



# CFP2000 Result

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Sun Microsystems  
Sun Fire 6800

SPECfp\_rate2000 = 205

SPECfp\_rate\_base2000 = 161

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

				Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
4000	3000	2000	1000	168.wupwise	24	310	144	24	292	152
				171.swim	24	1240	69.6	24	146	592
				172.mgrid	24	721	69.5	24	724	69.2
				173.applu	24	383	153	24	306	191
				177.mesa	24	211	185	24	198	197
				178.galgel	24	157	515	24	130	619
				179.art	24	29.8	2427	24	27.8	2599
				183.equake	24	242	150	24	239	152
				187.facerec	24	196	270	24	196	270
				188.amp	24	472	130	24	376	163
				189.lucas	24	1013	54.9	24	862	64.6
				191.fma3d	24	824	71.0	24	763	76.6
				200.sixtrack	24	293	104	24	259	118
				301.apsi	24	464	156	24	464	156

### Hardware

CPU: UltraSPARC III Cu  
CPU MHz: 1200  
FPU: Integrated  
CPU(s) enabled: 24 cores, 24 chips, 1 core/chip  
CPU(s) orderable: 4-24  
Parallel: No  
Primary Cache: 32KBI+64KBD on chip  
Secondary Cache: 8MB(I+D) off chip  
L3 Cache: None  
Other Cache: None  
Memory: 48GB 16-way interleaved  
Disk Subsystem: 2 x 36GB  
4 x (Sun StorEdge T3, 9x18GB raid5)  
4-way 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



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## Notes/Tuning Information (Continued)

```

-Qoption iropt -Atile:skewp,-Ainline:cs=700
(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.earthquake: -fast -xipo=2 -xalias_level=strong -xprefetch_level=2
187.facerec: -fast -xipo=2
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: -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

The benchmark was run on the Sun StorEdge T3 disk resident file system.