



# OMPL2001 Result

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**Hewlett-Packard Company**  
HP Superdome 64-way (875MHz PA-8700+)

SPECompLpeak2001 = 150600  
SPECompLbase2001 = 144183

SPEC license #HPG0001 | Tested by: Hewlett-Packard Company | Test site: Richardson, Texas | Test date: Jun-2002 | Hardware Avail:Jun-2002 | Software Avail:Jun-2002

| Benchmark     | Reference Time | Base Runtime | Base Ratio | Peak Runtime | Peak Ratio |
|---------------|----------------|--------------|------------|--------------|------------|
| 311.wupwise_l | 9200           | 931          | 158057     | 703          | 209264     |
| 313.swim_l    | 12500          | 1500         | 133369     | 1500         | 133369     |
| 315.mgrid_l   | 13500          | 1336         | 161707     | 1336         | 161707     |
| 317.applu_l   | 13500          | 1190         | 181440     | 1130         | 191168     |
| 321.quake_l   | 13000          | 2560         | 81246      | 2560         | 81246      |
| 325.apsi_l    | 10500          | 1945         | 86376      | 1834         | 91627      |
| 327.gafort_l  | 11000          | 1283         | 137146     | 1283         | 137146     |
| 329.fma3d_l   | 23500          | 2752         | 136624     | 2752         | 136624     |
| 331.art_l     | 25000          | 1208         | 331133     | 1208         | 331133     |

**Hardware**

CPU: PA-8700+  
CPU MHz: 875  
FPU: Integrated  
CPU(s) enabled: 64  
CPU(s) orderable: 8 to 64  
Primary Cache: 0.75MB(I) + 1.5MB(D) on chip  
Secondary Cache: None  
L3 Cache: None  
Other Cache: None  
Memory: 256GB  
Disk Subsystem: 5x9GB Fiberchannel (striped)  
1x9GB SCSI disk (root), 28x9GB FC disks (swap)  
Other Hardware: 16 cells

**Software**

OpenMP Threads: 64  
Parallel: OpenMP  
Operating System: HP-UX 11i TCOE B.11.11.0206.5  
Compiler: HP C/ANSI C Compiler v11.11.04  
HP Fortran 90 Compiler v2.5.14  
HP aC++ Compiler A.03.35

PHSS\_26263 ld(1) and linker tools patch  
PHSS\_25719 LIBCL patch  
PHSS\_26913 CPSlib patch  
PHSS\_26792 ANSI C compiler patch  
PHSS\_26793 +O4/PBO compiler patch  
PHSS\_27072 Fortran90 compiler patch  
PHSS\_26952 aC++ -AA runtime libraries  
PHSS\_24207 libm patch  
PHSS\_26264 linker startup code

File System: Online JFS  
System State: Multi-user

## Notes/Tuning Information

User environment:  
OMP\_NUM\_THREADS=64

Kernel Paramters (/stand/system):  
maxdsiz 3221225472  
maxdsiz\_64bit 274877906944  
maxssiz 0x10000000  
maxssiz\_64bit 1073741824  
maxtsiz 1073741824  
maxtsiz\_64bit 4294967296  
vps\_pagesize 4096  
vps\_ceiling 16384  
dbc\_min\_pct 10  
dbc\_max\_pct 10

Base:  
F90 +O3 +Oall +Ofltacc -Wl,+FPD +Oopenmp  
-Wl,-aarchive +Oinfo +DA2.0W +Oloop\_unroll=2  
aCC +Oall +Oopenmp +Oinfo -Wl,-aarchive +DA2.0W  
PASS1\_CFLAGS +I  
PASS1\_LDCFLAGS +I -Wl,-aarchive  
PASS2\_CFLAGS +P +Ostatic\_prediction  
PASS2\_LDCFLAGS +P +Ostatic\_prediction -Wl,-aarchive



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## Notes/Tuning Information (Continued)

Peak:

```
311.wupwise_1:  +O3 +Oall +Onofltacc -Wl,+FPD
                 +Oopenmp -Wl,-aarchive +Oinfo +DA2.0W
                 +Oloop_unroll=2 +cat +Oinline_budget=10000
                 ONESTEP = true
```

```
317.applu_1:    +O3 +Oall +Onofltacc -Wl,+FPD
                 +Oopenmp -Wl,-aarchive +Oinfo +DA2.0W
                 +Oloop_unroll=2 +Ono_ptrs_to_globals
```

```
325.apsi_1:    +O3 +Oall +Onofltacc -Wl,+FPD
                 +Oopenmp -Wl,-aarchive +Oinfo +DA2.0W
                 +Oloop_unroll=2 +Onodataprefetch
```