**ATLAS Preliminary**

\(\sqrt{s} = 13\) TeV

Absolute fluence \([10^{12} \text{ Si } 1\text{ MeV } n_{eq}/\text{cm}^2/\text{fb}^{-1}]\)

**Insertable B-layer (IBL)**

- Predicted by Pythia (A2) + FLUKA
- Predicted by Pythia (A3) + FLUKA
- Predicted by Pythia (A3) + Geant4
- Predicted by Pythia (A3) + Geant4 (n + p + \pi only)
- Extracted from Hamburg Model + Leakage Currents

Relative data fluence \(\Phi(z)/\Phi(0)\) [%]

Distance along stave [cm]