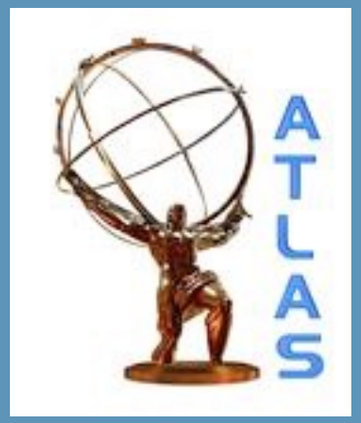
- Status, plans and pledges




# UNIBE-LHEP TIER 2 REPORT

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CHIPP-CSCS face 2 face - 21 January 2019

# UNIBE-LHEP TIER 2 REPORT



## Site installation - UNIBE-LHEP

**2460 cores, 22000 HS06 (18000 pledged), 1 PB SE, 250 TB scratch file systems**

**VOs: ATLAS, t2k.org, fermilab/uboone**

- **Two in house clusters, two ARC CEs, *2160 logical cores***
  - ce01.lhep.unibe.ch : 13122 HS06 - *1424 logical cores - Lustre 190 TB (200 spindles)*
  - ce02.lhep.unibe.ch : 5575 HS06 - *736 cores - Lustre 60 TB (140 spindles)*
- **Share on Ubelix, one ARC CE, *300 logical cores***
  - nordugrid.unibe.ch : 3304 HS06 (*) (*opportunistic usage up to twice as much*)
- **DPM Storage Element - *1 PB***
  - ATLASDATADISK *530 TB*
  - ATLASSCRATCHDISK *15 TB*
  - ATLASLOCALGROUPDISK *410 TB*
  - UBOONEPRODDISK *45 TB*

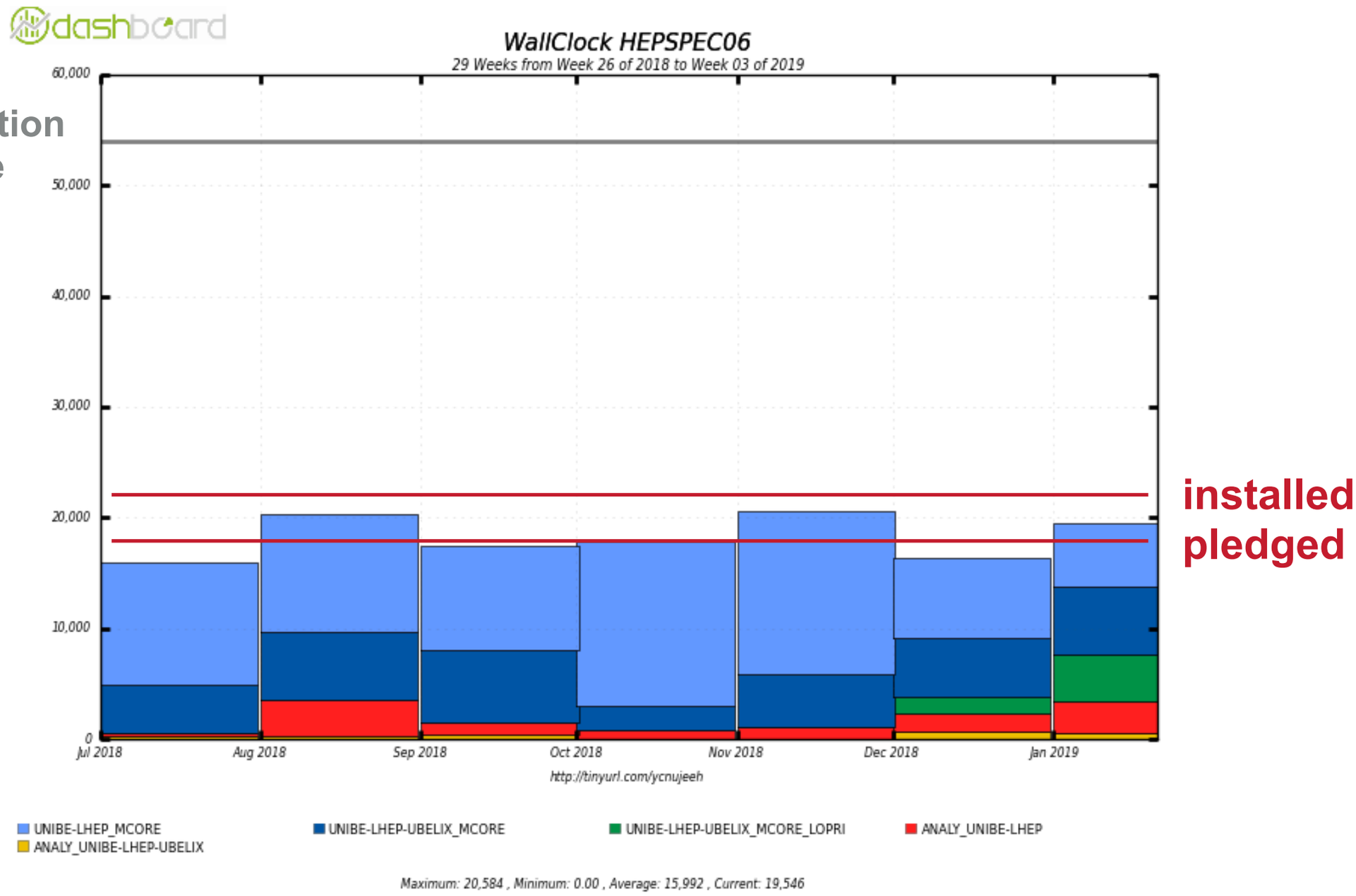
(*) *this is 300 cores @ 11.03HS06 (average coefficient calculated by Rebus). The real Ubelix HS06 share would be 4650 HS06*

# UNIBE-LHEP TIER 2 REPORT



## WallClock HS06 - UNIBE-LHEP

- **UNIBE-LHEP** *HS06 ATLAS* ***installed (**): 22000 - pledged: 18000*** (2018)



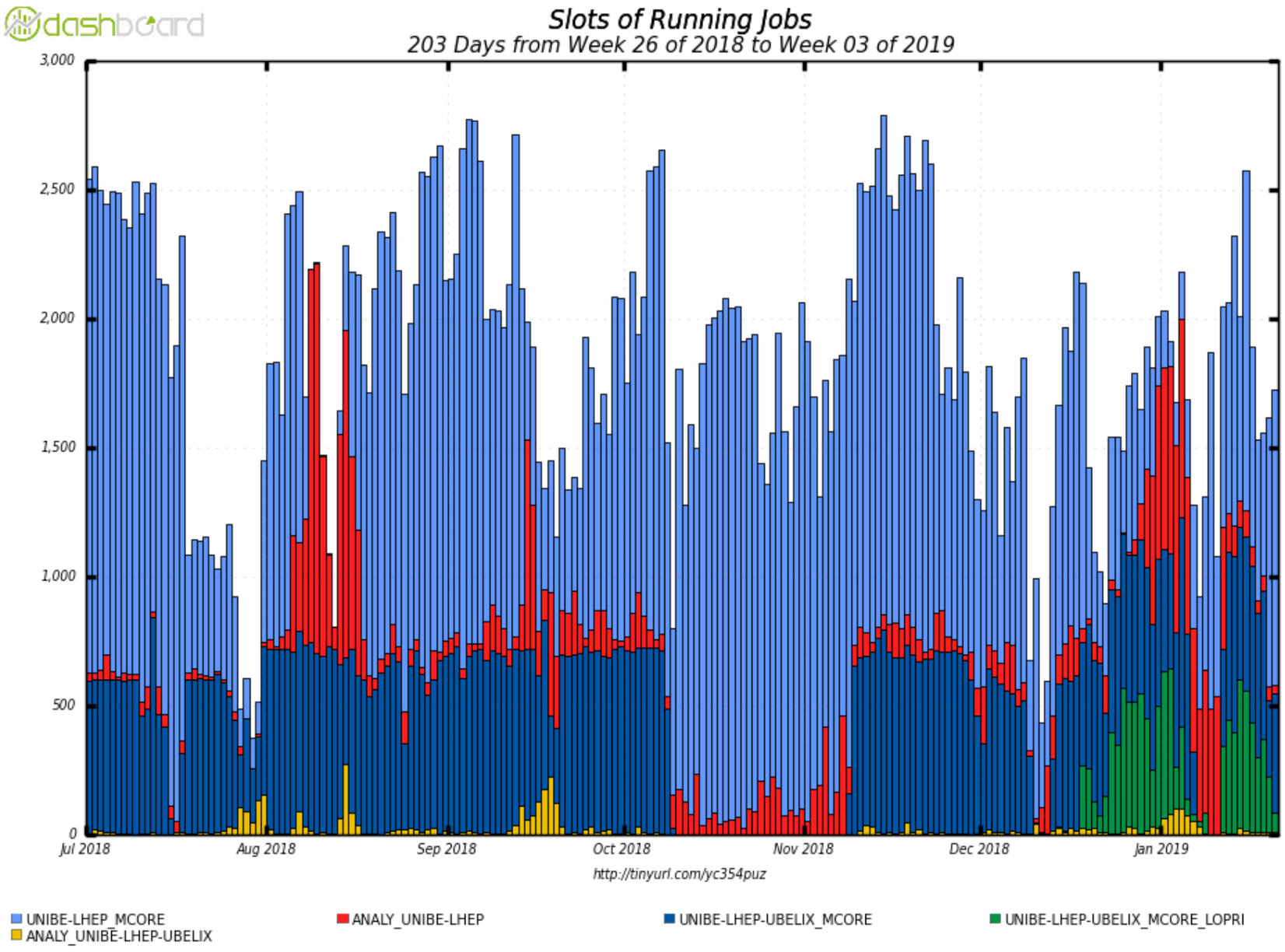

**federation pledge**

**installed**
**pledged**

(**) *- also serving t2k.org and fermilab/uboone*
*- some opportunistic usage on Ubelix*

# UNIBE-LHEP TIER 2 REPORT

## Slots used - UNIBE-LHEP

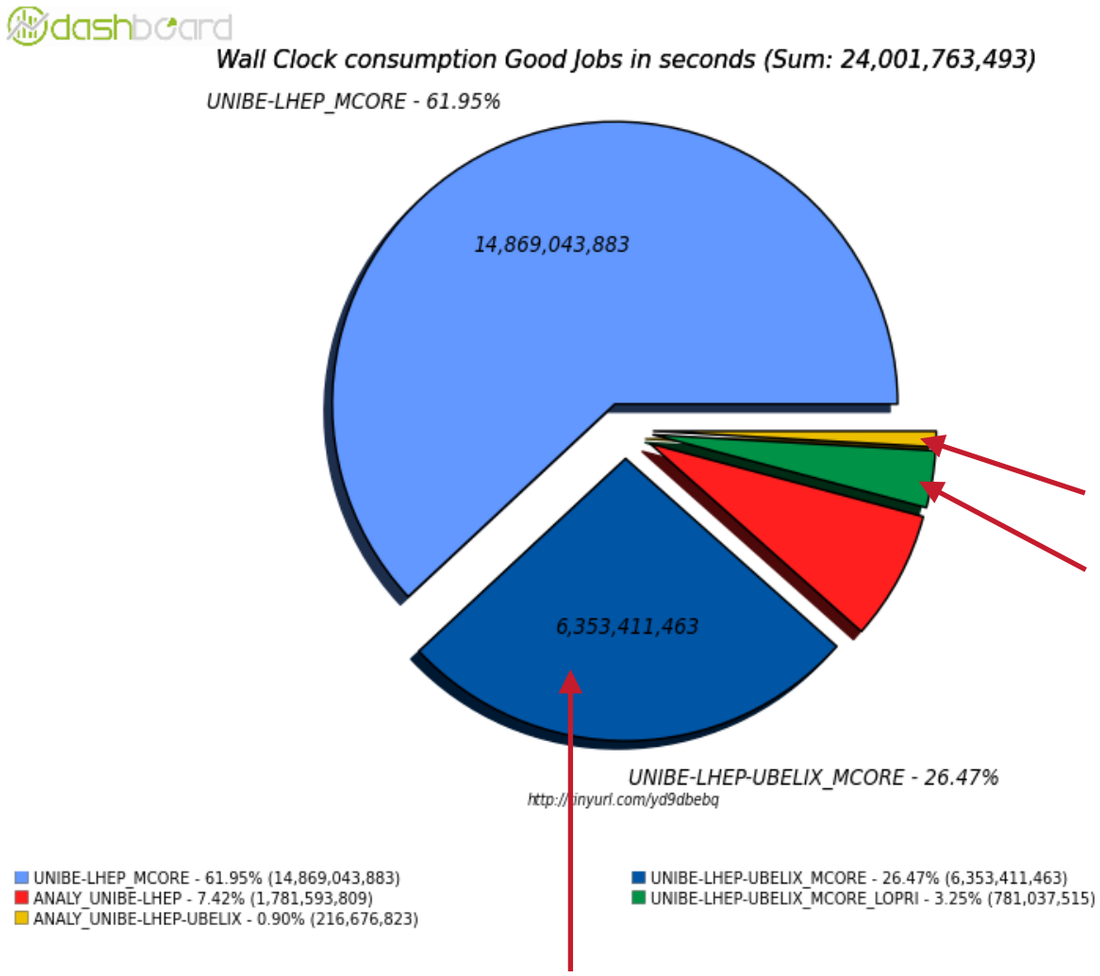


# UNIBE-LHEP TIER 2 REPORT

## Processing shares

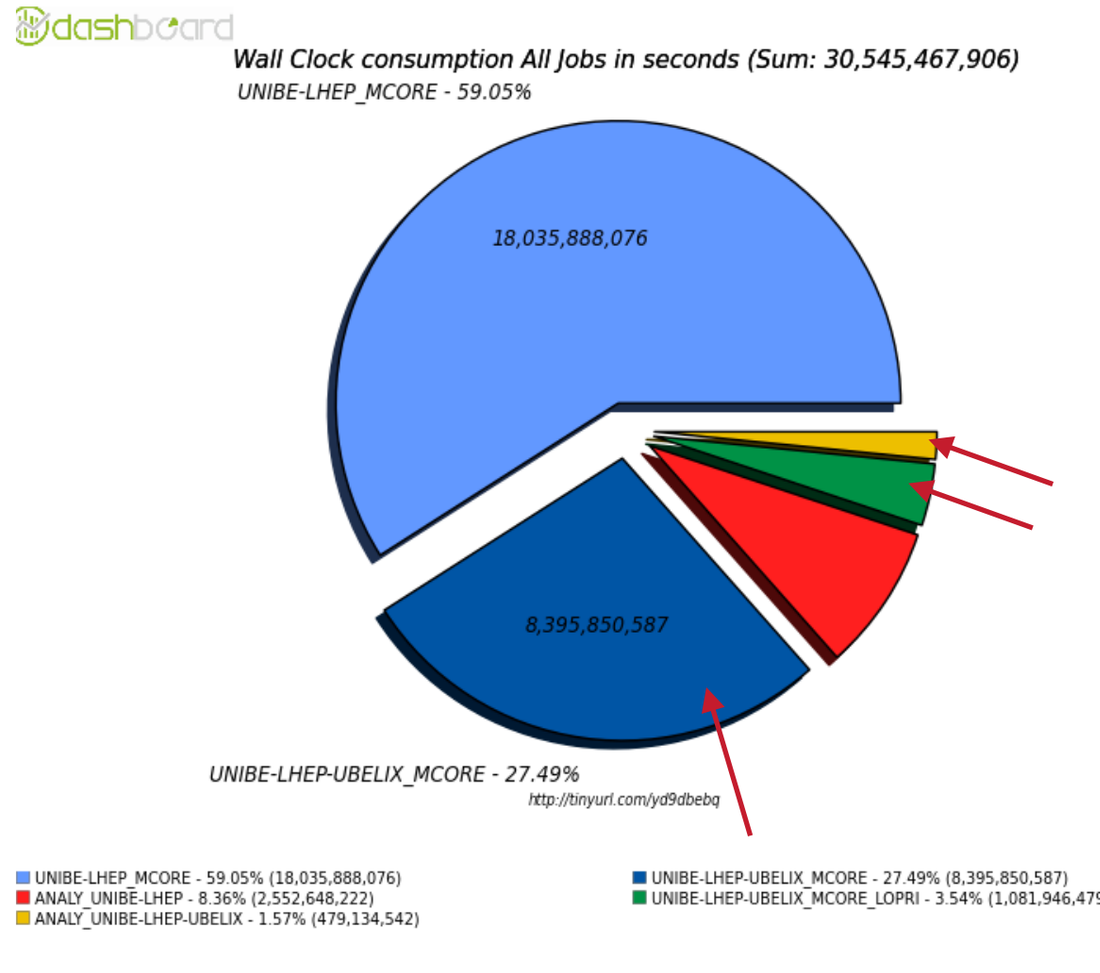
- **Ubelix estimated** in between 15% and 30% ***of the total installed capacity (2018)***

### WC good jobs




**Ubelix delivered 30.62%**

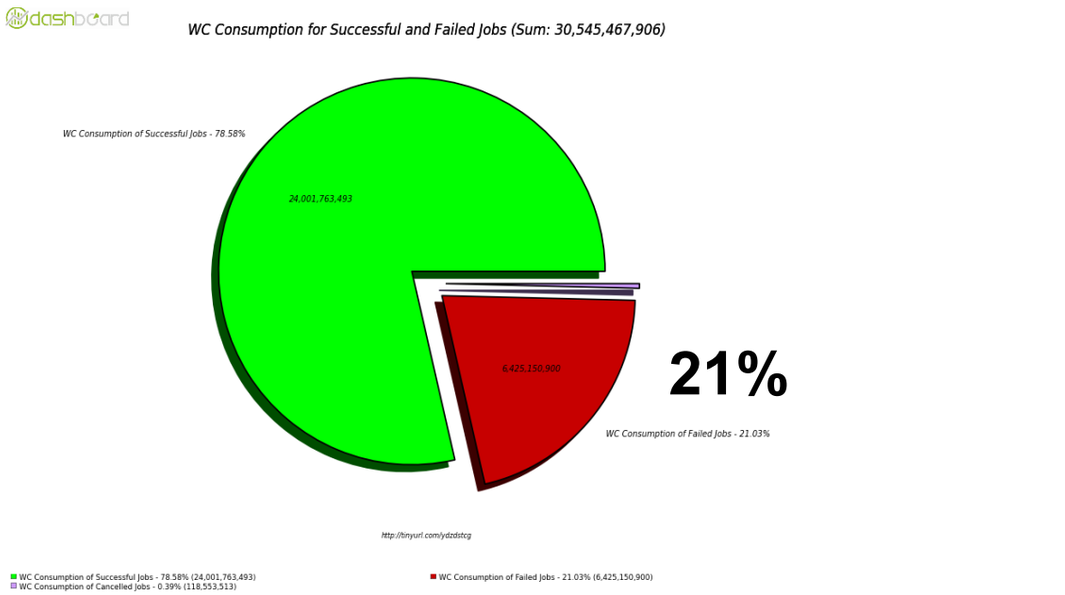
### WC all jobs

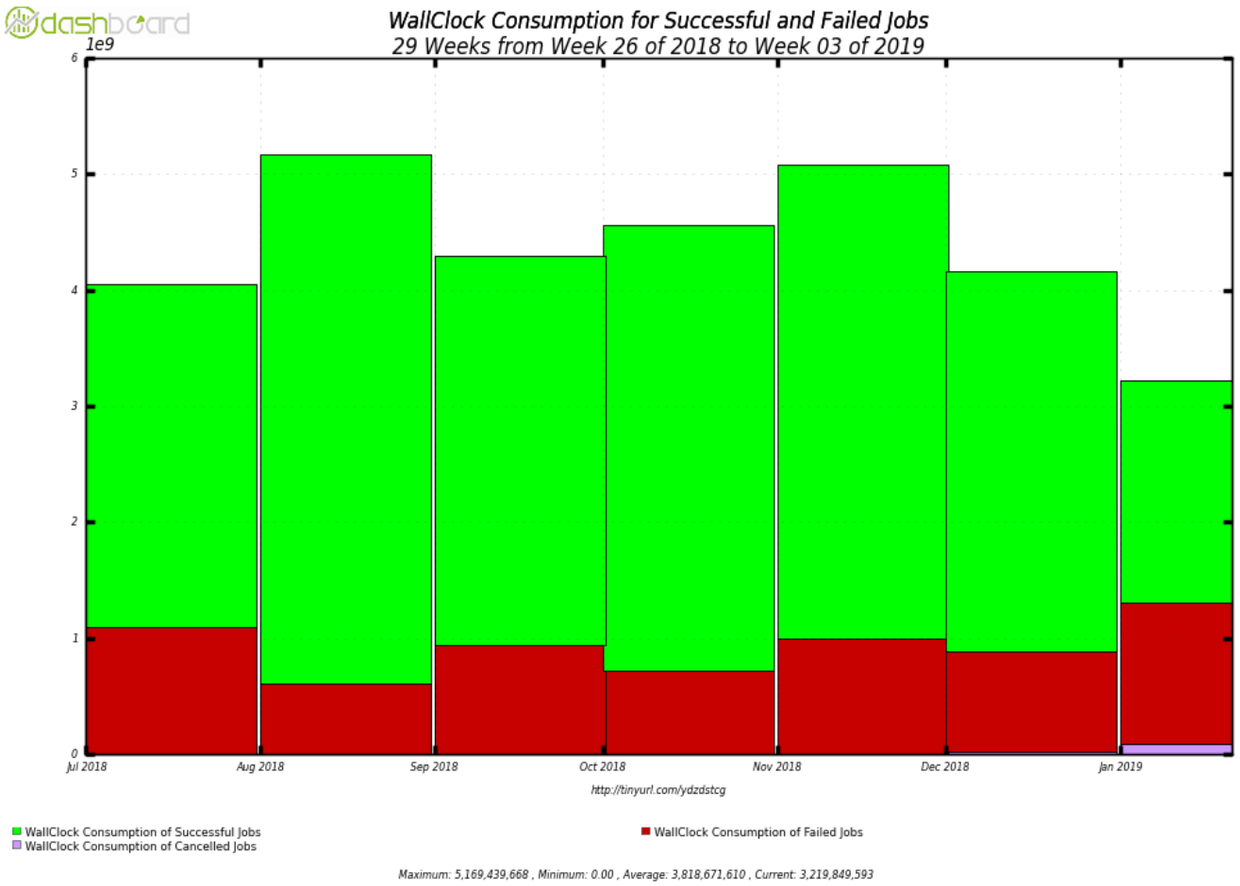


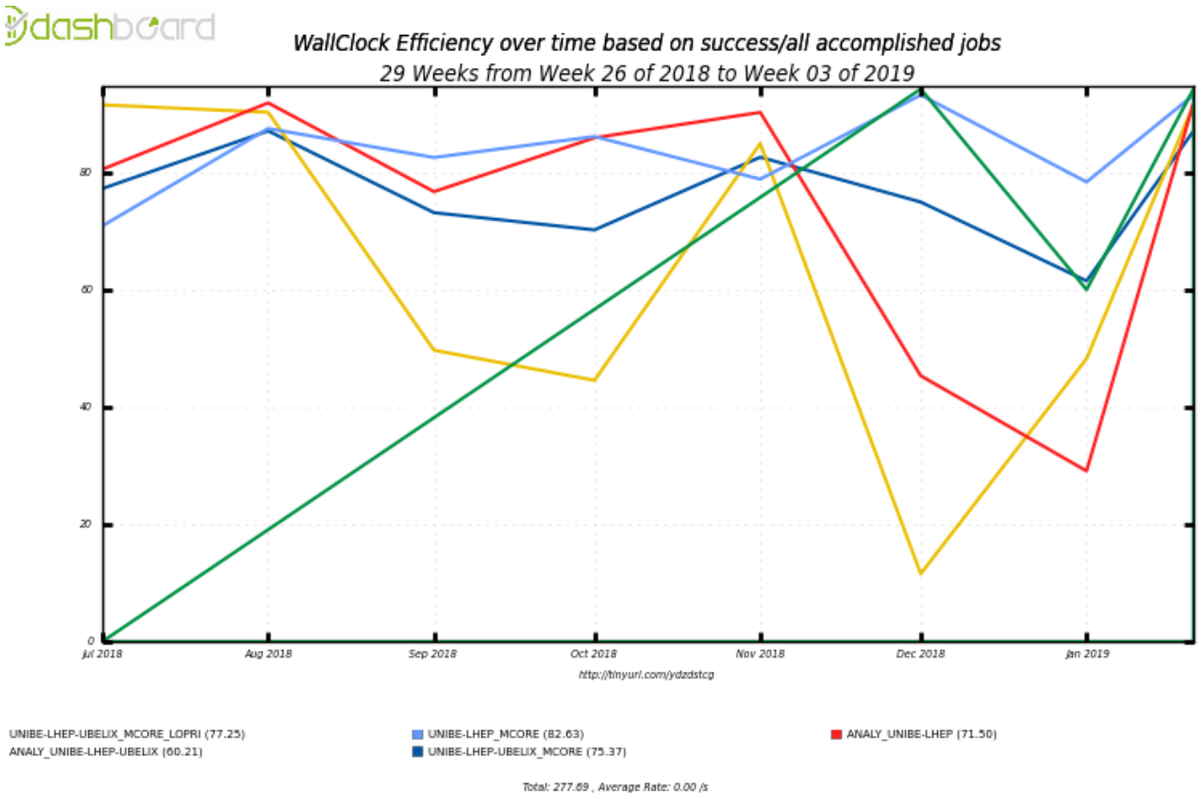

**Ubelix delivered 32.60%**

# UNIBE-LHEP TIER 2 REPORT

## Success vs fail WallClock efficiency



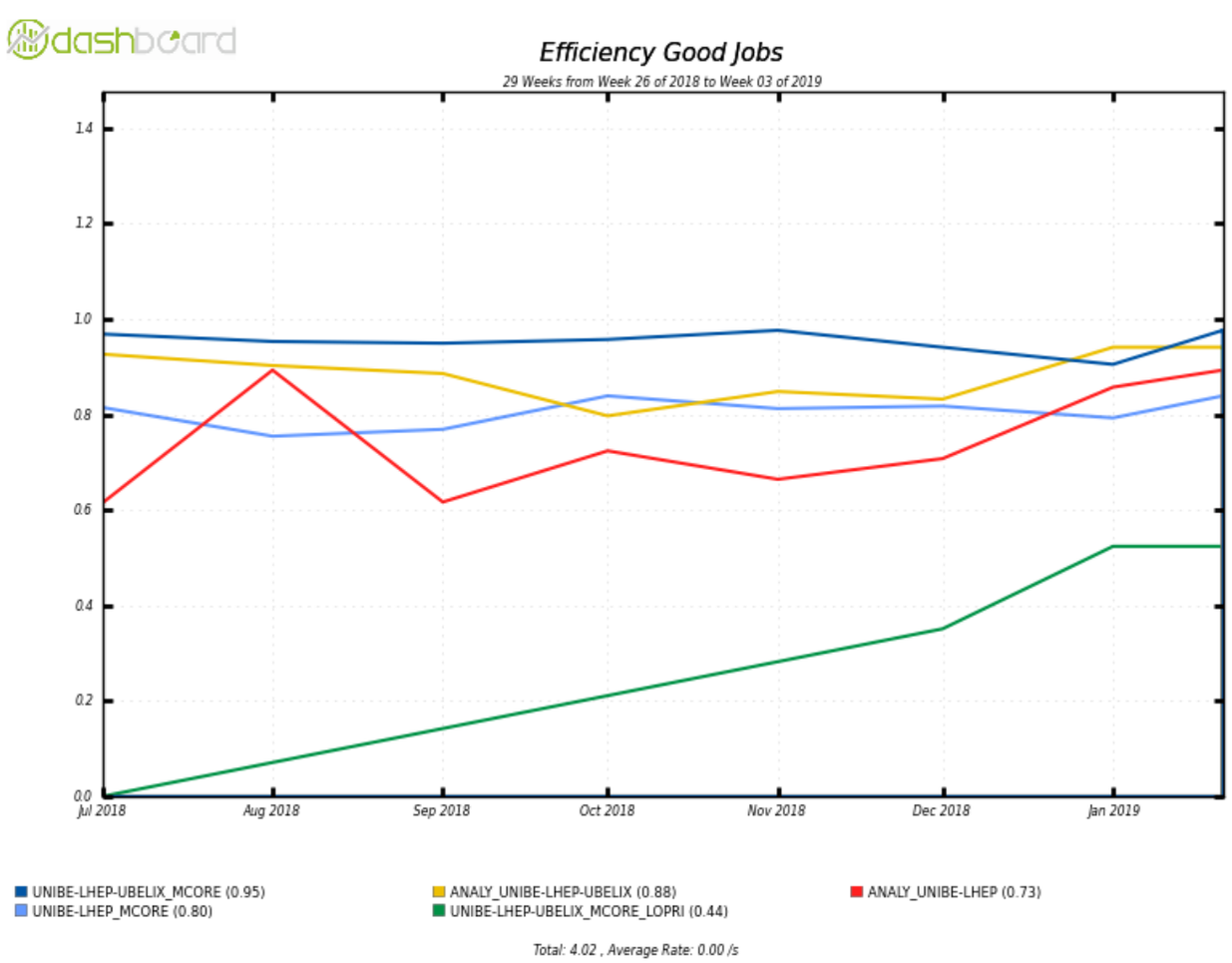



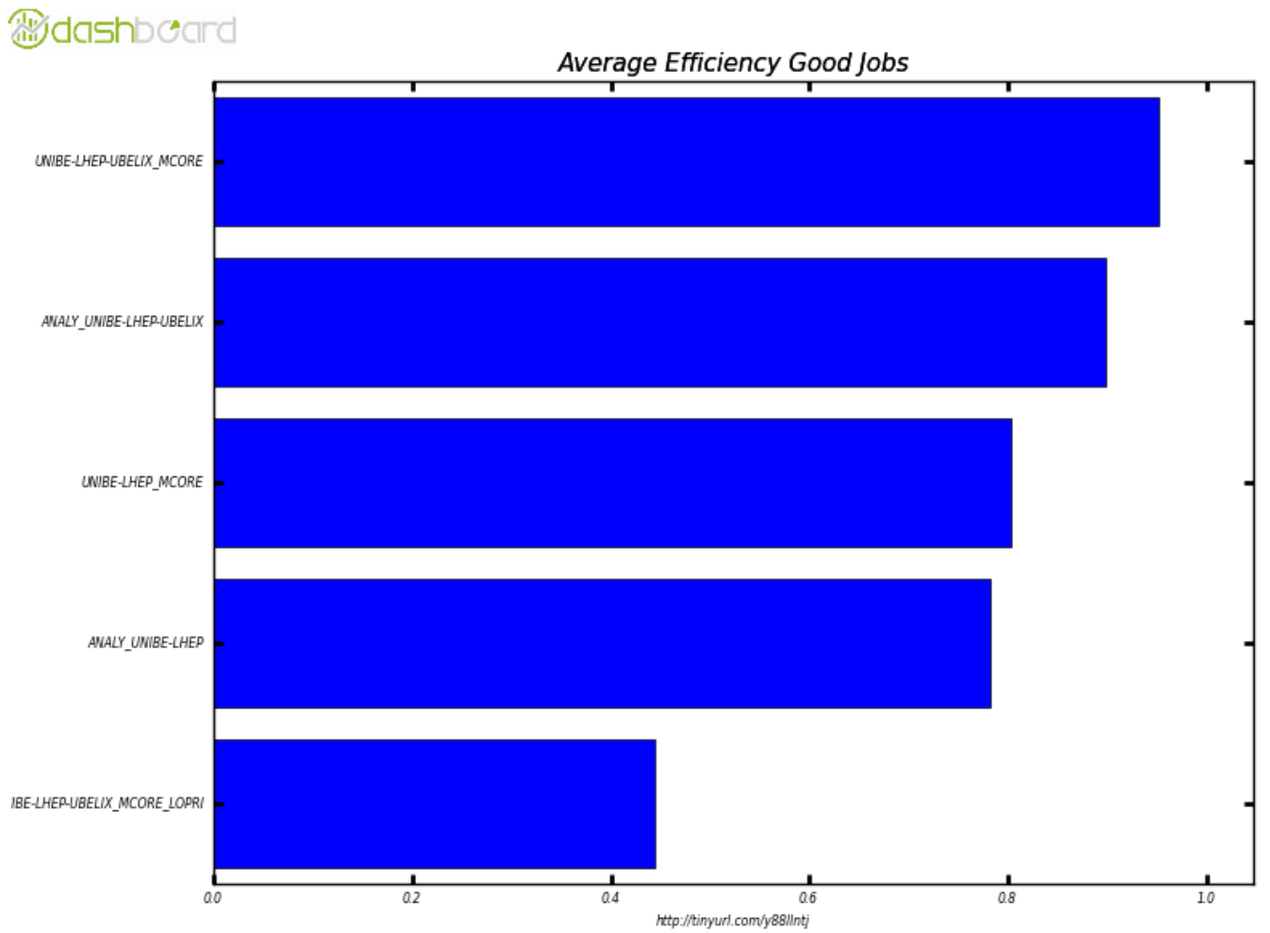



# UNIBE-LHEP TIER 2 REPORT

## CPU / WallClock efficiency

**Average: 0.80**



# UNIBE-LHEP TIER 2 REPORT

## Achievements and plan

- **Singularity on CentOS7 and event service at Ubelix**
  - Ubelix is now fully CentOS7, singularity is available
  - Opportunistic usage for the ATLAS "*event service*" switched on 16th Dec 2018
    - Added a dedicated partition to SLURM
    - Pre-emption is QoS based
    - Worked like a charm from day 1
    - Will need to tune *zip-out* interval (on the ATLAS side) in order to maximise CPU efficiency

- **Phoenix merger to UNIBE-LHEP**
  - We really need _*now*_ to have details of the hardware that is going to be available to us

- **Move to CentOS7**
  - LHEP cluster(s) will be re-built with ROCKS 7 and CentOS7, starting prototyping now
  - No time/manpower to move to CEPH, will re-deploy Lustre for scratch/ARC cache

# UNIBE-LHEP TIER 2 REPORT

## Summary and outlook

- **Transition period, ramping down effort on current resources**
  - Currently contributing about a third of the Swiss ATLAS WallClock (typically 40%)

- **Ramping up opportunistic usage on Ubelix**
  - Effortless deployment, will check the faculty feedback on the move
  - Might also federate Geneva into the T2

- **Plans for next years influenced by the “move to HPC” strategy**
  - We have a solid plan up to 2024 for Swiss ATLAS computing (CSCS + UNIBE)
  - Re-evaluation of the role of Bern for >2024