Prior probability distribution of Bulk Loss Angles

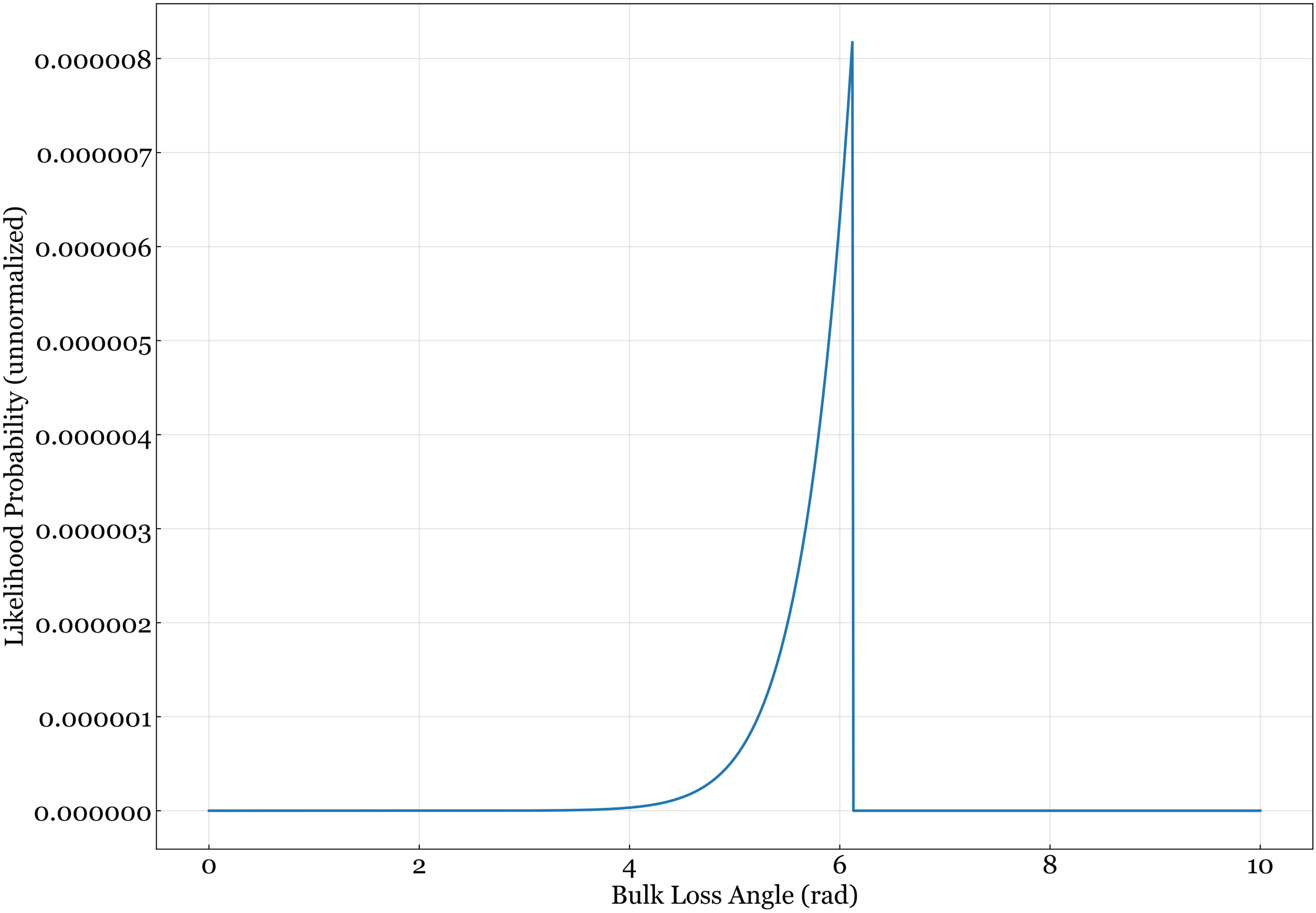
Prior Probability (unnormalized)

1.0
0.8
0.6
0.4
0.2
0.0

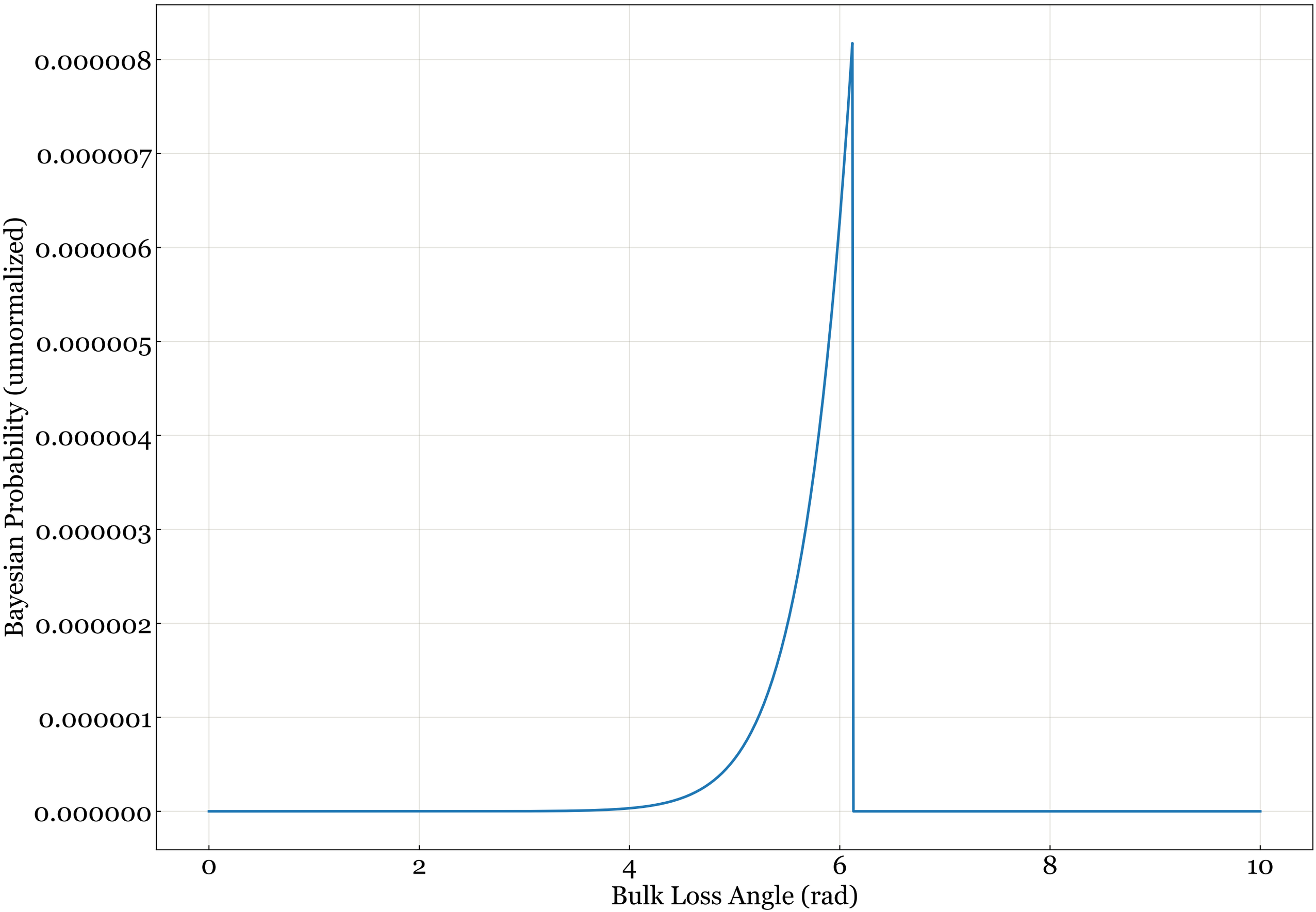
0
2
4
6
8
10

Bulk Loss Angle (rad)

Bayesian Inferred Porbability Distribution of Bulk loss angles formeasured ASD of beatnote from 51.0 Hz to 590.0 Hz



Bayesian Inferred Porbability Distribution of Bulk loss angles formeasured ASD of beatnote from 51.0 Hz to 590.0 Hz



CTN Noise Budget, Mar 11, 2020

$\Phi_B = 6.1^{6.1}_{5.2} \times 10^{-4}$ radians; $\Phi_S = 5.2 \times 10^{-7}$ radians

Coating Brownian Noise
Coating Thermo-Optic Noise
Substrate Brownian Noise
Substrate Thermoelastic Noise
PDH Shot Noise
DPLL Frequency Noise
Beatnote PD Dark Noise
Seismic Noise
Photothermal Noise
Residual NPRO Noise
Total expected noise
Measured Beatnote Spectrum

ASD of beat note frequency [$Hz/Hz^{1/2}$]

10^{3}
10^{2}
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}

10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4}

Frequency [Hz]