



CFP2000 Result

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Sun Microsystems
Sun Fire 15K

SPECfp_rate2000 = 717

SPECfp_rate_base2000 = 605

SPEC license #: 6 Tested by: Sun Microsystems Test date: Mar-2003 Hardware Avail: Mar-2003 Software Avail: May-2003

| Benchmark | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|--------------|-------------|--------------|------------|--------|---------|-------|
| 168.wupwise | 72 | 230 | 581 | 72 | 220 | 607 |
| 171.swim | 72 | 509 | 509 | 72 | 164 | 1583 |
| 172.mgrid | 72 | 325 | 462 | 72 | 322 | 467 |
| 173.applu | 72 | 356 | 492 | 72 | 260 | 675 |
| 177.mesa | 72 | 217 | 539 | 72 | 206 | 567 |
| 178.galgel | 72 | 168 | 1439 | 72 | 140 | 1727 |
| 179.art | 72 | 36.6 | 5937 | 72 | 35.2 | 6164 |
| 183.quake | 72 | 130 | 835 | 72 | 126 | 865 |
| 187.facerec | 72 | 180 | 883 | 72 | 180 | 879 |
| 188.amp | 72 | 486 | 378 | 72 | 398 | 461 |
| 189.lucas | 72 | 569 | 294 | 72 | 466 | 359 |
| 191.fma3d | 72 | 553 | 317 | 72 | 511 | 343 |
| 200.sixtrack | 72 | 393 | 234 | 72 | 362 | 254 |
| 301.apsi | 72 | 462 | 470 | 72 | 461 | 471 |

Hardware

CPU: UltraSPARC III Cu
CPU MHz: 1200
FPU: Integrated
CPU(s) enabled: 72 cores, 72 chips, 1 core/chip
CPU(s) orderable: 4-106
Parallel: No
Primary Cache: 32KBI+64KBD on chip
Secondary Cache: 8MB(I+D) off chip
L3 Cache: None
Other Cache: None
Memory: 576GB 16-way interleaved
Disk Subsystem: 1 x 36GB (System Disk)
Sun StorEdge T3, 9 x 18GB striped
Other Hardware: None

Software

Operating System: Solaris 9 12/02
Compiler: Sun ONE Studio 8 (pre-FCS build 3/9)
Sun Performance Library 8 (pre-FCS build 3/9)
File System: ufs with ufs logging
System State: Multi-User

Notes/Tuning Information

Compiler invocation:

C: cc
CXX: CC
F90: f90
F77: f90

Floating point base flags:

C: -fast -xipo=2 -xalias_level=std with ONESTEP=yes and feedback
F90: -fast -xipo=2 with ONESTEP=yes and feedback

Floating point peak flags:

ONESTEP=yes and feedback for all benchmarks, unless otherwise noted

168.wupwise: -fast -xipo=2 -Qoption iropt -Ainline:inc=800:cp=1
171.swim: -fast -xpad=common:3969 -xpagesize=64K -xprefetch=latx:1.6
-Qoption iropt -Atile:skewp,-Ainline:cs=700



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Notes/Tuning Information (Continued)

```

(no feedback)
172.mgrid: -fast -xipo=2
173.applu: -fast -xipo=2
          -Qoption cg -Qlp=1-av=192-fa=1,-Qms_pipe+prefolim=7
          -Qoption iropt -Aujam:inner=g
177.mesa: -fast -xipo=2 -xalias_level=strong -xrestrict
          -Wc,-Qms_pipe+unoovf
178.galgel: -fast -xipo=2 -Qoption iropt -Addint:sf=9 -xlic_lib=sunperf
          RM_SOURCES=lapak.f90
179.art: -fast -xipo=2 -xalias_level=std
          -Wc,-Qms_pipe-prefst,-Qms_pipe+prefolim=11
183.equake: -fast -xipo=2 -xalias_level=strong -xprefetch_level=2
187.facerec: -fast -xipo=2
188.amp: -fast -xipo=2 -xalias_level=std -xpagesize=512K -lmopt -lm
189.lucas: -fast -xipo=2 -xprefetch_level=3 -Qoption iropt -Apf:pdl=1
          -Qoption f90comp -array_pad_rows,1977
191.fma3d: -fast -xipo=2 -stackvar -xprefetch_level=3
          -Qoption iropt -Apf:pdl=1
200.sixtrack: -O -dalign -xchip=ultra3 -xarch=v8plusb -fsimple=2
301.apsi: -fast -xipo=2

```

Feedback is done as follows, unless otherwise noted:

```

fdo_pre0: rm -rf ./feedback.profile ./SunWS_cache
PASS1: -xprofile=collect:./feedback
PASS2: -xprofile=use:./feedback

```

Portability:

178.galgel: -e -fixed

Shell Environments:

```

Stack size set to unlimited via "ulimit -s unlimited"
MPSSHEAP=4M
MPSSSTACK=4M
LD_PRELOAD=mpss.so.1

```

Kernel Parameters (/etc/system):

```

autoup=900
tune_t_fsflushr=1

```

Processes were bound to CPUs using submit=pbind