OSG Production Support

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Fermilab

OSG Area Coordinators Call

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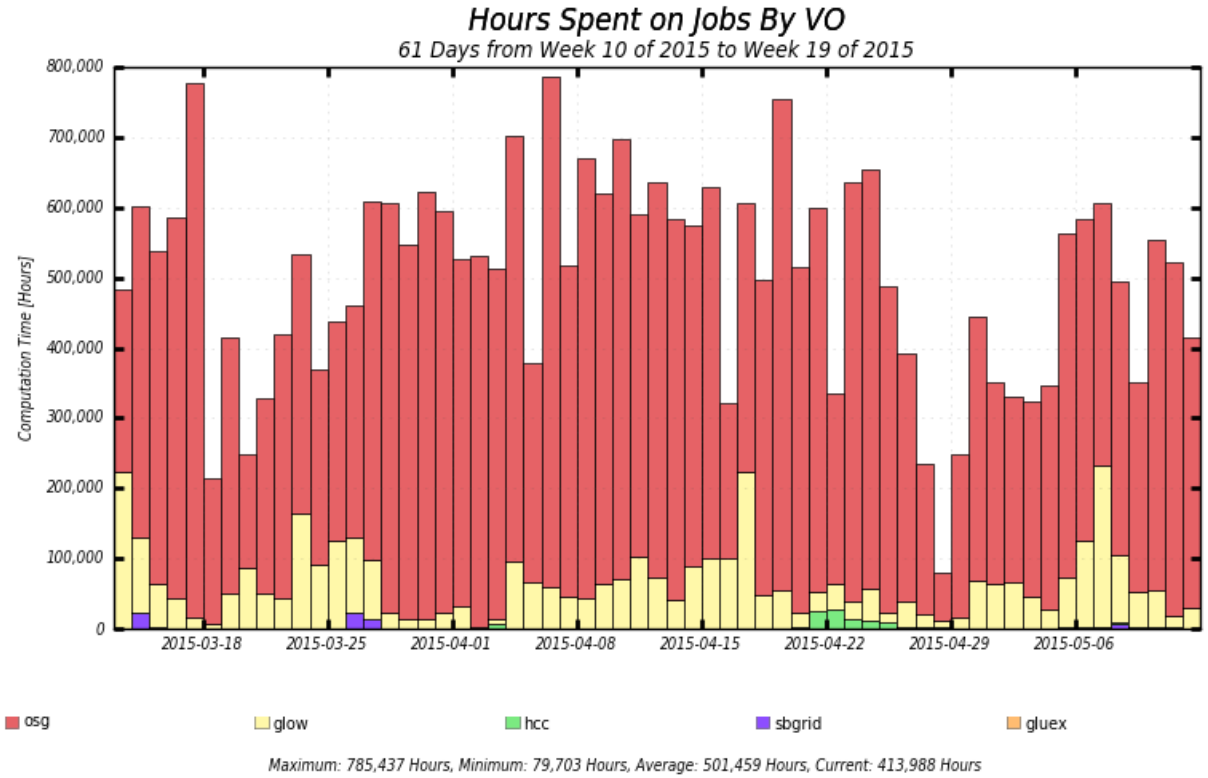
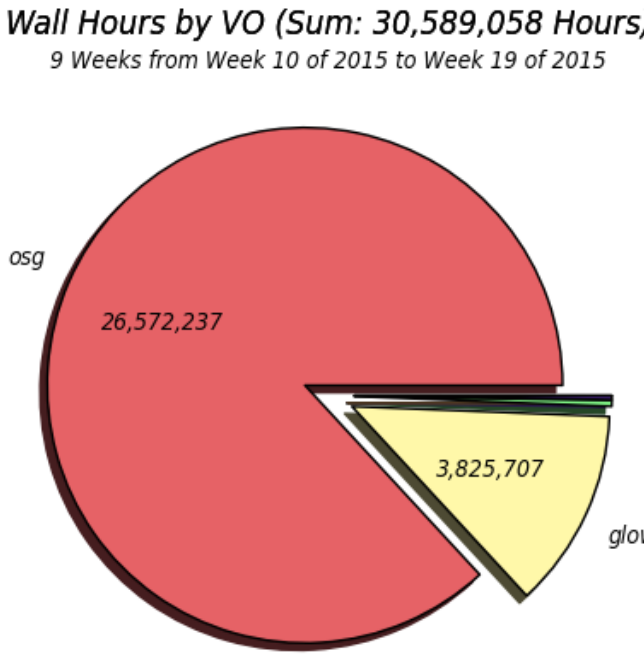
Mission of Production Support

1. Growing the opportunistic pool of the OSG
   - Add sites to opportunistic sphere
   - Improve on methods and technology to access opportunistic resources more efficiently
2. Help experiments (and VOs) access the opportunistic sphere
   - *e.g.* find the right VO for experiments (OSG for PHENIX, Fermilab for the FNAL IF experiments)
3. Be a catalyst for projects and technologies that help VOs run opportunistically
   - *e.g.* XRootD-based StashCache system for distributed storage access

Opportunistic VOs



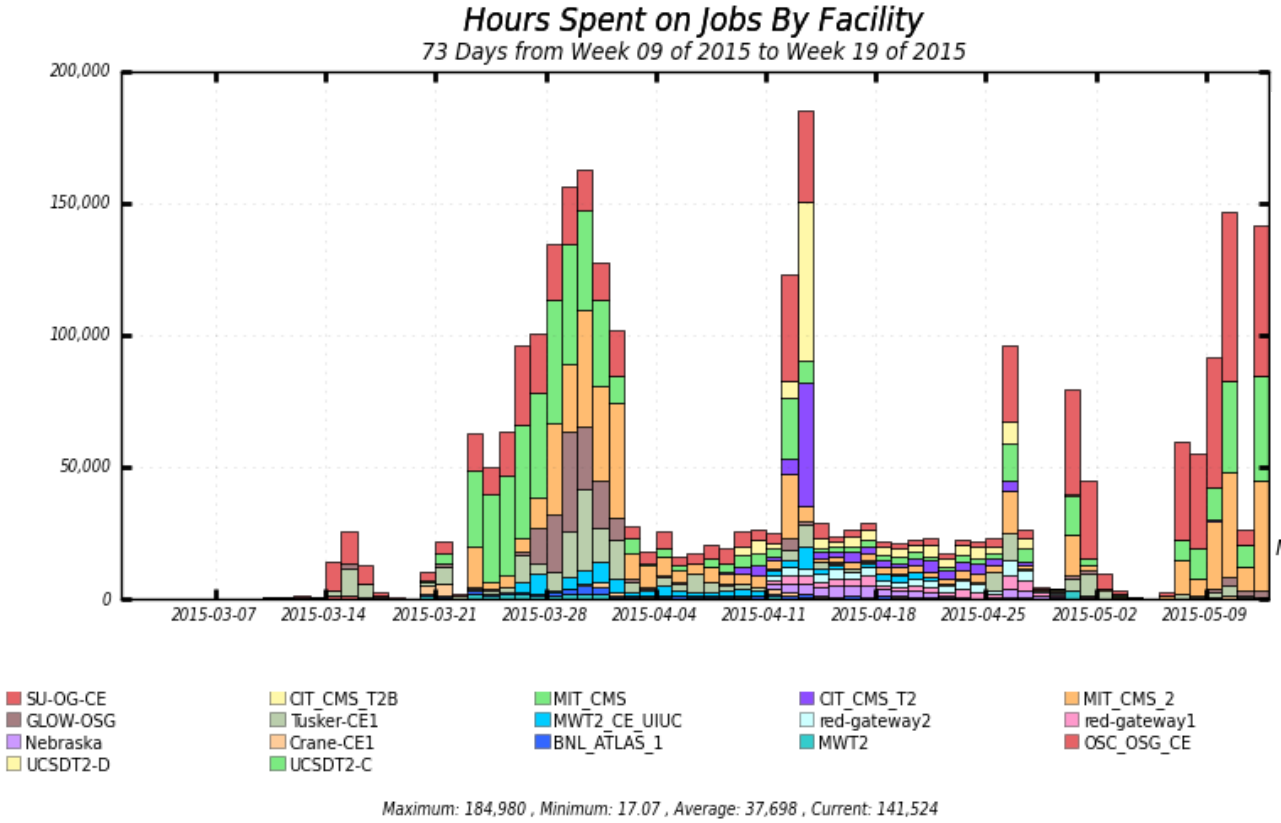


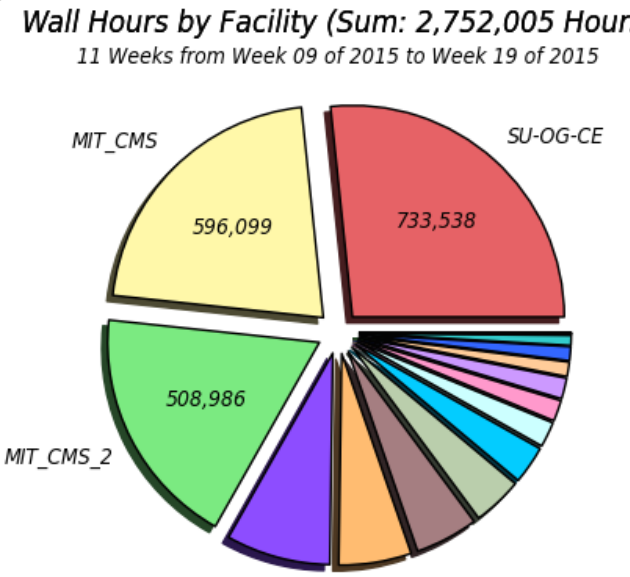
- Past two months (since last AC presentation)
- 30.6M wall hours— **21%** of all OSG hours

10 Largest Sites in April

Site	Total	Percent Opportunistic	Opportunistic VOs glow	hcc	osg	sbgrid	*Total Opp*
Total (all sites)	*71,055,170*	*22%*	*1,624,498*	*105,123*	*13,983,722*	*101*	*15,713,444*
CIT_CMS_T2	3,740,081	65%	433,164	5,718	1,994,352	10	2,433,244
Nebraska	3,208,588	75%	327,814	2,690	2,091,254		2,421,758
SU-OG	2,280,215	89%	104,859	54,777	1,878,958	2	2,038,596
MIT_CMS	2,979,428	58%		1,945	1,720,257	26	1,722,228
Tusker	1,443,098	84%	57,527	461	1,147,567		1,205,555
Purdue-Hadoop	1,445,378	50%	65,955	904	655,657	14	722,530
FNAL_FERMIGRID	7,836,830	9%	90,873	227	592,046		683,146
USCMS-FNAL-WC1	7,462,100	9%	82,532	2,035	570,207		654,774
UCSDT2	1,452,613	41%	100,008	2,027	493,140	31	595,206
MWT2	5,205,889	10%	137,281	6,405	388,295		531,981

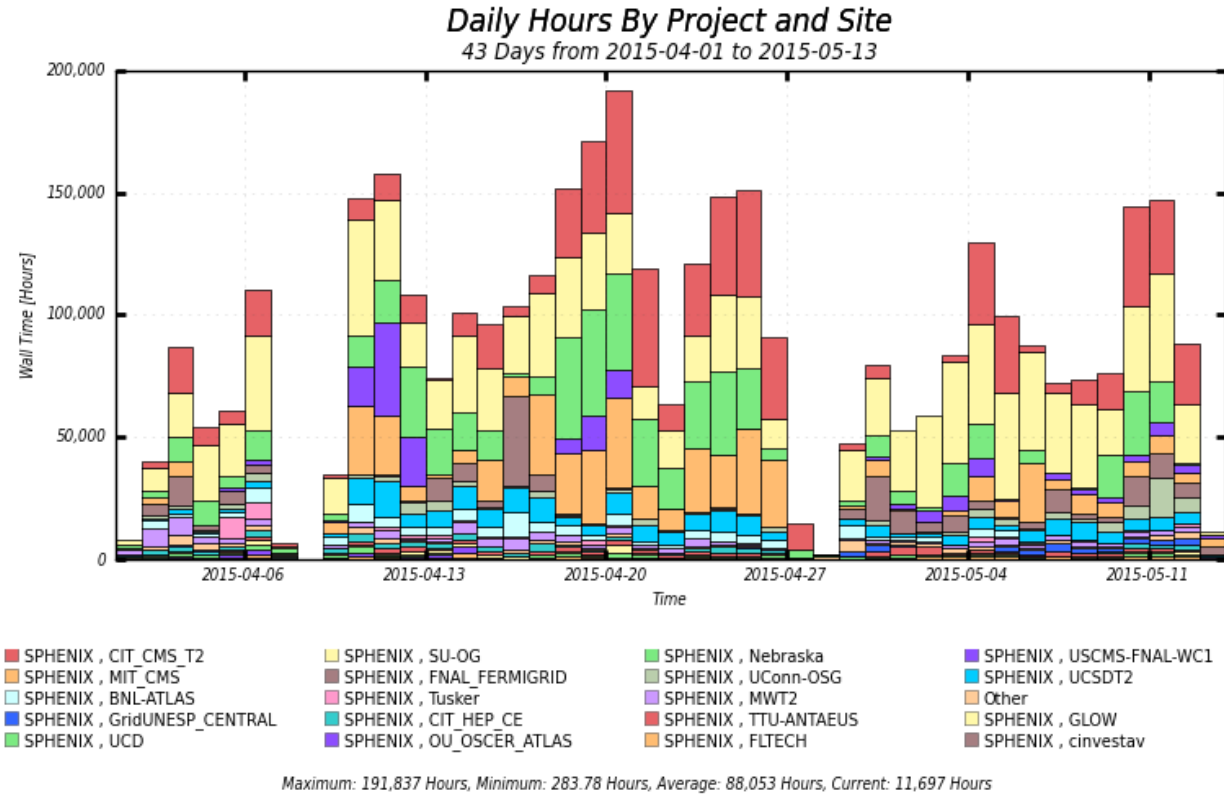
Recent success: mu2e

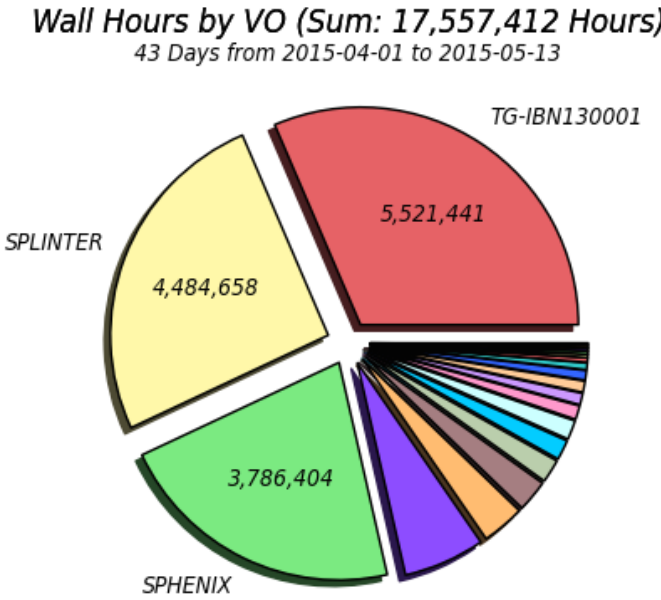




- Large production campaign through ~September
- Nearly 3M off-FNAL hours this year
- Some site-specific hiccups but support being utilized

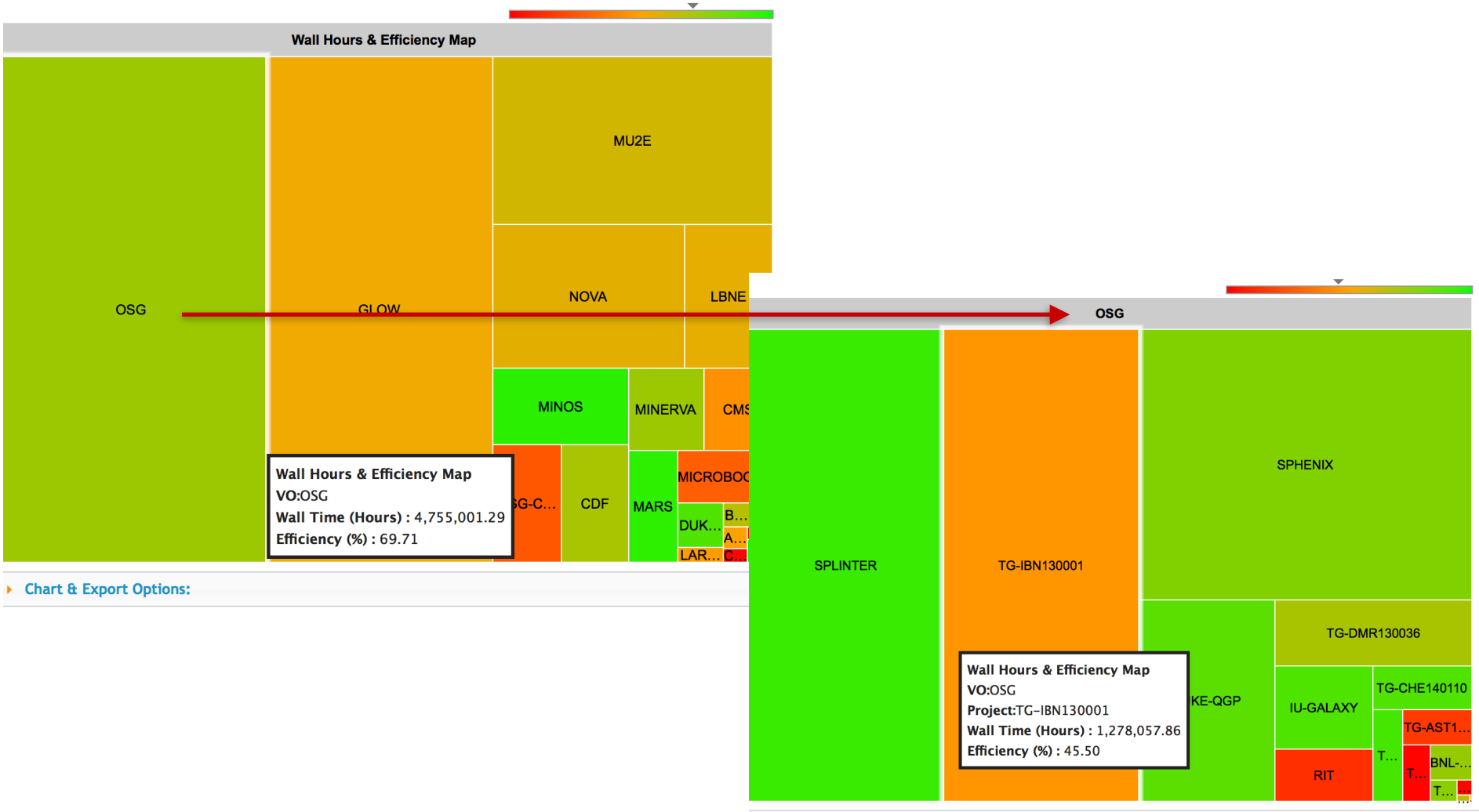
Recent success: sPHENIX





- Studies for upgraded PHENIX detector at BNL (~5 trillion collisions)
- Expected to continue through the end of this month
  - Able to ramp up rapidly - #3 project on OSG in that time

Visualization tools: treemaps



Upcoming: SDSC Comet

- New HPC Installation at SDSC: Comet
  - "HPC for the 99%" (see M. Norman's talk at 1/14/15 Council meeting)
  - 45K cores, online now
  - Targeted user base similar in profile to OSG/DHTC users (jobs that don't require massive MPI and tend to be shorter)

- Plan: implement OSG-CE in front of Comet
  - Allows users with OSG experience who also have a Comet allocation to run on both easily using the same code/tools
  - Support/onboarding of users by production support group
  - Many open questions still (e.g., accounting)

Current concerns/work

- Can we grow any more?
  - Current accounting of “opportunistic” is incomplete
    - New options for gratia to truly show opportunistic hours (run on sites not owned by VO) being tested and soon deployed
  - Rough estimate is ~17M/month for the past 3 months
  - Are there structural limitations? Test proposed at last council meeting to be carried out
- New site integration
  - FIU in testing now
- StashCache testing for use cases outside of OSG Connect
  - Timing tests for NOvA flux files comparing dCache and Stash done at Fermilab. Soon to be done at Nebraska.

Backup

Personnel

User Support

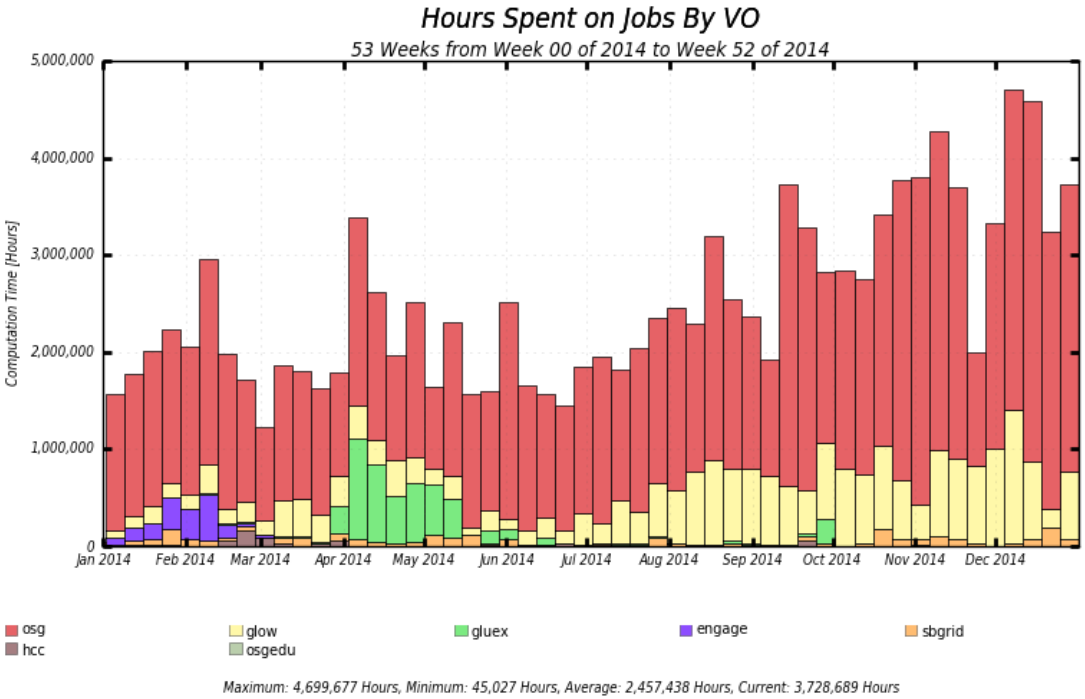
Name	*Institution*
Alex Zaytsev	BNL
Marko Slyz	FNAL
Tanya Levshina	FNAL
Bo Jayatilaka	FNAL
Chander Sehgal	FNAL
Mats Rynge	ISI
Emelie Harstad	Nebraska

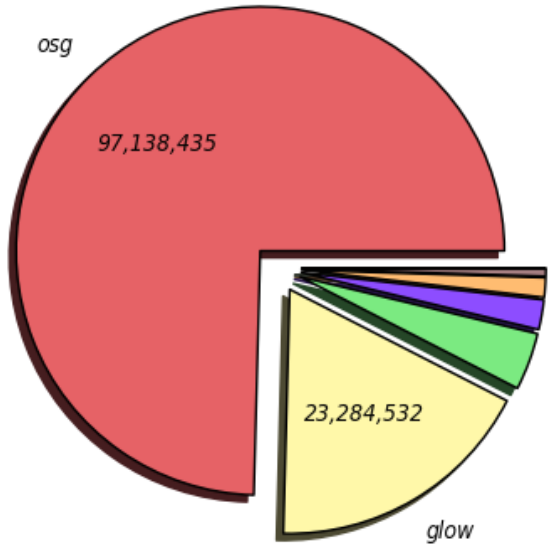
Production Support

Name	*Institution*	*FTE*
Alex Zaytsev	BNL	0.10
Marko Slyz	FNAL	0.60
Tanya Levshina	FNAL	0.25
Bo Jayatilaka	FNAL	0.75
Chander Sehgal	FNAL	*ex officio*
Robert Illingworth	FNAL	0.50
		2.2

Campus Grids

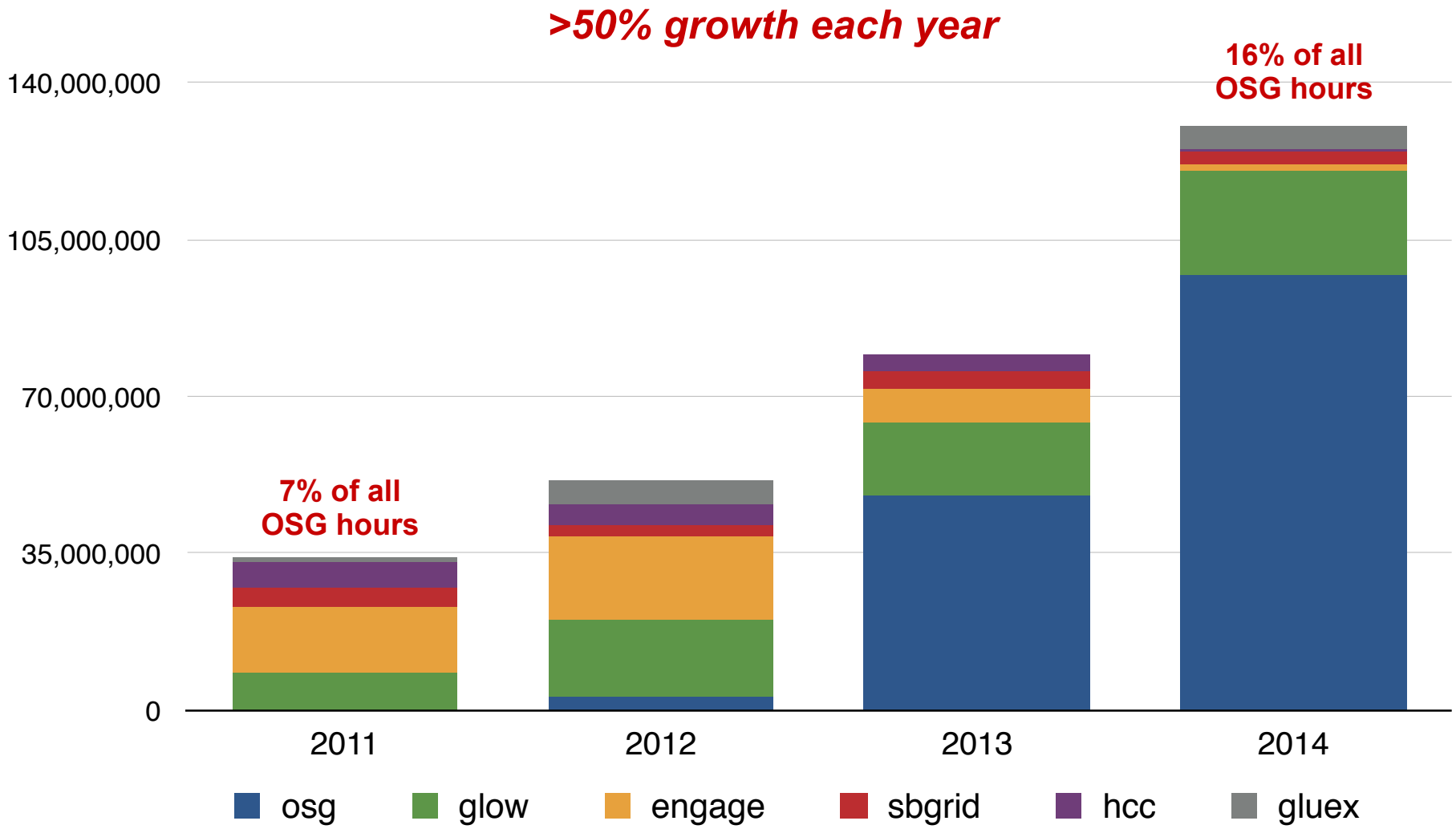
Opportunistic Computing in 2014



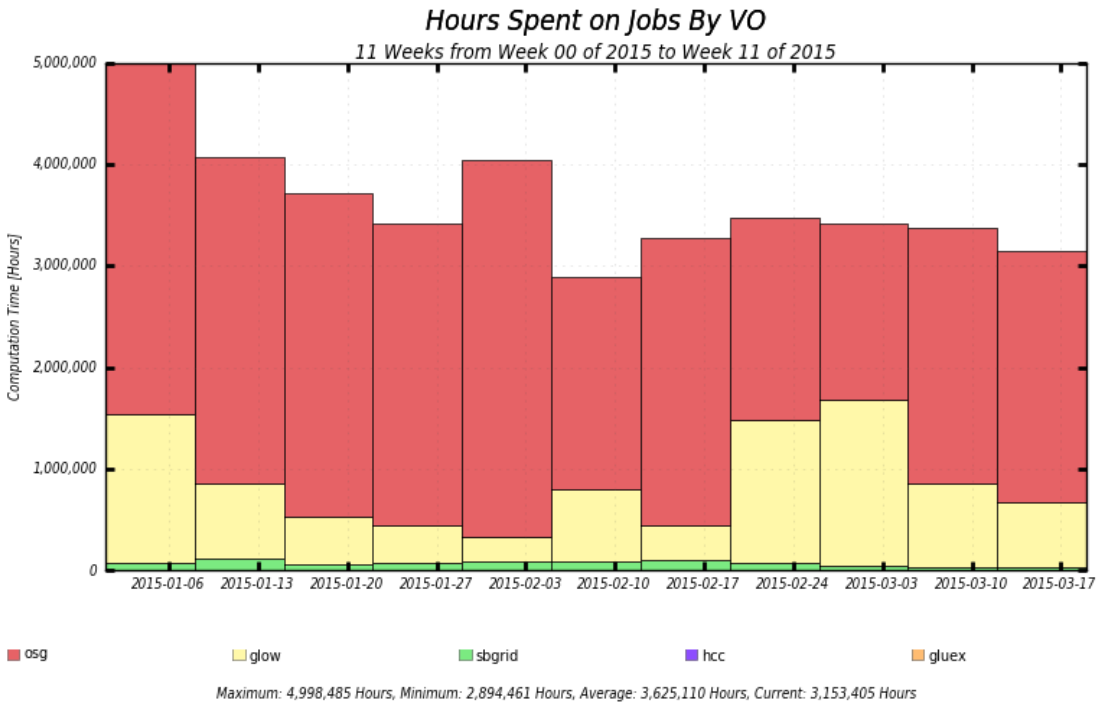


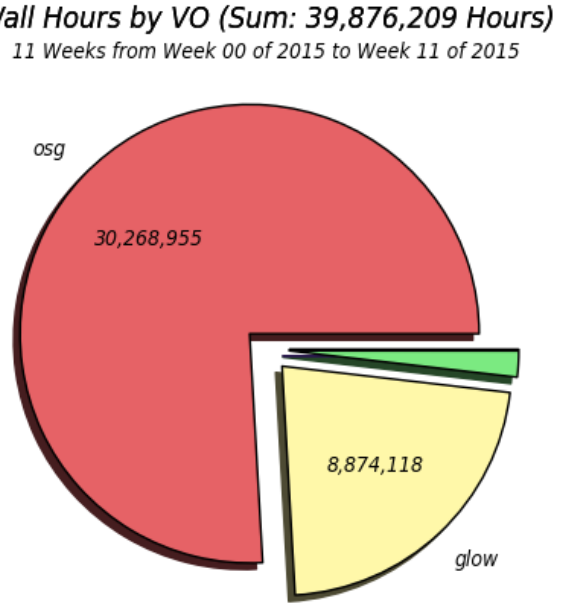
- Primarily opportunistic VOs (osg, glow, gluex, engage, sbgrid, hcc) received **130M wall hours** in 2014
  - 16% of all OSG hours

Growth of Opportunistic VOs



Opportunistic in 2015 so far





- Total of **39.9M** hours to-date in 2015 for primarily opportunistic VOs
  - ~24% of all OSG hours

Open Facility for US Researchers