| | # supervisor states | | | mean time [s] for 10 random index orders | | | | | | mean #cells for 10 random index orders | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | \|X\| | \|X'\| | | SL base | SL var | isolate | warmstart SL | TSL | % | SL base | SL var | initial gue | isolated | TSL |
| CMT1 | 362 | 362 | level 1 | 1.28 | 1.22 | 0.05 | 0.15 | 0.20 | -83% | 11.6 | 11.6 | 11.6 | 11.6 | 11.6 |
| | | | level 2 | 1.13 | 1.11 | 0.04 | 0.21 | 0.25 | -78% | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 |
| | | | level 3 | 1.19 | 1.16 | 0.04 | 0.15 | 0.18 | -84% | 13.7 | 13.7 | 13.7 | 13.7 | 13.7 |
| | | | level 4 | 2.46 | 2.47 | 0.06 | 0.08 | 0.14 | -94% | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 |
| CMT2 | 362 | 375 | level 1 | 1.75 | 1.84 | 0.03 | 1.73 | 1.76 | -4% | 10.9 | 11.5 | 23.9 | 295.6 | 18.8 |
| | | | level 2 | 1.14 | 1.10 | 0.05 | 1.26 | 1.30 | 18% | 14.8 | 15.0 | 27.8 | 231.6 | 22.1 |
| | | | level 3 | 1.16 | 1.32 | 0.04 | 1.21 | 1.26 | -5% | 14.5 | 14.7 | 27.5 | 232.7 | 21.7 |
| | | | level 4 | 3.05 | 3.78 | 0.03 | 1.92 | 1.95 | -48% | 11.3 | 11.1 | 24.3 | 292.7 | 17.2 |
| CMT3 | 362 | 270 | level 1 | 1.81 | 0.78 | 0.04 | 0.10 | 0.14 | -82% | 8.8 | 9.4 | 8.8 | 8.8 | 8.8 |
| | | | level 2 | 1.12 | 0.71 | 0.02 | 0.09 | 0.11 | -85% | 14.2 | 12.8 | 14.1 | 14.1 | 13.9 |
| | | | level 3 | 1.28 | 0.88 | 0.03 | 0.10 | 0.12 | -86% | 14.7 | 10.8 | 14.3 | 14.7 | 13.9 |
| | | | level 4 | 2.59 | 6.90 | 0.04 | 3.68 | 3.72 | -46% | 10.5 | 2.5 | 10.0 | 10.0 | 9.0 |
| CMT4 | 362 | 309 | level 1 | 1.91 | 2.19 | 0.05 | 0.65 | 0.69 | -68% | 11.6 | 8.9 | 11.2 | 11.2 | 10.6 |
| | | | level 2 | 1.10 | 0.82 | 0.03 | 0.10 | 0.12 | -85% | 14.3 | 12.8 | 14.3 | 14.3 | 14.3 |
| | | | level 3 | 1.08 | 0.79 | 0.03 | 0.15 | 0.17 | -78% | 14.1 | 13.9 | 14.1 | 14.1 | 14.1 |
| | | | level 4 | 2.81 | 1.78 | 0.04 | 0.08 | 0.13 | -93% | 11.4 | 10.6 | 11.4 | 11.4 | 11.4 |
| CMT5 | 362 | 403 | level 1 | 1.94 | 2.23 | 0.05 | 1.49 | 1.54 | -31% | 10.5 | 12.1 | 51.5 | 327.4 | 14.7 |
| | | | level 2 | 1.10 | 1.41 | 0.05 | 0.66 | 0.71 | -50% | 14.2 | 14.6 | 55.2 | 269.4 | 15.9 |
| | | | level 3 | 1.36 | 1.79 | 0.05 | 0.61 | 0.66 | -63% | 14.1 | 14.3 | 55.1 | 262.0 | 14.4 |
| | | | level 4 | 2.83 | 4.59 | 0.03 | 1.49 | 1.52 | -67% | 11.4 | 11.2 | 52.4 | 323.2 | 11.7 |

-61%

| | # supervisor states | | | time [s] for one random index order | | | | | % | #cells | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | \|X\| | \|X'\| | | SL base | SL var | isolate | warmstart SL | TSL | | SL base | SL var | initial gue | isolated | TSL |
| CMT1 | 842 | 842 | level 1 | 54.7 | 54.1 | 0.4 | 13.3 | 13.7 | -75% | 12 | 12 | 12 | 12 | 12 |
| | | | level 2 | 16.0 | 16.0 | 0.2 | 1.6 | 1.8 | -89% | 16 | 16 | 16 | 16 | 16 |
| | | | level 3 | 36.9 | 37.1 | 0.3 | 3.9 | 4.1 | -89% | 13 | 13 | 13 | 13 | 13 |
| | | | level 4 | 32.2 | 32.1 | 0.3 | 1.2 | 1.5 | -95% | 12 | 12 | 12 | 12 | 12 |
| | | | level 5 | 71.8 | 72.5 | 0.4 | 0.5 | 0.9 | -99% | 12 | 12 | 12 | 12 | 12 |
| | | | level 6 | 56.7 | 57.1 | 0.5 | 0.6 | 1.1 | -98% | 7 | 7 | 7 | 7 | 7 |
| CMT2 | 842 | 864 | level 1 | 60.4 | 20.9 | 0.1 | 22.8 | 23.0 | 10% | 10 | 15 | 32 | 791 | 22 |
| | | | level 2 | 38.9 | 53.1 | 0.1 | 23.1 | 23.2 | -56% | 13 | 14 | 35 | 753 | 26 |
| | | | level 3 | 26.4 | 58.5 | 0.1 | 21.4 | 21.5 | -63% | 11 | 12 | 33 | 756 | 19 |
| | | | level 4 | 19.0 | 37.3 | 0.1 | 25.1 | 25.2 | -32% | 15 | 12 | 37 | 706 | 29 |
| | | | level 5 | 51.5 | 18.5 | 0.1 | 22.3 | 22.4 | 21% | 13 | 18 | 35 | 748 | 25 |
| | | | level 6 | 48.7 | 49.6 | 0.1 | 25.2 | 25.3 | -49% | 14 | 15 | 36 | 729 | 29 |
| CMT3 | 842 | 420 | level 1 | 125.5 | 5.3 | 0.1 | 1.8 | 1.9 | -64% | 7 | 7 | 7 | 7 | 7 |
| | | | level 2 | 26.4 | 4.9 | 0.1 | 0.5 | 0.6 | -89% | 13 | 16 | 13 | 13 | 13 |
| | | | level 3 | 20.3 | 6.0 | 0.1 | 0.6 | 0.7 | -89% | 14 | 12 | 14 | 15 | 14 |
| | | | level 4 | 54.9 | 84.1 | 0.1 | 4.4 | 4.5 | -95% | 14 | 2 | 14 | 14 | 12 |
| | | | level 5 | 69.0 | 112.0 | 0.1 | 67.0 | 67.2 | -40% | 15 | 1 | 15 | 15 | 1 |
| | | | level 6 | 131.6 | 111.8 | 0.1 | 82.2 | 82.3 | -26% | 13 | 1 | 12 | 12 | 1 |
| CMT4 | 842 | 759 | level 1 | 22.3 | 17.9 | 0.2 | 72.0 | 72.2 | 303% | 14 | 14 | 12 | 12 | 12 |
| | | | level 2 | 14.0 | 13.7 | 0.1 | 2.1 | 2.3 | -84% | 18 | 21 | 18 | 18 | 18 |
| | | | level 3 | 19.1 | 14.8 | 0.1 | 1.0 | 1.1 | -93% | 21 | 21 | 21 | 21 | 21 |
| | | | level 4 | 79.4 | 44.9 | 0.3 | 0.4 | 0.6 | -99% | 13 | 12 | 13 | 13 | 13 |
| | | | level 5 | 48.0 | 27.8 | 0.3 | 0.8 | 1.1 | -96% | 13 | 13 | 13 | 13 | 13 |
| | | | level 6 | 219.6 | 21.8 | 0.2 | 6.3 | 6.4 | -70% | 14 | 13 | 14 | 14 | 14 |
| CMT5 | 842 | 903 | level 1 | 61.9 | 59.4 | 0.2 | 39.1 | 39.3 | -34% | 11 | 13 | 72 | 798 | 15 |
| | | | level 2 | 15.8 | 19.4 | 0.1 | 14.1 | 14.3 | -26% | 19 | 20 | 80 | 632 | 19 |
| | | | level 3 | 18.6 | 24.4 | 0.2 | 6.5 | 6.6 | -73% | 17 | 17 | 78 | 670 | 17 |
| | | | level 4 | 29.8 | 40.5 | 0.2 | 6.4 | 6.6 | -84% | 17 | 18 | 78 | 694 | 21 |
| | | | level 5 | 23.9 | 19.4 | 0.2 | 2.2 | 2.3 | -88% | 23 | 22 | 84 | 543 | 23 |
| | | | level 6 | 232.5 | 378.1 | 0.1 | 99.0 | 99.1 | -74% | 11 | 10 | 72 | 828 | 11 |

-54%

| | # supervisor states | | | time [s] for one random index order | | | | | % | #cells | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | \|X\| | \|X'\| | | SL base | SL var | isolate | warmstart SL | TSL | | SL base | SL var | initial gue | isolated | TSL |
| CMT1 | 1525 | 1525 | level 1 | 3004.9 | 2978.8 | 2.9 | 7.3 | 10.2 | -100% | 9 | 9 | 9 | 9 | 9 |
| | | | level 2 | 1456.3 | 1445.2 | 1.9 | 3.7 | 5.6 | -100% | 11 | 11 | 11 | 11 | 11 |
| | | | level 3 | 171.2 | 172.0 | 0.8 | 5.5 | 6.3 | -96% | 14 | 14 | 14 | 14 | 14 |
| | | | level 4 | 530.2 | 550.3 | 0.4 | 9.6 | 10.0 | -98% | 23 | 23 | 23 | 23 | 23 |
| | | | level 5 | 307.4 | 305.0 | 0.5 | 7.4 | 7.9 | -97% | 20 | 20 | 20 | 20 | 20 |
| | | | level 6 | 659.4 | 654.6 | 1.5 | 5.7 | 7.2 | -99% | 11 | 11 | 11 | 11 | 11 |
| | | | level 7 | 97.2 | 97.2 | 0.4 | 4.2 | 4.6 | -95% | 23 | 23 | 23 | 23 | 23 |
| | | | level 8 | 293.5 | 294.9 | 0.5 | 27.2 | 27.7 | -91% | 18 | 18 | 18 | 18 | 18 |
| CMT2 | 1525 | 1547 | level 1 | 2812.0 | 2822.4 | 0.2 | 426.5 | 426.7 | -85% | 12 | 11 | 34 | 1452 | 26 |
| | | | level 2 | 406.5 | 389.0 | 0.2 | 144.3 | 144.6 | -63% | 16 | 18 | 38 | 1372 | 29 |
| | | | level 3 | 129.6 | 277.9 | 0.3 | 185.7 | 186.0 | -33% | 25 | 21 | 47 | 1124 | 40 |
| | | | level 4 | 727.7 | 647.4 | 0.2 | 247.5 | 247.7 | -62% | 15 | 15 | 37 | 1367 | 34 |
| | | | level 5 | 117.2 | 2517.3 | 0.3 | 216.9 | 217.2 | -91% | 24 | 17 | 46 | 1130 | 39 |
| | | | level 6 | 1918.2 | 2066.4 | 0.2 | 421.8 | 422.0 | -80% | 12 | 13 | 34 | 1448 | 18 |
| | | | level 7 | 1065.1 | 325.2 | 0.2 | 1217.8 | 1218.0 | 275% | 19 | 18 | 41 | 1296 | 27 |
| | | | level 8 | 2626.3 | 2855.3 | 0.2 | 2233.9 | 2234.1 | -22% | 10 | 10 | 32 | 1472 | 10 |
| CMT3 | 1525 | 570 | level 1 | 2256.4 | 37.4 | 0.3 | 17.4 | 17.8 | -52% | 8 | 8 | 8 | 8 | 8 |
| | | | level 2 | 95.6 | 25.1 | 0.1 | 2.2 | 2.2 | -91% | 20 | 11 | 20 | 20 | 20 |
| | | | level 3 | 80.7 | 29.1 | 0.1 | 2.6 | 2.7 | -91% | 21 | 12 | 21 | 21 | 21 |
| | | | level 4 | 628.8 | 440.1 | 0.2 | 521.1 | 521.2 | 18% | 13 | 2 | 13 | 13 | 12 |
| | | | level 5 | 320.2 | 729.9 | 0.2 | 422.9 | 423.1 | -42% | 14 | 1 | 13 | 13 | 1 |
| | | | level 6 | 1468.7 | 728.4 | 0.3 | 570.4 | 570.8 | -22% | 10 | 1 | 8 | 8 | 1 |
| | | | level 7 | 984.9 | 729.4 | 0.2 | 433.9 | 434.1 | -40% | 18 | 1 | 16 | 16 | 1 |
| | | | level 8 | 3500.5 | 729.6 | 0.2 | 436.6 | 436.8 | -40% | 18 | 1 | 14 | 14 | 1 |
| CMT4 | 1525 | 1412 | level 1 | 887.0 | 3166.3 | 1.4 | 51.9 | 53.2 | -98% | 11 | 5 | 10 | 10 | 10 |
| | | | level 2 | 109.4 | 101.7 | 0.4 | 11.5 | 11.9 | -88% | 21 | 23 | 21 | 21 | 21 |
| | | | level 3 | 96.2 | 97.8 | 0.3 | 18.9 | 19.1 | -80% | 26 | 26 | 26 | 26 | 26 |
| | | | level 4 | 1540.2 | 162.4 | 1.3 | 4.0 | 5.3 | -97% | 13 | 22 | 13 | 13 | 13 |
| | | | level 5 | 182.7 | 186.4 | 0.7 | 195.0 | 195.7 | 5% | 27 | 25 | 27 | 914 | 40 |
| | | | level 6 | 131.0 | 118.7 | 0.3 | 59.6 | 59.9 | -50% | 25 | 25 | 25 | 25 | 25 |
| | | | level 7 | 2551.8 | 2294.9 | 1.7 | 316.7 | 318.4 | -86% | 12 | 13 | 12 | 12 | 12 |
| | | | level 8 | 193.7 | 156.2 | 0.3 | 4.3 | 4.6 | -97% | 23 | 20 | 23 | 23 | 23 |
| CMT5 | 1525 | 1606 | level 1 | 3425.1 | 3795.8 | 0.6 | 3432.6 | 3433.1 | -10% | 8 | 10 | 89 | 1553 | 11 |
| | | | level 2 | 119.3 | 132.1 | 0.4 | 25.1 | 25.5 | -81% | 27 | 28 | 108 | 1128 | 27 |
| | | | level 3 | 243.0 | 279.2 | 0.3 | 137.1 | 137.5 | -51% | 16 | 17 | 97 | 1408 | 16 |
| | | | level 4 | 139.9 | 145.7 | 0.5 | 29.6 | 30.1 | -79% | 28 | 29 | 109 | 1000 | 28 |
| | | | level 5 | 184.4 | 196.4 | 0.3 | 30.3 | 30.6 | -84% | 18 | 18 | 99 | 1327 | 18 |
| | | | level 6 | 1105.7 | 1431.3 | 0.2 | 1277.1 | 1277.4 | -11% | 12 | 12 | 93 | 1484 | 12 |
| | | | level 7 | 216.8 | 245.0 | 0.4 | 71.6 | 71.9 | -71% | 27 | 27 | 108 | 1055 | 27 |
| | | | level 8 | 3623.3 | 4696.0 | 0.4 | 4232.9 | 4233.3 | -10% | 9 | 9 | 90 | 1542 | 9 |

-57%