MONTE CARLO METHODS:

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- **Problem:** computing integrals is hard

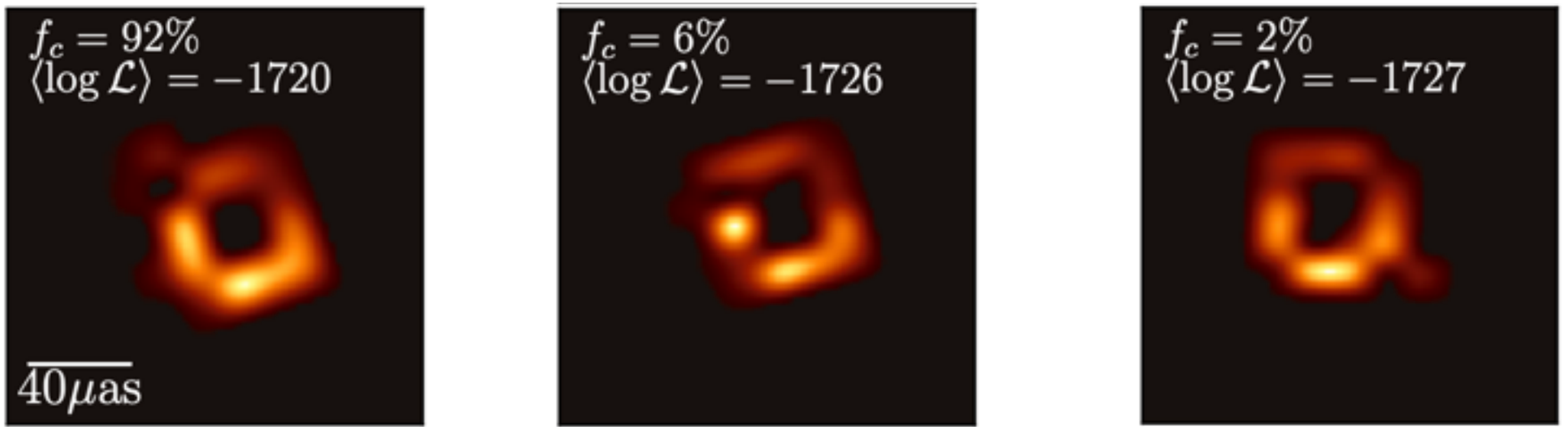
- Problem only gets worse in high-dimensions

- **Monte Carlo (MC) algorithms:** approximate inference

- **Las Vegas algorithms:** perfect inference

- Accuracy increases with budget

- Multi-modality, varying scales, unidentifiable, combinatorial explotions



- Compute resources increases with problem complexity

- A class of algorithms that gamble accuracy for a fixed compute budget.

- A class of algorithms that gamble computational budget for perfect accuracy

MONTE CARLO METHODS:

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  - Problem only gets worse in high-dimensions
- **Monte Carlo (MC) algorithms:** approximate inference
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  - Accuracy increases with budget
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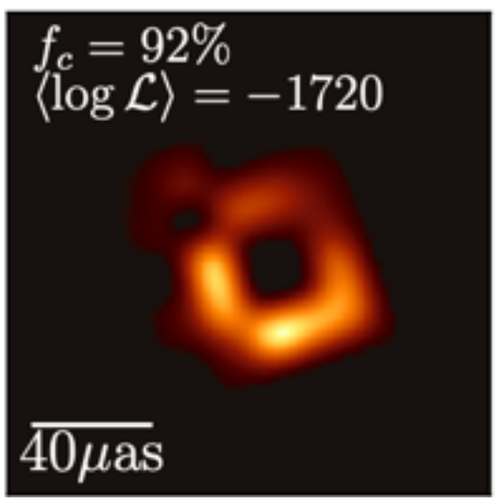
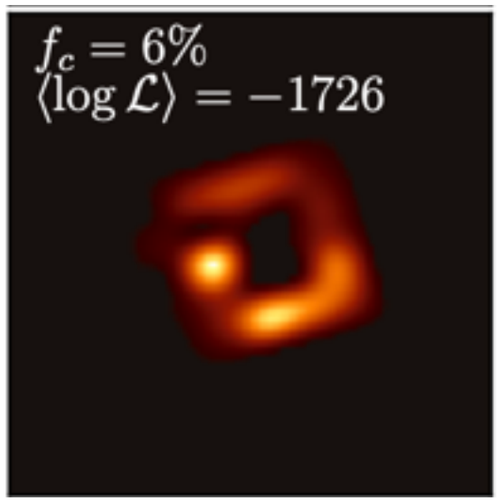
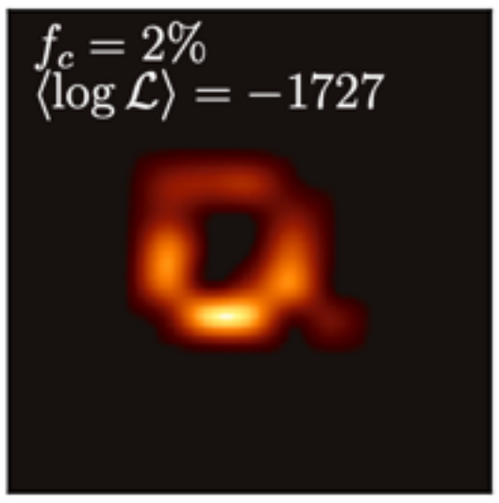
  - A class of algorithms that gamble computational budget for perfect accuracy
  - Compute resources increases with problem complexity







MONTE CARLO ESTIMATOR