



OMPL2001 Result

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Sun Microsystems
Sun SPARC Enterprise M9000 Server

SPECompLpeak2001 = 1230446

SPECompLbase2001 = 1148235

SPEC license #HPG0010 | Tested by: Sun Microsystems | Test site: | Test date: Apr-2007 | Hardware Avail: Apr-2007 | Software Avail: Jul-2007

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_1	9200	127	1158569	107	1378740
313.swim_1	12500	173	1157700	174	1146578
315.mgrid_1	13500	178	1212185	177	1221797
317.applu_1	13500	152	1424890	139	1556386
321.quake_1	13000	350	594145	316	658639
325.apsi_1	10500	324	518556	250	671728
327.gafort_1	11000	179	981933	179	981933
329.fma3d_1	23500	384	980376	384	980376
331.art_1	25000	79.2	5049461	79.2	5049461

Hardware

CPU: SPARC64 VI
CPU MHz: 2400
FPU: Integrated
CPU(s) enabled: 128 cores, 64 chips, 2 cores/chip
CPU(s) orderable: 1 to 16 CMUs; each CMU contains 2 or 4 chips
Primary Cache: 128 KB I + 128 KB D on chip per core
Secondary Cache: 6 MB I+D on chip per chip
L3 Cache: None
Other Cache: None
Memory: 1 TB (512 x 2 GB)
Disk Subsystem: 673 GB RAID 1+0 created by Solaris Volume Manager with 20 x 73 GB 10,000 RPM Fujitsu MAY2073RC SAS
Other Hardware: --

Software

OpenMP Threads: 128
Parallel: OpenMP and Autoparallel
Operating System: Solaris 10 7/07
Compiler: Sun Studio 12
File System: ufs
System State: Multi-User

Notes/Tuning Information

Compiler Invocation:

```
C: cc
F90: f90
F77: f77
```

Base Tuning:

```
C: -fast -xopenmp -xipo=2 -xprefetch_level=3 -xcode=abs44
-m64 -lmtmalloc -xpagesize=4m -xprefetch=latx:3
-Xc -xprofile
```

```
Fortran: -fast -openmp -xcode=abs44 -m64 -xipo=2 -autopar
-fma=fused -xpagesize=4m -xprefetch=latx:3 -xprofile
```

ONESTEP=yes

Peak Tuning:

ONESTEP=yes

```
311.wupwise_1: -fast -openmp -autopar -xcode=abs44 -m32 -xipo=2
-fma=fused -xpagesize=512k -xprefetch_level=3
-Qoption iropt -Athr,-Apf:l2subblock=256,-Apf:ipa=9
-xprefetch=latx:3 -xprofile
```

```
313.swim_1: -fast -openmp -m64 -xipo=2 -autopar -xcode=abs44
-xpagesize=512k -xprefetch=latx:3 -xprofile
```

```
315.mgrid_1: -fast -openmp -xipo=2 -xprefetch_level=3
```



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Notes/Tuning Information (Continued)

```

-Qoption iropt -Apf:largedim,-Apf:l2subblock=256
-m64 -xcode=abs44 -xpagesize=512k -xprefetch=latx:5
-xprofile
317.applu_l: -fast -openmp -xipo=2 -xcode=abs44 -m64 -fma=fused
-xpagesize=4m -Qoption iropt -Aujam:inner=g,
-Apf:l2subblock=256 -xprefetch=latx:3 -xprofile
321.quake_l: -fast -xopenmp -xipo=2 -xcode=abs44 -xrestrict
-xprefetch_level=3 -lmtmalloc -m64 -xpagesize=64k
-W2,-Apf:l2subblock=256 -xprefetch=latx:3
-xprofile
325.apsi_l: -fast -openmp -xcode=abs44 -xipo=2 -m64
-xpagesize=4m -lmtmalloc -xprefetch=latx:3
-xprofile
327.gafort_l: basepeak=yes
329.fma3d_l: basepeak=yes
331.art_l: basepeak=yes

```

Portability flags:

```
318.galgel_l: -e -fixed
```

Extra art allowed flags:

```
331.art_l: -DINTS_PER_CACHELINE=16 -DDBLS_PER_CACHELINE=8
```

Alternate Source for Peak:

```
Approved alternate source ompl.dd was used for 325.apsi_l.
Change initial data distribution for WORK array
ompl2001-dd-20040128.tar.gz
```

Feedback optimization (-xprofile) is done as follows,
unless otherwise noted:

```
fdo_pre0: rm -rf `pwd`/feedback.profile
PASS1: -xprofile=collect:./feedback
PASS2: -xprofile=use:./feedback
```

Base and Peak User Environment:

```
setenv SUNW_MP_PROCBIND "0 2 4 6 8 10 12 14 16 18
20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50
52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82
84 86 88 90 92 94 96 98 100 102 104 106 108 110
112 114 116 118 120 122 124 126 128 130 132 134
136 138 140 142 144 146 148 150 152 154 156 158
160 162 164 166 168 170 172 174 176 178 180 182
184 186 188 190 192 194 196 198 200 202 204 206
208 210 212 214 216 218 220 222 224 226 228 230
232 234 236 238 240 242 244 246 248 250 252 254"
setenv SUNW_MP_THR_IDLE SPIN
```

Kernel Paramters (/etc/system):

```
set autoup=900
set tune_t_fsflushr=3
```

System configuration details located at
<http://www.sun.com/servers/>

For a description of Sun Studio 12 Compiler flags, portability flags
and system parameters used to generate this result, please refer to



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Notes/Tuning Information (Continued)

SUN-20070503-Studio-Solaris-sparc.txt file in the flags directory.

This result was measured on Sun SPARC Enterprise M9000.
The Sun SPARC Enterprise M9000 and the Fujitsu SPARC Enterprise M9000 are electrically equivalent.