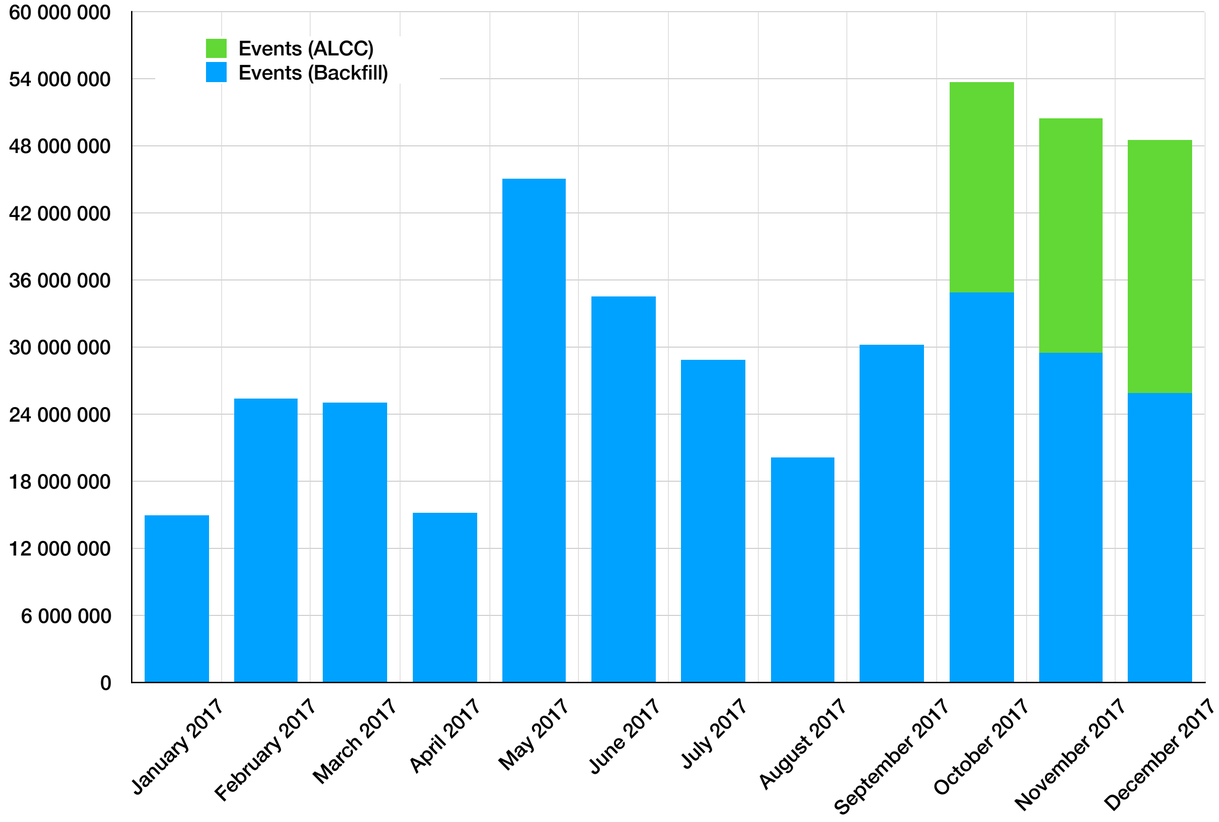
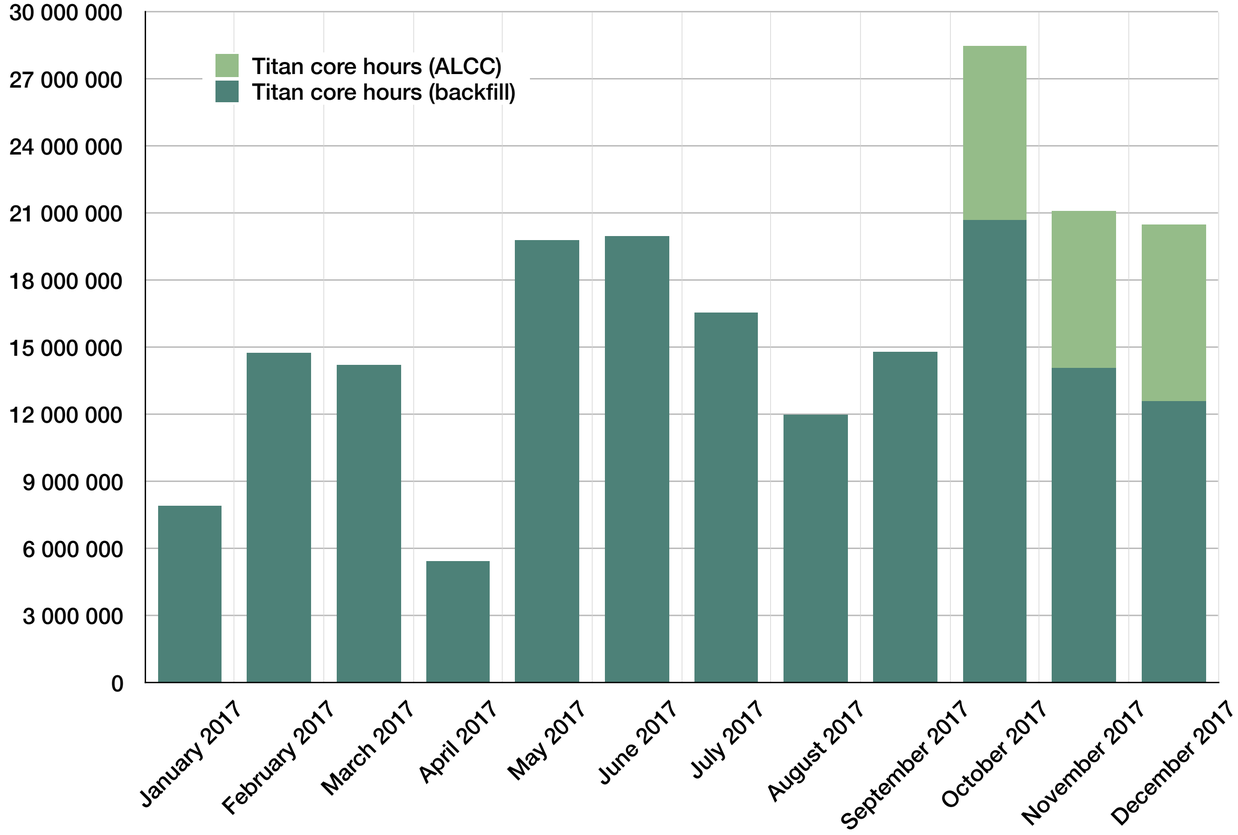
ATLAS production in OLCF

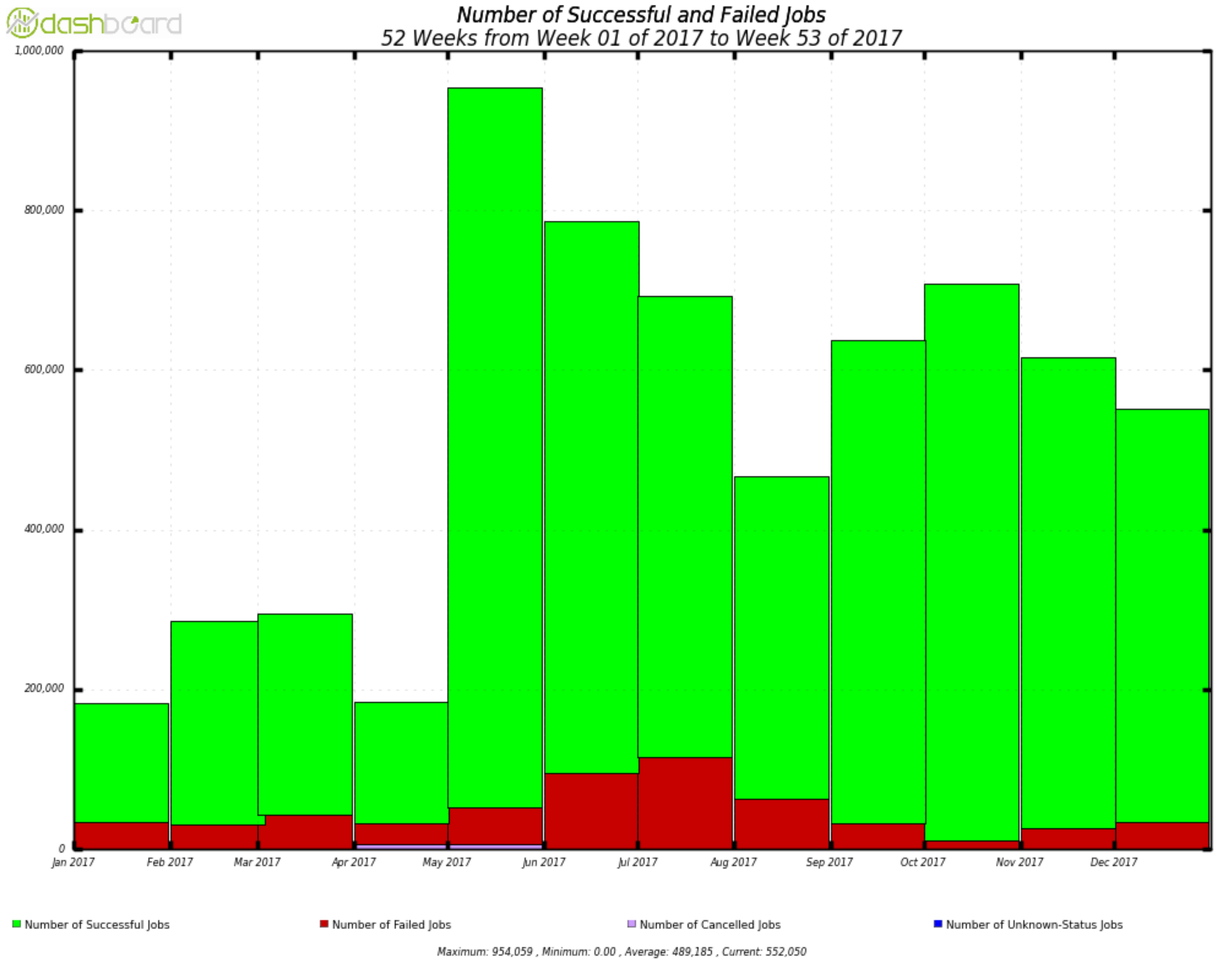
ATLAS@OLCF 2017. Events & core hours

- In 2017 ATLAS works in production mode in OLCF
  - More than 392M events were simulated for ATLAS in OLCF
  - Successfully completed >5,8M of jobs
  - Consumed more than 200M Titan core fours





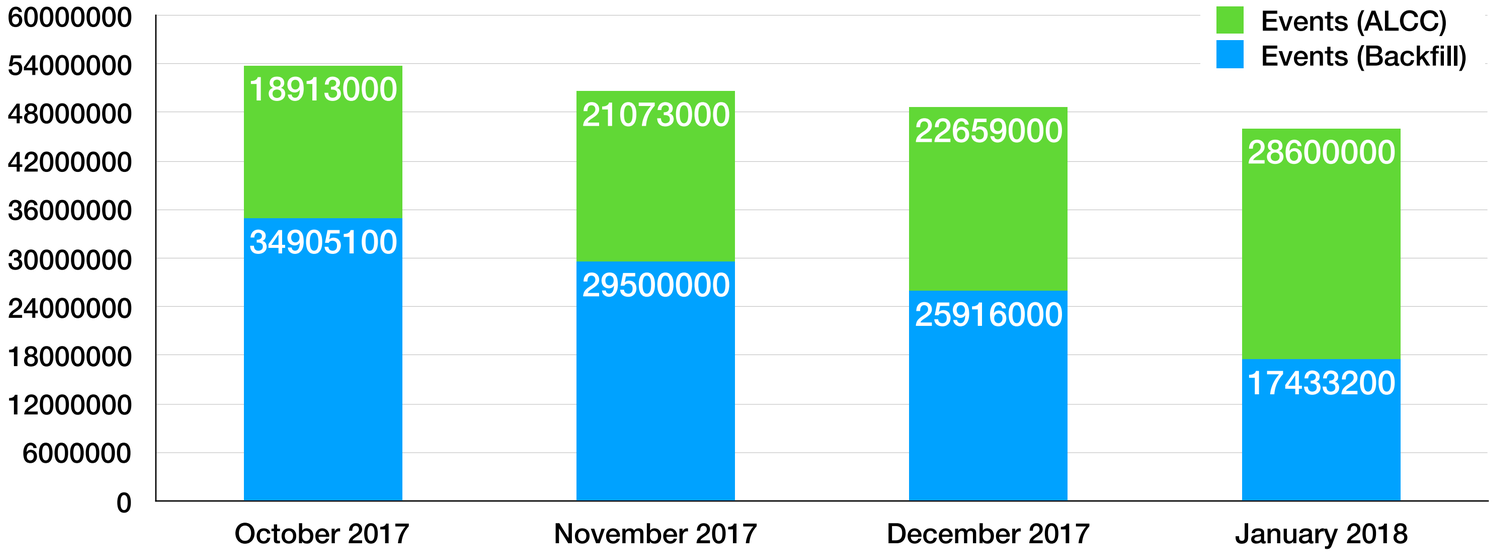
Failure rate and issues



- Failure rate for jobs executed in backfill mode was ~8,7% which is less than we have on the grid
  - vary from month to month
- Most significant issues in 2017 related with increasing of IO with increasing of loading from ATLAS site
  - Special workaround was implemented to cope IO issues caused by ATLAS payloads
  - Pilot logging was modified to reduce redundant messages

ALCC

- Consumption of ALCC allocation for ATLAS production was started in October 2017. About 30% (probably 40%) from allocation already consumed
  - Previous version of middleware (aka MultiJob Pilot) with switched off ‘backfill' compatibility were used for ability to launch longer jobs up to 12h
  - Limitation for size of submission was increased (from 350 to 800 PanDA jobs per submission) but still in place. Upper limit should increased (or disappear) with migration to Harvester



Next steps

- A lot of and main of them:
  - Migration to new generation of PanDA Software: Harvester
  - Containers for software distribution and decreasing of IO intensity
  - Preparation to migration to Summit:
    - ATLAS code builds for PowerPC