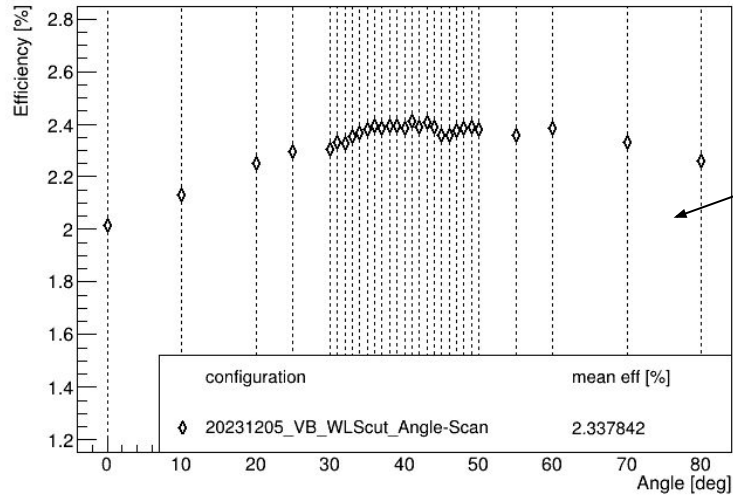
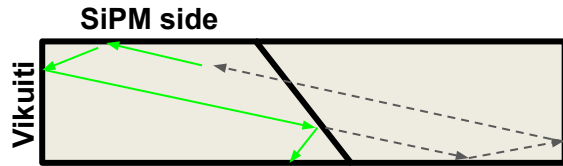


Updates on MiB XA testing

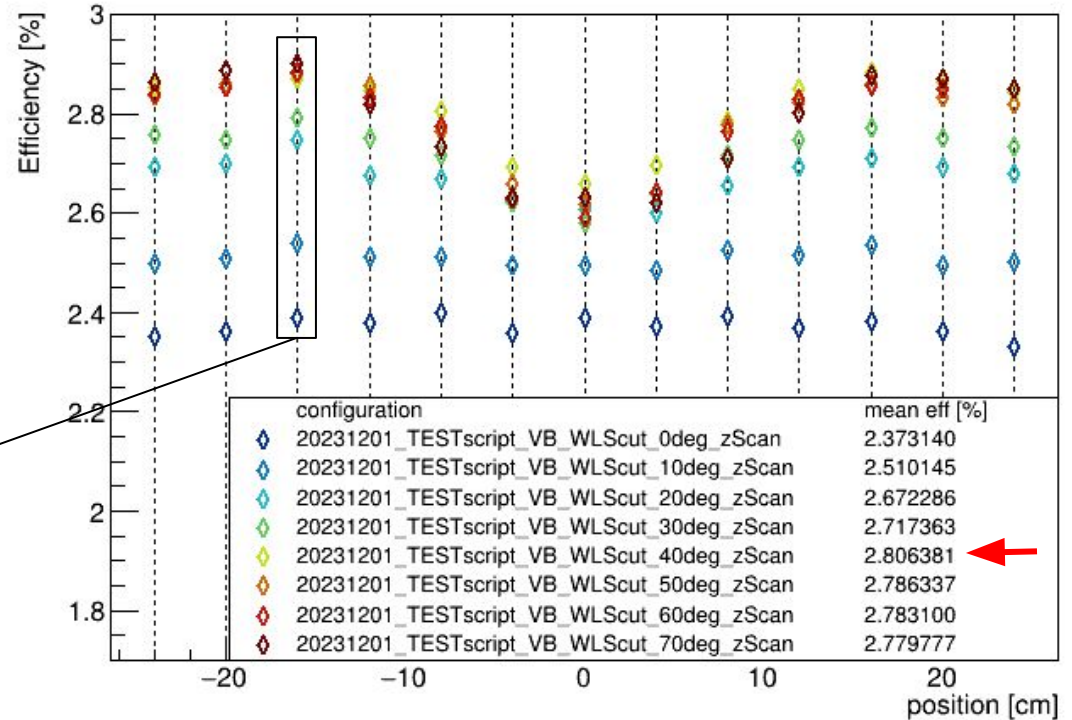
C. Brizzolari, C. Cattadori , L. Meazza
Photon Collection Meeting
30/01/2024

XA-SC simulation - 2 piece wls lg cut scan

- finer simulation of the angle of the cut

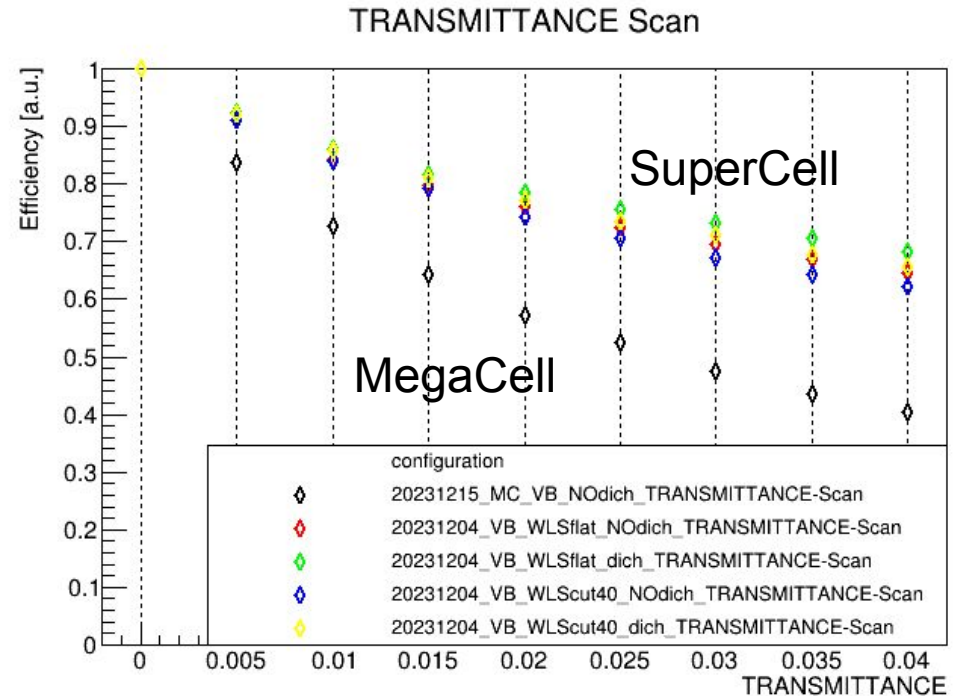


WLS cut angle - position Scan



XA simulation - Light escaping Total Internal Reflection

- in geant4 light trapped by Total Internal Reflection (TIR) cannot escape
- a feature allows to **ignore a surface interaction and transmit the photon without change in momentum**
 - TRANSMITTANCE
- this allows to model imperfections in the casted large sides of the light guide
- we do not know what value this parameter should have
- **the larger the light guide surface area the higher the effect**



Planned measurements at MiB

- We are planning a **measurement of the XA-SC with pTP deposited glass without dichroic filter** on the other side **to assess its effect**

- ❖ We expect to be able to have a result in a couple of months
 - improve MiB setup
 - new control runs to match previous results
 - new measurements