



CFP2000 Result

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Sun Microsystems
Sun Fire V490(4 processor)

SPECfp_rate2000 = 87.4
SPECfp_rate_base2000 = 75.0

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	8	201	73.7	8	187	79.3
171.swim	8	624	46.1	8	191	151
172.mgrid	8	389	43.0	8	389	43.0
173.applu	8	310	62.8	8	257	75.9
177.mesa	8	174	74.8	8	153	84.9
178.galgel	8	177	152	8	136	199
179.art	8	33.1	730	8	32.0	754
183.equake	8	132	91.4	8	132	91.4
187.facerec	8	123	143	8	123	143
188.amp	8	364	56.0	8	363	56.2
189.lucas	8	516	36.0	8	495	37.5
191.fma3d	8	536	36.3	8	469	41.5
200.sixtrack	8	240	42.6	8	220	46.3
301.apsi	8	423	57.1	8	421	57.4

Hardware

CPU: UltraSPARC IV
CPU MHz: 1350
FPU: Integrated
CPU(s) enabled: 8 cores, 4 chips, 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: 32GB 8-way interleaved
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.quake: 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

```

Processes were bound to CPUs using submit=pbind