



# CFP2000 Result

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Sun Microsystems  
Sun Netra 20 (900MHz)

SPECfp2000 = 713  
SPECfp\_base2000 = 634

SPEC license #: 6 Tested by: Sun Microsystems, Palo Alto Test date: May-2002 Hardware Avail: Jun-2002 Software Avail: May-2002

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	268	596	268	596
171.swim	3100	347	894	347	894
172.mgrid	1800	430	418	430	418
173.applu	2100	675	311	378	555
177.mesa	1400	284	494	279	502
178.galgel	2900	203	1429	167	1735
179.art	2600	31.2	8342	31.2	8342
183.earth	1300	204	636	134	970
187.facerec	1900	232	817	232	817
188.amp	2200	484	454	505	436
189.lucas	2000	566	353	393	509
191.fma3d	2100	572	367	518	406
200.sixtrack	1100	395	279	395	279
301.apsi	2600	531	489	528	492

### Hardware

CPU: UltraSPARC III Cu  
 CPU MHz: 900  
 FPU: Integrated  
 CPU(s) enabled: 1 core, 1 chip, 1 core/chip  
 CPU(s) orderable: 1,2  
 Parallel: No  
 Primary Cache: 32KBI+64KBD on chip  
 Secondary Cache: 8MB(I+D) off chip  
 L3 Cache: None  
 Other Cache: None  
 Memory: 2GB  
 Disk Subsystem: 1 x 36GB  
 Other Hardware: None

### Software

Operating System: Solaris 9  
 Compiler: Sun ONE Studio 7 with patch 111704-01  
 Sun Performance Library 7  
 File System: ufs  
 System State: Single-User

## Notes/Tuning Information

Portability:

178.galgel: -e -fixed

-xprofile: PASS1=-xprofile=collect, PASS2=-xprofile=use

Base Flags:

Base C flags: -fast -xipo=2 -xalias\_level=std -xprofile

Base F90 flags: -fast -xcrossfile -lprism32 -xprofile

Peak Flags:

168.wupwise: basepeak=yes

171.swim: basepeak=yes

172.mgrid: basepeak=yes

173.applu: -fast -Qoption iropt -Adata\_access,-Mt7000,-Mm14000,-Mr40000,-Ma400,-whole  
-xregs=syst -Qoption iropt -Rscalarrep,-MR -Qoption cg -Qlp=1-av=192-fa=1  
-Qoption f90comp -O3



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## Notes/Tuning Information (Continued)

```

177.mesa: -fast -xcrossfile -xalias_level=strong -xprofile
178.galgel: -fast -xcrossfile -xregs=syst -Qoption iropt -Addint:sf=9 -xlic_lib=sunperf -lsunperf -xprofile
179.art: basepeak=yes
183.earthquake: -fast -xalias_level=strong -W2,-whole,-Amemopt:arrayloc
               -Wc,-Qms_pipe-pref,-Qlp=1-av=256-t=4-fa=1-fl=1 -lprism32 -lmopt -xprofile
187.facerec: basepeak=yes
188.ammmp: -fast -xcrossfile -xalias_level=std -lprism32 -xprofile
189.lucas: -fast -Qoption f90comp -array_pad_rows,2002 -Qoption iropt -whole
           -Qoption cg -Qms_pipe-pref,-Qlp=1-t=3-fa=1
           -lprism32 -xprofile
191.fma3d: -fast -xcrossfile -stackvar -Qoption cg -Qlp=1-av=256-t=3-fa=1 -xprofile
200.sixtrack: basepeak=yes
301.apsi: -fast -Qoption iropt -Mt450 -lprism32 -xprofile
ONESTEP=yes for all benchmarks in peak and Fortran benchmarks in base

```

### Shell Environments:

```

LD_LIBRARY_PATH=/usr/lib:/opt/SUNWspro/lib/v8plusb:/opt/SUNWspro/prod/lib/v8plusb
PRISM_HEAP=268435456
PRISM_MODE=2

```

Stack size set to unlimited via "ulimit -s unlimited"

### System Settings:

2nd cpu physically removed from system

### Kernel Parameters (/etc/system):

```

set shmsys:shminfo_shmmmin=1
set shmsys:shminfo_shmmmax=1477846784
set shmsys:shminfo_shmmni=256
set shmsys:shminfo_shmseg=400

```

System configuration details located (as of Jun 2002) at  
<http://www.sun.com/servers/nebs/>