BAYESIAN INFERENCE

- **Sample**: make inferences from the posterior (e.g. sample candidate images)

$$X \sim p(x \mid y)$$

- **Probabilities**: credible intervals (e.g. quantify uncertainty in the images)

$$p[X \in A \,|\, y] = \int_A p(y \,|\, x) \mathrm{d}x$$

- **Expectations**: expected statistics e.g. mass, polarisation, size, etc

$$p[f \,|\, y] = \int_{\mathbb{X}} f(x) p(y \,|\, x) \mathrm{d}x$$

- **Evidence**: e.g. for model comparison

$$p(y) = \int_{\mathbb{X}} L(y \mid x) p(x) \mathrm{d}x$$

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SAMPLING: DENSITIES