



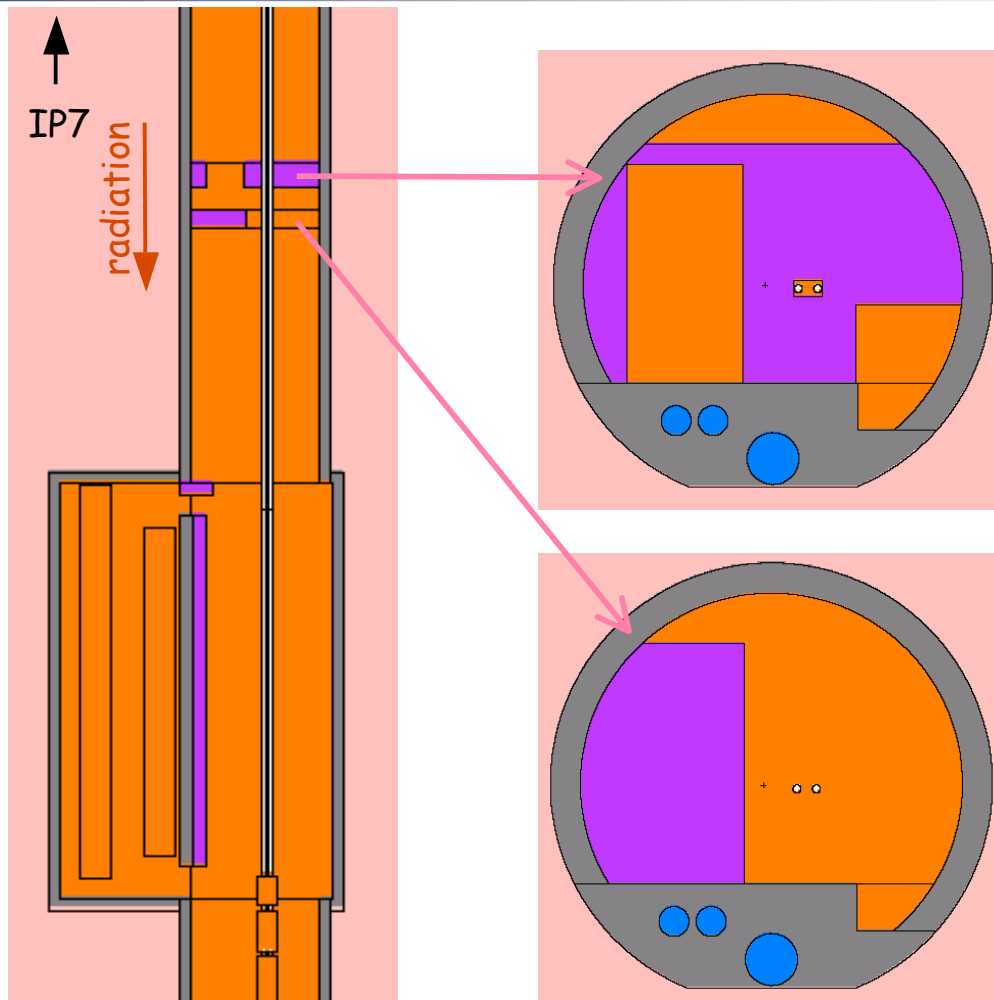
Shielding studies in RR73/77

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49th Collimation WG Meeting, 10/12/04

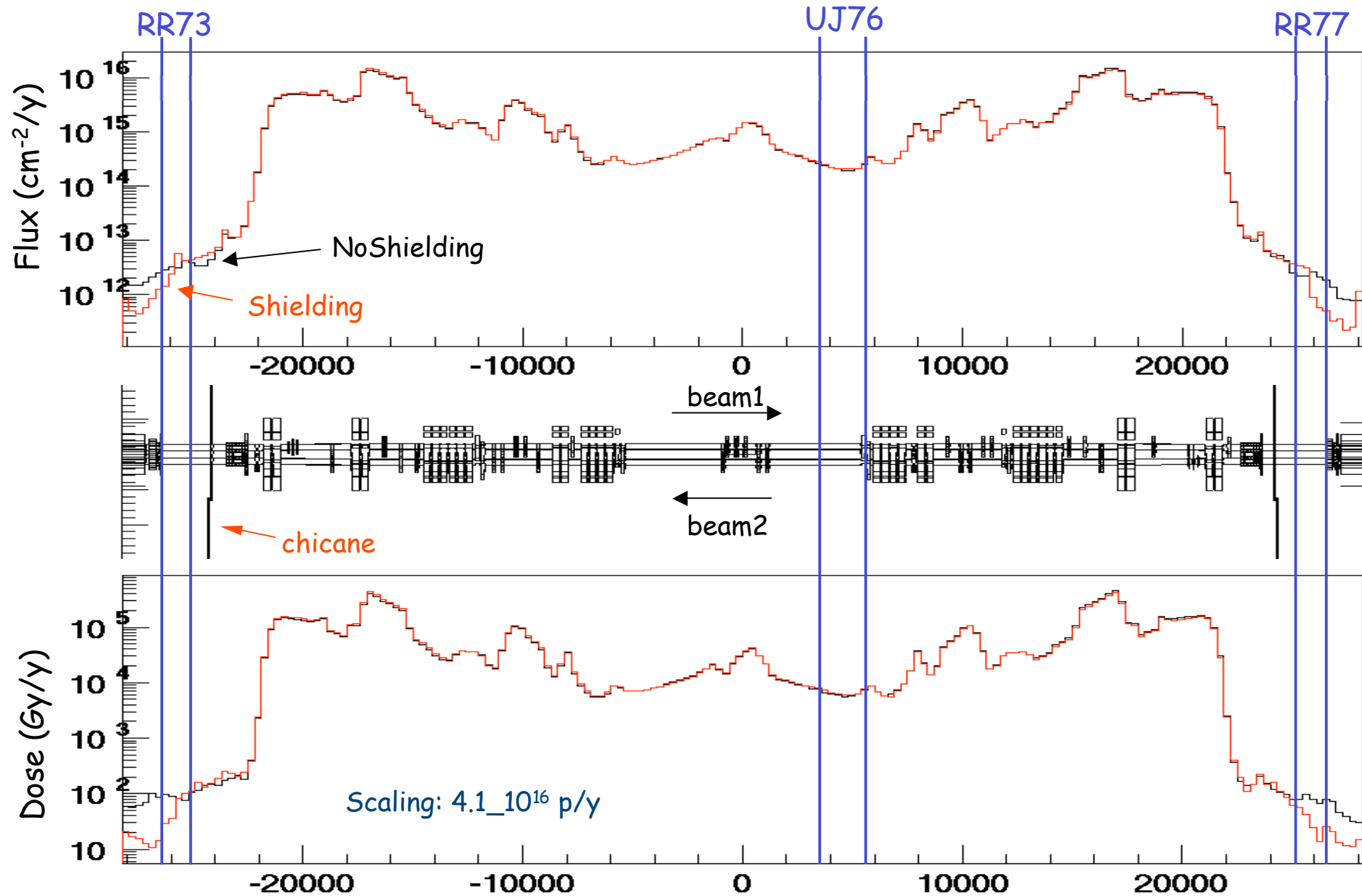
Shielding for the RRs



Shielding scenario
by Roger Valbuena
(24/11/04)

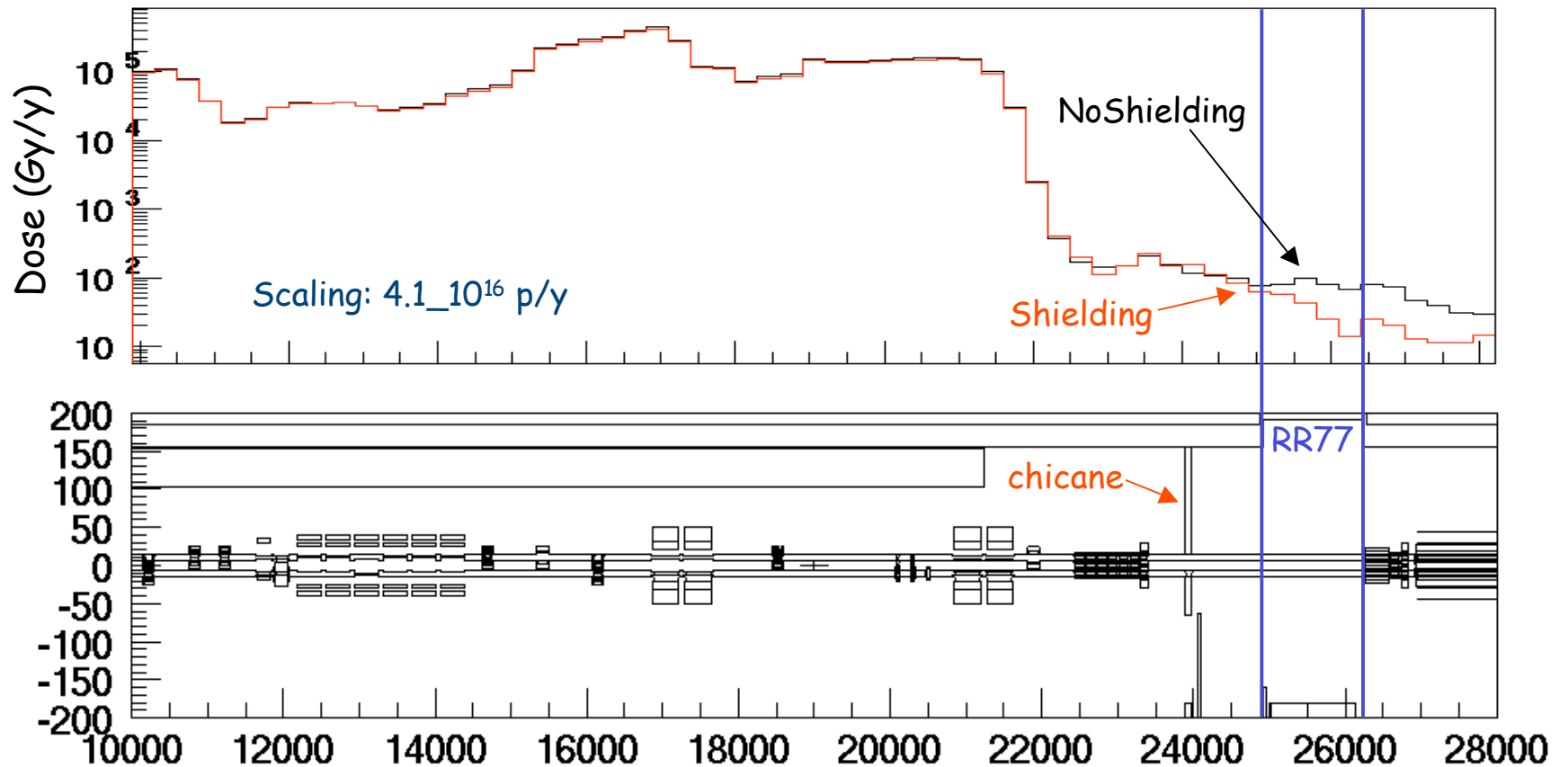
Material: IRON

NoShielding vs. Shielding Case Along the Tunnel



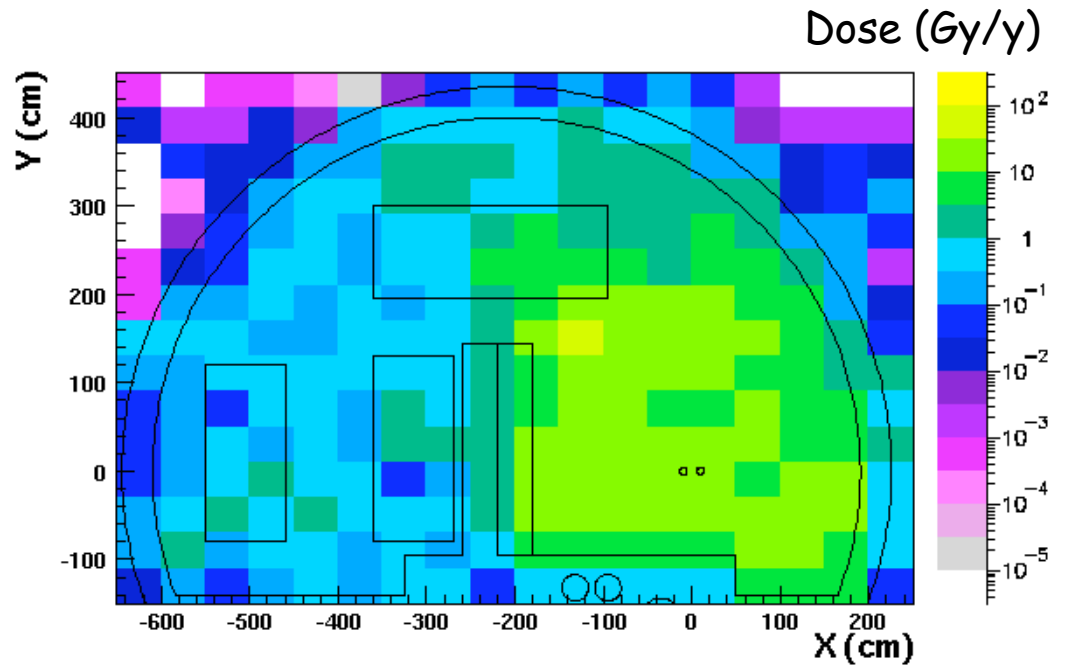
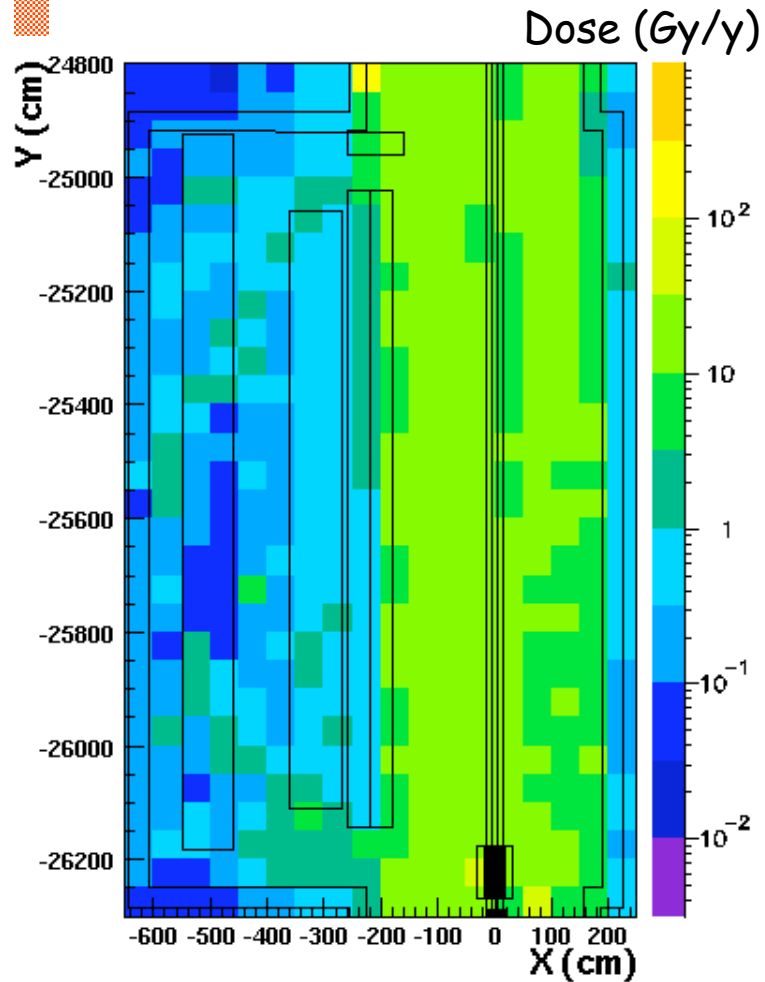
Chicane Effectiveness near the RR77

...too close?



Dose in RR73

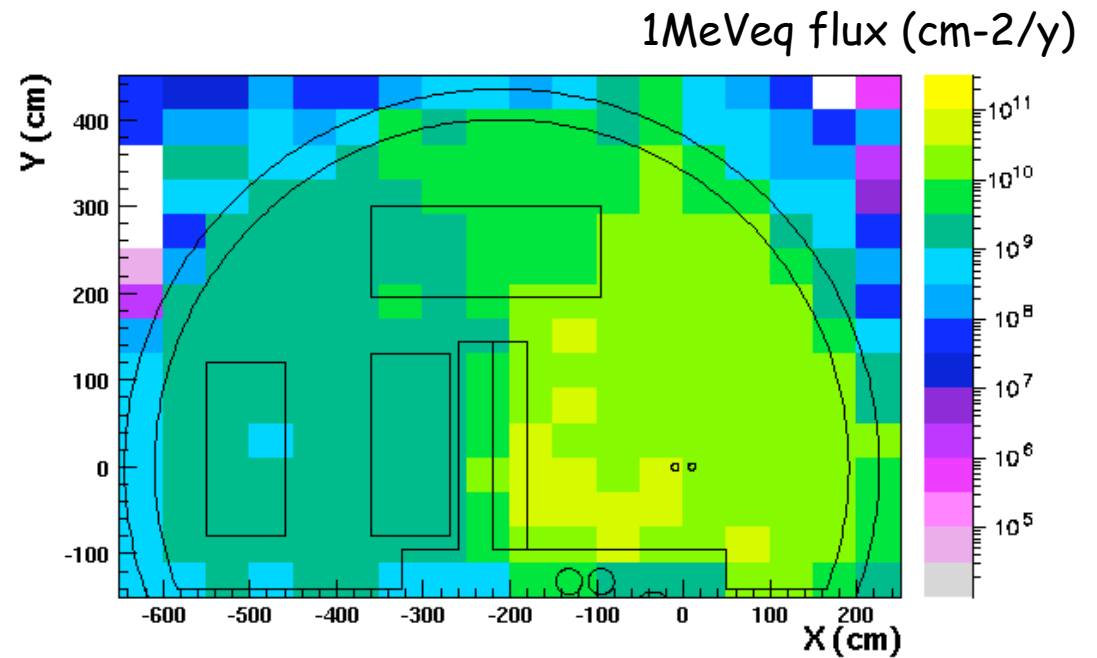
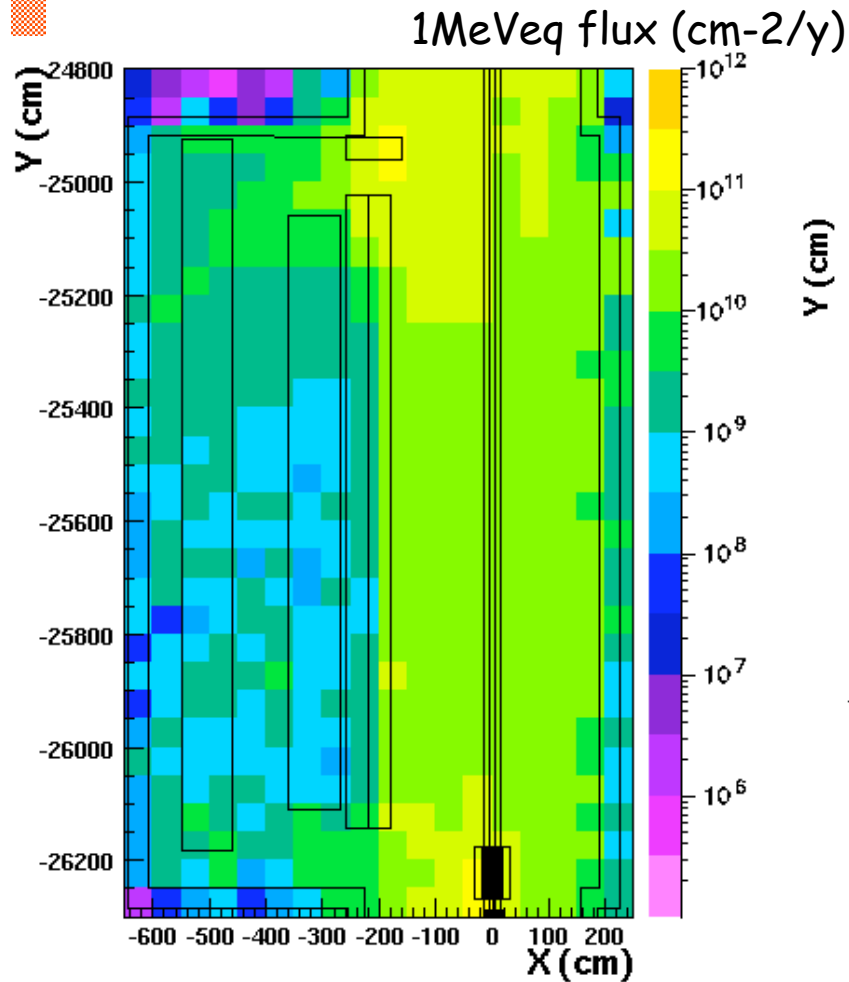
Similar values for RR77



Scaling: $4.1 \cdot 10^{16}$ p/y

1MeVeq fluence in RR73

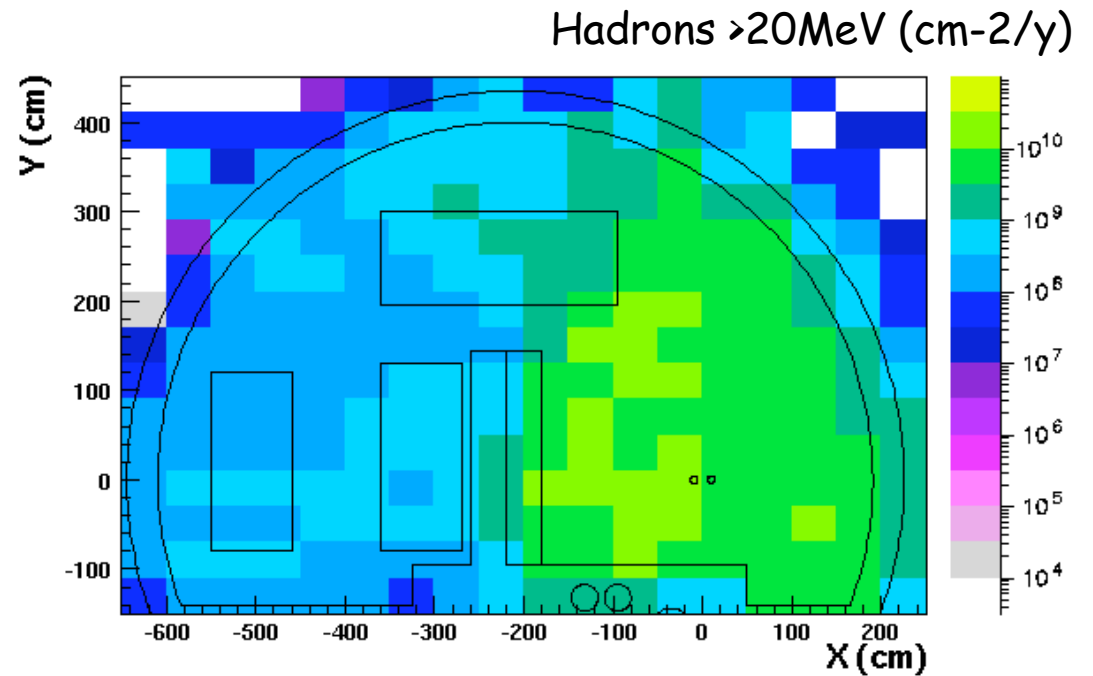
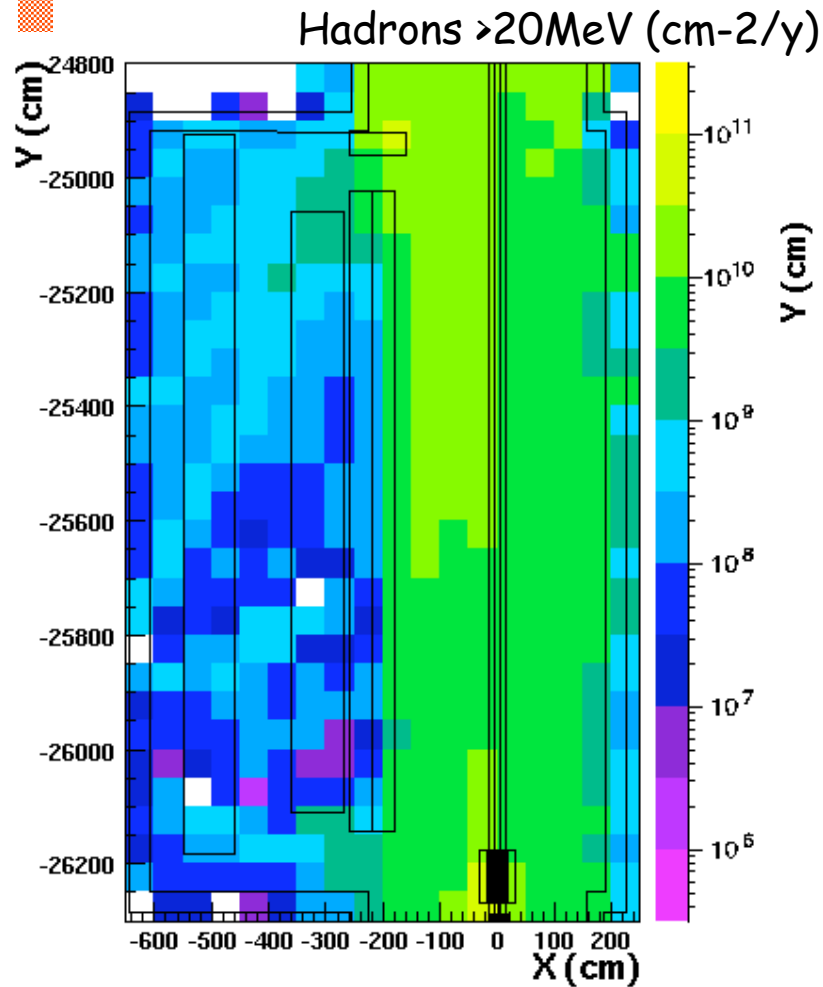
Similar values for RR77



Scaling: 4.1_10¹⁶ p/y

Hadrons >20MeV in RR73

Similar values for RR77



Scaling: $4.1 \cdot 10^{16}$ p/y

Conclusions

Radiation levels in the RRs at the racks:

- Dose: up to 1-2 Gy/y
 - 1MeVeq flux : $\sim 5 \cdot 10^8 \text{ cm}^{-2}/\text{y}$
 - Hadrons $>20\text{MeV}$: $\sim 2 \cdot 10^8 \text{ cm}^{-2}/\text{y}$
- reduction of $\sim 2 \dots$

Actions:

- ✓ Improve chicane ?
- ✓ Remove entrance block ?
- ✓ What about the UJ ?...