



# CFP2000 Result

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Sun Microsystems  
Sun Fire V880 (1050MHz)

SPECfp\_rate2000 = 21.6

SPECfp\_rate\_base2000 = 18.4

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	216	17.2	2	205	18.1
171.swim	2	380	18.9	2	136	52.8
172.mgrid	2	305	13.7	2	303	13.8
173.applu	2	340	14.3	2	258	18.9
177.mesa	2	233	13.9	2	223	14.6
178.galgel	2	170	39.6	2	144	46.9
179.art	2	30.2	200	2	27.4	220
183.quake	2	109	27.6	2	105	28.7
187.facerec	2	186	23.7	2	185	23.8
188.amp	2	440	11.6	2	401	12.7
189.lucas	2	489	9.48	2	376	12.3
191.fma3d	2	521	9.34	2	472	10.3
200.sixtrack	2	315	8.10	2	285	8.95
301.apsi	2	467	12.9	2	467	12.9

### Hardware

CPU: UltraSPARC III Cu  
CPU MHz: 1050  
FPU: Integrated  
CPU(s) enabled: 2 cores, 2 chips, 1 core/chip  
CPU(s) orderable: 2,4,8  
Parallel: No  
Primary Cache: 32KBI+64KBD on chip  
Secondary Cache: 8MB(I+D) off chip  
L3 Cache: None  
Other Cache: None  
Memory: 4GB 8-way interleaved  
Disk Subsystem: 1 x 36GB  
Other Hardware: None

### Software

Operating System: Solaris 9 4/03  
Compiler: Sun ONE Studio 8  
Sun Performance Library 8  
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  
(no feedback)



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## Notes/Tuning Information (Continued)

```
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.quake: -fast -xipo=2 -xalias_level=strong -xprefetch_level=2
187.facerec: -fast -xipo=2
188.ampp: -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=512K
MPSSSTACK=512K
LD_PRELOAD=mpss.so.1
```

Kernel Parameters (/etc/system):

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