			MegaDepth			ScanNet					P.	lanar		IMC PhotoTourism							
Pipeline	Filtered	Precision	Recall	$\mathrm{AUC}^F_{\measuredangle}$	$\mathrm{AUC}^E_{\measuredangle}$	Filtered	Precision	Recall	$\mathrm{AUC}^F_{\measuredangle}$	$\mathrm{AUC}^E_{\measuredangle}$	Filtered	Precision	Recall	AUC_{\square}^H	Filtered	Precision	Recall	$\mathrm{AUC}^F_{\measuredangle}$	$\mathrm{AUC}^E_{\measuredangle}$	AUC_{\square}^F	$\mathrm{AUC}_{\square}^{E}$
$\begin{array}{l} \mathrm{SIFT} + \mathrm{NNR} \\ + \mathrm{MAGSAC}_{\uparrow} \\ + \mathrm{MAGSAC}_{\downarrow} \end{array}$	0.00 51.10 54.52	53.52 93.20 93.83	100.00 85.09 79.32	0.30 44.29 46.86	61.47 61.92 62.20	0.00 78.15 80.84	25.21 55.30 55.24	99.12 46.62 40.60	0.15 14.43 14.74	20.42 22.54 22.36	0.00 69.07 75.34	44.38 73.35 73.43	90.42 50.04 39.88	22.88 48.13 45.12	0.00 63.48 66.19	39.31 83.04 83.60	99.94 76.37 70.76	0.21 33.21 34.68	56.57 57.97 57.33	0.26 17.07 18.43	31.24 31.28 30.84
+ACNe	47.98	92.51	90.88	29.25	62.56	67.72	55.42	71.03	12.71	25.73 25.59 25.26	54.05	66.12	70.87	35.07	61.26	84.45	84.77	22.71	61.01	8.51	32.27
+MAGSAC↑	53.64	96.39	83.39	54.34	62.83	79.85	60.96	47.76	19.31		72.80	74.25	44.48	44.42	66.56	89.79	75.67	45.17	60.79	23.08	32.10
+MAGSAC↓	56.55	96.80	78.35	54.70	62.05	82.11	60.98	42.28	19.48		77.78	74.17	35.81	41.45	68.51	90.12	71.18	46.08	60.62	23.72	31.97
$^{+\mathrm{AdaLAM}}_{+\mathrm{MAGSAC}_\uparrow} \\ ^{+\mathrm{MAGSAC}_\downarrow}$	82.59	93.53	27.39	16.72	52.79	92.38	53.61	15.17	3.61	14.44	80.67	63.16	25.89	28.29	91.03	83.75	16.71	14.07	39.98	6.93	21.33
	83.65	92.40	26.08	47.13	51.16	93.93	46.42	12.23	10.56	13.69	84.95	60.73	20.41	33.11	91.52	73.33	15.77	30.39	39.30	17.66	20.81
	84.25	92.64	25.22	47.45	50.38	94.38	46.41	11.32	11.12	14.36	87.28	60.99	17.28	32.26	91.76	73.42	15.36	30.59	39.34	17.84	20.84
$^{+\mathrm{CC}}_{+\mathrm{MAGSAC}_\uparrow} \\ ^{+\mathrm{MAGSAC}_\downarrow}$	46.83 54.12 57.00	92.78 96.28 96.69	89.32 80.70 75.85	26.91 52.23 52.94	59.83 59.36 60.12	40.87 81.21 83.30	52.01 59.26 59.14	81.13 41.56 36.73	5.08 12.68 12.67	18.12 18.59 18.20	27.33 69.29 75.61	66.77 73.36 73.44	89.62 49.55 39.61	55.26 47.48 44.77	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a
$^{+\mathrm{CLNet}}_{+\mathrm{MAGSAC}_{\uparrow}} \\ ^{+\mathrm{MAGSAC}_{\downarrow}}$	48.86	91.30	87.88	8.97	58.19	77.09	58.23	52.82	3.10	19.98	50.71	68.34	76.41	39.66	62.34	85.58	83.07	16.37	59.17	5.05	30.61
	55.64	96.13	79.14	43.23	56.75	83.33	61.54	39.84	10.99	19.37	69.31	74.19	49.16	47.42	67.41	90.32	73.95	39.88	58.80	20.18	30.24
	58.52	96.59	74.21	43.90	57.72	85.15	61.33	35.34	10.96	19.02	75.56	74.24	39.01	44.39	69.38	90.66	69.44	40.97	58.65	20.87	29.98
$+ ConvMatch \\ + MAGSAC_{\uparrow} \\ + MAGSAC_{\downarrow}$	57.48	88.99	79.39	28.58	56.66	69.50	56.86	70.05	8.74	23.95	71.07	63.96	50.96	33.32	63.69	84.05	83.00	25.99	60.45	10.92	31.26
	62.89	92.85	71.39	46.47	57.05	80.86	61.77	46.67	17.24	23.85	84.62	70.11	30.68	33.72	69.50	90.27	72.00	43.36	59.95	22.40	30.98
	65.25	93.24	67.01	47.30	57.43	83.00	61.77	41.37	17.50	23.08	87.40	70.32	25.19	32.65	71.33	90.62	67.59	44.22	59.97	23.08	31.04
$^{+\mathrm{DeMatch}}_{+\mathrm{MAGSAC}_{\uparrow}}$ $^{+\mathrm{MAGSAC}_{\downarrow}}$	52.87	91.38	83.69	26.05	57.69	70.09	55.89	67.66	6.82	22.22	64.33	65.16	57.55	39.07	63.59	83.19	81.96	24.13	59.60	9.82	30.69
	58.86	95.94	75.29	44.95	58.01	81.27	60.89	45.11	14.82	22.93	79.19	72.74	36.09	40.02	69.61	89.57	70.95	41.51	58.94	21.19	30.26
	61.43	96.37	70.74	45.97	58.03	83.38	60.81	39.80	15.04	22.25	82.65	73.06	30.00	38.64	71.45	89.91	66.56	42.58	58.85	21.94	30.16
$^{+\text{FC-GNN}}_{+\text{MAGSAC}_{\uparrow}} \\ ^{+\text{MAGSAC}_{\downarrow}}$	50.51	95.34	85.52	26.90	63.37	79.49	64.92	48.23	11.06	24.54	54.32	72.08	71.04	46.44	65.09	89.13	74.92	17.95	60.00	8.84	33.13
	52.15	97.19	83.91	59.91	63.34	81.29	66.12	44.57	19.75	24.46	63.57	74.51	57.22	47.40	66.60	91.39	73.07	46.57	59.17	27.16	32.53
	52.91	97.31	82.60	60.24	63.69	82.11	66.19	42.62	19.82	24.55	68.94	74.69	48.61	45.04	67.16	91.52	71.84	47.12	59.09	27.58	32.26
$^{+\mathrm{GMS}}_{+\mathrm{MAGSAC}_{\uparrow}}$ $^{+\mathrm{MAGSAC}_{\downarrow}}$	58.25	87.80	64.67	13.59	51.11	86.83	51.91	25.92	3.98	11.82	65.03	61.20	46.28	37.81	74.34	78.84	48.20	8.80	41.78	3.97	22.28
	63.16	89.73	59.01	47.74	50.22	89.63	47.75	20.92	8.26	12.04	76.34	62.86	32.64	37.44	76.94	78.35	44.54	30.30	41.40	16.89	22.07
	65.38	90.04	55.65	48.13	50.76	90.60	47.80	19.03	8.52	11.82	80.57	63.03	26.75	35.28	78.14	78.56	42.36	30.91	41.67	17.27	22.15
$+\mathrm{MS^2DG\text{-}Net}$	65.84	81.23	58.09	0.90	52.16	68.15	43.36	57.34	0.20	18.70	70.84	58.69	44.68	11.17	68.76	68.35	59.78	0.52	48.69	0.29	24.83
$+\mathrm{MAGSAC}_\uparrow$	72.88	91.21	52.22	41.99	51.17	85.11	56.79	35.62	11.87	18.94	85.42	71.66	27.93	35.57	77.23	80.26	51.84	31.06	47.85	16.00	24.37
$+\mathrm{MAGSAC}_\downarrow$	74.47	91.62	49.24	42.79	50.69	86.68	56.73	31.66	11.66	18.18	87.76	71.92	23.30	34.49	78.55	80.58	48.82	32.36	47.46	16.78	24.04
$^{+\mathrm{NCMNet}}_{+\mathrm{MAGSAC}_\uparrow}$ $^{+\mathrm{MAGSAC}_\downarrow}$	48.30	91.24	88.72	10.54	58.90	76.16	58.45	54.53	5.16	20.86	50.91	68.41	76.14	39.95	62.07	86.37	84.67	19.40	60.22	6.65	31.31
	55.23	96.03	79.74	44.46	58.49	82.52	61.43	41.22	12.34	20.87	69.57	74.32	49.00	47.42	67.16	90.86	75.22	40.47	59.68	20.29	30.72
	58.12	96.44	74.78	45.30	58.48	84.40	61.38	36.74	12.42	19.90	75.66	74.98	39.33	45.10	69.16	91.20	70.61	41.48	59.39	20.89	30.44
$^{+\mathrm{OANet}}_{+\mathrm{MAGSAC}_{\uparrow}} \\ ^{+\mathrm{MAGSAC}_{\downarrow}}$	66.81	94.67	63.81	28.67	54.59	80.43	60.92	50.75	12.22	22.19	78.02	68.40	41.67	28.41	73.00	89.43	66.58	31.68	56.42	14.01	27.99
	69.20	96.50	59.90	40.99	54.51	84.85	62.94	38.99	15.58	23.09	85.81	72.54	26.65	36.59	74.99	91.46	61.49	39.61	56.11	18.80	27.62
	70.91	96.87	56.68	41.90	54.72	86.33	62.92	34.98	15.64	22.14	88.20	72.87	22.06	35.43	76.24	91.70	58.31	40.56	56.21	19.49	27.79
$\begin{array}{l} +\mathbf{MOP} \\ +\mathbf{MAGSAC}_{\uparrow} \\ +\mathbf{MAGSAC}_{\downarrow} \end{array}$	44.18	89.57	92.50	10.20	62.05	70.50	52.42	61.97	3.30	23.12	50.12	66.08	76.18	49.83	61.15	81.01	79.03	8.49	57.20	3.61	31.22
	52.29	95.02	83.43	55.92	62.46	81.18	58.70	43.71	17.73	23.12	69.68	71.61	47.93	47.22	66.65	85.80	71.36	42.46	56.83	23.86	30.87
	55.34	95.45	78.37	57.54	62.40	83.37	58.72	38.59	17.52	23.08	76.07	72.01	37.87	44.79	68.66	86.12	67.24	43.23	56.79	24.52	30.91
+MOP+MiHo	39.79	85.29	95.84	3.85	64.82	59.34	45.24	74.68	0.94	24.80	46.99	63.77	78.60	41.52	55.98	76.16	84.92	3.62	59.96	1.76	33.18
+MAGSAC↑	51.68	95.72	85.38	55.16	64.01	79.39	60.03	48.41	17.21	24.33	69.47	72.91	49.26	46.73	65.42	86.81	74.78	41.74	58.78	23.35	32.12
+MAGSAC↓	54.83	96.24	80.13	56.56	63.77	81.78	60.02	42.67	18.18	24.33	75.64	73.28	39.36	44.71	67.63	87.20	70.19	42.83	58.75	24.07	31.77
+MOP+MiHo+NCC +MAGSAC↑ +MAGSAC↓	39.79 51.05 53.11	95.69 96.11	95.05 86.17 82.65	3.58 53.29 54.66	64.47 62.84 63.87	59.34 78.57 80.50	45.04 59.97 60.02	75.17 50.18 45.40	0.91 18.38 18.30	25.93 25.49 24.30	46.99 61.66 66.99	65.10 73.03 73.47	81.47 63.66 55.16	42.17 51.26 49.32	55.98 65.45 67.01	75.17 86.48 86.83	83.85 74.20 70.91	3.38 40.11 41.20	59.86 58.61 57.94	1.71 22.24 22.97	33.17 32.05 31.43
$+ \mathbf{MOP} + \mathbf{NCC} \\ + \mathbf{MAGSAC}_{\uparrow} \\ + \mathbf{MAGSAC}_{\downarrow}$	44.18	88.74	91.81	9.31	62.72	70.50	52.08	61.97	3.09	24.38	50.12	67.19	78.04	50.01	61.15	80.02	78.16	7.07	57.39	3.12	31.60
	51.63	95.03	84.32	53.88	62.49	80.28	58.91	45.86	18.15	23.96	61.70	71.58	62.41	50.57	66.62	85.64	71.16	41.30	56.49	23.10	30.83
	53.60	95.35	80.95	54.61	62.63	81.97	58.92	41.74	18.53	23.75	67.14	71.97	54.12	48.31	67.97	85.89	68.33	42.07	56.42	23.65	30.63
+NCC	0.00	52.70	98.00	0.30	60.61	0.00	24.93	99.86	0.14	21.31	0.00	43.61	89.65	22.69	0.00	38.65	97.92	0.21	54.86	0.26	29.91
$+$ MAGSAC $_{\uparrow}$	51.75	92.67	83.04	42.69	61.45	78.30	55.18	46.59	13.51	22.32	69.76	74.43	48.27	47.08	64.41	82.02	73.18	31.17	56.02	15.91	29.81
$+$ MAGSAC $_{\downarrow}$	54.72	93.27	78.06	44.05	60.39	80.79	55.39	41.19	13.70	21.73	75.90	74.34	38.23	43.96	66.88	82.55	68.09	32.29	55.14	16.82	29.34