

Shared Memory Versus Disk I/O

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- These benchmarks were performed using the mips-24 offline science pipeline on the *sscpipe9* segment test machine specifically configured to handle intermediate FITS file I/O through shared memory using the *cfitsio* driver.
- Figure 1 shows the processing times for each module/step using the UNIX “*ptime*” command. The times are from an average of 10 independent single pipeline runs (one jobber). Figure 2 shows the difference in execution time for each module/step (Regular disk I/O – Shared Mem. I/O).
- **Conclusions:** Summing the ordinate values in Figure 2 gives a **total** execution time difference of ≈ 0.8 second between regular local-disk I/O and shared memory methods. Under the assumption that shared memory is handled exclusively through CPU, this implies that regular disk I/O activity does NOT dominate the processing-time budget.

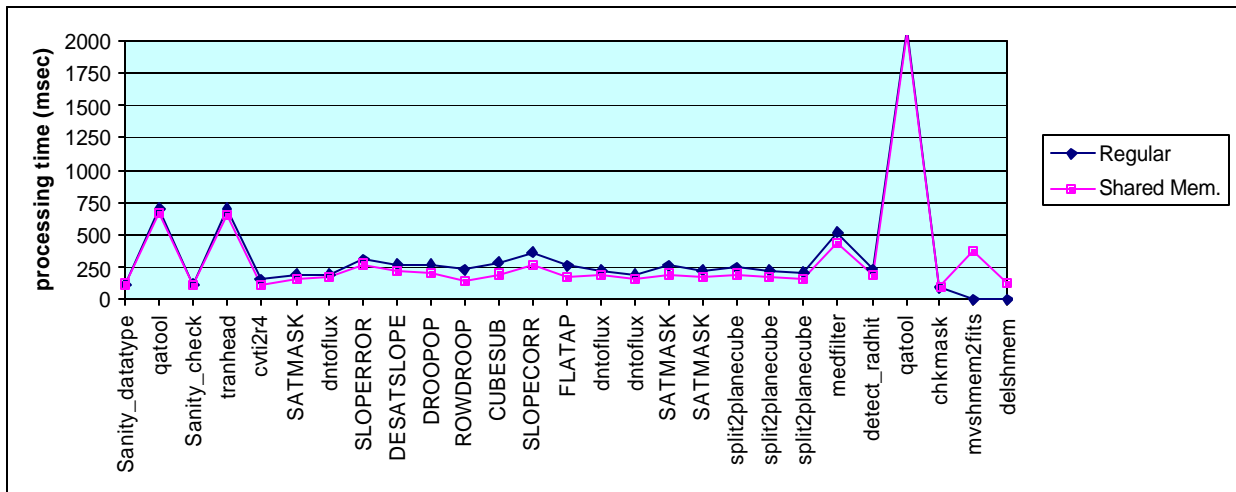


Fig. 1

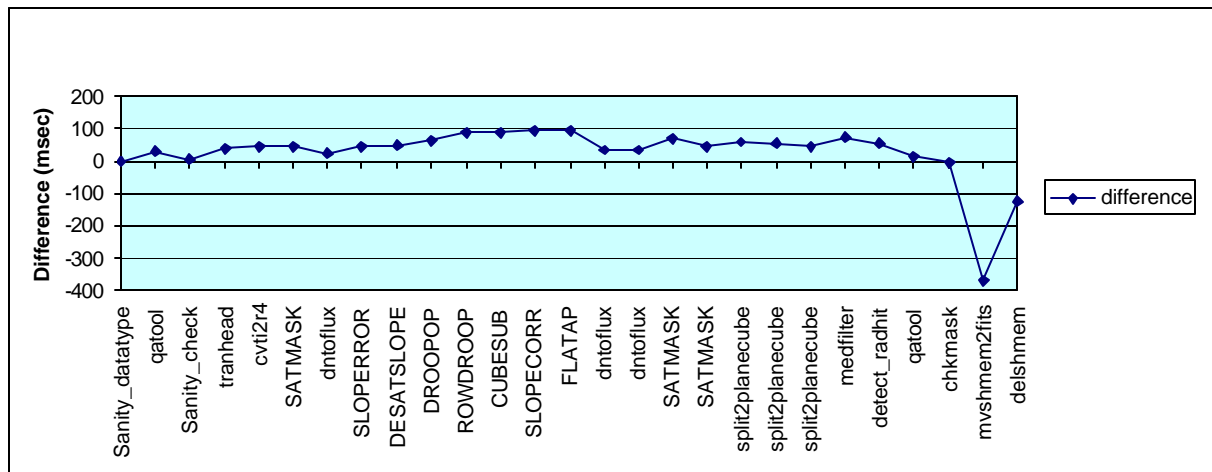


Fig. 2