

## A. Additional Results - LD-SMC Rebuttal

Table 1: *FFHQ*. Additional baselines. Box inpainting on 1024 test examples.

	Perceptual Quality		Distortion		
	FID ( $\downarrow$ )	NIQE ( $\downarrow$ )	PSNR ( $\uparrow$ )	SSIM ( $\uparrow$ )	LPIPS ( $\downarrow$ )
PFLD	49.21	7.647	21.43	0.642	0.375
LatentDAPS	60.49	10.02	<b>25.16</b>	<b>0.836</b>	0.256
LD-SMC (prior proposal)	62.35	7.628	12.60	0.365	0.671
LD-SMC (Ours)	<b>34.98</b>	<b>7.263</b>	24.16	0.820	<b>0.217</b>

Table 2: *FFHQ*. Additional baselines. Gaussian deblurring on 1024 test examples.

	Perceptual Quality		Distortion		
	FID ( $\downarrow$ )	NIQE ( $\downarrow$ )	PSNR ( $\uparrow$ )	SSIM ( $\uparrow$ )	LPIPS ( $\downarrow$ )
PFLD	42.11	7.123	22.28	0.570	0.388
LatentDAPS	52.96	9.397	<b>29.55</b>	<b>0.829</b>	0.284
LD-SMC (prior proposal)	59.80	7.037	11.00	0.292	0.683
LD-SMC (Ours)	<b>32.23</b>	<b>6.543</b>	26.66	0.724	<b>0.279</b>

Table 3: *ImageNet*. Free-form inpainting on 1024 test examples.

	Perceptual Quality		Distortion		
	FID ( $\downarrow$ )	NIQE ( $\downarrow$ )	PSNR ( $\uparrow$ )	SSIM ( $\uparrow$ )	LPIPS ( $\downarrow$ )
Latent DPS	53.44	7.867	<b>23.76</b>	<u>0.722</u>	0.334
Latent TDS	52.75	7.884	<u>23.74</u>	0.721	0.334
ReSample	<u>44.15</u>	<u>7.104</u>	22.78	<b>0.778</b>	<b>0.248</b>
PSLD	59.24	8.470	21.93	0.638	0.372
LD-SMC (Ours)	<b>37.44</b>	<b>6.746</b>	23.40	<u>0.722</u>	<u>0.286</u>

Table 4: *FFHQ*. Free-form inpainting on 1024 test examples.

	Perceptual Quality		Distortion		
	FID ( $\downarrow$ )	NIQE ( $\downarrow$ )	PSNR ( $\uparrow$ )	SSIM ( $\uparrow$ )	LPIPS ( $\downarrow$ )
Latent DPS	40.17	7.609	<b>27.95</b>	0.858	0.212
Latent TDS	39.78	7.578	<b>27.95</b>	0.858	0.212
Resample	37.01	<b>6.622</b>	26.31	<b>0.891</b>	<b>0.151</b>
PSLD	46.94	7.573	25.33	0.760	0.290
LD-SMC (Ours)	<b>34.65</b>	<u>7.263</u>	<u>27.36</u>	<u>0.858</u>	<u>0.200</u>

Table 5: *FFHQ*. Proposal distribution ablation. Box inpainting on 1024 test examples.

	Perceptual Quality		Distortion		
	FID ( $\downarrow$ )	NIQE ( $\downarrow$ )	PSNR ( $\uparrow$ )	SSIM ( $\uparrow$ )	LPIPS ( $\downarrow$ )
Prior proposal	62.35	7.628	12.60	0.365	0.671
DPS proposal	39.94	7.558	<b>24.20</b>	0.814	0.235
LD-SMC (Ours)	<b>34.98</b>	<b>7.263</b>	24.16	<b>0.820</b>	<b>0.217</b>

 Table 6: *ImageNet*. Ablation on number of particle for LD-SMC. Box inpainting on 1024 test examples.

	Perceptual Quality		Distortion		
	FID ( $\downarrow$ )	NIQE ( $\downarrow$ )	PSNR ( $\uparrow$ )	SSIM ( $\uparrow$ )	LPIPS ( $\downarrow$ )
1 particle	52.94	6.929	19.30	0.668	0.333
3 particles	51.69	<b>6.901</b>	19.32	0.667	0.332
5 particles	51.46	6.953	<b>19.41</b>	<b>0.669</b>	<b>0.331</b>
10 particles	<b>50.99</b>	6.909	19.38	<b>0.669</b>	0.332

 Table 7: *ImageNet*. Ablation on number of Gibbs iterations for LD-SMC. Gaussian deblurring on 1024 test examples.

	Perceptual Quality		Distortion		
	FID ( $\downarrow$ )	NIQE ( $\downarrow$ )	PSNR ( $\uparrow$ )	SSIM ( $\uparrow$ )	LPIPS ( $\downarrow$ )
5 particles; 1 iteration	51.95	6.796	23.60	0.614	0.382
1 particle ; 1 iteration	52.48	6.855	<b>23.61</b>	<b>0.615</b>	0.383
1 particle; 2 iterations	51.62	6.824	23.58	0.614	0.382
1 particle; 4 iterations	<b>51.08</b>	<b>6.732</b>	23.57	0.613	<b>0.380</b>

 Table 8: *ImageNet*. Ablation on number of Gibbs iterations for LD-SMC. Super-resolution on 1024 test examples.

	Perceptual Quality		Distortion		
	FID ( $\downarrow$ )	NIQE ( $\downarrow$ )	PSNR ( $\uparrow$ )	SSIM ( $\uparrow$ )	LPIPS ( $\downarrow$ )
5 particles; 1 iteration	59.42	6.812	21.78	0.523	0.436
1 particle ; 1 iteration	60.79	6.941	<b>21.82</b>	<b>0.533</b>	0.438
1 particle; 2 iterations	<b>58.88</b>	6.809	21.77	0.530	0.436
1 particle; 4 iterations	59.14	<b>6.801</b>	21.75	0.529	<b>0.435</b>

 Table 9: *ImageNet*. Ablation on  $z_0$  initialization. Box inpainting on 1024 test examples.

	Perceptual Quality		Distortion		
	FID ( $\downarrow$ )	NIQE ( $\downarrow$ )	PSNR ( $\uparrow$ )	SSIM ( $\uparrow$ )	LPIPS ( $\downarrow$ )
$y_0$ Initialization	54.79	7.400	<b>19.43</b>	0.666	0.340
LD-SMC initialization	<b>51.46</b>	<b>6.953</b>	19.41	<b>0.669</b>	<b>0.331</b>

 Table 10: *FFHQ*. Ablation on  $z_0$  initialization. Box inpainting on 1024 test examples.

	Perceptual Quality		Distortion		
	FID ( $\downarrow$ )	NIQE ( $\downarrow$ )	PSNR ( $\uparrow$ )	SSIM ( $\uparrow$ )	LPIPS ( $\downarrow$ )
$y_0$ Initialization	36.26	7.500	24.12	<b>0.821</b>	0.220
LD-SMC initialization	<b>34.98</b>	<b>7.263</b>	<b>24.16</b>	0.820	<b>0.217</b>