

| m = 20 |          | star tree setup 1 |        |        |       | star tree setup 2 |        |        |       | caterpillar tree |        |        |    |
|--------|----------|-------------------|--------|--------|-------|-------------------|--------|--------|-------|------------------|--------|--------|----|
| n      | $\alpha$ | Test 1            | Test 2 | Test 3 | LR    | Test 1            | Test 2 | Test 3 | LR    | Test 1           | Test 2 | Test 3 | LR |
| 100    | 0.01     | 0.062             | 0.3    |        | 0.018 | 0.078             | 0.418  |        | 0.034 | 0.048            | ok     |        | ok |
|        | 0.05     | 0.322             | 0.698  |        | 0.05  | 0.326             | 0.856  |        | 0.134 | 0.216            |        |        |    |
|        | 0.1      | 0.612             | 0.884  |        | 0.092 | 0.582             | 0.958  |        | 0.21  | 0.420            |        |        |    |
| 250    | 0.01     | 0.01              | 0.054  |        | 0.012 | 0.01              | 0.102  |        | 0.088 | 0.002            |        |        |    |
|        | 0.05     | 0.068             | 0.136  |        | 0.042 | 0.046             | 0.212  |        | 0.27  | 0.038            |        |        |    |
|        | 0.1      | 0.148             | 0.242  |        | 0.088 | 0.11              | 0.326  |        | 0.398 | 0.084            |        |        |    |
| 500    | 0.01     | 0.004             | 0.018  |        | 0.012 | 0.01              | 0.042  |        | 0.368 | 0.004            |        |        |    |
|        | 0.05     | 0.02              | 0.042  |        | 0.046 | 0.03              | 0.088  |        | 0.626 | 0.032            |        |        |    |
|        | 0.1      | 0.06              | 0.09   |        | 0.102 | 0.08              | 0.124  |        | 0.74  | 0.058            |        |        |    |
| 1000   | 0.01     | 0.002             | 0.006  |        | 0.012 | 0.004             | 0.018  | 0      | 0.856 | 0.002            |        |        |    |
|        | 0.05     | 0.036             | 0.022  |        | 0.062 | 0.03              | 0.04   | 0.03   | 0.944 | 0.026            |        |        |    |
|        | 0.1      | 0.072             | 0.054  |        | 0.110 | 0.056             | 0.076  | 0.078  | 0.962 | 0.066            |        |        |    |
| 2000   | 0.01     | 0.004             | 0.008  |        | 0.006 | 0.004             | 0.008  |        | 1.0   | 0.002            |        |        |    |
|        | 0.05     | 0.046             | 0.03   |        | 0.048 | 0.028             | 0.048  |        | 1.0   | 0.016            |        |        |    |
|        | 0.1      | 0.08              | 0.06   |        | 0.094 | 0.068             | 0.104  |        | 1.0   | 0.042            |        |        |    |