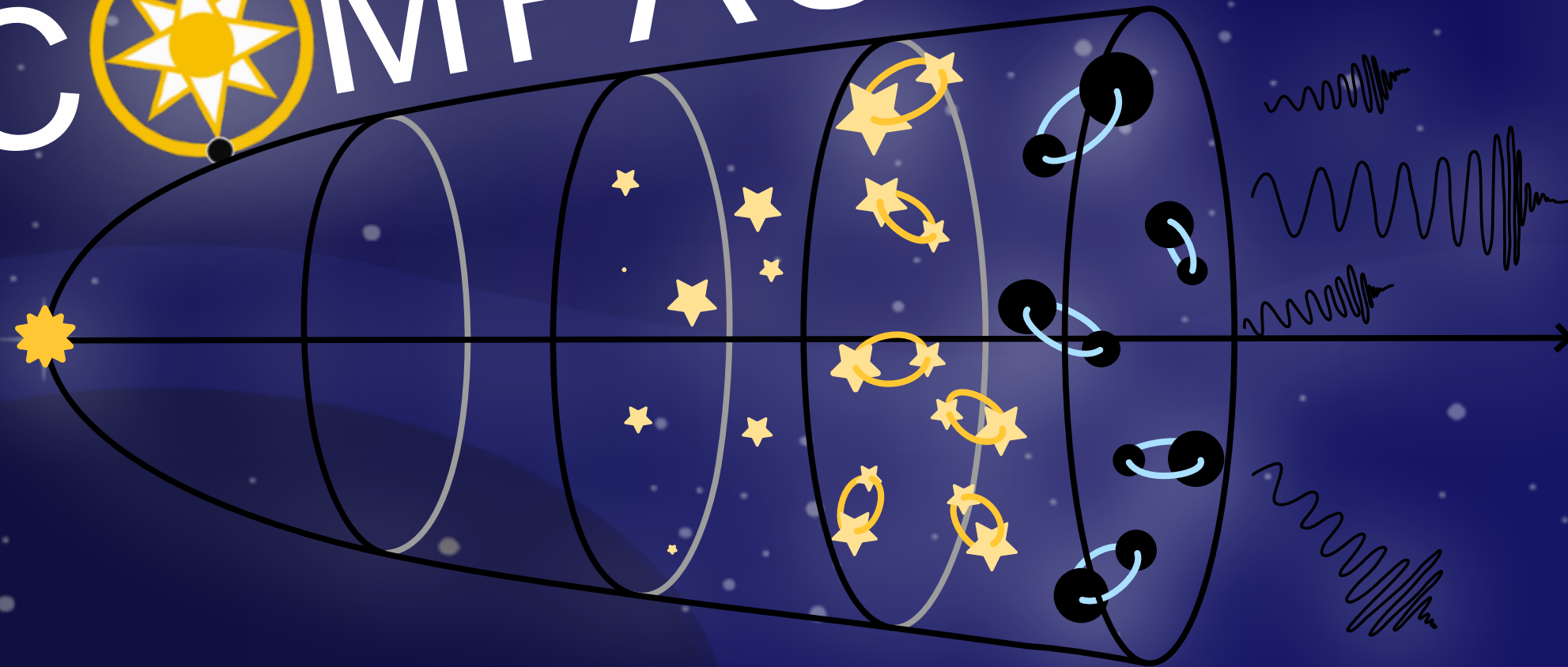


Forward (simulator) modelling

A surrogate model for COMPAS

COMPAS



Simulated
Population

Riley+Mandel, '23
arXiv:2303.00508



TensorFlow

$L(\mathcal{D} \mid \text{COMPAS parameters})$

- Four dimensions
- Average accuracy ~ 98%
- ~20,000X faster than COMPAS

Large training set:
~13,000 COMPAS populations

Forward (simulator) modelling

A surrogate model for the Likelihood

COMPAS

Simulated
Population

$$L(\mathcal{D} \mid \text{COMPAS parameters})$$

Sample

$$\pi(\text{COMPAS parameters})$$

$L_{\text{surr}}(\mathcal{D} \mid \text{COMPAS parameters})$
TensorFlow