LPSC

P-A Delsart, Grenoble,
O. Kenobi, Tatooine

ATLAS France CAF-user meeting
28th November 2024

Team by end 2024

Composition of the team
1 enseignant-chercheur : J. Collot
6 CNRS : S. Crépé-Renaudin (DAS In2P3), P-A Delsart, J-B De Vivie Regie(group leader), M-H Genest,F Ledroit, F Malek,
3 IR : J. Fulachier, F. Lambert, J. Odier
1 post-doc (Luka Selem), 1 **phD** (G. Albouy)

→ ***analyses :***

- Emerging Jets : Dark sector models with LLP decaying to SM quarks in the tracker
- J-B ?

→ ***perf studies :***

- Jets
  - Jet calibration with DNN
  - R&D : jet constituent calib with GNN
  - Software development for Jet Reco and analysis
- Egamma
  - ??

S&C involvement 2024

S&C Institutional Commitments

→ *report differences between Committed and Allocated and actions taken to solve them*

→ *see CAF-28112024-InstitutionalCommitments.pptx*

Involvement of the team in computing

→ *None*

Involvement of the team in software

Staff IE/IR : 3 IR (J. Fulachier, F. Lambert, J. Odier), total **2.05 FTE** sur AMI-ATLAS

Physicist **0.73 FTE** (J-B de Vivie, P-A) : egamma, jets, AMI/ADAM

Computing resources in 2024-2025

Pledged Tier 2 grid resources (2024)

None

Other non pledged grid resources

None

Other local (lab, university) resources

- local storage & computing : old T2 machine &disk available in a LPSC farm.
- "Gricad" (never used, no need until now)

Analysis and needs

Dark sectors & Emerging Jets analysis in Run3

→ Contributions to all aspect of the analysis

→ trigger, analysis code (on-grid and local), analysis strategy, analysis interpretation and re-cast, truth studies.

→ DAOD → ntuple analysis performed on-grid

→ Using CC-IN2P3 interactive and batch : ~10Tb (ntuple) + low batch usage

HH → bbyy

→ experimentations with NN at CC-IN2P3 with some SPS and batch usage

→ re-using group datasets on eos

Technical support for e/y calibration

Jet Calibration with DNN

→ Using GPU farm at CC-IN2P3, mostly interactive & batch jobs

→ "Maintenance" mode during 2024 (low GPU usage)

→ Expect to re-start devel next year : more usage (~O(300h) on GPUs ?)

→ Smooth operations at cc

Jet constituent-level calibration with GNN

→ pre-processed ntuple build on the grid + custom PyTorch code at CC-IN2P3

→ Using GPU farm at CC-IN2P3, mostly interactive & batch jobs

→ Usage by wave : coincided with a high occupancy (?) of the farm in July → had to find other solution.

Near future

→ *please adress foreseen evolutions in near future (~2 years) which could affect software and computing (mostly if different from what was shown last year)*

Activities of the team

→ Arrival of a CPJ (Carlo ??) : Di-higgs analysis + ITK work

→ Possible "Anomaly detection" activity starting (depending on MIAI grant availability + end of emerging jet analysis)

Resources and needs

→ Continued need for DNN & GNN studies : ponctual and/or regular usage of GPU farm

→ Continued use of disk & batch for end of Emerging Jet analysis

AOB

Details on Software involvement

Information taken from OTP report
Total software involvement = 0.24 FTE

Reconstruction/Analysis: 0.24 FTE (Reco/Ana=0.24) [S&C+AS=0.24]

Name	OTP	Activity	System	Task	FTE
P-A. Delsart	C3	Computing/Software	General Tasks	Reconstruction	0.14
J-B. de Vivie	C3	Computing/Software	General Tasks	Reconstruction	0.10

Details on ADAM involvement

Information taken from OTP report
Total software involvement = 1.95 FTE

Name	OTP	Activity	System	Task	FTE
P-A. Delsart	C3	Computing/Software	General Tasks	ADAM Group Coordination	0.20
P-A. Delsart	C3	Computing/Software	General Tasks	Dataset-level metadata catalogs and infrastructure (AMI)	0.10
J. Fulachier	C3	Computing/Software	General Tasks	Dataset-level metadata catalogs and infrastructure (AMI)	0.50
F. Lambert	C3	Computing/Software	General Tasks	Dataset-level metadata catalogs and infrastructure (AMI)	0.65
J. Odier	C3	Computing/Software	General Tasks	Dataset-level metadata catalogs and infrastructure (AMI)	0.50

The repartition is wrong, I should not have more than 0.1
F. Lambert should be at 0.9
J. Odier at 0.55

Details on Computing involvement

Information taken from OTP report

Total computing involvement = 0 FTE