



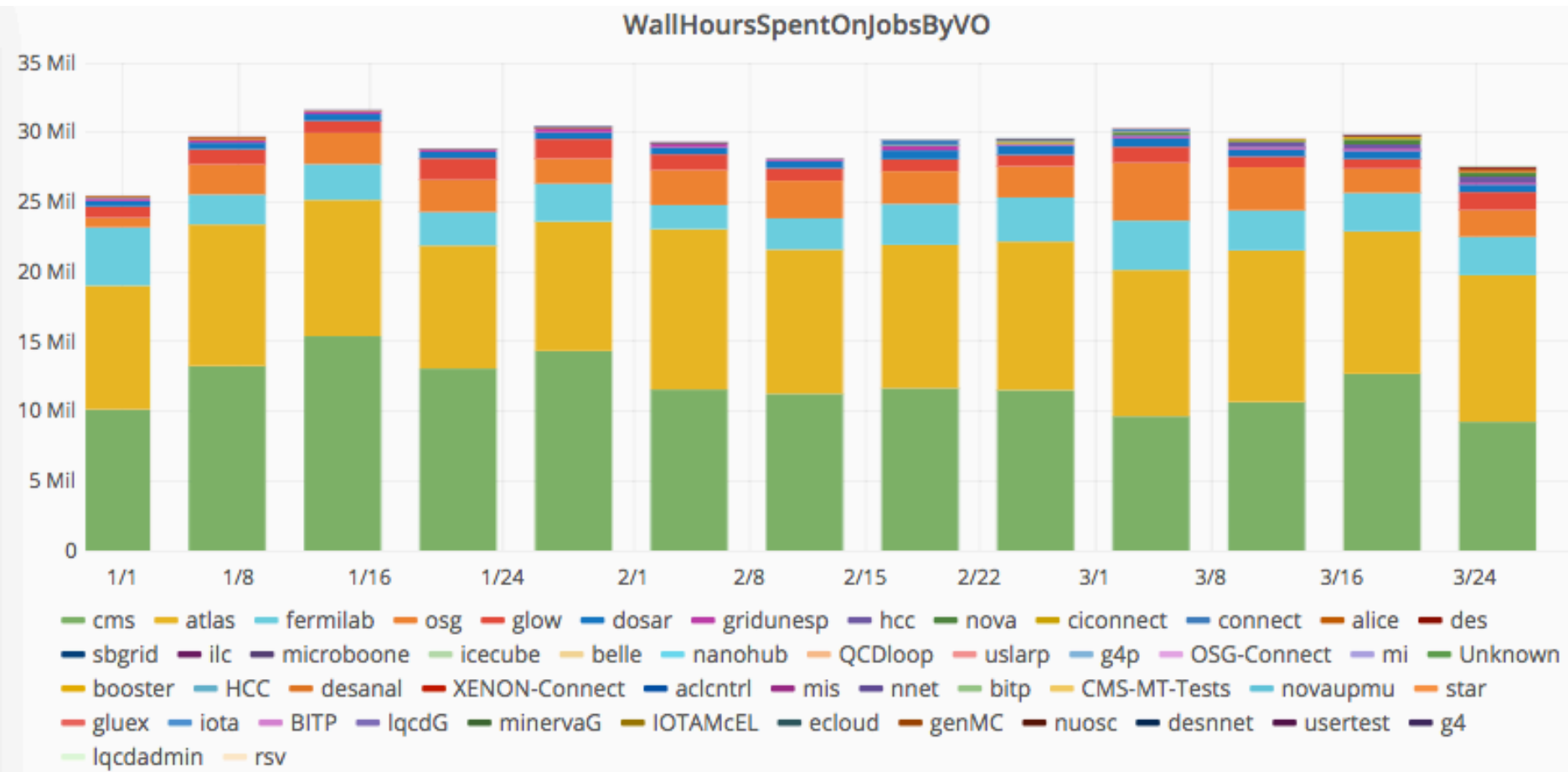
Open Science Grid

Production Support Report or, Ken's Farewell Address?

Ken Herner
29 Mar 2017



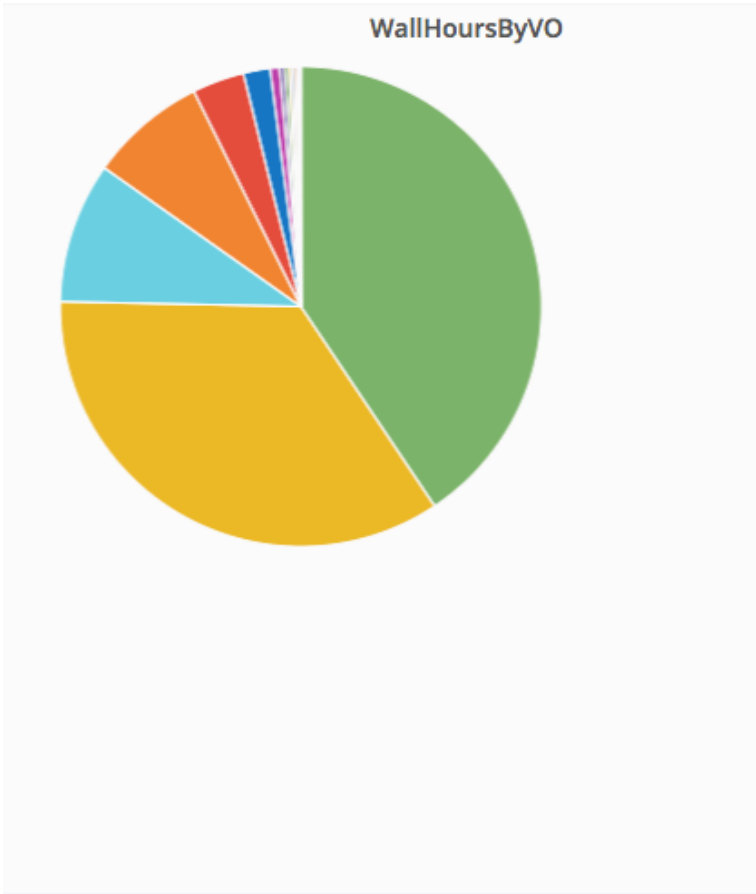
Pilot hours over 90 days



This is not opportunistic only



Pilot hours over 90 days (2)



	values
cms	154328416
atlas	131863403
fermilab	36008206
osg	29898557
glow	13289207
dosar	6817262
gridunesp	2376216
hcc	1215953
nova	1001361
ciconnect	706829
connect	679966
alice	636639
des	453748
sbgrid	280583
ilc	243734
microboone	61036
icecube	34209
belle	28632
nanohub	22597
QCDloop	22416

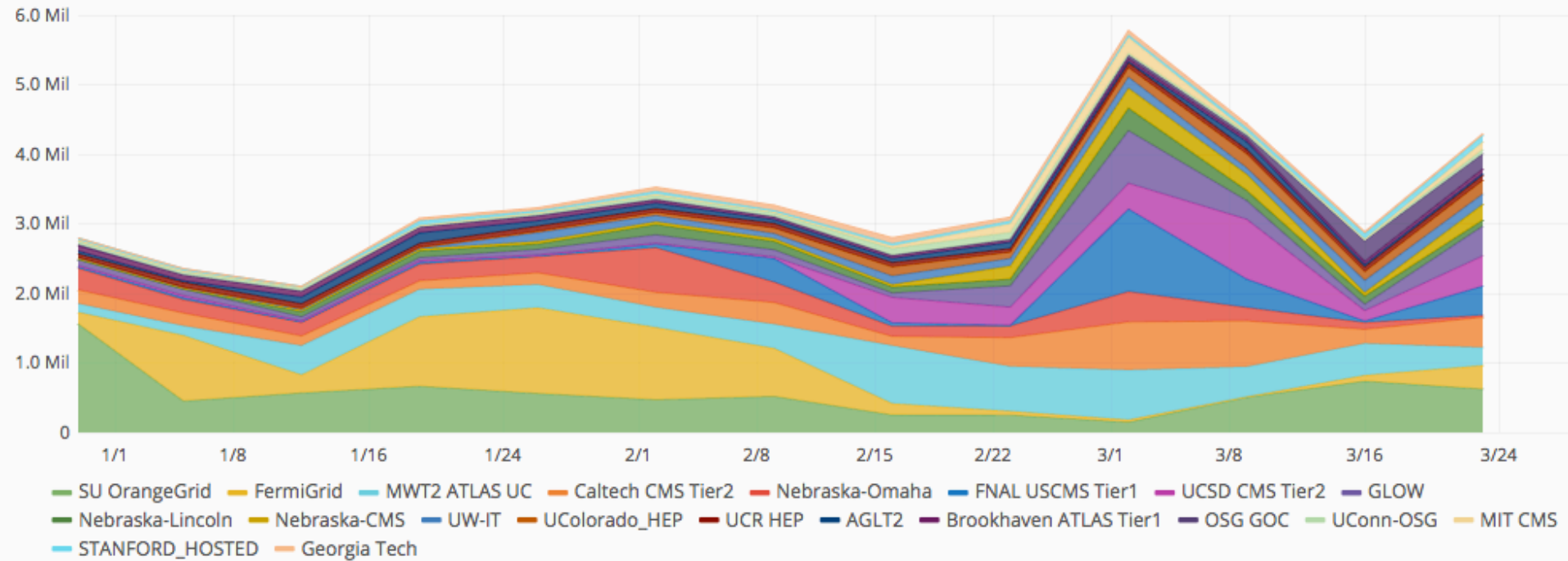
This is not opportunistic only

N.B. Some nova, microboone hours are grouped in Fermilab



Top opportunistic sites

Opportunistic Wall Hours by Site (Top 20)



- Syracuse again the top site
- Stanford turn-on clearly visible

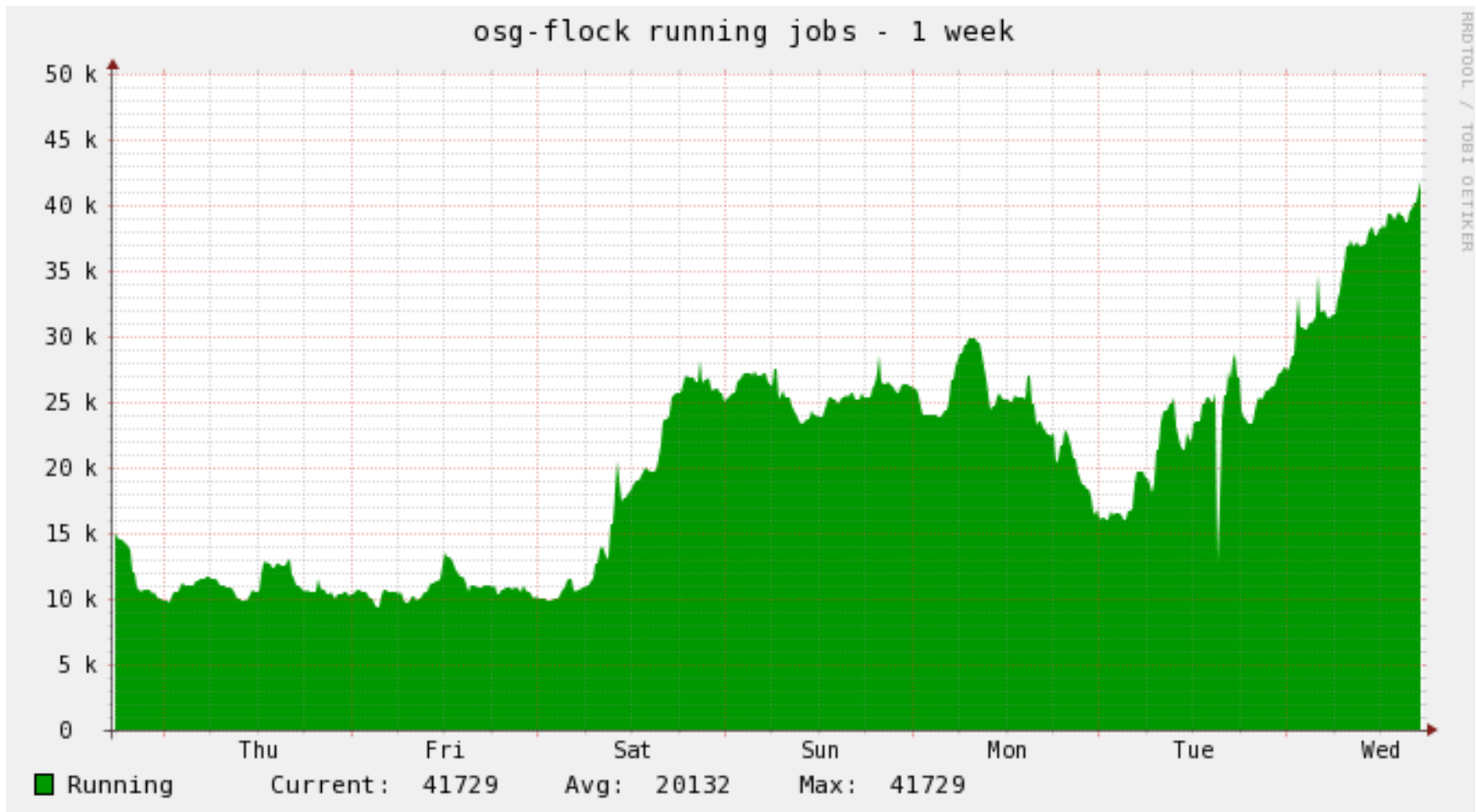
Top opportunistic sites

Top 20 Sites Providing Opportunistic Usage		
OIM_Site	OIM_Facility	Wall Hours ▼
SU OrangeGrid	Syracuse University	7 Mil
FermiGrid	Fermi National Accelerator Laboratory	6 Mil
MWT2 ATLAS UC	University of Chicago	5 Mil
Caltech CMS Tier2	California Institute of Technology	4 Mil
Nebraska-Omaha	University of Nebraska	3 Mil
FNAL USCMS Tier1	Fermi National Accelerator Laboratory	3 Mil
UCSD CMS Tier2	University of California San Diego	3 Mil
GLOW	University of Wisconsin	3 Mil
Nebraska-Lincoln	University of Nebraska	1 Mil
Nebraska-CMS	University of Nebraska	1 Mil
UW-IT	University of Washington	1 Mil
UColorado_HEP	University of Colorado	1 Mil
UCR HEP	University of California Riverside	847 K
AGLT2	University of Michigan	846 K
Brookhaven ATLAS Tier1	Brookhaven National Laboratory	756 K
OSG GOC	Indiana University	671 K
UConn-OSG	University of Connecticut	656 K
MIT CMS	Massachusetts Institute of Technology	605 K
STANFORD_HOSTED	Stanford University	554 K
Georgia Tech	Georgia Institute of Technology	492 K

- Syracuse again the top site



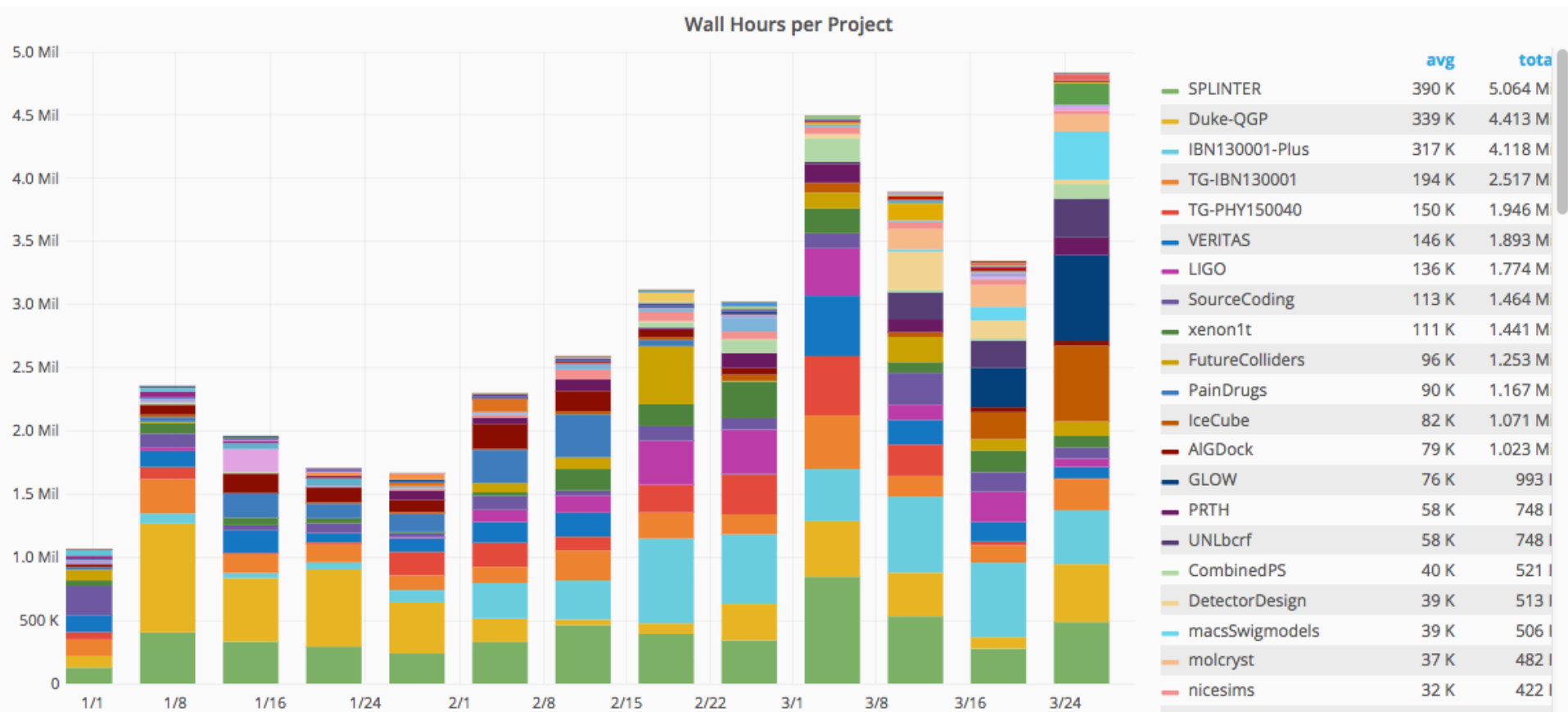
Opportunistic Usage



- 40K running OSG flock jobs today!



Projects: past 90 days



We have a new #1: SPLINTER (at IU)

For reference: <https://gracc.opensciencegrid.org/dashboard/db/projects-table>



Recent Trends

- Oct-Dec: Downturn in opportunistic resources for OSG, etc. VOs (-40%)
 - Academic year kicks in, affects campus sites
 - (The big factor) ATLAS and CMS putting greater emphasis on opportunistic running
- **Things have definitely improved in the past 1-2 months**
 - Moriond rush is over
 - **Very important to grow the pie and leverage non-LHC sites**
- Some sites are moving to SL7 (at least partially)
 - Some smoother than others
 - Containers gaining a lot of steam recently (a good thing!)

Recent progress with new sites

- JINR (NOvA + STAR)
 - CILogon Basic CA acceptance problem solved. Steady in production for a few weeks now.
- Was going to work on getting other VOs (Fermilab for example) working Utah, PR, Ole Miss soon, but low demand pushed it to the back burner
 - The long-awaited ramp-up may be happening now, so back to work on this



GPUs

- Tusker (HCC) has nodes with GPUs on OSG
 - accessible via dedicated factory entry
 - Currently in use by IceCube (GLOW) and OSG VOs
 - Fermilab VO now testing. **Several experiments interested.**
- We should also express openness to sites that are willing to share GPUs
 - e.g., new BNL institutional cluster (non-ATLAS) with ~200 GPUs, Stanford
 - *Syracuse also has a new cluster; expressed openness to OSG jobs at the AHM*
 - Email in to Eric today



Concerns from last time

- Dip in available resources for OSG, GLOW, SBGrid, etc.
 - Righted the ship recently, at least for now
 - No more Moriond rush helps. **But what about the summer rush?**
 - Keep growing the pie. I'm hopeful that the Hosted CE can bring some new customers to the table
- Continue to push HPC (e.g. Stampede) and GPU
 - Encouraging news at AHM regarding possibilities of new GPU clusters
- **Concerns about SL7 readiness and site migration too**
 - Containers will largely mitigate that

Other VO Updates

- ATLAS and CMS still making good use of opp. resources
- NOvA seems to be starting their long-awaited ramp-up for new results
 - Now using StashCache over CVMFS
- Microboone and Mu2e have now both deployed StashCache + CVMFS instances
 - Still populating and commissioning
- LSST (re?)deployed a submit node at Purdue; will flock to OSG
- Some EGI sites have pledged cycles to DUNE/protoDUNE
 - Plan to follow prescription that was successful with Microboone
- Working with GlueX on ramping up again
 - Ran quite a bit in 2014
 - Looking at a hosted CE setup for now; JLab and UConn will be the big users at first



Summary

- Solid past couple of months
 - Minor issues as always, but better resource availability, adding sites, simplifying software, making good changes for the long run
 - Several new pushes from non-LHC VOs
- Still a few concerns
 - Opp resources OK now; what happens during EPS rush? **Must continue to grow the pie!**
 - SL7 marches on w/o a lot of experiments now (container road map makes this a much smaller concern)
- Enjoyed my time so far. If it's up...
 - Au revoir, jamais adieu!
 - Be excellent to each other...