Heteroskedastic Geospatial Tracking with Distributed Camera Networks (Supplementary Material)

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Table 1: Complete Results

| Lights	Model	KF Train	Calibration	Detector NLL	Detector OPM	NLL	OPM	DetPr	LocA
False	ResNet50	False	None	11.329	0.197	19.675	0.469	0.470	0.900
False	ResNet50	False	NLL	8.847	0.105	7.200	0.414	0.414	0.722
False	ResNet50	True	None	14.205	0.202	29.881	0.501	0.502	0.925
False	ResNet50	True	NLL	8.823	0.100	7.360	0.398	0.396	0.709
False	DETR	False	None	7.484	0.595	6.834	0.917	0.919	0.978
False	DETR	False	NLL	6.270	0.429	4.803	0.870	0.883	0.929
False	DETR	True	None	8.469	0.594	7.876	0.914	0.915	0.981
False	DETR	True	NLL	6.470	0.388	5.002	0.853	0.867	0.918
False	Ours	False	None	17.489	0.308	35.338	0.644	0.646	0.947
False	Ours	False	NLL	8.725	0.137	7.419	0.476	0.479	0.771
False	Ours	True	None	22.912	0.318	48.259	0.643	0.645	0.956
False	Ours	True	NLL	8.645	0.133	7.240	0.476	0.479	0.766
True	ResNet50	False	None	6.361	0.803	6.598	0.959	0.959	0.997
True	ResNet50	False	NLL	5.921	0.569	4.537	0.934	0.939	0.974
True	ResNet50	True	None	6.840	0.793	7.171	0.958	0.958	0.997
True	ResNet50	True	NLL	6.000	0.559	4.510	0.936	0.942	0.975
True	DETR	False	None	5.288	0.819	7.149	0.985	0.987	0.990
True	DETR	False	NLL	5.736	0.637	5.465	0.936	0.946	0.956
True	DETR	True	None	5.665	0.818	8.842	0.989	0.991	0.991
True	DETR	True	NLL	5.870	0.617	5.980	0.925	0.937	0.946
True	Ours	False	None	7.873	0.701	8.624	0.958	0.960	0.993
True	Ours	False	NLL	6.449	0.457	5.364	0.879	0.890	0.939
True	Ours	True	None	8.274	0.704	8.857	0.960	0.961	0.996
True	Ours	True	NLL	6.346	0.472	4.973	0.890	0.900	0.947
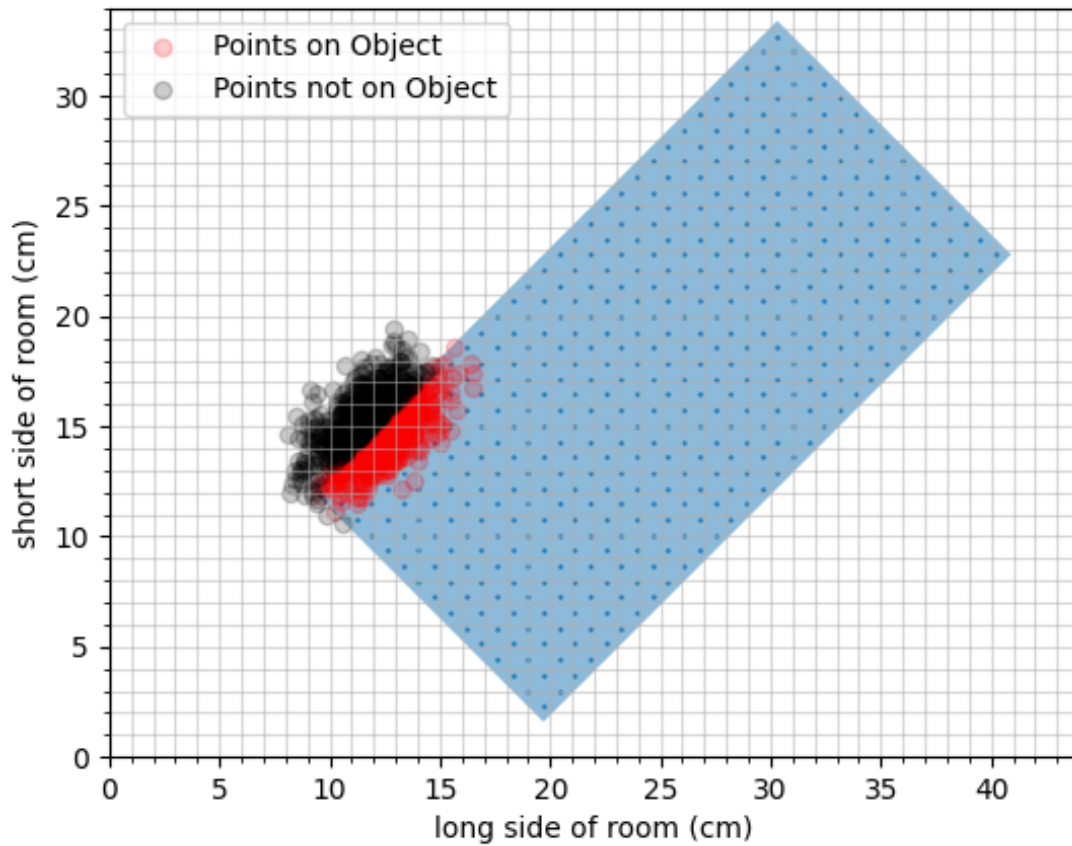
Figure 1: Illustration of the Object Probability Mass (OPM) metric. The blue rectangle represents the physical extent of an object. The black points are sampled points which do not fall inside the spatial extent of the object, while the red points are points that do fall inside the object. The OPM is then the ratio of these two quantities. In this case the OPM = 0.52. We note that both the object and distributions may not be axis aligned as shown here.