



# HPC2002 Result

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Sun Microsystems  
Sun Enterprise 450

SPECchemS2002 = 288

SPEC license #: HPG0007A | Tested by: Purdue University | Test site: Purdue University | Test date: Oct-2003 | HW Avail: Aug-2000 | SW Avail: Nov-2002

Benchmark	Reference Time	Runtime	Ratio
370.gamess_s	86400	300	288

Hardware		Software	
CPU:	UltraSPARC II	Parallel:	MPI
CPU MHz:	480	Processes-Threads:	4
FPU:	Integrated	MPI Processes:	4
CPU(s) enabled:	4	OpenMP Threads:	--
CPU(s) orderable:	1 to 4	Operating System:	Solaris 8
Primary Cache:	16KBI+16KBD on chip	Compiler:	Sun WorkShop 6 update 2
Secondary Cache:	8MB(I+D) off chip	File System:	NFS
L3 Cache:	None	System State:	Multi User
Other Cache:	None	Other Software:	MPICH-1.2.4 ch_shmem
Memory:	4GB		
Disk Subsystem:	Fujitsu MAJ3364M SUN36G		
Other Hardware:	100Mbps Ethernet		

## Notes/Tuning Information

Tested by Purdue University

```
FC = ${MPIHOME}/bin/mpif90
F77 = ${MPIHOME}/bin/mpif90
CC = ${MPIHOME}/bin/mpicc
```

Flags:

```
OPTIMIZE = -I${MPIHOME}/include -fast -xarch=v9a -ftrap=%none
FOPTIMIZE = -xtypemap=integer:64
```

MPICH: version 1.2.4

```
setenv CC "cc -xarch=v9a"
setenv FC "f90 -xarch=v9a -xtypemap=integer:64"
setenv F90 "f90 -xarch=v9a -xtypemap=integer:64"
configure --with-device=ch_shmem
make
```

```
submit = MPI_ENABLED=ENABLED; export MPI_ENABLED; \
STACKSIZE=20000; export STACKSIZE; \
${MPIHOME}/bin/mpirun -np 4 $command
```