**Why search for electric dipole moment (EDM)?**

- EDMs are CPV observables
  - Small SM prediction \((d_e \sim 10^{-18} \text{e} \cdot \text{cm})\) [1]
  - Background free search for BSM
- Various BSM models predicts enhanced EDM [2, 3]
  - Complementary to LHC searches
  - EDMs are good probes for BSM CPV
- Present landscape of \((\mu)\)EDM:

**Increase sensitivity by applying a radial E-field, \(E_r \approx aBC\gamma^2\)**

- Removes \(g-2\) anomalous precession in storage plane
- EDM inflict an increasing vertical polarisation

**Frozen-spin technique at muEDM**

Asymmetry due to EDM measured using up-down scintillators

**Summary**

- A prototype entrance detector is developed with plastic scintillators and SiPM
- Detector performance evaluated by reproducing event characteristics in simulation with optical characteristics for the telescope detectors
- Event rates reproduced in simulation are of close agreement with the measured results
- Event selection efficiency is at ~4% efficiency with gate-only trigger but improves significantly with gate-exit coincidence trigger to ~70%