

GEANT Field Rotation in Palmer's Ring

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Constant Field Rotation in GEANT

- Can GEANT rotate the field by itself ?
 - Applied a constant field (0.1278 Tesla) into one cell
 - Let GEANT rotates the field by itself
 - Locate μ^+ (204 MeV/c) at 532 cm in z direction
- The μ^+ still follow a closed orbit !

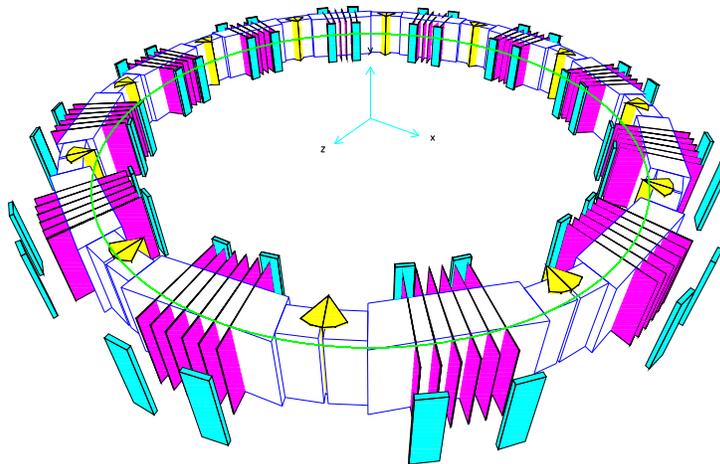
Closed Orbit with Rotation Field

ARTE

PALMER RFOFO RING SCHEME

11/08/02

Applied $B = 0.127821$ T into one cell
Let GEANT rotates the field by itself



Rotated Constant Field

No Field, No Closed Orbit

- Did GEANT rotate the field correctly ?
 - Applied the same field (0.1278 Tesla) into one cell
 - Let GEANT rotates the field by itself
 - Locate μ^+ (115 MeV/c) at 300 cm in z direction
- If the field is every where \perp to the ring we should get a closed orbit otherwise there is no field outside the ring
 - Indeed μ^+ does not follow a closed orbit !
 - The μ^+ was bent when entering the ring

No Field Outside the Geometry Region

