



# CFP2000 Result

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Sun Microsystems  
Sun Fire V480 (1200MHz)

SPECfp\_rate2000 = 45.5

SPECfp\_rate\_base2000 = 37.5

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	207	35.8	4	197	37.7
171.swim	4	513	28.0	4	120	120
172.mgrid	4	342	24.4	4	342	24.4
173.applu	4	319	30.5	4	234	41.6
177.mesa	4	202	32.1	4	191	34.0
178.galgel	4	149	90.1	4	126	107
179.art	4	26.0	465	4	24.0	502
183.equake	4	122	49.4	4	119	50.9
187.facerec	4	167	52.7	4	167	52.9
188.amp	4	391	26.1	4	361	28.3
189.lucas	4	574	16.2	4	444	20.9
191.fma3d	4	543	17.9	4	476	20.5
200.sixtrack	4	272	18.8	4	244	20.9
301.apsi	4	418	28.9	4	419	28.8

### Hardware

CPU: UltraSPARC III Cu  
CPU MHz: 1200  
FPU: Integrated  
CPU(s) enabled: 4 cores, 4 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: 16GB 8-way interleaved  
Disk Subsystem: 1 x 18GB SEAGATE ST318304FSUN18G  
Other Hardware: None

### Software

Operating System: Solaris 9 12/03  
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: 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: -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 -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
```