Performance Evaluation of the Cray XT3 Configured with Dual-Core Opteron Processors

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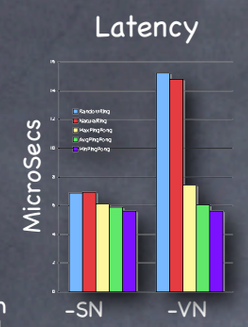
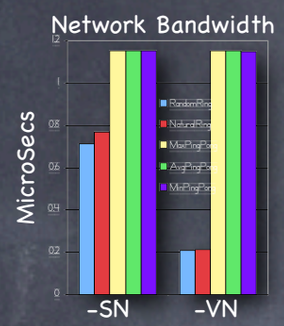
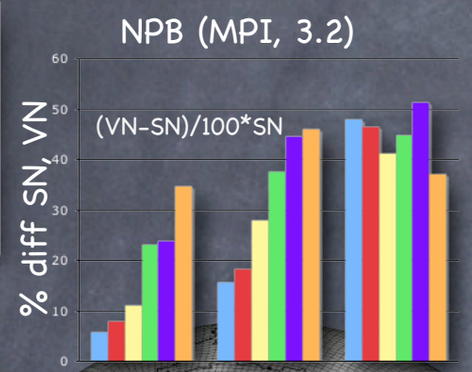
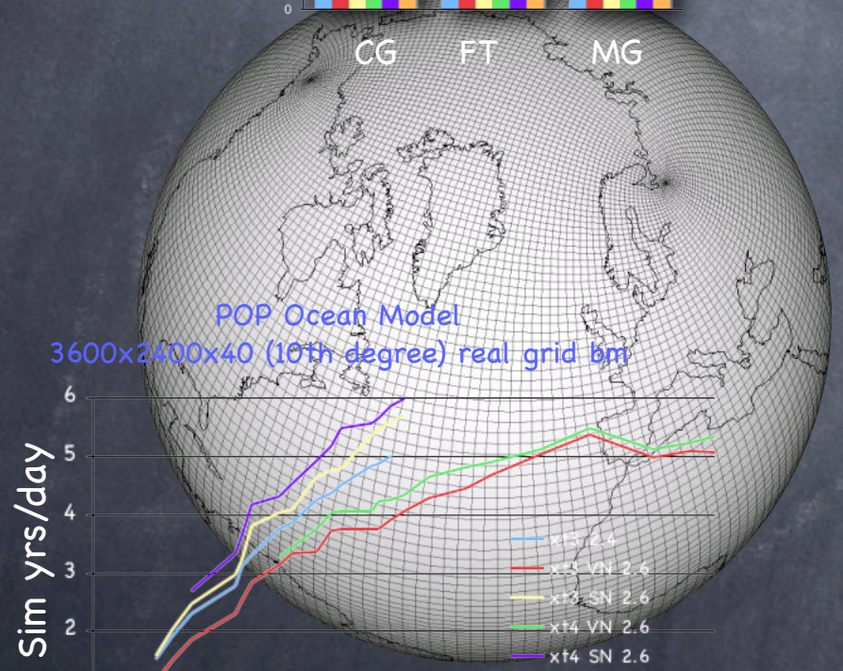
Jaguar,a Cray XT3 located at ORNL, is comprised of 5,212 compute nodes, each consisting two dual-core AMD Opteron 2.6 GHz, sharing 4 GBytes of memory, and 1 MBytes of L2 cache/core. The compute nodes, connected by the SeaStar ..., run the Catamount LWK operating system. Compilers are from PGI, version X.Y.Z at the time of these tests. ACML...



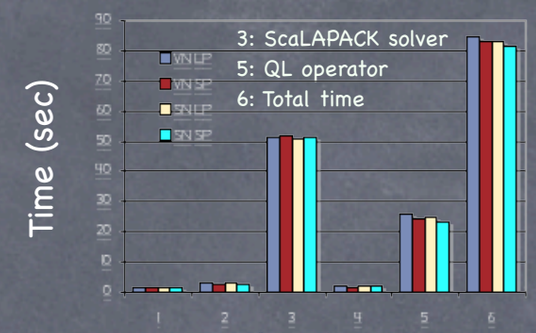


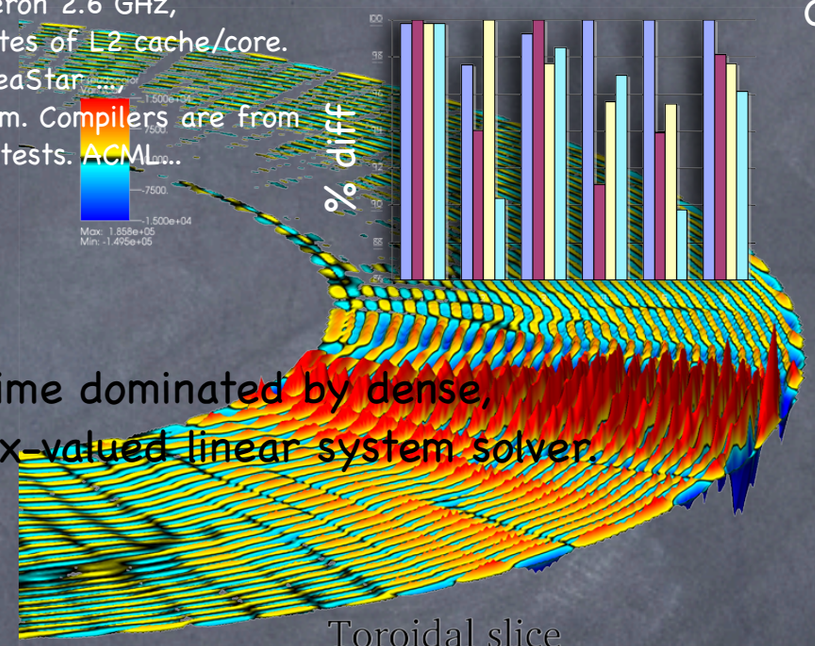




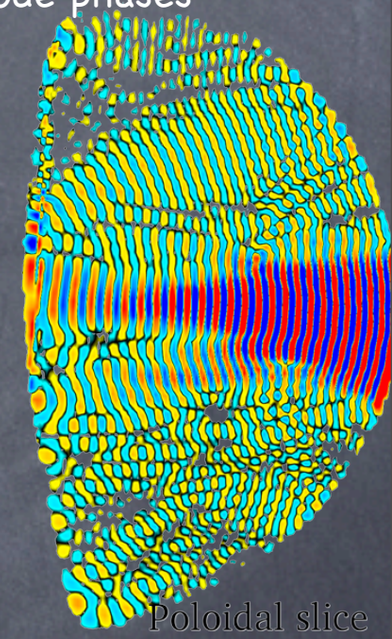
Per core, -SN about 30% faster than -VN node

AORSA
rf-heating of plasma
in fusion energy device



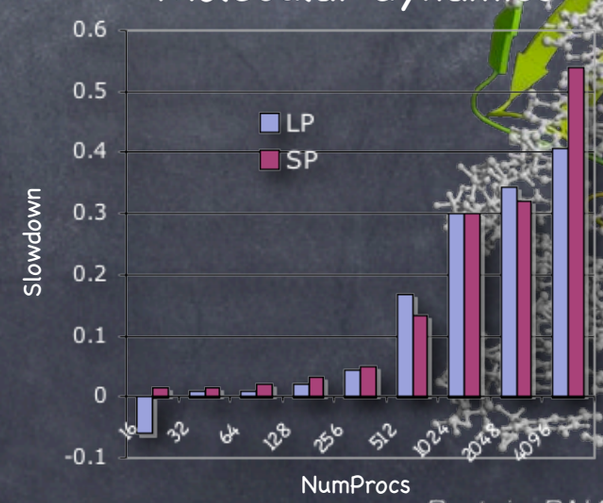


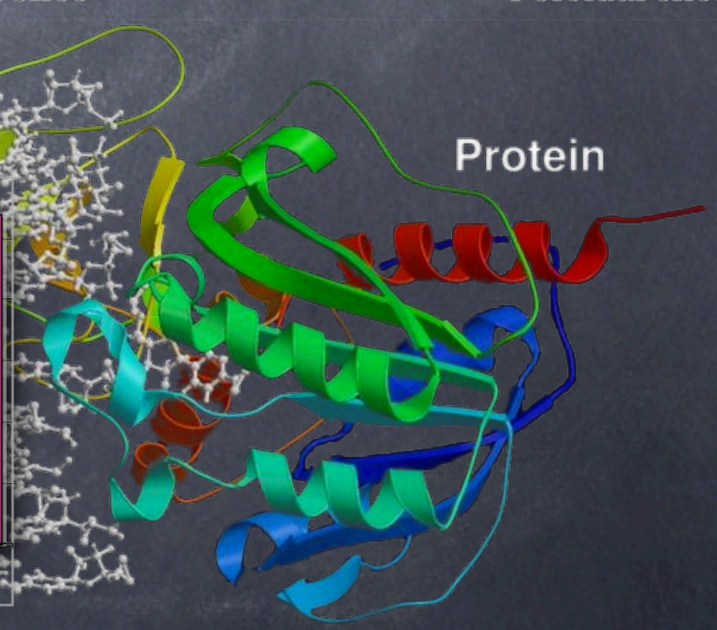
Time dominated by dense, complex-valued linear system solver.



DNA

LAMMPS
Molecular dynamics





Protein-DNA complex for the M.HhaI methyltransferase