

# Search for PBH evaporations with H.E.S.S.

→ **Goal of the analysis** : search TeV  $\gamma$ -ray bursts from PBH at their final stage of evaporation

- Clusters of few photons
- Timescale of a few seconds to few minutes

**Dataset** :

- $\sim$  5000 hours of H.E.S.S.-1 observations

**Method** :

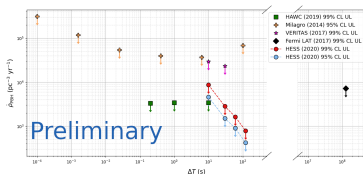
- Clustering algorithm (OPTICS)
- Maximum Likelihood ratio

**Hypothesis** :

- Hawking's radiation
- PBH formed from Gaussian density fluctuations

**Results** :

Analysis was ran for 10s, 30s, 60s, 120s time scales : No significant excess



Cosmological limits on  $\frac{\Omega_{PBH}}{\Omega_{DM}}$  :

