



# CFP2000 Result

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Sun Microsystems  
Sun Fire 15K

SPECfp\_rate2000 = 492

SPECfp\_rate\_base2000 = 414

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

8000 6000 4000 2000				Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
				168.wupwise	48	220	405	48	211	423
				171.swim	48	494	350	48	151	1144
				172.mgrid	48	316	317	48	326	307
				173.applu	48	356	328	48	259	452
				177.mesa	48	223	350	48	207	376
				178.galgel	48	165	981	48	137	1181
				179.art	48	34.3	4216	48	34.1	4244
				183.equake	48	126	572	48	123	591
				187.facerec	48	178	595	48	178	594
				188.ampm	48	491	249	48	394	311
				189.lucas	48	559	199	48	453	246
				191.fma3d	48	546	214	48	505	232
				200.sixtrack	48	347	176	48	312	196
				301.apsi	48	462	314	48	463	313

### Hardware

CPU: UltraSPARC III Cu  
CPU MHz: 1200  
FPU: Integrated  
CPU(s) enabled: 48 cores, 48 chips, 1 core/chip  
CPU(s) orderable: 4-106  
Parallel: No  
Primary Cache: 32KBI+64KBD on chip  
Secondary Cache: 8MB(I+D) off chip  
L3 Cache: None  
Other Cache: None  
Memory: 384GB 16-way interleaved  
Disk Subsystem: 1 x 36GB (System Disk)  
Sun StorEdge T3, 9 x 18GB 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  
-Qoption iropt -Atile:skewp,-Ainline:cs=700



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## Notes/Tuning Information (Continued)

```

(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.equake: -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=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