

FINAL SUMMARY OF THE EVALUATION ON THE RESEARCH UNIT:

Laboratoire de Physique de Clermont
(LPC)

UNDER THE SUPERVISION OF THE FOLLOWING INSTITUTIONS AND RESEARCH BODIES:

Centre National de la Recherche
Scientifique – CNRS

Université Clermont-Auvergne

EVALUATION CAMPAIGN 2019-2020
GROUP A



In the name of Hcéres¹:

Nelly Dupin, Acting
President

In the name of the experts committee²:

Günther Dissertori, Chairman of the committee

Under the decree No.2014-1365 dated 14 November 2014,

¹ The president of Hcéres "countersigns the evaluation reports set up by the experts committees and signed by their chairman." (Article 8, paragraph 5);

² The evaluation reports "are signed by the chairman of the experts committee". (Article 11, paragraph 2).

Tables in this document were filled with data submitted by the supervising body on behalf the unit.

UNIT PRESENTATION

Unit name:	Clermont Physics Laboratory
Unit acronym:	LPC
Current label and N°:	UMR 6533
ID RNSR:	197412323M
Application type:	Renewal
Head of the unit (2019-2020):	M. Dominique Pallin
Project leader (2021-2025):	M. Dominique Pallin
Number of teams and/or themes:	3 themes

EXPERTS COMMITTEE MEMBERS

Chair:	Mr Günther DISSERTORI, ETH Zürich, Switzerland
	Mr David BRASSE, CNRS, Strasbourg
	Mr Johann COLLOT, Université Grenoble Alpes, Grenoble (representative of CNU)
	Mr Kenneth GANGA, CNRS, Paris
Experts:	Ms Pilar HERNANDEZ, University of Valencia, Spain
	Mr Marc KRAUTH, CNRS, Strasbourg (supporting personnel)
	Mr Guillaume PIGNOL, Université Grenoble Alpes, Grenoble (representative of CoNRS)
	Mr Vincent PROCACCIO, Université d'Angers, Angers
	Mr Roberto TENCHINI, INFN – Sezione di Pisa, Italy

HCÉRES REPRESENTATIVE

Mr Yannis KARYOTAKIS

REPRESENTATIVES OF SUPERVISING BODIES

Mr Pierre HENRARD, UCA

Ms Lydia Roos, IN2P3/CNRS

INTRODUCTION

HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The Laboratoire de Physique Corpusculaire (LPC) was created in 1959, 60 years ago. Research programmes very quickly turned towards high-energy physics: first using national facilities at the Saclay and Orsay accelerators, then internationally at CERN in Geneva and in the United States. At the same time, applied physics started developing. The laboratory is a Joint Research Unit (UMR 6533) of the new University of Clermont Auvergne (UCA) and of the CNRS. It is one of the units of the National Institute of Nuclear Physics and Particle Physics (IN2P3). The unit is composed of about 120 permanent members divided in a balanced way between the UCA and CNRS-IN2P3 structures.

As part of the merging of the two Clermont universities (UBP and UDA forming the UCA), the unit and three associated teams PCSN/C-Biosenss (Physico Chimie des Surfaces Nanostructurées), RGM (Réparation du Génome Mitochondrial) and LAEPT (Laboratoire Arc Electrique et Plasmas Thermiques) joined forces to form the Laboratoire de Physique de Clermont on 1st January 2017, so that the unit retains its acronym LPC.

The merged unit had research facilities spread over two sites (biology center and physics center) on the Cézeaux campus in Aubière. Since July 2109, an additional building has been refurbished to accommodate the unit's staff in a single building complex covering 3600 m² inside the physics center. Additional staff occupy other location in the two IUT (Institut Universitaire Technologique) on the Cezeaux campus and at the Montluçon city site.

Management team

The management team is composed of the director, Dominique Pallin, three associate directors, Frédéric Badaud-Gardy, Emmanuel Busato, Philippe Rosnet, the administrative manager, Cyril Galper and the technical manager, Nicolas Pillet.

HCÉRES NOMENCLATURE

ST2 - Physique.

THEMATICS

The main activity of the unit is physics in the field of fundamental interactions, both experimentally and theoretically, with experiments on accelerators, reactors and with telescopes.

The unit is multidisciplinary; its activities also extend to the fields of Health, Environment and Energy/plasmas, taking advantage of the unit's know-how in fundamental and instrumental aspects. The major research programs are coordinated by the IN2P3 institute of the CNRS within a network of national units and within the framework of large infrastructures and international collaborations.

UNIT WORKFORCE

Clermont Physics Laboratory (LPC)		
Active staff	Number 06/30/2019	Number 01/01/2021
Full professors and similar positions	15	15
Assistant professors and similar positions	27	28
Full time research directors (Directeurs de recherche) and similar positions	12	10
Full time research associates (Chargés de recherche) and similar positions	8	9

Other scientists ("Conservateurs, cadres scientifiques des EPIC, fondations, industries, etc.")	0	
High school teachers	0	
Supporting personnel (ITAs, BIATSSs and others, notably of EPICs)	54	51
Permanent staff	116	115
Non-permanent professors and associate professors, including emeritus	5	NA
Non-permanent full time scientists, including emeritus, post-docs (except PhD students)	9	NA
PhD Students	15	NA
Non-permanent supporting personnel	3	NA
Non-permanent staff	32	NA
Total	148	115

GLOBAL ASSESSMENT OF THE UNIT

The LPC is one of the main research units of IN2P3 and at the same time a highly valued unit in the realm of the UCA. It is a very well-run research unit that is making excellent scientific and technical contributions to the projects it is involved in.

The committee commends the unit, and in particular its management, for having considerably improved the interactions and collaborations with the UCA and for having succeeded towards establishing fundamental research (in particular concerning mathematics and physics) as one of the main strategic pillars of the site.

The committee also commends the unit for having maintained and even improved its international standing and scientific output throughout a recent period that must have been challenging, because of the changes in external (merger of two former University structures into UCA in 2017) and internal structures (joining of three groups, PCSN/C-Biosenss, RGM and LAEPT), with corresponding evolutions in infrastructure (new floor for the biology activities), governance, integration of researchers and interactions with external bodies. Despite these challenges, the unit and its leadership have made significant progress towards the creation of an overall coherent unit.

The committee considers the presented scientific strategy for the next contract period to be sound. To a large extent, it proposes a well justified continuation of the current activities. Obviously, major strategic decisions for the scientific future of the unit, in particular considering particle physics at colliders, will strongly depend on the outcome of the update of the European Strategy discussions, that are not yet known at the time of this Hcéres evaluation. In any case, in the coming years the unit will have to go through a careful evaluation of the feasibility and scientific interest in maintaining (or not) a long-term involvement in three out of the four LHC experiments, while continuing to foster the by now well-established activities in observational cosmology and exploring and implementing new avenues via small-scale particle physics experiments.

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