



# IRRADIATION

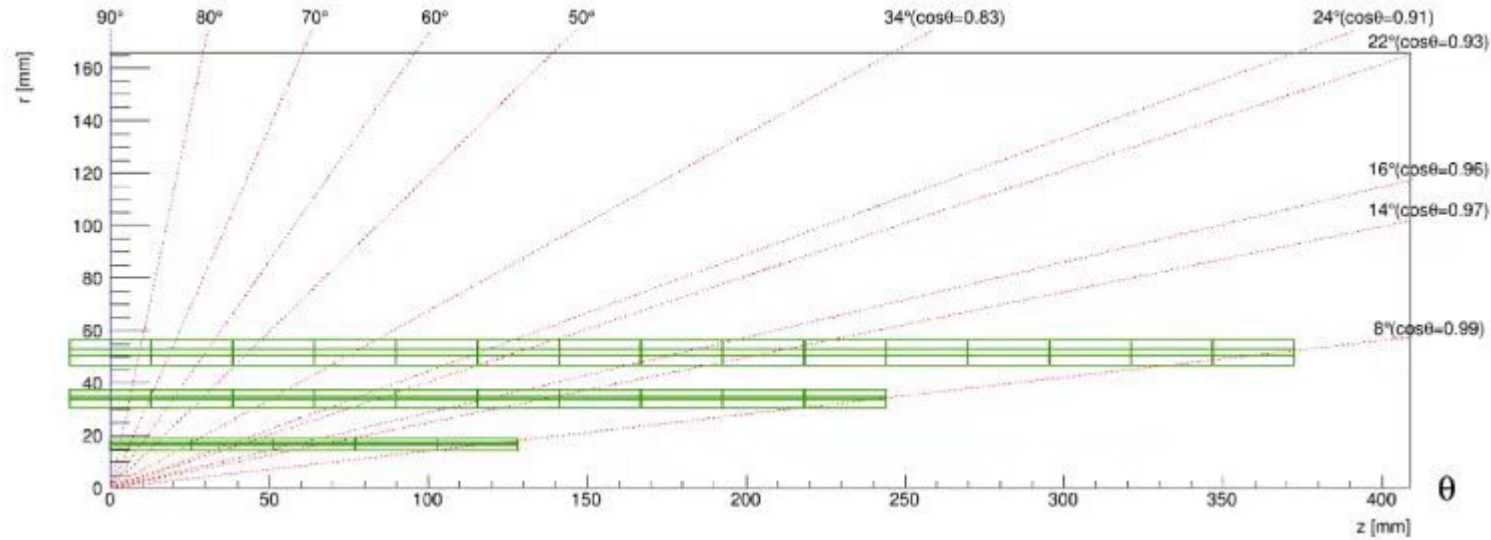
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Weiyi Sun

IHEP

Apr. 24 2024

# VERTEX -LONG BARREL



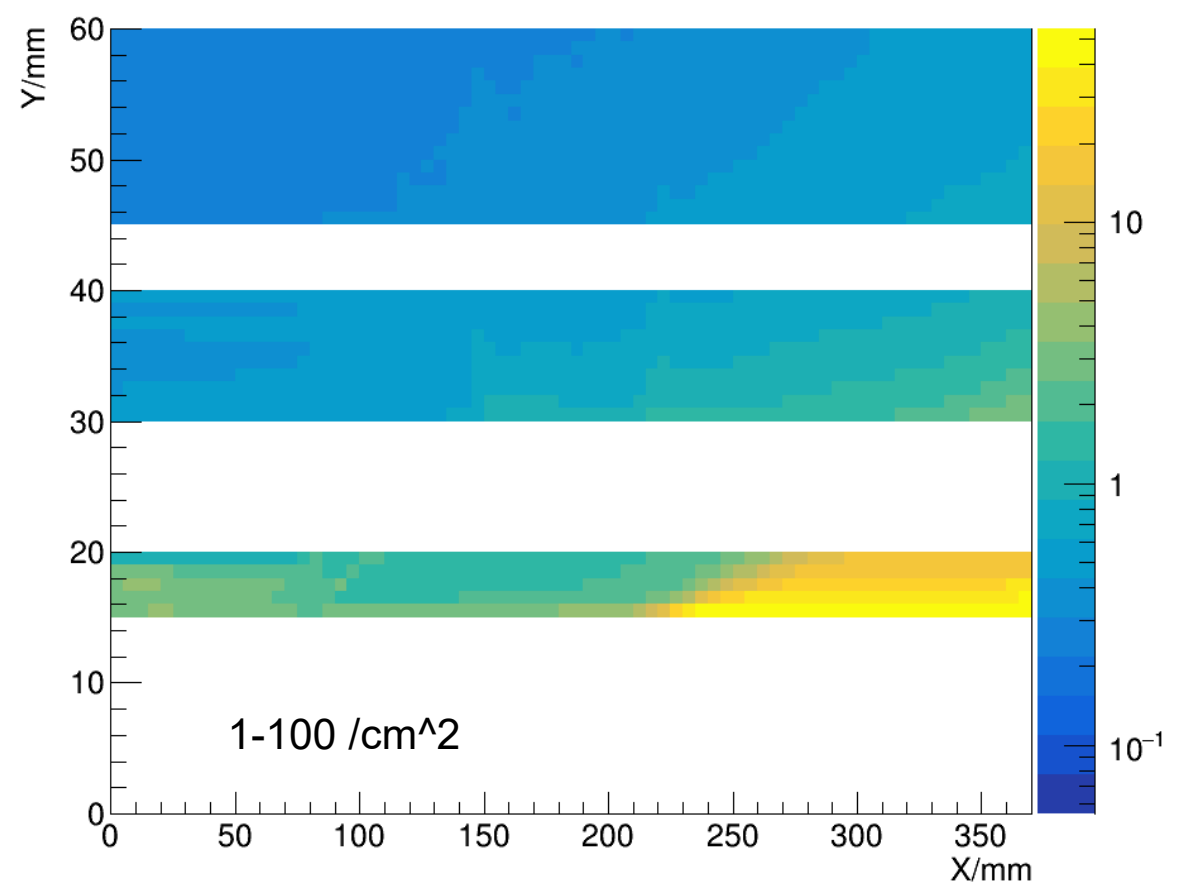
Higgs Background

Z Background

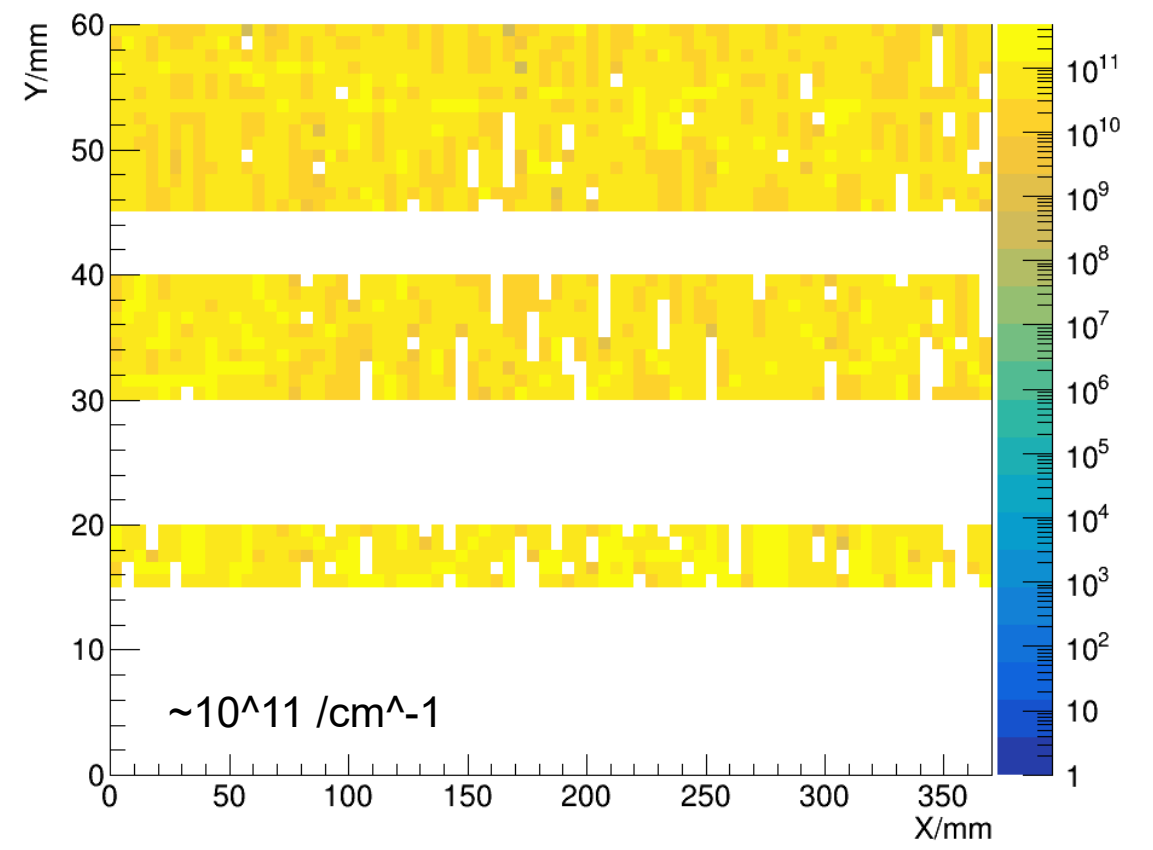
- Charged particle fluence,
- Single Event Effect,
- TID ,
- 1 MeV proton Fluence

# Higgs Background

Charged particles fluence [Charged particles  $\text{cm}^{-2}$ ] for BX

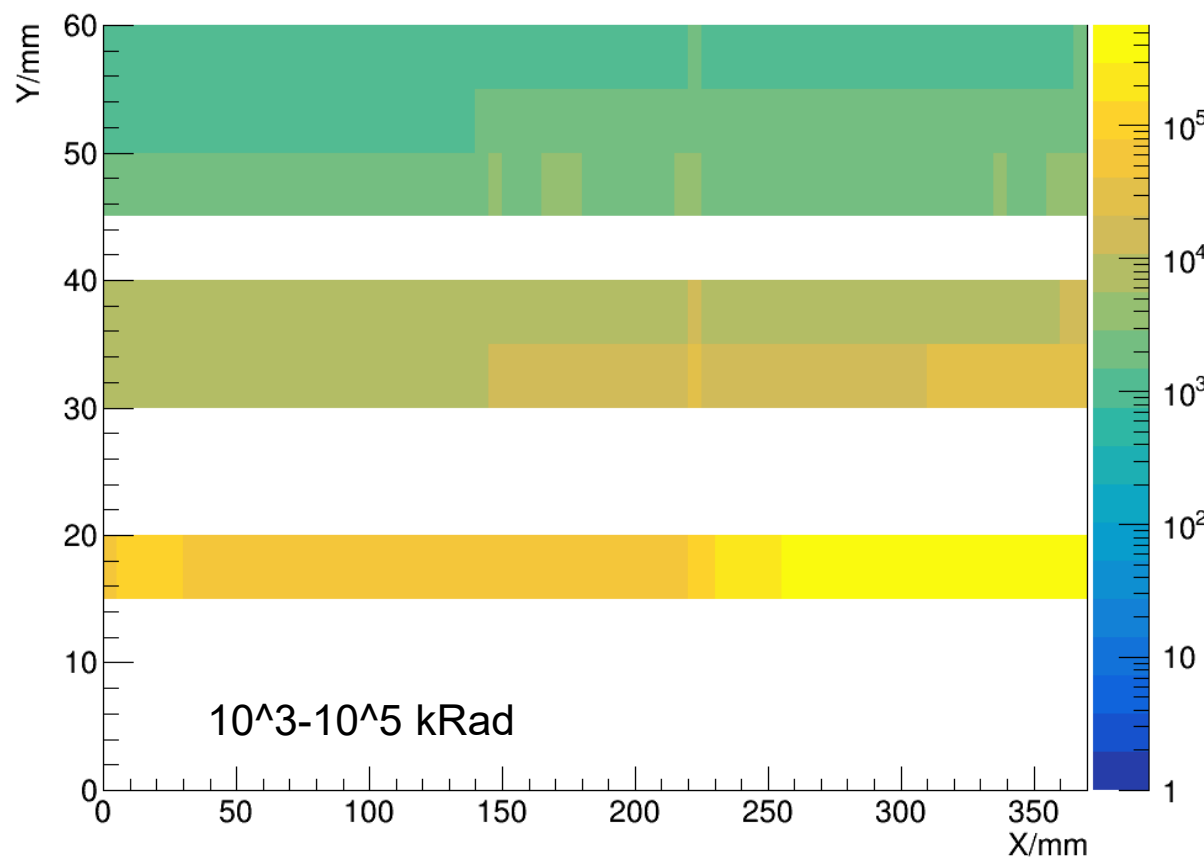


Single Event Effect [events  $\text{cm}^{-1}$ ] for a year

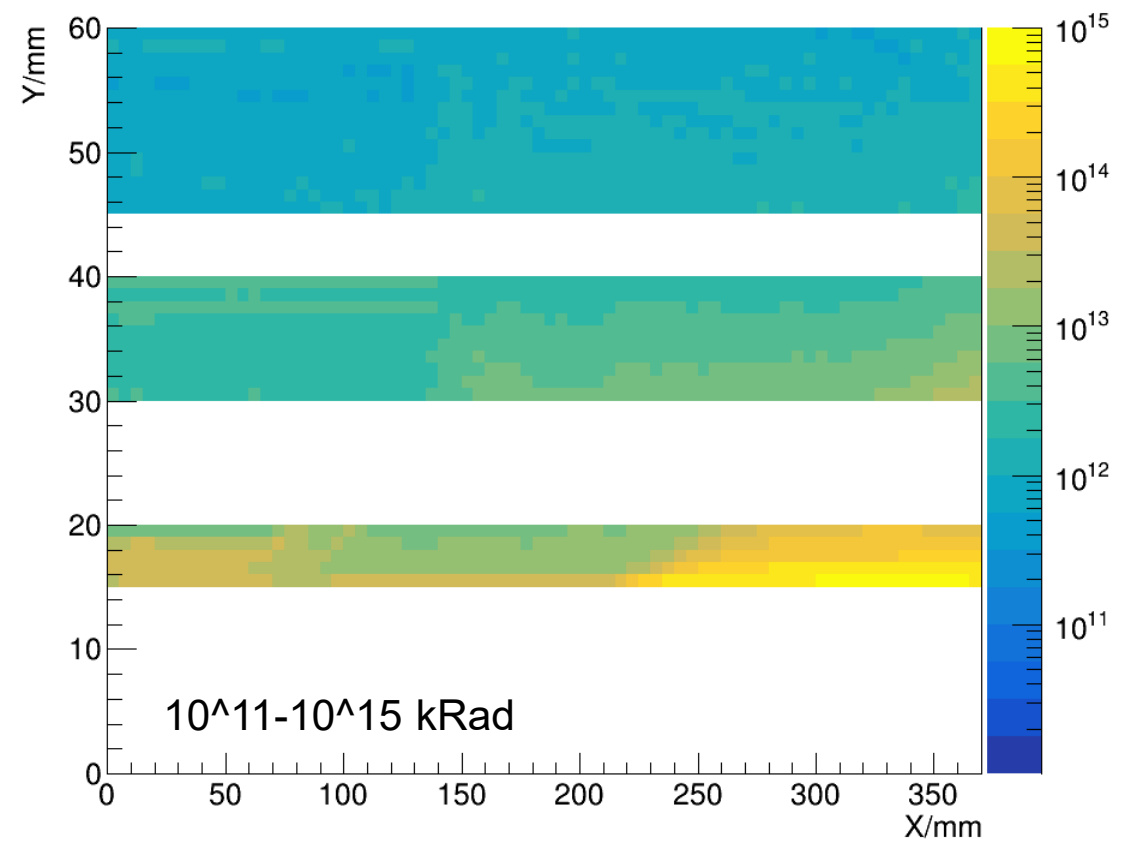


# Higgs Background

TID in Vertex region [kRad]

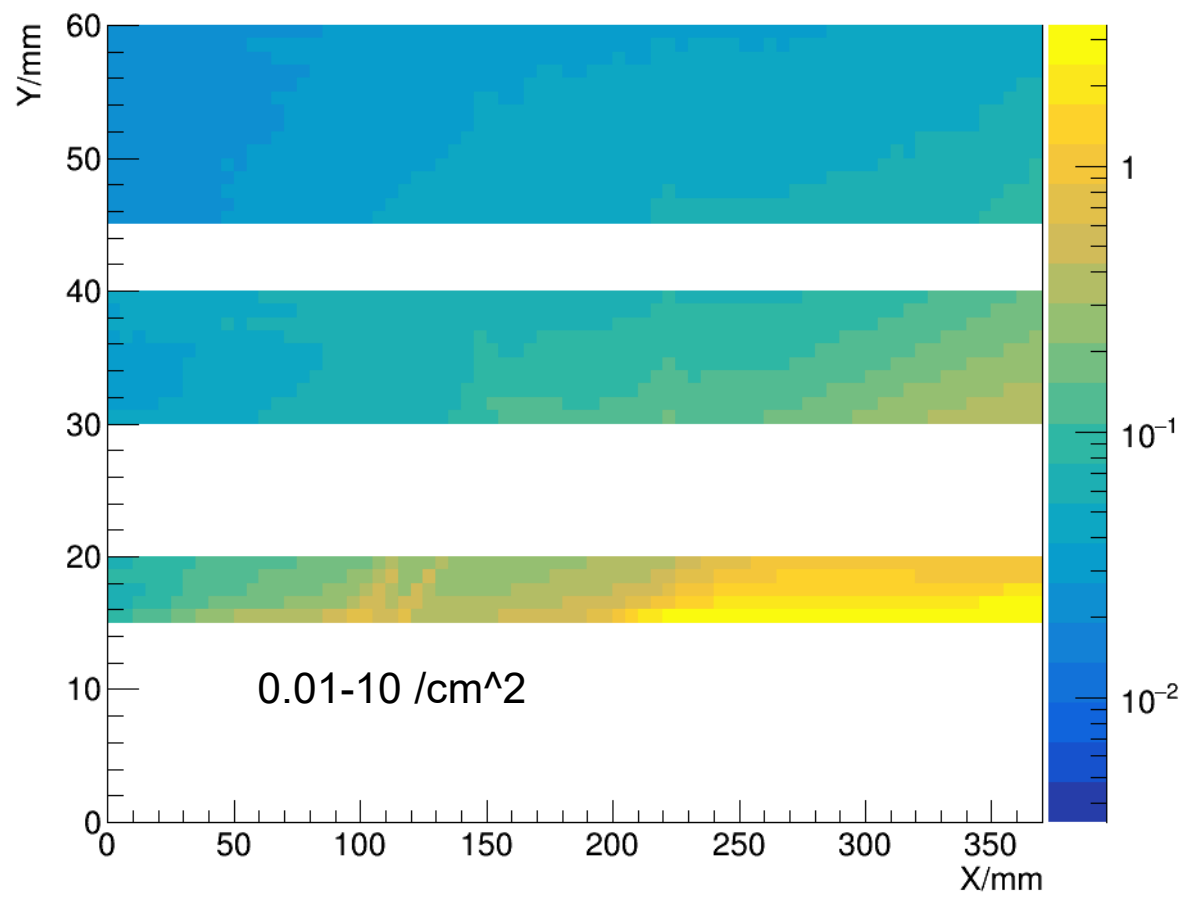


1 MeV neutron equivalent fluence [neutrons  $\text{cm}^{-2}$ ] for a year

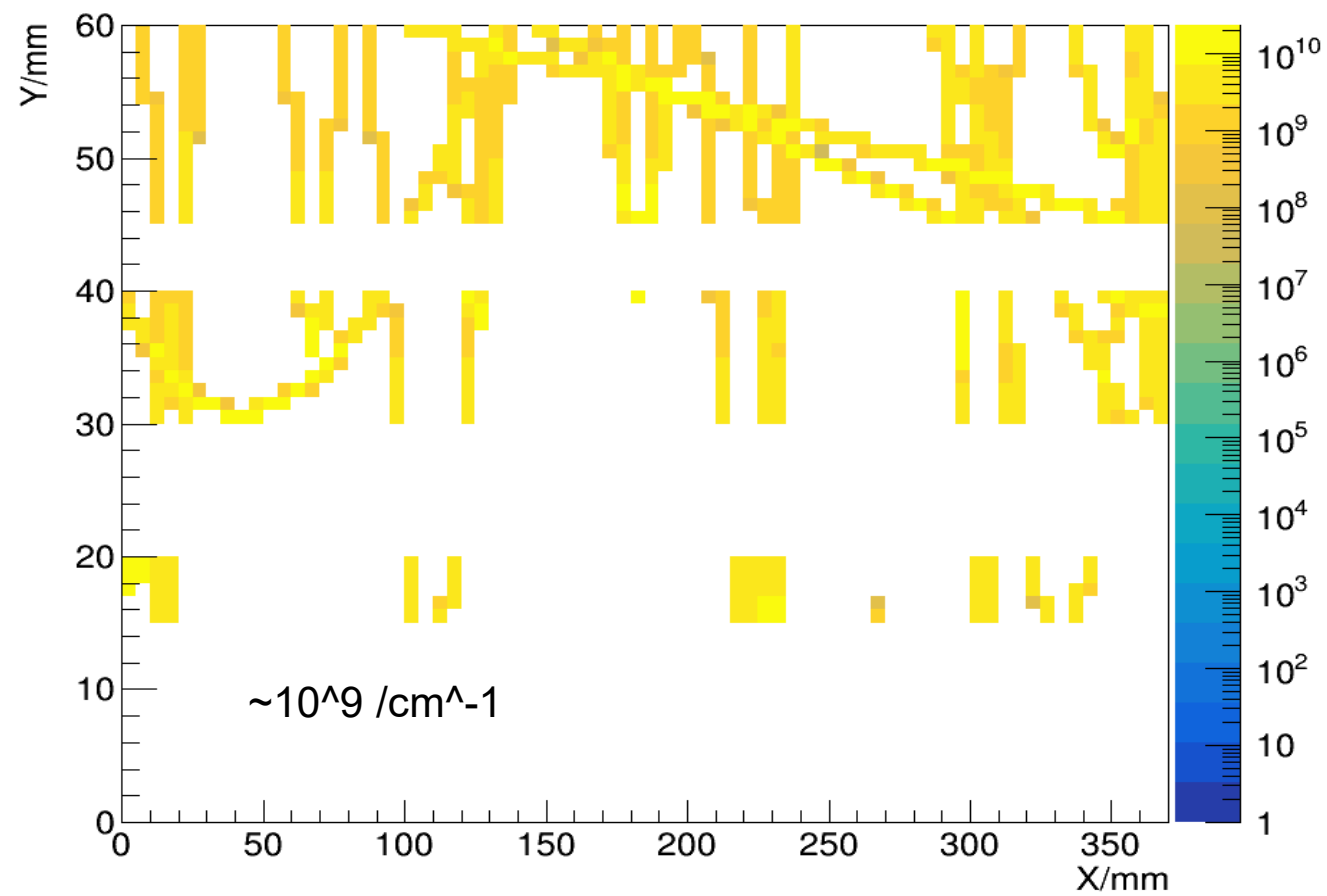


# Z Background

Charged particles fluence [Charged particles  $\text{cm}^{-2}$ ] for BX

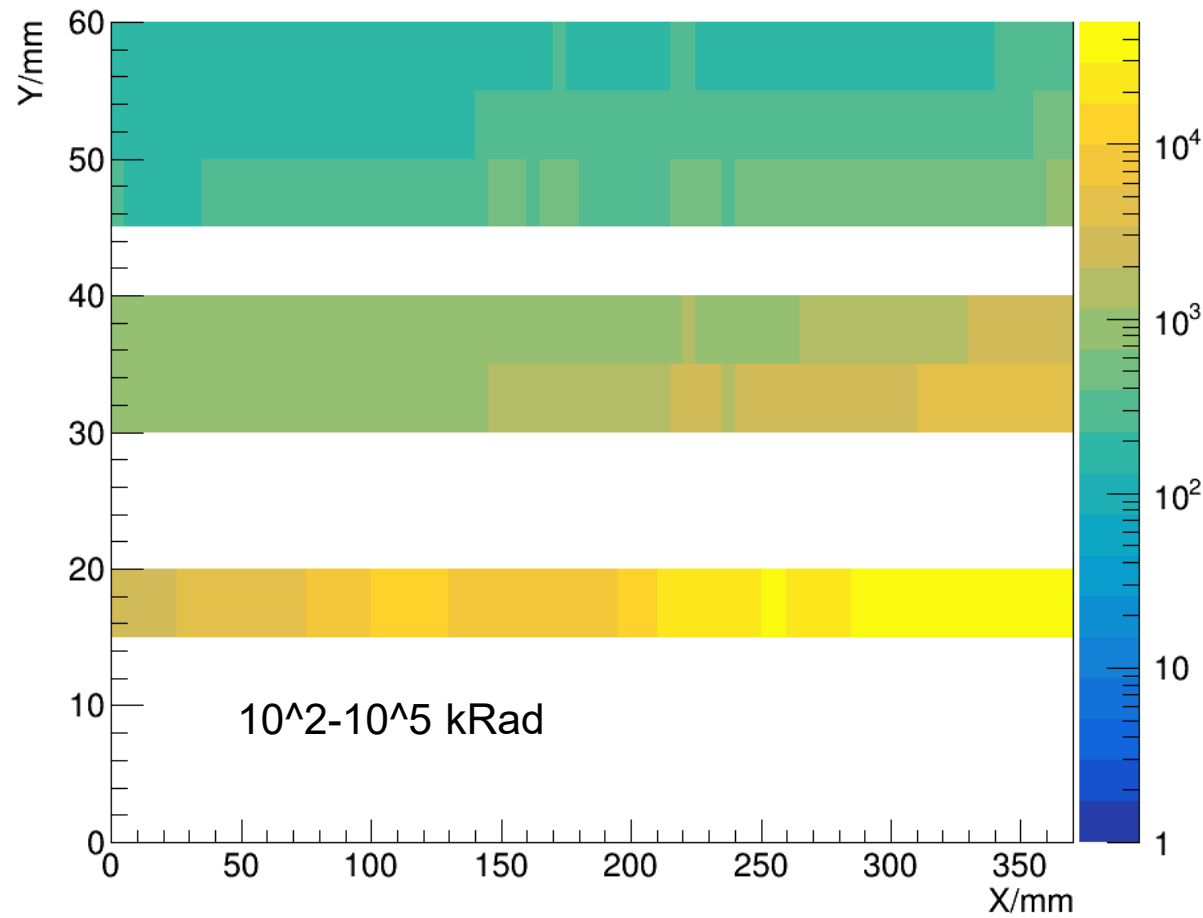


Single Event Effect [events  $\text{cm}^{-1}$ ] for a year

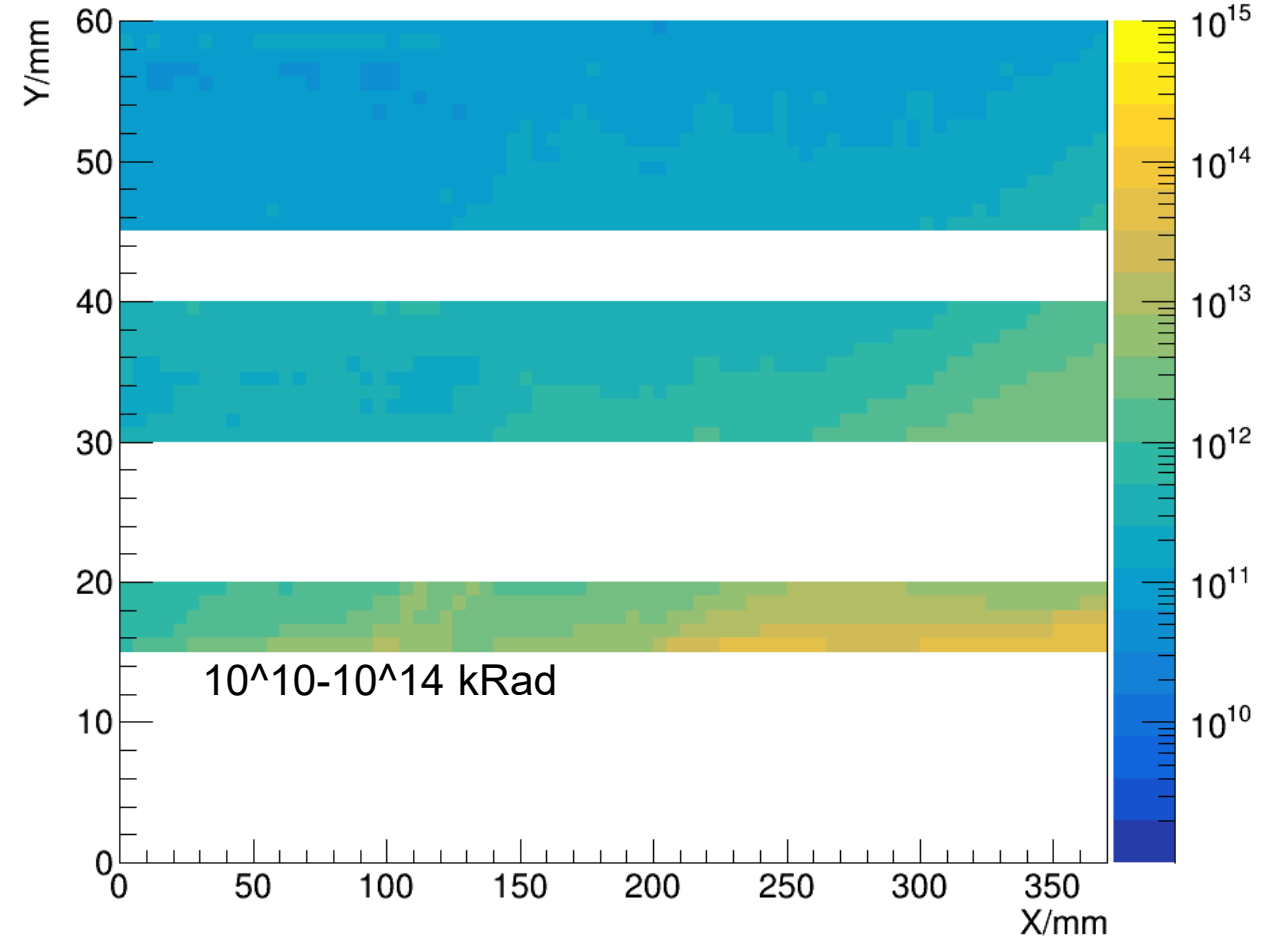


# Z Background

TID in Vertex region [kRad]



1 MeV neutron equivalent fluence [neutrons  $\text{cm}^{-2}$ ] for a year



# Summary

We have analyzed

- Charged particle fluence,
- Single Event Effect,
- TID ,
- 1 MeV proton Fluence

Z background has **lower values** in those **four terms**