Hi-Lumi UPGRADE

- The phase-II CMS muon endcap upgrade will include a new forward station at high $\eta \rightarrow \text{ME0}$
- The ME0 ring (18 detectors $\times$ 6 layers $\times$ 2 endcaps) will be the closest muon station to LHC beam line $\rightarrow 2.0 < |\eta| < 2.8$

MOTIVATION

Possible source of gain drop at high rates:
- Ion space charge
- Drop in voltage difference across GEM foil

PROPOSED SOLUTION

- Dedicated study for the high particle rate expected in the ME0 region
- New type of segmentation $\rightarrow$ azimuthal