

The DESY Grid Centre



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Grid

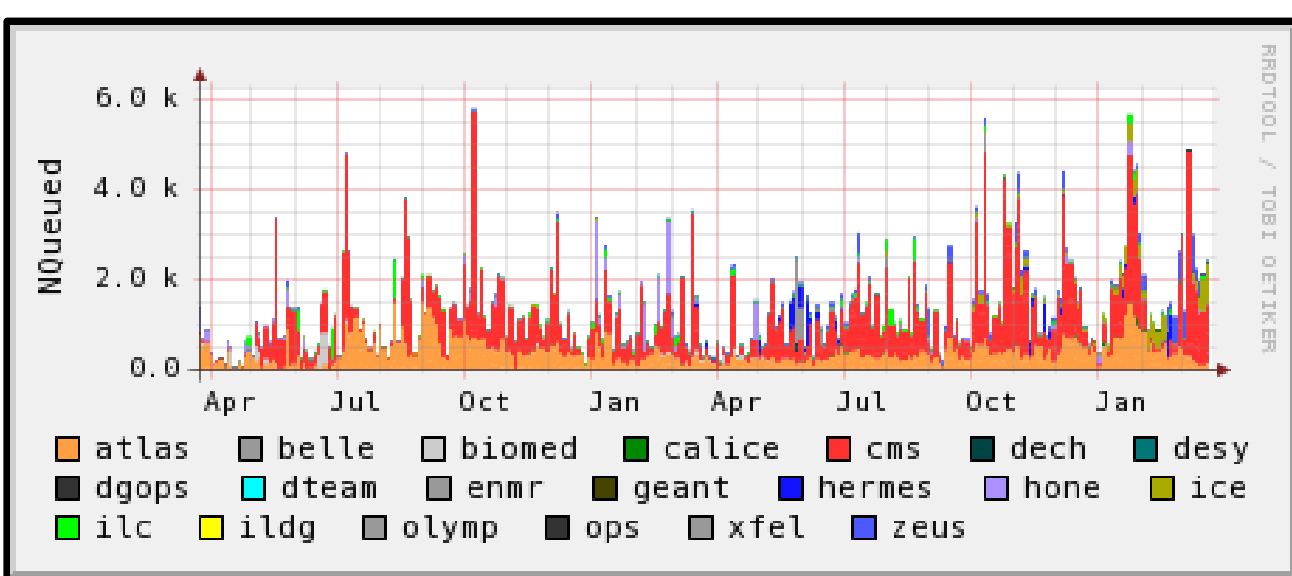
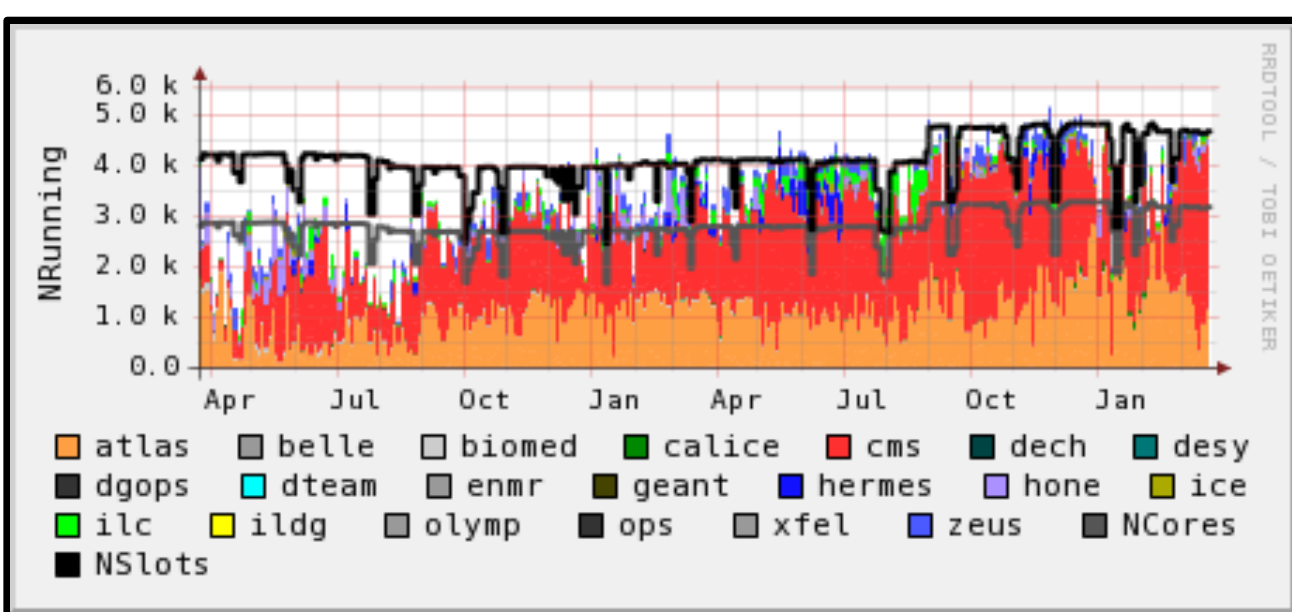
The DESY Grid Infrastructure is based on the most recent **EMI** middleware. It contains all node types to make up a **complete** Grid infrastructure.

Core services are Workload Management Systems (**WMS**), Information Index (**BDII**), Proxy Server (**PX**), Catalog Services (**LFC**), VO Management (**VOMS**).

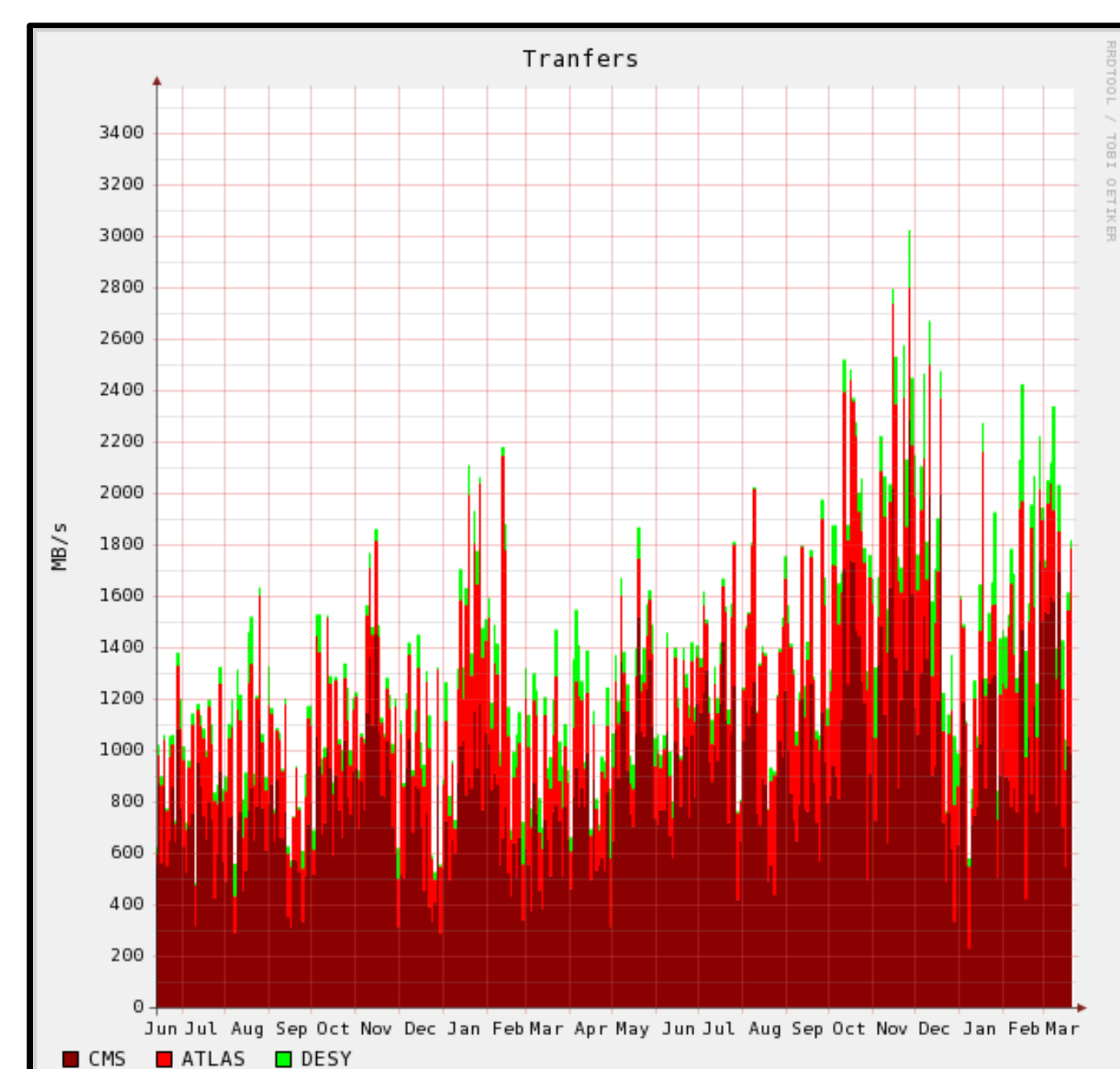
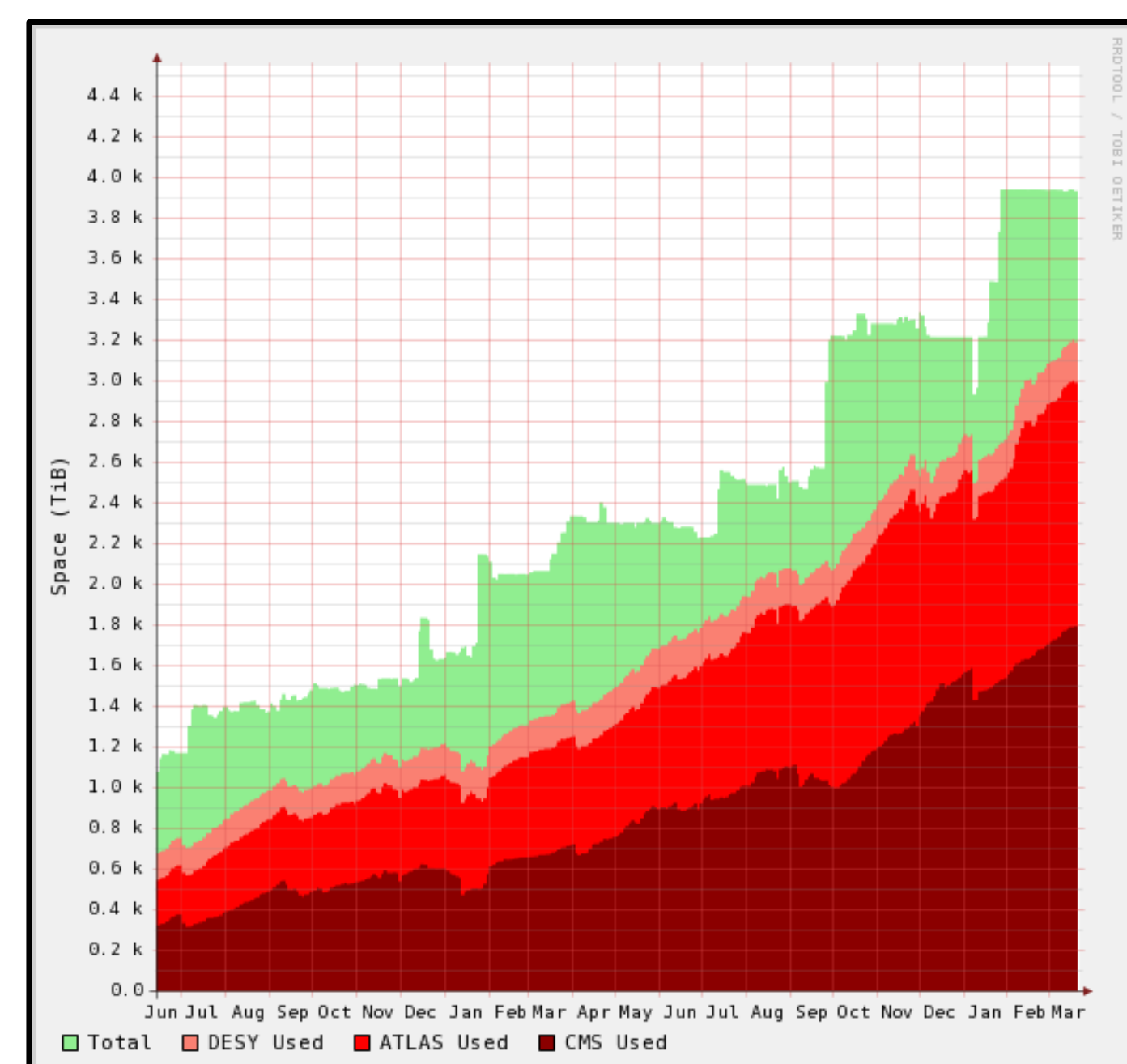
Resources are published by the site Information Service (**GIIS**) and provided by Computing Elements (**CE**) with Worker Nodes (**WN**), and dCache-based Storage Elements (**SE**) as a front-end to the hierarchical mass storage system.

Job Occupancy

DESY-HH running and queued jobs



Storage resources on disk



All VOs supported on one common Grid infrastructure. Virtual sharing of the DESY Grid Resources by all VOs.

HEP

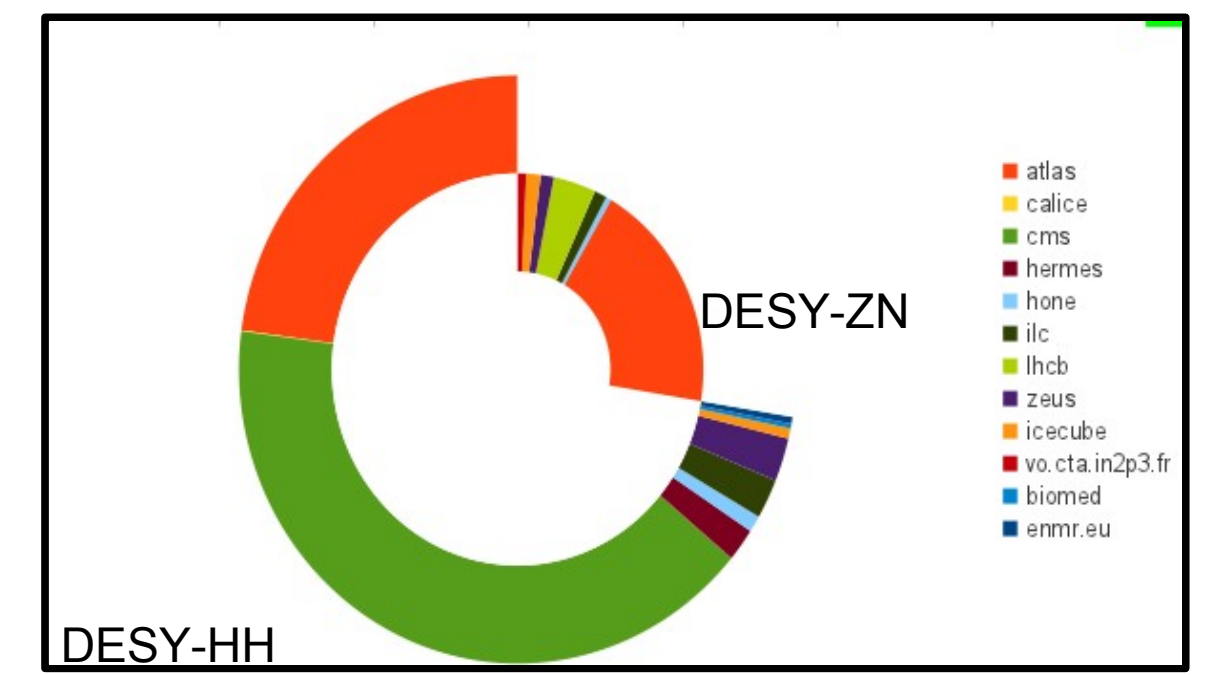
Theory

Photons

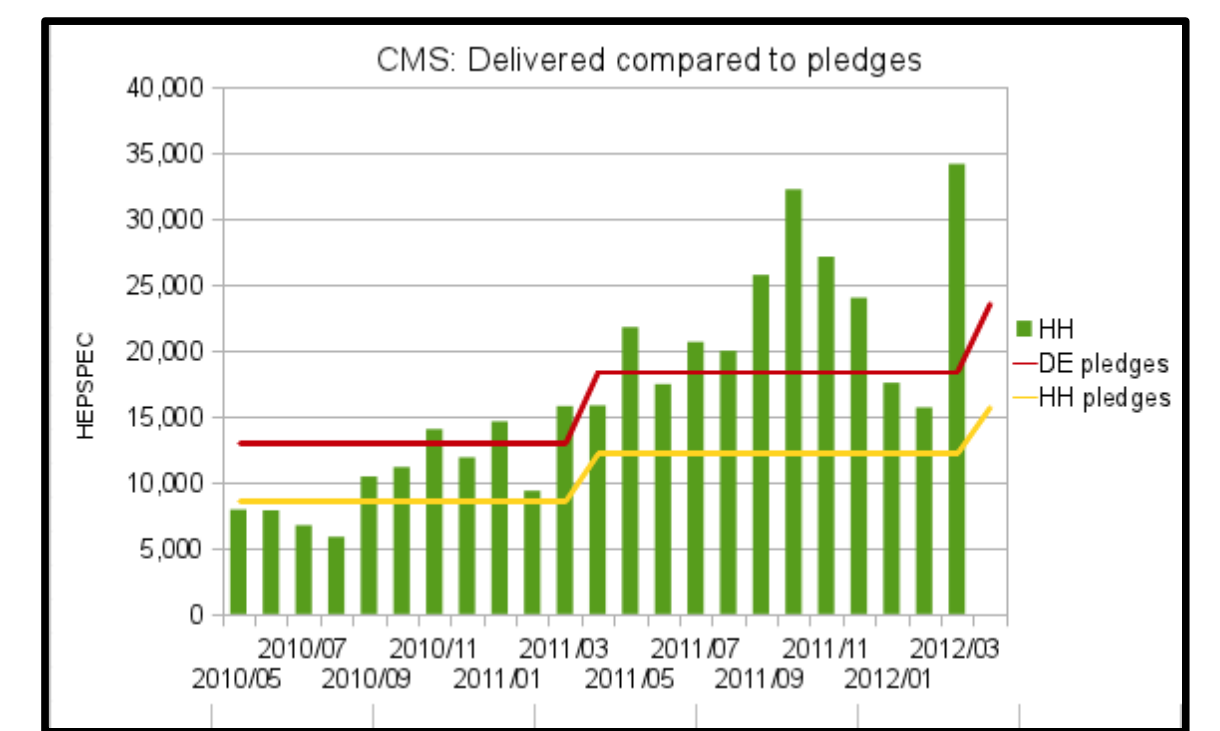
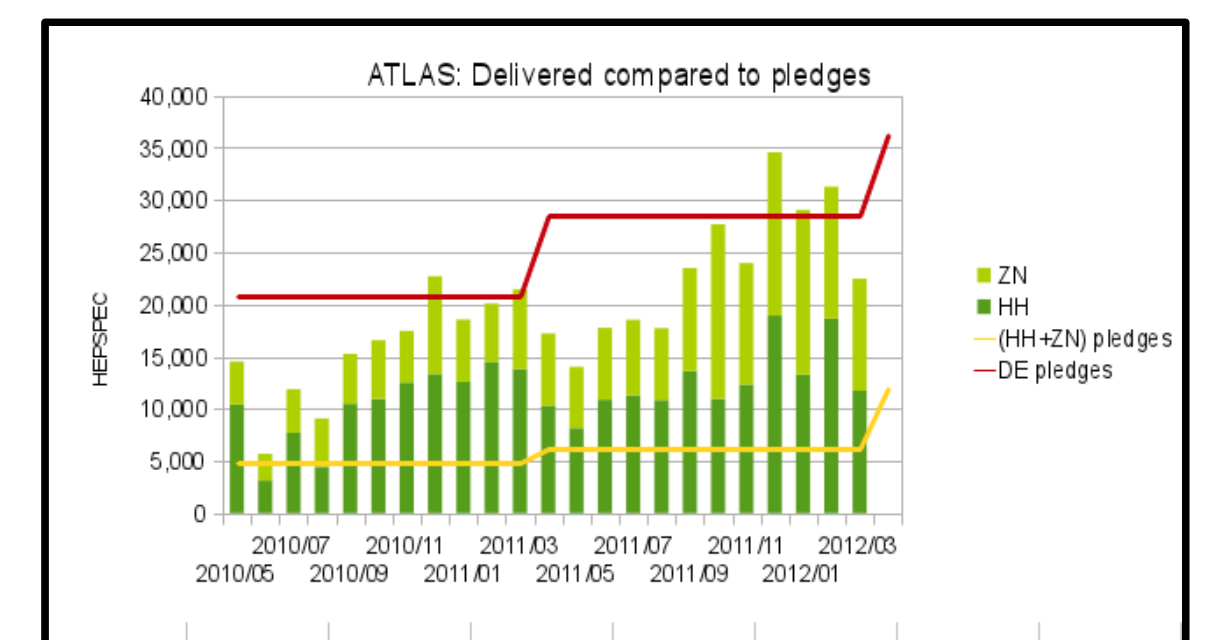
Astroparticle

Bio Users

Opportunistic and federated usage of CPU resources



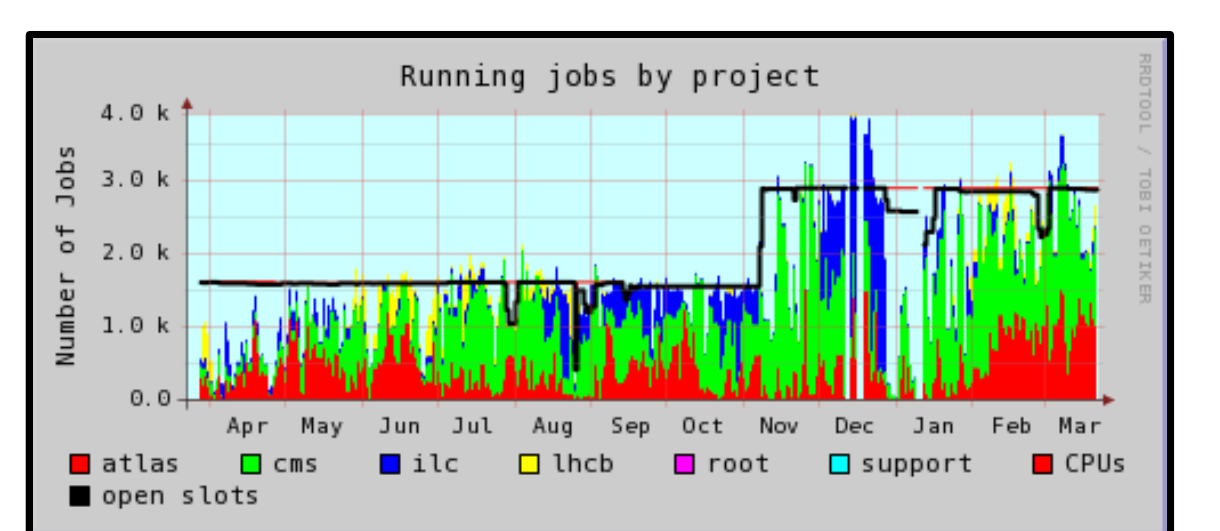
Heavy user community delivered vs. pledged CPU resources



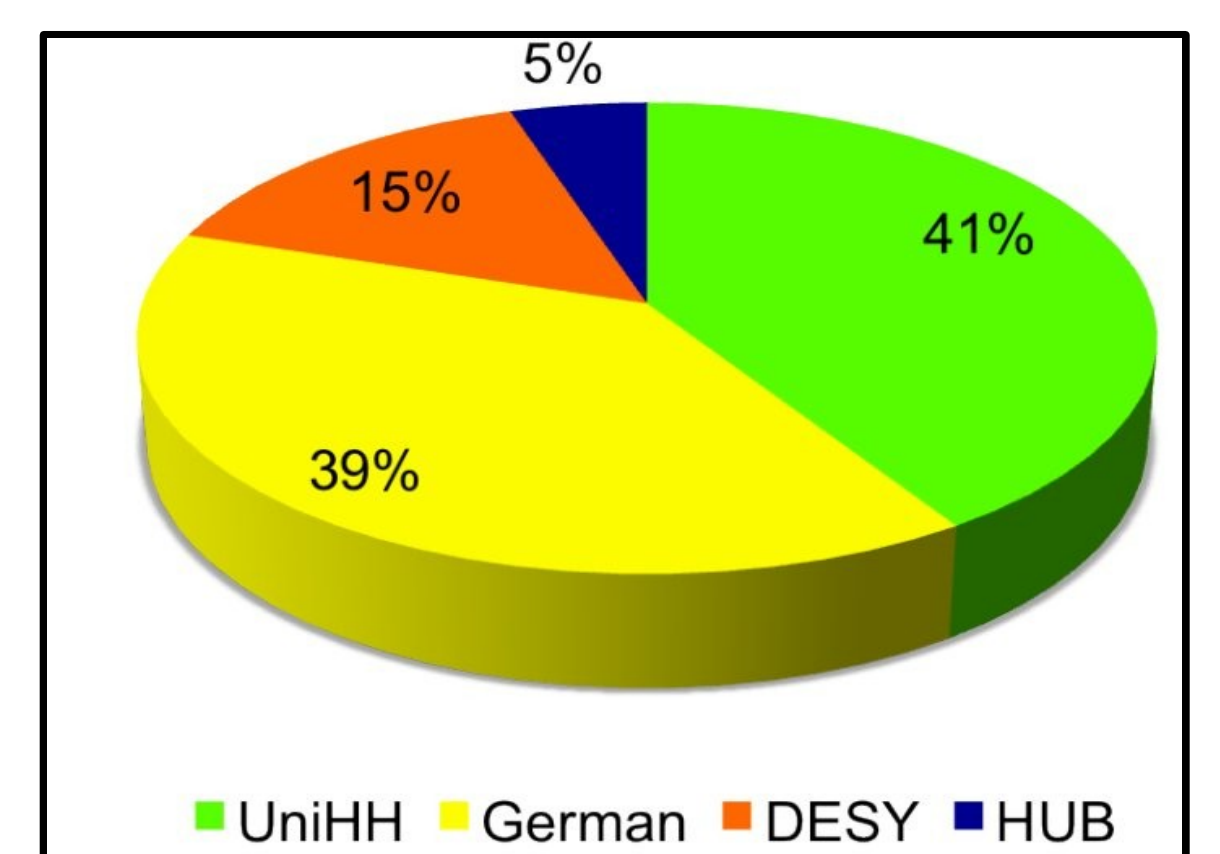
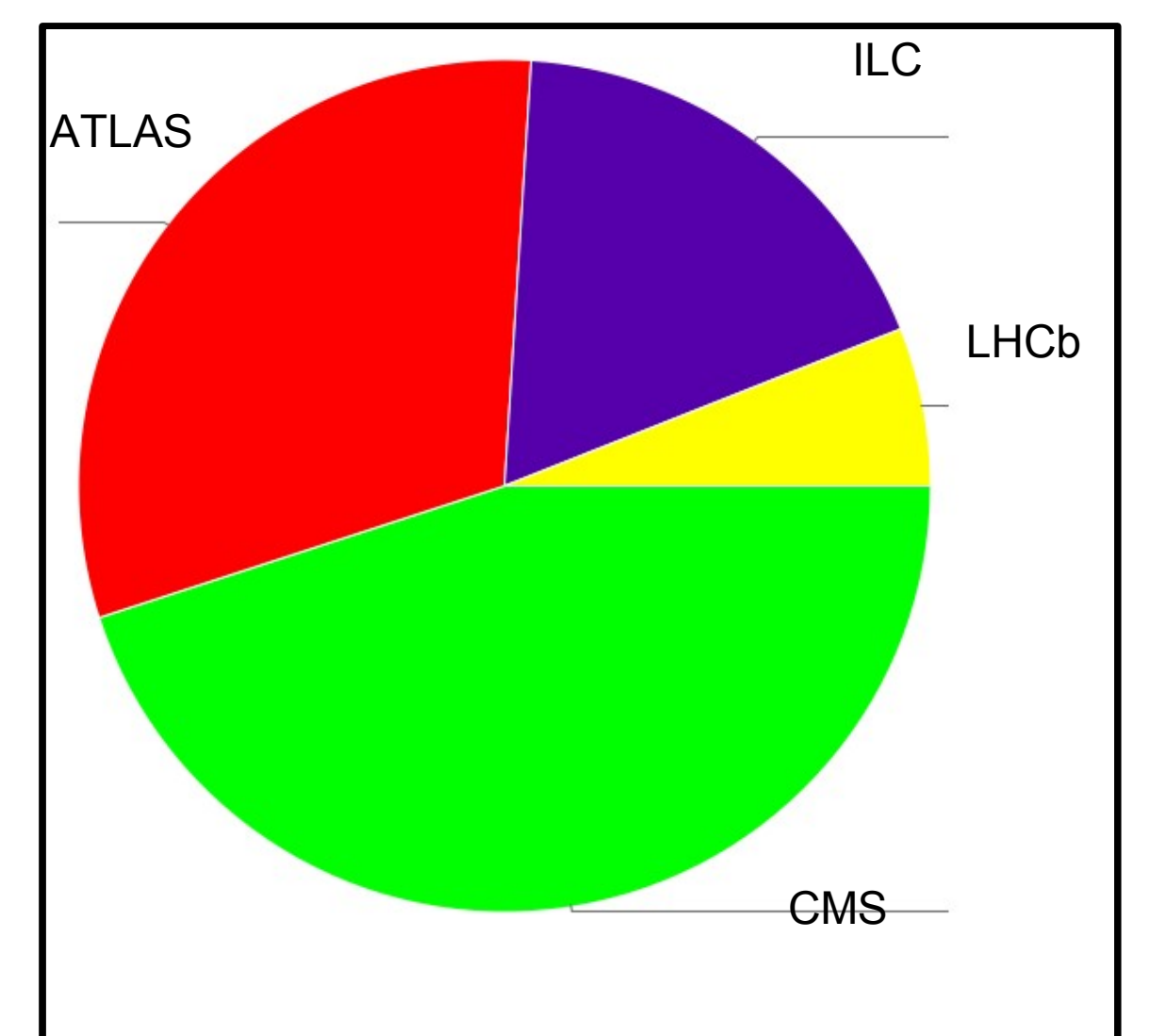
National Analysis Facility (NAF)

- Provide members of German institutes with a generic multi-purpose analysis facility Atlas, CMS, LHCb and ILC current users
- Built, hosted and operated by DESY (Hamburg and Zeuthen)
- complementary access to storage
- tightly coupled to existing storage: Tier-2 dCache share which hosts analysis data
- Extension of existing Grid infrastructure
- Additional interactive resources: ~3000 cores & ~400 TB Lustre file system
- Evaluating high performance storage system Sonas as replacement for Lustre
- Support and documentation in close collaboration with experiments

NAF CPU Occupancy



NAF CPU usage of TeraScale users



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February – March 2012

60TB data transfer
from LCLS (USA) to DESY-dCache
for the photon science community