

# Muon Acceleration to 750 GeV in the Fermilab Tevatron Tunnel

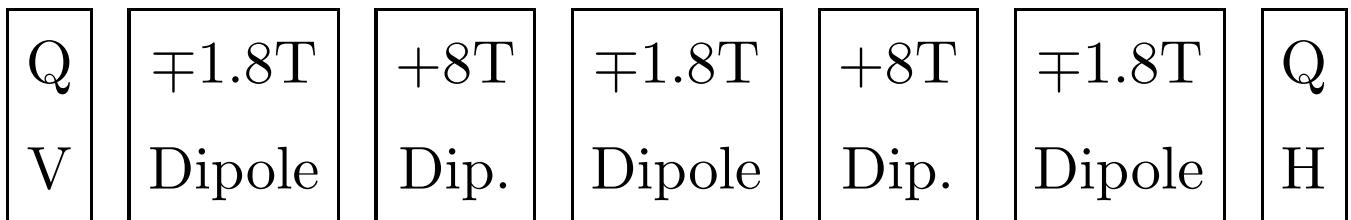
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## Modify the 400 GeV Main Ring

- $100 \rightarrow 750$  GeV in 65 orbits (1.4 ms).  
10 GeV of 1.3 GHz, 30 MV/m SRF.  
Muon Survival = 82%.  $r = 1000$  m.
- FODO Lattice 30.45 m Long Half Cell.  
3.3 m, 160 Hz, 30 T/m Quadrupoles.  
3.2 m, 8 Tesla Superconducting Dipoles.  
5.7 m, 360 Hz,  $\pm 1.8$  Tesla Dipoles.  
Dipoles oppose, then act in unison.  
Eddy Currents: Thin copper wire and  
.28mm grain oriented Si steel laminations.



- 1.5 TeV  $\mu^+ \mu^-$  Collisions in the MI Tunnel.  
Little civil construction. Existing tunnels.