

CMS Communications: outreach

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On behalf of The CMS Collaboration



What we do...

We aim to bring cohesion and recognition to the CMS community, and communicate & educate the outside world on all things CMS



CMS

Other talks on CMS comms: Nefeli Stathaki: Wed morning Sofia Hurst: Thu morning



CMS Comms Structure & Activities

The Core Team

Head of External Communications

David Barney

Marina Passaseo

Physics

Deputy Head of

External Comms

Comms & Outreach

Sofia Hurst Nefeli Stathaki

Thomas McCauley

Ansar Iqbal Andrés Delannov

Communication

News Briefings Newsletter Blogs Social media Interviews Photos & videos Brochures, posters P5 Visits (real & virtual) Lab tours (most)





Public Website: The central hub for CMS information.



CMS web pages







/inner of Department of Energy Early Career Grant - meet Kevin Pedro and his work on dark matter research



ntangled Valentine st Post by Stefano Marcelli 4 February, 202

SHINY NEW LUMINOSITY AND FIRST TRACKER SUPPORT STRUCTURES, TBPS RINGS, IN **BEAM CONDITIONS** PRODUCTION FOR HI-LUMI INSTRUMENTATION FOR CMS CMS!



The main web resource is the CMS.CERN repository, featuring detector information, physics content, and news. It includes "The Cylindrical Onion" blog for enthusiast experiences and "Physics Briefings" and articles explaining the latest CMS collaboration activities and

results.



Physics briefings

CMS Communications EPS - HEP Marseille 2025

Articles

The newsletter





A note from the editorial team

First stable collisions, reflecting on the April CMS week, and representing CMS at LHCP are all in the news this month! On top of that, there are many photographs of CMS and CMS collaborators now available colline, and a quiral about CMS in popular medial Remember you can give tu your feedback on the newsletter here!

Find all CMS links here

First 13.6 TeV collisions with stable beams



The first high-energy collisions of the year with stable beams took place on the 5th of May 2025! As is tradition, a bottle was put aside for the occasion, and it was engraved to celebrat the moment. The collisions gave some beautiful event displays!

If you'd like to find out a little more about what that means, take a look at our <u>explainer series</u> on how we get the CMS detector ready to take physics data.

Event display: Thomas McCauley, Photograph: Andrés Delanne





Nefeli Stathaki has been covering the conference from inside - check out the behind the scenes on the CMS instagram highlights - @cmsexperiment -, including a visit to CMS labs at NTU, shots of CMS talks, posters, demos, and more!



Puzzle Me This...

To celebrate the visit to CMS by Science Fiction author Douglas Phillips, we have a quiz based on CERN/CMS in popular media.

Created by our quizmaster Chelonia

Which band, founded by CERN members, chose their name to have the initials LHC? A photo
of this band also has the honour of being the first ever image on the World Wide Web!

2. In which animated tv series did the father of character "Stan" break into CERN to steal a "superconducting bending magnet" to use in his child's derby racer?

 What type of ride is "quantum" at the U.K. Amusement park, Thorpe Park? (clue - a reference to Aladdin?)
 Set during the needed of a need concluse in which 2000 book is a "concluse of antimater"

4. Set during the period of a papal conclave, in which 2000 book is a "canister of antimatter" stolen from CERN?

Which band uses the CMS tracker as the basis for their "Super Collider" album cover?
 In which TV comedy series do two of the characters. Leonard and Bai, travel to CERN 1

6. In which TV comedy series do two of the characters, Leonard and Raj, travel to CERN to attend a conference and see the LHC? CMS posters, t-shirts and technical design reports have featured in this series!

7. Who do the antagonists "Le Chiffre" and " Mr White" work for in the 2006 James Bond film "Casino Royale"?

8. In which Oscar-winning film (best animated feature film at the 91st Academy Awards) was there a "super-collider", a particle accelerator designed to bridge the gap between dimensions?

9. Which long-running UK TV science fiction series featured an episode where CERN, The White House and other locations were connected by a hub of mysterious portals? (This show has had 15 different people play the main character since 19661)

10. In which comedy film do a group of parapsychology professors use portable particle accelerators to save New York?

11. Who did the singer of "The Higgs Boson Blues" duet with, 20 years ago, on the song "Where the wild roses grow"?

12. Described by "Paste" magazine as having "perhaps the most inventive setting in recent memory", what is the title of the murder-mystery book that features Simon de Vries as the fictional "project head" of CMS

Bonus question: what is the name of the post-punk band that features several members of cms? Clue: their latest single (Jan 2025) is titled "No Choice".





Find out about CMS results, news, and stories straight to your inbox with our new monthly newsletter

Subscribe at cms.cern/newsletter

The monthly CMS newsletter, Point Cinq, summarises all the activities, results and news from the previous month. It is sent via email to everyone at CMS. Since March, a public version has been available to the outside world subscribers

Audio Visual

•Visual Communication:

Posters, brochures, banners, standard images of CMS (photos and 3D representations),
event displays (static, animated, and user-adjustable), and animated slices of the detector
Virtual Reality

•Video Production:

•Creating engaging videos for various platforms.

•Timelapses to show long term activities at P5

•Showcasing research, technology, and the people behind CMS.









Social Media engagement

We are present on YouTube, Facebook, Instagram, TikTok, X, Bluesky, Linkedin targeting people of different age and background, highlighting discoveries and results, event coverage, behind-the-scenes glimpses



CMS

CMS has seen increased engagement through initiatives like the photo of the month voting or visits live streaming. The goal is to shift from traditional broadcast-style communication to more interactive, community-building approaches that encourage participation from both collaboration members and external audiences.

Live events







Coverage of Conferences & Workshops: On site interviews to CMS speakers
Tours and Visits: Guided tours of CMS facilities, in-person and virtual. Live streaming on Youtube, Instagram and TikTok
Local connection: We are working to improve relationships with local communities, especially around the P5 site, participating in events like the Cessy color run





Visits at P5



CMS

<complex-block>

CMS is not only about physics; it is about history

When excavating the ground around P5, remains of a Roman Villa were found – a couple of thousand years old. Pottery and coins were also found. After <u>examination</u> the villa was covered again with earth. It is underneath the field just outside the fence. The roads around CMS are all "Roman roads" too. And a Roman forge was found



The mountain range to the west of CMS is the Jura. It is fun to ask visitors what they know about the Jura: most know nothing! So are then surprised when you tell them they gave their name to the "Jurassic" period of pre-history, more than 150 million years ago. So we have "Jurassic Park" just outside!

Tip: always ask the visitors about the Jura!



And, of course, CMS is exploring the history of the Universe, from 13.7 billion years ago to the present day!

Posters and exhibits being produced, with focus on HL-CMS, TC, Physics, Coordination Areas Guides training not only about safety and detectors, but also focusing on stories to fascinate people

Detector models

Updated version of CMS sketchup image for Hi-Lumi CMS are made available to everyone in the experiment to be used in presentations and documents





We also produce printed 3D models to be given as gifts, to celebrate occasions, as aides to the guides. Visitors can buy them in

our shop.

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Design and Print

Graphic designs have been created and incorporated into merchandise, they are included in presentations and posters to reach a visual identity



CMS CONTROL ROOM Salle de contrôle CMS If CMS was a human body, the control room would serve 🛛 Si le CMS était un corps humain, la salle de contrôle as the central nervous system for the detector, where servirait de système nerveux central du détecteur, où perators – known as shifters – maintain constant 🛛 les opérateurs - appelés « shifters » - maintiennent une lance over real-time detector operations. As the 🛛 vigilance constante sur les opérations du détecteur en primary point of information in case of malfunctions, the temps réel. En tant que premier point d'informatio control room is indispensable for ensuring the smooth, en cas de dysfonctionnement, la salle de contrôle ent, and safe operation of the entire CMS detector. est indispensable pour assurer le fonctionnement harmonieux, efficace et sûr de l'ensemble du détecteu **Technical Shifte** Data Quality **Control Room Blueprint** echnicien de maintenand Monitoring (DQM) Plan de la salle de contrôle Contrôle de la qualité des données (DQM) h the chain of certification of da tial technical issues in P5 Shift Leader Chef d'équipe rigger nmande triaa **Central Table** Table centra H T et plus tard au Tier-0 du CMS por Detectors On Call (DOC) responsables de la coordination complète de la salle de contrôle et des équipes, ains Détecteurs sur appel (DOC) ole who take shifts for the DOC positions are in charge of Data Acquisition (DAQ) Sélecteur d'acquisition de données (DAQ) Starts the data taking - a period of data taking is called a "run



Archive





This comprehensive documentation captures the complete construction and installation process of CMS_HL-CMS for inclusion in a commemorative photo book.



They all go (together with our productions) to our CDS archive as a resource for the whole collaboration



The documentation will serve as both a technical record and visual narrative of the experiment's evolution from conception to completion.

Collaborations

None of this work could be done without the invaluable support of our subsystems communication contact persons (CCP), who volunteer to help us gather and convey all the interesting news produced by the work of CMS members.





Collaborations

• **Open Data:** the release of 10 years of data is an important boost for spreading knowledge of our work, researchers, educators, and enthusiasts worldwide can access and analyse real collider data. (talk by Julie Hogan on Friday morning)

• **CERN Communications Team:** The Comms Team works with the CERN Communications team to increase the visibility of CMS results and announcements, leveraging CERN's wider audience base. CERN provides communication through written media, social media, and long-form videos

• **Content Creators** that visit our experiments let us reach audiences we don't currently reach and in languages that we don't speak

• **IPPOG:** CMS collaboration in one of the member of the IPPOG, and the Comms Team takes part in the IPPOG activities like the Masterclasses

• LHC Outreach Group (LOG): The Comms Team participates in monthly LOG meetings, which include representatives from the communication teams of the four LHC experiments, as well as CERN Communications. These meetings facilitate collaborative outreach projects and foster a communications community within CERN





Conclusions

After approximately two years of dedicated work, we have significantly boosted collaboration engagement and transitioned nearly all our activities to sustainable operations that don't depend on a handful of individuals working in overdrive----though a few such cases still remain. Despite this shift, our overall output has actually increased compared to two years ago.

The high-energy physics field faces significant challenges in the years ahead, and our field's continued success and growth will depend on exceptional communication from all HEP participants across diverse audiences, supported by specialized communication experts.



CMS Communication