

Brainstorming on Correcting the Dogleg Effect

February 27 and March 13, 2003

- Short term - Reducing the dogleg effect:
 - With no Dog13
 - Test successful
 - Need solution for short batches, \$17 and RDF
 - Dump in the MI-8 line (AP4)
 - Dump to the Booster collimators
 - Compromise between dogleg current and septum height
 - Being pursued (Tomlin)
 - Use 3 legs instead of 4 legs
 - Need another power supply
 - Can be tested in L3 (Lackey, Popovic)
 - Build longer new doglegs - permanent magnet (Harding)
 - Remotely adjustable MP01 height for different operation modes
 - Not preferred due to operational difficulties
- Long term - Removing both doglegs:
 - Use pulsed doglegs (Lackey)
 - Use large aperture main magnet upstream L3 and L13 (Ankenbrandt, Harding)
- Proposals studied but not seem to be feasible:
 - Enlarge the spacing between doglegs
 - Relocate Dog13 to L5 or L11
 - Use correction wedge magnet
 - Use correction quads
 - Use 45-degree legs

(blue: done or being done; red: those working on it)