**Data management**

- **3.5 billions events collected and processed by 5k cores at Tier-0**
- **RAW compression introduced in 2011** (gain factor ~2)

**Site distribution**

- **New in 2010-2011:**
  - ATLAS Tier-3 Grid site
  - 1) Definition of T3 operational model
  - 2) Creation/support of > 50 sites

**Data distribution**

- Europe >80
- Africa : 2
- Oceania : 1
- Asia : 3
- America >20

**Job activity**

- Submitted job rate increased by factor 6
- Main contribution from User Analysis
- Number of job slots multiplied by factor 2
- New activities
  - 1) Group production (Physics and performance groups’ data analysis)
  - 2) Permanent site validation (Ensure that jobs are not stuck at problematic clusters)

**Grid operation tools and shifts**

- The need for improved monitoring tools highlighted in ATLAS Grid survey
- Automatic blacklisting reduced amount of manual operations (still pending automation of announcement to site)
- Reduced load on expert
- Reduced human errors
- Easier to spot fundamental issues

**Future challenges**

- Consolidation of ATLAS Grid infrastructure:
  - Improve redundancy and reduce sensitivity to site instabilities
- Better usage of storage/CPUs
- Include new technologies; cloud, new transfer protocols,...
- More flexibility to network availability
- Keep monitoring up to date with all evolution