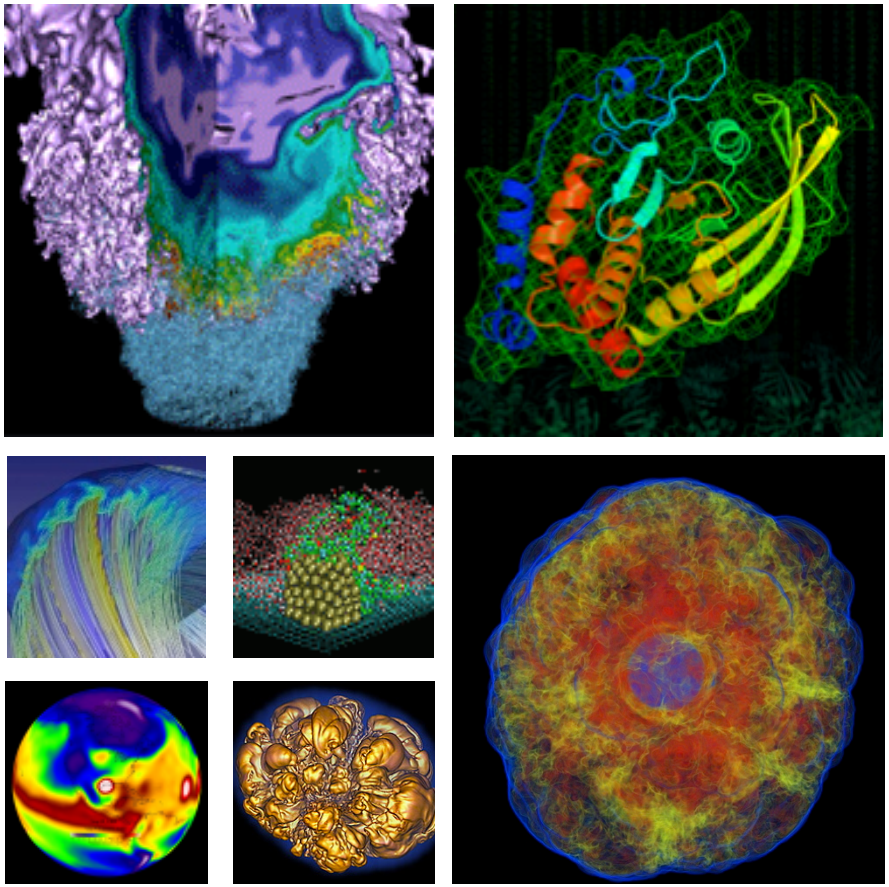
# 2013 NERSC Allocations



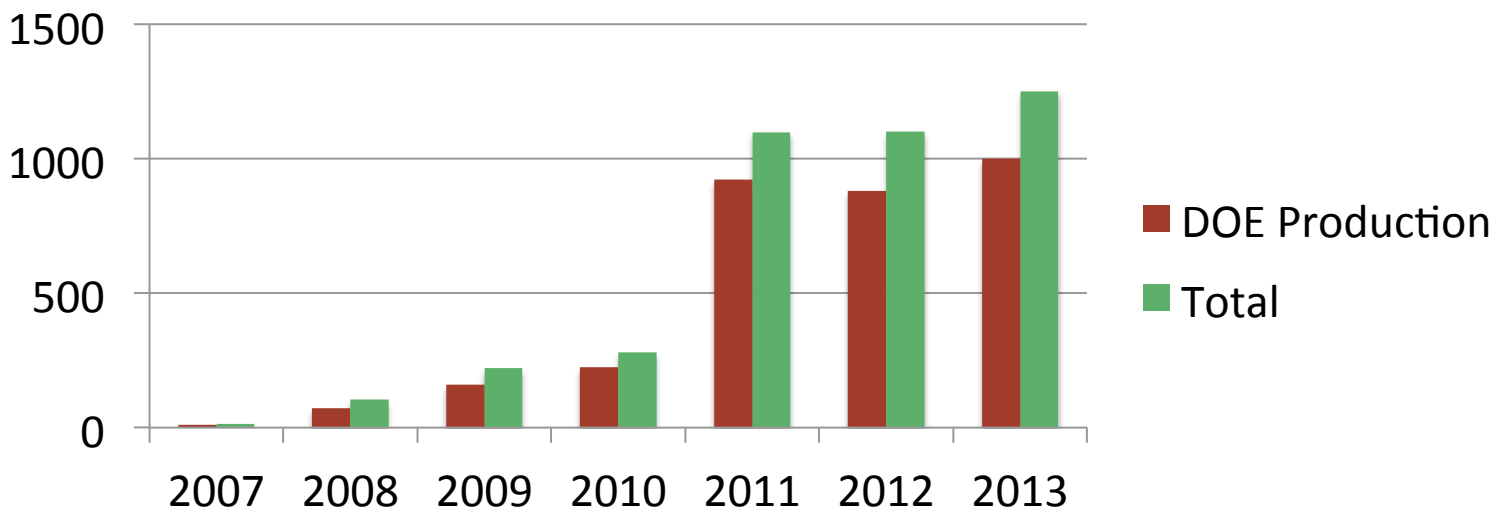
Francesca Verdier
fverdier@lbl.gov

# NERSC Allocation Programs

| Allocation Type | % of DOE Allocation | Description |
|---|---|---|
| "DOE Production" | 80% | Allocated by DOE Program managers in the six offices of science. Applicants need to be DOE funded or show work in the DOE mission. |
| ALCC | 10% | ASCR Leadership Computing Challenge – a DOE program run by ASCR to promote areas of interest to DOE. |
| NISE | 10% | NERSC Initiative for Scientific Exploration – used to allocate the NERSC Director's reserve. Last year we made two-year awards – there will not be a big new call for proposals this year. In 2014 we will align NISE with our strategic plans |
| Education, Startup | N/A | Small awards made by NERSC from "overhead time". |
| Data Pilot, Dedicated | N/A | For hardware purchased with other funds. |

# MPP Allocations 2007 – 2012 (millions of XT4-based hours)

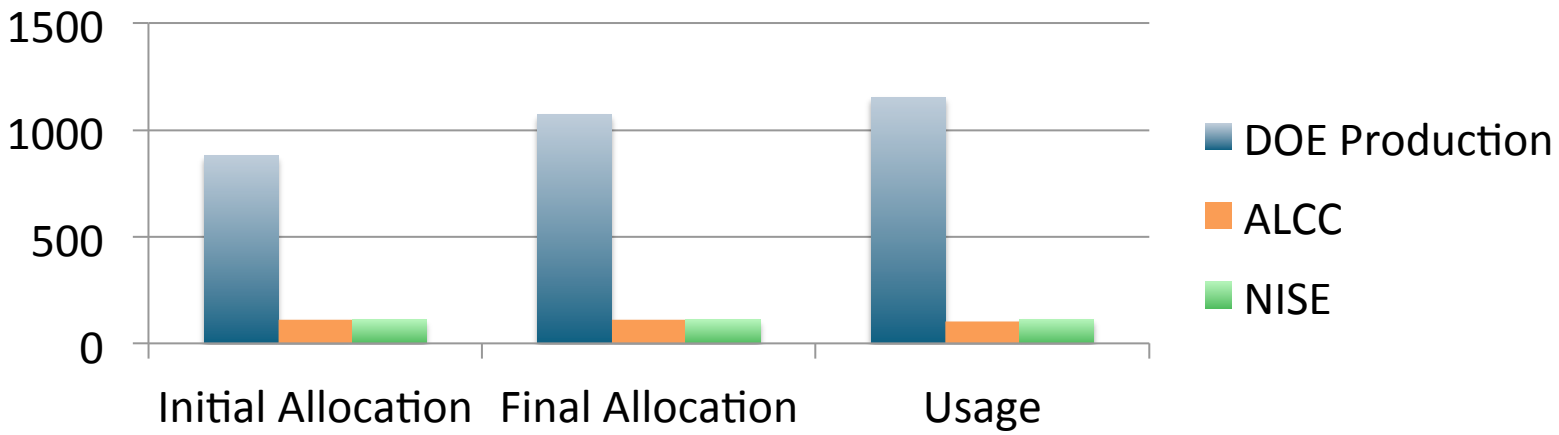
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|
| DOE Production | 9.9 | 73.1 | 160.5 | 224 | 922 | 880 | 1000 |
| INCITE | 1.4 | 10.4 | 20 | - | - | - | - |
| DOE reserve / ALCC | 1.4 | 10.4 | 20 | 28 | 88.5 | 110 | 125 |
| NERSC reserve / NISE | - | 10.4 | 20 | 28 | 88.5 | 110 | 125 |
| **Totals** | **12.7** | **104.4** | **220.5** | **280** | **1,099** | **1,100** | **1,250** |



# 2012 MPP Allocations v. Usage (M hours)

| Type | Initial Allocation | Final Allocation | Num | Usage |
|---|---|---|---|---|
| DOE Production | 880 | 1,073 | 578 | 1,153 |
| ALCC | 110 | 110 | 8 | 103 |
| NISE | 110 | 110 | 24 | 113 |
| **Totals** | **1,100** | **1,293** | **605** | **1,369** |

(Note: 5 projects both NISE and DOE Production)

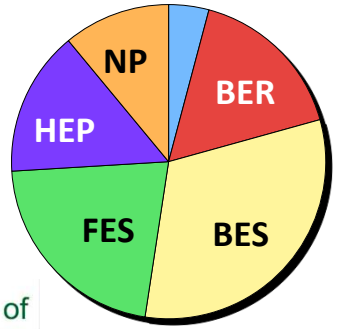


# 2012 DOE Production MPP Allocations & Usage (M hours)

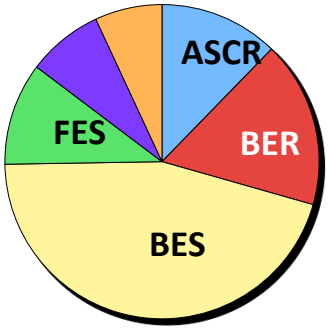
| Office | 2012 Initial Allocation | Final Allocation | Num | Usage | 2013 Initial Allocation |
|---|---|---|---|---|---|
| ASCR | 47.2 | 52.6 | 71 | 48.8 | 55.6 |
| BER | 155.4 | 196.5 | 99 | 195.2 | 190.1 |
| BES | 270.0 | 363.7 | 262 | 374.0 | 305.8 |
| FES | 170.0 | 216.0 | 61 | 255.1 | 189.2 |
| HEP | 137.2 | 153.4 | 45 | 176.4 | 147.5 |
| NP | 100.2 | 117.7 | 40 | 129.8 | 111.2 |
| **Totals** | **880** | **1,100** | **578** | **1,179** | **1,000** |

(Includes some NISE time from 5 projects.)

Percent of hours used




ASCR
BER
BES
FES
HEP
NP

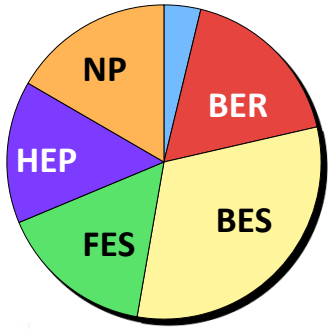


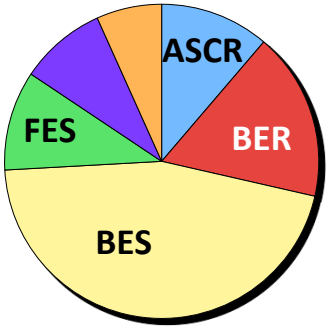

Percent of projects

# 2013 MPP Requests (M hours)

| Office | Requested | Num | Office Allocation | Req/Alloc |
|---|---|---|---|---|
| ASCR | 88.2 | 67 | 55.6 | 1.6 |
| BER | 411.6 | 103 | 190.1 | 2.2 |
| BES | 731.3 | 271 | 305.8 | 2.4 |
| FES | 372.8 | 61 | 189.2 | 2.0 |
| HEP | 342.1 | 53 | 147.5 | 2.3 |
| NP | 388.3 | 40 | 111.8 | 3.5 |
| **Totals** | **2,334** | **596** | **1,000** | **2.3** |

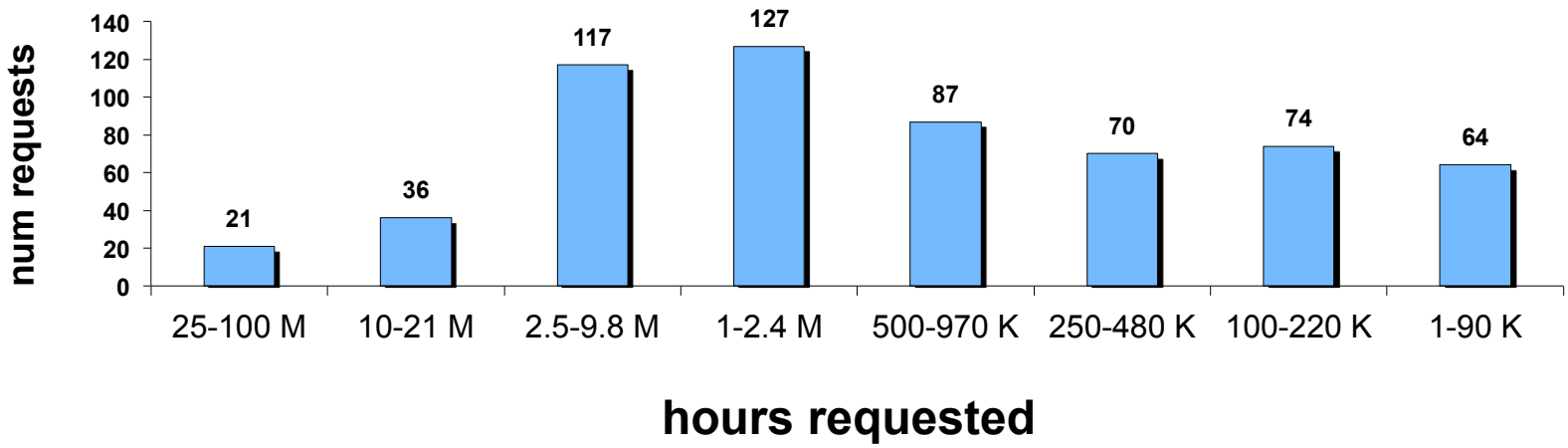
Percent of hours requested






Percent of projects

# 2012 MPP DOE Production Request Distribution (594 requests total)



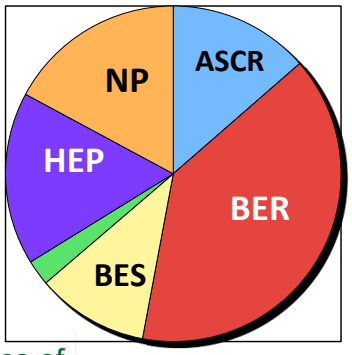

- **Largest requests:**
  - 100.1 M hours (HEP QCD)
  - 73.9 M hours (NP QCD)
  - 66.5 M hours (BES Combustion)
  - 66.0 M hours (Fusion)
- **9 projects requested 25% of total requests**
- **32 projects requested 50% of total**
- **94 projects requested 75% of total**

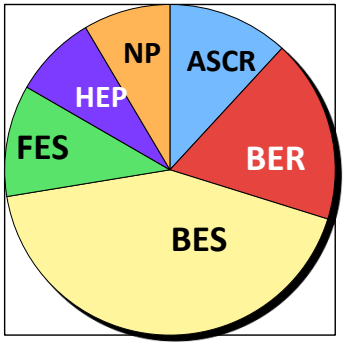
# 2013 HPSS Requests (M SRUs)

## (includes ALCC, NISE, Data Pilots)

| Office | SRUs requested | SRUs awarded | # projects awarded |
|---|---|---|---|
| ASCR | 32.9 | 32.3 | 74 |
| BER | 129.1 | 106.1 | 121 |
| BES | 26.8 | 16.1 | 272 |
| FES | 26.9 | 12.3 | 63 |
| HEP | 55.8 | 52.5 | 63 |
| NP | 35.5 | 36.2 | 49 |
| Totals | 307.1 | 255.5 | 642 |

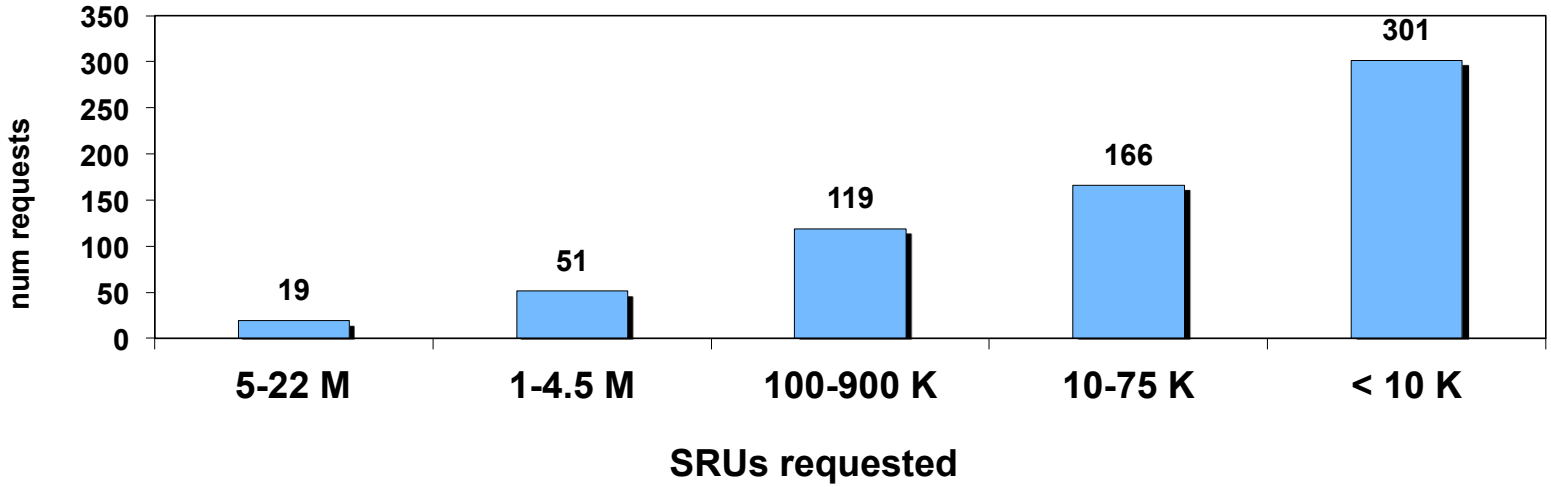
Percent of SRUs awarded






Percent of Projects

# 2013 HPSS Request Distribution (656 requests total)




- **Largest HPSS requests:**
  - 22 M SRUs (BER Climate)
  - 20 M SRUs (Fusion)
  - 12.4 M SRUs (BER Climate)
  - 11 M SRUs (NP Theory)
  - 10 M SRUs (HEP Astro)
- **4 projects requested 24% of the total amount requested**
- **13 projects requested 49% of total**
- **37 projects requested 75% of total**