Table 1. Pose estimation results on the MegaDepth-8-Scenes benchmark, measured in AUC (higher is better). Top section, sparse methods, bottom section, dense methods.

| Method               | AUC @5° | AUC @10° | AUC @20° |
|----------------------|---------|----------|----------|
| ASpanFormer          | 57.2    | 72.1     | 82.9     |
| PDCNet+              | 51.8    | 66.6     | 77.2     |
| DKM                  | 60.5    | 74.5     | 84.2     |

1. Additional State-of-the-Art Comparison

MegaDepth-8-Scenes Pose Estimation:
Since the MegaDepth-1500 benchmark is sampled from only 2 scenes, it is of interest to ascertain that results hold in a wider setting. We therefore sample a total of 1600 pairs from 8 different scenes:

1. Piazza San Marco (0008): Example in Figure 1.
2. Sagrada Familia (0019): Example in Figure 2.
3. Lincoln Memorial Statue (0021): See main paper.
4. British Museum (0024): Example in Figure 3.
5. Tower of London (0025): See main paper.
6. Florence Cathedral (0032): Example in Figure 4.
7. Milan Cathedral (0063): See main paper.
8. Mount Rushmore (1589): Example in Figure 5.

We use the same protocol as in MegaDepth-1500. We call this new benchmark MegaDepth-8-Scenes. Results on this benchmark are presented in Table 1. We achieve state-of-the-art results here as well, with a relative performance increase of +3.3 AUC @5° compared to the previous best sparse method, and by +8.7 percentage points compared to the previous best dense method.

St. Paul's Cathedral: COTR and ECO-TR [2, 3] are two recent dense methods based on transformer architectures.
Here we compare results of our approach compared to those works on the St. Paul’s Cathedral scene. We use the evaluation protocol of ECO-TR. We present results in Table 2. We find that our method outperforms both COTR and ECO-TR, achieving a performance increase of +8.0 mAA@5°. We additionally present a representative qualitative example in Figure 6.

### 2. Further Qualitative Examples

#### 2.1. MegaDepth-1500

In Figure 7 we present a qualitative example on the St. Peter’s Basilica (0015) scene.

#### 2.2. HPatches

In Figures 8 and 9 we present qualitative results on HPatches. We find that despite not being trained for planar scenes, DKM performs very well here as well.
Figure 7. DKM warp and certainty on a pair from the St. Peter’s Basilica (0015) scene.

Figure 8. DKM result on the HPatches planar scene v_bird.

Figure 9. DKM result on the HPatches planar scene v_graffiti.

Figure 10. DKM indoor model results on a kitchen scene in the ScanNet-1500 benchmark.

Figure 11. Failure case of DKM. The warp completely fails, and the estimated certainty is very low.

2.3. ScanNet

In Figure 10, we present a qualitative example of the indoor model of DKM on the ScanNet-1500 benchmark.

3. Additional Failure Cases

**Extreme Lack of Texture:** In Figure 11 we show a failure case where our method completely fails. We believe this failure is due to the complete lack of unique local textures. However, the matching is not ill-defined as unique global patterns exist. Encouragingly however, the model predicts a very low certainty for this pair, indicating a well calibrated uncertainty estimate.
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