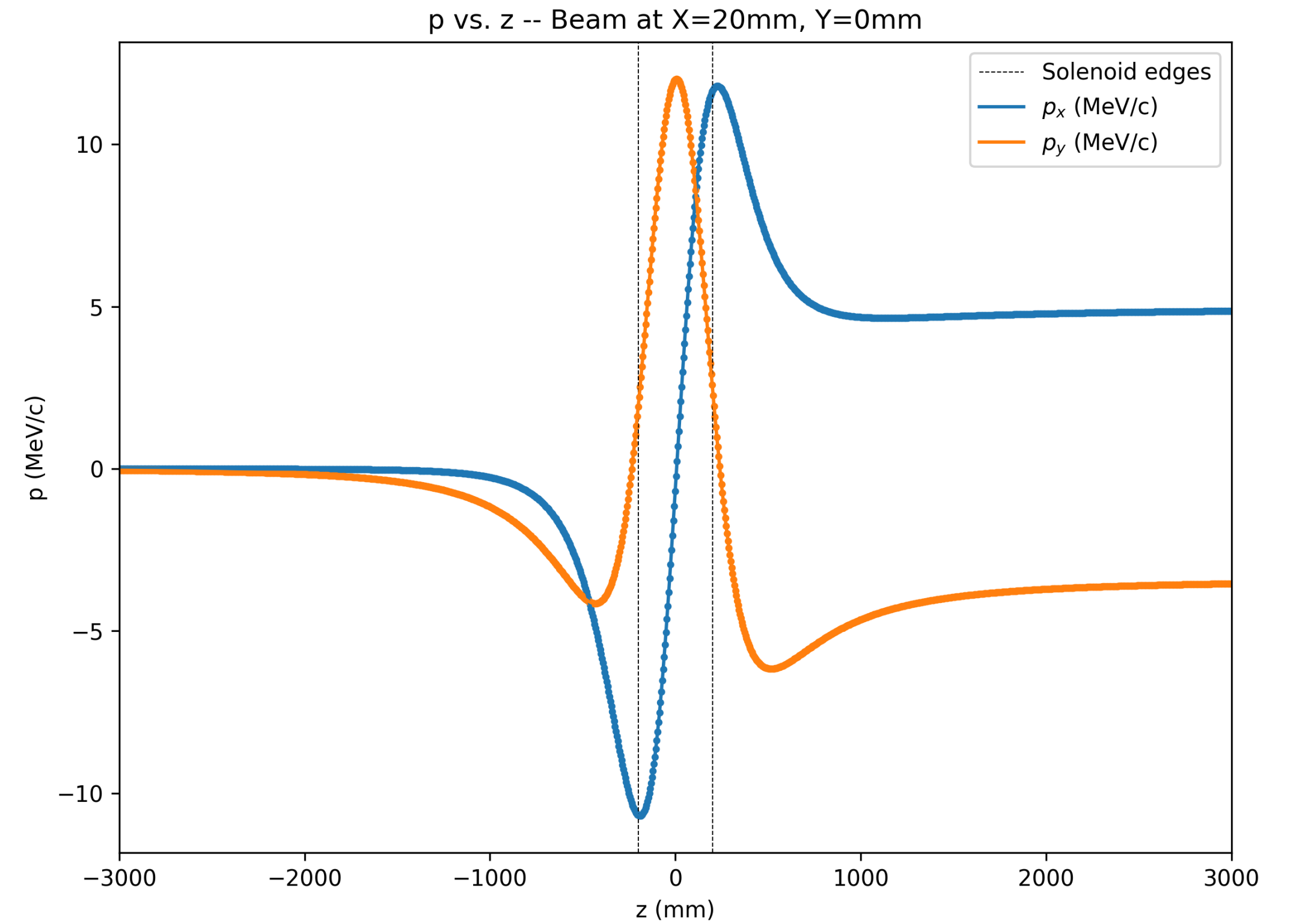
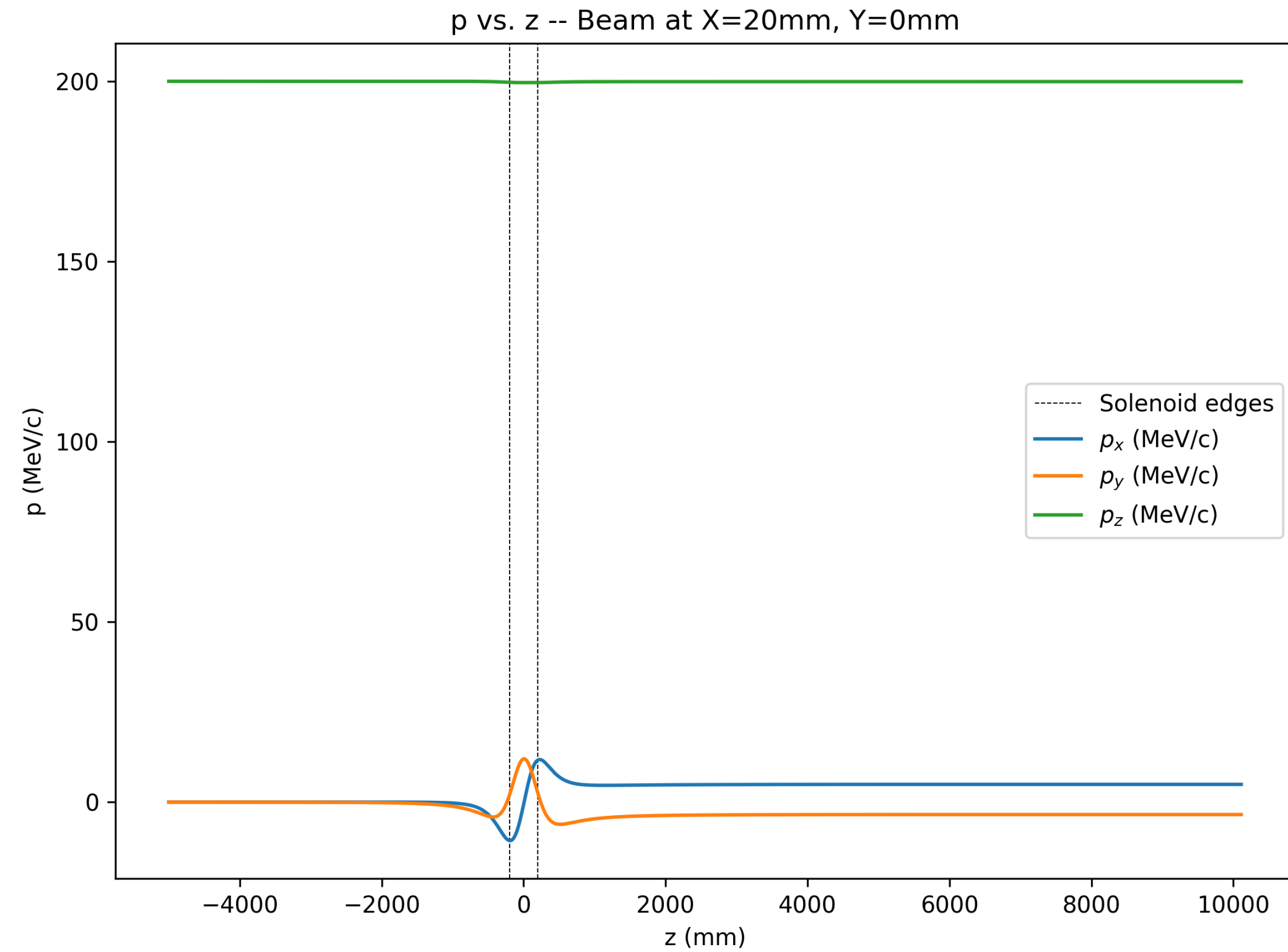
Single solenoid studies

- Starting by studying the properties of a single solenoid in this channel
- Tentative plan is to add one solenoid at a time to observe changes and eventually reproduce the matching section
- Some interesting results →

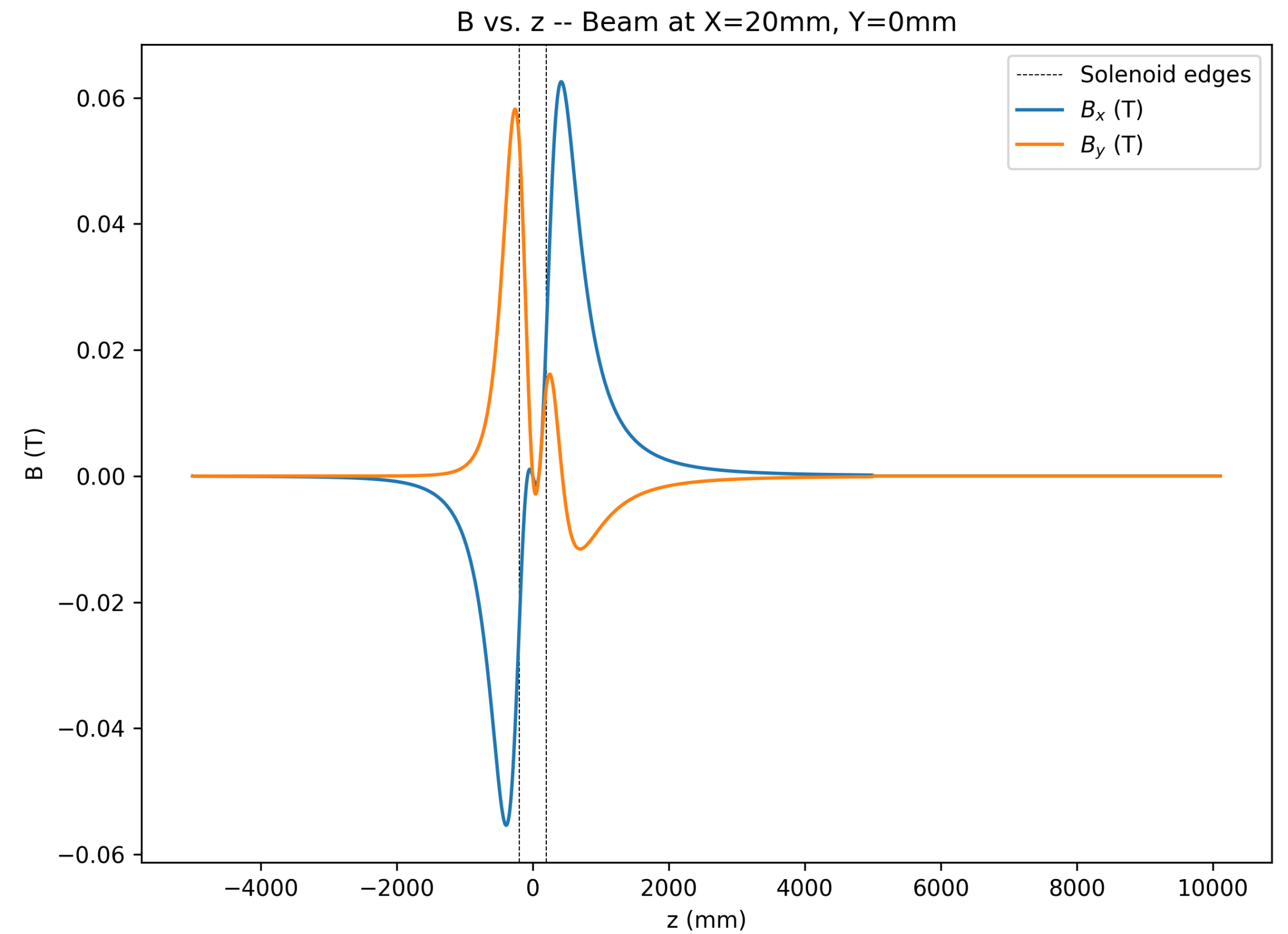
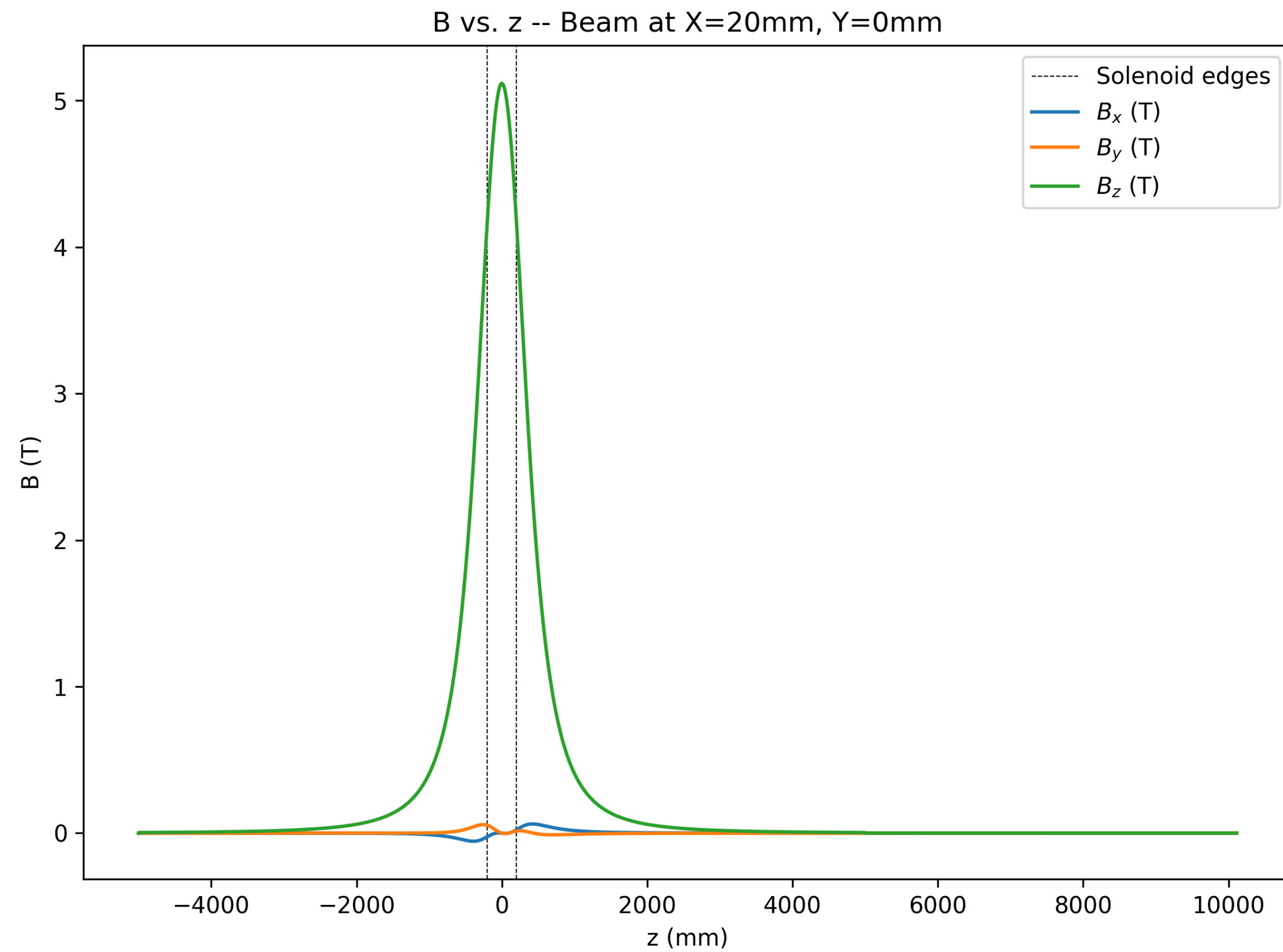


Solenoid — g4bl visualization

Single solenoid studies – momentum



Single solenoid studies – B-fields



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