50
100
150
200
250
300
350
α
δ
$p(\vec{\vartheta}|d,h)^{1/T}p(\vec{\vartheta}|h)$

50
100
150
200
250
300
350
α
δ
$p(\vec{\vartheta}|d,h)^{1/T}p(\vec{\vartheta}|h)$

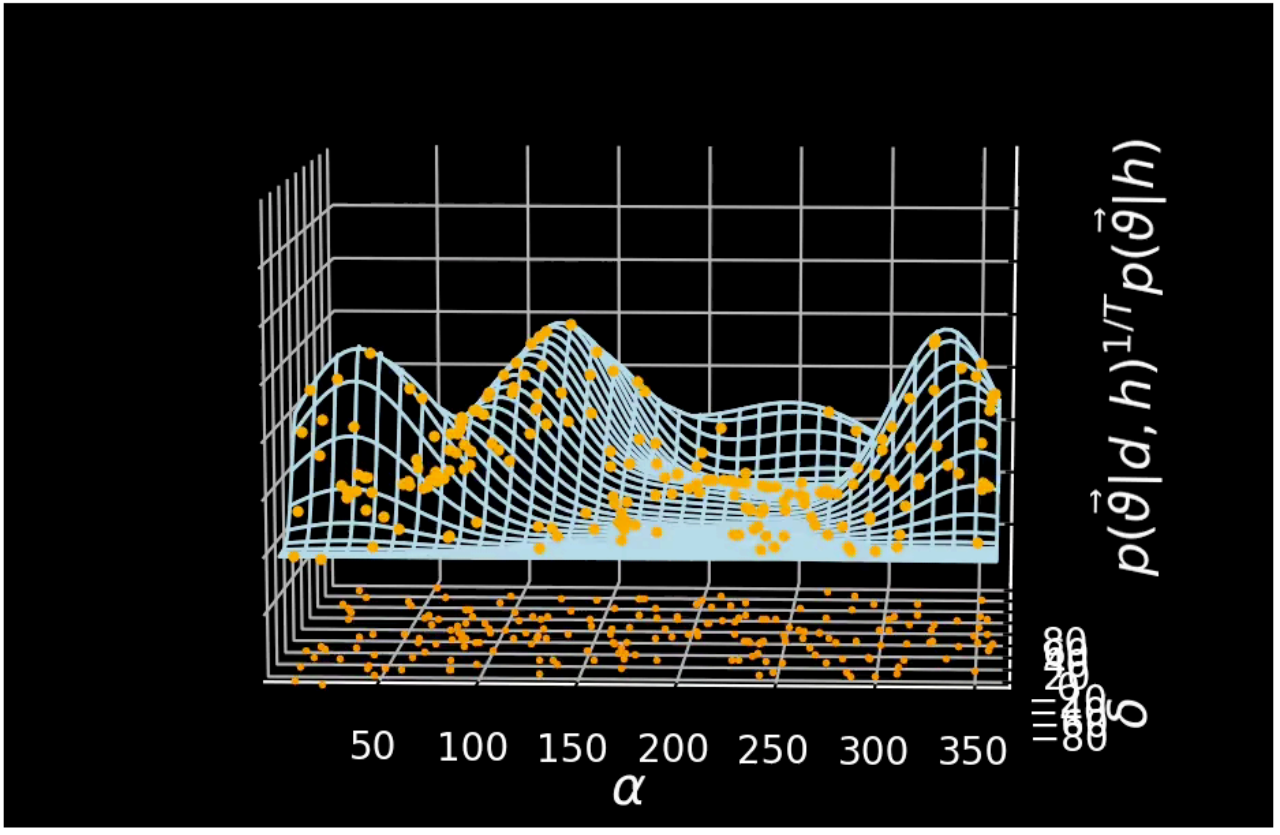
50
100
150
200
250
300
350
α
δ
$p(\vec{\vartheta}|d,h)^{1/T}p(\vec{\vartheta}|h)$

PARALLEL TEMPERED MCMC

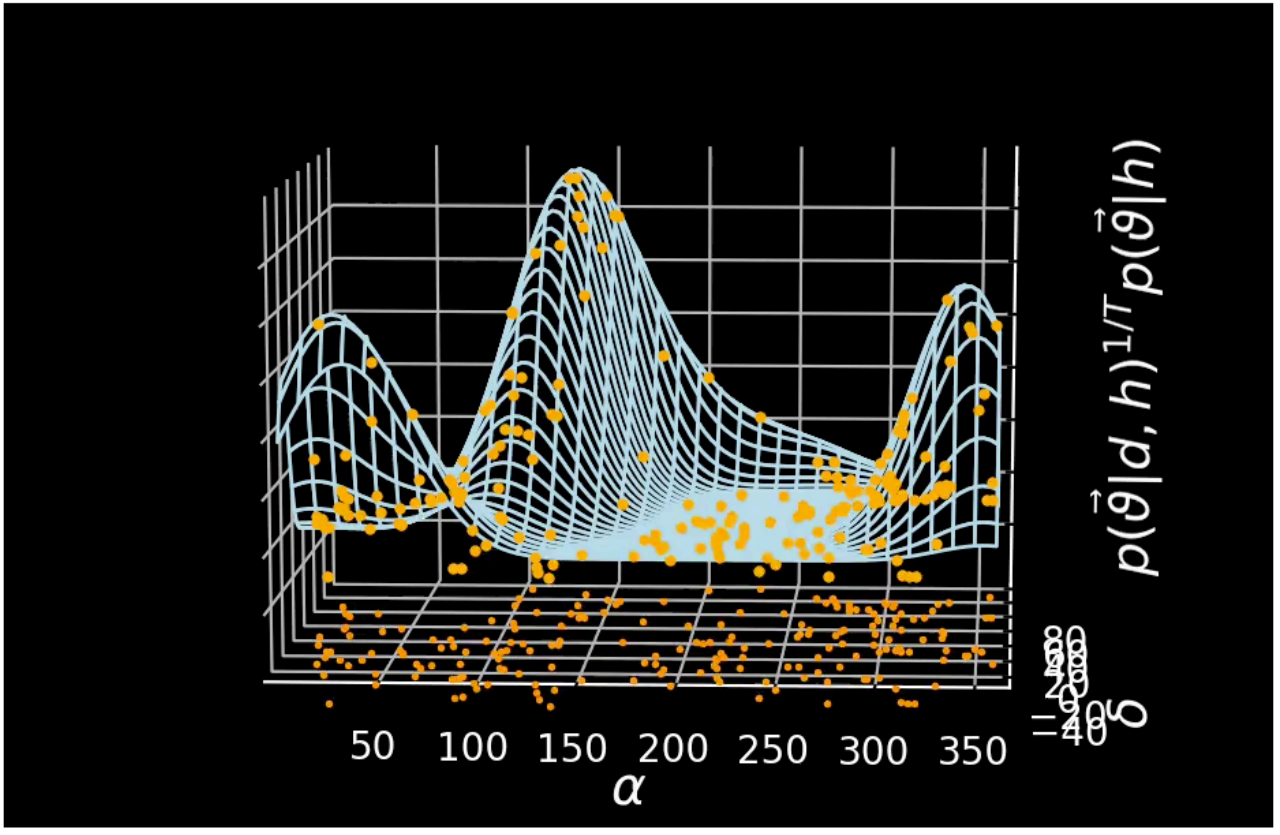
50
100
150
200
250
300
350
α
δ
$p(\vec{\vartheta}|d,h)^{1/T}p(\vec{\vartheta}|h)$

50
100
150
200
250
300
350
α
$p(\vec{\vartheta}|d,h)^{1/T}p(\vec{\vartheta}|h)$

50
100
150
200
250
300
350
α
δ
$p(\vec{\vartheta}|d,h)^{1/T}p(\vec{\vartheta}|h)$

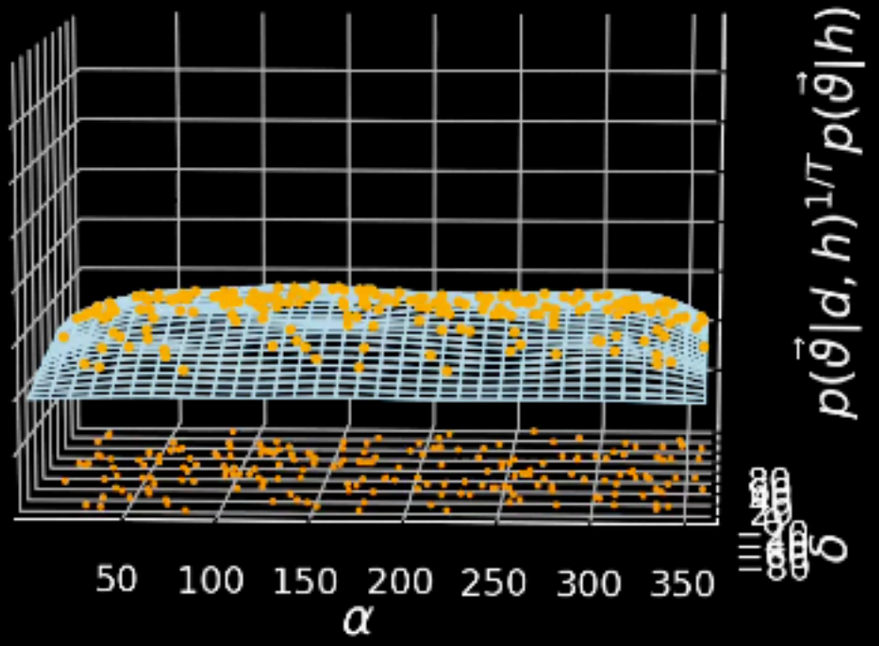

50
100
150
200
250
300
350
α
δ
$p(\vec{\vartheta}|d,h)^{1/T} p(\vec{\vartheta}|h)$

50
100
150
200
250
300
350
α
δ
$p(\vec{\vartheta}|d,h)^{1/T}p(\vec{\vartheta}|h)$

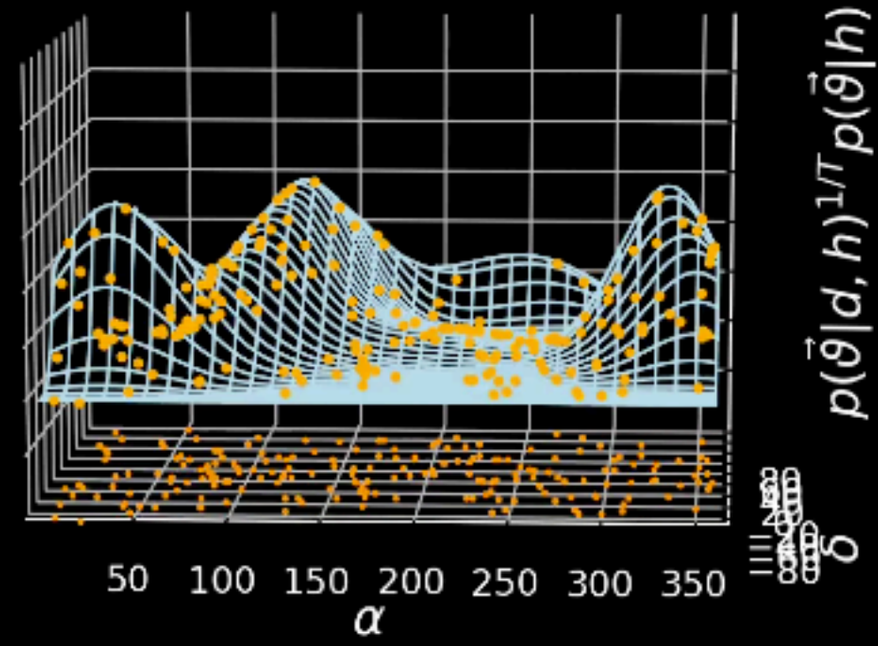

50
100
150
200
250
300
350
α
−40
δ
$p(\vec{\vartheta}|d,h)^{1/T}p(\vec{\vartheta}|h)$

PARALLEL TEMPERED MCMC

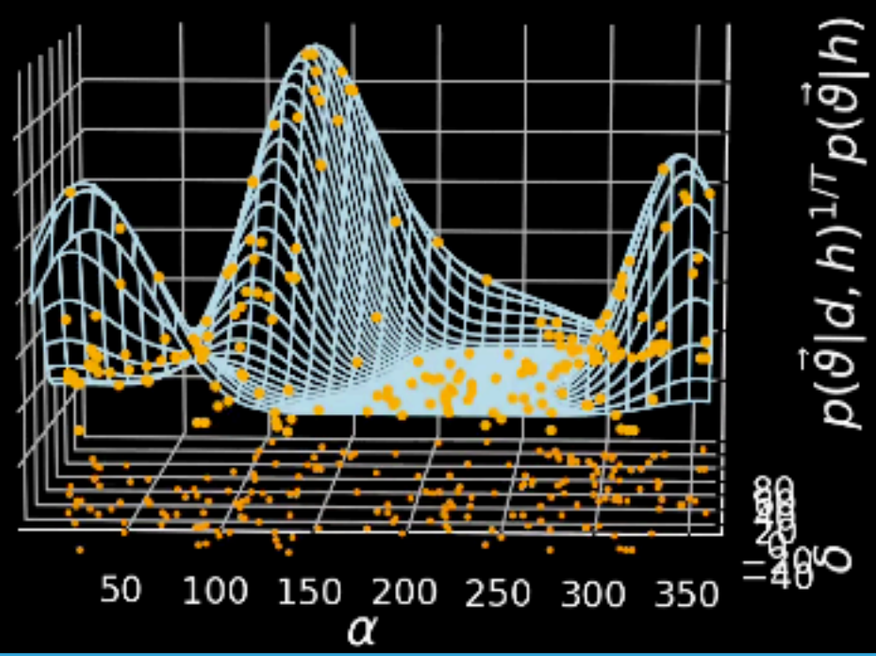
***T* = 10^5**



***T* = 3.5**



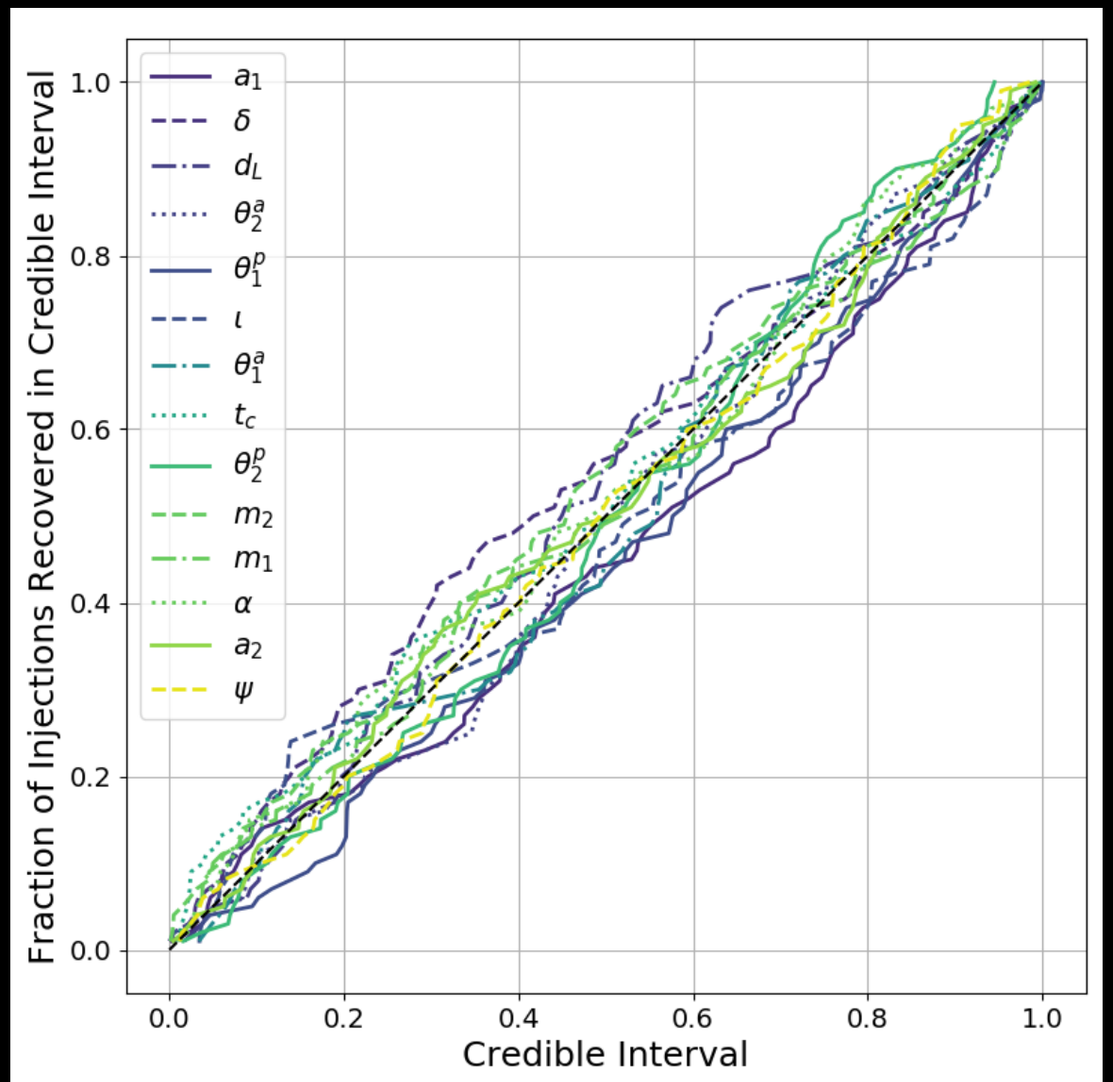
***T* = 1**



PERCENTILE - PERCENTILE TEST

- Add signals to realizations of Gaussian noise
- Run PE on each signal, produce marginal posteriors for each parameter
- Test: for each parameter, do X% of the injected values fall within the X% credible interval?

emcee_pt



C. Biwer, **C. Capano**, et al., arXiv:1807.10312

Probability of obtaining this graph if emcee_pt provides unbiased parameter estimates: **70% (pass)**