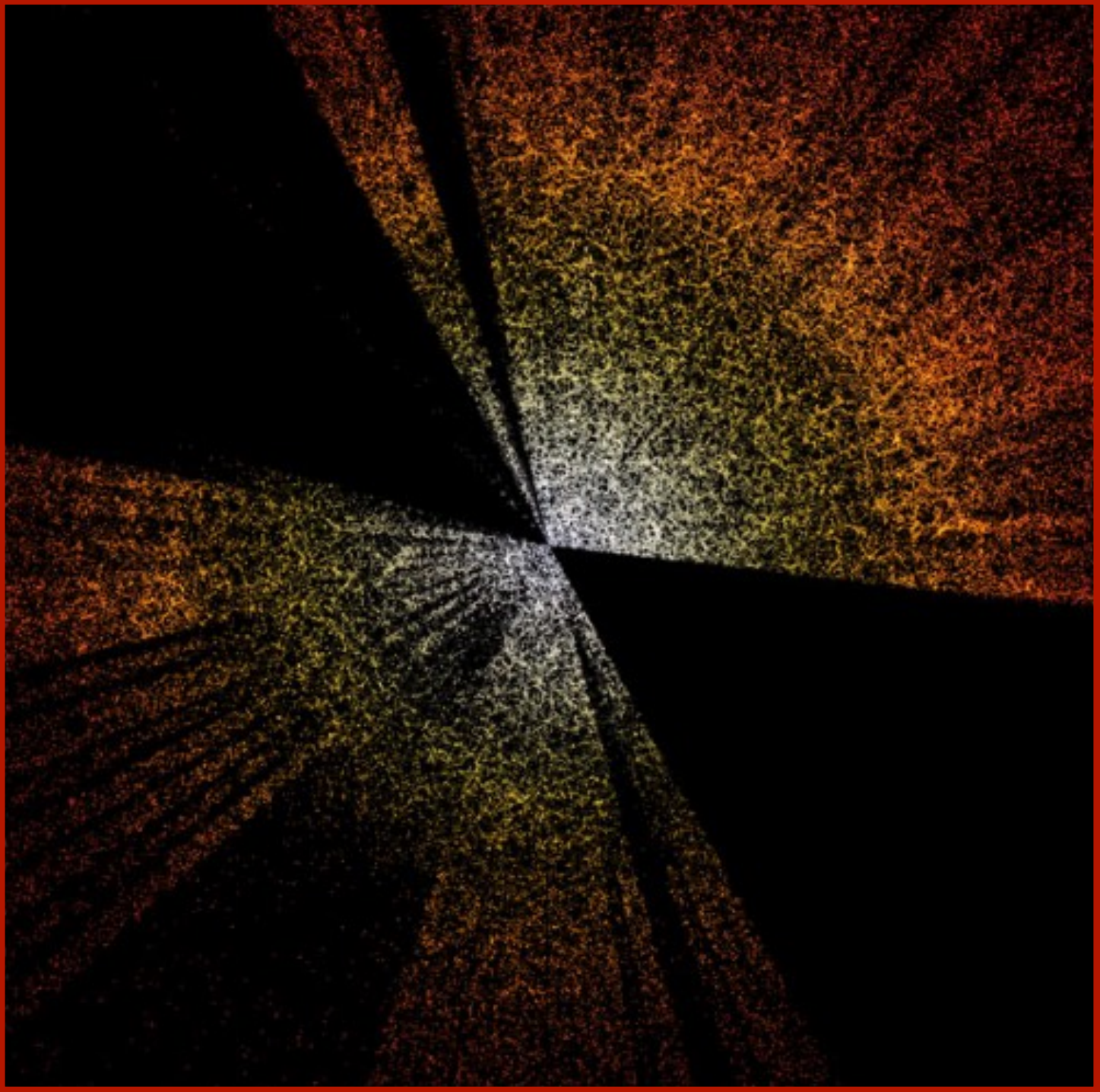
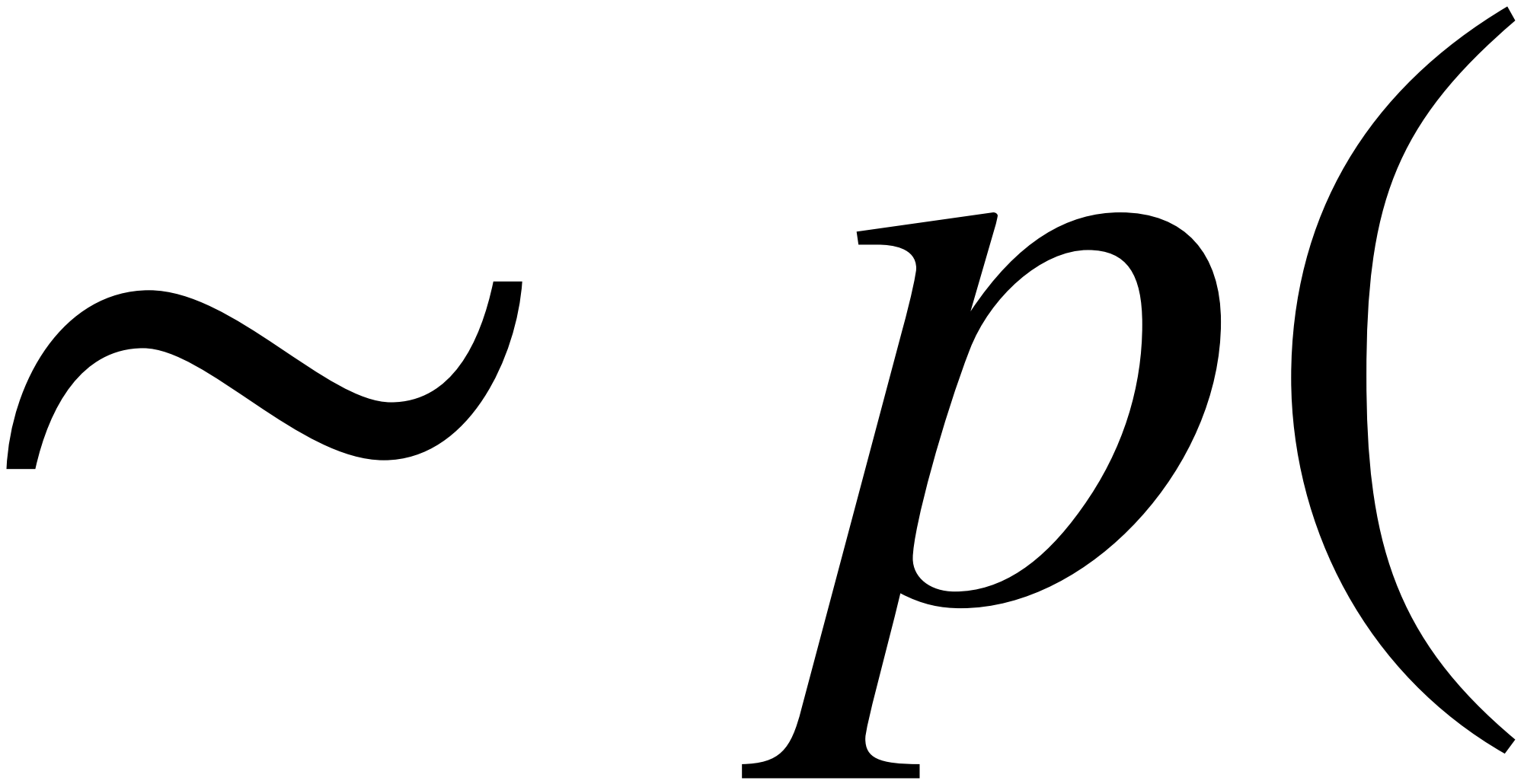
/70

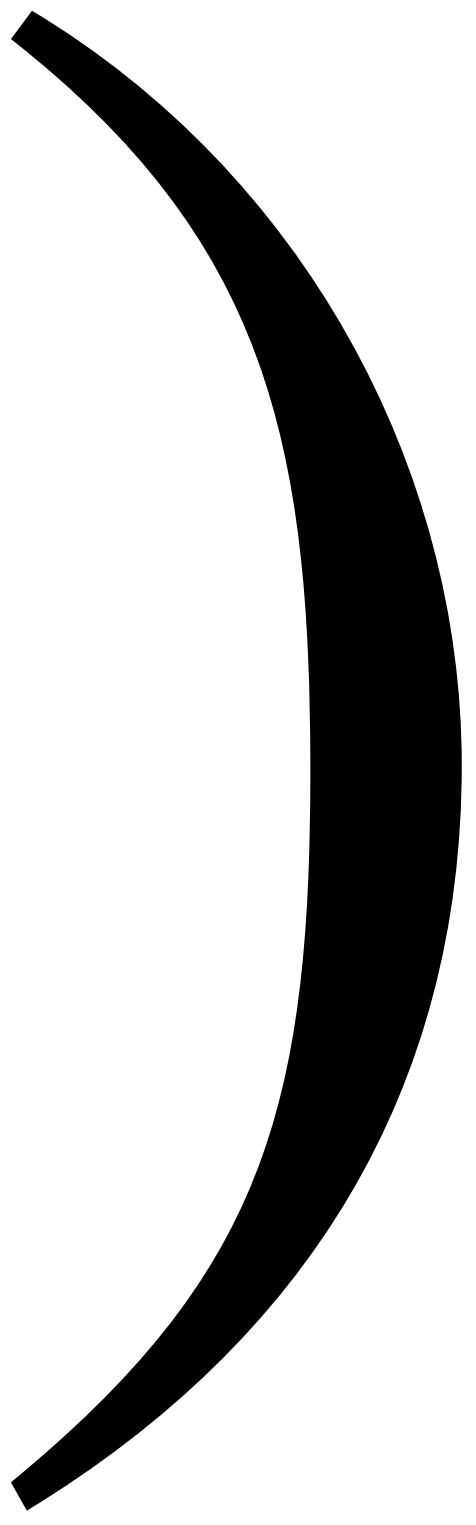
50

Emulation and inference

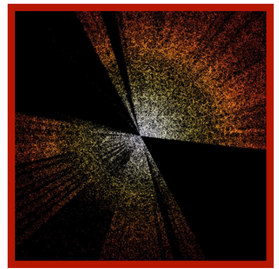
Emulation/ sampling

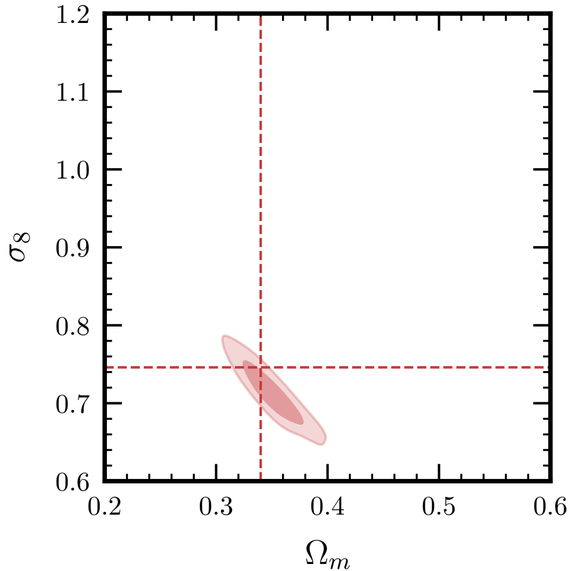






Cosmology

$$p(\ \text{Cosmology}\ \Omega_m, \sigma_8\ |\ \text{  }\ )$$

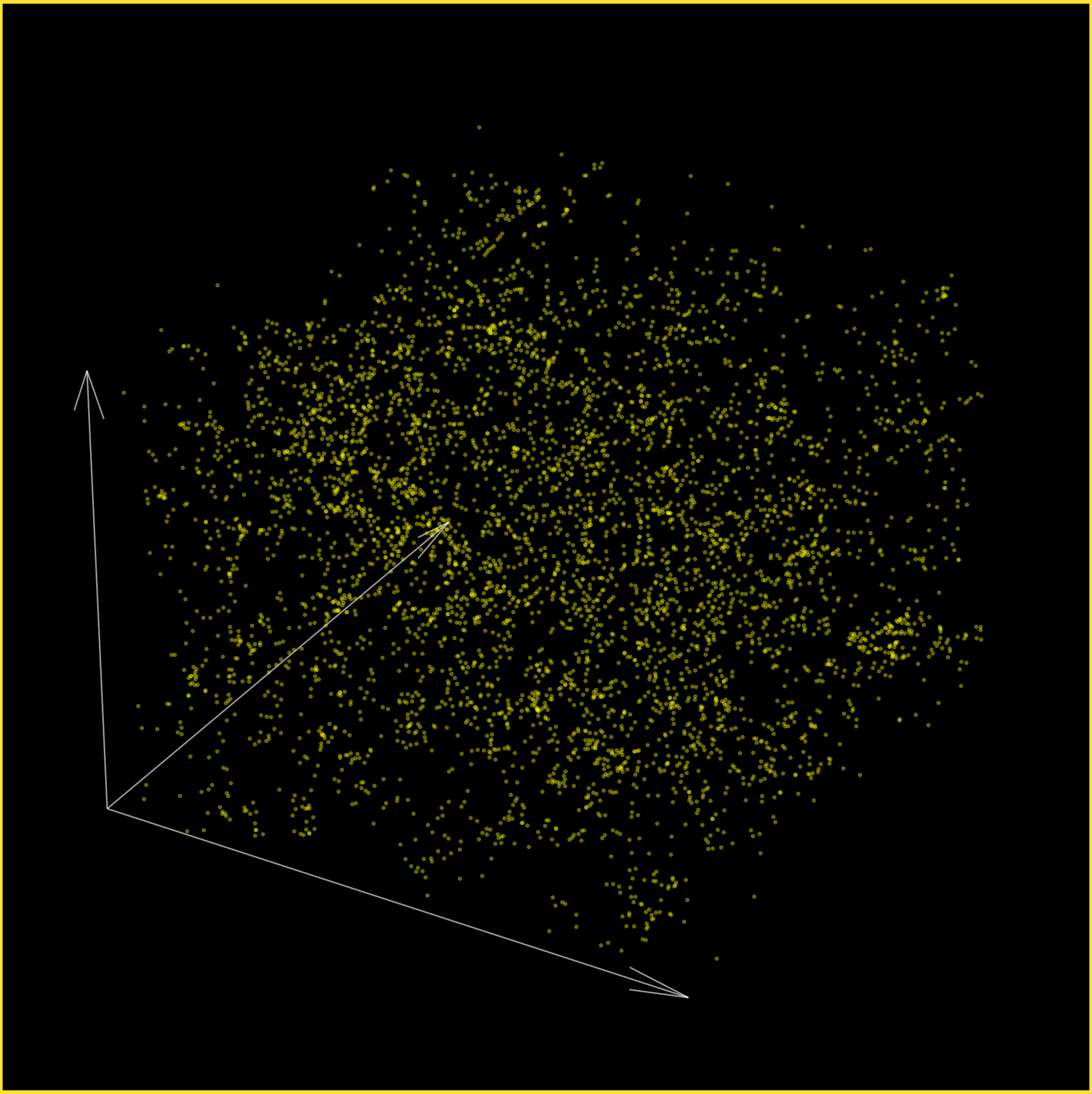


Parameter estimation

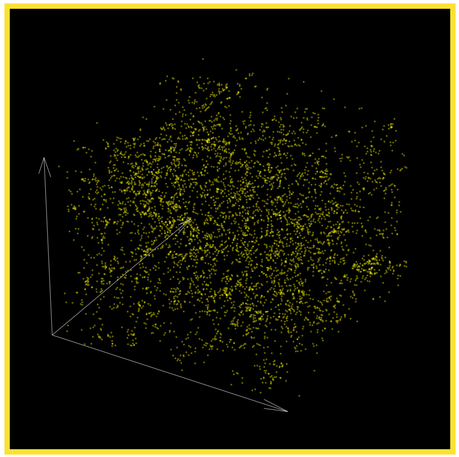
$\nabla_{\{\Omega_m, \sigma_8\}} p$

Differentiable likelihood

→ even better!



Emulation and inference



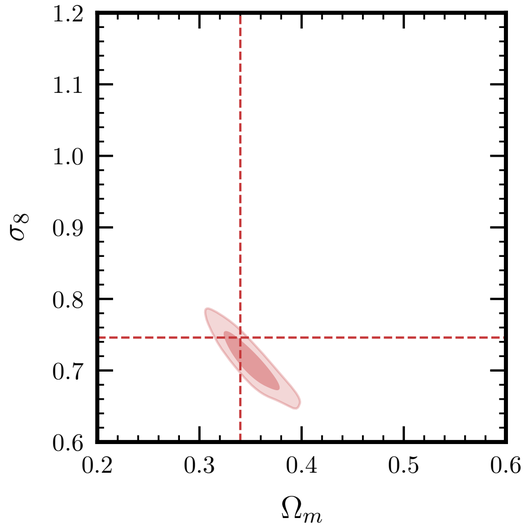
$$\sim p\left(\; \right| \; \text{Cosmology} \;)$$

Emulation/ sampling

$$p\left(\; \text{Cosmology } \Omega_m, \sigma_8 \; \right| \;)$$

$$\nabla_{\{\Omega_m, \sigma_8\}} p$$

Differentiable likelihood → even better!



Parameter estimation

The diffusion score model

Want a score model that

- Operates on *sets* of varying cardinality
- Is permutation equivariant
- Efficiently captures correlation structure of point cloud