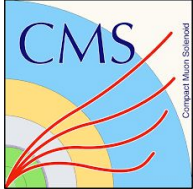


CMS Collaboration. People

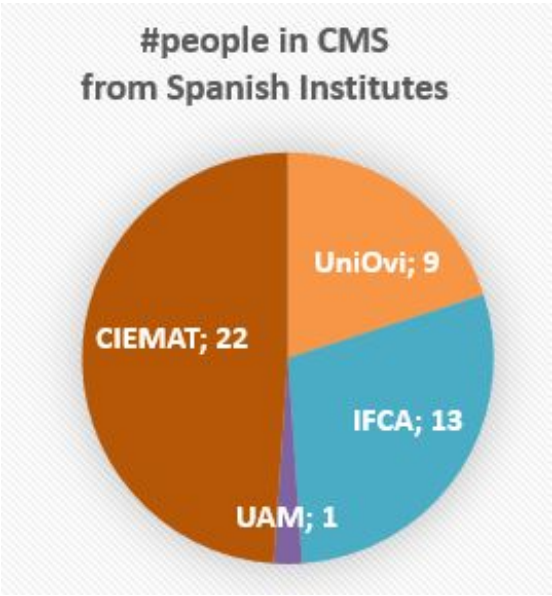


Overall, ~6000 people are associated with the CMS experiment (physicists, engineers, etc.).

Number of CMS signing members: 2251 (1401 PhD (pay) + students)

Spanish signing members: 65 (44 PhD (pay) + students)

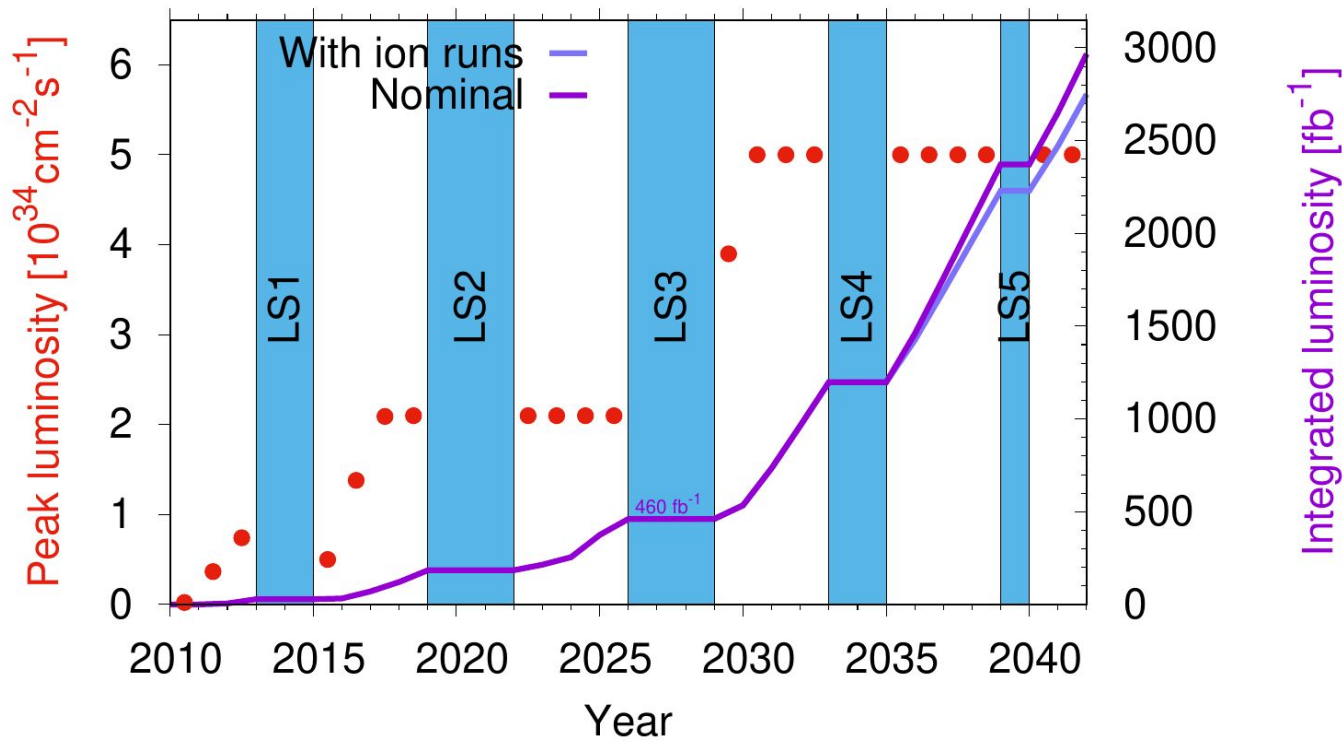
Percentage of Spanish participation in the collaboration: ~3%



CMS non-signing members		Spanish CMS non-signing members	
105	Administrative	0	Administrative
1501	Non-doctoral students	3	Non-doctoral students
418	Doctoral students	5	Doctoral students
269	Technician	5	Technician
997	Engineers	24	Engineers
31	Theoretical physicist	0	Theoretical physicist
490	Physicists	6	Physicists
3811	Total CMS non signing members	43	Total CMS Spain non signing members

CMS Status of the experiment

- Finishing 15 years of operation
- Entering an upgrade phase with installation starting in 2026.
- HL-LHC phase to start in 2030.



Expected cost evolution (all CMS)

- Cost increases are taken place now (5%) to account for Spares and Decommissioning costs in Long Shutdown 3 (2026-2030).
- Likely to expect further unexpected costs upgrade related (bPOL issue plus necessities during installation and commissioning).
- Longer term, likely to increase following inflation (1-2%) though large efforts are being made to maintain it flat.

	2025	2026	2027	2028	2029
M&OA (kCHF)	13814	14444	14483	13623	13513
M&OB (kCHF)	7293	8272	7822	7573	7260
TOTAL (kCHF)	21107	22716	22305	21196	20773
kCHF/PHD	15,1	16,2	15,9	15,1	14,8
k€/PHD	16,5	17,8	17,4	16,6	16,2



CIEMAT responsibility positions in CMS (in the last 3 years)

Committees

1. Juan Alcaraz - Member of the CMS CB
2. Silvia Goy - Advisory to the CMS CB
3. Cristina F. Bedoya - Spanish National Contact Physicist for CMS since January 2025.
4. MariCruz Fouz - Muon DT Institutional Board chair. Sept. 2024 – Aug. 2026.
5. Cristina F. Bedoya - CMS L1 Tridas IB Chair (CMS Level 2 coordination level). Sept. 2025.
6. Isabel Josa - Member of the DT Institutional Board
7. Cristina F. Bedoya - Member of the CMS Finance Board since 2021
8. Begoña de la Cruz - Member of the CMS Theses Awards Committee since Sept 2024.
9. Ignacio Redondo, Cristina F. Bedoya - Member of the Tridas Institutional Board
10. Alberto Escalante del Valle - Member of the Task Force Optimization on Time to Publication in CMS (2023-2024)

L1, L2 and L3 positions

11. Silvia Goy López - Coordinator of the Trigger Study Group in charge of the general High Level trigger system (CMS Level 1 coordination level), Sept. 2022 - Sept. 2024.
12. Silvia Goy López - Deputy CMS Muon Drift Tubes Project Manager since Sept 2025
13. Dermot Moran - LHC Higgs WG, Higgs cross-section and branching ratios since 2025
14. Cristina F. Bedoya: CMS L1 Trigger Resource manager (CMS Level 2 coordination level). Sept. 2021 - Jun. 2025.
15. Javier Llorente - Physics Modelling and Validation (CMS L3 coordination level). Ongoing, Sept 2025-2027

CIEMAT responsibility positions in CMS (in the last 3 years)



16. Ignacio Redondo - CMS L1 Trigger Upgrade Technical Coordinator (CMS Level 2 coordination level), Sept. 2024 – Aug. 2026.
17. Cristina F. Bedoya: CMS DT Upgrade Coordinator (CMS Level 3 coordination level) since Sept. 2020.
18. Ignacio Redondo Fernández: CMS Coordinator of the Detector Safety System Upgrade group for “Warm” detectors (CMS Level 3 coordination level) since 2023.
19. Cristina Martín Pérez: Coordinator of the CMS L1 Muon Trigger Detector Performance Group for Phase-2 developments (CMS Level 3 coordination level), Sept. 2024 – Aug. 2026.
20. Juan Pablo Fernández: Coordinator of the Standard Model Vector boson + jets physics group (CMS Level 3 coordination level), Sept. 2023 – Aug. 2024.
21. María Cepeda: Coordinator of the CMS L1 Trigger Detector Performance Group for Phase-2 developments (CMS Level 2 coordination level). 2023.
22. Alberto Escalante del Valle: (CMS) Convenor of the LHC Long-lived Particles Working Group (LHC LLP WG) since Sept. 2022.
23. Diego Fernández del Val: Coordinator of the Selection subgroup of the CMS Muon Physics object group (CMS Level 3 coordination level), Sept. 2023 – Aug. 2025.
24. Óscar González López: Coordinator of the Data Processing Tools subgroup of the CMS Common Analysis Tools group (CMS Level 3 coordination level), Sept. 2024 – Aug. 2026.
25. Silvia Goy López: Member of the CMS Task Force on Deadtime since Sep 2024.

CIEMAT responsibility positions in Computing (in the last 3 years)



1. José Flix: Coordinator of the CMS Resource Management Office (CMS Level 2 coordination level) since 2013.
2. José Flix: Chair of the worldwide HEPiX forum since 2024.
3. José Flix: Chair of the WLCG Deployment Board, 2020-2024.
4. José Flix: Member of the WLCG Technical Coordination Board since 2024.
5. José Flix: Member of the WLCG Management Board since 2013.
6. José Flix: Member of the WLCG Overview Board since 2013.
7. José M. Hernández: Chair of the WLCG Computing Resource Scrutiny Group since 2025.
8. José M. Hernández: Coordinator of the LHC computing strategic project at the Barcelona Supercomputing Center since 2020.
9. José M. Hernández: Chair of the CMS Computing Resource Board, 2020-2025.
10. José M. Hernández: Member of the WLCG Overview Board since 2024.
11. Antonio Pérez-Calero Yzquierdo: Coordinator of the CMS Computing Submission Infrastructure (CMS Level 2 coordination level) since 2020.
12. Antonio Pérez-Calero Yzquierdo: WLCG Ops Coord, Job Allocation and Handling TF coordinator, since 2019.
13. Gonzalo Merino: WLCG LHCC lead reviewer since 2024.

IFCA responsibility positions in CMS (in the last 3 years)

Committees:

1. Celso Martínez Rivero - CMS CB Member
2. Celso Martínez Rivero - Spanish CMS Link Person
3. Celso Martínez Rivero - Responsible for Spanish funding (FPN)
4. Pablo Martínez - Member, MTD Institutional Board (IB)
5. Pablo Martínez - Member, MTD Finance Board (FB)
6. Iván Vila - Member, TK Institutional Board (IB)
7. Iván Vila - Member, Tracker Finance Board (TKFB)
8. Alberto Ruiz - PhD Thesis Award Committee
9. Francisco Matorras - Chair, CMS Statistical Committee
10. Francisco Matorras - Member, BPH/Top Board of the CMS Publication Committee

Steering and coordination and upgrade

11. Iván Vila - Member, Tracker Upgrade Steering Group (TUSG)
12. Gervasio Gómez Gramuglio - Member, TK Upgrade Coordination Group
13. Gervasio Gómez Gramuglio - Responsible for Inner Tracker Module Production (IMPO)

IFCA responsibility positions in CMS (in the last 3 years)

L2 and L3 positions

14. Gervasio Gómez Gramuglio - L2 Convener, Phase-II Pixel Sensors
15. Pablo Martínez - L2 Convenor, MTD DPG
16. Pablo Martínez - L3 Alignment and calibration convener MTD
17. Rubén López - L3 Convener, Muon Reconstruction POG
18. Rubén López - L3 Convener, Simulation and Reconstruction in MTD DPG
19. Sergio Blanco - L3 Convener, Muon Calibration and Commissioning
20. Sergio Blanco - L3 Muon HLT
21. Celia Fernández - L3 Muon Reconstruction Convener

PAG contacts

22. Jonatan Piedra - MUO Contact, Higgs PAG
23. Celia Fernández - DQM Contact Person, EXO
24. Rubén López - DQM Contact Person, EXO
25. Victor Rodriguez - SUSY MC

Univ. Oviedo responsibility positions in CMS (in the last 3 years)



Committees:

1. Member of the CMS CB (J. Cuevas)
2. Member of the Diversity Office (A.Cardini, since Sep 2025)
3. Member of the CMS Conference Committee (E. Palencia, Sept 2022 - Aug 2026)
4. Chair of Higgs Board of the Publication Committee (J. Cuevas, since 2019)
5. Member of Higgs Board of the Publication Committee (J. Cuevas, since 2015)
6. Member of the CMS Statistics Committee (P. Vischia, since 2015)
7. Deputy chair of the Young Scientist Committee (A.Cardini, Sep 2024 - Aug 2025)

L2 and L3 positions

7. **[L2]** Top PAG Convener (S. Sánchez, since Sept 2024)
8. **[L2]** Machine Learning Convener (P. Vischia, since Sept 2024)
9. **[L2]** Muon Upgrade Coordination Officer (B. Álvarez, since June 2024)
10. **[L2]** Offline & Computing - Reconstruction (J. Fernández, since Sept 2023)
11. **[L3]** SMP-VV Convener (S. Folgueras, since Sept 2024)
12. **[L3]** Top modelling subgroup Convener (C. Vico, since Sept 2023)
13. **[L3]** Phase-2 DT Trigger studies task force coordinator (S. Folgueras, since Sept 2019)
[L3] Drift Tube Upgrade Coordinator (I. González, since 2017)
14. **[L3]** L1 Trigger Detector Performance Group Phase-2 Muon (S. Folgueras, since Sep 2020)
15. **[L2]** Tau Physics Object Group Coordinator (A.Cardini, 2023-2025)
16. **[L2]** L1 Trigger Offline Software Coordinator (E. Palencia, Jan 2022 - Aug 2024)

Further info of past positions:

https://docs.google.com/document/d/1nb-3c43l_Qzy3GR38j7kwaTLVBYYyUyxXDsAuoUU6bKQ/edit?tab=t.0#heading=h.yytvcwncdxxs

Projects assignment of signing members (UniOvi, IFCA)



<u>Institute</u>	<u>Name</u>	<u>PID project</u>
Uniovi	Sanchez Cruz Sergio	PID2023-147115NB-I00
Uniovi	Gonzalez Caballero Isidro	PID2023-147115NB-I00
Uniovi	Cuevas Javier	PID2023-147115NB-I00
Uniovi	Fernandez Menendez Javier	PID2023-147115NB-I00
Uniovi	Folgueras Santiago	PID2023-147115NB-I00
Uniovi	Vischia Pietro	PID2023-147115NB-I00
Uniovi	Palencia Cortezon Enrique	PID2023-147115NB-I00
Uniovi	Cardini Andrea	PID2023-147115NB-I00
Uniovi	Alvarez Gonzalez Barbara	PID2023-147115NB-I00

<u>Institute</u>	<u>Name</u>	<u>PID project</u>
IFCA	Calderon Alicia	PID2023-146983NB-I00
IFCA	Martinez Rivero Celso	PID2023-146983NB-I00
IFCA	Vilar Cortabitarte Rocio	PID2022-139494ND-I00
IFCA	Vizan Garcia Jesus Manuel	PID2023-146983NB-I00
IFCA	Scodellaro Luca	PID2023-146983NB-I00
IFCA	Piedra Gomez Jonatan	PID2023-146983NB-I00
IFCA	Gomez Gervasio	PID2023-148418NB-C41
IFCA	Martinez Ruiz del Arbol Pablo	PID2023-148418NB-C41
IFCA	Vila Ivan	PID2023-148418NB-C41
IFCA	Fernandez Marcos	PID2023-148418NB-C41
IFCA	Duarte Campderros Jordi	PID2023-148418NB-C41
IFCA	Matorras Francisco	PID2022-139519OB-C21

Projects assignment of signing members (CIEMAT, UAM)



<u>Institute</u>	<u>Name</u>	<u>PID project</u>
CIEMAT	Josa Maria Isabel	PID2023-147706NB-I00
CIEMAT	De La Cruz Begona	PID2023-147706NB-I00
CIEMAT	Alcaraz Maestre Juan	PID2023-147706NB-I00
CIEMAT	Gonzalez Lopez Oscar	PID2023-147706NB-I00
CIEMAT	Cepeda Maria	PID2023-147706NB-I00
CIEMAT	Fernández Ramos Juan Pablo	PID2023-147706NB-I00
CIEMAT	Brochero Cifuentes Javier Andres	PID2023-147706NB-I00
CIEMAT	Escalante Del Valle Alberto	PID2023-147706NB-I00
CIEMAT	Moran Dermot	PID2023-147706NB-I00
CIEMAT	Llorente Merino Javier	PID2023-147706NB-I00
CIEMAT	Fernandez Bedoya Cristina	PID2023-148896NB-I00
CIEMAT	Redondo Ignacio	PID2023-148896NB-I00
CIEMAT	Colino Nicanor	PID2023-148896NB-I00
CIEMAT	Puerta Pelayo Jesus	PID2023-148896NB-I00
CIEMAT	Goy Lopez Silvia	PID2023-148896NB-I00
CIEMAT	Navarro Tobar Álvaro	PID2023-148896NB-I00
CIEMAT	Martin Perez Cristina	PID2023-148896NB-I00
CIEMAT	Redondo Ferrero David Daniel	PID2023-148896NB-I00
CIEMAT	Fouz Maria Cruz	PID2024-158190NB-C22
CIEMAT	Hernandez Jose M.	PID2022-142604OB-C21
CIEMAT	Pérez-Calero Yzquierdo Antonio María	PID2022-142604OB-C21
CIEMAT	Flix Jose	PID2022-142604OB-C21

<u>Institute</u>	<u>Name</u>	<u>PID project</u>
UAM	de Trocóniz Jorge F	PID2023-147706NB-I00

Economic returns

~45 number of companies with which we have collaborated closely with:

- Mechanics manufacturing: Yalentma, Umesal, Luger, Swagelock, Rysia, Delinte, Cosomo 3D, etc.
- Cabling and optical fiber: Sintersa, A.M.C., Fiberco, Imycom, etc
- Electronics: CIDEIN, Labcircuits, Insyte, Rompal, Future Electronics, Arquimea, Telkron, Merchán, Microchip, AMD, RS amidata, Farnell, Labcircuits, Rompal, Distron, Cenvalsa, AGPM, Aerin, Samtec, ATI Sistemas, etc
- Empresas de cooling por inmersión: Green Revolution Cooling (<https://www.grcooling.com/>) y Submer (<https://submer.com/>)
- Otras: FYLA S. A. (láseres), Muon Systems (muography)
- Acuerdo de colaboración con AERIN
- Computing: NEMIX, CI90, FlyTech, Becomit, SATAEC, Teknoservice.
- CMS Upgrade: ~2.5 M€ directly spent on Spanish companies
- Computing (last 3 years): ~4 M€ directly spent on Spanish companies



Additional inputs:



- Spain's contribution as a CERN Member State, by itself, does not ensure participation in the scientific return generated by CERN activities.
- Without the complementary investments in the experiments, Spain would not be in a position to participate in the resulting discoveries and research outcomes, and therefore would not benefit from its national investment.
- In addition, substantial contributions — both financial and in highly qualified technical personnel — to the experiments help maximize economic return by strengthening the positioning of Spanish industry for CERN procurement opportunities.

LHC (and HL-LHC) are the priority of all strategic scientific panels both in Europe and in the United States

LHC and HL-LHC: First priority from the European ESPPU 2020 (EUROPEAN STRATEGY FOR PARTICLE PHYSICS)

*that the HL-LHC. The required high field superconducting dipole magnets have been developed. **The successful completion of the high-luminosity upgrade of the machine and detectors should remain the focal point of European particle physics, together with continued innovation in experimental techniques. The full physics potential of the LHC and the HL-LHC, including the study of flavour physics and the quark-gluon plasma, should be exploited.***



LHC and HL-LHC: First priority from the European ESPPU 2026 (EUROPEAN STRATEGY FOR PARTICLE PHYSICS)

<https://cds.cern.ch/record/2950671>

2. General considerations for the 2026 update

Europe's leadership in accelerator-based particle physics and related technologies is anchored in CERN. The future of the field, in Europe and beyond, relies on CERN and the particle physics community at universities and research centres continuing to carry out impactful scientific projects.

- A. The full exploitation of the physics potential of the LHC and the HL-LHC and the completion of the high-luminosity upgrade remain the highest priorities of European particle physics. Every effort must be made to complete the HL-LHC upgrade within the current schedule.*



The European Strategy for Particle Physics:
2026 Update



Pathways to Innovation and Discovery in Particle Physics

Report of the 2023 Particle Physics Project Prioritization Panel

American P5 (**Particle Physics Project Prioritization Panel**)

<https://www.usparticlephysics.org/2023-p5-report/executive-summary.html>

1. As the highest priority independent of the budget scenarios, complete construction projects and support operations of ongoing experiments and research to enable maximum science. This includes High-Luminosity LHC, the first phase of Deep Underground Neutrino Experiment (DUNE) and Proton Improvement Plan II, the Rubin Observatory to carry out the Legacy Survey of Space and Time (LSST).

Additional inputs:

9398 scientific papers published since its creation:

<https://inspirehep.net/literature?sort=mostrecent&size=25&page=1&q=collaboration%3A%20CMS>

186 contribution to international conferences (in the last 5 years)

- 78 contributions from CIEMAT

- 10 contributions from UAM

- 40 contributions from IFCA

- 58 contributions from UniOvi

56 Thesis students trained (in the last 10 years)

- 32 PHD thesis at CIEMAT

- 2 PHD thesis at UAM

- 8 PHD thesis at UniOvi

- 14 PHD thesis at IFCA

~30 number of engineers/technicians trained (this my estimation in total)

CIEMAT CMS Alumni (last 15 years)



- Miguel Vidal Maroño. Co-founder and CTO at Artabro Tech and of North Tomography.
- Roberto Martínez Ballarín. Staff researcher at European Spallation Source-Bilbao (Bilbao, Spain).
- Constantino Calancha Paredes. Senior Software Engineer at Red Hat, Czech Republic.
- María Cepeda Hermida. Staff researcher at CIEMAT.
- Carmen Díez Pardos. Scientific Staff at University of Siegen (Germany), working in the ATLAS experiment.
- Javier Santaolalla Camino. Freelance science communicator.
- Daniel Domínguez Vázquez. Head of Data (Responsible for the Data Science team) at Geoblink.
- Jorge Berenguer Antequera. Staff at Universidad de Córdoba.
- Eduardo Navarro de Martino. Líder técnico y Java Senior Expert at DIA.
- Enrique Calvo Alamillo. CIEMAT Científico Titular.
- Alberto Escalante del Valle. Postdoc researcher at HEPHY-Institute of High Energy Physics, Vienna (Austria). Now staff at CIEMAT.
- Adrián Álvarez Fernández. Postdoc researcher at the Johannes Gutenberg Universitat Mainz (Germany), ATLAS experiment.
- Irene Bachiller Perea. Postdoc researcher at EPFL, Laussane (Switzerland), LHCb experiment.
- Mar Barrio Luna. Data Scientist in OKUANT (www.okuant.com).
- Manuel Álvarez Estévez. XVA trader at BBVA.
- Sergio Sánchez Navas. Postdoc at CSIC en ISOLDE.
- Héctor García Cabrera. Professor at the Universidad Europea.

CIEMAT CMS Alumni (last 15 years)



- Jaime León Holgado: Postdoc researcher at Imperial College London (UK), CMS experiment and now CERN fellow with the Next Generation Trigger project.
- Julia Vazquez
- Lourdes Urda Gómez: Postdoc researcher at Laboratoire Leprince-Ringuet, Paris (France), CMS experiment.
- Clara de Lara Martínez: Ingeniera de sistemas de radar en INDRA.
- Jesús Cuchillo Ortega: Ingeniero de obras en Salud Madrid.
- Jose Manuel Cela Ruiz: Ministerio de Ciencia, Innovación y Universidades.

UAM Alumni (last 10 years)

- Marino Missiroli, UAM 2017, postdoc Physik-Institut Universität Zürich
- Jonathan Machado Rodríguez, UAM 2024, empresa privada
- Fernando Frías García-Lago, UAM 2023; Instituto Astrofísico de Canarias

Univ. Oviedo CMS Alumni (last 15 years)



- Carlos Vico Villalba, UO, jun. 2025 Postdoctoral fellow at Univ. Rice.
- Alejandro Soto Rodríguez, UO, may. 2025 - Researcher at INDRA since nov. 2025
- Clara Ramón Álvarez, UO, feb. 2024 Postdoctoral fellow at Univ. Virginia.
- Andrea Trapote Fernández, UO, jan. 2024 - Researcher at TheNextPangea S.L. (Technology, IT) since feb. 2024
- Víctor Rodríguez Bouza, UO, apr. 2023 - Postdoctoral fellow European Molecular Biology Laboratory - European Bioinformatics Institute (EMBL-EBI). Best experimental thesis by the Royal Spanish Society of Physics, and best thesis in the field of science by the UO in 2025.
- Carlos Erice Cid, UO, sept. 2021 - Postdoctoral fellow at Univ. Boston. Best experimental thesis by the Royal Spanish Society of Physics, and best thesis in the field of science by the UO in 2023.
- Sergio Sánchez Cruz, UO, sept. 2020 - CERN fellow since jan. 2024, previously postdoctoral fellow at Univ. Zurich. Best experimental thesis by the Royal Spanish Society of Physics, and best thesis in the field of science by the UO in 2022.
- Juan Rodrigo González Fernández, UO, sept. 2019 - Researcher at TheNextPangea S.L. (Technology, IT) since apr. 2023.
- Santiago Folgueras Gómez, UO, nov. 2015 - Professor at UO
- Lara Lloret Iglesias, UO, jun. 2013 - Staff CSIC
- Patricia Lobelle, sept. 2011 - Postdoc at KIT, now industry Germany
- Rebeca González Suárez, Professor at Uppsala Univ.
- Bárbara Álvarez González, UO, may 2010 - Professor at UO

IFCA CMS Alumni (last 15 years)



- Pablo Martinez . Tesis 2010 .Catedrático Universidad de Cantabria
- Bruno Casal .Tesis 2010 . Compañía en Ginebra
- Rebeca González. Tesis 2010 . Universidad de Uppsala, Suecia
- Patricia Lobelle. Tesis 2011. Externo a HEP
- Clara Jordá. Tesis 2012. Compañía técnica en Ginebra
- Francisca Muños. Tesis 2014. Universidad de Manchester
- Javier Brochero. Tesis 2014. Investigador del CIEMAT
- Jordi Duarte. Tesis 2014. Científico Titular CSIC
- Rehman Muhammed. Tesis 2016. Externo a HEP
- Esteban Curras. Tesis 2017. Externo a HEP
- Leo Galeta. Tesis 2017. Externo a HEP
- Juan García Ferrero. Tesis 2018. Profesor de secundaria
- Nicolò Trevisani. Tesis 2019. Investigador en Karlsruhe
- Bárbara Chazín. Tesis 2020. Externo a HEP
- Ibán Cabrillo. Tesis 2020. Personal de Administración y Servicios IFCA
- Andrea García. Tesis 2021. Postdoc en NIKHEF
- Pedro Fernández. Tesis 2022. Fellow en el CERN
- Cédric Prieels. Tesis 2022. Empresa tecnológica en Bélgica
- Celia Fernández. Tesis 2023. Postdoc en la Universidad de Boston
- Pablo Matorras. Tesis 2025. Externo a HEP
- Efrén Navarrete. Tesis 2025. Postdoc en el IFCA
- Clara Lasasa. Tesis 2025. Fellow en el CERN

TOTALES A INCLUIR EN LOS PROYECTOS DE GRID PID2025 (con exchange rate 1.07 euros/chf)

Entiendo que el plan es pedirlo en los proyectos para que los puedan asignar a proyectos PCI2026 (es decir, no lo conceden en los proyectos pero os autorizan a pedirlo en la petición PCI2026)

CIEMAT (Pepe Flix, Antonio Perez-Calero)

M&OA y M&OB = **332840 €**

Inc CF = **122339 €**

TOTAL 455179 €

IFCA (Francisco Matorras?)

M&OA y M&OB = **288770 €**

Inc CF + DUF= **104215 € + 123050 € = 227265 € TOTAL**

TOTAL 516035 €

UPGRADE RELATED COSTS

DUF (DETECTOR UPGRADE FUND) (CMS-FB-275)

First, following the approval of the CMS Detector Fund (DUF) in April 2023, addressing the financial consequences for LHC experiments due to the Russian invasion of Ukraine in February 2022—a letter from the CERN Director of Research and Computing, Prof. Joachim Mnich, was sent to all CMS Funding Agencies in September 2023 (cf. Document 1). Spain's share of this contribution amounts to 301'000 CHF out of the total 10 MCHF.

Our reference: DG-DI-RCS-2023-087

Geneva, 13 September 2023

Subject: CMS Detector Upgrade Fund for RDMS Funding Shortfall

Dear Professor Hernández Gamazo,

I am writing to you following the productive discussions that have taken place during meetings of the Resources Review Board (“RRB”) related to the financial consequences for LHC Experiments resulting from the Russian invasion of Ukraine in February 2022.

As you are aware, the reliable flow of the RDMS contributions is currently at risk, creating a significant funding challenge. Urgent fund reallocation is necessary to bridge the projected deficit, ensure a seamless progression with the CMS Phase 2 Upgrade and allow for timely completion of

DUF SPAIN 301 kCHF

DUF (DETECTOR UPGRADE FUND) (CMS-FB-275)

CIEMAT ha contribuido in-kind a la construcción de HGICAL utilizando los fondos del CORE de upgrade

Se nos ha reconocido: **198 kEur ==> 186 kCHF (62%)**

Faltan **115 kCHF (125 k€) de DUF (38%)**

Opciones:

siguiendo un sharing ~54%/46% :

- CIEMAT ya ha contribuido por encima de su sharing, los 125 k€ (38%) los pediría IFCA

COMMON FUND (CERN-RRB-2017-060)

Second, the CMS Common Fund Addendum No. 10 (CERN-RRB-2017-060) due for Spain amounts to a total of 778'986 CHF. Out of this amount, 482'282 CHF have been paid, leaving the outstanding contribution to 296'704 CHF. This MoU was signed by Dr. Marina Villegas for MINEICO on 31 January 2018.

CIEMAT había pagado 265kCHF

IFCA había pagado 180kCHF

Tras eso, dos proyectos PCI han sido concedidos.

482kCHF

En el momento de la carta, 40 k€ (37kCHF) ya habían sido transferidos por parte del CIEMAT.

El resto está en proceso de ser pagado:

PCI2024-155040-2 155k€ CIEMAT => 143 kCHF - 37kCHF = 106 kCHF

PCI2024-155090-2 180k€ IFCA => 166kCHF

$106\text{kCHF} + 166\text{kCHF} = 272 \text{ kCHF}$

Van a faltar ~25 kCHF (27 keuro) incluso después de los dos PCIs por el cambio de euro a CHF (cada vez baja más).

Aún no están hechas las transferencias así que tampoco sabemos cuánto va a ser el total de esta deuda. Propondría dejarlo de momento hasta que sepamos cuánto falta una vez hechas todas las transferencias (meterlo en los PID2026).

INCREMENTO DEL COMMON FUND (CERN-MoU-2024-010)

Following the approval by the RRB in April 2024, an Amendment No. 1 to Addendum No. 10 (CERN-MoU-2024-010) was issued, outlining the increase in Common Items for the Phase-2 Upgrade of CMS (CMS Common Fund). This amendment was sent to all CMS Funding Agencies in July 2024, with Spain's share amounting to 211'733 CHF out of the total 6.7 MCHF.

Estos fondos no han sido concedidos a través de ningún proyecto aún, pero tiene que completarse en 2026:

TOTAL Inc. CF

211.733 CHF (229.447 €)

CMS COLLABORATION		CERN-MoU-2024-010
4.5	As the bulk of the financial commitments for the Common Fund fall on the <u>period of 2018-2026</u> , the full payments due into the Phase-2 Upgrade Common Fund should be made within this timeframe.	

Proposal: standard sharing CIEMAT(54%, 124k€) , IFCA (46%,105.5 k€)

RESUMEN DEL TOTAL A PEDIR UPGRADE

Lo pedimos en los proyectos de GRID de 2025 (ya abierta la petición) con el objetivo de que se pueda transferir a un PCI:

CIEMAT (Pepe Flix, Antonio Perez-Calero)

123.901 € Incremento Common Fund 54%

IFCA (Francisco Matorras, Iban Cabrillo)

105.545 € Incremento Common Fund 46%

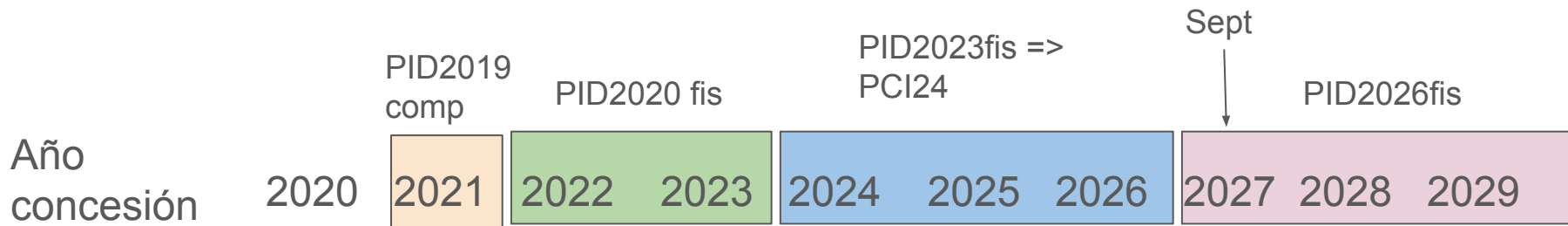
125.000 € DUF

TOTAL 231 k€

M&O A y M&O B

M&OA y M&OB

problema en 2027

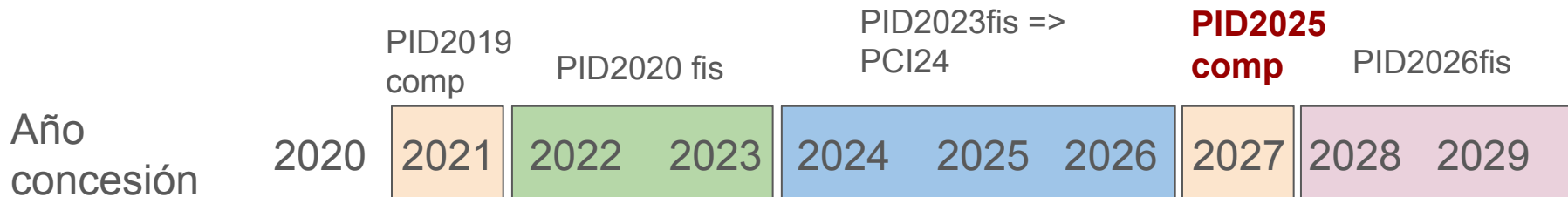


El pago de 2027 es imposible hacerlo en 2027 pues el proyecto comienza a 1 sept2027 y es cuando se empieza a recibir los fondos
No hay tiempo material para organizar una transferencia de cuotas que tiene que pasar por Consejo de Ministros

Lo ideal sería incluir los gastos de M&OA,B para 2027 en algún proyecto anterior. Este PID2025 de GRID es la última opción.

M&OA y M&OB

problema en 2027



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M&OA y M&OB

2027						
CIEMAT			IFCA		Oviedo	
	CHF	euros	CHF	euros	CHF	euros
M&OA	237765	259164	134389	146484	82701	90144
M&OB	73300	79897	45500	49595	7288	7944
TOTAL		339061		196079		98088

CIEMAT M&OA y M&OB = 339k€

IFCA M&OA y M&OB = 196 k€ + 98 k€ (Oviedo) = 294 k€

TOTALES A INCLUIR EN LOS PROYECTOS DE GRID PID2025

Entiendo que el plan es pedirlo en los proyectos para que los puedan asignar a proyectos PCI2026 (es decir, no lo conceden en los proyectos pero os autorizan a pedirlo en la petición PCI2026)

CIEMAT (Pepe Flix, Antonio Perez-Calero)

M&OA y M&OB = **339k€**

Inc CF = **124 k€**

TOTAL 463 k€

IFCA (Francisco Matorras?)

M&OA y M&OB = 196 k€ + 98 k€ (Oviedo) = **294 k€**

Inc CF + DUF = **105.5k€ + 125k€ = 231 k€ TOTAL**

TOTAL 524.5 k€

TOTALES A INCLUIR EN LOS PROYECTOS DE GRID PID2025 (con exchange rate 1.07 euros/chf)

Entiendo que el plan es pedirlo en los proyectos para que los puedan asignar a proyectos PCI2026 (es decir, no lo conceden en los proyectos pero os autorizan a pedirlo en la petición PCI2026)

CIEMAT (Pepe Flix, Antonio Perez-Calero)

M&OA y M&OB = **332840 €**

Inc CF = **122339 €**

TOTAL 455179 €

IFCA (Francisco Matorras?)

M&OA y M&OB = **288770 €**

Inc CF + DUF= **104215 € + 123050 € = 227265 € TOTAL**

TOTAL 516035 €