

Relative Solution Time

using diagonally preconditioned CGLS on $Ax = b$, $A \in \mathbb{R}^{m \times n}$, $n=1.5 \cdot 10^6$, $m=2.0 \cdot 10^6$. $Ax = b$ comes from a 3-dimensional CFD-problem. Solution requires 5400 iterations and takes 32 seconds a 32 processor Fujitsu VPP700. Solver uses single precision (32bit, except 64 bit on NEC and Cray). Parallelism via MPI.

| Machine | CPU | Time |
|----------------------|-----|--------|
| Fujitsu VPP700 | 32 | 1.00 |
| Fujitsu VPP700 | 16 | 1.70 |
| NEC SX-4 | 16 | 1.97 |
| SGI Origin 2000 | 32 | 2.68 |
| NEC SX-4 | 8 | 2.70 |
| Fujitsu VPP700 | 8 | 3.08 |
| IBM SP-2 SC 120 Mhz | 32 | 4.08 |
| SGI Origin 2000 | 16 | 4.46 |
| IBM SP-2 SC 120 Mhz | 16 | 5.51 |
| SGI PC R8000 | 16 | 5.84 |
| Cray T3D | 64 | 6.73 |
| Convex SPP-2000 | 16 | 7.78 |
| IBM SP-2 Wide 67 Mhz | 16 | 8.57 |
| IBM SP-2 Thin 67 Mhz | 32 | 8.62 |
| SGI PC R4000 | 16 | 11.26 |
| Meiko CS-2 | 14 | 22.67 |
| SGI PC R10000 | 6 | 23.90 |
| CRAY C92A | 1 | 29.02 |
| SP-2 SC 135Mhz | 1 | 49.10 |
| CRAY Y-MP | 1 | 62.72 |
| HP 9000/180 | 1 | 166.24 |
| Pentium PRO 200 Mhz | 1 | 370.76 |