USQCD All-Hands Meeting 2017

Report from the Scientific Program Committee

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Task of the SPC

Follow the USQCD Charter:

The Scientific Program Committee (SPC) advises the Executive Committee (EC)

- The SPC advises the EC on science priorities for USQCD
- The SPC suggests to the EC allocations of computer time on the USQCD facilities and zero-priority time on Incite resources

Scientific Program Committee

- Tom Blum
- Aida El-Khadra (Co-chair, incoming chair)
- Steve Gottlieb
- Anna Hasenfratz (Chair)
- Keh-Fei Liu (replaces Will Detmold)
- David Richards (replaces Kostas Orginos)
- Swagato Mukherjee

Available resources

Available resources: (from CfP)

– BNL BG/Q: 17.7M BG/Q core-hrs (29M Jpsi core-hrs)

(last year: 71M - this resource is going away)

– Clusters: 261M (last year: 263M) Jpsi core-hrs

71M @ JLAB, 190M at FNAL

– GPUs: 8.4M (last year: 7.7M) Fermi/Tesla GPU-hrs

(688 M Jpsi core-hrs):

2.6+3.4+2.4 @ JLAB, BNL, FNAL

–KNLs: 120M KNL core hrs @ JLAB (360M Jpsi)

-New resources @ BNL: 300M Jpsi core-hrs : GPU or KNL

Total available: 1338M (last year: 1260M) Jpsi core-hrs

Modest increase

Proposals 2017-2018

The SPC has received

- 35 Type-A proposals (27 last year)
  - 4 for Incite 0-priority time
  - 1 for MILC configuration storage
  - Rest for physics projects
- 4 Type-B proposals (can be requested any time) (5 last year)

These are within fluctuations are the same numbers as last year

Proposals 2017-2018

- Many of the proposals are continuation of past years -

The SPC has asked for report on progress, improvements, timeline to finish if appropriate

- There are a few all or mostly new efforts -

We tried to invite those PIs to present here

- The SPC had no direct input to the Incite proposal and has no role in distributing those resources. The EC will solicit input about possible change in the Incite proposal process - roundtable tomorrow.

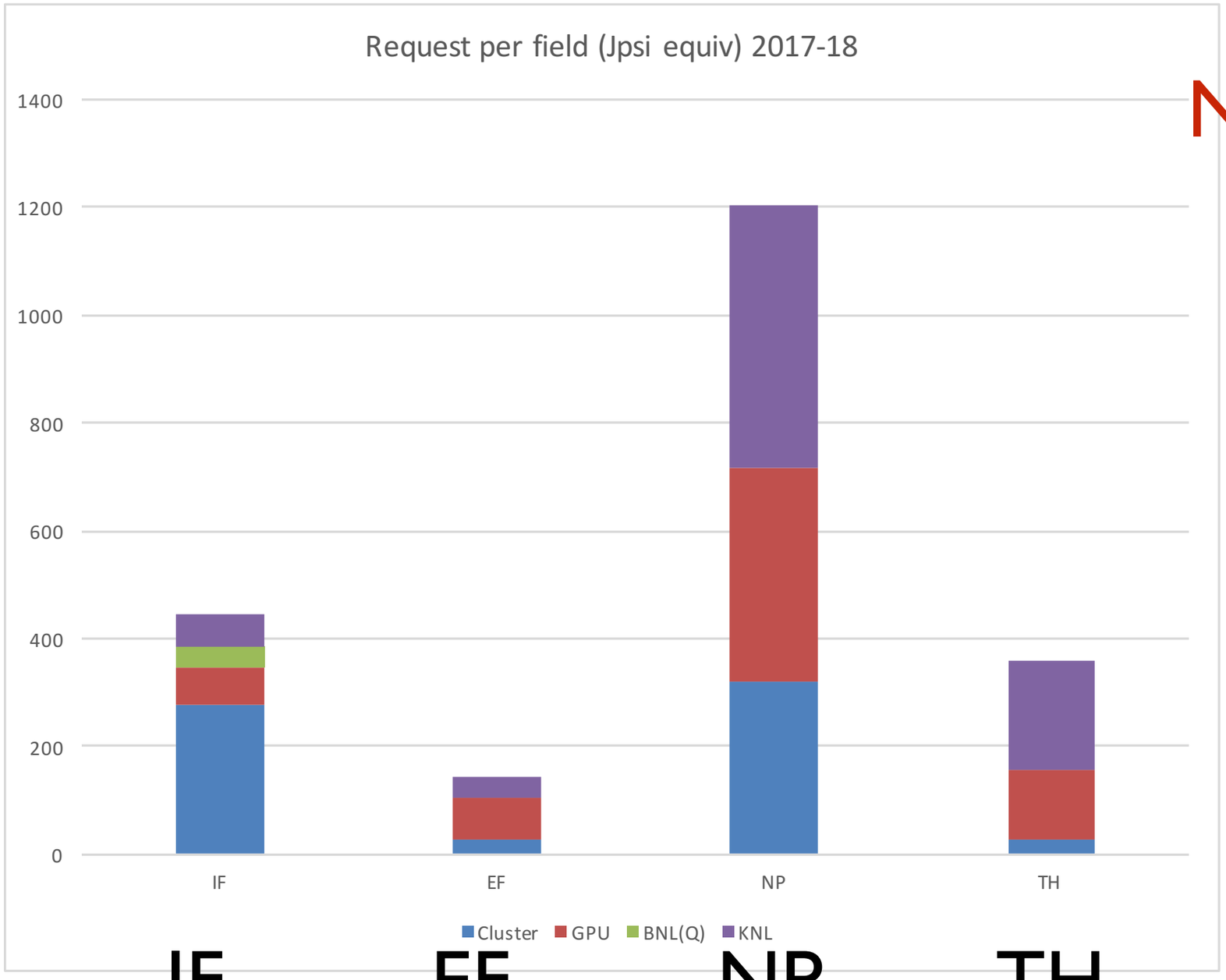
Proposals 2017-2018

- 35 Type-A proposals

Resource	Request	Available	Req/Avail
BNL BG/Q	23.4M	17.7M	132%
Clusters(M)	645M	261M	249%
GPU(K)	8236K	8396K	98%
KNL(Ipsi)	789M	360M	219%
New(Ipsi)		300M	extra
Total	2153M Jpsi	1338 M	161%

- 60% over-subscription is not bad, but the clusters and KNL are very over-subscribed while GPUs are not even 100%;
- The new hardware purchase should correct this imbalance.

Distribution per field (requested) 2017-18



IF EF NP TH

Not including Incite

2017-18:

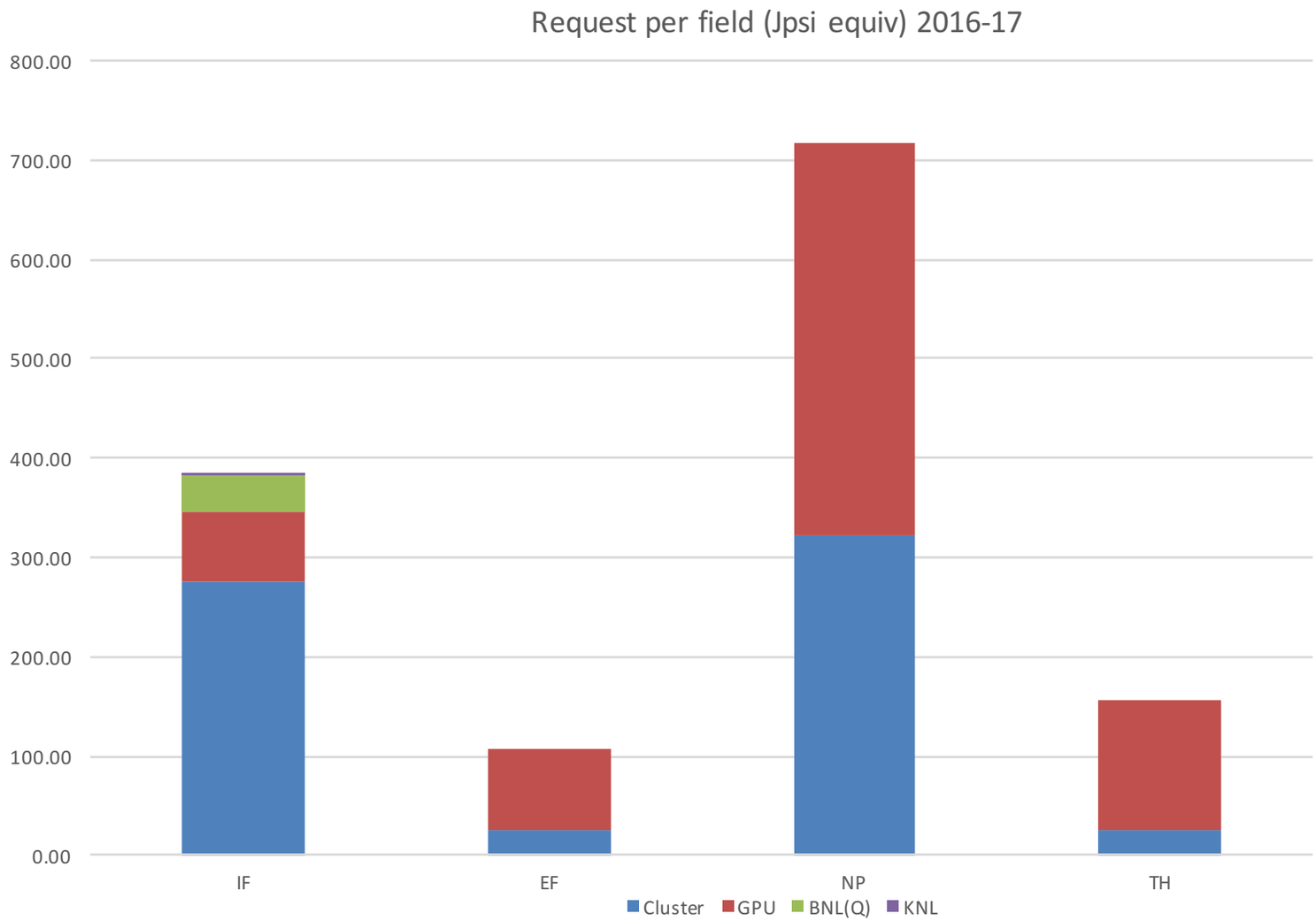
IF: 446M

EF: 143M

NP: 1202M

Th: 360M

Last year:



IF EF NP TH

Total:(J-psi hrs)

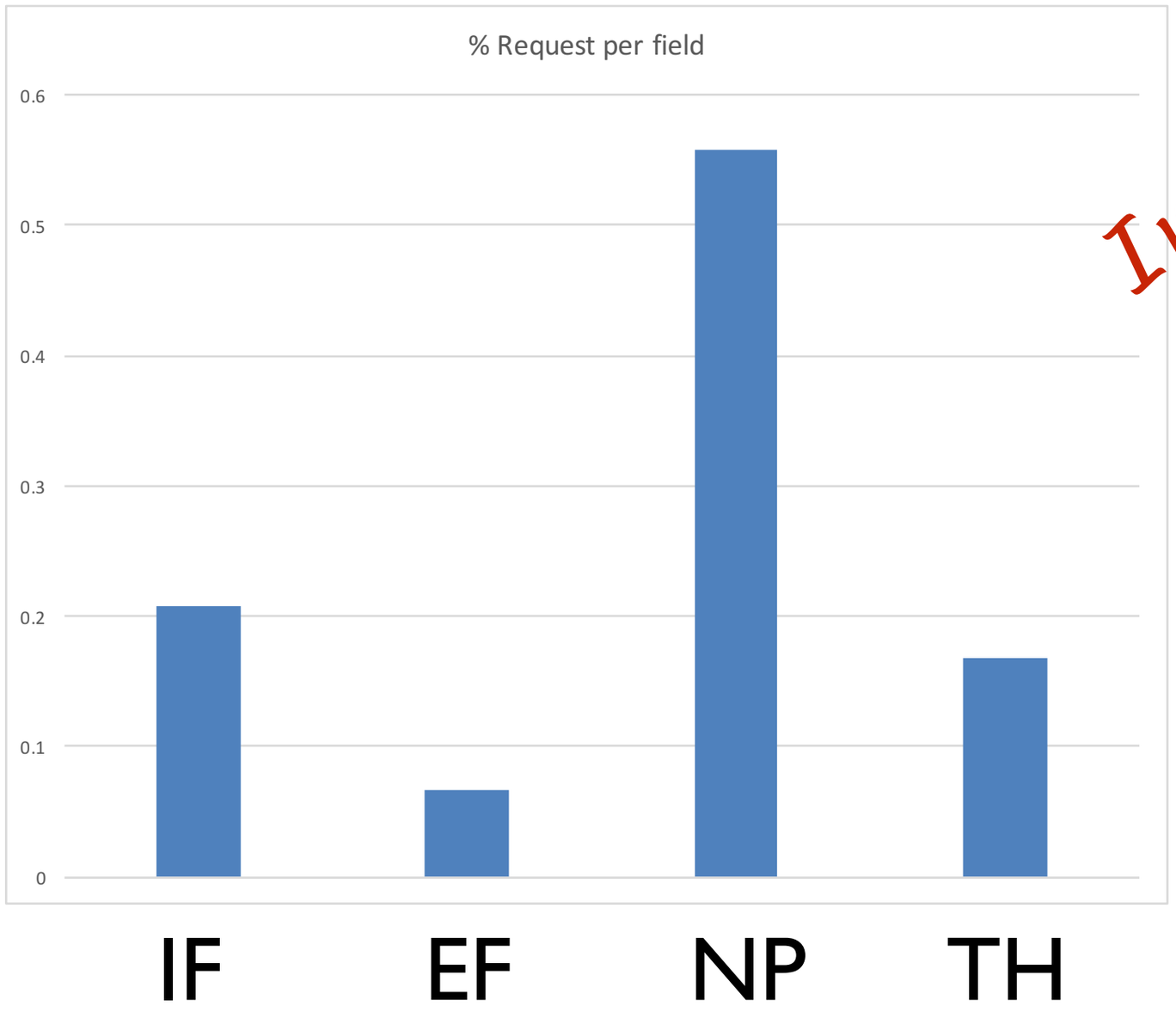
2016-17:
IF: 529M
EF: 86M

NP: 812M
Th: 272M

2017-18:
IF: 446M
EF: 143M

NP: 1202M
Th: 360M

Per-cent request per field 2017-18



Imbalance

Total:(J-psi hrs)

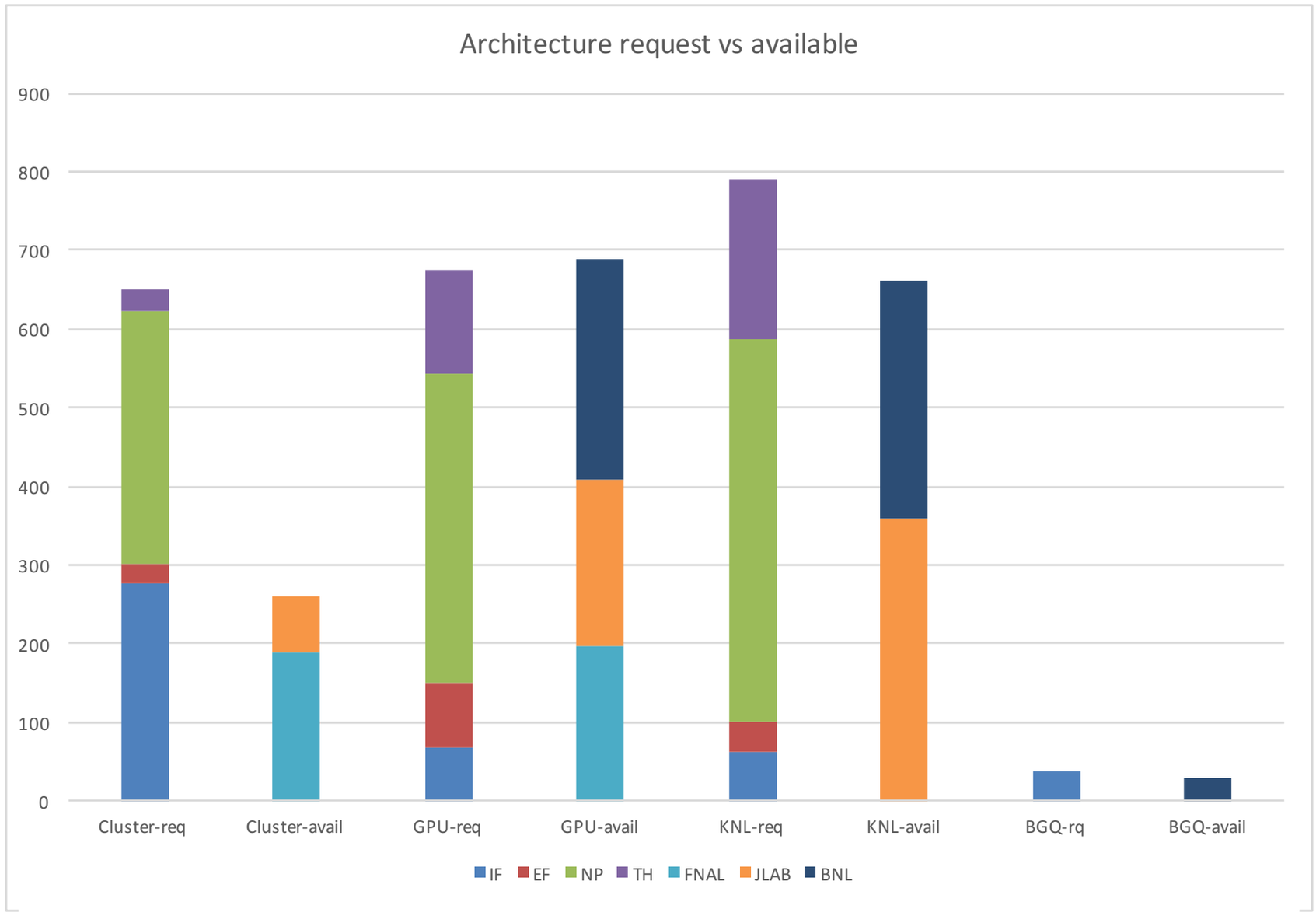
IF: 21%

EF: 6.5 %

NP: 56 %

Th: 16.5 %

Request vs availability



Cluster GPU KNL BG/Q

request vs available

Imbalance

Total:(J-psi hrs)

Clusters 250%

GPU 98%

KNL 120% *

BG/Q 132%

* BNL new added as KNL

Proposals 2017-2018

SPC is attempting to rationalize availability across all resources

- Scientific merit of proposals
- Which projects align with US HEP / NP programs ?
- Could projects share resources or be combined ?
- Can projects shift resource request? (clusters --> KNL or GPU)
- What is the architecture of the new resource?
- What is the desired balance between NP and HEP ?

- We would like to discuss some of these issues during the roundtables

Communication

Until now the SPC chair was not a member of the EC, creating occasional communication problems;

> This is changing now, the chair of SPC will be a member of the EC form now on.

Communication between SPC and USQCD membership could also be improved

> Secure website where proposals, reviews, responses and allocations are uploaded, minimizing individual e-mail traffic. The website could provide forum for general discussion and also questions, messages to SPC and EC.

Save your suggestions for the round table discussion