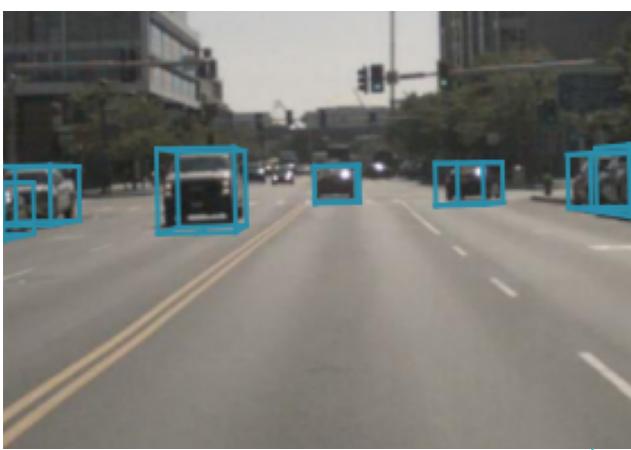


(a) Ground truth in Verified nuScenes

Far field

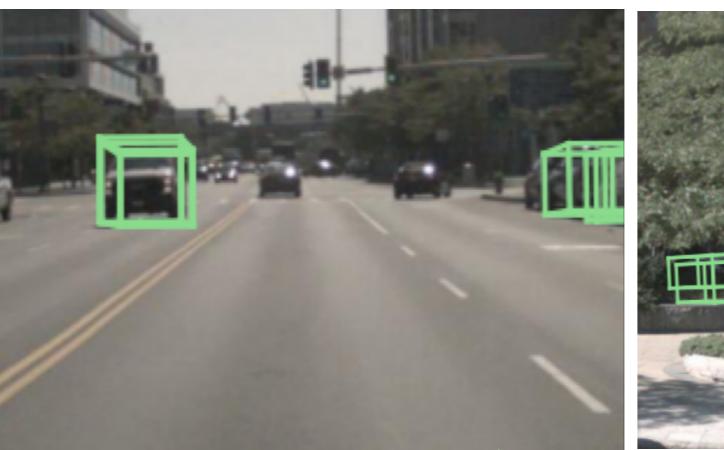


Clutter



(b) LiDAR-based detector (CenterPoint)

Poor in far-field

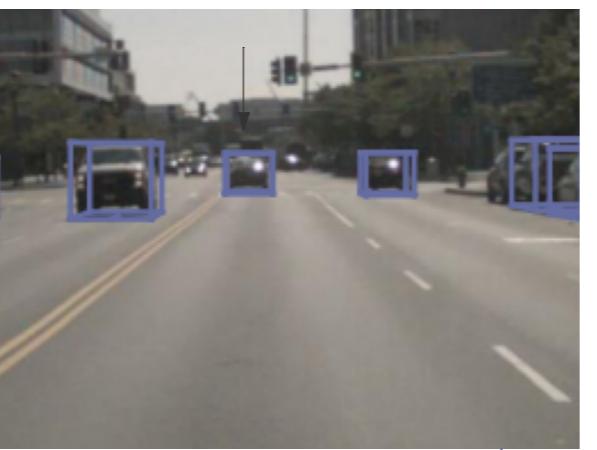


Good in clutter



(c) Image-based detector (FCOS3D)

Good in far-field

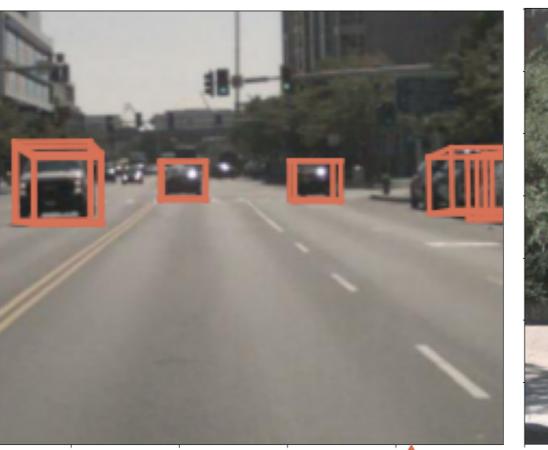


Poor in clutter

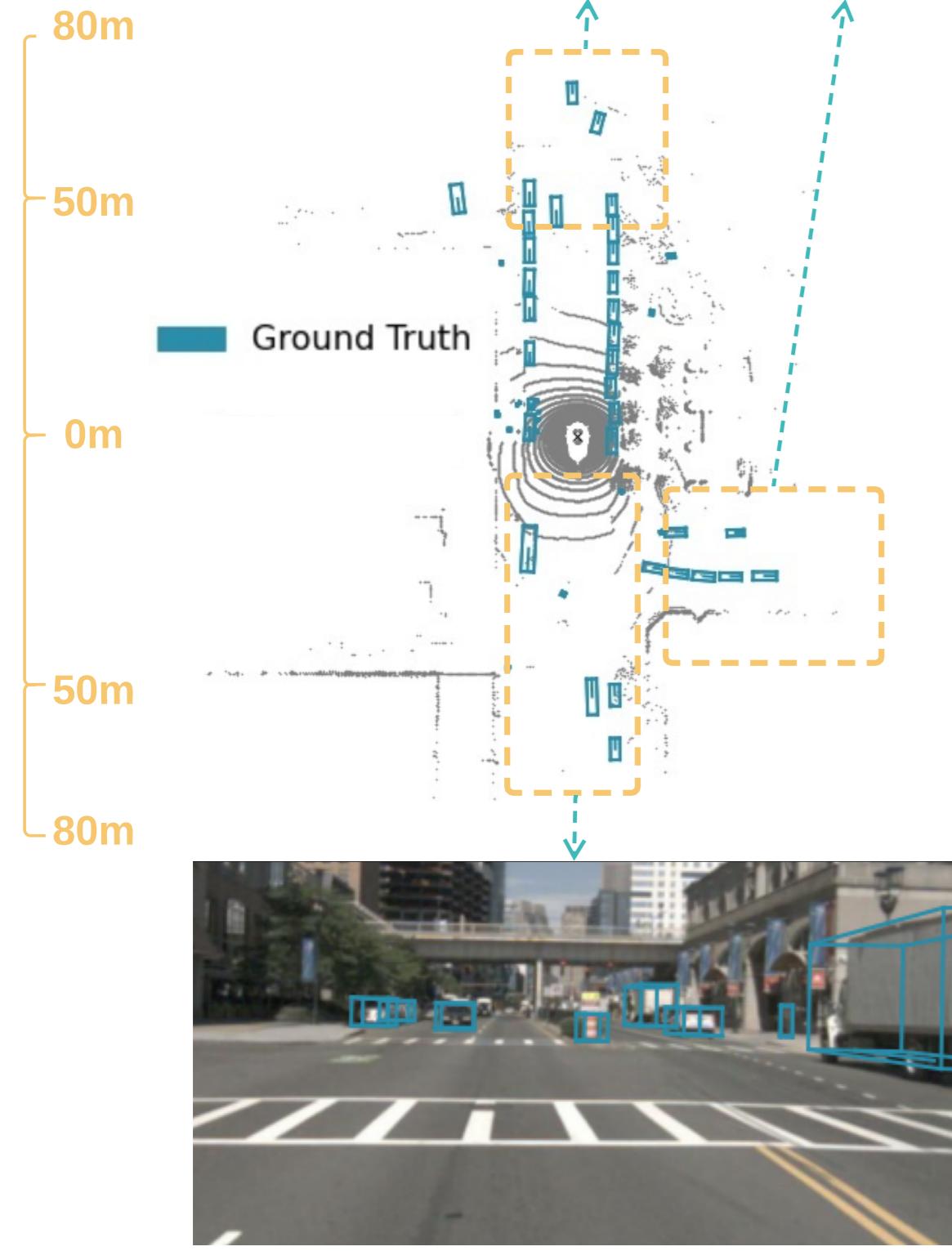


(d) Multimodal fusion (Ours)

Good in far-field



Good in clutter



Far field

Poor in far-field

Good in far-field

Good in far-field