IPNL - Institut de physique nucléaire de Lyon

Rapport Hcéres

HCERES

High Council for the Evaluation of Research and Higher Education

Research units

HCERES report on research unit:

Institut de Physique Nucléaire de Lyon

IPNL

Under the supervision of the following institutions and research bodies:

Université Claude Bernard Lyon 1 – UCB

Centre National de la Recherche Scientifique – CNRS

Evaluation Campaign 2014-2015 (Group A)

HCERES

High Council for the Evaluation of Research and Higher Education

Research units

In the name of HCERES,[1]

Didier HOUSSIN, president

In the name of the experts committee,[2]

Clara MATTEUZZI, chairman of the committee

Under the decree N°.2014-1365 dated 14 november 2014,

[1] The president of HCERES "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 expert committee". (Article 11, paragraph 2)

Evaluation report

This report is the result of the evaluation by the experts committee, the composition of which is specified below.

The assessments contained herein are the expression of an independent and collegial deliberation of the committee.

Unit name:	Institut de Physique Nucléaire de Lyon
Unit acronym:	IPNL
Label requested:	UMR
Present no.:	UMR 5822
Name of Director (2014-2015):	Mr Guy CHANFRAY
Name of Project Leader (2016-2020):	Mr Guy CHANFRAY

Expert committee members

Chair:	Mrs Clara MATTEUZZI, INFN and Università degli Studi Milano-Bicocca, Italy
Experts:	Mr Emmanuel BALANZAT, CIMAP
	Mr Jacques DUMARCHEZ, LPNHE UPMC
	Mr Michel GUIDAL, IPNO (representative of the CoNRS)
	Mrs Isabelle MONNET, CIMAP
	Mr Elias KHAN, IPNO
	Mr James RICH, CEA IRFU
	Mrs Evelyne SAGE, CNRS Institut Curie
	Mr Pierre TAXIL, Université d'Aix-Marseille (representative of the CNU)
	Mr Guillaume UNAL, CERN, Suisse

Scientific delegate representing the HCERES:

Mr Cristinel DIACONU

Representatives of the unit's supervising institutions and bodies:

Mr Serge KOX, IN2P3/CNRS

Mr Frédéric FAURE, CNRS Rhône Auvergne

Mrs Christelle GOUTAUDIER, Université de Lyon

Mr Henning SAMTLEBEN (directeur adjoint de l'École Doctorale Physique et astrophysique (PHAST ED52)

1 • Introduction

History and geographical location of the unit

The Institut de Physique Nucléaire de Lyon (IPNL) has been founded in 1961 and is located on the La Doua campus in Villeurbanne since 1963. IPNL is presently a joint research unit (UMR 5822) of the Institut National de Physique Nucléaire et de Physique des Particules (IN2P3) of the Centre National de la Recherche Scientifique (CNRS) and of the Claude Bernard Lyon 1 University. The laboratory is involved in most domains of subatomic physics, namely, particle physics of the Standard Model and beyond, astro-particles and cosmology, nuclear structure and quark-gluon plasma, transdisciplinary physics related to health and environmental applications. In addition, a theory group is conducting researches on all these fields together with more formal developments. The laboratory staff is 211 persons, including 144 permanents with CNRS or University positions.

Management team

Mr Guy CHANFRAY, Director

Mr Patrice VERDIER, Deputy Director

Mr Christophe PEAUCELLE, Technical Coordinator

Mrs Geneviève GATEAUD, Administrative Officer

HCERES nomenclature

ST2 Physique

Unit workforce

Unit workforce	Number as at 30/06/2014	Number as at 01/01/2016
N1: Permanent professors and similar positions	37	42
N2: Permanent researchers from Institutions and similar positions	26	30
N3: Other permanent staff (without research duties)	81	82
N4: Other professors (Emeritus Professor, on-contract Professor, etc.)	6	6
N5: Other researchers from Institutions (Emeritus Research Director, Postdoctoral students, visitors, etc.)	22	12
N6: Other contractual staff (without research duties)	7	6
TOTAL N1 to N6	**179**	**178**

Unit workforce	Number as at 30/06/2014	Number as at 01/01/2016
Doctoral students	32	
Theses defended	61	
Postdoctoral students having spent at least 12 months in the unit	14	
Number of Research Supervisor Qualifications (HDR) taken	7	
Qualified research supervisors (with an HDR) or similar positions	48	51

2 • Overall assessment of the unit

Global assessment of the unit

The committee recognizes that the scientific activities of IPNL is based on an extremely interesting and original pluridisciplinarity with high international impact and visibility. The IPNL operates relying on very competent technical and administrative services. It is present in the local regional reality with significant impact through outreach activity.

The experimental teams are committed to very important international projects and the theoretical group works in tight and supporting contact with the experimental activities. The interdisciplinarity opens possibilities of external contracts, very desirable to achieve the rich scientific program performed by IPNL. The laboratory is very attractive for high qualified PhD students, to whom the laboratory direction dedicates particular attention.

Strengths and opportunities in relation to the context

The high degree of international visibility of IPNL is translated into very important responsibilities, ranging from the leadership of a member of the CMS group for the entire upgrade project of the CMS detector, and the important role within the international France-China laboratory (LIA FCPPL) all the way to the responsibility for data handling and analysis for the CosFlow activity.

National rewards came through the appointment of one member of the theory group as IUF in 2013 and best PhD 2011 prize from the EADS foundation in Physics-Chemistry.

The successful pluridisciplinar research activity both in the experimental and theoretical fields is proved by hundreds of papers published in the relevant international scientific journals with a very high number of citations.

The IBEX project in the Radiation Science sector and the EUCLID project in the Astroparticles and Neutrino sector will strengthen the international visibility of IPNL in the respective fields.

The activity in the domain of radioactivity metrology and research in radiobiology is inserted in the local environment raising many possibilities of applications and interactions in the local social network and opening the possibility of connections with the local environment through external contracts from industries and state agencies like EDF and AREVA.

IPNL is operating on the university campus, and it brings very important innovative contributions to the academic life and organization with the creation of masters SYVIC and “licence professionelle”.

The internal organization of IPNL relies on administrative, representative (Conseil du Laboratoire) and scientific (Conseil Scientificque du laboratoire) bodies which allow the participation of all the components in the laboratory life. The technical teams, organized as a central service, put their high quality competence in the domain of mechanics, electronics, informatics, instrumentation, radioprotection and administration, at the service of the different experimental activities running at IPNL.

Weaknesses and threats related to the context

The committee expresses the worry about the smallness of some research groups, involved in international commitments, which could lead to the risk of not satisfying the responsibilities taken.

Some of the projects, like ILC which could not to be realized or phase 2 of Spiral2 which could be delayed, can imply a reconversion of some researchers into other activities. The committee however takes note that the direction of the laboratory is conscious of the risk, working actively towards trying to keep the continuity of the number of personnel in each project, including the administration service, even in the present unfavorable economic conjuncture.

In this respect, the committee takes also note that the technical services are sometimes overloaded, putting stress on defining priorities among the projects. The direction actively tries to cope with the decrease of the administration personnel, working also in upgrading the informatization of some aspects of the administrative work load.

The 4 MV machine starts to be too old for a reliable operation. The consequent low efficiency could jeopardize some of the acitivities related to the irradiation programs.

Recommendations

An important part of the scientific activity of IPNL relies on the 4 MV machine. The committee considers that the new machine project IBEX, which should replace and upgrade the old one, must be strongly pushed to give IPNL a leading role in the concerned sector. The committee recommends to give high priority to the project IBEX in its full design.

It is very important that the flow of information, from the direction to all the members of the community is kept at a satisfactory level. The internal organization already in place, gives the instruments which can be however improved, in order to reach all levels of IPNL members.

It could be very useful to introduce a support network for postdocs, similar to the one in place for students.

Exploiting the interdisciplinarity of the IPNL activity, a constant effort to find external contracts as well as European funding must be pursued. The opportunity to make of IPNL an important actor in the frame of the future “Grande region Rhone-Alpes-Auvergne” should not be missed.