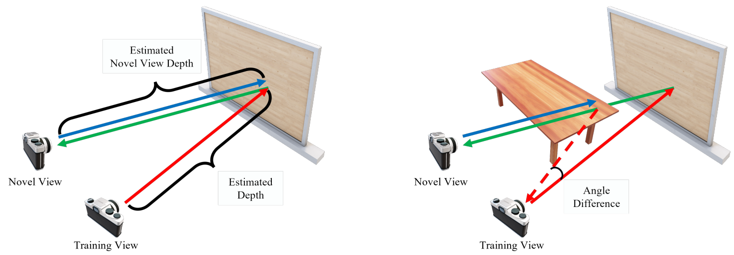

(a) Novel Patch Sampling (b) Occlusion

Figure 1: **Novel View Patch sampling and occlusion visualization.** (a) We first sample novel view near the training view. Then, we render a patch from the training view to estimate depth (Red line), which is projected to the novel view (Green Line). Finally, we render the corresponding patch at the novel view (Blue line) and compare the rendered RGB from the novel view to the ground truth RGB from the training view. (b) A pixel is marked as occluded and excluded from the NCC and SSIM terms if the projection of its rendered novel view depth is inconsistent with the training view depth based on the angular difference.

Figure 2: **Image and Depth overlay visualization.** From the left to right, we overlay the RGB image and the rendered depth map with varying fade thresholds. We show that our method does not experience foreground fattening as the images and the depths are precisely overlapped.

Scenes	Grid	Grid w/ Cues [2]	MLP [1]	MLP w/ Mono	Ours
Auditorium	1.36	3.17	1.60	3.09	**8.02**
Ballroom	2.67	3.70	2.04	2.47	**26.57**
Courtroom	7.84	13.75	8.03	10.00	**17.18**
Museum	4.12	5.68	2.96	5.10	**21.38**
Mean	4.00	6.58	3.66	5.17	**18.29**

Table 1: **Quantitative Results on the Tanks and Temples Advanced Set.** We measure the F-score with the standard 1cm threshold on the same scenes tested by MonoSDF [2]. We use the author provided results for the MonoSDF [2] which includes the evaluation of VolSDF [1]. Our method significantly improves the geometry compared to the existing methods.

References

[1] L. Yariv, J. Gu, Y. Kasten, and Y. Lipman. Volume rendering of neural implicit surfaces. *Advances in Neural Information Processing Systems (NeurIPS)*, 2021.

[2] Z. Yu, S. Peng, M. Niemeyer, T. Sattler, and A. Geiger. Monosdf: Exploring monocular geometric cues for neural implicit surface reconstruction. *arXiv preprint arXiv:2206.00665*, 2022.