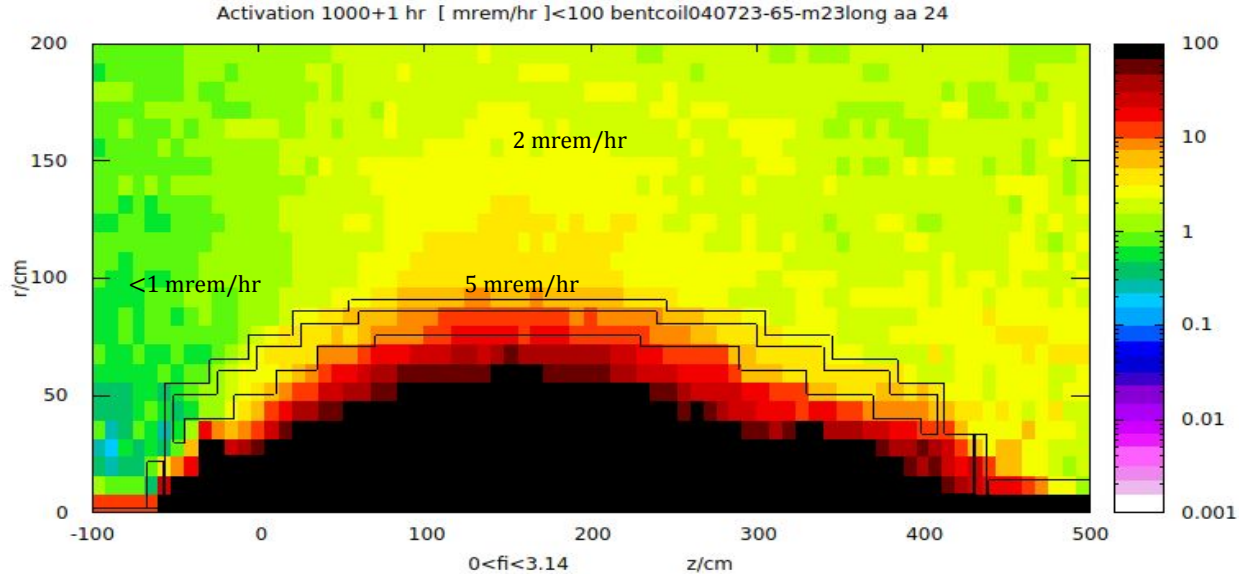


# Optimisation of Tim Whitlatch design. In progress.



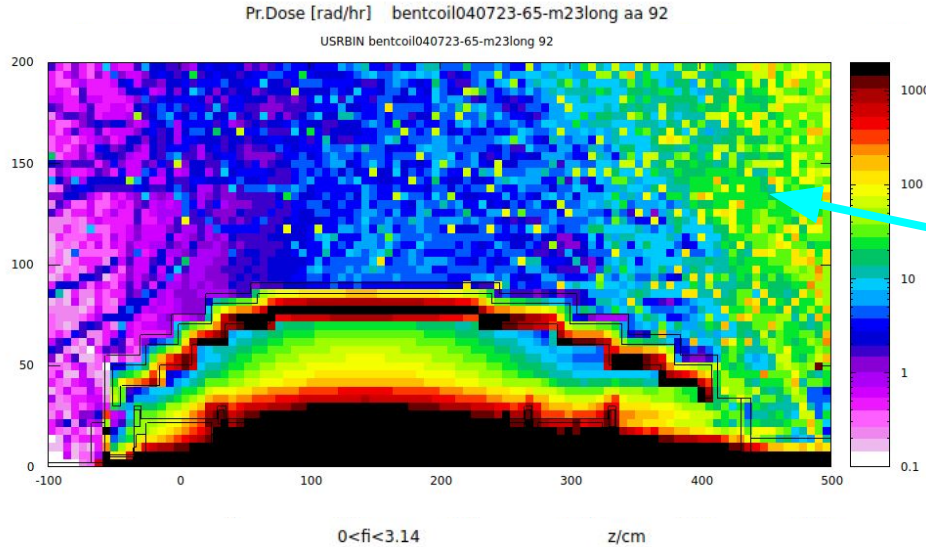
- Maximal radius reduced from 110 to 91 cm. (=>Lower cost)
- Copper, lead, iron, and small W-based coil shields.
- Activation, Prompt Dose, and coil LT are estimated at 80% of nominal field (Hovanes).

# 1000+1 hr Activation estimate . In progress.



- Activation around CPS is below 10 mrem/hr.

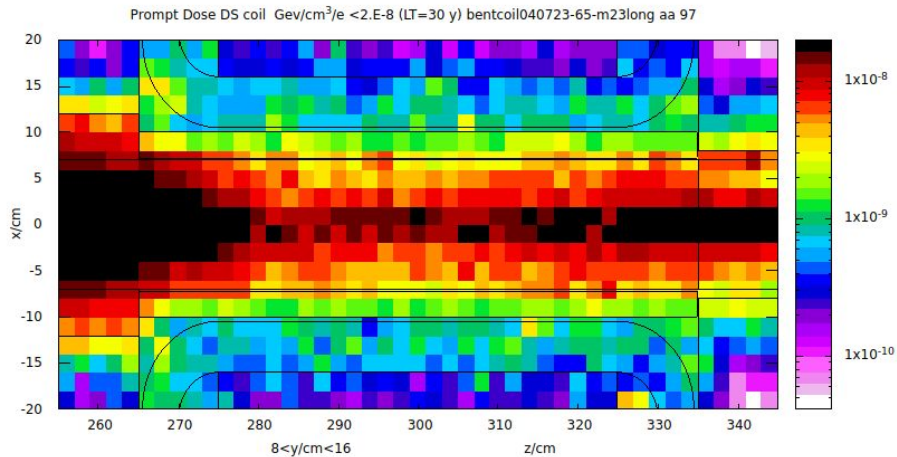
# Prompt Dose rate estimate . In progress.



Particle tracks  
from the downstream part of  
The beam line.  
Will be fixed.

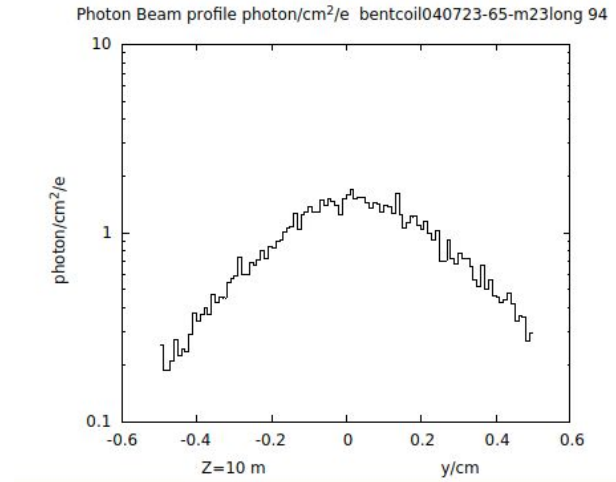
- CPS induced prompt dose is below 20 rad/hr.

# Prompt Dose IN DS coil . $2.E-8 \text{ GeV/cm}^3/\text{e} \Rightarrow \text{LT}=30 \text{ years. In progress.}$



- $4.E-9 \text{ GeV/cm}^3/\text{e} \Rightarrow \text{Coil Insulation LT}=150 \text{ Years.}$

# Photon Beam profile at $z=10$ m . Primary beam $1 \times 1 \text{ cm}^2$ .



- **Primary beam to be collimated** => to reduce interactions with DS beam line.
- **Further optimisation** of CPS shield **radius** (below 91 cm) if Lead temperature is OK.