



# HPC2002 Result

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**IBM Corporation**  
IBM eServer pSeries 690 Turbo (1700 MHz, 16 CPUs)

**SPECseisM2002 = 207**

SPEC license #: HPG0007A | Tested by: Purdue University | Test site: Purdue University | Test date: Oct-2004 | HW Avail: May-2003 | SW Avail: Jul-2003

Benchmark	Reference Time	Runtime	Ratio
351.seis_m	86400	417	207

Hardware		Software	
CPU:	POWER4+	Parallel:	OpenMP
CPU MHz:	1700	Processes-Threads:	16
FPU:	Integrated	MPI Processes:	--
CPU(s) enabled:	16 cores, 8 chips, 2 cores/chip 4 chips/MCM	OpenMP Threads:	16
CPU(s) orderable:	1,2,3,4 (order # of MCMs)	Operating System:	AIX 5L V5.2
Primary Cache:	64KBI+32KBD (on chip)/core	Compiler:	IBM XL FORTRAN for AIX, Version 8.1.1.0 IBM C for AIX, Version 6.0
Secondary Cache:	1536KB unified (on chip) per chip	File System:	AIX/JFS
L3 Cache:	128MB unified (off-chip) per MCM, 2 MCMs in SUT	System State:	Multi-user
Other Cache:	None	Other Software:	Parallel Environment for AIX V3.2.0.10
Memory:	128GB		
Disk Subsystem:	2x36GB+14x72GB, SCSI, 10K RPM		
Other Hardware:	None		

## Notes/Tuning Information

Tested by Purdue University

C: IBM C invoked as cc\_r  
Fortran 90: IBM XL Fortran for AIX invoked as xlf90\_r

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Flags:
COPTIMIZE = -O4 -qsmp=omp -qstrict -qarch=pwr4 -qtune=pwr4
FOPTIMIZE = -O4 -qsmp=omp -qstrict -qarch=pwr4 -qtune=pwr4
EXTRA_CFLAGS = -DNOUNDERSCORE
EXTRA_FFLAGS = -qfixed
EXTRA_LDFLAGS = -bmaxdata:0x60000000 -bmaxstack:0x20000000
EXTRA_CPPFLAGS = -D_OPENMP

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MCM: Acronym for "Multi-Chip Module"  
SUT: Acronym for "System Under Test"