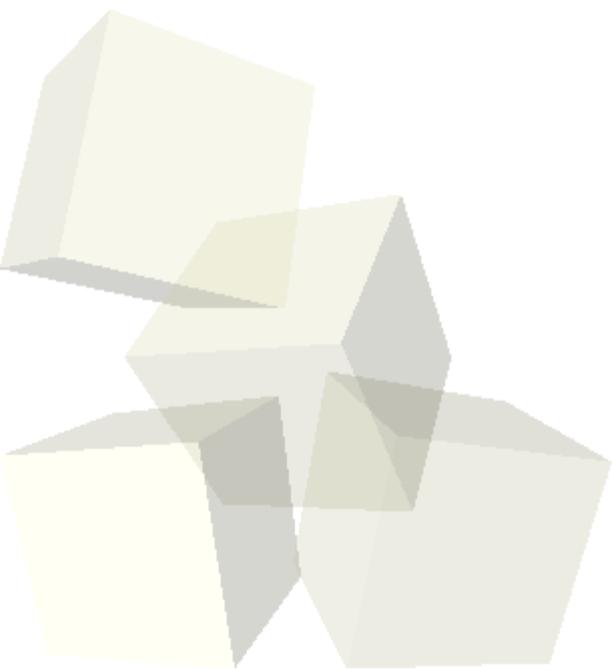# Report from the
Scientific Program Committee
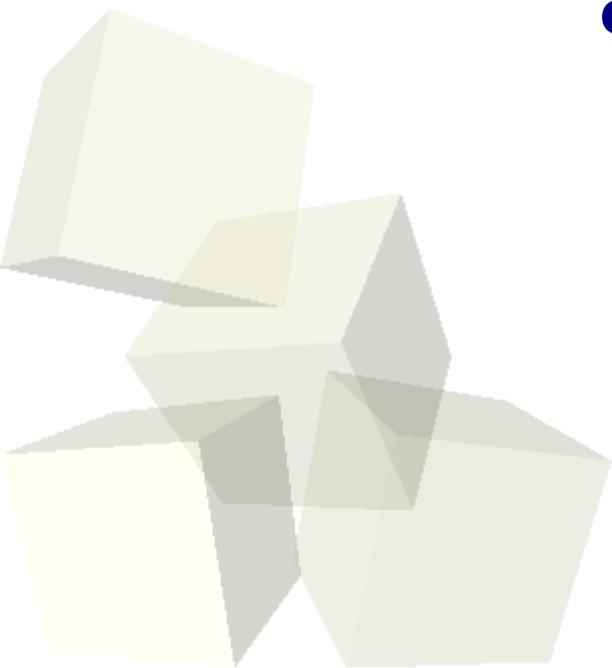
Frithjof Karsch
SPC Chair

OUTLINE

- Allocations 2010/11

- Resources 2011/12

- Requests   2011/12 (INCITE/cluster/GPU)

Simon Catterall
Robert Edwards
Taku Izubuchi (replaces Chris Dawson)
Frithjof Karsch (chair)
Martin Savage
Junko Shigemitsu
Doug Toussaint (replaces Tom Blum)

The SPC advises the ExecCom

- The SPC suggests to the ExecCom allocations of computer time on the DOE-funded hardware at BNL, FNAL and JLab as well as the usage of INCITE time

- The SPC advises the ExecCom which projects are suitable new USQCD project proposals, for usage of zero priority time on leadership-class machines, ...

- When additional resources become available, the SPC suggests redistributions/reallocations

2010 INCITE allocation

Cray XT4/XT5 at Oak Ridge (2010 allocation: 40 M core-h)

half of this has been distributed in the 2010/11 allocation period
07/10-12/10: 20 M core-h $\simeq$ 10 M Jpsi core-h

actually used: 102% + 7.5 M J/psi core-h 'no penalty' time

BlueGene/P at ALCF (2010 allocation: 67 M core-h)

used up already in Jan/Feb 2010; 67 M core-h $\simeq$ 36.2 M Jpsi core-h

during 2010/11 allocation period only zero priority time has been
distributed: 03/22/10 – 03/31/11
109.45 M BGP core-h $\simeq$ 59.1 M Jpsi core-h
(interrupted during Jan/Feb 2011 where regular allocation
of 50 M core-h   27 M Jpsi core-h was used)
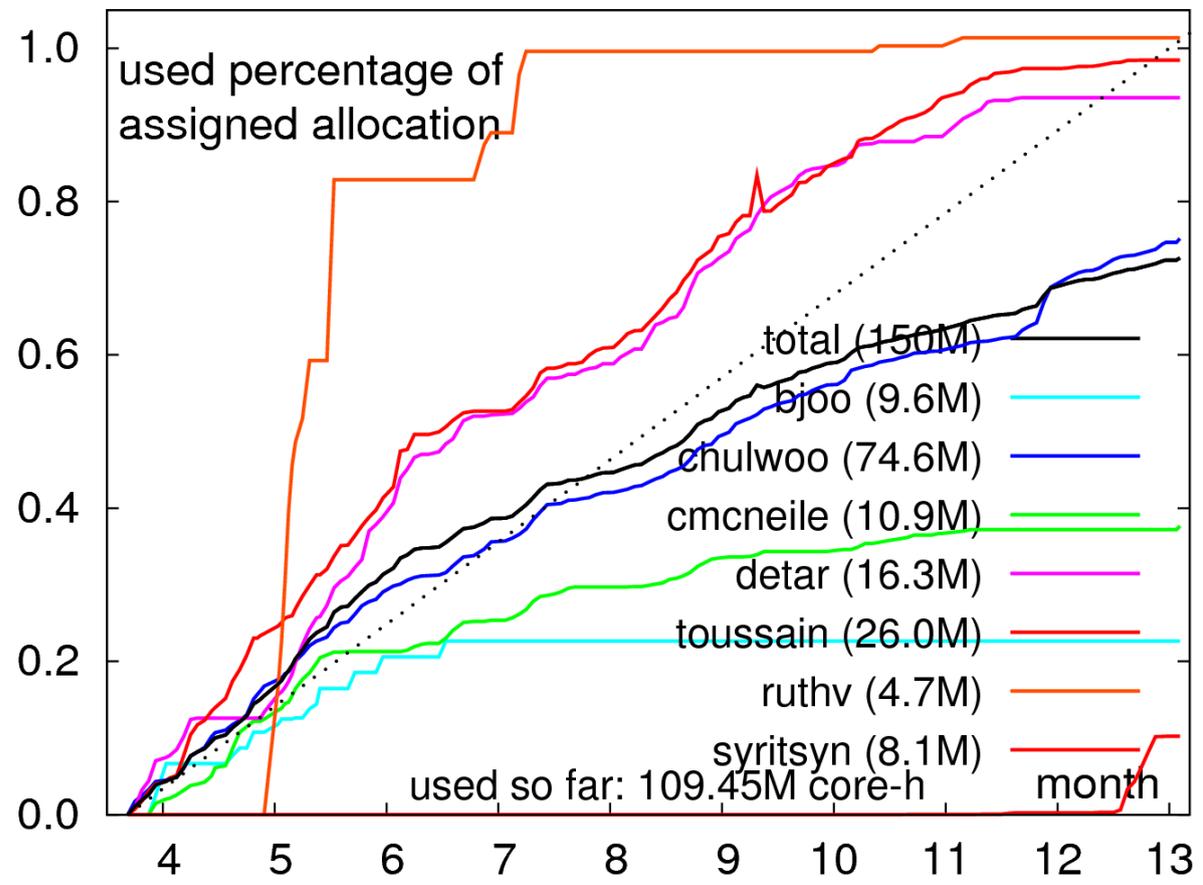
total INCITE usage 2010/11: 111.1 M Jpsi core-h

(includes half of XT5 INCITE allocation for 2011)   5

zero priority time decreased towards the end of the year;
throughput on the average : about 0.36 M BGP core-h/day

6

2011 INCITE allocation (new 3-year INCITE project)

Cray XT4/XT5 at Oak Ridge (2011 allocation: 30 M core-h)
BlueGene/P at ALCF   (2011 allocation: 50 M core-h)

expect similar size allocation in 2012

BGP allocation again used within 2 months: Jan/Feb 2011
we thus will distribute the entire, expected 2012 allocation;

on the Cray half of 2011 allocation and half of expected
2012 allocation will be distributed in 2011/12

allocation of regular INCITE allocation on BGP followed
project proposal:

36% DWF
24% HISQ
20% Thermo
20% BSM

New allocation period 2011/12 started on BG/P already on 04/01/2011:
SPC allocated preliminary zero priority time in April 2011;
allocation period has been synchronized with USQCD allocation period,
i.e. it now also lasts until 06/12

BlueGene/P at ALCF discretionary time usage since 04/2011:

user	M BGP core-hours	usage % of total	allocation % of total
Bazavov	2.269	17.7	19
Chulwoo	2.489	19.4	21
McNeile	0.564	4.4	12
DeTar	1.123	8.8	7
Fleming	1.169	9.1	11
Mawhinney	1.918	14.9	5
vdWater	0.277	2.2	5
Syritsyn	1.287	10.0	6
Toussaint	1.737	13.5	14
total	12.834	100.0	100

do get about 0.36M BGP core-h/day

==> call expected about
83 M BGP core-h
in 2011/12

but may turn out to be more,

140 M BGP core-h ?

2010/11 allocation on USQCD hardware

regular call: 07/10 – 06/11
supplementary call: 01/11 – 06/11

  9 INCITE   projects
  3 QCDOC projects
16 type-A   projects;
14 type-B   projects on clusters
12 GPU   proposals   (includes 5 projects with less than 100 K hours)

allocated 165.1 M Jpsi core-hours on clusters
              10.6 M Jpsi core-hours on QCDOC
               3.5 M GPU hours

              44.5 M Jpsi core-hours regular INCITE time
              59.1 M Jpsi core-hours zero priority INCITE time
               7.5 M Jpsi core-hours no penalty time

total allocation: 286.8 M Jpsi equivalent core-hours + 3.5 M GPU hours

Allocations in Jpsi equivalent core-hours

increased upper limit for type-B proposals
to 2.5 M Jpsi equivalent core-hours

- INCITE: 42.0 M (regular)
                45.0 M (estimated zero priority)

- cluster: 262.3 M

- GPUs: 4200 K GPU-hours

          + 5.0 M storage

– Japan-aid: about 10 M Jpsi core-h during 5/11 – 9/11

- 22 type-A; 15 type-B proposals
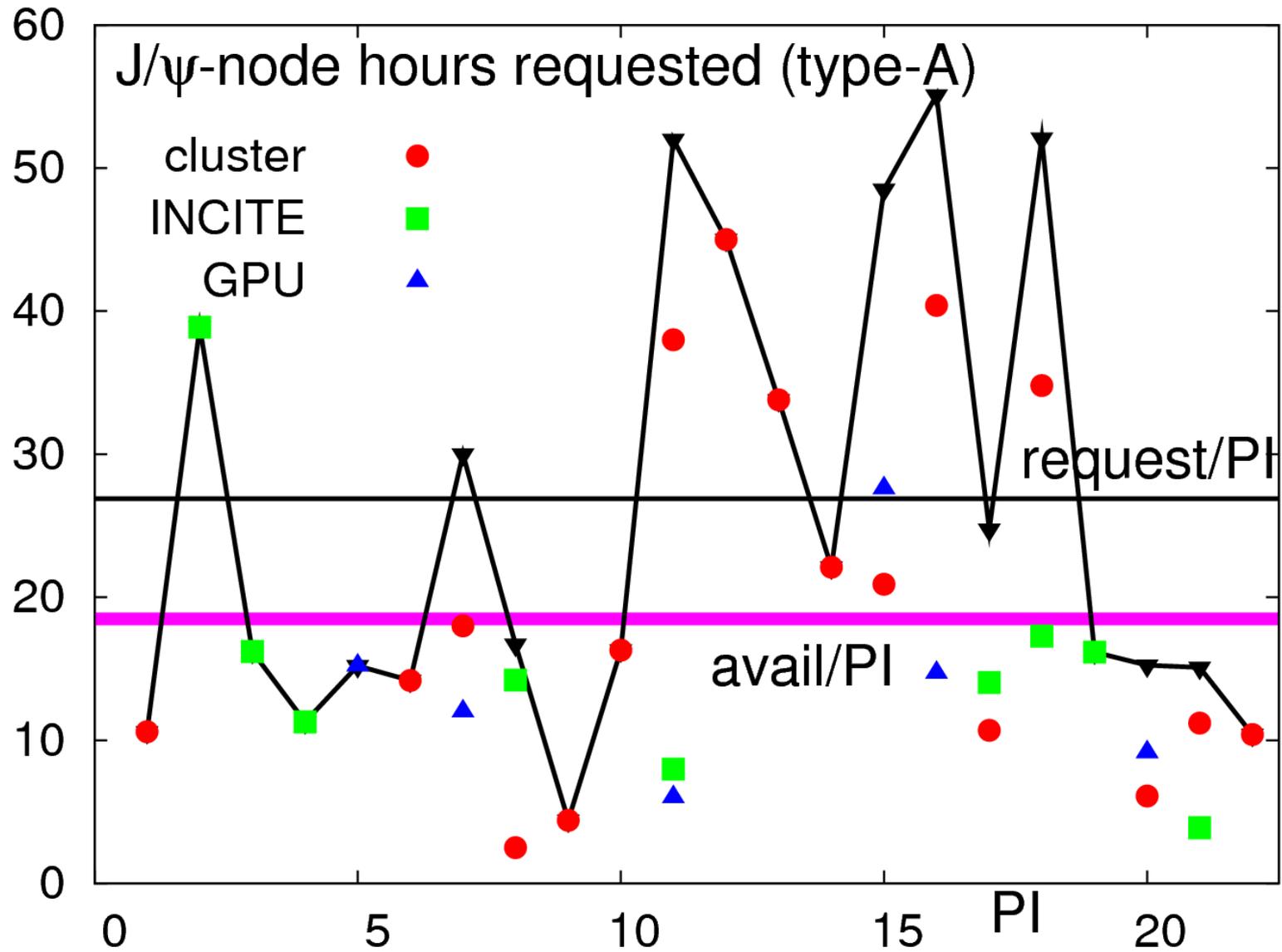
- type-A proposals: 9 INCITE
                                17 cluster
                                6 GPU
- type-B proposals: 12 cluster
                                3 GPU
-                                type-B: request 10.1%
                                        of available time

CPU time request
- cluster: 140% of available time
- GPUs: 140% of available time
- INCITE: (127+218)% of (not) available time

- second half of the Ds cluster at FNAL:
  176 nodes = 5632 cores

  adds about 54 M Jpsi core-h (already anticipated
  in our call for proposals)

- GPU cluster at FNAL: 65 node cluster with 128 GPUs
  adds about 900 K GPU-hours
  (already included in the call for P.)

[allocations may need to be reduced a bit due to late arrival of the new nodes]

- early science time on BGQ prototype at BNL starting 12/11 ?

not relevant for next allocation period:
- new hardware: BGQ at BNL or cluster at JLab?
- ALCF early science time on BGQ ?

Request is significantly larger than last year:

requested about 12.3 M J/psi equivalent core-h

- 330 TB disk
- 915 TB tape

planned to allocate 5 M J/psi equivalent core-h

FNAL and JLab site managers think that they can handle this increased request

- later today:

  hardware, software, experience with GPUs, ...

- Saturday:

  discussion with the Executive Committee