LAPP

S. Jézéquel, M. Delmastro

ATLAS France CAF-User meeting
Lyon, 21st November 20234

Team by 01/01/24

- **Composition of the team**
  - 11 (~7,5 effective FTE) physicists with permanent position / 5 post-docs (4.5 FTE) / 4 PhD
  - Post-docs funded by Labex , ANR (Acts), ERC, IN2P3 (50 % ATLAS)
  - ~14 (~7.5 FTE) engineers in mechanic, electronic, online and Grid

Involvement in software

- LAr online (IT + O. Arnaez + E. Sauvan) : Institutional comitment
  - Highlight of USMB CPJ 2023 (O. Arnaez)
    - Part of funding dedicated to 1 CDD IR Software
  - F. Bellachia (IR software , Médaille de cristal CNRS 2022) issue
    - not available since march 2023 due to medical issue. Coming back and when and what fraction ?
    - Retirement foreseen before HL-LHC : Organise transition with new position
- HL-LHC tracking reconstruction
  - Acts : J. Leveque, J. Couthures (PhD), F. Castillo (Post-doc)

Team by 01/01/24 (2)

Involvement in egamma performance

→ Physicist : QT Electron Forward HL-LHC : M. Dubau

Involvement in Grid computing

→ Physicist (S. Jezequel on spare time) : Site support+CAF

→ Engineers : Site operation (share of MUST platform to ATLAS) : New team being rebuilt by F. Chollet

- Not foreseen : a lot of stress on operation for remaining team
  - Challenge : Keep operation at high efficiency and finish Grid storage migration (dcache)
- Be positive : Opportunity to consolidate team on for HL-LHC

ATLAS Grid @ LAPP for 2023-2024

« Grid » resources (pledge 2024 bought and being deployed)

⟶ Increase mainly funded by IDEFICS AURA-FEDER (now exhausted) and LCG

→ storage = Pledge 2024 deployed : 7 PB (+50 % compared to 2023)

→ computing = 60 kHS06 in 2024 (+20 % en 2023 : Being deployed)

Infra activities related to Grid infra :

→ Delay : Implementation of 40 Gb/s (20 Gb/s) WAN connection due to priority to deployment of new internal network within LAPP/LAPth (close follow-up of subcontractor)

→ Upgrade of cooling infrastructure of MUST requested close follow up of subcontractor

Other computing resources in 2024

Other « grid » resources

- storage = 150 TB LAPP_LOCALGROUPDISK (out of warranty recycled GRID storage).
- computing = 0
- FR-ALPAMED storage federation :
  - o common validation of Grid software (CPPM/LPC/LAPP) : 100 TB
  - o Integrated in proto-datalake for new ESCAPE project

Other local (lab, university) resources

- Local batch resources also shared with Grid → Very efficient to start jobs
- Few interactive machines shared within laboratory

Analysis and needs for 2024

Run-2 + Run-3 analysis

- **Multiboson analysis** : O. Arnaez, L Di Ciaccio, M. Dubau (PhD 2026), I. Koletsou, E. Sauvan , L. Boudet (PhD 2025), post-doc CPJ (à embaucher)
  - sps : 50 (used) → 100 TB (new request for Run 3 MC)
  - LOCALGROUPDISK@CC : Maintain 70 TB
  - CPU : Same level as 2022-2023 : 1,5 M HS06.h
- **DiHiggs :** N. Berger , M. Delmastro , Z Wu (post-doc)
  - Analysis activity just restarting : request few TB on sps and reduced usage of CPU
- **BSM** : N. Berger, T. Hryn'ova, D. Lewis (post-doc), N. Brahimi (post-doc), T. Cavaliere (PhD 2025), R. Balasubramanian (post-doc – Apr 24)
  - Location of analysis to be defined. At CERN in the past. Not more than few TB sps needed
- ***HL-LHC tracking reconstruction :*** J. Leveque , F. Castillo (post-doc), J. Couthures (PhD 2025)
  - No special request at CCIN2P3

Near future