

# RESULTS OF MCER- $k$ FOR INSTANCES TA08-TA22

| Instance |     |     |     | Optimal Solution  |        | Performance metrics |                      |                   |             |              |        |
|----------|-----|-----|-----|-------------------|--------|---------------------|----------------------|-------------------|-------------|--------------|--------|
| Name     | $n$ | $m$ | $k$ | Selected Ellipses | Income | CLS size<br>$ S_k $ | # E3P<br>subproblems | Backtracking Tree |             | CPU Time (s) |        |
|          |     |     |     |                   |        |                     |                      | # nodes           | #sol leaves | CLS-MCER     | Total  |
| TA08     |     |     | 1   | 1                 | 85.9   | 8589                |                      | 37,146            | 18,514      | 129.71       | 129.73 |
| TA09     | 200 | 3   | 2   | 1,2               | 169.7  | 1448                | 681,627              | 53,908            | 25,243      | 129.22       | 129.27 |
| TA10     |     |     | 3   | 1,2,3             | 202.6  | 8477                |                      | 772,760           | 60,542      | 128.75       | 138.25 |
| TA11     |     |     | 1   | 2                 | 126.2  | 11,226              |                      | 59,486            | 34,196      | 228.61       | 228.68 |
| TA12     | 250 | 3   | 2   | 2,3               | 215.0  | 25,284              | 995,713              | 34,200            | 8912        | 232.41       | 233.87 |
| TA13     |     |     | 3   | 1,2,3             | 262.8  | 8912                |                      | 32,908,602        | 53,459      | 226.03       | 610.32 |
| TA14     |     |     | 1   | 1                 | 112.1  | 6693                |                      | 42,702            | 29,310      | 383.00       | 383.05 |
| TA15     | 300 | 3   | 2   | 1,3               | 214.2  | 22,954              | 1,755,415            | 81,519            | 45,175      | 410.92       | 411.05 |
| TA16     |     |     | 3   | 1,2,3             | 311.2  | 22,617              |                      | 257,865           | 22,558      | 401.90       | 402.44 |
| TA17     |     |     | 1   | 2                 | 225.9  | 63,315              |                      | 54,419            | 43,151      | 775.78       | 775.85 |
| TA18     | 350 | 3   | 2   | 1,2               | 398.1  | 11,262              | 2,961,709            | 191,753           | 83,386      | 771.38       | 772.47 |
| TA19     |     |     | 3   | 1,2,3             | 483.3  | 31,889              |                      | 2,421,540         | 274,754     | 800.72       | 874.46 |
| TA20     |     |     | 1   | 2                 | 199.6  | 17,691              |                      | 178,589           | 141,413     | 922.98       | 923.47 |
| TA21     | 400 | 3   | 2   | 2,3               | 364.7  | 37,170              | 2,432,988            | 245,472           | 208,298     | 903.69       | 912.19 |
| TA22     |     |     | 3   | -                 | -      | 112,932             |                      | -                 | -           | -            | -      |