



CFP2000 Result

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Sun Microsystems
Sun Fire V490(1 processor)

SPECfp_rate2000 = 23.3

SPECfp_rate_base2000 = 20.3

SPEC license #: 6 Tested by: Sun Microsystems Test date: Dec-2004 Hardware Avail: Feb-2005 Software Avail: Jul-2004

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	185	20.1	2	170	21.8
171.swim	2	511	14.1	2	191	37.7
172.mgrid	2	328	12.7	2	328	12.7
173.applu	2	296	16.5	2	252	19.4
177.mesa	2	171	18.9	2	153	21.2
178.galgel	2	176	38.2	2	135	50.0
179.art	2	33.0	183	2	32.0	189
183.quake	2	102	29.6	2	102	29.6
187.facerec	2	117	37.7	2	117	37.7
188.amp	2	362	14.1	2	361	14.1
189.lucas	2	433	10.7	2	404	11.5
191.fma3d	2	491	9.93	2	425	11.5
200.sixtrack	2	238	10.7	2	217	11.7
301.apsi	2	421	14.3	2	422	14.3

Hardware

CPU: UltraSPARC IV
CPU MHz: 1350
FPU: Integrated
CPU(s) enabled: 2 cores, 1 chip, 2 cores/chips
CPU(s) orderable: 2,4 (order by # of chips)
Parallel: No
Primary Cache: 32KBI+64KBD per core on chip (64KBI+128KBD on chip)
Secondary Cache: 8MB(I+D) per core off chip (16MB(I+D) off chip)
L3 Cache: None
Other Cache: None
Memory: 8GB
Disk Subsystem: 1 x 73GB
Other Hardware: None

Software

Operating System: Solaris 10
Compiler: Sun Studio 9
File System: ufs
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
(no feedback)



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Notes/Tuning Information (Continued)

```
172.mgrid:      basepeak = yes
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:    basepeak= yes
187.facerec:   basepeak= yes
188.ammp:      -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: -xO4 -dalign -xchip=ultra3 -xarch=v8plusb -fsimple=2 -xprefetch=no
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=512K
MPSSSTACK=512K
LD_PRELOAD=mpss.so.1
```

Kernel Parameters (/etc/system):

```
autoup=900
tune_t_fsflushr=1
```