



CFP2000 Result

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IBM Corporation
RS/6000 44P-170 (450 MHz)

SPECfp2000 = 409
SPECfp_base2000 = 356

SPEC license #: 11 | Tested by: IBM, Austin, TX | Test date: Aug-2000 | Hardware Avail: Oct-2000 | Software Avail: Oct-2000

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
168.wupwise	1600	445	360	253	632	
171.swim	3100	1111	279	795	390	
172.mgrid	1800	565	319	564	319	
173.applu	2100	642	327	642	327	
177.mesa	1400	424	330	424	330	
178.galgel	2900	675	429	668	434	
179.art	2600	268	969	268	969	
183.earthquake	1300	232	560	172	757	
187.facerec	1900	740	257	460	413	
188.ammpp	2200	675	326	584	377	
189.lucas	2000	703	284	703	284	
191.fma3d	2100	618	340	608	346	
200.sixtrack	1100	470	234	470	234	
301.apsi	2600	746	349	688	378	

Hardware

CPU: IBM Power3-II
CPU MHz: 450
FPU: Integrated
CPU(s) enabled: 1 core, 1 chip, 1 core/chip
CPU(s) orderable: 1
Parallel: No
Primary Cache: 32KBI+64KBD (on chip)
Secondary Cache: 8MB (I+D) (off chip)
L3 Cache: None
Other Cache: None
Memory: 512MB
Disk Subsystem: 1X9.1GB IBM Ultra-2 SCSI, 7200 RPM
Other Hardware: None

Software

Operating System: AIX 4.3.3 + beta of APAR IY12051
Compiler: Fortran 77 and 90: IBM xl Fortran 6.1 invoked as 'xlF90'
C: IBM VAC 5.0 invoked as 'xlc'
File System: AIX/JFS
System State: Multi-user

Notes/Tuning Information

Portability Flags

-qfixed used in: wupwise, swim, mgrid, applu, galgel, sixtrack, apsi
-qsuffix=f=f90 used in: galgel, facerec, lucas, fma3d

NOTE: The flag combination 'qpdf1/qpdf2' indicates a 2 step compilation process, the exact process is as follows:

```
fdo_pre0 = rm -rf ${PDFDIR}; mkdir -p ${PDFDIR}
PASS1_FLAGS    =--qpdf1 {optimization flags}
PASS1_LDFLAGS  = {libraries} -L{pdf library location} -lpdf
PASS2_FLAGS    =--qpdf2 {optimization flags}
PASS2_LDFLAGS  =--{libraries}
```

Base Optimization Flags:

Fortran: -qpdf1/pdf2 -O3 -qarch=pwr3 -lmass
C: -O5 -lmass

Peak Optimization Flags:

168.wupwise: -qpdf1/pdf2 -O4 -qipa=level=2 -lmass
171.swim: -qpdf1/pdf2 -O4 -qipa=level=2 -qhot -lmass
172.mgrid: -O3 -qarch=pwr3 -qhot



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Notes/Tuning Information (Continued)

```
173.applu: -qpdf1/pdf2 -O3 -qarch=pwr3 -lmass
177.mesa: -O5 -lmass
178.galgel: -O4 -qipa=level=2 -qhot -lmass
179.art: -O5 -lmass
183.quake: -O5 -lmass -lhm
187.facerec: -O3 -qarch=pwr3 -qhot -lmass
188.amp: -O3 -qarch=pwr3 -bnso -bI:/lib/syscalls.exp
189.lucas: -qpdf1/pdf2 -O3 -qarch=pwr3 -lmass
191.fma3d: -O4 -qipa=level=2 -qhot -lmass
200.sixtrack: -O3 -qarch=pwr3
301.apsi: -O4 -qipa=level=2 -qhot -lmass -bnso -bI:/lib/syscalls.exp
```