MICE Step IV without the Downstream M1 Solenoid

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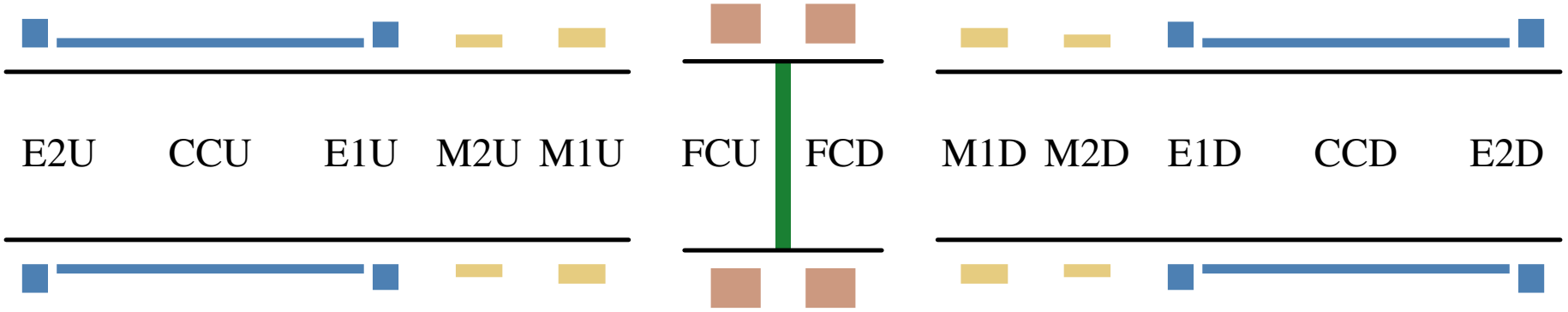
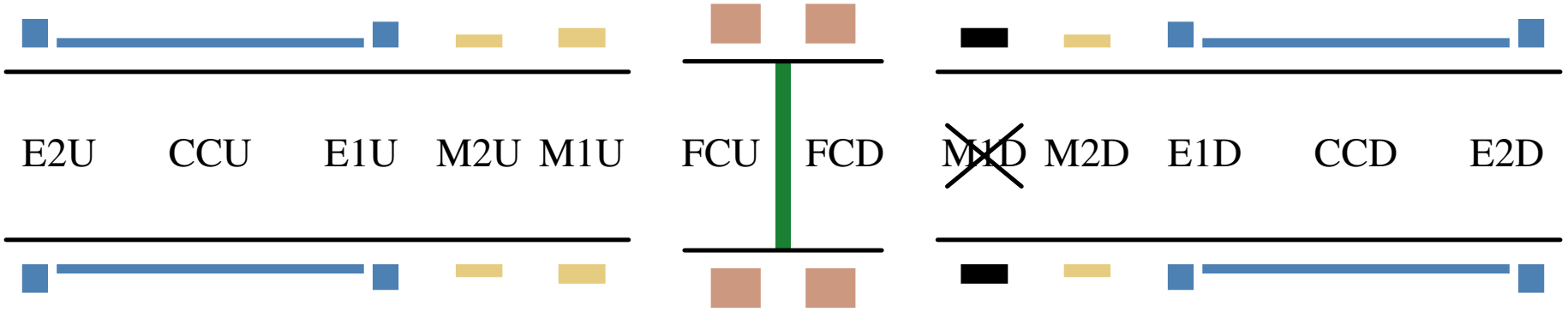
MICE Step IV



- E1/CC/E2 create a uniform ≈ 4 T field for the spectrometer
- FC/M1/M2 create a low-beta focus at the absorber
- M1/M2 share a cryostat with E1/CC/E2

Then there was a Foul Odor



- The downstream M1 solenoid is not currently working
- We need a plan for Step IV without the downstream M1
- Several people have been looking at solutions

What is being Looked At?

- Challenge is getting low beta while maintaining acceptance
- Lowering spectrometer fields (spectrometer resolution issues)
  - Maybe different upstream/downstream
- Solutions with upstream M1 on: asymmetric
- Use of E2 like a matching coil: doesn't really help
- Maybe having runs with low spectrometer field (poorer resolution but cooling) and higher spectrometer field (better resolution, more cooling)

What is being Looked At?

- Mostly linear lattice studies thus far, but Chris Rogers has put forth a couple solutions to track