



# CFP2000 Result

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Sun Microsystems  
Sun Fire V480 (1050MHz)

SPECfp\_rate2000 = 20.8

SPECfp\_rate\_base2000 = 17.4

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	220	16.9	2	207	18.0
171.swim	2	488	14.7	2	136	53.0
172.mgrid	2	337	12.4	2	337	12.4
173.applu	2	341	14.3	2	258	18.9
177.mesa	2	229	14.2	2	217	14.9
178.galgel	2	168	40.0	2	139	48.2
179.art	2	29.7	203	2	27.0	224
183.quake	2	119	25.4	2	115	26.3
187.facerec	2	187	23.6	2	188	23.4
188.amp	2	432	11.8	2	400	12.8
189.lucas	2	537	8.64	2	428	10.8
191.fma3d	2	554	8.79	2	491	9.92
200.sixtrack	2	395	6.47	2	362	7.04
301.apsi	2	464	13.0	2	464	13.0

### 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  
Parallel: No  
Primary Cache: 32KBI+64KBD on chip  
Secondary Cache: 8MB(I+D) off chip  
L3 Cache: None  
Other Cache: None  
Memory: 8GB 8-way interleaved  
Disk Subsystem: 2 x 36GB Seagate ST336605  
Other Hardware: None

### Software

Operating System: Solaris 9  
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.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=512K
MPSSSTACK=512K
LD_PRELOAD=mpss.so.1
```

Kernel Parameters (/etc/system):

```
set cpu_bringup_set=4
set autoup=900
set tune_t_fsflushr=1
```