

# Supporting Information for “Proton Properties in Mercury’s Magnetotail: A Statistical Study”

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1. Table S1

**Table S1.** Model parameters obtained from the mean phase space density shown in Figure 1f

	Density( $\text{cm}^{-3}$ )	Temperature(keV)	Pressure(nPa)	Kappa
Single Gaussian <sup>a</sup>	2.1	0.89	0.30	-
Single Kappa	2.2	0.83	0.29	5.5
Gaussian-Kappa <sup>b</sup> Kappa part	2.2	0.84	0.30	5.7
Gaussian-Kappa <sup>b</sup> Gaussian part	0.2	0.02	< 0.01	-
Gaussian-Kappa <sup>b</sup> Total	2.4	0.77	0.30	5.7

<sup>a</sup> Green dashed line shown in Figure 1f.

<sup>b</sup> Red dashed line shown in Figure 1f.