



Effect of new field taper on IDR front end performance

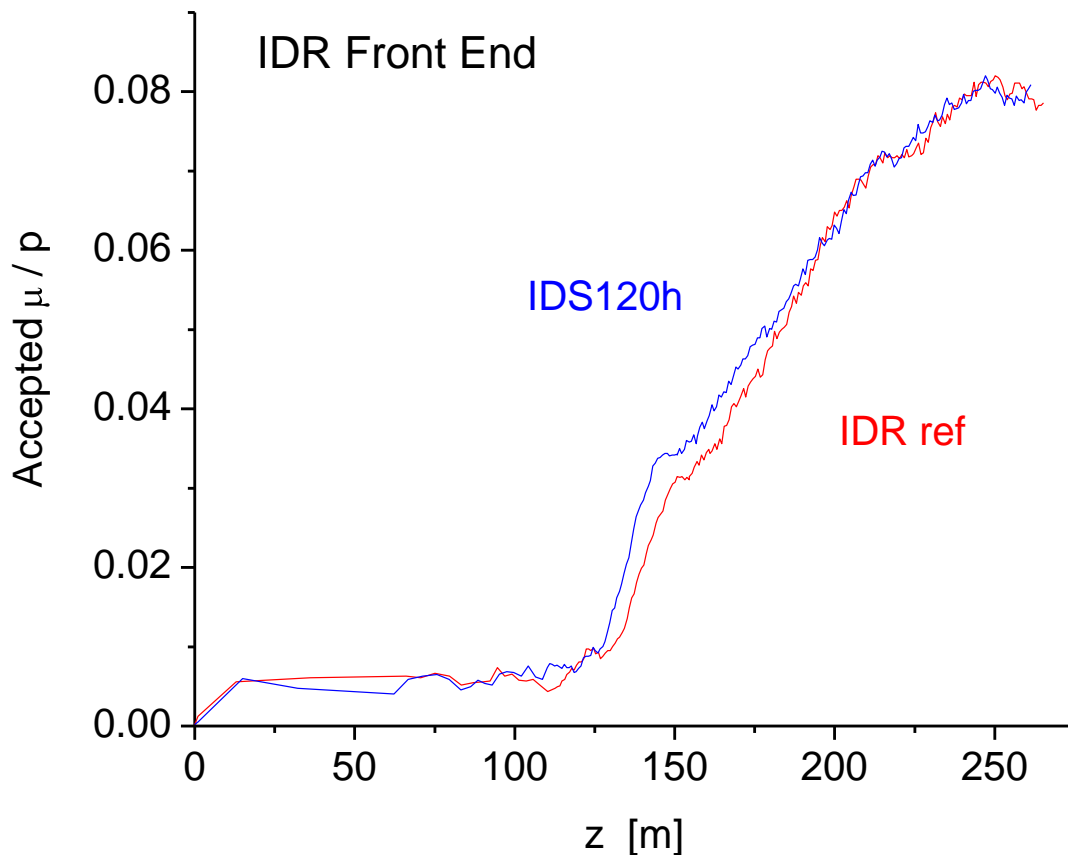
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AAG Thursday Meeting

15 December 2011

Acceptance

12/13/2011 14:19:05



- ref = v1.1 discrete
- used ICOOL v3.28
- replaced Study 2 taper (18.9 m) with IDS120h taper (15 m)
- used ref 8 GeV beam for both (should repeat IDS120h with self-consistent beam)
- issue with aperture in ref files

Taper aperture

- the aperture (radius) in the taper region was constant 40 cm in the reference design
- the field map was only defined to 32 cm
- look at realistic taper aperture (constant B flux) for IDS120h
 - reduced total transmission by $\sim 1.1\%$
 - reduced accepted muons by $\sim 5.7\%$

12/14/2011 10:29:28

