CMS measured magnetic field

/afs/cern.ch/cms/OO/mag_field/version_11031_071212_4t
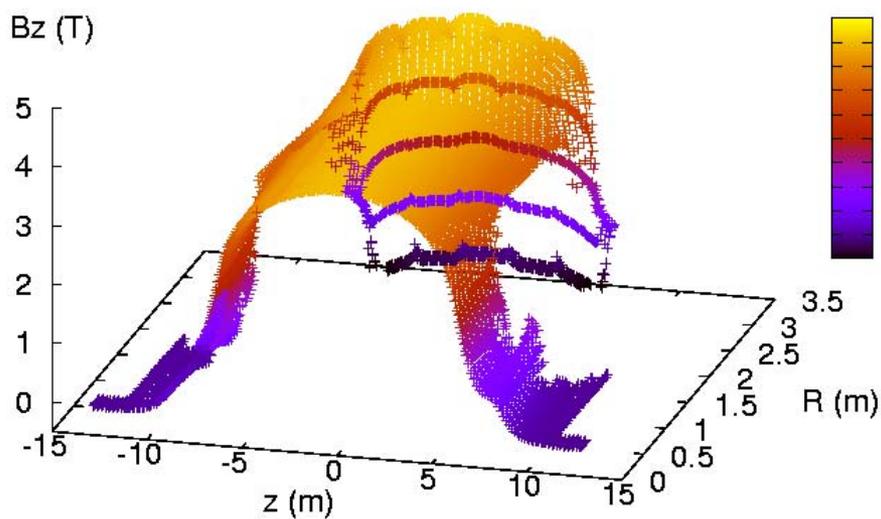
Non *equal-spaced* 3D map (**B***(r, φ, z)*)
We interpolate it to produce *Bz vs z*
and *Bx,By* (Br2=Bx2+By2) *vs z* maps
along the beam trajectory (like the SiD
map) at the CLIC crossing angle.
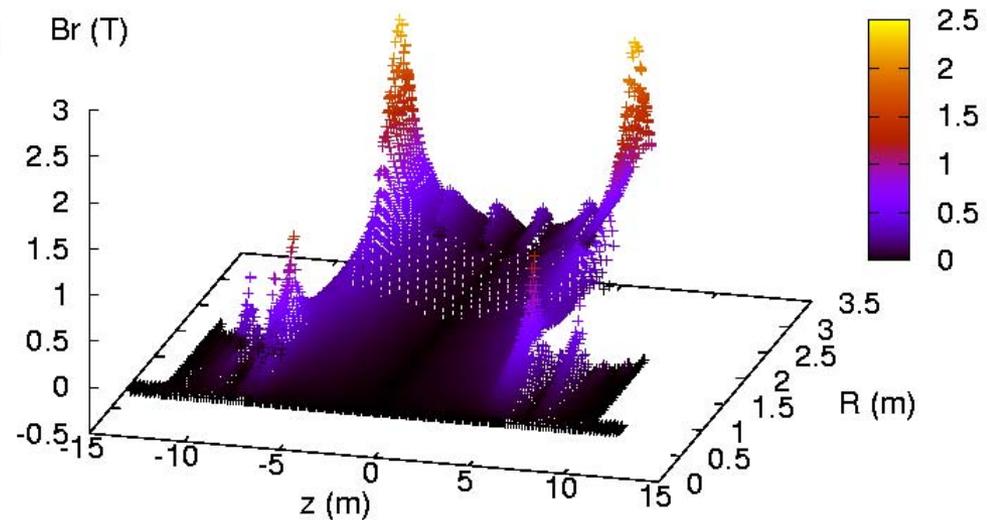
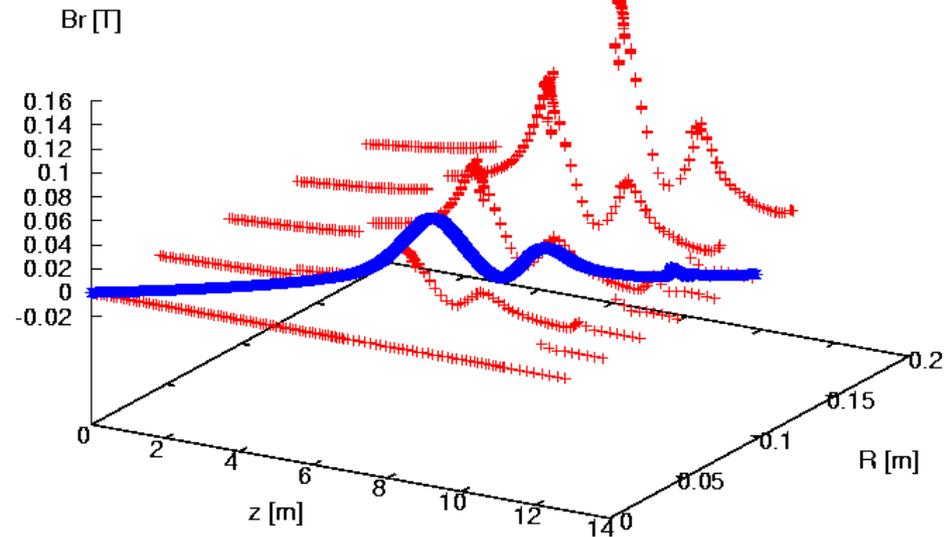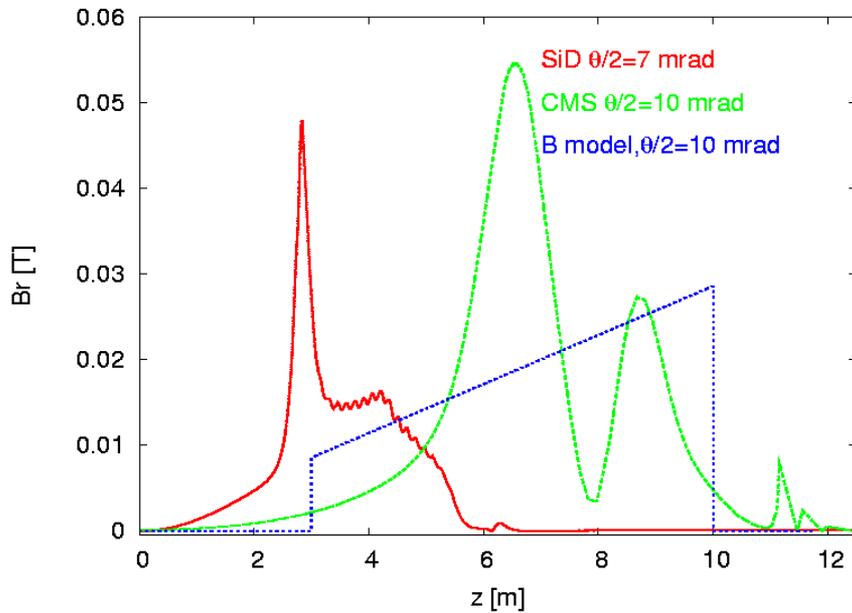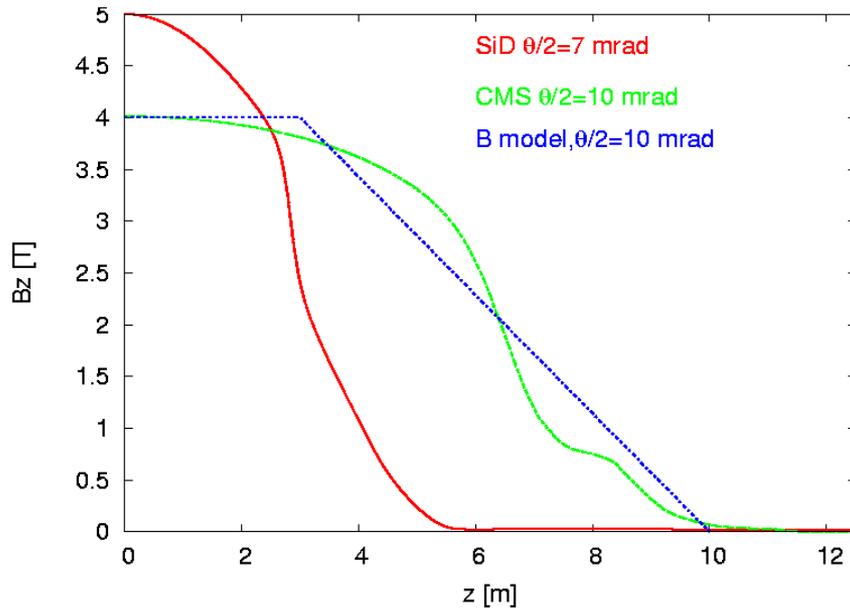# CMS measured magnetic field (interpolation)

CMS map

CMS magnetic field map
CMS interpolation = 16 θ/2=10 mrad

Bz [T]

CMS map

Br [T]
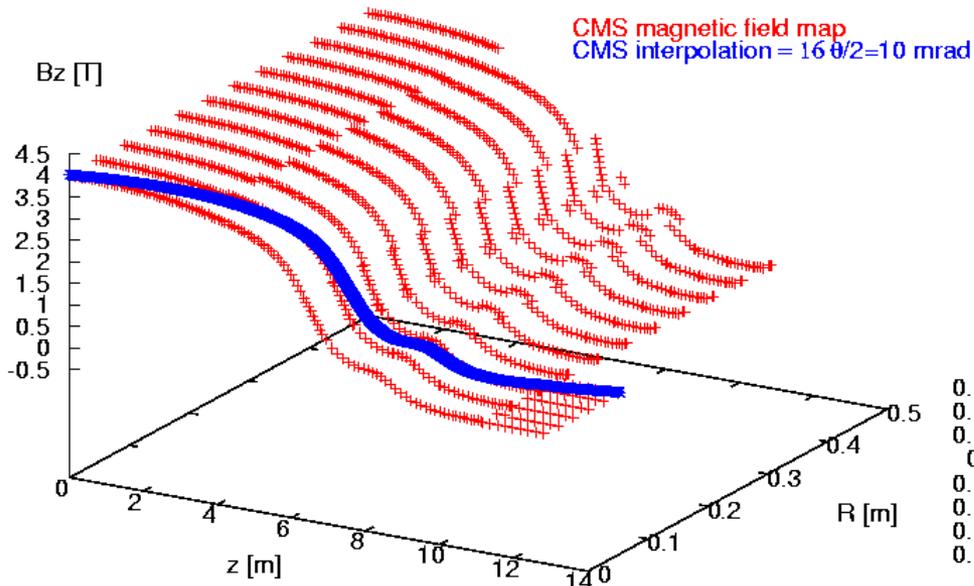
Fields and trajectories

Orbits in different magnetic fileds:
1)SiD: field calculated by ANSYS
2)CMS: interpolated from measured data points
3)Simple model of solenoid magnetic field (for comparison)

Beam orbits