



LPSC Grenoble

P-A Delsart

ATLAS France CAF-PAF meeting
9 December 2021

Team

Composition of the team

1 enseignant-chercheur : J. Collot

8 CNRS : S. Crépe-Renaudin (DAS In2P3), P-A Delsart, J-B De Vivie Regie, M-H Genest, F Ledroit, A. Lucotte (directeur LPSC), F Malek, B. Trocmé (group leader)

3 IR : J. Fulachier, F. Lambert, J. Odier

1 post-doc (Ana Peixoto), 2 PhD (G. Albouy, N. Lalloué)

Involvement of the team in computing

Staff IE/IR : (C. Gondrand) 0.5 FTE sur T2

Staff physicist : (P-A Delsart) 0.1 FTE sur T2

Involvement of the team in software

Staff IE/IR : 3 IR (J. Fulachier, F. Lambert, J. Odier), total 2.04 FTE sur AMI-ATLAS

Staff physicist 0.6 FTE (P-A) : jets+AMI

Computing resources in 2021-2022

LPSC is shutting down its T2 : January 1st 2023

« Grid » pledged resources in 2021

- storage = 734 TB in 2021
- computing = 13279 HS06 in 2021 (reduced to 11900 in 2022)

Other « grid » resources (*if available, correspond to non pledged resources*)

- storage = 75 TB in LOCALGROUPDISK in 2020

Other local (lab, university) resources :

- GRICAD : common computing resources in Grenoble AREA
(not actively used by LPSC last year)

Analysis and needs

DarkQCD MC-level studies & Analysis

- Software contrib : Analysis code
- inputs : evgen & truth daod (~20 GB), analysis ntuple (~10GB)
- time : hours (MC level) to day (analysis)
- grid (production) and CERN (analysis)
- Remarks : lxplus sometime very slow
- Expectations : increase truth-level studies, includes fastsim (delphes)

Jet Calibration

- Software contrib : Analysis code
- inputs : group DAOD + analysis ntuple (~50GB)
- time : days (ntuple prod on grid), day/hours (analysis interactive or batch)
- ntuple production on grid, analysis at CERN (interactive & condor) or on laptop (using AnalysisBase) or at CC

Machine Learning studies

- Jet Calibration with DNN
- Using GPU farm at CC-IN2P3, mostly interactive & batch jobs
- Planning increased usage of the Farm (~x2 for jet calib)
- very good interaction with CC support : private tutorial to setup/install conda environment !!

Analysis and needs

Hgg Analysis

- Software : analysis code
- inputs : mini DAOD on cern EOS
- punctually grid jobs at CC accessing EOS & laptop analysis

Luminosity Studies

- Software : analysis code
- lxplus interactive on small ntuples

Near future

Activities of the team

Increased activity on Dark QCD analysis

- new postdoc & PhD just started
- possible switch from CERN to cc ?

New ML activity starting : Constituents calib

- part of ANR : *DMwithLLPatLHC*
- Start studying GraphNN
- Grid jobs (DAOD -> ntuple) and intense ML GPU usage at CC

Resources and needs

No evolution planned on local ressources

AOB

Software involvement

Information taken from OTP reports

Software involvement = 0.48 FTE (was 2.50 in 2020, partly moved to ADAM),

S&C+AS Activity = 0.44 FTE

(Core=0, Upgrade=0, Detector=0.04, Ana/Reco=0.44)

Data preparation: 0.04 FTE (Detector=0.04) [S&C+AS=0]

Name	OTP	Activity	System	Task	FTE
P-A Delsart	C3	Data Preparation	General Tasks	Offline DQ Monitoring Software & Debugging -- Jet/Etmiss/CaloGlobal	0.04

Reconstruction/Analysis: 0.44 FTE (Reco/Ana=0.44) [S&C+AS=0.44]

Name	OTP	Activity	System	Task	FTE
P-A Delsart	C3	Computing/Software	General Tasks	Reconstruction	0.40
J-B de Vivie	C3	Analysis Support	General Tasks	Internal Software	0.04

Other (ACTS etc ...) : FTE

Name	OTP	Activity	System	Task	FTE

ADAM involvement

Information taken from OTP reports

ADAM involvement = 2.02 FTE (was 2.02 in 2020)

Also 1 part time student (*formation continue*) for 16 months

ADAM: 2.02 FTE

Name	OTP	Activity	System	Task	FTE
P-A Delsart	C3	Computing/Software	General Tasks	Dataset-level metadata catalogs and infrastructure (AMI)	0.24
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)	0.64
J. Odier	C3	Computing/Software	General Tasks	Dataset-level metadata catalogs and infrastructure (AMI)	0.64

Computing involvement

Information taken from OTP reports

Total computing involvement = 0.95 FTE (0 C2, 0.05 C3, 0.90 C4)

(also LCG-FR)

was 1.29 in 2020 : Sabine now busy as DAS

Class 2 : 0 FTE

Name	OTP	Activity	System	Task	FTE

Class 3 : 0.05 FTE

Name	OTP	Activity	System	Task	FTE
P-A. Delsart	C3	Computing/Software	General Tasks	Cloud Operation & Management / cloud manag	0.05

wrong : P-A not involved in cloud work !

Class 4 : 0.90 FTE

Name	OTP	Activity	System	Task	FTE
P-A Delsart	C4	Computing/Software	General Tasks	FR LPSC, Grenoble	0.10
Institute	C4	Computing/Software	General Tasks	FR LPSC, Grenoble	0.8