Papelline Pietre Precision Real AUC ₈ AUC ₈	23.01 22.30 21.30 21.30 21.15 23.01 24.62 23.39 21.55 22.00 22.04	34.80 2 35.86 2 34.23 2 34.13 2 34.80 2 36.73 2 35.62 2 32.95 2	23.17 23.10 22.00 21.82
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	22.30 21.30 21.15 23.01 24.62 23.39 21.55 22.00 22.04	35.86 2 34.23 2 34.13 2 34.80 2 36.73 2 35.62 2 32.95 2	23.10 22.00 21.82
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	21.30 21.15 23.01 24.62 23.39 21.55 22.00 22.04	34.23 2 34.13 2 34.80 2 36.73 2 35.62 2 32.95 2	22.00 21.82
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	21.15 23.01 24.62 23.39 21.55 22.00 22.04	34.13 2 34.80 2 36.73 2 35.62 2 32.95 2	21.82
+AdaLAM + MCGSAC; 41.74 92.50 75.91 82.50 75.91 75.9	23.01 24.62 23.39 21.55 22.00 22.04	34.80 2 36.73 2 35.62 2 32.95 2	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	24.62 23.39 21.55 22.00 22.04	36.73 2 35.62 2 32.95 2	23.17
+AdaLAM*+MAGSAC; 67,14 92,56 72,94 43,46 56,75 67,89 56,03 51,50 67,24 78,32 66,69 60,93 56,16 42,12 85,9 17,31 22,27 17,72 18,17 40,77 40	23.39 21.55 22.00 22.04	35.62 2 32.95 2	24.74
+CC+MAGSAC; 42.87 87.91 91.55 16.86 27.75 40.74 28.45 50.67 66.37 77.99 65.01 32.01 51.25 73.56 0.30 1.18 41.3 1.87 11.07 +CC+MAGSAC; 42.26 40.50 76.22 88.95 61.83 72.29 61.03 51.36 66.81 77.81 61.83 89.06 55.73 44.92 70.1 14.50 22.68 15.06 11.42 +CC+MAGSAC; 42.26 40.50 70.25 50.04 62.68 72.89 61.87 72.89 61.37 50.36 63.41 77.81 61.83 63.43 55.25 38.72 7.16 15.26 25.05 15.22 11.26	21.55 22.00 22.04	32.95 2	23.61
+CC+MAGSAC1 49.26 94.80 70.25 80.04 62.68 72.89 61.87 50.35 66.34 77.81 64.83 63.63 55.25 38.72 7.16 15.26 25.05 15.82 11.26	22.04	33.64	21.86
			22.35
+CLNet 37.82 86.87 79.15 2.54 7.16 17.69 9.13 43.33 61.17 74.07 59.52 69.31 59.54 49.81 0.48 1.62 4.99 2.34 7.90		33.85 2	22.38
	17.76		18.66
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	16.81		17.70
$^{+}$ CLNet+MAGSAC ₁ 54.78 9304 61.63 92.57 6.31 90.39 46.42 92.96 60.06 73.11 85.71 74.79 61.49 30.97 3.00 8.95 17.73 10.16 75.4 Clowlatch 66.65 8.566 49.33 13.92 23.82 36.8 24.74 32.26 48.13 60.85 47.08 67.05 64.06 47.32 22.7 6.95 16.66 8.8 8.98	16.47 19.56		17.43 20.46
Committed HAGSAC; 72 73 876 29 30 95 47 36 84 49 34 37 29 32 91 48 12 61 2 47 38 76 69 878 39 84 479 1173 29 40 12 98 96 2	20.82		21.56
+ConvMatch+MAGSAC ₁ 75.01 88.06 38.92 25.48 37.01 49.34 37.28 32.96 47.47 60.26 46.90 79.45 68.82 28.30 4.79 11.53 22.08 12.80 8.92	19.96		20.67
+DeMatch 51.79 88.06 64.51 13.55 24.25 38.48 25.43 39.17 57.24 71.21 55.87 62.80 61.34 49.52 1.49 4.61 11.63 5.91 9.12	19.91		20.74
+DeMatch+MAGSAC ₇ 60.95 92.69 54.90 28.27 42.69 57.36 42.77 37.37 56.14 70.82 54.78 73.38 63.08 34.21 3.66 9.73 20.32 11.24 8.41	18.94	31.91	19.75
+DeMarch+MAGSAC, 64.19 93.16 56.57 29.67 44.16 58.17 44.00 39.04 56.82 71.30 55.72 76.43 63.15 29.77 3.40 10.09 20.70 11.40 8.81 +FC.GNN 23 54.5 83.88 81.77 26.9 5.96 11.90 64.9 14.77 70.66 50.05 14.50 14	19.36		20.19
	27.98		27.88 26.77
+FC-GNN+MAGSAC, 41.79 94.77 80.90 80.47 62.78 82.24 85.10 92.2 79.70 87.61 62.72 62.24 85.16 9.89 19.75 31.37 20.40 13.29 14.75 45.75 65.27 62.14 85.16 9.89 19.75 31.37 20.40 13.29 14.75 63.75 65.27 62.16 67.09 65.27 62.16 42.09 14.25	26.55 27.12		27.32
+GMS 34.72 84.36 79.85 11.36 20.26 32.50 21.37 49.93 65.07 75.85 63.62 34.53 51.60 71.56 0.19 1.00 4.01 1.73 10.82	21.77		22.09
$+GMS+MAGSAC_{\uparrow}$ 49.52 92.10 67.14 49.02 62.02 72.05 61.03 51.57 66.69 77.13 65.13 61.43 56.39 42.84 7.11 14.87 24.58 15.52 9.29	20.08	32.25 2	20.54
$+GMS+MAGSAC_{\downarrow}$ 53.82 92.60 61.76 49.29 62.22 72.09 61.20 49.48 65.09 76.07 63.55 65.88 55.83 36.71 7.04 14.97 24.75 15.59 9.84	20.67	33.00 2	21.17
+MAGSAC ₇ 41.74 92.09 79.44 43.26 56.07 67.19 55.51 52.25 67.51 78.54 66.10 55.59 56.52 49.24 8.13 17.51 27.76 17.80 12.86	24.62		24.74
+MaGSAC, 47.14 9259 7234 63.46 56.75 67.89 56.03 67.50 67.24 78.32 65.99 69.93 56.16 42.12 8.59 17.31 27.27 17.72 11.81	23.39		23.61
$^{+}$ Ms ^F PG-Net $^{-}$ 72.95 83.11 36.48 0.21 0.74 3.32 1.42 32.51 48.45 63.05 88.01 70.26 54.24 35.21 0.00 0.07 0.47 0.18 4.55 0.00 0.00 0.07 0.47 0.18 4.55 0.00 0.00 0.07 0.47 0.18 4.55 0.00 0.00 0.00 0.00 0.00 0.00 0.00	11.07 10.49		11.99 11.70
Tais Develorations/Act 18.38 91.66 28.33 30.28 40.45 30.99 40.15 00.05 45.73 80.70 57.09 21.92 2.00 5.95 15.27 7.0.9 4.85 4.45 30.99 40.15 00.05 45.73 80.70 57.09 21.92 2.00 5.95 15.27 7.0.9 4.85 4.45 30.99 40.15 61.93 47.01 82.54 56.64 19.29 2.48 6.20 13.13 7.27 4.39	10.49		11.70
+NCC 0.00 60.62 84.79 0.34 1.15 3.66 1.71 43.37 57.56 69.25 56.72 0.00 43.88 97.78 0.00 0.12 1.04 0.39 11.24	22.30		22.48
$+NCC+MAGSAC_{\uparrow}$ 52.70 85.47 59.26 32.07 43.88 55.38 43.78 42.25 56.26 67.85 55.46 56.57 55.69 47.45 6.89 14.30 24.37 15.19 11.48	22.72	34.76 2	22.99
+NCC+MAGSAC4 57.34 86.11 53.90 32.90 44.83 56.42 44.72 40.66 55.83 67.75 54.75 61.01 55.36 41.71 6.91 14.66 24.98 15.52 10.16	21.72		22.04
+NCMNet AGSAC: 40.77 15.8 10.50 2.37 6.41 16.78 8.52 43.18 6.131 74.25 90.58 60.47 61.22 51.30 1.25 3.40 8.09 4.24 9.84 1.05.01 1.05.0	20.09		20.88
$^{+}$ NCMNet+MMGSAC ₁ 49.77 93.58 99.06 34.33 47.39 61.12 47.61 44.12 61.84 74.71 69.22 71.72 63.54 36.99 43 10.84 19.85 11.87 9.10 $^{+}$ NCMNet+MMGSAC ₄ 51.00 91.06 35.36 34.23 48.95 61.78 48.95 41.71 61.81 74.88 60.29 75.21 63.45 32.00 46.2 10.69 20.09 11.89 9.10	19.24 19.72		20.27
34.00 94.00	8 84		9.72
+OANet+MAGSAC ₁ 76.77 92.71 32.89 22.34 35.77 50.36 36.16 31.52 49.30 64.60 48.47 83.58 50.05 14.70 1.26 4.37 10.36 5.33 2.99	8.75		9.56
+OANet+MAGSAC ₄ 78.65 93.11 30.33 23.28 36.81 50.90 36.99 32.45 49.68 65.11 49.08 84.87 49.98 12.95 1.02 4.00 9.61 4.88 3.33	8.71	17.04	9.69
+MOP _{0.5K} +MiHo 10.96 74.40 98.76 0.59 1.44 5.10 2.38 53.75 69.14 79.76 67.55 8.15 47.28 95.52 0.00 0.38 1.97 0.78 12.04	23.51		23.60
$^{+}$ MOP $_{0.5x}$ +MH0+3MGSAC, 41.98 92.67 79.48 44.49 57.74 68.56 56.93 51.47 67.42 78.70 65.87 55.93 56.89 49.62 8.62 18.01 28.71 18.45 12.22 + MOP $_{0.5x}$ +MH0+3MGSAC, 47.30 12.07 12.09 45.54 55.71 69.55 79.93 51.64 67.38 78.60 55.87 61.18 56.45 2.27 8.21 17.38 27.84 17.74 12.58	24.16		24.24
$^{+}$ MOP $_{0.8x}$ +MH0+MXSAC; 47.30 93.42 72.00 45.54 58.71 99.55 57.93 51.64 67.38 78.00 65.87 61.18 56.45 42.37 821 17.38 27.64 17.74 12.64 MOP $_{0.8x}$ +MH0+MC+OC 119.6 71.37 94.52 10.8 15.1 51.4 2.41 51.68 67.33 78.97 66.06 81.5 46.37 95.16 900 0.39 19.5 0.78 11.37	24.15 23.04		24.59
+MOP _{0.8x} +MiHo+NCC+MAGSAC 4 417 93.38 77.44 41.53 54.49 66.29 54.10 51.33 67.42 79.09 65.95 54.92 56.95 50.94 7.73 16.57 27.27 17.19 13.11	25.43		25.52
$+MOP_{0.5K} + MiHo + NCC + MAGSAC_{\downarrow}$ 47.60 93.94 73.02 43.32 56.90 68.46 56.23 51.13 67.27 78.57 65.66 59.08 56.75 45.33 8.18 17.32 28.04 17.84 13.49	26.06		25.85
$+MOP_{1.0K}+MiHo$ 10.32 74.00 99.03 0.48 1.54 4.91 2.31 51.89 67.83 79.10 66.27 7.66 47.16 95.86 0.00 0.21 1.65 0.62 12.34	23.64		23.66
$\frac{4MOP_{1.06}+MH0+3MGSAC_{1}}{4MOP_{1.06}+MH0+3MGSAC_{2}} + \frac{41.92}{62.02} + \frac{92.02}{27.01} + \frac{72.01}{6.35} + \frac{95.00}{55.0} + \frac{98.88}{68.2} + \frac{57.29}{5.17} + \frac{25.20}{6.17} + \frac{67.29}{6.17} + \frac{96.87}{6.17} + \frac{96.87}{6.17} + \frac{96.87}{6.18} + \frac{96.87}{6.17} + \frac{96.87}{6$	24.73		24.72
	24.26		24.46 24.51
$^{+}$ MOP $_{-10x}$ +MH0+NCC 10.32 71.03 5214 0.51 1.60 4.89 2.23 52.54 68.79 8002 67.12 7.66 46.26 56.18 0.00 0.24 1.65 0.63 12.79 1.74	24.34 25.55		25.53
+MOP.10K+MiHo+NCC+MAGSAQ4 47.58 93.95 73.06 41.57 55.02 67.51 54.70 51.09 67.46 79.25 65.93 58.94 56.86 45.54 8.44 17.36 27.57 17.79 12.79	24.54		24.88
$+MOP_{1.5K}+MiHo$ 9.89 73.70 99.07 0.47 1.44 4.89 2.27 52.90 68.02 78.46 66.46 7.41 47.12 96.08 0.00 0.23 1.69 0.64 11.60	22.97		23.20
+MOP _{1.5K} +MiHo+MAGSAC ₁ 41.93 92.56 79.59 44.59 57.12 67.73 56.48 51.01 66.45 77.79 65.08 55.94 57.02 49.47 7.98 17.09 27.59 17.55 12.60	24.86		24.92
**MOP_ia;#+MIH0+MXCSAC; 47:22 93.38 25:9 58.78 6934 88:10 51.03 66.70 66.27 61.12 95.53 42.33 8.26 17.02 27.49 17.59 12.45 4000 62.50 80.14 67.52 74.00 65:12 10.55 12.10 65.70 12.1	23.54		23.87
$^{+}$ MOP _{1.5x} +MiHe+NCC 9.89 70.76 95.13 0.49 1.44 1.76 2.23 52.00 68.90 80.14 67.02 7.41 66.24 95.74 0.00 0.24 1.71 0.65 12.10 +MOP _{1.5x} +MiHe+NCC+MAGSAC; 44.0 93.46 53.18 65.93 52.99 50.11 66.28 75.37 64.92 54.81 57.37 51.45 8.06 16.79 27.37 17.44 12.33	23.67 24.78		23.80 25.03
THOP JAK THIRD-INCC-131033047 44.01 93.48 73.11 44.63 54.93 68.10 54.89 49.90 66.38 78.27 64.85 58.87 57.13 45.88 7.87 17.00 28.99 17.65 12.82	24.78		25.16
+MOP _{2.0K} +MiHo 9.68 73.60 99.21 0.64 1.59 4.78 2.34 55.18 69.91 80.11 68.40 7.25 47.07 96.08 0.00 0.24 1.70 0.65 11.73	22.89		23.14
$+MOP_{2.0K} + MiHo + MAGSAC_{\uparrow}$ 41.91 92.49 79.55 45.11 57.92 68.24 57.09 52.57 68.01 79.00 66.52 55.94 56.75 49.43 8.25 16.99 27.44 17.56 12.43	24.35	37.14 2	24.64
+MOP _{2.0K} +MiHo+MAGSAC ₁ 47.24 93.28 72.74 46.09 58.84 69.66 58.20 51.70 66.98 78.18 65.62 61.16 56.64 42.50 8.54 17.49 27.75 17.92 12.39	23.77		24.17
$^{+}$ MOP $_{-20x}$ +MiHe+NCC 9.68 7 0.67 9.59 0.65 1.58 4.71 2.32 2.526 6.33 70.71 6.699 7.25 46.18 95.53 0.00 0.23 1.70 0.64 12.64 $^{+}$ MOP $_{-20x}$ +MiHe+NCC+MAGSAC† 44.01 $^{+}$ 0.33 77.82 0.92 5.125 56.47 5.184 5.78 5.184 5.78 5.78 5.10 5.22 51.85 5.80 5.10 8.23 16.55 2.299 17.36 12.94	24.60		24.52 24.91
$^{+}$ MOP _{20x} +MH0+NCC+MAGSAC; 44.04 93.8 77.82 40.82 54.25 66.47 53.84 50.73 67.18 78.93 65.62 54.85 56.80 51.08 8.23 16.85 27.29 17.46 12.91 + MOP _{2.0x} +MH0+NCC+MAGSAC; 47.85 93.05 17.30 41.72 55.41 67.59 54.90 50.96 67.44 79.36 65.92 58.85 56.62 45.88 8.37 17.20 28.36 11.98 12.83	24.64 25.10		24.91
+MOP _{0.5K} 17.75 79.29 96.92 1.11 3.11 8.18 4.13 5.221 65.71 79.66 67.19 14.43 48.90 91.50 91.50 0.13 0.33 2.25 0.90 11.75	23.21		23.41
+MOP _{0.5K} +MAGSAC ₇ 42.34 93.47 79.44 46.26 59.18 70.46 58.63 53.27 69.05 80.01 67.44 56.39 57.22 49.31 8.57 17.52 27.97 18.02 12.14	23.71		24.03
+MOP _{0.5K} +MAGSAC ₁ 47.53 94.11 72.72 47.21 60.42 71.67 59.77 53.39 68.67 79.80 67.28 61.63 56.82 42.33 8.46 17.36 27.74 17.85 12.50	24.08		24.37
+MOP _{0.5K} +NCC 17.75 75.81 92.68 1.06 3.09 8.18 4.11 51.48 67.57 79.17 66.08 14.43 47.99 90.99 0.13 0.35 2.26 0.91 12.08	24.39		24.52
$\frac{\text{MOP}_{0.06} + \text{NCC} + \text{MASNC}_{1}}{\text{MOP}_{0.06} + \text{NCC} + \text{MASNC}_{2}} + \frac{4461}{820} + \frac{93.64}{121} + \frac{76.9}{621} + \frac{64.9}{665} + \frac{51.37}{656} + \frac{90.27}{651} + \frac{67.41}{78.41} + \frac{60.06}{6512} + \frac{55.12}{759} + \frac{51.68}{634} + \frac{828}{820} + \frac{17.15}{127.0} + \frac{27.22}{236} + \frac{17.55}{128} + \frac{17.25}{128} + \frac{17.25}{1$	25.37		25.52
+MOP _{Lox} +NCC+MAGSAC; 48.02 9120 7224 43.90 57.21 69.17 56.76 51.16 67.23 78.83 65.74 50.05 57.09 46.34 8.90 17.70 28.36 18.22 13.11 MOP _{Lox} MOP _{Lox} MOP _{Lox} 9.05 20.00 28.25 13.72 48.81 92.62 0.07 0.57 275 1.17 12.10	26.10		25.97
THOP 1 AND PLANE MAGNAC 122 93.41 79.61 46.25 59.38 70.20 85.61 53.29 85.11 79.13 67.04 56.30 57.17 49.31 84.7 17.29 27.77 17.85 12.17	23.23		23.43
$+MOP_{1.0K} + MAGSAC_{\downarrow}$ 47.42 94.03 72.83 47.26 60.39 71.24 59.63 54.35 68.95 79.65 67.65 61.46 56.86 42.40 8.54 17.55 27.78 17.95 12.57	23.92		24.21
$+MOP_{1.0K}+NCC$ 17.04 75.42 93.01 1.03 2.46 7.01 3.50 52.06 67.84 79.51 66.47 13.72 47.89 92.28 0.20 0.57 2.75 1.18 12.97	25.11	37.56 2	25.21
+MOP_Lox+NCC+MAGSAC _↑ 44.50 93.86 76.96 42.74 55.41 66.96 55.04 51.07 67.18 78.91 65.72 55.05 57.92 51.91 9.08 18.29 28.83 18.73 13.34	26.27		26.47
+MOP_nx+NCC+MAGSAC; 47.91 94.37 72.57 43.03 56.11 68.07 55.74 50.83 67.21 79.20 65.75 59.06 57.75 46.50 9.17 18.15 29.22 18.85 12.61	25.45		25.70
$+MOP_{1.9c} + MOS_{1.9c} = 16.65$ 78.47 97.39 8.81 2.25 7.23 3.43 53.36 68.53 79.69 67.23 13.56 48.73 92.73 0.13 0.44 2.27 0.95 11.67 + MOP_{1.9c} + MAGP_{3.6c} + MAGP_	23.25 23.84		23.33
THOP LINE THAT COLUMN 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1	23.84		25.00
+MOP _{1.5K} +NCC 16.65 75.13 93.22 0.89 2.32 7.03 3.41 54.26 69.53 80.21 68.00 13.56 47.81 91.91 0.14 0.45 2.27 0.95 13.13	25.32		25.31
+MOPLSK+NCC+MAGSAC+ 44 45 93 73 77 03 42 00 55 27 67 86 55 04 49 87 66 09 78 26 64 74 54 95 57 68 51 76 8 66 18 30 29.25 18 74 13.60	26.46		26.51
$+MOP_{1.5K}+NCC+MAGSAC_{\downarrow}$ 47.91 94.22 72.53 43.87 57.19 69.23 56.76 49.24 65.83 78.56 64.55 58.96 57.34 46.22 8.89 18.02 28.85 18.59 13.46	25.70		25.63
+MOP _{2.0K} 16.44 78.32 97.48 0.91 2.55 7.30 3.59 53.47 69.36 80.18 67.67 13.45 48.69 92.64 0.13 0.53 2.63 1.10 11.69	22.94		23.01
$+MOP_{g,net}+MAGSAC$, 42.17 83.18 70.54 66.15 85.66 69.72 83.17 22.88 65.22 85.02 79.36 65.29 65.42 57.21 49.28 82.5 175.5 27.46 17.58	24.84		24.91
+MOP-2ax+MAGSAC; 47.42 93.77 72.67 85.06 60.95 71.41 60.14 52.38 67.82 78.63 66.28 61.54 56.67 42.07 81.8 17.09 27.81 17.69 12.70 +MOP-2ax+NCC 16.44 75.04 93.88 0.85 2.35 7.11 3.44 62.64 68.29 79.73 66.38 13.45 74.74 91.83 0.13 0.33 2.67 1.11 12.09	24.25		24.60
THOU TOUR THOU THOU THOU THOU THOU THOU THOU THOU	26.05		26.23
+MOP _{2.06} +NCC+MAGSAC ₄ 47.80 94.99 72.97 42.33 56.47 69.23 56.01 49.88 66.37 78.66 64.90 58.99 57.25 46.05 9.10 18.33 29.03 18.35 13.33	26.14		26.04