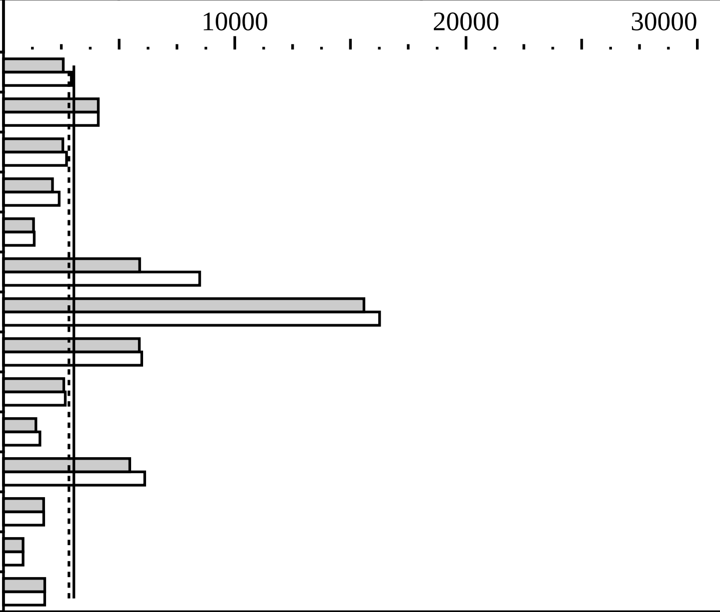
CFP2000 Result

IBM Corporation
IBM System p5 575 (1900 MHz, 1 CPU)

SPECfp2000 = 3042
SPECfp_base2000 = 2830

SPEC license #: 11	Tested by: IBM	Test date: Dec-2005	Hardware Avail: Feb-2006	Software Avail: Feb-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	61.9	2584	54.6	2933
171.swim	3100	75.6	4098	75.6	4098
172.mgrid	1800	70.1	2566	66.0	2726
173.applu	2100	99.1	2119	87.2	2407
177.mesa	1400	108	1299	105	1328
178.galgel	2900	49.3	5888	34.2	8483
179.art	2600	16.7	15586	16.0	16261
183.equake	1300	22.1	5873	21.7	5978
187.facerec	1900	72.9	2607	71.2	2670
188.ammp	2200	157	1401	140	1575
189.lucas	2000	36.6	5460	32.8	6107
191.fma3d	2100	121	1736	121	1740
200.sixtrack	1100	130	846	130	846
301.apsi	2600	146	1784	146	1783



Hardware

CPU:	POWER5+
CPU MHz:	1900
FPU:	Integrated
CPU(s) enabled:	1 core, 8 chips, 2 cores/chip (SMT off)
CPU(s) orderable:	8,16
Parallel:	No
Primary Cache:	64KBI+32KBD (on chip)/core
Secondary Cache:	1920KB unified, shared (on chip)/chip
L3 Cache:	36MB unified (off-chip)/DCM, 8 DCMs/SUT
Other Cache:	None
Memory:	64x2GB
Disk Subsystem:	2x73GB SCSI, 15K RPM
Other Hardware:	None

Software

Operating System:	AIX 5L V5.3
Compiler:	XL C/C++ Enterprise Edition Version 8.0 for AIX XL Fortran Enterprise Edition Version 10.1 for AIX Other Software: ESSL 4.2.0.2
File System:	AIX/JFS2
System State:	Multi-user

Notes/Tuning Information

```
Portability Flags:
     -qfixed used in:        168.wupwise, 171.swim, 172.mgrid, 173.applu,
                             178.galgel, 200.sixtrack, 301.apsi
     -qsuffix=f=f90 used in: 178.galgel, 187.facerec, 189.lucas, 191.fma3d

Base Optimization Flags:
  Fortran:    -O5 -lhmu -blpdata -lmass
  C:          -qpdf1/pdf2
              -O5 -blpdata -qalign=natural

Peak Optimization Flags
  168.wupwise:  -O5 -qsave -blpdata -lhmu -lmass
  171.swim:     basepeak=1
  172.mgrid:    -qpdf1/pdf2
                -O4 -qipa=partition=large -q64 -blpdata
  173.applu:    -O5 -qarch=pwr3 -qtune=pwr3 -qalign=struct=natural -qfdpr -q64 -blpdata
                  fdpr -q -O3
```

Notes/Tuning Information (Continued)

```
177.mesa:     -qpdf1/pdf2
               -O5 -qfdpr
               fdpr -q -O3
178.galgel:   -qpdf1/pdf2
              -O5 -qfdpr -lhmu -blpdata -lmass -qessl -lessl
              fdpr -q -O3
179.art:      -qpdf1/pdf2
              -O5 -qhot=arraypad -Q -qalign=natural -blpdata -lhmu
183.equake:   -qpdf1/pdf2
              -O3 -qarch=auto -qtune=auto -qipa=level=2 -blpdata
187.facerec:  -O5 -qsave -blpdata
188.ammp:     -O5 -qalign=natural -qfdpr -blpdata -lhmu
              fdpr -q -O3
189.lucas:    -O3 -qarch=auto -qtune=auto -qfdpr -blpdata -qessl -lessl
              fdpr -q -O3
191.fma3d:    -qpdf1/pdf2
             -O3 -qarch=auto -qtune=auto -qipa=level=2 -q64 -lhmu -blpdata -lmass
200.sixtrack: -qpdf1/pdf2
              -O4 -qfdpr
              fdpr -q -O3
301.apsi:     -O5
```

The installed OS level is AIX 5L for POWER version 5.3 with the 5300-04 Recommended Technology Level.

```
SMT:  Acronym for "Simultaneous Multi-Threading". A processor technology that allows
      the simultaneous execution of multiple thread contexts within a single processor
      core. (Enabled by default)
DCM:  Acronym for "Dual-Chip Module" (one dual-core processor chip + one L3-cache chip)
SUT:  Acronym for "System Under Test"
ESSL: Engineering and Scientific Subroutine Library

ANSI C89:       IBM XL C for AIX invoked as xlc
Fortran 77:     IBM XL Fortran for AIX invoked as xlf90
Fortran 90:     IBM XL Fortran for AIX invoked as xlf90

ulimits set to unlimited.
Large page mode and memory affinity were set as follows:
    vmo -r -o lgpg_regions=1600 -o lgpg_size=16777216
    chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
    shutdown -rF
    export MEMORY_AFFINITY=MCM

The following config-file entry was used to assign each benchmark process to a core:
     submit = bindprocessor $$ $SPECUSERNUM; $command
The "bindprocessor" AIX command binds a process to a CPU core.
Fifteen cores were deconfigured and SMT disabled using the AIX commands
     smtctl -m off -w boot
     bosboot -aD
     shutdown -rF
     drmgr -r -c cpu
     drmgr -r -c cpu
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     drmgr -r -c cpu
```

Notes/Tuning Information (Continued)

```
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```