ANNUAL
REPORT
2024

INSTITUTO DE FÍSICA CORPUSCULAR

IFIC
INSTITUT DE FÍSICA CORPUSCULAR

EXCELENCIA SEVERO OCHOA

VNIVERSITAT DE VALÈNCIA

CSIC
CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS

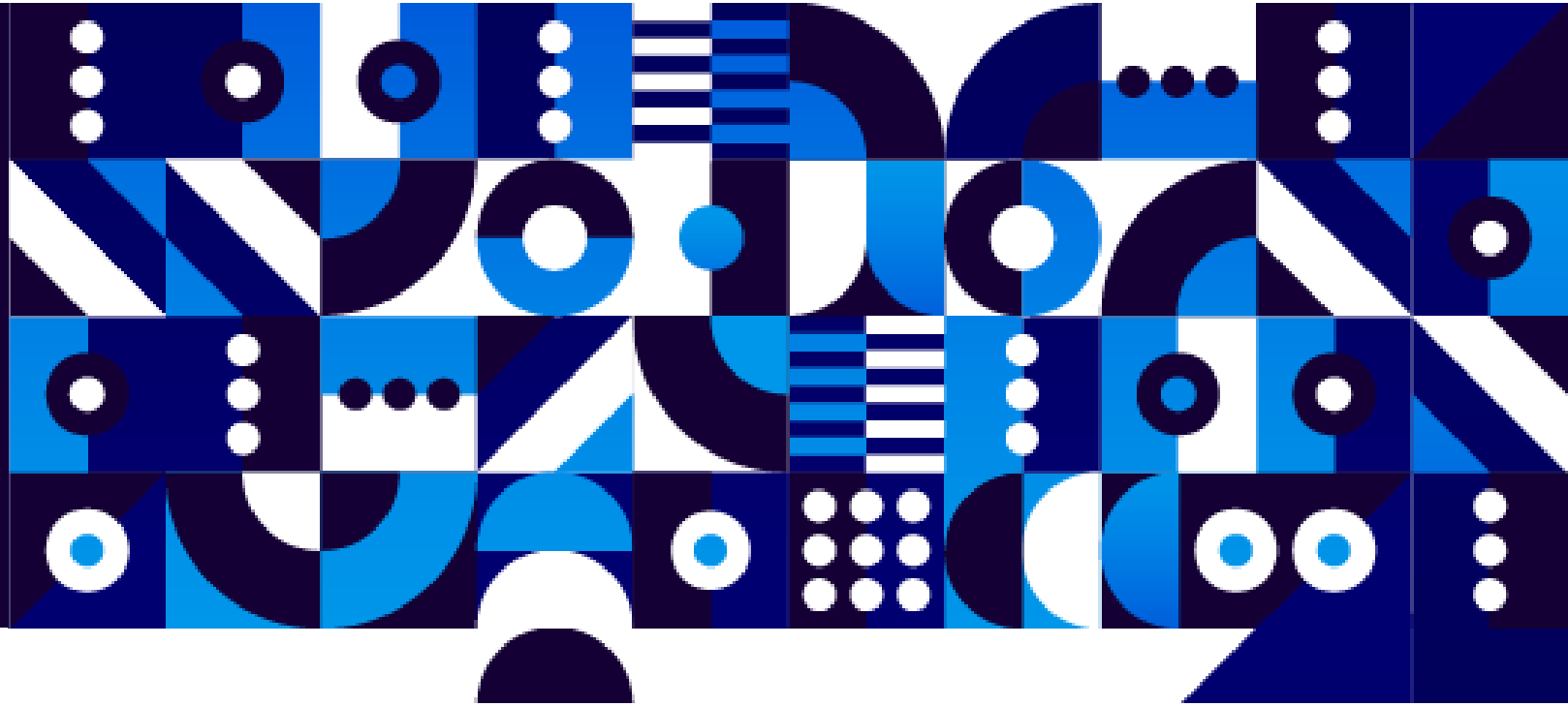


TABLE OF CONTENTS

1 WELCOME

2 HIGHLIGHTS

3 STRUCTURE AND ORGANIZATION

4 SCIENTIFIC PRODUCTION

5 TRAINING

6 FUNDING

ANNEXES

WELCOME

1 LETTER FROM THE DIRECTOR

Español

En 2024 el IFIC ha sido galardonado con el distintivo Centro de Excelencia Severo Ochoa. Quiero en primer lugar agradecer a todos los miembros del IFIC, tanto el personal docente e investigador como el personal técnico, de administración y comunicación, vuestro trabajo y tenacidad, que nos han llevado a este gran éxito.

Pero no ha sido el único, la investigación de alta calidad realizada en el IFIC ha recibido importantes reconocimientos en 2024, a todos los niveles, destacando sin duda el premio Nacional de Investigación en Física Blas Cabrera, con el que ha sido galardonada nuestra compañera Carmen García, profesora de investigación del CSIC. Además, María Moreno, investigadora Ramón y Cajal de la Universitat de València, ha sido una de las cinco investigadoras jóvenes españolas reconocidas por el programa L'Oreal-UNESCO "For Women in Science". Fernando Hueso, investigador postdoctoral CDEIGenT del CSIC ha recibido el premio del Grupo Cooperativo de Terapia de Partículas para desarrollar una nueva tecnología en protonterapia. El doctorando Jiahui Zhuo y el investigador postdoctoral CIDEGenT del CSIC Agustín Sánchez Losa, los premios "Early Career Scientist" de las colaboraciones LHCb y KM3Net, respectivamente. Sin olvidar por supuesto las tesis realizadas en el IFIC que han sido reconocidas: Jorge Roser, mejor tesis en Física Aplicada de la RSEF; Roberto Bruschini, tesis teórica premiada por el experimento PANDA y Adrià Delhom i Latorre y Joan Ruiz Vidal, premios extraordinarios de Doctorado 2023 de la Universitat de València. ¡Enhorabuena a todas y todos!

Por otro lado, como ya es habitual, varios investigadores del IFIC han asumido en 2024 importantes responsabilidades internacionales: Alejandro Algora es co-portavoz de la colaboración HISPEC-DESPEC de NUSTAR/FAIR; Lola Cortina ha sido nombrada miembro del GANIL Scientific Committee; Pilar Hernández vicepresidenta del Comité de Política Científica del CERN y Carlos Mariñas jefe de las operaciones de 'upgrade global' del detector japonés Belle II.

Para conocer con detalle los numerosos resultados de nuestra investigación en 2024, os invito a continuar leyendo esta memoria, anticipando que dentro de la física fundamental incluyen temas tan interesantes como la observación del entrelazamiento cuántico a altas energías en quarks top en el LHC y la recreación en el CERN de una reacción nuclear clave para conocer la evolución química de nuestra galaxia y del sistema solar.

En relación con el esfuerzo por transferir los resultados de nuestra investigación a la sociedad, quiero destacar en 2024 la creación de la spin-off HYBRIMS (Hybrid Imaging Systems), liderada por el investigador del CSIC Luis Caballero, participada por el CSIC y la Universitat de València. La empresa busca llevar al mercado un dispositivo de imagen biomédica para el guiado de la biopsia de cáncer en tiempo real. La tecnología utilizada —titularidad industrial de ambas instituciones públicas— proporciona de manera combinada datos metabólicos y morfológicos, que permiten una caracterización mucho más precisa de los tumores.

También dentro de esta línea, el IFIC albergará una infraestructura pionera de investigación en hadronterapia contra el cáncer, basada en un acelerador de iones de carbono. Esta infraestructura se construirá en colaboración con empresas españolas y el CIEMAT, y en diciembre de 2024 la ministra de Ciencia, Innovación y Universidades, Diana Morant, participó en el acto de firma del convenio de cesión de los terrenos por parte de la Universitat de València (UV) al Consejo Superior de Investigaciones Científicas (CSIC), para iniciar la primera parte del proyecto de construcción de esta instalación.

En octubre de este año recibimos la visita de nuestro Comité Científico Asesor, formado por investigadores de prestigio internacional, a los que agradecemos su implicación y sus consejos para seguir mejorando.

En 2024 también se cerró el primer ciclo de

Jornadas científicas del IFIC, con la correspondiente a la línea L3 “Flavour and quark matter" en enero, y volvimos a empezar con L1 “The Higgs Force" en diciembre.

Finalmente, entre los numerosos congresos y escuelas internacionales organizados por el IFIC en 2024, me gustaría destacar la segunda edición del workshop FlipPhysics, especialmente dedicado a dar una visión general de la física de partículas, nuclear y aplicaciones a jóvenes postdocs y doctorandas/os, y cuyo objetivo es también dar visibilidad a las investigadoras, promoviendo la participación de mujeres para intentar reducir la desigualdad de género en nuestro campo científico, que es todavía muy grande. Desde el IFIC seguimos comprometidos por la igualdad, también con una amplia actividad de divulgación en colegios e IES por el 11 de febrero, Día de la Mujer y la Niña en la Ciencia y una “master class" especial para potenciar la participación de las estudiantes de secundaria.

Nuria Rius

Directora del IFIC

1 LETTER FROM THE DIRECTOR

En Valencià

En 2024 el IFIC ha sigut guardonat amb el distintiu Centre d'Excel·lència Sever Ochoa. Vull en primer lloc agrair a tots els membres del IFIC, tant el personal docent i investigador com el personal tècnic, d'administració i comunicació, el vostre treball i tenacitat, que ens han portat a aquest gran èxit.

Però no ha sigut l'únic, la investigació d'alta qualitat realitzada en el IFIC ha rebut importants reconeixements en 2024, a tots els nivells, destacant sense dubte el premi Nacional d'Investigació en Física Blas Cabrera, amb el qual ha sigut guardonada la nostra companya Carmen García, professora d'investigació del CSIC. A més, María Moreno, investigadora Ramón y Cajal de la Universitat de València, ha sigut una de les cinc investigadores joves espanyoles reconegudes pel programa L'Oreal-UNESCO "For Women in Science". Fernando Hueso, investigador postdoctoral CDEIGenT del CSIC ha rebut el premi del Grup Cooperatiu de Teràpia de Partícules per a desenvolupar una nova tecnologia en protonterapia. El doctorand Jiahui Zhuo i l'investigador postdoctoral CIDEGenT del CSIC Agustín Sánchez Losa, els premis "Early Career Scientist" de les col·laboracions LHCb i KM3Net, respectivament. Sense oblidar per descomptat les tesis realitzades en el IFIC que han sigut reconegudes: Jorge Roser, millor tesi en Física Aplicada de la RSEF; Roberto Bruschini, tesi teòrica premiada per l'experiment PANDA i Adrià Delhom i Latorre i Joan Ruiz Vidal, premis extraordinaris de Doctorat 2023 de la Universitat de València. Enhorabona a totes i tots!

D'altra banda, com ja és habitual, diversos investigadors del IFIC han assumit en 2024 importants responsabilitats internacionals: Alejandro Algora és co-portaveu de la col·laboració HISPEC-DESPEC de NUSTAR/FAIR; Lola Cortina ha sigut nomenada membre del GANIL Scientific Committee; Pilar Hernández vicepresidenta del Comité de Política Científica del CERN i Carlos Mariñas cap de les operacions de 'upgrade global' del detector japonés Belle II.

Per a conéixer amb detall els nombrosos resultats de la nostra investigació en 2024, us convide a continuar llegint aquesta memòria, anticipant que dins de la física fonamental inclouen temes tan interessants com l'observació de l'entrellaçament quàntic a altes energies en quarks top en el LHC i la recreació en el CERN d'una reacció nuclear clau per a conéixer l'evolució química de la nostra galàxia i del sistema solar.

En relació amb l'esforç per transferir els resultats de la nostra investigació a la societat, vull destacar en 2024 la creació de la spin-off HYBRIMS (Hybrid Imaging Systems), liderada per l'investigador del CSIC Luis Caballero, participada pel CSIC i la Universitat de València. L'empresa busca portar al mercat un dispositiu d'imatge biomèdica per al guiat de la biòpsia de càncer en temps real. La tecnologia utilitzada —titularitat industrial de totes dues institucions públiques— proporciona de manera combinada dades metabòliques i morfològiques, que permeten una caracterització molt més precisa dels tumors.

També dins d'aquesta línia, el IFIC albergarà una infraestructura pionera d'investigació en hadronterapia contra el càncer, basada en un accelerador d'ions de carboni. Aquesta infraestructura es construirà en col·laboració amb empreses espanyoles i el CIEMAT, i al desembre de 2024 la ministra de Ciència, Innovació i Universitats, Diana Morant, va participar en l'acte de signatura del conveni de cessió dels terrenys per part de la Universitat de València al Consell Superior d'Investigacions Científiques (CSIC), per a iniciar la primera part del projecte de construcció d'aquesta instal·lació.

A l'octubre d'enguany rebem la visita del nostre Comité Científic Assessor, format per investigadors de prestigi internacional, als quals agraïm la seua implicació i els seus consells per a continuar millorant.

En 2024 també es va tancar el primer cicle de Jornades científiques del IFIC, amb la corresponent a la línia L3 "Flavour and quark matter" al gener, i vam tornar a començar amb L1 "The Higgs Force" al desembre.

Finalment, entre els nombrosos congressos i escoles internacionals organitzats pel IFIC en

2024, m'agradaria destacar la segona edició del workshop FlipPhysics, especialment dedicat a donar una visió general de la física de partícules, nuclear i aplicacions a joves postdocs i doctorandes/doctorands, i l'objectiu de les quals és també donar visibilitat a les investigadores, promovent la participació de dones per a intentar reduir la desigualtat de gènere en el nostre camp científic, que és encara molt gran. Des del IFIC seguim compromesos per la igualtat, també amb una àmplia activitat de divulgació en col·legis i IES per l'11 de febrer, Dia de la Dona i la Xiqueta en la Ciència i una "màster class" especial per a potenciar la participació de les estudiants de secundària.

Nuria Rius

Directora de l'IFIC

1 LETTER FROM THE DIRECTOR

English

In 2024, IFIC has been awarded the Severo Ochoa Centre of Excellence distinction. I would like to begin by thanking all IFIC members—teaching and research staff, as well as technical, administrative, and communication personnel—for your hard work and perseverance, which have led us to this great achievement.

But this has not been the only success. The high-quality research carried out at IFIC has received significant recognition in 2024 at all levels. Among these, we must highlight the National Research Award in Physics "Blas Cabrera", granted to our colleague Carmen García, CSIC research professor. In addition, María Moreno, Ramón y Cajal researcher at the University of Valencia, was one of five young Spanish researchers honored by the L'Oréal-UNESCO "For Women in Science" program. Fernando Hueso, postdoctoral CDEIGenT researcher at CSIC, received the Particle Therapy Cooperative Group Award for developing a new technology in proton therapy. Doctoral student Jiahui Zhuo and tenure-track CIDEGenT CSIC researcher Agustín Sánchez Losa received "Early Career Scientist" awards from the LHCb and KM3Net collaborations, respectively. We also celebrate the outstanding theses produced at IFIC that have been recognized: Jorge Roser, awarded best thesis in Applied Physics by the RSEF; Roberto Bruschini, whose theoretical thesis was honored by the PANDA experiment; and Adrià Delhom i Latorre and Joan Ruiz Vidal, recipients of the Extraordinary Doctorate Awards 2023 from the University of Valencia. Congratulations to all!

Moreover, as has become customary, several IFIC researchers have taken on major international responsibilities in 2024: Alejandro Algora is now co-spokesperson of the HISPEC-DESPEC collaboration at NUSTAR/FAIR; Lola Cortina has been appointed to the GANIL Scientific Committee; Pilar Hernández is now Vice-Chair of the CERN Scientific Policy Committee; and Carlos Mariñas is leading global upgrade operations for the Belle II detector in Japan.

To explore the many research results from 2024 in detail, I invite you to continue reading this report. It includes exciting developments in fundamental physics, such as the observation of quantum entanglement at high energies in top quarks at the LHC, and the recreation at CERN of a key nuclear reaction for understanding the chemical evolution of our galaxy and the solar system.

In terms of our efforts to transfer research outcomes to society, I want to highlight the creation in 2024 of the HYBRIMS (Hybrid Imaging Systems) spin-off, led by CSIC researcher Luis Caballero and with the participation of CSIC and the University of Valencia. The company aims to bring to market a biomedical imaging device for real-time cancer biopsy guidance. The technology—jointly owned by the two public institutions—combines metabolic and morphological data to enable a much more precise characterization of tumors.

Also within our transfer activities, IFIC will host a pioneering research infrastructure in hadron therapy against cancer, based on a carbon ion accelerator. This facility will be developed in collaboration with Spanish companies and CIEMAT. In December 2024, the Minister of Science, Innovation and Universities, Diana Morant, participated in the signing ceremony for the land transfer agreement from the University of Valencia to the Spanish National Research Council (CSIC), marking the start of the project's construction phase.

In October of 2024, we welcomed the visit of our Scientific Advisory Committee, composed of internationally renowned researchers. We thank them for their engagement and valuable advice to help us continue improving.

In 2024, we also concluded the first cycle of IFIC Scientific Days, with the session on research line L3 "Flavour and Quark Matter" in January, and restarted the cycle with L1 "The Higgs Force" in December.

Finally, among the many international conferences and schools organized by IFIC in 2024, I would like to highlight the second edition of the FlipPhysics workshop. This workshop is especially designed to provide an overview of particle and nuclear physics and their applications to young postdocs and PhD students, while also promoting visibility for women researchers, encouraging female participation in order to help reduce the still significant gender gap in our scientific field. IFIC remains committed to equality, with a wide range of outreach activities in secondary and high schools around February 11, the International Day of Women and Girls in Science, and a special masterclass to encourage the participation of female high school students in STEM university subjects.

Nuria Rius

IFIC Director

20

HIGHLIGHTS OF THE YEAR

2 HIGHLIGHTS OF THE YEAR

IFIC RECEIVES ONCE AGAIN THE SEVERO OCHOA DISTINCTION OF EXCELLENCE

IFIC has been distinguished as Severo Ochoa Center of Excellence for the second time, for the period 2024-2030 and with Verónica Sanz as Scientific Director. IFIC was awarded the Severo Ochoa distinction for the first time during 2015-2019. More information here and here.

CARMEN GARCÍA, NATIONAL RESEARCH AWARD 2024 IN THE CATEGORY OF PHYSICAL SCIENCES

Professor Carmen García has obtained the “National Research Award 2024" in the Blas Cabrera Physical Sciences modality. She is the first female recipient in this area since the Government grants these awards. More information here.

2 HIGHLIGHTS OF THE YEAR

MARÍA MORENO LLÁCER, AWARDED BY THE L'ORÉAL-UNESCO PROGRAM 'FOR WOMEN IN SCIENCE'

This award recognizes the work of five national researchers under 40 years of age. Moreno Llácer was awarded for her research on “Concept and origin of mass in the universe, why are we made of matter and not of antimatter?". More information here.

PILAR HERNÁNDEZ, NEW VICE-PRESIDENT OF THE CERN SCIENTIFIC POLICY COMMITTEE FOR 2024

The Scientific Policy Committee (SPC) was created at the origins of CERN in 1954 as a consulting body to establish the scientific objectives of the laboratory. Pilar Hernández is a member of this committee since 2020. A recent update of the SPC reference terms has spurred the creation of the role of vice-president, a position that Hernández now occupies. More information here.

2 HIGHLIGHTS OF THE YEAR

IFIC WILL HOST A PIONEERING INFRASTRUCTURE FOR HADRONTHERAPY RESEARCH AGAINST CANCER

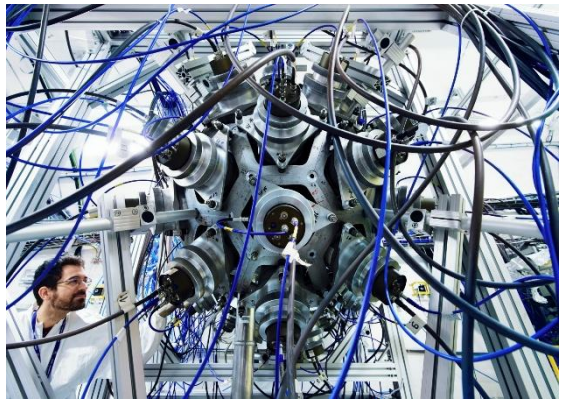
IFIC will host the first hadrontherapy research infrastructure in Spain based on a carbon ion accelerator, a pioneering technology against cancer. The infrastructure will be built in cooperation with Spanish companies and CIEMAT. More information here and here.

HYBRIMS, A NEW SPIN-OFF THAT DEVELOPS DEVICES FOR PRECISE DIAGNOSTICS AND IMPROVED PROGNOSIS FOR CANCER PATIENTS

A new spin-off from UV and CSIC will bring to the market a biomedical imaging device to help with real-time cancer biopsy. Luis Caballero is the main promoter of the company. More information here.

2 HIGHLIGHTS OF THE YEAR

KEY NUCLEAR REACTION RECREATED AT CERN TO UNDERSTAND THE CHEMICAL EVOLUTION OF OUR GALAXY AND OF THE SOLAR SYSTEM



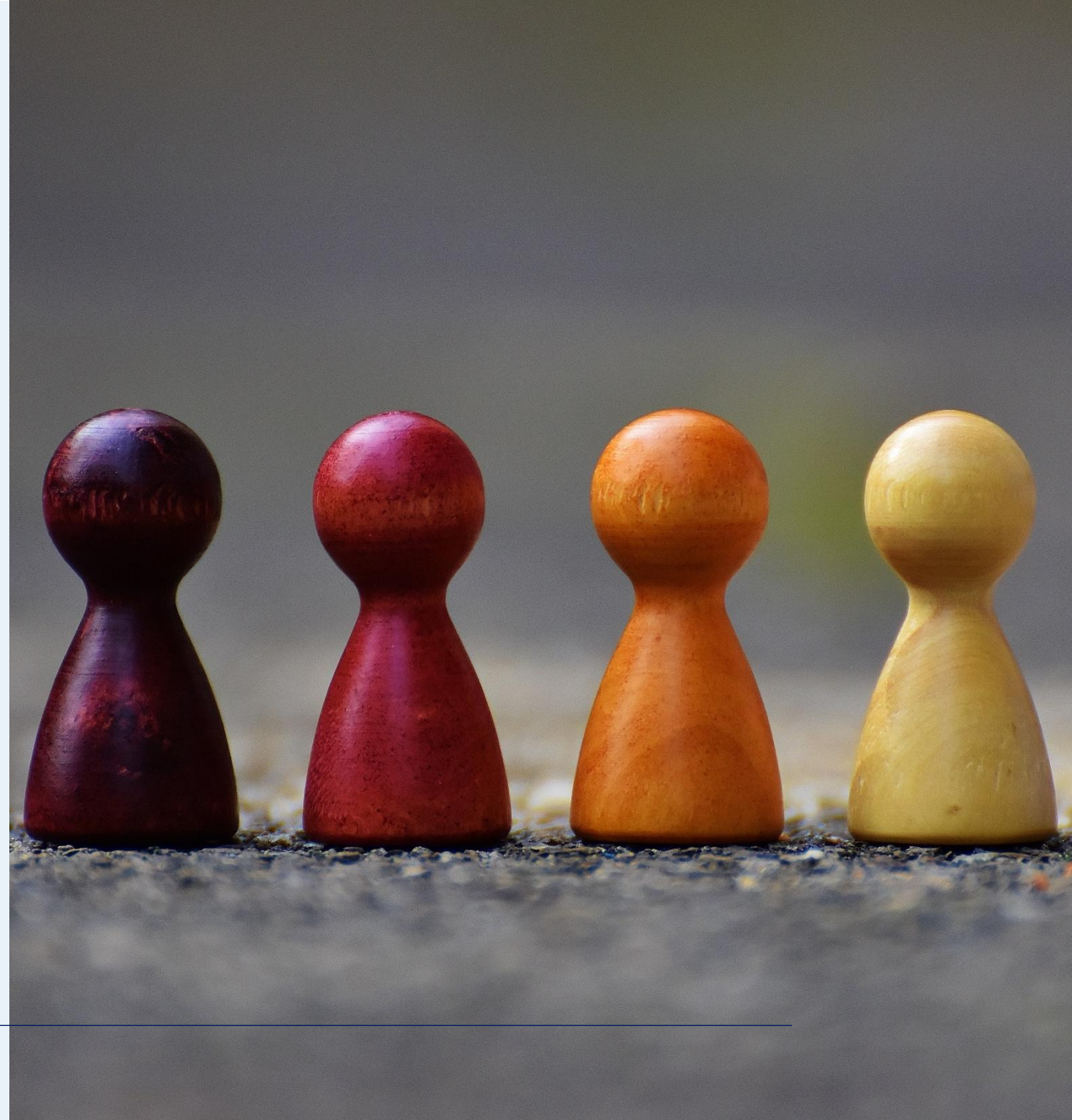
In a paper published in Physical Review Letters, a team led by IFIC details how Pb-204 is formed, an isotope that explains the evolution of the chemical composition of our galaxy since the first stars were formed. The formation of this isotope also allows us to date the first solid materials created in the Solar System. More information here.

THE ATLAS AND CMS EXPERIMENTS AT THE LHC OBSERVE QUANTUM ENTANGLEMENT AT HIGH ENERGY IN TOP QUARKS

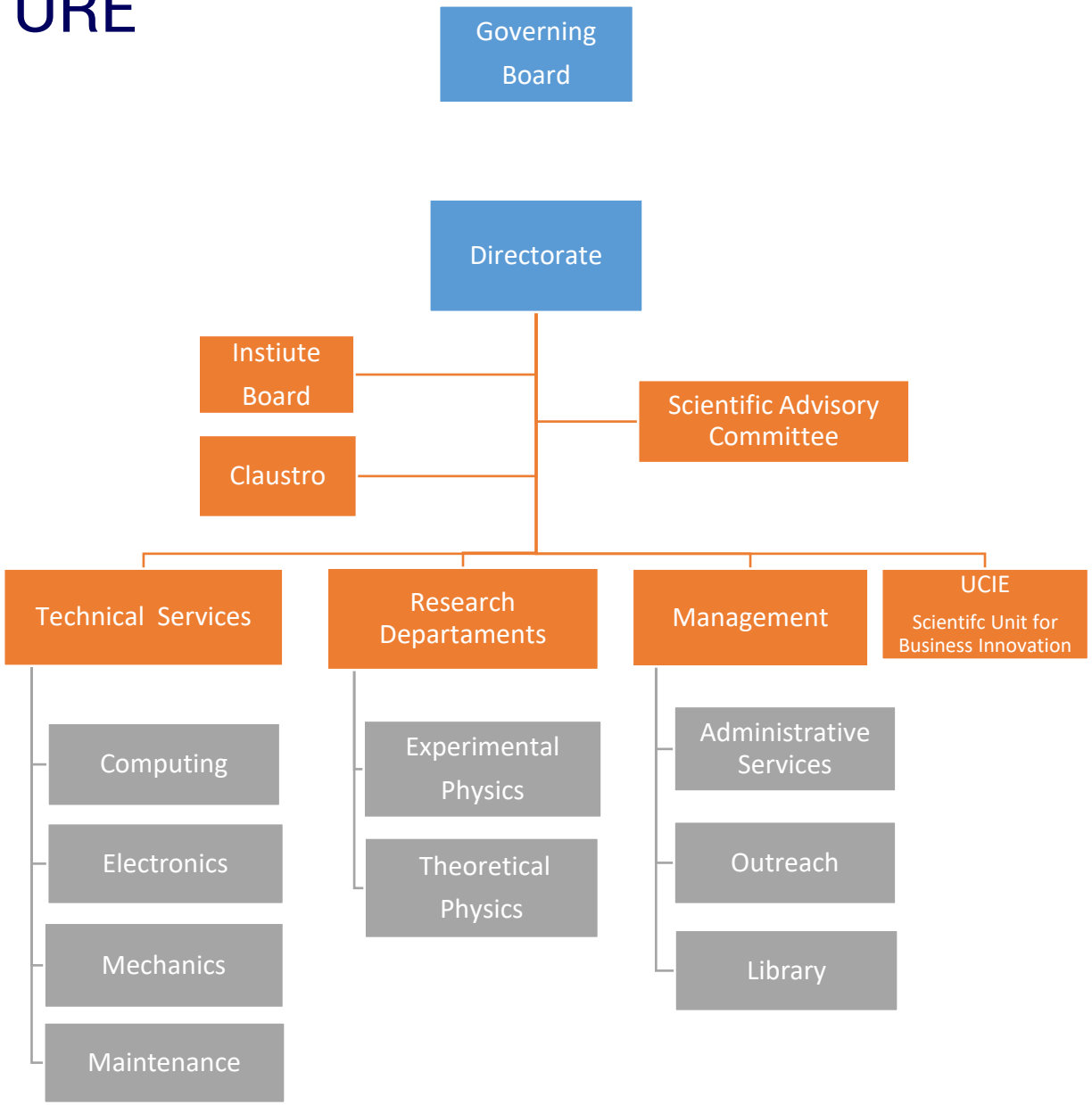
In an article published in 2024 in the journal Nature, the ATLAS collaboration explains how it observed the quantum entanglement between top quarks for the first time, and at the highest energy to date: 13 TeV. More information here.

3

STRUCTURE AND ORGANIZATION



3 IFIC STRUCTURE



3 STRUCTURE


Deputy Director
Sergio Pastor
Manager
Ana Fandos
Deputy Director
Michel Sorel
Deputy Director
José E. García
Director
Nuria Rius

3 STRUCTURE

Heads of the research departments

- **Experimental Physics** — Luca Fiorini and Ximo Poveda
- **Theoretical Physics** — Luis Álvarez

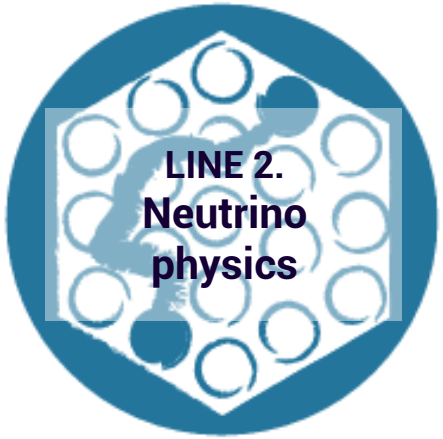
Personnel representatives

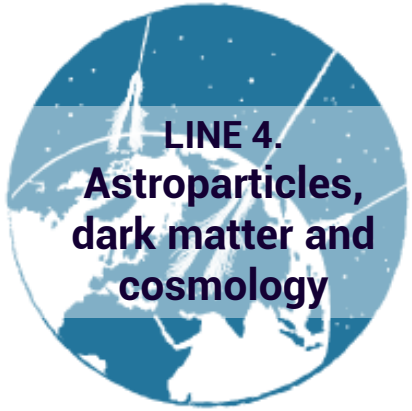
- **Non-PhD members** — Teresa Cámara and Javier Sánchez
- **PhD members** — Martín González

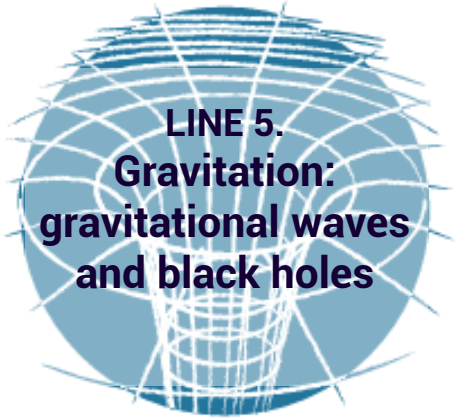
International Scientific Advisory Committee

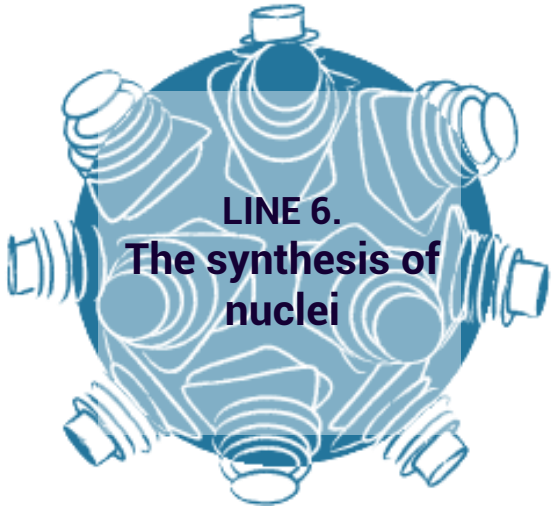
> Gustavo C Branco (CFTP/IST, Univ. Lisbon, Portugal)
> William Gelletly (Univ. Surrey, UK)
> Francis Halzen (Univ. Wisconsin, USA)
> Antonio Masiero (INFN and Univ. Padua, Italy)
> Tatsuya Nakada (EPFL Lausanne, Switzerland)
> Manuella Vincter (Univ. Carleton, Canada, and CERN)
> Bing-Song Zou (ITP, Chinese Academy of Sciences, China)

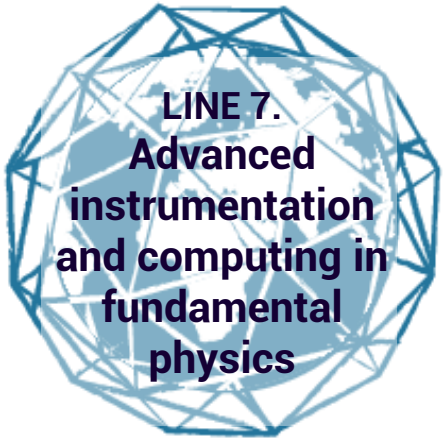
RESEARCH LINES









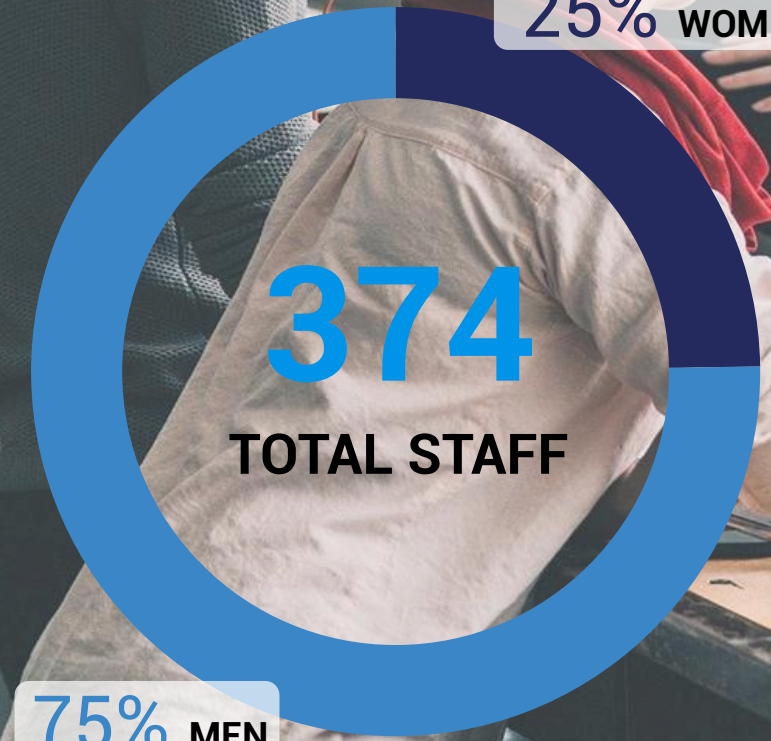


COMMITTEES

More information here

3 PERSONNEL

DECEMBER 2024



25% WOMEN

75% MEN

4% Administrative staff (non-permanent)

3,2% Administrative Staff (permanent)

15,2% Technical staff (non-permanent)

3,2% Technical staff (permanent)

15,5% Post-doctoral researchers

23% Permanent staff researchers

27,3% PhD Students

5,6% Tenure-track researchers

2,9% Professors emeriti and visiting researchers

Personnel list

4

SCIENTIFIC PRODUCTION

4 SCIENTIFIC OUTCOME

ARTICLES IN INDEXED JOURNALS 504
(ONLY DOCUMENT TYPE ARTICLE OR REVIEW). SEE ANNEX FOR FULL LIST OF PUBLICATIONS

90% **IN FIRST QUARTILE JOURNALS**
(JCR-WoS OR CITESCORE-SCOPUS, 2024)

TOP 5 JOURNALS
(BY IMPACT FACTOR, JCR-WoS) WITH IFIC AUTHORS

Nature (IF 50.5): 1
Reports on Progress in Physics (IF 19.1): 1
Science Bulletin (IF 18.8): 1
Nature Communications (IF 14.7): 1
Progress in Particle and Nuclear Physics (IF 14.5): 1

TOP 5 JOURNALS
(BY NUMBER OF PAPERS) WITH IFIC AUTHORS

108 Journal of High Energy Physics (IF 5.0)
102 Physical Review D (IF 4.6)
59 European Physical Journal C (IF 4.2)
37 Physics Letters B (IF 4.3)
41 Physical Review Letters (IF 8.1)

Full list of publications

4 CONFERENCES, WORKSHOPS, SEMINARS AND COLLOQUIA

CONTRIBUTIONS TO CONFERENCES AND WORKSHOPS	CONFERENCES AND WORKSHOPS ORGANIZED	COLLOQUIA ORGANIZED	SEMINARS ORGANIZED
359	28	10	121

Full list of events

4.1 CONFERENCES AND WORKSHOPS

CONTRIBUTIONS TO CONFERENCES AND WORKSHOPS

NATIONAL AND INTERNATIONAL CONFERENCES

IFIC researchers present their results in the main international conferences and workshops. A total of 359 contributions were presented in 2024: 340 talks (9 invited, 122 plenaries) and 19 posters.

359

CONFERENCES AND WORKSHOPS ORGANIZED

IFIC members have organized 28 conferences and workshops during 2024. The full listing can be found in Annex 3

28

Full list of events

4.2 COLLOQUIA

'SEVERO OCHOA' COLLOQUIA ORGANIZED

The colloquium series "Severo Ochoa" invites world leading experts in their area of science. Lectures are primarily devoted to particle, astroparticle and nuclear physics, but also explore other areas. Colloquia are open to scientists, personnel and students of other research institutes and science faculties. The outreach department shares Zoom recordings of the colloquia on the institute's Indico server. In 2024, IFIC celebrated 10 Severo Ochoa Colloquia. The listing can be found in Annex 4. Organizers: Alejandro Algora, Juan Herrero, Sergio Palomares, Arantxa Ruiz.

10

Full list of events

4.3 SEMINARS

SEMINARS ORGANIZED

Seminars are more specific research talks given by an invited speaker, usually connected to one of the IFIC research groups. Some of them are more informal talks followed by a discussion session, such as those within the Student Seminars series. In 2024 we hosted a total of 121 seminars, including 35 student seminars. The complete list can be found in Annex 5.

Organizers: Josu Cantero, Leandro Cieri, Andrea Donini, Carlos Escobar, Daniel G. Figueroa, Adrián Irles, Nicolás Loayza, Jacobo López, Neus López, Pablo Martinez, Omar Medina, Laura Molina, Raquel Molina, David Muñoz, Miguel Nebot, Sergio Palomares, Alberto Prades, David Valles, Avelino Vicente.

121

Full list of events

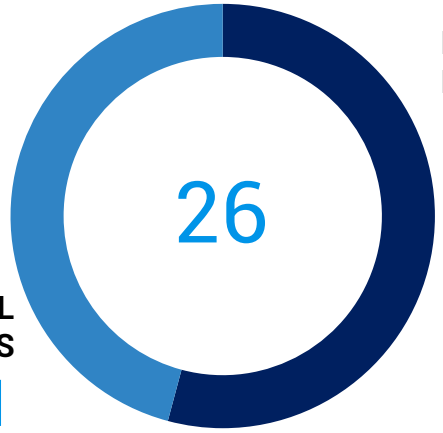
5

TRAINING

5 TRAINING

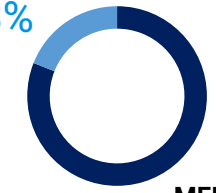
The members of IFIC with positions at the University of Valencia are mainly involved in its Degree in Physics, although they also teach in Chemistry and Engineering. At the postgraduate level, IFIC coordinates the Master's Degree in Advanced Physics at UVEG, and participates in the Master in Medical Physics at UVEG and in the Interuniversity Master of Nuclear Physics. In the former, we are responsible for two of the four specialities: Theoretical Physics and Nuclear & Particle Physics. IFIC also coordinates the PhD program in Physics at the UVEG.

PHD THESES WITH IFIC SUPERVISORS



EXPERIMENTAL PHYSICS 15

THEORETICAL PHYSICS 11



WOMEN 23%

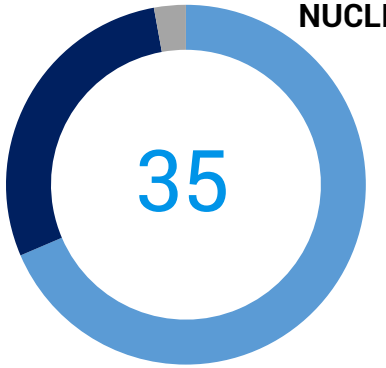
MEN 77%

Full list of PhD theses

MASTER PROJECTS

JOINT EUROPEAN MASTER DEGREE IN NUCLEAR PHYSICS (NUCPHYS) 1

UV MASTER'S DEGREE IN MEDICAL PHYSICS 10



UV MASTER'S DEGREE IN ADVANCED PHYSICS 24

Full list of Masters

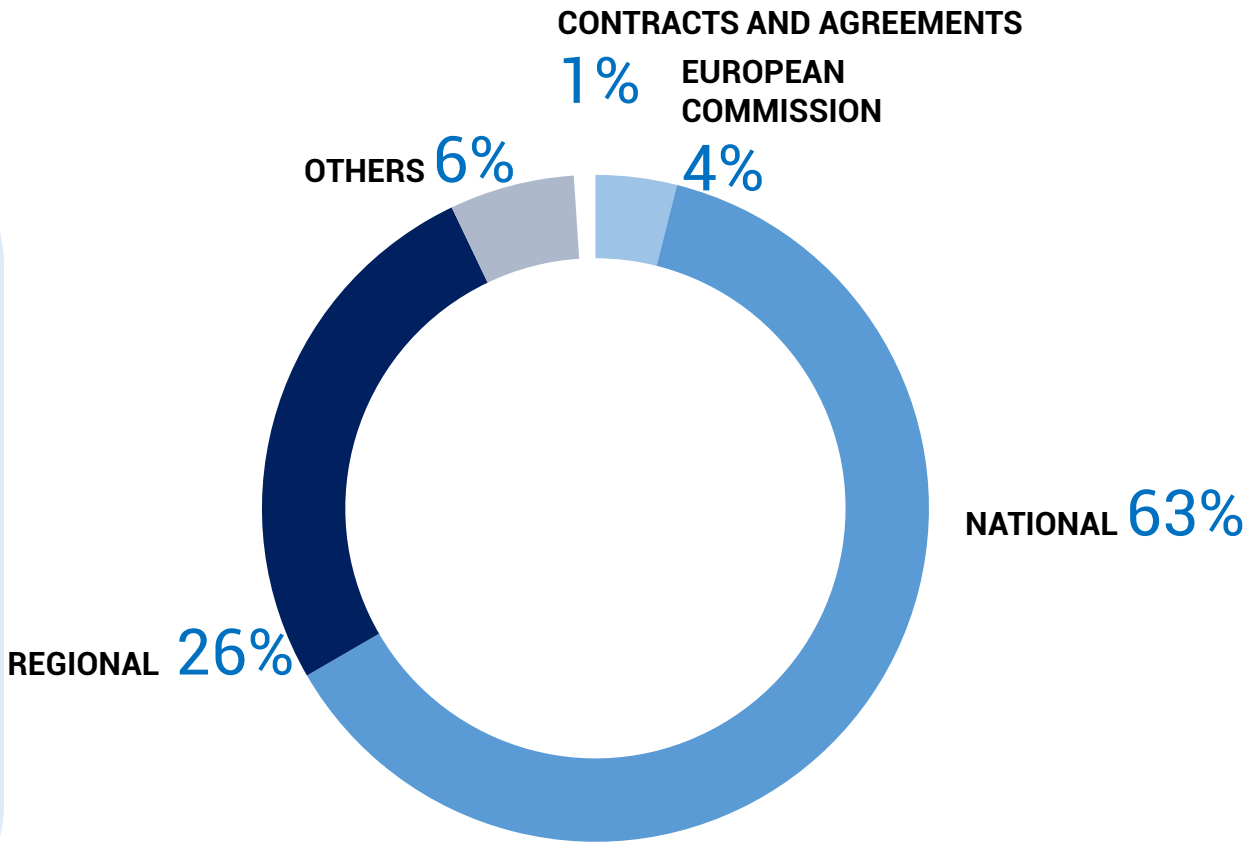
FUNDING

6 PROJECTS

* Map of experimental collaborations in fundamental physics with IFIC's participation

6 TOTAL INCOME BY SOURCE

NATIONAL PROJECTS	11,465,889.32 €
EUROPEAN PROJECTS	718,847 €
REGIONAL PROJECTS	4,803,316.72 €
OTHER PROJECTS	1,107,346.22 €
CONTRACTS AND AGREEMENTS	189,330.75 €
TOTAL	**18,284,730.66 €**



Full list of grants

ANNEXES

1 Personnel List

Permanent staff researchers: 86

Albiol Colomer, Francisco Javier
Algora, Alejandro
Alvarez Ruso, Luis
Barenboim Szuchman, Gabriela
Benlliure Anaya, José
Bordes Villagrasa, José Manuel
Botella Olcina, Francisco J.
Caballero Ontanaya, Luis
Cabrera Urbán, Susana
Campanario Pallás, Francisco
Cases Ruiz, Ramón
Castillo Giménez, M. Victoria
Cervera Villanueva, Anselmo
Cortina Gil, María Dolores
Costa Mezquita, María José
Domingo Pardo, César
Donini, Andrea
Díaz Medina, José
Escobar Ibáñez, Carlos
Fabbri, Alessandro
Figueroa, Daniel G.
Fiorini, Luca
Fuster Verdú, Juan A.
Gadea Raga, Andrés
Garcia Navarro, José Enrique
García García, Carmen
Gimeno Martinez, Benito
González Alonso, Martín
González de la Hoz, Santiago
González Marhuenda, Pedro
Hernández Gamazo, Pilar
Hernández Rey, Juan Jose
Herrero García, Juan Andrés
Hirsch, Martin
Lacasta LLacer, Carlos
Lledó Barrena, Mª Antonia
Llosá Llácer, Gabriela
Lopez March, Neus
Lopez Pavon, Jacobo
Mariñas Pardo, Carlos Manuel
Marti García, Salvador
Martínez Vidal, Fernando
Mena Requejo, Olga
Mitsou, Vasiliki
Molina Peralta, Raquel
Navarro Salas, José
Nebot Gómez, Miguel
Nieves Pamplona, Juan Miguel
Novella Garijo, Pau
Nácher González, Enrique
Olmo Alba, Gonzalo
Orrigo, Sonja Elena Agata
Oyanguren Campos, Arantza
Palomares Ruiz, Sergio
Papavassiliou, Ioannis
Pastor Carpi, Sergio
Pich Zardoya, Antonio
Portoles Ibañez, Jorge
Poveda Torres, Joaquin
Pérez Cañellas, Armando
Ramos Martínez, Alberto
Rius Dionis, Nuria
Rodrigo García, Germán
Ros Garcia, Ana
Rubio Barroso, Berta
Ruiz de Austri Bazan, Roberto
Ruiz Martínez, Arantxa
Salesa Greus, Francisco
Salt Cairols, José
Santamaría Luna, Arcadi
Sanz González, Veronica
Sorel, Michel
Tarifeño Saldivia, Ariel
Taín Enríquez, José Luis
Torró Pastor, Emma
Tortola Baixauli, Mª Amparo
Valls Ferrer, Juan Antonio
Vicente Montesinos, Avelino
Vicente Vacas, Manuel
Vidal Perona, Jorge
Vijande Asenjo, Javier
Vives García, Oscar
Vos, Marcel
Yahlali Haddou, Nadia
Zornoza Gómez, Juan de Dios
Zuñiga Román, Juan

Tenure-track researchers: 21

Albaladejo Serrano, Miguel
Cantero García, Josu
Cieri, Leandro Javier
De Romeri, Valentina
Esperante Pereira, Daniel
García Cely, Camilo Alfredo
Gessner, Manuel
Gozzini, Sara Rebecca
Gross, Christian
Hagedorn, Claudia
Irles Quiles, Adrian
Martín-Albo Simón, Justo
Molina Bueno, Laura
Morales Lopez, Ana Isabel
Moreno Llácer, María
Passemar, Emilie
Renner, Joshua Edward
Sanchez Losa, Agustin
Villaplana Pérez, Miguel
Zaldívar Montero, Bryan
Zurita, José Francisco

Professors emeriti and visiting researchers: 11

Azcárraga Feliu, José Adolfo de
Bernabéu Alberola, José
Fassi Imlahi, Farida
Ferrer Soria, Antonio
Furtado Valle, José Wagner
Higón Rodriguez, Emilio
Noguera Puchol, Santiago
Oset Báguena, Eulogio
Peñarrocha Gantes, José Antonio
Sanchis Lozano, Miguel Angel

Vento Torres, Vicente

Post-doctoral researchers: 58

Alcalá Escalona, Gustavo Adolfo
Aparício Pereira Magalhaes Alv, Joao
Ardu, Marco
Balibrea Correa, Javier
Barrientos Mauriz, Luis Alfredo
Bera, Mohit Lal
Berbig, Maximilian
Bhattacharya, Arunima
Boronat Arevalo, Março
Carrió Argos, Fernando
Cecchini, Vincent
Coutiño de León, Sara
Curcio, Francesco
Dhani, Prasanna Kumar
Feijoo Aliau, Eduardo Alberto
Franco Patiño, Juan Manuel
Fuster Martinez, Nuria
Garcia Folgado, Miguel
García Soto, Alfonso Andrés
Giachino, Alessandro
Hati, Chandan
Hernandez Garcia, Josu
Huang, Shan
Hueso Gonzalez, Fernando
Höfer, Judith
Juhasz, Marcell
Karan, Anirban
Landini, Giacomo
Lang, Nicolas
Lerendegui Marco, Jorge
Lucio Martínez, Miriam
Mantani, Luca
Melini, Davide
Miramontes López, Angel Salvador
Nath, Newton
Novoa Brunet, Martín Rodrigo
Papoulias, Dimitrios
Penalva Martinez, Neus
Perez Vidal, Rosa Maria
Prakash, Suraj
Rahat, Moinul Hossain
Rodriguez Sanchez, Antonio
Rosario Bonastre, Ivan
Salamatin, Kirill
Salas Bernardez, Alexandre
Sanchez Sebastian, Victoria
Sanderswood, Izaac Gregory
Shergold, Jack David
Shi, Pan Pan
Simakachorn, Peera
Soto Otón, José Alfonso
Stefanek, Benjamin
Strugari, Matthew Evan
Sánchez García, Gonzalo
Torres Sánchez, Pablo
Tortajada Velert, Salvador
Vobbilisetti, Vidya Sagar
Wang, Deng
Zakareishvili, Tamar

PhD students: 102

Agius, Dominic Alfred Klaus
Ahuja, Sonakshi
Aikot, Arya
Almanza Soto, Melissa
Amar Es-Sghir, Hamza
Amerio, Aurelio
Autieri, Andrea
Bariego Quintana, Adriana
Barón Ospina, David Alejandro
Bas Beneito, Arnau
Beltrán Lloría, Rebeca
Bernardino Gameiro, Bernardo
Blasco Gil, Pablo Agustín
Camilletti, Giovanni
Capó Torres, Jordi
Carrasco Mejía, Juliana Mara
Carrión Martínez, Clara
Cervelló Duato, Antonio
Chitishvili, Mariam
Conde Villatoro, Daniel Eduardo
Cortés Parra, Camilo Andrés
De la Cruz Alzaga, Sergio
De la Fuente Rosales, Gabriel
Di Meglio, Francesco Paolo
Didenko, Mariia
Dimitriou, Androniki
Dávila Illán, Juan Manuel
Escalante Castro, José Manuel
Fernández Ortega, Juan carlos
Ferrando Solera, Sergio
Fonseca Vargas, Angie Carolina
García Lorenzo, Amador
García Martínez, Irene
García Pol, Victoria
Garrido Rey, Laura
Garvey, Declan Daniel
Gomez Delegido, Antonio Jesus
Gómez Lurbe, Rafael
Hajjar Muñoz, Rasmi Enrique
Hermosilla Sobarzo, Paula
Herrero Brocal, Antonio
Illicachi Guamán, Ruth Micaela
Ion, Luca Petru
Jiménez Ortega, Miguel
Kellerer, Fabian
Kundu, Mallicka
Lanzac Berrocal, Marta
Lazo Pedrajas, Alfonso
Lessing, Nadja
Libralon, Simone
Loayza Romero, Nicolas
Marañón González, Francisco Javier
Marsili, Luca
Martinez Vara, Miryam
Martín Galán, Ana
Martín Luna, Pablo
Martínez de Lejarza Samper, Jorge Juan
Martínez López, Eduardo
Miró Arenas, Carlos
Montesinos Llácer, Víctor
Musumeci, Emanuela
Muñoz Candela, Pablo

Muñoz Ovalle, Alejandro
Muñoz Perez, David
Márquez Hernández, Jesús Pedro
Palacios Gonzalez, Juan
Parra Aedo, Selene Bárbara
Pastor Gómez, Emilio Jesús
Pattnaik, Baibhab
Pedraza Motavita, Laura Karina
Peñalver Mares, Daniel
Prado González, Jorge
Pyretzidis, Konstantinos
Pérez Curbelo, Javier
Pérez Soler, Javier
Queiroz Correa, Daniel
Rebollo de Miguel, Miguel
Reina Valero, José
Renteria Estrada, David Francisco
Roche Fernández, Andrea
Rodríguez García, David
Rubio Jiménez, Adrián
Saharia, Pokhee
Saina, Adrian
Senthilkumar, Varsha
Simeó Vinaixa, Mireia
Svintozelskyi, Volodymyr
Sánchez Muñoz, Julián Andrés
Taylor Vara, Ryan James
Terrones Aragón, Adrián
Tolino, Agnese
Torres Reoyo, Eduardo
Tuzi, Mirald
Ureña González, Julio
Valiente Moreno, Enrique
Valori, Nicola
Vatsyayan, Drona
Villamil Santiago, Juan David
Vincent, Morvan
Wandall-Christensen, Katinka
Zhuang, Zejian
Zhuo, Jiahui

Technical staff (permanent): 12

Bernabeu Verdú, José
Carrasco de Fez, Rosa
Cámara García, María Teresa
Fernández Casaní, Álvaro
G. B., Adrián
González González, Francisco
Marco Hernández, Ricardo
Martínez Saez, Carlos
Mestre Antoni, Josep Vicent
Nácher Arándiga, Jorge
Sánchez Martínez, Fco. Javier
Valero Biot, José Alberto

Technical staff (non-permanent): 57

Agramunt Ros, Jorge
Ballester Rodrigo, José
Benítez Montiel, Carlos Gaspar
Blanch Gutierrez, Cesar
Blasco Miquel, José
Brzezinski, Karol Wiktor
Burriel Navarro, Helena
Camacho Juárez, José Manuel
Capilla Fernández, Elvira
Cisterna, Gastón
Costa Pavía, Antonio
Delgado Belmar, Ana Isabel
Delgado Belmar, Vanesa
Deltoro Berrio, Jose Manuel
Elesgaray Susierra, Oihan
Esteban Ferrer, Guillermo
Fuentes Castilla, Angel
Gallego Baviera, Francisco Javier
Gandía Escribá, Manuel
Gutiérrez Arance, Héctor
Hernández Navalón, David
Hervás Álvarez, Francisco
Kholoimov, Valerii
Ladarescu Palivan, Ion
Lisa Laborda, Jorge
Lopez Redondo, Manuel
López Gómez, Jose Luis
López López, Hanlez
Manzaneda García, Mario
Mazorra de Cos, José
Menéndez Márquez, Abraham
Moncho Francés, Jaume
Moreno Lario, Alberto
Orero Canet, Carlos
Pascua Ramón, Guillermo
Paz Castro, Santiago
Platero Garcia, Adrian
Platero Montagut, Vicente
Pérez García, Alejandro
Querol Segura, Marc
Ramírez Tejerina, Wilson Daniel
Rivera Nebot, Antonio Daniel
Rodriguez Cespedosa, Nicolas
Rodríguez Sánchez, Maitane
Rubí Bort, Josep
Salinero Delgado, Matias
Sanchis Moltó, Andrea
Senra Moledo, Cesar
Solaz Contell, Carles
Soldevila Serrano, Urmila
Such Borràs, Paula
Tchogna Davis, Daniel
Teruel Pardo, Simón
Uzum, Roberto Andreeas
Vico Gil, Santiago
Vérez-Fraguela Cerdeira, José Luis
Álvarez Puerta, Jesús

Administrative and outreach staff (permanent): 12

Aguilar Argilés, Teresa
Charco Plaza, Oro
Claramunt Pedrón, Luis Miguel
Fandos Lario, Ana María
Ferrer Lazaro, Jose Manuel
Fillol Ricart, Amparo
Garcia Gonzalez, Soledad
Gonzalez Romeu, Maria Teresa
Mas Villar, Montserrat
Monzón Herrero, Benjamín

Salgado Lopez, Oscar
Vicent Beneito, Blanca

Administrative and outreach staff (non-permanent): 15

Armenteros Ruiz, Gema
Falcó Moreno, Nuria
Ferrer Lluch, Pablo David
Fillol Lacruz, Raquel
García Moner, Ignacio
Gracia Vidal, Maria Jose
Hernando Recuero, Maria Luisa
Molina Ruiz, Angela
Monserrate Fandos, María
Novo Picouto, José Carlos
Pérez García, José
Rubiera Prats, Chabely
Rubio Padilla, Azahara
Taberner Ubeda, Mª Eva
Tokai, Andrea

Total staff: 374

2 Publications

The full list of scientific publications in 2024 is available at the IFIC Literature Database

3 Conferences and workshops organized

- Towards a realistic forecast detection of Primordial Gravitational Wave Backgrounds, Dec 9-13
- Atmospheric Neutrinos: Experiments and Phenomenology, Dec 4-5
- LatticeNET meeting, Oct 10-11
- Fourth MODE Workshop on Differentiable Programming for Experimental Design, Sep 23-25
- TWOCRYST and ALADDIN Workshop, Sep 18-20
- ATLAS TDAQ Week, Sep 16-20
- QuantFunc2024, Sep 2-6
- Jornadas de la Red Española de Futuros Colisionadores, Jul 1-2
- LHCPHENO 2024: Workshop on High-Energy Physics Phenomenology in the LHC era, Jun 19-20
- Magnificent CEvNS 2024, Jun 12-14
- Jornadas RF-Track: Accelerator and Beam Physics Computing, Jun 6-7
- Nuclear Structure and Dynamics - NSD 2024, May 27-31
- Workshop on top quark mass measurements, May 21-23
- @FlipPhysics, May 21-24
- Valencia Quantum Spain mini-workshop, May 13

3 Conferences and workshops organized

- Key Elements in Proposal Writing for Horizon Europe, Apr 25
- 9ª Reunión Presencial del Proyecto VMGRID (ATLAS TIER2 ESPAÑA) , Apr 12
- NSTAR mini-Workshop, Apr 9-.12
- ATLAS E/Gamma Workshop 2024, Apr 9-12
- ASFAE 2024 WORKSHOP, Mar 4-6
- Workshop on Technologies & applied research at the future Valencian proton-therapy facility, Feb 21-23
- Calorimetry R&D for LUXE and future colliders, Feb 13-17
- Hirschfest, Jan 23-24
- Excited QCD (eQCD), Jan 15-19

4 Colloquia organized

- Benjamin Grinstein, "The neutron decay anomaly and dark neutron decay", Dec 5
- Francis Halzen, "IceCube: The First Decade of Neutrino Astronomy", Oct 23
- Hamid Aït Abderrahim, "Sustainable nuclear energy: the MYRRHA project", Sep 26
- Isabel Díaz, "Zeolites for sustainable development", Jul 11
- Mauro Stefanon, "Unveiling the Secrets of Early Galaxy Formation with the James Webb Telescope", Jun 6
- Jeffrey S. Hangst, "Gravitational and spectroscopic studies of antimatter: the ALPHA antihydrogen experiment at CERN", May 9
- Marisol Martín González, "Engineering Metamaterials", Apr 18
- Carlos Argüelles, "High-energy neutrinos: a new trail towards new physics", Mar 14
- Monica Dietl, "Past and future of the EU Framework programme for research and innovation: an outlook", Feb 29
- Vincenzo Pavone, "Conversaciones (im)POSIBLES. Of Neutrality: Science, innovation and the politics of future", Jan 25

5 Seminars organized

- 19 Dec Víctor Bresó, "Topical seminar: A Lorentz-Equivariant Transformer for All of the LHC"
- 18 Dec Daniel Wendler, "Topical seminar: Teaming up MET plus jet with Drell-Yan in the SMEFT"
- 18 Dec Ameer Hamza, "Topological Data Analysis: A Naive Introduction"
- 18 Dec Luis Monsonis Romero, "#StudentSeminar: The top-quark mass measurement using tt+1jet events in the dileptonic final state with the full Run 2 data set at √s = 13 TeV with the ATLAS experiment."
- 17 Dec Vadim Baru, "IFIC seminars: Doubly heavy tetraquarks: insights from experiment and lattice QCD"
- 17 Dec Josu Sánchez Martín, "#Student Seminar: Columbite single-crystal CoV_2O_6 under High pressure: An XRD and Raman spectroscopy study"
- 16 Dec Surabhi Tiwari, "Topical Seminar: Corrections to Higgs boson mass in MSSM and resummation of the pseudoscalar Higgs rapidity distribution"
- 13 Dec Joao Penedo, "Topical seminar: A flavour of modular symmetry"
- 12 Dec Anshika Bansal, "Topical seminar: LCSR application to $D^+ \to \pi^+\ell^+\ell^-$"
- 11 Dec Balint Radics, "Topical seminar: "Neutrino oscillation parameter inference at the T2K experiment""
- 10 Dec Jose Benlliure, "IFIC Seminar: Laser-plasma particle acceleration and some medical applications"
- 05 Dec Jesús Pedro Márquez Hernández, "Future colliders (...and my PhD about it)"
- 03 Dec Alba Soto Ontoso, "IFIC seminar: "The PanScales project: next generation parton showers""

5 Seminars organized

- 29 Nov Pablo Sanchez Puertas, "Topical seminar: The electromagnetic form factor of the pion“
- 28 Nov Bernat Capdevila, "Topical seminar: Using Machine Learning Techniques to Increase Model Agnosticism in Statistical Analyses"
- 27 Nov Nicoló De Groot, "IFIC Seminar (ONLINE): Detecting relic neutrinos and measuring the neutrino mass with Ptolemy"
- 26 Nov Josh McFayden, "IFIC seminar: Top Secret(s): Probing the Standard Model with rare processes involving top quarks"
- 22 Nov Pablo Roig, "Topical seminar: Tau data are again useful to get a_mu in the SM"
- 19 Nov Gernot Eichman, "IFIC seminar: Exotic hadrons with functional methods"
- 15 Nov Dominik Suelmann, "Topical seminar: Effective field theory analysis of rare $|\Delta c|=|\Delta u|=1$ charm decays"
- 15 Nov Antonio Jesus Gomez Delegido, "#StudentSeminar: Unveiling the Higgs sector with tau-leptons using the ATLAS detector"
- 14 Nov Vincenzo Padulano, "ONLINE: The ROOT software project: modern features and future outlook"
- 14 Nov Adrian Saina, "#StudentSeminar: Searches for dark matter with the KM3NeT neutrino telescope"
- 12 Nov Rishav Roshan, "IFIC Seminar: Quantum gravity effects on dark matter and gravitational waves"
- 29 Oct Nicoló De Groot, "Postponed due to DANA -> IFIC Seminar: Detecting relic neutrinos and measuring the neutrino mass with Ptolemy"
- 23 Oct Andrés Ernesto Rentería Olivo, "#StudentSeminar: Exploring the Vacuum with Feynman Diagrams and Quantum Algorithms via the Loop-Tree Duality"

5 Seminars organized

- 22 Oct David Lin , "IFIC Seminar: "Parton physics from a heavy-quark operator product expansion: pion light-cone distribution amplitude as a case study""
- 17 Oct Julien Pépin, "#StudentSeminar: Study of exotic nuclei with Total Absorption Gamma-ray Spectroscopy“
- 15 Oct Wolfram Razintger, "IFIC Seminar: High-Frequency Gravitational Waves"
- 15 Oct Mariam Chitishvili, "#StudentSeminar: Angular Measurements in Top Quark Decays and EFT Constraints"
- 04 Oct Venture Capital: Encuentros en las primeras fases
- 01 Oct Miguel Escudero, "IFIC Seminar: Cosmological neutrino mass bounds after DESI and their potential BSM implications"
- 01 Oct Guilherme Catumba, "#StudentSeminar: The Higgs mechanism: a gauge-invariant perspective"
- 30 Sep Poulami Mandal, "Topical seminar: Status of extended Georgi-Machacek model in the light of NLO unitarity and latest Run II data from LHC"
- 24 Sep Alex Friedland, "IFIC Seminar: "Neutrino-assisted nucleosynthesis in a core-collapse supernova and its signatures""
- 18 Sep Elina Merkel, "Topical Seminar: HIDDeN outreach in Bologna: the inVISIBILI project"
- 12 Sep M. Carmen Pujades-Claumarchirant, "#StudentSeminar: Uso clínico de dosímetros OSL"
- 11 Sep Juan Manuel Cruz Martínez, "Topical Seminar: Challenges and developments on PDF determination"
- 10 Sep Javier Caravaca Rodríguez, "Topical Webminar: Photon imaging technologies for nuclear medicine therapy"
- 10 Sep Ander Simón Estévez, "Topical Seminar: Novel approaches to noble gas detectors for neutrino physics"

5 Seminars organized

- 09 Sep Joanna E. Sobczyk, "Topical Webminar: Nuclear physics for neutrinos"
- 06 Sep Stefano Gariazzo, "Topical Seminar: Standard and non-standard neutrino properties from cosmology"
- 05 Sep David Albandea, "#StudentSeminar: Sampling from complex probability distributions: from Monte Carlo methods to machine-learning normalizing flows"
- 04 Sep Ennio Salvioni, "Topical Seminar: New portals to the dark sector"
- 25 Jul Lorenzo Varriale, "#StudentSeminar: The importance of being Electron: an (ATLAS) unexpected journey"
- 23 Jul Igor Danilkin , "IFIC Seminar: Dispersive analysis of $\pi\pi, \pi\eta,~\rm{ and}~K\bar{K}$ final state interactions and its application to BESIII data"
- 19 Jul Andrea Guerrieri, "Topical Seminar: Bounds on QCD observables: Hadronic Strings, Glueball Scattering, and Meson Spectrum"
- 19 Jul Giorgia Tonani, "#StudentSeminar: Electromagnetic dipole moments measurement of Λ baryons at LHCb“
- 16 Jul Raúl Briceño, "IFIC Seminar: Three-body systems: from lattice QCD to Efimov"
- 15 Jul Andrea Abril Fajardo, "se-fis-med: Post-therapy 131-I dose quantification based on quality image enhancement"
- 15 Jul REMO
- 12 Jul Seminario UCIE: Principios y claves de la protección del software
- 05 Jul Aurore Courtoy, "Topical seminar: Distribution functions of the pion in phenomenology"

5 Seminars organized

- 04 Jul Vincent Mathieu, "The Search of Exotic Mesons at Jefferson Lab: status and future perspective“
- 21 Jun David Vanegas Forero, "Topical Seminar: Old problems new experiments: the quest for new physics at neutrino oscillation experiments"
- 21 Jun #StudentSeminar: Online Monitoring in Hadron Therapy
- 20 Jun Fabian Esser, "Fabian Esser, "#StudentSeminar: Climbing up the scales: A tale of Effective Field Theories and ALP adventures""
- 18 Jun Jisuke Kubo, "IFIC Seminar: Scale invariant extension of the Starobinsky inflation model and associated problems"
- 17 Jun Jayita Lahiri, "Topical seminar: High-scale validity of two Higgs doublet scenarios with a real scalar singlet dark matter"
- 11 Jun Louis Strigari, "IFIC Seminar: Astrophysical phenomenology at large scale neutrino detectors"
- 10 Jun Xiang-Gan Liu, "Topical Seminar: Near-Critical Behavior and Beyond in Modular Flavor Models"
- 10 Jun Yong Du, "Topical Seminar: "Towards unfolding new physics from the SMEFT global analysis and precision measurements""
- 06 Jun Fernando Gil-Domínguez, "#StudentSeminar: Studying quark mass dependence of meson resonances through an exotic example"
- 05 Jun Javier Yeste Torregrosa #StudentSeminar: Effects of the carrier gas in the growth of CdZnO by MOCVD: Simulation and Parametric Study

5 Seminars organized

- 04 Jun Austin Schneider, "IFIC Seminar: Dark sector searches with Coherent CAPTAIN-Mills"
- 03 Jun Priyotosh Bandyopadhyay, "Topical seminar: Displaced heavy leptons at colliders"
- 31 May Agostino Patella, "Topical Seminar: Extracting Scattering Amplitudes from Euclidean Correlators"
- 30 May Miguel Ángel Sanchez Conde, "Topical Seminar: NASA’s Fermi gamma-ray space telescope to unveil the dark side of the Universe"
- 30 May Federico Coro, "#StudentSeminar: Massive corrections in scattering amplitudes"
- 28 May Lukáš Gráf, "IFIC Seminar: Towards Unraveling the Lepton Number Violation"
- 24 May Luis Barrientos Mauriz, "#StudentSeminar: Results of MACACO Compton camera for proton therapy and its evaluation for radiotracers imaging"
- 23 May Bachir Moussallam, "Topical Seminar: Isospin symmetry and three-body rescattering in $D\to \bar{K}\pi\pi$ amplitudes"
- 22 May Andre Hoang, "Topical Seminar: Matching Parton Shower Evolution and Hadronization: A blueprint to resolve the MC top mass interpretation problem"
- 17 May Giovani Dalla Valle Garcia, "Topical Seminar: Not-so-inelastic Dark Matter"
- 16 May Salvador Urrea González, "#Salvador Urrea González: "ProtoDUNE: A potential new experiment at CERN!!!""
- 15 May Ali Esquembre Kucukalic #StudentSeminar: Introduction to quasiparticles in condensed matter physics: excitons and magnons

5 Seminars organized

- 14 May Michael Staelens, "IFIC Seminar: Exploring the Feebly Interacting Particle Frontier with the MoEDAL-MAPP Experiment at the LHC"
- 13 May Gustavo Alcalá, "#StudentSeminar: Finland! A Love-Hate Story of an Isotope"
- 09 May Jorge Juan Baeza Ballesteros, "#StudentSeminar: Lattice simulations of the early universe"
- 07 May Nejc Kosnik, "IFIC Seminar: Status of lepton universality within and beyond the Standard model"
- 03 May Alessandro Vicini, "Topical Seminar: Precision electroweak phenomenology at the LHC"
- 30 Apr Daniele Gaggero, "IFIC Seminar: Black Holes and Dark Matter"
- 25 Apr Andreu Font-Ribera, "Topical Seminar: First Cosmological Results from DESI"
- 23 Apr Ben Stefanek, "IFIC Seminar: Renormalization of the primordial inflationary power spectra"
- 15 Apr se-fis-med: Multi-institutional study on image quality from novel CBCT solution
- 15 Apr Mariia Didenko, "#StudentSeminar: Searching for LLP and background estimation"
- 11 Apr Victoria Sánchez Sebastián, "#StudentSeminar: Search for long-lived particles in the ATLAS hadronic calorimeter in association with a W boson using 13 TeV collision data"
- 09 Apr Ivan Esteban, "HiDDeN webinar: "Accreting neutron stars: the potential third MeV astrophysical neutrino source.""
- 04 Apr Federica Pompa, "#StudentSeminar: Neutrino masses from Astro- to Particle Physics"
- 26 Mar Davide Melini, "IFIC Seminar: Jets and machine learning for searches of new physics"

5 Seminars organized

- 26 Mar Pablo Martinez Reviriego, "#StudentSeminar: Limitations of conventional accelerators and novel solutions"
- 25 Mar Patrick Bolton, "Topical Seminar: Signatures of Light New Particles in B->K^(*) Emiss"
- 19 Mar Isabel Oldengott, "HiDDeN webinar: Cosmic QCD epoch at large lepton flavour asymmetries."
- 13 Mar Jeffrey Lazar, "Topical Seminar: The Tau Air-Shower Mountain-Based Observatory"
- 13 Mar Student Seminar Session: Applied Physics (2/2)
- 12 Mar Maksym Ovchynnikov, "IFIC Seminar: LHCb as a lifetime frontier experiment"
- 12 Mar Student Seminar Session: Applied Physics (1/2)
- 11 Mar Alexandre Salas-Bernárdez, "Topical Seminar: Flow-Oriented Perturbation Theory"
- 07 Mar Fernando Alvarado, "#StudentSeminar: Strong Interaction and Symmetry"
- 05 Mar Josu Hernandez, "IFIC Seminar: Limits on Heavy Neutral Leptons and Their Connection with Effective Operators"
- 04 Mar Michele Grossi, "POSTPONED: Topical Seminar: Quantum Computing for High energy physics: CERN perspective"
- 01 Mar #StudentSeminars: Department of Astronomy and Astrophysics Session
- 29 Feb Omar Medina, "#StudentSeminar: "Extra dimensions for particle physics""
- 27 Feb Venus Keus, "IFIC Seminar: Flavourful FIMP Dark Matter"
- 22 Feb Javier Silva-Malpartida, "#StudentSeminar: "Introduction to dark matter genesis in non-standard cosmology""
- 21 Feb Juan Racker, "Topical Seminar: Different approaches to leptogenesis with quasi-degenerate neutrinos"

5 Seminars organized

- 20 Feb Maximilian Berbig, "IFIC Seminar: Diraxiogenesis"
- 20 Feb Ricardo Rubio Oliver, "#StudentSeminar: Interferometric and holographic microscopy, a new cepstrum-based approach"
- 19 Feb Nils Peters, "se-fis-med: Accurate imaging for radiotherapy - an (un)solved problem"
- 19 Feb Hui Yun, "#StudentSeminar: Optical design and characteristics for an applied microscope using the M12 lens"
- 16 Feb Ting Cheng, "Topical Seminar: Neutrino Magnetic Moment. Signatures at IceCube"
- 14 Feb William Javier Torres Bobadilla, "Topical Seminar: On my adventures to compute multi-loop scattering amplitudes"
- 13 Feb Guillem Domènech, "HiDDeN webinar: Gravitational waves from primordial fluctuations."
- 13 Feb Grzegorz. Grzelak, "IFIC Seminar: The LUXE - Laser und XFEL Experiment - era of strong fields QED."
- 06 Feb Gaia Lanfranchi, "IFIC Seminar: The search for MeV-GeV Dark Matter and other feebly interacting particles at accelerators."
- 30 Jan Jack Shergold, "IFIC Seminar: Hunting for the cosmic neutrino background"
- 23 Jan Joel Jones, "IFIC Seminar: Placing Bounds on the Seesaw with Photons"
- 17 Jan Santiago Agüí Salcedo, "Topical Seminar: The Cosmological Tree Theorem"
- 16 Jan Susanne Westhoff, "IFIC Seminar: FIMP, the new WIMP"
- 10 Jan Michele Lucente, "IFIC Seminar: Thermal effects in freeze-in neutrino dark matter production"
- 08 Jan Javier Caravaca, "se-fis-med: In-vivo imaging of theranostics radionuclides"

6 PhD Theses 2024

THEORETICAL PHYSICS

- *Accelerating configuration generation in lattice field theories and applications*
David Albandea Jordán
Advisors: Pilar Hernández Gamazo and Alberto Ramos Martínez
December 17, University of Valencia
TESEO: 2574108

- *Quark mass dependence of hadron resonances*
Fernando Gil Domínguez
Advisor: Raquel Molina Peralta
December 13, University of Valencia
TESEO: 2568306

- *Hadron interactions and cosmic strings from lattice simulations*
Jorge Juan Baeza Ballesteros
Advisors: Pilar Hernández Gamazo and Daniel García Figueroa
October 18, University of Valencia
TESEO: 2553279

- *Probing neutrino physics with supernovae and rare decay searches*
Federica Pompa
Advisors: Olga Mena Requejo and Michel Sorel
October 14, University of Valencia
TESEO: 2552001

- *Family symmetry, neutrino masses, and dark matter stability*
Omar Medina Rosales
Advisors: José W.F. Valle and Carlos Vaquera Araujo
October 1, University of Valencia
TESEO: 2551581

- *Exploring UV completions of the Standard Model with Effective Field Theories*
Fabian Esser
Advisors: Verónica Sanz González, Martin Hirsch and Andrea Donini
September 19, University of Valencia
TESEO: 2554233

- *New Physics at Neutrino Detectors*
Salvador Urrea González
Advisors: Jacobo López Pavón and Pilar Coloma Escribano
September 12, University of Valencia
TESEO: 2551641

- *Effective Field Theories in Hadron Physics*
Fernando Alvarado Álvarez
Advisor: Luis Álvarez Ruso
July 18, University of Valencia
TESEO: 2531019

- *Quantum States in Cosmological Spacetimes and Entanglement in Quantum Field Theory*
Sergi Nadal Gisbert
Advisor: José Navarro Salas and Iván Agulló Rodenas
July 5, University of Valencia
TESEO: 2523747

- *Non-perturbative QCD dynamics in measurements of CP violation and rare decays in the charm sector*
Eleftheria Solomonidi
Advisors: Antonio Pich Zardoya and Luiz Vale Silva
May 21, University of Valencia
TESEO: 2523219

- *Low-energy quark-lepton interactions within and beyond the Standard Model*
David Díaz Calderón
Advisors: Martín González Alonso and Antonio Rodríguez Sánchez
February 2, University of Valencia
TESEO: 2497914

EXPERIMENTAL PHYSICS

- *Novel radio frequency accelerating cavity developments for compact linear accelerators in hadron therapy treatment*
Pablo Martínez Reviriego
Advisor: Benito Gimeno Martínez
November 29, University of Valencia
TESEO: 2563707

- *Electron efficiency measurements and search for Higgs boson production in association with top quarks with the ATLAS experiment*
Lorenzo Varriale
Advisor: Joaquín Poveda Torres
November 27, University of Valencia
TESEO: 2561724

- *Searching for neutral long-lived particles with hadronic decays in the ATLAS experiment and identification of non-collision backgrounds*
Victoria Sánchez Sebastián
Advisors: Santiago González de la Hoz and Emma Torró Pastor
October 28, University of Valencia
TESEO: 2564247

- *Beta spectrum shapes study for the prediction of reactors' antineutrino spectra*

6 PhD Theses 2024

Gustavo Adolfo Alcalá Escalona
Advisor: Alejandro Algora
October 24, University of Valencia
TESEO: 2552307

- *Enhancing Compton camera performance for in-vivo hadrontherapy monitoring with advanced readout electronics*
Rita Viegas
Advisors: Gabriela Llosá Llácer and Ana Ros García
October 22, University of Valencia
TESEO: 2555874

- *Performance improvement in a Compton telescope for hadron therapy treatment monitoring*
Luis Barrientos Mauriz
Advisors: Gabriela Llosá Llácer and Ana Ros García
September 27, University of Valencia
TESEO: 2556390

- *Search for lepton-flavour-violating decays of the Higgs boson and constraints on off-diagonal Yukawa couplings with the ATLAS detector*
Kieran Amos
Advisor: Luca Fiorini
July 8, University of Valencia
TESEO: 2526915

- *Developments on new Detector Technologies for High-Resolution Gamma Spectroscopy*
Stefano Bertoldo
Advisors: Andres Gadea Raga and Davide De Salvador
July 5 University of Valencia
TESEO: 2526600

- *Soluciones para la reconstrucción de aplicadores ginecológicos en braquiterapia sobre imágenes de resonancia magnética nuclear*
Antonio Otal Palacín
Advisors: Javier Vijande Asenjo and José Pérez Calatayud
May 24, University of Valencia
TESEO: 2518155

- *Towards a precise top quark mass measurement: Improved in-situ jet response measurements and interpretation of the Monte Carlo top quark mass parameter*
Naseem Bouchhar
Advisors: Miguel Villaplana Pérez and Marcel Vos
April 18, University of Valencia
TESEO: 2515209

- *Search for the Higgs boson produced in association with a top quark using τ leptons with ATLAS*
Pablo Martínez Agulló
Advisors: Carlos Escobar Ibáñez and Susana Cabrera Urbán
March 11, University of Valencia
TESEO: 2508570

- *Neutrino oscillations and invisible decay with the KM3NeT-ORCA detector*
Víctor Carretero Cuenca
Advisors: Juan Zúñiga Román and Juan de Dios Zornoza Gómez
March 8, University of Valencia
TESEO: 2496441

- *Studies of performance and background in a Compton camera for proton therapy treatment monitoring*
Marina Borja Lloret
Advisors: Gabriela Llosá Llácer and Ana Ros García
February 15, University of Valencia
TESEO: 2490174

- *Search for new physics in processes involving top quarks with the ATLAS experiment*
Josep Navarro González
Advisors: Carlos Escobar Ibáñez and José Enrique García Navarro
January 19, University of Valencia
TESEO: 2493240

- *Development of a likelihood-based top quark mass measurement using semileptonically decaying tt+jet events with the full Run 2 ATLAS dataset*
Alberto Prades Ibáñez
Advisors: Marcel Vos and Andrej Saibel
January 11, University of Valencia
TESEO: 2490909

Masters 2024

UV MASTER'S DEGREE IN ADVANCED PHYSICS

Theoretical physics

- *Análisis de correlaciones cuánticas en estrellas compactas*

Alejandro Andión Adrover
Advisors: Nicolás Sanchis Gual and Adrián del Río Vega

- *Renormalización del tensor energía-momento de un campo escalar cuántico en el interior de un agujero negro*

Pablo Agustín Blasco Gil
Advisor: Adrián del Rio Vega

- *Radiative neutrino masses and spontaneous lepton number violation*

Ángela Montserrat de Juan Jiménez
Advisor: Avelino Vicente Montesinos

- *Quantum Entanglement with Top Quarks: SMEFT Constraints and Reconstruction Level Effects*

Belén Durán González
Advisors: María Moreno and Marcel Vos

- *Neutrino masses from the inverse seesaw with flavour and CP symmetries*

Òscar Fontelles López
Advisor: Claudia Hagedorn

- *Dark Matter in the Minimal Non-Minimal Universal Extra Dimension Model*

David Galacho Martínez
Advisors: Andrea Donini and Roberto Ruiz de Austri

- *Studying dark matter with NA64*

Susana González Cantero
Advisors: Valentina de Romeri and Laura Molina Bueno

- *Higgs boson measurements at ATLAS as a way to constrain effective field theory coefficients*

Carlos Martín Fernández
Advisor: Luca Fiorini

- *Krylov subspace methods*

Fiona McAvinue Muñoz
Advisor: Armando Pérez Cañellas

- *The Earliest Laboratory: Neutrino Decoupling and Big Bang Nucleosynthesis as probes of Beyond the Standard Model* theories

Alberto Sánchez Vargas
Advisors: Gabriela Barenboim and Stefano Gariazzo

- *Bounds on Primordial Black Holes due to Cosmic Neutrinos and Hawking Radiation*

Héctor Sanchis Pérez
Advisor: Gabriela Barenboim

- *Hawking Radiation and Correlations*

Gonzalo Sancho Garrido
Advisor: Alessandro Fabbri

- *Acoplamiento del Axión con Quarks Top Ricardo Senabre Navarro*

Advisors: Verónica Sanz and Maria Moreno

- *El experimento COHERENT: un análisis fenomenológico*

Santiago Villodre Martínez
Advisor: Martin González Alonso

Nuclear and particle physics

- *Estimation of Systematic Errors in Deep Learning Methods applied to the extraction of ttbar resonances in ATLAS experiment*

Guillem Arbona Ferrer
Advisors: Santiago Gónzalez de la Hoz and José Salt Cairols

- *Quantum entanglement in top-antitop quark production in ATLAS experiment at LHC Pablo Copete Garrido*

Advisors: María Moreno Llácer and Marcel Vos

- *Compton camera studies for radionuclide therapy*

Cristina García Prado
Advisors: Gabriela Llosá and Karol Brzeziński

- *Characterization of the muon veto of NEXT DEMO*

María Hernández Fernández
Advisor: Jose Alfonso Soto Otón

- *Optimization of image quality of a probe for Total-Body PET*

Laura Navarro Cozcolluela
Advisor: Ana Ros García

- *Test/Optimization of scintillation detectors for range verification in proton therapy*

David Alexandre Pastor Pérez
Advisors: Enrique Nácher González and Marcos Martínez Roig

- *Photon collectors R&D for the DUNE Far Detector 3*

Andrea Roche Fernández
Advisor: Jose Alfonso Soto

- *Reconstruction studies of long-lived particles using early 2024 data from the upgraded LHCb detector*

Javier Velilla Serna
Advisors: Fernando Martínez Vidal and Izaac Sanderswood

7 Masters 2024

Astrophysics

- *Formación dinámica y estabilidad de estrellas de bosones multi-estado*

Alejandro José Florido Tomé
Advisors: Nicolás Sanchis Gual and Adrián del Río Vega

Photonics

- *Fabricación y estudios en criogenia de redes de Bragg en fibras ópticas para el experimento DUNE (Deep Underground Neutrino Experiment)*

Victoria García Pol
Advisors: José Luis Cruz and Nadia Yahlali

MASTER IN MEDICAL PHYSICS UV

- *Comparación de métodos dosimétricos post-tratamiento en radioembolización con microesferas de Itrio-90*
  Manuel De La Cruz González
  Co-advisor: Josu Cantero García

- *Estudio de protección radiológica en el entorno de un equipo LIAC HWL de Sordina mediante simulaciones con MCNP6.2*
  Beatriz García Costa
  Co-advisor: Juan de Dios Zornoza Gómez

- *Modelado y comisionado de un acelerador lineal TrueBeam, de Varian, en el sistema de planificación de tratamientos Pinnacle, de Philips*
  Lydia Pérez Ríos
  Co-advisor: Santiago González de La Hoz

- *Niveles de Referencia para Diagnóstico en Mamografía de la Comunidad Autónoma de la Rioja*
  Celestino Rodríguez Cobo
  Co-advisor: M. Victoria Castillo Giménez

- *Simulación de Rayos X para estudios de biodiversidad*
  Nesrine Salhi
  Co-advisor: Nadia Yahlali Haddou

- *Análisis de supervivencia celular para el estudio del efecto radiosensibilizador de nanopartículas de oro para hadronterapia*
  Guillermo Javier Seron Rodrigo
  Co-advisor: Nuria Fuster Martínez

- *Caracterización dosimétrica de fuentes de braquiterapia direccionales*
  José Torres Sánchez
  Advisor: Javier Vijande Asenjo

- *Design and characterization of an ultrasound holographic system for neurological therapy*
  Víctor Vegas Luque
  Co-advisor: Fernando Martínez Vidal

- *Simulación de una gamma cámara con aplicación veterinaria*
  Giorgia Yang
  Co-advisor: Miguel Villaplana Pérez

- *Monitorización de la hipoxia en tumores de cabeza y cuello tratados con radioterapia*
  Xiomara Lorena Zamudio Cifuentes
  Co-advisor: Neus López March

JOINT EUROPEAN MASTER DEGREE IN NUCLEAR PHYSICS (NUCPHYS)

- *Development and experimental validation of the neutron imaging capability of the dual gamma-neutron vision (gn-vision)*

Gastón Emanuel Cisterna
Advisors: Jorge Lerendegui-Marco and Carlos Guerrero

8 Grants

In the following, we list projects executed at IFIC that have been active during at least part of 2024. For conciseness, the following criteria have been used:
• The project dates refer to the ones at time of the granting of the project, without considering possible extensions
• Only projects obtained in competitive calls are listed
• Only projects with significant research funds beyond PI salaries are listed
• Only projects/contracts with funds exceeding 10,000 € are listed
On the other hand, funding from all projects/contracts are accounted for in the total income summary of the main part of this report.

NATIONAL PROJECTS

• Development of new Instrumentation and Techiques for in-flighr decay spectroscopy at DESPEC-FAIR
Ref. CNS2023-144871
PI: Ana Isabel Morales López
199,944 € (Apr 2024 – Jun 2026)

• Astronomía multimensajero con observaciones de rayos gamma y neutrinos
Ref. CNS2023-144099
PI: Francisco Salesa Greus
199,969.98 € (Apr 2024 – Jun 2026)

• New opportunities with CEvNS
Ref. CNS2023- 144124
PI: Valentina De Romeri
199,985.14 € (Apr 2024 – Jun 2026)

• Teorías efectivas en física hadrónica y nuclear
Ref. PID2023-147458NB-C21
PIs: Luis Alvárez Ruso, Miguel Albaladejo
271,750 € (Sep 2024 – Aug 2027)

• Estudios de estructura nuclear con espectroscopia gamma en haz y de desintegración. Construcción y desarrollo instrumental del multidetector de trazado AGATA
Ref. PID2023-150056NB-C41
PIs: Andrés Gadea Raga, Ana Isabel Morales
479,875 € (Sep 2024 – Aug 2027)

• El bosón de Higgs y la física de sabor en la frontera teórica
Ref. PID2023-146220NB-I00
PIs: Germán V. Rodrigo García, Martín González Alonso
338,750 € (Sep 2024 – Aug 2027)

• Astropartículas y Física de Altas Energías
Ref. PID2023-147306NB-I00
PIs: Martin Hirsch, Avelino Vicente Montesinos
249,000 € (Sep 2024 – Aug 2027)

• Contribución del IFIC al programa científico del experimento DUNE
Ref. PID2023-147949NB-C52
PIs: Anselmo Cervera, Nadia Yahlali
414,625 € (Sep 2024 – Aug 2027)

• Cosmología y origen de la materia
Ref. PID2023-148162NB-C22
PIs: Olga Mena Requejo, Daniel García Figueroa
312,500 € (Sep 2024 – Aug 2027)

• Convocatoria de adquisición de equipamiento científico-técnico del año 2024
Ref. EQC2024- 008353-P
PI: José Enrique García Navarro
1,203,175.60 € (Jan 2024 – Jun 2026)

• Adquisición integrada en red
Ref. PDC2023-145913-100
PI: Juande Zornoza
290,400 € (Jan 2024 – Dec 2025)

• Severo Ochoa
Ref. CEX2023-001292-S
PI: Verónica Sanz González
5,660,000 € (Apr 2024 – Mar 2028)

• El modelo estándar y sus extensiones
Ref. PID2023-151418NB-I00
PIs: Sergio Palomares Ruiz, Miguel Nebot Gómez
347,625 € (Sep 2024 – Aug 2027)

• Sabor y origen de la materia
Ref. PID2023-148162NB-C21
PIs: Pilar Hernández Gamazo, Verónica Sanz
400,000 € (Sep 2024 – Aug 2027)

• Quantum metrology with limited measurements
Ref. PID2023-152724NA-I00
PI: Manuel Gessner
78,750 € (Sep 2024 – Aug 2027)

• Retos actuales en gravedad y campos: aspectos clásicos y cuánticos
Ref. PID2023-149560NB-C21
PIs: Gonzalo Olmo Alba, Adrián del Río
113,750 € (Sep 2024 – Aug 2027)

• Participación española en estructuras de investigación en física de particulas, astropartículas y nuclear
Ref. RED2022-134204-E
PI: Antonio Pich Zardoya
60,000 € (Jan 2023 – Dec 2024)

• Evaluación del potencial de BabylAXO para detectar ondas gravitacionales y candidatos a materia oscura más allá del QCD axión
Ref. PID2022-137268NA-C55
PI: Camilo Alfredo García Cely
47,625 € (Sep 2023 – Aug 2026)

• Imagen médica para mejora de diagnóstico y tratamientos
Ref. PID2022-1432460B-I00
PI: Gabriela Llosa Llácer
175,000 € (Sep 2023 – Aug 2026)

• Investigando el entrelazamiento cuántico a altas energías con el detector ATLAS en el LHC
Ref. CNS2022-135718
PI: Carlos Escobar Ibáñez
178,110 € (Sep 2023 – Aug 2025)

• La constante de acoplo fuerte para física de alta precisión
Ref. CNS2022-136005
PI: Alberto Ramos Martinez
198,196 € (Sep 2023 – Aug 2025)

• Asentando la búsqueda de sectores oscuros en el experimento NA64 del CENR usando un haz de muones
Ref. CNS2022-135850

8 Grants

PI: Laura Molina Bueno
198,702 € (Sep 2023 – Aug 2025)

• Estudio de QED en regímenes extremos en LUXE
Ref. CNS2022-135420
PI: Adrián Irles Quiles
199,285 € (Sep 2023 – Aug 2025)

• Mejora de la detección de fotones en un detector NEXT en la escala de la tonelada
Ref. CNS2022-135619
PI: Justo Martín-Albo Simón
199,406 € (Sep 2023 – Aug 2025)

• I+D en demostradores DMAPS de gran superficie para futuros colisionadores
Ref. CNS2022-135606
PI: Carlos Mariñas Pardo
199,527 € (Sep 2023 – Aug 2025)

• Nuclear structure, Astrophysics and Knowledge Transfer IFIC
Ref. PID2022-138297NB-C21
PIs: Cesar Domingo Pardo, Ariel Tarifeño Saldivia
470,250 € (Sep 2023 – Aug 2026)

• Tier-2 Federado Español de ATLAS (Centro IFIC) para afrontar el reto del almacenamiento, gestión, procesado y análisis del Big Data del LHC (ES-ATLAS-T2)
Ref. PID2022-136323OB-C21
PIs: Santiago González de la Hoz, José Enrique García Navarro
729,250 € (Sep 2023 – Aug 2026)

• Hacia el Nuevo Modelo Estándar Oscuro y Unificado
Ref. CNS-2022-135592
PI: Juan Andrés Herrero García
199,283 € (Sep 2023 – Aug 2025)

• Fenomenología Avanzada en la era del LHC
Ref. CNS-2022-136165
PI: Francisco Campanario Pallas
199,408 € (Sep 2023 – Aug 2025)

• Propiedades fundamentales de hadrones exóticos
Ref. CNS-2022-136146
PI: Raquel Molina Peralta
199,408 € (Sep 2023 – Aug 2025)

• Neutrinos: desvelando una escala en Nueva Física
Ref. CNS-2022-136013
PI: Jacobo López Pavón
199,417 € (Sep 2023 – Aug 2025)

• Llevando al límite lo que el LHC es capaz de hacer
Ref. CNS-2022-135688
PI: Verónica Sanz González
199,611 € (Sep 2023 – Aug 2025)

• Neutrones, núcleos y colisionadores (NENUCO)
Ref. CNS2022-135595
PI: Martín González Alonso
199,363 € (Sep 2023 – Aug 2025)

• Retando la física y la tecnología con el detector mejorado LHCb del CERN
Ref. PID2022-139842NB-C22
PIs: Fernando Martínez Vida, Maria Aranzazu Oyanguren Campos
474,125 € (Sep 2023 – Aug 2026)

• The upgraded LHCB Detector at CERN - IFIC
Ref. PCI2023-146012-2
PI: Fernando Martínez Vidal
84,000 € (Sep 2023 – Aug 2026)

• ATLAS participación in the LCH IFIC
Ref. PCI2022-135002-2
PI: Salvador Marti García
102,000 € (Jan 2022 – Dec 2024)

• The ITK Upgrade of ATLAS IFIC
Ref. PCI2022-135087-2
PI: Carlos Lacasta Llácer
765,000 € (Jan 2022 – Dec 2024)

• Proton Range and Imaging Device for protontherapy
Ref. PDC2022-133382-100
PI: Enrique Nacher González
149,500 € (Dec 2022 – Nov 2024)

• Telescopio para CT de protones ha Hadron Terapia
Ref. PDC2022-133605-100
PI: Carlos Lacasta Llácer
115,000 € (Dec 2022 – Nov 2024)

• LHC y la fábrica de Higgs - física y aspectos tecnológicos
Ref. PID2021-122134NB-C21
PIs: Vasiliki Mitsou, Marcel Vos
446,490 € (Sep 2022 – Aug 2025)

• Búsquedas de sectores oscuros con el experimento NA64 en el CERN
Ref. PID2021-123955NA-100
PI: Laura Molina Bueno
102,850 € (Sep 2022 – Aug 2025)

• Telescopios de neutrinos para física fundamental y astronomía multimensajero
Ref. PID2021-124591NB-C41
PIs: Juan de Dios Zornoza Gómez, Juan José Hernández Rey
919,600 € (Sep 2022 – Aug 2025)

• Contribución a la operación del experimento ATLAS y su programa de física durante el Run3 del LHC
Ref. PID2021-124912NB-100
PIs: Salvador Marti Garcia, Luca Fiorini
592,900 € (Sep 2022 – Aug 2025)

• Upgrade del detector ATLAS: Electrónica del Tile Calorimeter, Trigger y Explotación del Programa de Física
Ref. PID2021-125069OB-100
PIs: Arantxa Ruiz Martínez, José Alberto Valero Biot
699,380 € (Sep 2022 – Aug 2025)

• Explotación científica del detector NEXT-100 y R&D para el detector NEXT-HD
Ref. PID2021-125475NB-C52
PIs: Pau Novella Garijo, Justo Martín-Albo Simón
505,780 € (Sep 2022 – Aug 2025)

• Outlining sensors for future experiments in large radiation environments and the Itk strip upgrade of ATLAS
Ref. PID2021-1263270B-C21
PIs: Carlos Lacasta Llácer, Carlos Mariñas Pardo.

8 Grants

605,000 € (Sep 2022 – Aug 2025)

• Restoration Ecology and Artificial Intelligence (RESECARIN)
Ref. TED2021-130852B-100
PIs: Luca Fiorini, Verónica Sanz
575,000 € (Sep 2022 – Aug 2025)

• Física Nuclear y Hadrónica a Energías Intermedias
Ref. PID2020-112777GB-100
PIs: Juan Miguel Nieves Pamplona, Luis Álvarez Ruso
193,600 € (Sep 2021 – Aug 2024)

• Predicción de amenazas asociadas a corrientes inducidas goemagnéticamente en las infraestructuras críticas españolas
Ref. PID2020-113135RB-C33
PI: Carlos Escobar Ibáñez
54,450 € (Sep 2021 – Aug 2024)

• Astropartículas y Física de Altas Energías
Ref. PID2020-113775GB-100
PIs: Martin Hirsch, Maria Amparo Tórtola Baixauli
176,660 € (Sep 2021 – Aug 2024)

• Estudios de Estructura Nuclear y Desarrollos Instrumentales para AGATA un multidetector de trazado para las instalaciones de haces estables y radioactivos en Europa
Ref. PID2020-118265GB-C42
PI: Andrés Gadea
359,249 € (Sep 2021 – Aug 2024)

• Partículas elementales: el Modelo Estándar y sus extensiones
Ref. PID2020-113334GB-I00
PIs: Oscar Manuel Vives García, Sergio Palomares Ruiz
279,631 € (Sep 2021 – Aug 2024)

• Física de sabor, del bosón de Higgs y de las interacciones fuertes en el LHC y la frontera de intensidad
Ref. PID2020-114473GB-I00
PIs: Antonio Pich Zardoya, Germán Rodrigo García
279,510 € (Sep 2021 – Aug 2024)

• Sabor y Origen de la Materia
Ref. PID2020-113644GB-I00
PIs: Pilar Hernández Gamazo, Olga Mena Requejo
290,400 € (Sep 2021 – Aug 2024)

• Campos y Gravedad
Ref. PID2020-116567GB-C21
PIs: Gonzalo Olmo Alba, Alessandro Fabbri
96,800 € (Sep 2021 – Aug 2024)

EUROPEAN PROJECTS

• APRENDE. Addressing PRiorities of Evaluated Nuclear Data in Europe
Ref. GAP-101164596 HORIZON-EURATOM-2023-NRT-01
PI: Alejandro Algora
92,500 € (Oct 2024 – Sep 2028)

• EURAD-2 European Partnership on Radioactive Waste Manag
Ref. 1166718
PI: Kiko Albiol Colomer
290,400 € (Oct 2024 – Sep 2029)

• IMMPRINT: Integrated Molecular Imaging for Personalized Biomarker-based Breast Cancer Characterization and Treatment
Ref. Convocatoria PIANOFORTE
PI: Gabriela Llosa Llácer
185,947.65 € (Apr 2024 – Mar 2027)

Gamma-Neutron Vision aimed at improved cancer treatments in Hadron Therapy
Ref. 101113330 ERC-2022-POC2
PI: César Domingo Pardo
150,000 € (Jan 2024 – Jun 2025)

• Contribución del CSIC al proyecto ESFRI KM3NeT 2.0: Impulsando la investigación en astrofísica y física fundamental
Ref. INFRA23013
PI: Francisco Salesa
99,638 € (Jun 2023 – May 2025)

• EAJADE: Europe-America-Japan Accelerator Development and Exchange Programme
Ref. HORIZON-MSCA-2021-SE-01 Project: 101086276
PI: Juan Fuster (Nuria Fuster)
119,600 € (Mar 2023 – Feb 2027)

• SENSE: Search for new physics and technological advancements from neutrino experiments at the high intensity frontier. A cooperative Europe - United States - Brazil - Russia effort
Ref. HORIZON-MSCA-2021-SE-01 Project: 101081478
PI: Michel Sorel
128,800 € (Jan 2023 – Dec 2026)

•"Advanced imaging system for Medical Applications" (AMA)
Ref. ERC-2023-POC Project: 101137646 — AMA
PI: César Domingo Pardo
136,000 € (Nov 2023 – May 2025)

• COLLINEAR-FRACTURE (Towards loop splitting amplitudes and collinear factorisation breaking)
Ref. HORIZON-MSCA-2022-PF-01 — 101108573
PI: Germán Rodrigo (Prasanna Dhani)
181,153 € (May 2023 – Apr 2025)

• InnDIH - Valencia Region Digital Innovation Hub: Proposal ID 101083002
Ref. 101083002
PI: José Enrique García Navarro
189,497 € (Jan 2023 – Dec 2025)

• KM3NET-INFRADEV2 Towards full implementation of the KM3NeT Research Infrastructure
Ref. 101079679
PI: Francisco Salesa
225,000 € (Jan 2023 – Dec 2025)

• Cartan geometry, Lie and representation theory, Integrable Systems, quantum Groups and quantum computing towards the understanding of the geometry of deep Learning and its Applications- (CaLIGOLA)
Ref. HORIZON-MSCA-2021-SE-01 — 101086123
PI: Mª Antonia Lledó Barrena
170,200 € (Jan 2023 – Dec 2026)

• HIDDeN. Hunting invisibles: Dark sectors, Dark Matter and Neutrinos

8 Grants

H2020-MSCA-ITN-2019/860881-HIDDeN
PI: Pilar Hernández Gamazo
382,175 € (Jan 2020 – Sep 2024)

REGIONAL PROJECTS

• The strong coupling for precision physics
Ref. CIDEGENT/2019/040
PI: Alberto Ramos Martínez
170,000 € (Jul 2024 – Jun 2026)

• Search for long-lived particles with LHC data
Ref. CIDEGENT/2019/023
PI: Emma Torró Pastor
170,000 € (Apr 2024 – Mar 2026)

• Long-lived particles (LLPs) at present and future experiments
Ref. CIDEGENT/2019/068
PI: José Francisco Zurita
170,000 € (Jul 2024 – Jun 2026)

• Novel cost-effective proton range verification based on coaxial prompt gamma-ray monitoring
Ref. CDEIGENT/2019/011
PI: Fernando Hueso González
105,000 € (Jun 2024 – May 2026)

• Topics in beyond the Standard Model physics and cosmology
Ref. CIDEIG/2023/35
PI: Benjamín Stefanek
279,000 € (Sep 2024 – Sep 2028)

• Particle Physics with Neutrino Telescopes
Ref. CIDEIG/2023/20
PI: Alfonso Andrés García Soto
285,000 € (May 2024 – Apr 2028)

• Towards Improved Sensitivity to Neutrinoless Double Beta Decay in NEXT-10
Ref. CIDEXG/2023/16
PI: Joshua Edward Renner
610,000 € (Sep 2024 – Aug 2028)

• Search for New Physics and Astrophysics with the KM3Net Neutrino Telescope
Ref. CIPROM/2023/59
PIs: Juande Zornoza Gómez, Juanjo Hernández
595,942 € (Sep 2024 – Aug 2028)

• Effective field theories in hadron and nuclear physics
Ref. CIPROM/2023/51
PIs: Raquel Molina Peralta, Juan Nieves
600,000 € (Sep 2024 – Aug 2028)

• Acquisition Integrated On Network (AION+) - Sistema de adquisición distribuido en red de alta sincronización y muy alta fiabilidad
Ref. INNVA1/2024/110
PI: Juan de Dios Zornoza
249,850 € (Jan 2024 – Dec 2026)

• Theoretical approaches in model building and phenomenology of physics beyond the Standard Model in connection with neutrino physics
Ref. CIDEIG/2022/16
PI: Chandan Hati
285,000 € (Jul 2023 – Jul 2027)

• Exploring the universe with large scale structure observations and cosmological simulations
Ref. CIDEIG/2022/17
PI: Deng Wang
269,273 € (Jul 2023 – Jul 2027)

• Beta decay studies for fundamental physics and applications
Ref. CIPROM/2022/9
PI: Alejandro Algora
349,217 € (Jan 2023 – Dec 2025)

• Search for the sources of high-energy cosmic rays with the KM3NeT neutrino telescope in the era of Multi-messenger astronomy
Ref. CIDEGENT/2018/034
PI: Francisco Salesa Greus
169,807 € (Jan 2023 – Dec 2024)

• Dark matter and neutrinos as gateways to new physics (D´AMAGAT)
Ref. CIDEXG/2022/20
PI: Valentina De Romeri
541,545 € (Mar 2023 – Feb 2027)

• Desarrollo de instrumentación nuclear avanzada para AGATA y sus detectores complementarios. Aplicaciones en Física Médica e Imagen Compton
Ref. CIPROM/2022/54
PI: Andrés Gadea Raga
599,460 € (Jan 2023 – Dec 2026)

• Explotación de la física del Run-3 del LHC con el detector ATLAS, su actualización para HL-LHC y aplicaciones de las tecnologías desarrolladas a los retos de la sociedad
Ref. CIPROM/2022/70
PIs: Carmen Garcia García, Susana Cabrera Urbán
600,000 € (Jan 2023 – Dec 2026)

• Elucidating the nature of the neutrino: R&D towards tonne scale detectors for neutrinoless double beta decay searches
Ref. CISEJI/2023/27
PI: Neus López March
317,065 € (Jan 2023 – Dec 2026)

• The present and future of precision physics
Ref. CIDEGENT/2018/014
PI: Martín González Alonso
170,000 € (Jan 2023 – Dec 2024)

• Neutrinos: Hunting a new Physics Scale
Ref. CIDEGENT/2018/019
PI: Jacobo López Pavón
170,000 € (Jan 2023 – Dec 2024)

• Sabor y Origen de la Materia (SOM)
Ref. CIPROM/2022/69
PIs: Nuria Rius Dionis, Andrea Donini
596,960 € (Jan 2023 – Dec 2026)

• The Standard model and beyond in the quantum information era
Ref. CIPROM/2022/66
PIs: Arcadi Santamaria Luna, Armando Pérez Cañellas
600,000 € (Jan 2023 – Dec 2026)

• Retos experimentales y teóricos en la frontera de la intensidad: Sabor y Nueva Física (RETIS)
Ref. CIPROM/2022/36
PIs: Francisco José Botella Olcina, Fernando

8 Grants

Martínez Vidal
600,000 € (Jan 2023 – Dec 2026)

• Potenciación de la UCIE del IFIC
Ref. INNVA2/2023/8
PI: José Enrique Garcia Navarro, Nuria Rius Dionis
499,900 € (Jan 2023 – Dec 2025)

• Computación avanzada para el procesado intensivo de Big Data en ATLAS
Ref. ASFAE/2022/006
PIs: Miguel Villaplana Pérez, Emma Torró Pastor
299,863 € (Apr 2022 – Jun 2025)

• Detector de trazas de ATLAS para el HL-LHC
Ref. ASFAE/2022/007
PIs: Carlos Escobar Ibáñez, Carmen García García
299,920 € (Apr 2022 – Jun 2025)

• Detector de trazas de ATLAS para el HL-LHC
Ref. ASFAE/2022/008
PIs: Luca Fiorini, Aránzazu Ruiz Martínez
299,693 € (Apr 2022 – Jun 2025)

• Algoritmos cuánticos en fenomenología de partículas elementales
Ref. ASFAE/2022/009
PIs: Germán Vicente Rodrigo García, Martín González Alonso
123,219 € (Apr 2022 – Jun 2025)

• Operación del experimento ATLAS durante el RUN 3 del LHC y explotación de sus datos para el estudio del bosón de Higgs y el quark top
Ref. ASFAE/2022/010
PIs: Joaquín Poveda Torres, María Moreno Llacer
212,469 € (Apr 2022 – Jun 2025)

• Tecnologías de RF para monitores de haz en aceleradores y para detectores de axiones de materia oscura
Ref. ASFAE/2022/013
PIs: Daniel Esperante Pereira, Nuria Fuster Martínez
284,050 € (Apr 2022 – Jun 2025)

• Desarrollo y construcción de un demostrador de un detector de alta granularidad basado en tecnologías de silicio para futuras fábricas de Higgs y Top
Ref. ASFAE/2022/015
PIs: Adrián Irles Quiles, Marcel André Vos
284,979 € (Apr 2022 – Jun 2025)

• Sensores Monolíticos para búsqueda de Nueva Física
Ref. ASFAE/2022/016
PIs: Carlos Mariñas Pardo, Laura Molina Bueno
203,719 € (Apr 2022 – Jun 2025)

• Imagen Compton para terapia con radionúclidos (ICOR)
Ref. ASFAE/2022/019
PIs: Gabriela Llosá Llácer, Irene Torres Espallardo
299,920 € (Apr 2022 – Jun 2025)

• Ondas Gravitacionales, Axiones y Materia Oscura, Lattice e Inteligencia Artificial
Ref. ASFAE/2022/020
PIs: Alberto Ramos Martínez, Olga Mena
299,843 € (Apr 2022 – Jun 2025)

• Modeling neutrino interactions with matter for current and futures experiments
Ref. ASFAE/2022/022
PI: Luis Alvárez Ruso
106,877 € (Apr 2022 – Jun 2025)

• Adquisición y sincronización avanzada para Astrofísica
Ref. ASFAE/2022/023
PIs: Juan de Dios Zornoza Gómez, Rebecca Gozzini
300,000 € (Apr 2022 – Jun 2025)

• Artificial Environment for ML and Innovation in Scientific Advanced Computing
Ref. ASFAE/2022/024
PIs: José Enrique García Navarro, Bryan Zaldivar Montero
299,000 € (Apr 2022 – Jun 2025)

• Detectores complementarios modulares de nueva generación
Ref. ASFAE/2022/027
PIs: Alejandro Algora, Javier Balibrea Correa
299,587 € (Apr 2022 – Jun 2025)

• Creation of a multipurpose laboratory at IFIC for the development of cryogenically-cooled gas and liquid noble element detectors
Ref. ASFAE/2022/028
PIs: Anselmo Cervera Villanueva, Neus López March
299,000 € (Apr 2022 – Jun 2025)

• Development of state-of-the-art light detection systems for the DUNE and NEXT experiments
Ref. ASFAE/2022/029
PIs: Nadia Yahladi Haddou, Justo Martín-Albo Simón
299,000 € (Apr 2022 – Jun 2025)

• Retos tecnológicos para el descubrimiento con el detector LHCb mejorado del CERN
Ref. ASFAE/2022/030
PIs: Fernando Martínez Vidal, Ma. Aranzazu Oyanguren Campos
273,102 € (Apr 2022 – Jun 2025)

• Instrumentación avanzada para la experimentación con GRIT y AGATA
Ref. ASFAE/2022/031
PIs: Andrés Fco. Gadea Raga, Vicente González Millán
284,596 € (Apr 2022 – Jun 2025)

• Coordinación Proyectos ASFAE
Ref. ASFAE/COORD
PI: Carlos Lacasta Llácer
300,000 € (Apr 2022 – Jun 2025)

• Desarrollo de aceleradores lineales de alto gradiente y nuevas técnicas para su aplicación en radioterapia
Ref. CDEIGENT/2021/012
PI: Nuria Fuster Martínez
285,000 € (Apr 2022 – Dec 2025)

• Información cuántica y metrología
Ref. CDEIGENT/2021/014
PI: Manuel Gessner
285,000 € (Jul 2022 – Jul 2026)

8 Grants

• Estudio el autocoplamiento del bosón de Higgs en el experimento ATLAS del LHC
Ref. CIAICO/2021/154
PI: Arantxa Ruiz Martínez
90,000 € (Jan 2022 – Dec 2024)

• Dark and Shiny Dresses around Black Holes
Ref. CIDEGENT/2021/017
PI: Daniele Gaggero
539,765 € (Jan 2022 – Dec 2025)

• Search for new physics signatures and measurement of fundamental neutrino properties with the KM3NeT telescope
Ref. CIDEGENT/2021/023
PI: Sara Rebecca Gozzini
556,000 € (Jan 2022 – Dec 2025)

• Dark Bosons and Dark Matter
Ref. CIDEGENT/2021/025
PI: Christian Gross
481,706 € (Jul 2022 – Jul 2026)

• Searching for new physics in the flavour sector with precision hadronic physics
Ref. CIDEGENT/2021/037
PI: Emilie Passemar
610,000 € (Jul 2022 – Jul 2026)

• Dark Matter capture in Celestial bodies
Ref. CIDEIG/2022/22
PI: Aritra Gupta
284,902 € (Dec 2022 – Nov 2026)

• Astroparticle and neutrino physics: from Cosmology to the LHC (AstroParNu)
Ref. CIPROM/2021/054
PIs: Maria Amparo Tórtola Baixauli, Gabriela Barenboim Szuchman
600,000 € (Jan 2022 – Dec 2025)

• Innovación y desarrollo en la mejora y personalización de los tratamientos de radioterapia convencional y protonterapia.
Ref. CIPROM/2021/064
PI: Javier Vijande Asenjo
412,522 € (Jan 2022 – Dec 2025)

• The Quest for New Physics (QNe2Phys). High precision, direct searches and technology development
Ref. CIPROM/2021/073
PIs: Juan Antonio Fuster Verdu, Vasiliki Mitsou
600,000 € (Jan 2022 – Dec 2025)

• Total Absorption spectroscopy Technique Applied to Key Isotopes in r-Process nucleosynthesis of trans-bismuth elements (TATAKI-Pro)
Ref. CISEJI/2022/25
PI: Ana Isabel Morales López
320,000 € (Jan 2022 – Dec 2025)

• Radiotrazadores para el estudio de ecosistemas marinos y oceánicos (REMO)
Ref. THINKINAZUL/2021/036
PI: Enrique Nacher González
205,324 € (Jan 2022 – Sep 2025)

• Understanding non-perturbative phenomena in fundamental physics
Ref. PROMETEO/2021/083
PIs: Verónica Sanz González, Daniel García) Figueroa
469,106 € (Jan 2021 – Dec 2024

• Open questions on the fundamental interactions of matter at the LHC and Intensity Frontiers
Ref. PROMETEO/2021/071
PI: Antonio Pich Zardoya
475,000 € (Jan 2021 – Dec 2024)

• Física experimental de neutrinos en el IFIC
Ref. PROMETEO/2021/087
PI: Michel Sorel
524,893 € (Jan 2021 – Dec 2024)

• Frontiers in neutrino oscillations: precision and new phenomena
Ref. CDEIGENT/2020/003
PI: Francesco Capozzi
244,667 € (Nov 2021 – Jun 2025)

• Unitary effective theories in hadron physics: new particles and new physics
Ref. CIDEGENT/2020/002
PI: Miguel Albaladejo Serrano
402,015 € (Jul 2021 – Jun 2025)

• N3LO as the New Standard for Precision Physics at the LHC
Ref. CIDEGENT/2020/011
PI: Leandro Javier Cieri
409,702 € (Jul 2021 – Jun 2025)

• Estudios de Física e I+D en detectores para futuros colisionadores de leptones
Ref. CIDEGENT/2020/021
PI: Adrián Irles Quiles
410,000 € (Jan 2021 – Dec 2024)

• Multimessenger astronomy in the KM3NeT observatory: gravitational waves, gamma rays and cosmic neutrinos
Ref. CIDEGENT/2020/049
PI: Agustín Sánchez Losa
408,735 € (Apr 2021 – Mar 2025)

• Novel methods in Dark Matter searches with Artificial Intelligence
Ref. CIDEGENT/2020/055
PI: Bryan Zaldívar Montero
403,140 € (Jul 2021 – Jun 2025)

• Contribución al experimento ATLAS y análisis de datos I+D para futuros aceleradores y estudios de la física del quart
Ref. CDEIGENT/2019/003
PI: Adrián Irles Quiles
252,250 € (Jul 2020 – Jun 2024)

• Novel cost-effective proton range verification based on coaxial prompt gamma-ray monitoring
Ref. CDEIGENT/2019/011
PI: Fernando Hueso González
252,250 € (Jun 2020 – May 2024)

• Neutrino physics in the NEXT, T2K and DUNE experiments
Ref. CDEIGENT/2019/016
PI: Laura Molina Bueno
229,333 € (Jun 2020 – Jun 2024)

• The strong coupling for precision physics
Ref. CIDEGENT/2019/040
PI: Alberto Ramos Martínez
381,500 € (Jul 2020 – Jun 2024)

• Física en el experimento ATLAS del LHC
Ref. CIDEGENT/2019/029

8 Grants

PI: Carlos Escobar Ibáñez
381,475 € (Jan 2020 – Jun 2024)

• Search for new physics in the neutrino sector with the DUNE and NEXT experiments
Ref. CIDEGENT/2019/049
PI: Justo Martín-Albo Simón
381,500 € (Jul 2020 – Jun 2024)

• Search for long-lived particles with LHC data
Ref. CIDEGENT/2019/023
PI: Emma Torro Pastor
381,475 € (Apr 2020 – Mar 2024)

• Long-lived particles (LLPs) at present and future experiments
Ref. CIDEGENT/2019/068
PI: José Francisco Zurita
338,456 € (Dec 2020 – Nov 2024)

• Effective field theories for hadron exotic states with applications in lattice QCD
Ref. CIDEGENT/2019/015
PI: Raquel Molina Peralta
376,167 € (Jul 2020 – Jun 2024)

• What New Physics Lies Beyond The Standard Model
Ref. CIDEGENT/2019/024
PI: Miguel Rubén Nebot Gómez
370,410 € (Jul 2020 – Jun 2024)

• Precision jet substructure in the LHC
Ref. CIDEGENT/2019/027
PI: Miguel Villaplana Pérez
381,500 € (Jul 2020 – Jun 2024)

• Neutrino Masses and Dark Matter: Towards the New Standard Mode
Ref. CIDEGENT/2020/020
PI: Juan Andrés Herrero García
409,999 € (Jan 2020 – Nov 2024)

OTHER PROJECTS

• Compact objects and cosmology beyond the standard model and their observational confrontation
Ref. COOPPB23096
PI: Gonzálo Olmo
24,000 € (Jan 2024 – Dec 2025)

• Servidor informático. Armarios y conmutadores
Ref. FAS_078
PI: Ana Fandos
40,287.46 € (Jul 2024 – Dec 2024)

• Metodología y equipamiento Avanzado de Clasificación de residuos radioactivos mediante Imagen híbrida Neutrón-Gamma con amplio ca
Ref. 2024E0321060 CSN
PI: Cesar Domingo Pardo
96,000.04 € (Dec 2024 – Dec 2027)

• Ayuda atracción del talento RyC 2021 _ INTRAMURAL
Ref. 20235AT020
PI: Justo Martín-Albo Simón
100,000 € (May 2023 – Apr 2026)

• Técnicas innovativas para el cálculo de observables en el LHC a la precisión más alta
Ref. ILINK22045
PI: Javier Leandro Cieri
22,232 € (Jan 2023 – Dec 2024)

• Dark SHOwers at present and future colliders (DASHO)
Ref. ILINK22043
PI: José Francisco Zurita
24,000 € (Jan 2023 – Dec 2024)

• Lattice calculations of SU (2)-gauged scalar field theories in particle and condensed matter physics
Ref. BLTW22007
PI: Alberto Ramos Martínez
23,607 € (Jan 2023 – Dec 2024)

• Optimización de las búsquedas de la produccion de pares de bosones del Higgs en el experimento ATLAS del LHC
Ref. 20235PRC04
PI: Nuria Rius Dionis
120,000 € (Apr 2023 – Apr 2025)

• Protón: Proceso de Evaluación tomográfica de Residuos Nucleares
Ref. SUB-2/2023 (CSN)
PI: Francisco J. Albiol Colomer
97,028 € (Dec 2023 – Dec 2025)

CONTRACTS AND AGREEMENTS

•Improving targeted radionuclide oncotherapy with a Compton dosimeter
Ref. OTR13179
PI: Gabriela Llosa Llácer
37,253.27 € (Oct 2024 – Apr 2026)

• CONVENIO ENTRE LA AE CSIC, M.P. (IFIC) Y LA EMPRESA NACIONAL DE RESIDUOS RADIACTIVOS -ENRESA- PARA EL PROYECTO: IMAGEN GAMMA: IMPLEMENTACIÓN DE NUEVOS DESARROLLOS E INTEGRACIÓN CON DISPOSITIVOS EMPLEADOS POR ENRESA
Ref. 20235526
PI: Fco. Javier Albiol Colomer
118,678 € (Jul 2023 – Jul 2028)

• Desarrollo de un detector compacto de neutrones y rayos gamma
Ref. 20231396
PI: Luis Caballero Ontanaya
54,450 € (Jan 2023 – Jul 2025)

• CERN-ISOLDE-HISTARS
Ref. Fondos MRR Experimentos CERN
PI: Enrique Nacher González
221,000 € (Jul 2023 – Dec 2025)

• CERN-ATLAS
Ref. Fondos MRR Experimentos CERN
PI: Carlos Lacasta Llacer
600,000 € (Jul 2023 – Dec 2025)

• Gestion MRR
Ref. Fondos MRR Experimentos CERN
PI: Carlos Lacasta Llacer
90,000 € (Jul 2023 – Dec 2025)

• CERN-n_TOF
Ref. Fondos MRR Experimentos CERN
PI: César Domingo Pardo
546,000 € (Jul 2023 – Dec 2025)

• CERN-LHCb
Ref. Fondos MRR Experimentos CERN
PI: Fernando Martinez Vidal
1,083,000 € (Jul 2023 – Dec 2025)

8 Grants

• Convenio entre la AE CSIC y ENRESA:
Imagen Gamma: Implementacion de nuevos desarrollos e integracion con dispositivos empleados por ENRESA
Ref. 20235526
PI: Francisco J. Albiol Colomer
593,389 € (Jul 2023 – Jul 2028)

Images and vectors references

www.freepik.es, www.pixabay.com, https://www.flaticon.es/autores/darius-dan, www.pexels.com