CSSM Physics Report
23rd ILDG Workshop

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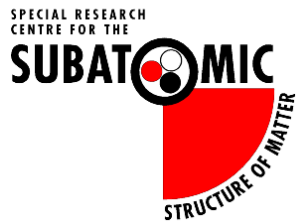

NCI MAS Computing facilities

- Approximately 1% share for Lattice QCD.
- NCI NF Raijin, CPU Cluster.
  - 57,472 cores in 3592 compute nodes.
  - Peak performance of approximately 1.2 PFlops.
- Avoca, IBM Blue Gene/Q.
  - 65,536 cores.
  - Peak performance of approximately 0.84 PFlops.
- Magnus, Cray XC40 cluster
  - 35,712 Haswell cores.
  - Peak performance of greater than 1 PFlops.

Local Computing facilities

Isaac

- Dedicated to Lattice QCD.
- **GTX Nodes:** 40× GTX Titan, 4 per node.
- 24 GB GDDR5 memory per node.
- Peak performance of 180 Tflops (SP), 60 Tflops (DP)

Phoenix – New Cluster

- Shared machine, CPU + GPU nodes.
- **GPU Nodes:** 48× Tesla K40, 8 per node.
- 96 GB GDDR5 memory per node.
- Peak performance of 240 Tflops (SP), 80 Tflops (DP)

ILDG usage

PACS-CS Configs

- 2+1 flavor full QCD configurations by PACS-CS are still seeing extensive use.
- Details: http://www.jldg.org/ildg-data/PACSCSconfig.html
- These ensembles form the “workbench” for our projects.

Physics Plans

- Hadron structure. . .