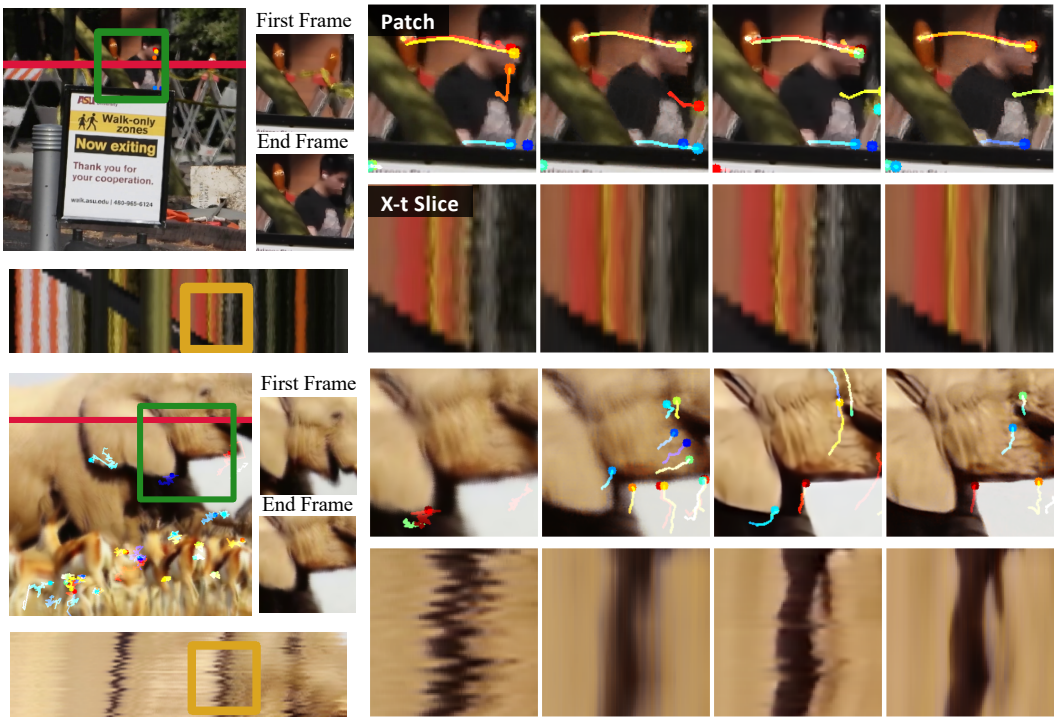


Figure 1: Experimental results demonstrate the effectiveness of our approach in two scenarios involving large motion. The top row shows a person walking quickly, while the bottom row shows an elephant rapidly raising its head. The long KLT trajectories and X-t slice plots indicate that our approach retains regular object motion while suppressing irregular turbulence motion.

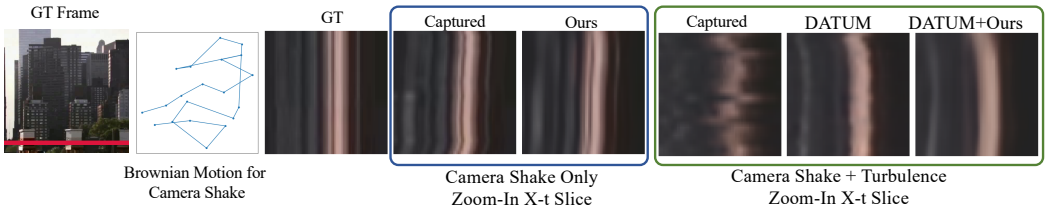


Figure 2: Illustration of camera shake simulation using Brownian Motion, in the X-t slice plots we can see the similarity between camera shake and turbulence and the effectiveness of our approach in handling both camera shake alone and the combination of camera shake and turbulence.


Figure 3: Experimental results compare our method with other unsupervised and test-time optimization turbulence removal methods, including those by Li et al. and Mao et al., on scenes with moving objects. Both baseline methods fail to capture the moving parts, replacing them with the average background, while our method effectively handles moving objects.

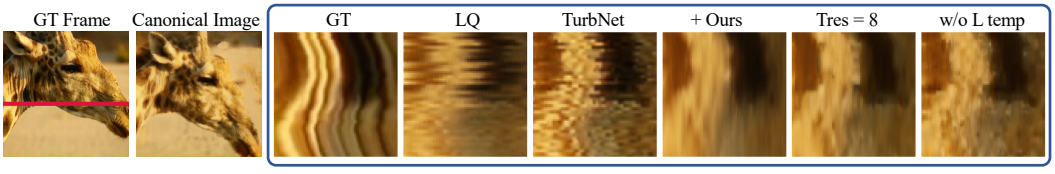


Figure 4: Ablation study and canonical image visualization. Our method mitigates residual turbulence using $L_{temp}$ and lower $T_{res}$. Canonical image is visualized from Canonical Spatial Feature Map C.