| Equations Per Process |         | JuliaPetra | Epetra  | Distributed-<br>Arrays.jl | Speedup  |
|-----------------------|---------|------------|---------|---------------------------|----------|
| 4 Processes           |         |            |         |                           |          |
| 100,000               | Mean    | 0.22514    | 0.19244 | 124.322                   | -0.14521 |
| equations             | Minimum | 0.22183    | 0.18437 | 123.324                   | -0.18948 |
|                       | Maximum | 0.22747    | 0.22145 | 126.464                   | -0.00171 |
| 1,000,000             | Mean    | 2.76858    | 2.35595 | 1149.26                   | -0.14904 |
| equations             | Minimum | 2.75613    | 2.35066 | 1144.52                   | -0.15722 |
|                       | Maximum | 2.78917    | 2.36304 | 1162.54                   | -0.14262 |
| 10,000,000            | Mean    | 30.8755    | 24.7034 | -                         | -0.19990 |
| equations             | Minimum | 30.6740    | 24.6805 | -                         | -0.20677 |
|                       | Maximum | 31.1139    | 24.7140 | -                         | -0.19430 |
| 16 Processes          |         |            |         |                           |          |
| 100,000               | Mean    | 0.53649    | 0.50143 | 2569.82                   | -0.06533 |
| equations             | Minimum | 0.53408    | 0.49653 | 2525.37                   | -0.07607 |
|                       | Maximum | 0.53741    | 0.50376 | 2713.96                   | -0.05677 |
| 1,000,000             | Mean    | 7.51502    | 7.40649 | -                         | -0.01444 |
| equations             | Minimum | 7.49275    | 7.40309 | -                         | -0.01919 |
|                       | Maximum | 7.54793    | 7.41002 | -                         | -0.01104 |
| 10,000,000            | Mean    | 74.2079    | 73.9740 | -                         | -0.00315 |
| equations             | Minimum | 74.0943    | 73.9240 | -                         | -0.00492 |
|                       | Maximum | 74.2893    | 74.0402 | -                         | -0.00073 |
| 20 Processes          |         |            |         |                           |          |
| 100,000               | Mean    | 0.77256    | 0.70583 | -                         | -0.08638 |
| equations             | Minimum | 0.73311    | 0.70270 | -                         | -0.12400 |
|                       | Maximum | 0.80217    | 0.71200 | -                         | -0.02880 |
| 1,000,000             | Mean    | 9.89883    | 9.22033 | -                         | -0.06854 |
| equations             | Minimum | 9.85269    | 9.21825 | -                         | -0.07627 |
|                       | Maximum | 9.97940    | 9.22443 | -                         | -0.06377 |
| 10,000,000            | Mean    | 97.4143    | 92.0917 | -                         | -0.05464 |
| equations             | Minimum | 96.9243    | 91.9722 | _                         | -0.06125 |
|                       | Maximum | 97.9733    | 92.1464 | -                         | -0.04930 |