

Leveraging the past to prepare the future of particle physics

A successful case of science communication

Anaïs Gerard

22 May 2023

A reminder: the CERN digital comms team

Media and Digital communications

Press Office Social Media Team Web Team



2022, a year of **celebration** and **excitement** for CERN



Restart of the LHC

→ Challenges :

- Uncertainties on the date
- Explain the difference with the beginning of the Run

10th anniversary of experimental discovery of the Higgs boson

→ Challenge :

- Difficult questions might arise

Beginning of the LHC Run 3

→ Challenges :

- Uncertainties on the date
- Dealing with conspiracy theories

What we wanted to **achieve**

CERN

Engage relevant parties
with CERN's world-
class research

What we wanted to **achieve**

CERN

Engage relevant parties
with CERN's world-
class research

Digital comms

Engage our audience(s)
in positive conversations

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CERN

Engage relevant parties
with CERN's world-
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Digital comms

Engage our audience(s)
in positive conversations

Higgs + Run 3

Promote the three
milestones

Our **strategy** to achieve it

Objectives

1. Generate positive attitudes around the decade of research since the discovery of the Higgs boson and the future of the field of particle physics, amongst citizens, decision-makers and in the media (considered a vector to reach other audiences)

2. Foster excitement for the future of the field within the particle physics community, in particular among young researchers

3. Develop a concerted implementation strategy across CERN Member States, with shared objectives, messaging, branding and products, in order to more successfully achieve the first two objectives.

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Themes

Celebration

10 years on

Preparing the future

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Themes

Celebration

10 years on

Preparing the future

Messages

The discovery of the Higgs boson **changed the field of particle physics and its future perspective**

We **know much more today** about the building blocks of the Universe and their interactions than we did 10 years ago and are **following interesting leads** via the full exploitation of the LHC and its high luminosity upgrade (HL-LHC)

The upcoming physics season will be focused on the study of the **properties of the Higgs** and the **search for physics beyond the Standard Model** of particle physics. After the Run 3, the **HL-LHC** will further these studies.

Ecosystem of the campaign(s)

Target audiences*

CERN community

Particle physics community

Decision-makers

Local communities

General public

Teachers and students

Media (as a vector)

Partners

Directorate (Governance)

LHC experiments

Machine OP team

European Particle Physics Communications Network

International Particle Physics Outreach Group

Interactions (communications network)

*Not listed in order of priority

#restartingLHC 9 February – 22 April 2022



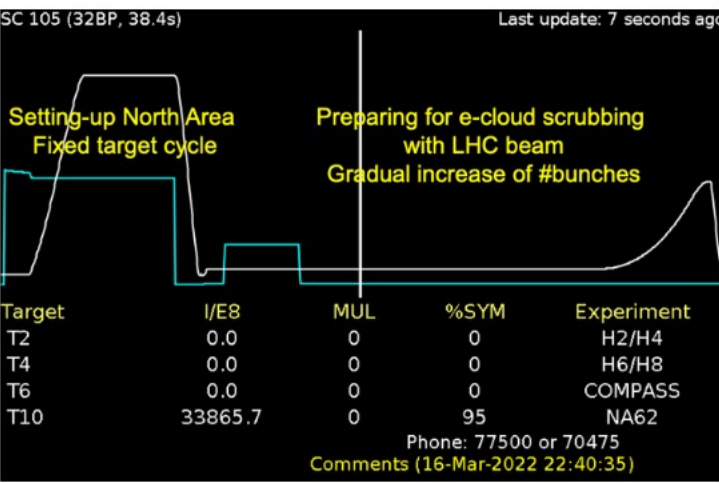
Upgrades to ATLAS

Engineering • CERN



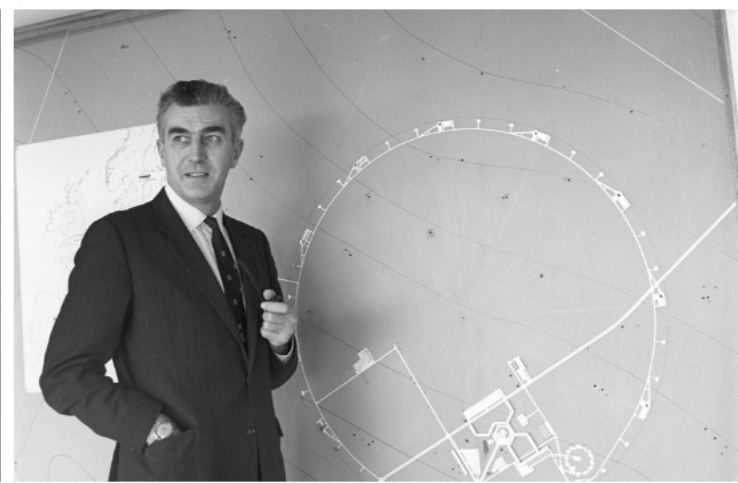
Upgrades to CMS

Engineering • CERN



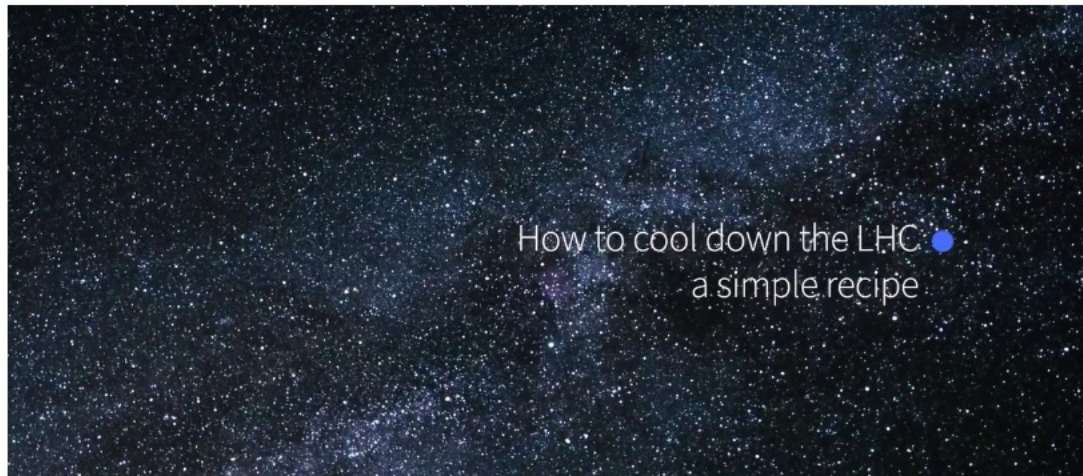
Large Hadron Collider Restarts

Accelerators • CERN



Upgrades to ALICE

Engineering • CERN



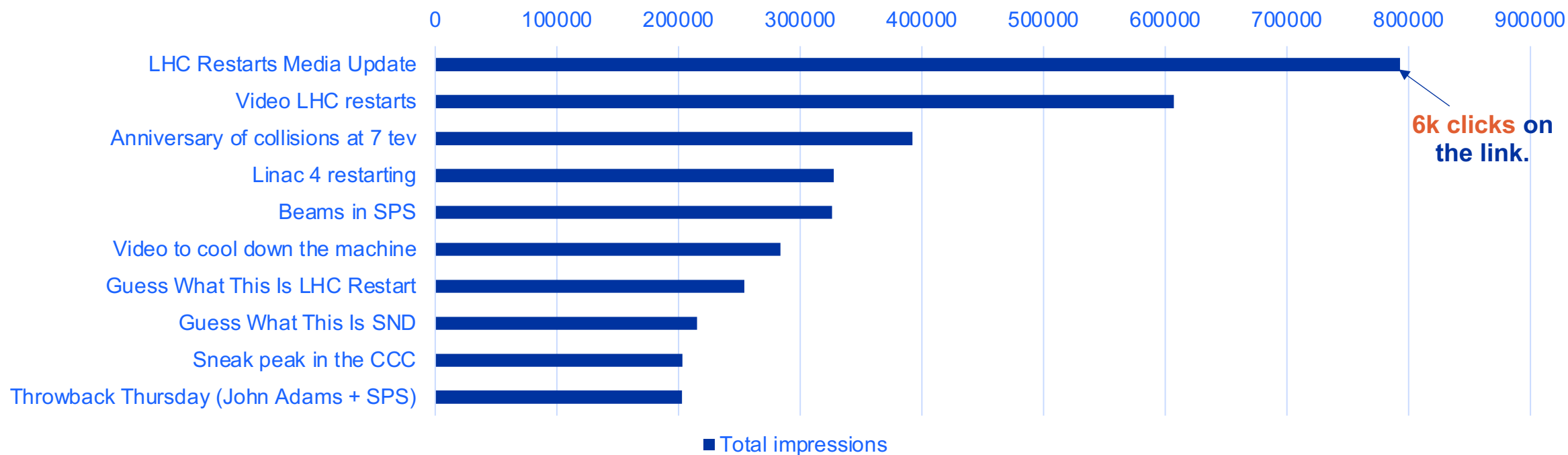
How to cool down the LHC •
a simple recipe



Upgrades to LHCb

Engineering • CERN

#restartingLHC 9 February – 22 April 2022



Featuring impressive content

Videos
State-of-the-art technologies

Making the most of our communications opportunities

Media update
regular content

Building on the excitement

Communicating on milestones within the milestone.

 **Alan Boyle** @bOyle · Apr 26
Large Hadron Collider has restarted, shooting protons at record energy levels: universetoday.com/155591/large-h... H/T @CERN #LHC #LHCRun3 #RestartingLHC



Jaleel Warren
Cheers to finding new physics! 🍷

Like Reply Hide 2 w

 **IN2P3 Les 2 infinis** @IN2P3_CNRS

#restartingLHC 🌟 | 22 avril : redémarrage du #LHC après 3 ans de maintenance.

Le soir même, Gaëlle Boudoul, physicienne @CNRS dans @CMSEperiment et directrice de l'antenne IN2P3 au @CERN raconte cette journée particulière au @Forum_RTS.

rts.ch/play/tv/-/vide...
Translate Tweet



Kieran Denahy
When does CERN restart?

Like Reply 7 w

 **Reuters** @Reuters

Scientists prepare CERN collider restart in hunt for "dark matter" reut.rs/3L3n4cq



Carmen MacDonald
Does anyone know the date when the LHC comes back online?

Like Reply 7 w

 **symmetry magazine** @symmetrymag

A sampling of upgrade photos: #restartingLHC



Dory Kodeih
Good luck LHC on the restart and revamping the energy to 13.6 TeV

Like Reply Hide 2 w



3



Erika @AstroErika · Apr 25
With the upgrades implemented, the energy of the LHC's proton beams was set to increase from 6.5 teraelectronvolts (TeV) to 6.8 TeV. 🌟🌟

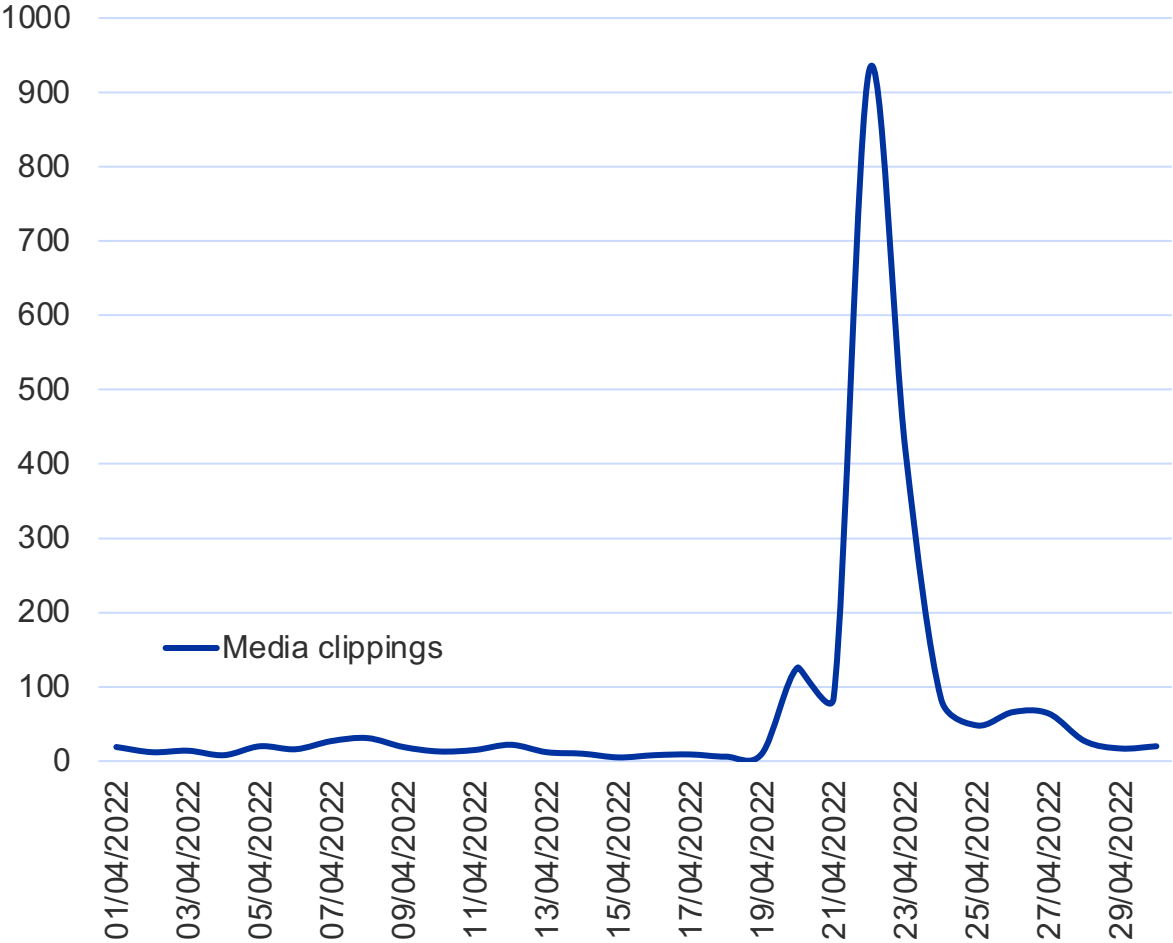
#RestartingLHC

Restart of the LHC 22 April 2022

- **Media update on the 22nd of April**
home.cern – CISION – alpha galileo
- **VNR (video news release) made on the day and sent with the media update**
- **Digital media kit focused on LS2**
- **Follow-up interviews and requests**

BACKGROUNDEERS

The backgrounders linked below summarise the key upgrades to the accelerators and four main LHC experiments during Long Shutdown (LS2), which began in December 2018 and runs until the LHC restarts in 2022.



#Higgs10 17 June – 04 July 2022

CERN @CERN · 4 Jul 2022

Joe Incandela, the @cmsexperiment spokesperson in 2012, and Fabiola Gianotti, the @atlasexperiment spokesperson in 2012 and now #CERN Director-General, recreate their photo from 4 July 2012 during the announcement of the #Higgsboson discovery 10 years on 📺📺

#Higgs10 #Thenandnow

CERN 339 348 abonnés · 11 mois · 🌐

- ? What is the Higgs boson?
- ? How do particles get mass?
- ? How did we discover the Higgs boson?
- ? How did the physicists know it was the Higgs boson?
- ? What have we learned since?
- ? How does the Higgs boson impact everyday life?

Stars, planets and life could only emerge because particles gained their mass from a fundamental field associated with the #Higgsboson. The existence of this mass-giving field was confirmed in 2012, when the famed particle was discovered at CERN by the **ATLAS Collaboration** & **CMS Collaboration**.

CERN @CERN · 15 Jul 2022

Still excited about the #Higgs10 anniversary? Relive the Higgs discovery announcement on 4 July 2012 through the memories of CERN Alumni Award winner Octavio Dominguez: alumni.cern/news/787179

CERN Alumni @cernalumni · 22 Jun 2022

Octavio Dominguez, CERN Alumni Award Winner, shares his memories from the Higgs discovery announcement in our special Higgs@10 campaign: alumni.cern/news/787179

CERN @CERN · 18 Jun 2022

To celebrate the 10 years since @ATLASexperiment & @CMSEperiment announced the discovery of the #Higgsboson, the #Higgs10 series covers its #Higgstory

VOLUME 13, NUMBER 16 PHYSICAL REVIEW LETTERS 19 OCTOBER 1964

BROKEN SYMMETRIES AND THE MASSES OF GAUGE BOSONS

Peter W. Higgs
Tait Institute of Mathematical Physics, University of Edinburgh, Edinburgh, Scotland
(Received 31 August 1964)

In a recent note¹ it was shown that the Goldstone theorem,² that Lorentz-covariant field theories in which spontaneous breakdown of symmetry under an internal Lie group occurs contain zero-mass particles, fails if and only if the conserved currents associated with the internal group are coupled to gauge fields. The purpose of the present note is to report that, as a consequence of this coupling, the spin-one quanta of some of the gauge fields acquire mass:

about the "vacuum" solution $\varphi_1(x) = 0, \varphi_2(x) = \varphi_0$:

$$\partial^\mu \{ \partial_\mu (\Delta \varphi_1) - e \varphi_0 A_\mu \} = 0, \quad (2a)$$

$$\{ \partial^2 - 4\varphi_0^2 v''(\varphi_0^2) \} (\Delta \varphi_2) = 0, \quad (2b)$$

$$\partial_\nu F^{\mu\nu} = e \varphi_0 \{ \partial^\mu (\Delta \varphi_1) - e \varphi_0 A_\mu \}. \quad (2c)$$

10 years

cern · Suivi(e)

cern Happy #Higgs10 anniversary!

#OnThisDay in 2012, a few short years after beam first circulated in the #LHC, the @atlasexperiment and @cmsexperiment announced the discovery of the Higgs boson. Its existence confirms the existence of the Higgs field, which gives mass to all elementary particles.

10122 J'aime

JUILLET 4, 2022

Ajouter un commentaire... Publier

CERN @CERN · 4 Jul 2022

And we're off! #Higgs10

The Scientific Symposium to celebrate the 10th anniversary of the #Higgsboson discovery is about to start. Join the webcast live: indico.cern.ch/event/1135177

sergiomartinsbraga Braga Portugal · 44 sem · 1 J'aime · Répondre · Voir la traduction

m_a_t19930101 Wooww 🥰🥰🥰 · 44 sem · 1 J'aime · Répondre

samuelj645 Hellow, congratulations from México 🇲🇽 · 44 sem · 1 J'aime · Répondre · Voir la traduction

cristinaadrada Me encantaría poder estar allí, 🙏 · 44 sem · Répondre · Voir la traduction

prernamadan_25 Now came home to have lunch, but have to go back to clg... So after coming back from college in evening, will watch this 🥰🥰🥰 · 44 sem · 1 J'aime · Répondre · Voir la traduction

44 097 vues

JUILLET 4, 2022

cern · Guess what this is

On 4 July 2012, the @atlasexperiment and the @cmsexperiment at CERN's Large Hadron Collider (LHC) announced they had each observed a new particle in the mass region around 126 GeV - the #Higgsboson, a cornerstone of the #StandardModel of particle physics! #Higgs10

On 8 October 2013, the Nobel Prize in Physics was awarded jointly to François Englert and Peter Higgs "for the theoretical discovery of a mechanism that contributes to our understanding of the origin of mass of subatomic particles, and the discovery of the predicted fundamental particle".

by Dominguez, Daniel

Modifié · 44 sem · Voir la traduction

gloominescent Looks like a dandelion under a full moon · 39 sem · Répondre · Voir la traduction

cern Happy #Higgs10 anniversary!

To continue to celebrate the #Higgsboson discovery, we're sharing an artistic view of the Brout-Englert-Higgs field, with the sonification of the two discovery plots from 2012, and the "sound" of the beam passing by in the #LHC

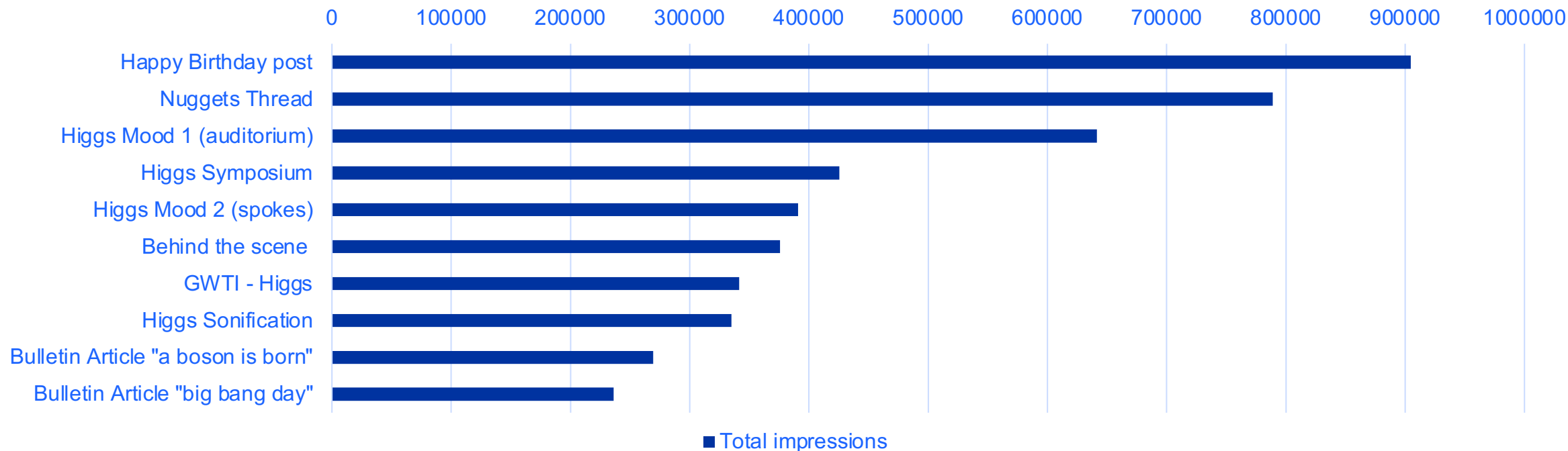
Daniel Dominguez, CERN · Piotr Traczyk, CERN · 44 sem

davidben.1612 Can we make better music? · 32 sem · Répondre · Voir la traduction

37 434 vues

JUILLET 4, 2022

#Higgs10 17 June – 04 July 2022



Leveraging #Higgstory

Home.cern articles with vintage pictures

Iconic moments

Finding "something" to show

Never seen before content from audiovisual team

Focus on the human faces

Going live

Making our audience feel the CERN "atmosphere"

Sharable content for celebration

The Nobel Prize @NobelPrize · 4 Jul 2022
Discover more about the Higgs boson, discovered ten years ago today, and which led to the 2013 #NobelPrize in Physics.

#Higgs10

CERN @CERN · 3 Jul 2022

Stars, planets and life could only emerge because particles gained their mass from the "Higgs field". Its existence was confirmed in 2012, when two #LHC experiments announced the discovery of the #Higgsboson.

But what do you know about this particle?

Here are the quick facts 📌

[Show this thread](#)



CPPM @CPPMLuminy · 6 juil. 2022

Et après l'observation du #Higgs10 ?

Une foison de sujets de recherche prometteurs !

C'est ce que nous exposent Elisabeth Petit @CPPMLuminy @CNRS_dr12 @Univamu

et Nicolas Morange @IJCLab @UnivParisSaclay @Univ_Paris @IN2P3_CNRS @ATLASexperiment @lhcpysics

IN2P3 Les 2 infinis @IN2P3_CNRS · 6 juil. 2022

L'#IN2P3 fête #Higgs10 🎉 | De nombreuses questions ? fondamentales restent en suspens. Le #LHCRUN3, la phase #HiLumiLHC et les accélérateurs du futur permettront de nouvelles découvertes.

Elisabeth Petit et Nicolas Morange nous promettent "Un avenir lumineux" !



Dr Clara Nellist @claranellist · 5 Jul 2022

What is the #HiggsBoson? Well, I made a little video to help explain it for #Higgs10



rocky_pierre_scifi CERN, keep making discoveries. What's so good about getting answers to questions in physics, is that they lead to more questions that need to be answered.

44 sem 1 J'aime Répondre Voir la traduction

Masquer les réponses



rocky_pierre_scifi @rocky_pierre_scifi As a physics enthusiast, for CERN to 'like' my Instagram comment, means a lot to me! It made my day! 🙌

44 sem Répondre Voir la traduction



javier.aa2511 Happy birthday from chihuahua mexico 🇲🇽

44 sem 2 J'aime Répondre Voir la traduction

Bernardo Nava and 2.3K others

101 comments 672 shares

Like

Comment

Share

Most relevant



Pile Shareno

I remember this day, I watched the live broadcast. It was better than the Oscars.

Like Reply 44 w Edited

3 replies



Kate Kahle @katekahle · 4 Jul 2022

Hilarious bit in today's #Higgs10 symposium @CERN when our Director-General, Fabiola Gianotti, reluctantly agrees to stop using Comic Sans to announce physics results 😂



#higgs10

People are posting about this



ATLAS Experiment at CERN

20 July 2022 · 🌐

How does the Higgs boson interact with itself? This special project explores the formation of the early Universe! #Higgs10

In this video, members of the ATLAS analysis team explain their interaction. Read the physics briefing to learn more: <https://atlas.ch/interaction>



cmsexperiment

Suivre

Contacter

+

241 publications

25,7 k followers

186 suivi(e)s

Compact Muon Solenoid at CERN

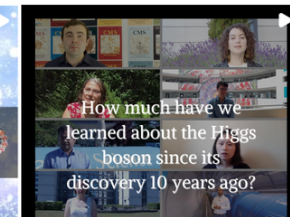
Science, technologie et génie civil

CMS is a particle detector on the #LHC @CERN

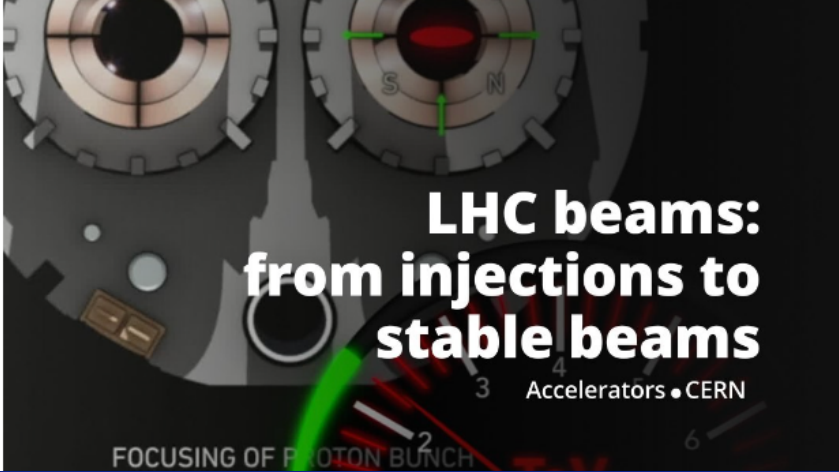
Sitting peacefully 100m underground, investigating secrets of the Universe while watching protons collide

linktr.ee/cmsexperiment

Suivi(e) par dm.csantonio, claranellist, wit.cern et 20 autres personnes



#LHCRun3 25 April – 05 July 2022



LHC beams: from injections to stable beams

Accelerators • CERN

FOCUSING OF PROTON BUNCH



TOP TRUMPS CMS Weight: 10000 Dimensions: 24x30x3 Scientists involved: 4000 Institutions involved: 200 Countries involved: 40 CMS Compact Muon Solenoid is a general purpose detector, designed to detect and measure the particles that result from the collision of protons and anti-protons at the LHC. It is the largest and most complex particle detector ever built.	TOP TRUMPS ALICE Weight: 10000 Dimensions: 24x30x3 Scientists involved: 4000 Institutions involved: 200 Countries involved: 40 ALICE (A Large Ion Collider Experiment) is the only detector at the LHC designed to study the matter created in the collisions of heavy ions.
TOP TRUMPS ATLAS Weight: 7000 Dimensions: 44x25x3 Scientists involved: 9000 Institutions involved: 200 Countries involved: 40 ATLAS is a general purpose particle detector at the LHC. It is the largest and most complex particle detector ever built.	TOP TRUMPS LHCb Weight: 5000 Dimensions: 24x30x3 Scientists involved: 500 Institutions involved: 200 Countries involved: 40 LHCb is a Large Hadron Collider beauty experiment. It is the only detector at the LHC designed to study the matter created in the collisions of protons and anti-protons at the LHC.

bigscience_stfc Today we start #LHCRun3 live 16.00 CEST on @cern 🎉

But what do you know about the four biggest experiments at the #LHC?

Find out more about @ATLASexperiment @CMSexperiment @alice_experiment and @LHCbExperiment from these #TopTrumps "Top Detectors" cards from @bigscience_stfc!

#science #education #engineering #learning #stem #research #physics #scientist #math #learn #laboratory #teaching #growing #studying #knowledge #study #students #engineer #planet #Higgs #HiggsBoson #Higgs10 #Higgsversary

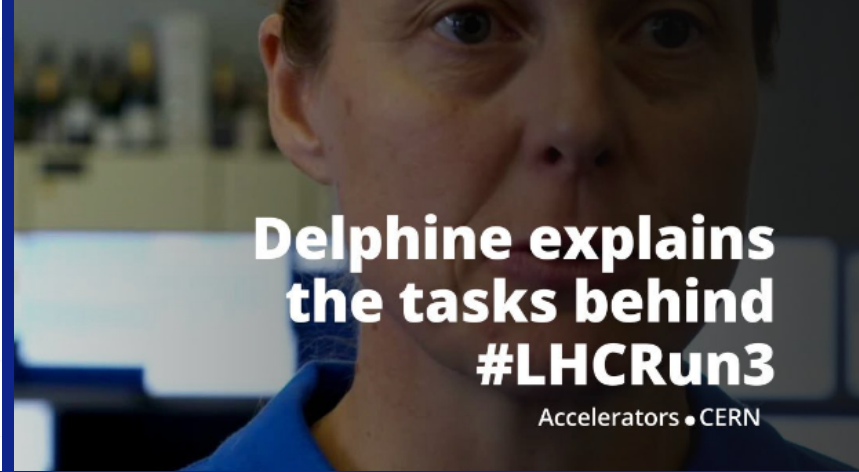
gloominescent PokéMach (Pocket Machines) 39 sem Répondre Voir la traduction

azwellzain ZAIN

Aimé par naomizinnmore et 2642 autres personnes

JUILLET 5, 2022

Ajouter un commentaire...



Delphine explains the tasks behind #LHCRUN3

Accelerators • CERN



Live from CERN: Join us for the first collisions for physics at 13.6 TeV!

5 July 2022, 16.00 CEST



Live from CERN: teaser

Accelerators • CERN



jacky.jcck 🥰🥰🥰
44 sem Répondre

pavithra_bandara_9188 ❤️❤️❤️
44 sem Répondre

music_is_food Congratulations! I hope the CERN team discovers many important new particles to further unify the theories in physics and contribute to the Standard Model 🙌
44 sem 5 J'aime Répondre Voir la traduction

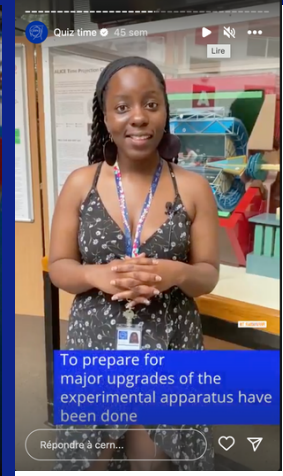
the_sall_suites_zakynthos_ 🙌🙌🙌🙌
44 sem Répondre

54 110 vues
JUN 29, 2022

Ajouter un commentaire...

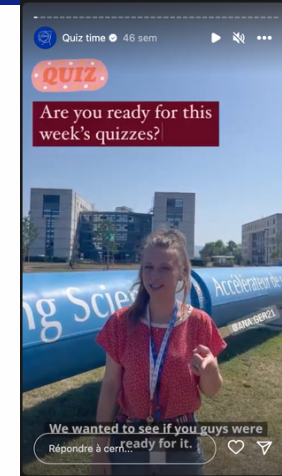


Ready to win a prize from CERN? We're having a contest on #LHCRUN3!



To prepare for major upgrades of the experimental apparatus have been done

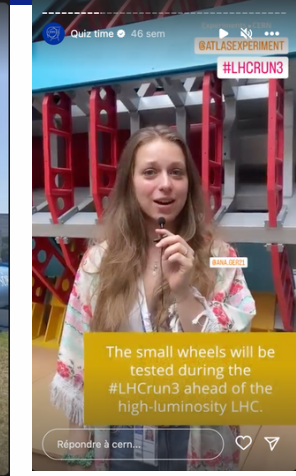
Répondre à cern...



Are you ready for this week's quizzes?

We wanted to see if you guys were ready for it.

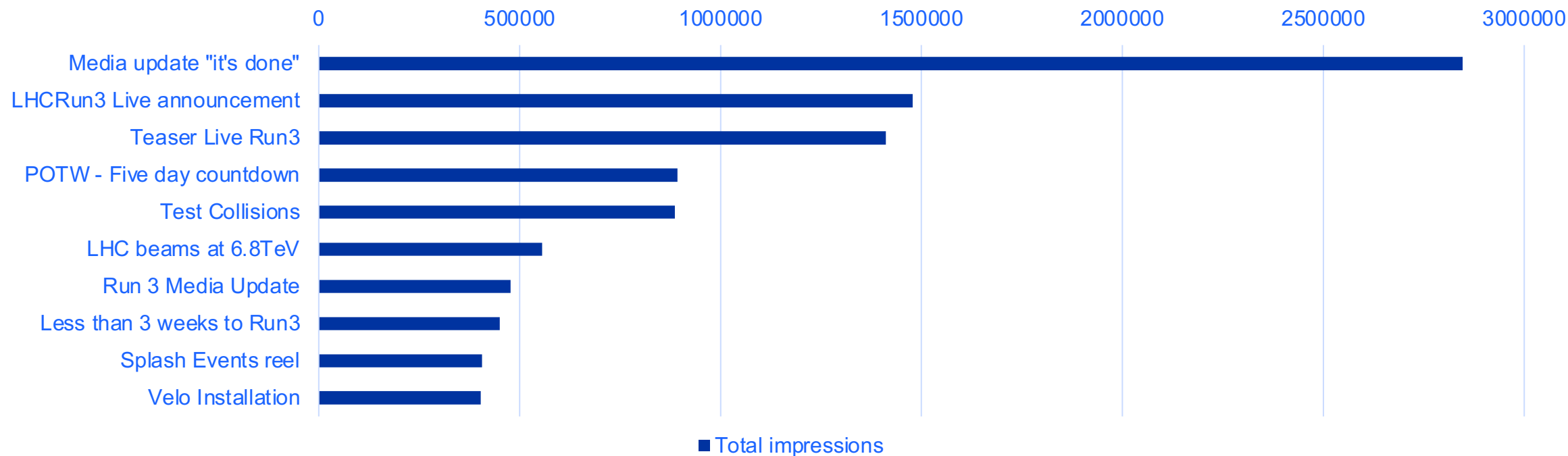
Répondre à cern...



The small wheels will be tested during the #LHCRUN3 ahead of the high-luminosity LHC.

Répondre à cern...

#LHCRun3 25 April – 05 July 2022



Building on the excitement

Countdowns to an exciting day

With pedagogical content

Top priority: talk about physics

To finish with a big “splash”

Taking our audience with us on the day
Making people feel heard

#LHCRun3 LIVE – 5 July 2022

Duration: 1H50

Moderation: 4 social media managers + 20 experts

Channels: Facebook (CERN + 4 experiments),
LinkedIn, Twitter, YouTube (EN, FR, IT, DE, ES + INFN)


Total of 13 platforms + 5 languages


Overview


- ❑ **11,557,580** impressions (reach)
- ❑ **4,732,869** views of the LIVE, inc. Reuters
- ❑ **59,626** engagements
- ❑ **75,737** concurrent viewers
- ❑ Hashtags caught **trending** in CH, FR, UK, US




Live from CERN: Join us for the first collisions for physics at 13.6 TeV!

 **Ryan Cole** il y a 10 mois
Love how they make it sound like we need this 🤔 😊
👍 35 🗨️ Répondre
▼ 9 réponses

 **Corina Saebels** il y a 10 mois
Congratulations...With all due respect...I am a bit worried about all of this happening, however, I am also excited and intrigued about all of what this means. Do we need to be afraid of any disasters that could happen with doing all of this? Thank you. 😊
👍 6 🗨️ Répondre
▼ 9 réponses


 **Uncle Traveling Matt** il y a 10 mois
This live event was great, hope to see the results and many more events in the future.
👍 61 🗨️ Répondre
▼ 7 réponses


 **turkfiles** il y a 10 mois
Congratulations! The ending song was perfect, and very creative! Great job to all!
👍 4 🗨️ Répondre


 **8honeyb** CERN is Dangerous and should be shut down. Not excited or looking forward to this demonic activity
45 sem 30 J'aime Répondre Voir la traduction

 **Stephanie** 🌸 🌻 @bowskeyes · 6 juil. 2022
I was definitely beaming over here in the US. To operate the accelerators myself would be a dream come true 🤩 🌟
🗨️ 🔄 ❤️ 4 📊 📤

 **William Scott** il y a 10 mois
11,000 laps per second? OH MY GOSH!
I didn't know humanity was even capable of making something go so fast.
👍 494 🗨️ Répondre
▼ 102 réponses


 **sacredromeo** Nothing is exciting about ripping holes in the planetary hologram! Wake up, people!
45 sem 25 J'aime Répondre Voir la traduction

 **kerstinheid5** Cern rocks! Keep on being curious about what keeps the world together
45 sem Répondre Voir la traduction

 **liamcoxisnot** They're trying to change the world line, don't fall for their lies!
46 sem 18 J'aime Répondre Voir la traduction
— Afficher les réponses (2)


 **DrKevGuitar** @DrKevGuitar · 6 juil. 2022
We'll done everyone! 🍷 🍷 🍷 🍷 🍷
🗨️ 🔄 ❤️ 4

 **wAke the SL** @slayerofsheepV2 · 6 juil. 2022
When do the demons show up?
🗨️ 1 🔄 ❤️


 **Subhra Shankar Banerjee** · 3e et + 1:14:44 ...
Solution Architect
What can be the practical application of these discovery
🗨️ | Répondre


 **Mary Slipper** @slippr · 5 juil. 2022
We have 13.6 TeV at the LHC! I'm an LHCb PhD student - what do I want to find out with #LHCRun3? A thread 🧵!
🗨️ 9 🔄 52 ❤️ 343 📊 📤
Afficher cette discussion


 **Carl** 🤖 🌌 @bigboycarl07 · 7 juil. 2022
stop playing God before you upset the Creator and create more problems for people
🗨️ 1 🔄 ❤️ 8 📊 📤

 · 1d ago · 6w ago il y a 10 mois
When the universe doesn't get destroyed and you have to continue on with life...
👍 94 🗨️ Répondre
▼ 17 réponses

 **Shimaa AbuZeid** @ShimaaAbuZeid1 · 5 juil. 2022
Ready 🤖 and Excited 🤩 for the Start of #LHCRun3 .. From @CMSExperiment @CERN control room 🍷 🌟

 **Konstantinos Davaris** il y a 10 mois
now that you increased the intensity of the beam by increasing the mass and not increasing the speed wouldn't this create more "debris" when they will collide? is there a chance debris to collide with debris?
👍 32 🗨️ Répondre
▼ 4 réponses

 **nicolov.a** Can't wait to see it not discover supersymmetry 🤩
🤔 🤔
46 sem Répondre Voir la traduction ...

 **CMS Collaboration**
2 950 abonnés 48:50 ...
Lauren Taylor We are using protons! We take them from a bottle of Hydrogen, which is the simplest element formed by one proton and one electron.
- Erica Brondolin
🗨️ · 7 J'aime | Répondre

Higgs10 and Run3 30 June – 05 July 2022

- Tailored home.cern content:
Backgrounders + Higgs nuggets

LHC RUN 3

<p>› LHC Run 3 Background information</p>	<p>› The High-Luminosity Large Hadron Collider Background information</p>	<p>› What is CERN going to do during Run 3? Fabiola Gianotti, CERN Director-General</p>
<p>› What do we call a "run" at the LHC? Rene Steerenberg, Head of the Operations Group in the Beams Department</p>	<p>› What's new about Run 3 of the LHC? Mike Lamont, Director for Accelerators and Technology</p>	<p>› Pourquoi le Run 3 est important pour le LHC ? Malika Meddahi, Deputy Director for Accelerators and Technology</p>

HIGGS10

<p>› The Higgs boson Background information</p>	<p>› What is special about the Higgs boson? Fabiola Gianotti, CERN Director General</p>	<p>› Which questions could the Higgs boson answer? Tiann-Tevong You, theoretical physicist</p>
<p>› Why continue studying the Higgs boson? Andreas Hoecker, ATLAS experiment spokesperson</p>	<p>› What can Run 3 bring to Higgs measurements? Luca Malgeri, CMS experiment spokesperson</p>	<p>› Higgs boson image gallery</p>

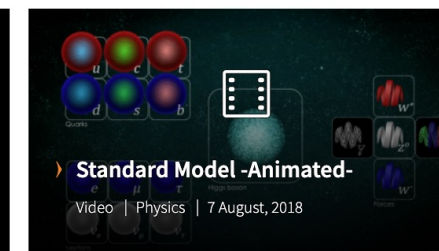
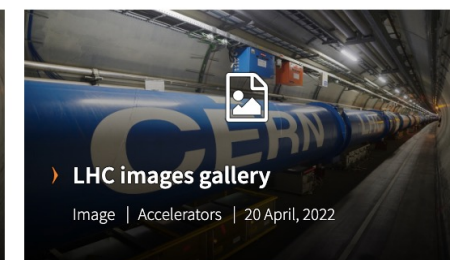
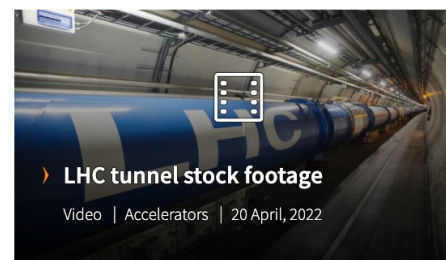
Higgs10 and Run3 30 June – 05 July 2022

- Tailored **home.cern** content:
Backgrounders + Higgs nuggets
- Supporting products shared with partners in **advance**:

Illustrations and animations

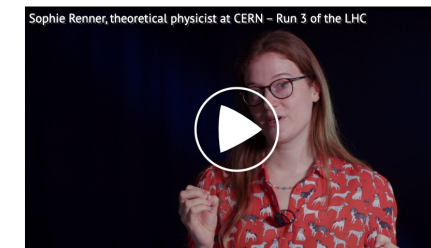
Pre-recorded interviews with LHC experiment spokes, deputy-spokes, theorists, the DG, Director for Accelerators and Technologies and his deputy

- **Media trainings**



2. New precision measurements paving the way to new physics

With this third run, scientists at the LHC experiments will be able to improve the measurement precision of numerous known processes addressing fundamental questions, such as the origin of the [matter-antimatter asymmetry](#) in the universe.



What are your physics expectations for Run 3? Sophie Renner, theoretical physicist at CERN ([Video: CERN](#))

They will also be searching for candidates for [dark matter](#) and for [other new physics phenomena](#), either through direct searches or - indirectly - through [precise measurements](#) of properties of known particles.



Which physics results do you expect from Run 3? Michelangelo Mangano, theoretical physicist at CERN ([Video: CERN](#))

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17 journalists on site, 40 online
- **[Embargoed material](#) + press releases**



Higgs10 and Run3 30 June – 05 July 2022

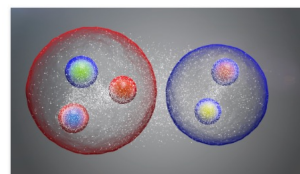
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17 journalists on site, 40 online
- **Embargoed material + press releases**
- **5 communications, and 2 VNR including 1 aired by the European Broadcasting Union**
- **Follow-up requests**



The third run of the Large Hadron Collider has successfully started

A round of applause broke out in the CERN Control Centre on 5 July at 4.47 p.m. CEST when the Large Hadron Collider (LHC) detectors started recording high-energy collisions at the unprecedented energy of 13.6 TeV

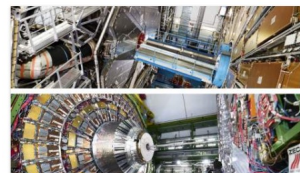
News | At CERN | 05 July, 2022



LHCb discovers three new exotic particles

The collaboration has observed a new kind of “pentaquark” and the first-ever pair of “tetraquarks”

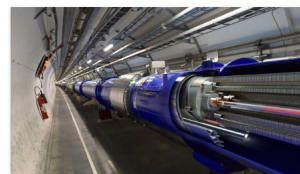
News | Physics | 05 July, 2022



ATLAS and CMS release results of most comprehensive studies yet of Higgs boson's properties

The collaborations have used the largest samples of proton-proton collision data recorded so far by the experiments to study the unique particle in unprecedented detail

News | Physics | 04 July, 2022



LHC Run 3: physics at record energy starts tomorrow

The Large Hadron Collider is ready to once again start delivering proton collisions to experiments, this time at an unprecedented energy of 13.6 TeV, marking the start of the accelerator's third run of data taking for physics

News | Physics | 04 July, 2022



The Higgs boson, ten years after its discovery

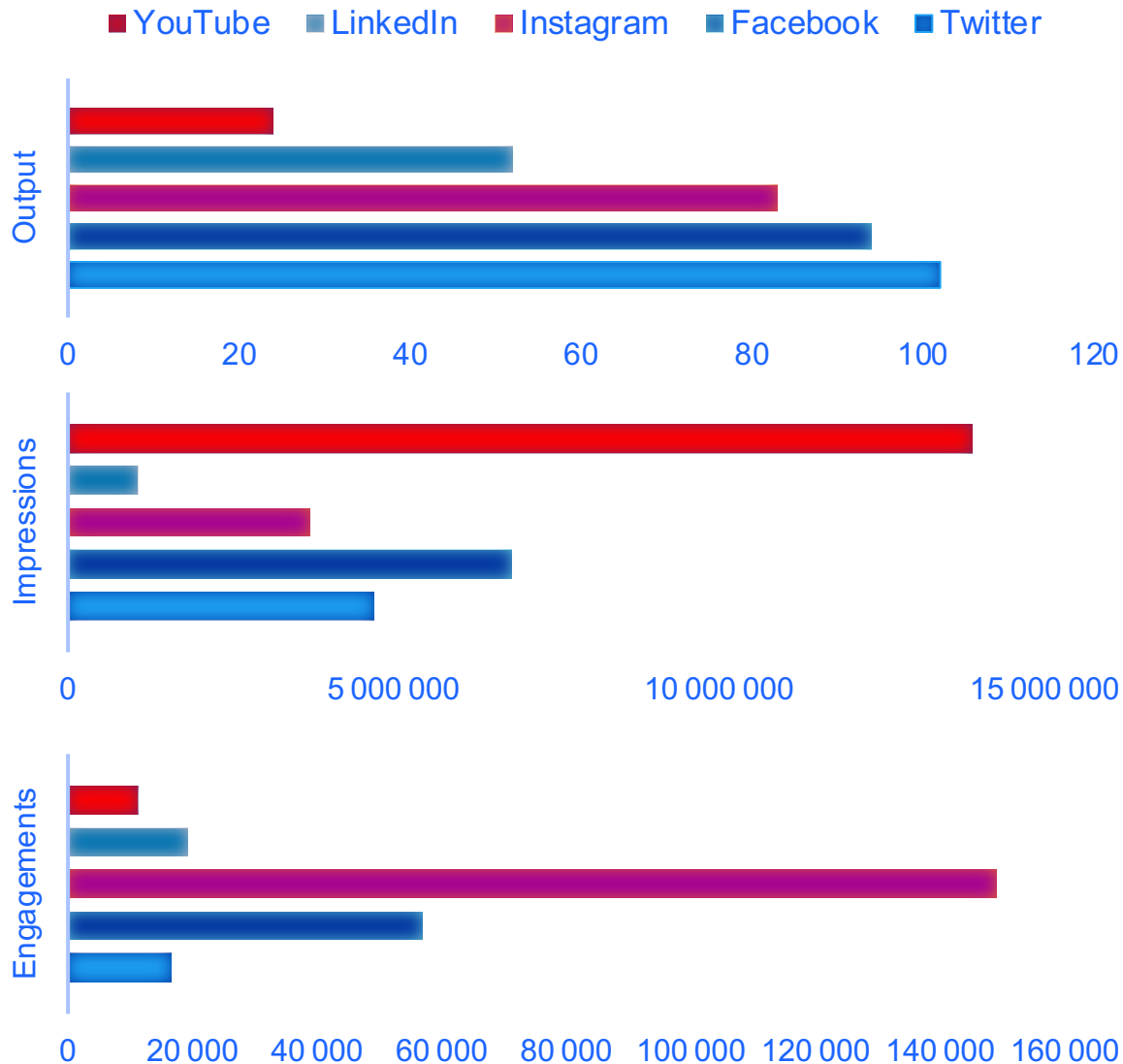
The discovery of the Higgs boson at the Large Hadron Collider and the progress made since then, have allowed physicists to make tremendous steps forward in our understanding of the universe

Press release | Physics | 04 July, 2022

Outcomes



Three campaigns “at a glance”



intense upgrade work
 new physics experiments world-record energy
 physics summer record energy preparation
 world accelerator anniversary third run
 particles **discovery** beams
 activities energy protons
 collisions large hadron collid...
 breaking energy existence first collisions mass
 look tera electron volts world-record
 stable beams opposite directions trillion electronvo...



355 posts *



30,159,710 impressions



252,899 likes



17,885 mentions

Impact on CERN channels



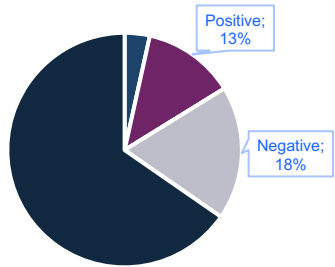
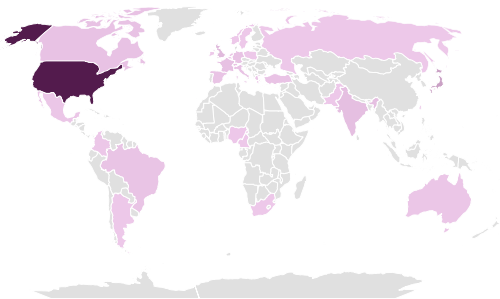
81,008,536 impressions



3,056,091 likes

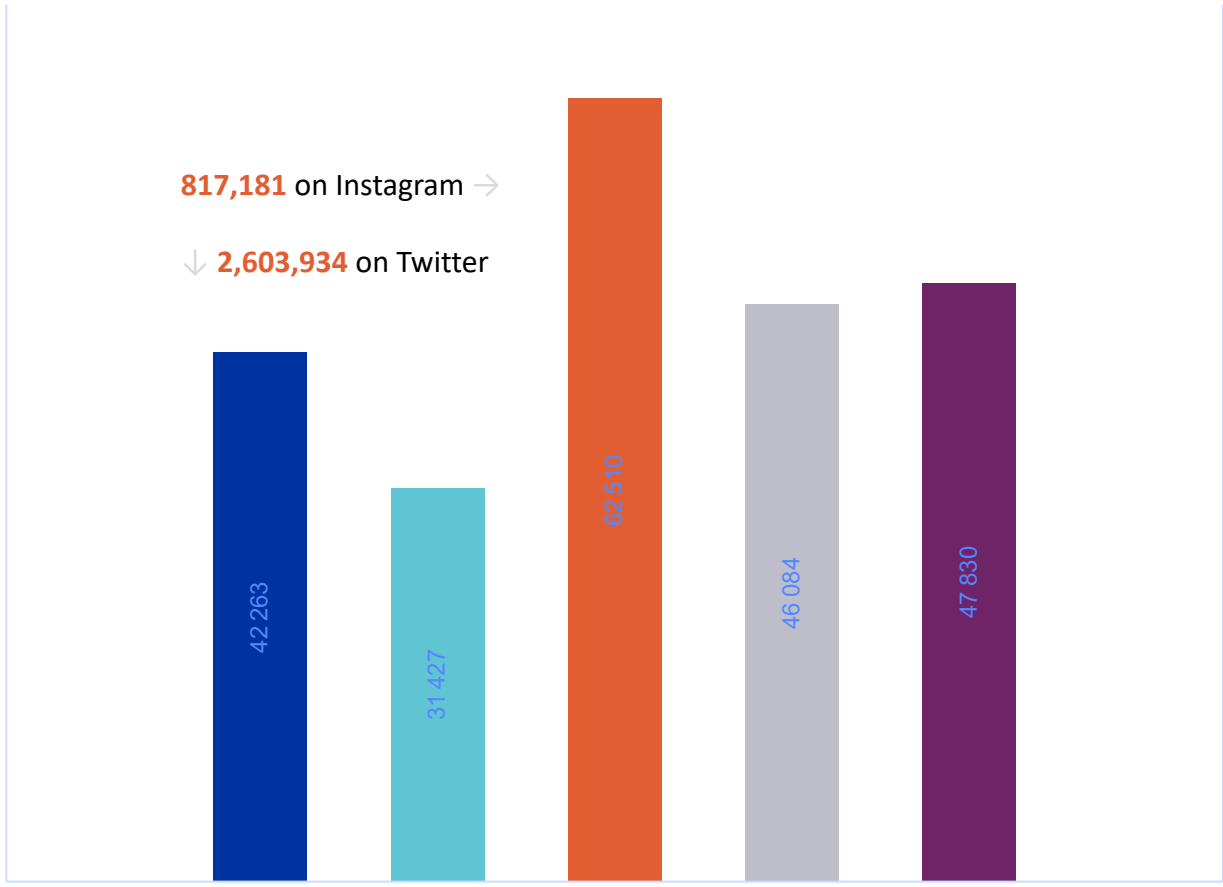


727,119 mentions



■ Not Rated ■ Positive
■ Negative ■ Neutral

■ Twitter ■ Facebook ■ Instagram ■ LinkedIn ■ YouTube



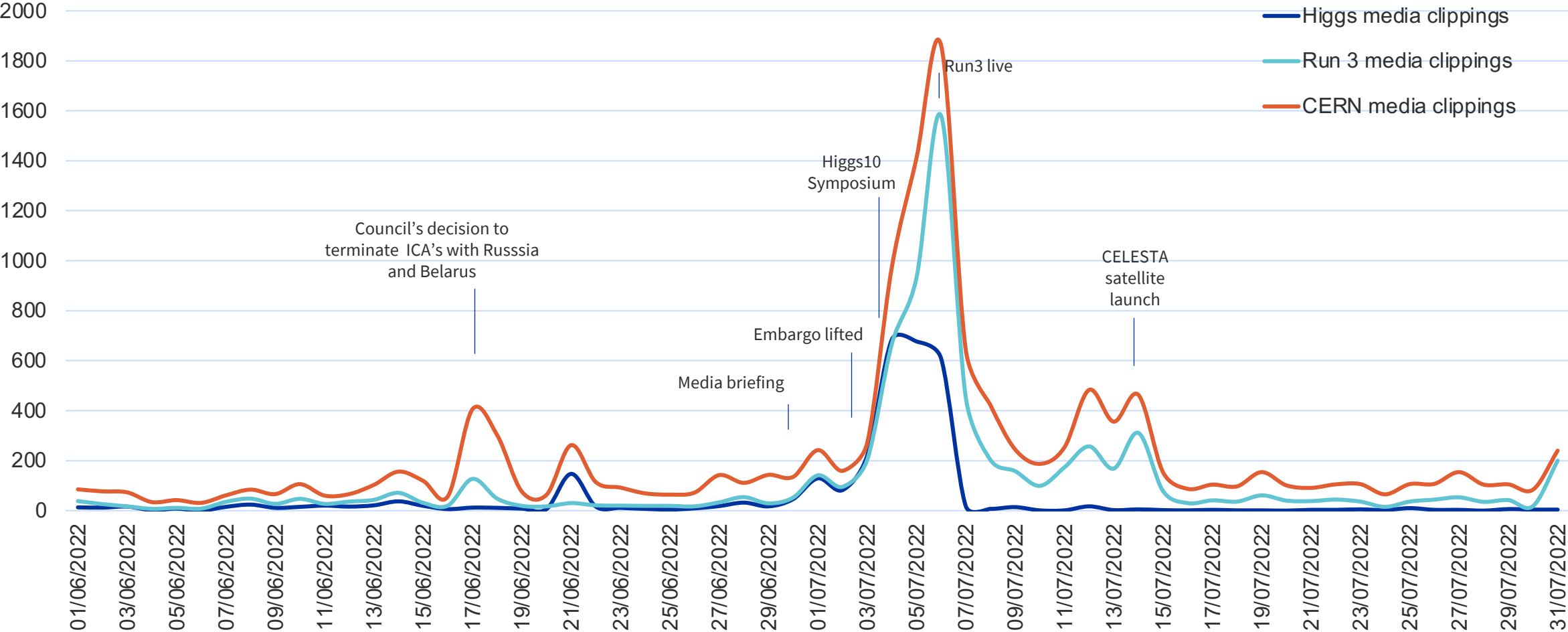
817,181 on Instagram →
↓ 2,603,934 on Twitter

GAINED FOLLOWERS

Total 230,114 new followers

Peaks in media clippings

6 897 articles: Higgs@10 and Run 3 clippings from 1 June to 31 July



A variety of outlets

Specialized



National and international



Local



Peak on **home.cern**

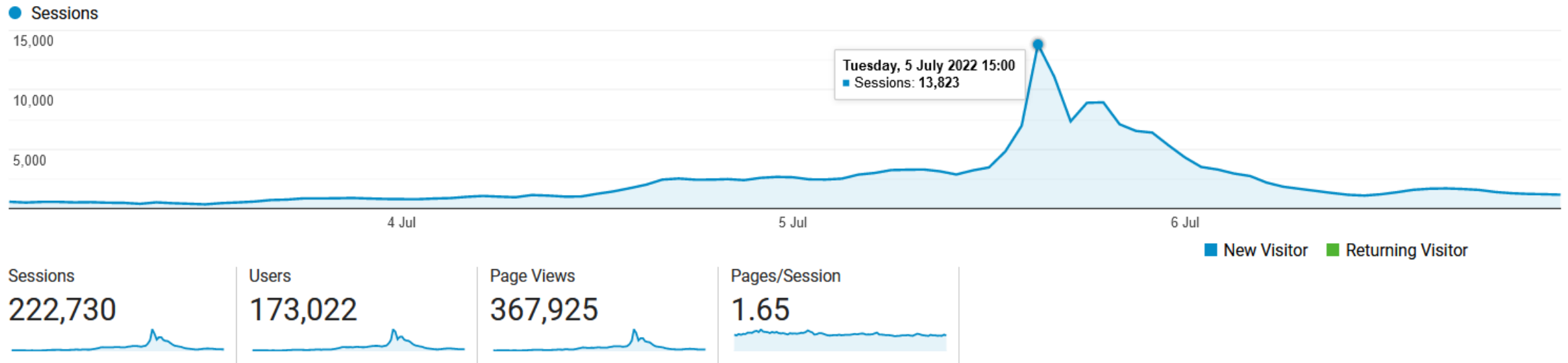
4 and 5 July

Home.cern experienced a rise in the number of visitors, peaking on 5 July afternoon

75% of traffic were new visitors

70% of traffic from the United States

Google Analytics show trends *not* real numbers due to cookie policy (real numbers may be 10-15% higher)



Learnings

Rely on the community

- Institutes
- Social media team
- Press Office

Keep the conversation going

- A “common thread”: thematic weeks, hashtags...
- Channels’ own strengths

Be accessible

- Layered content
- Accessible form

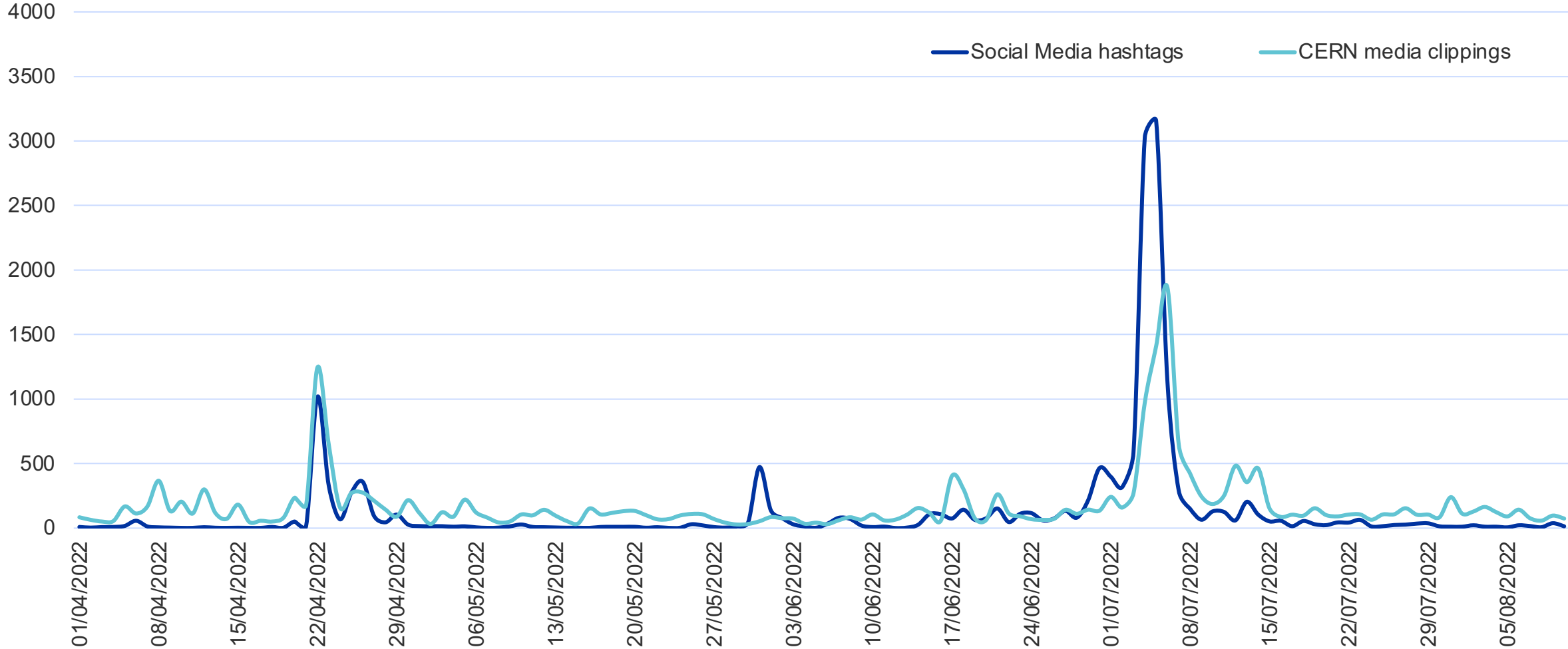
Mind the formats

- Variety
- Right format for right audience

Make the most of the timeline

- Restart vs. Higgs + run3

Conclusion



Conclusion



Follow CERN on social media
(if you don't already do)

[Facebook](#)
[Instagram](#)

[LinkedIn](#)
[Twitter](#)

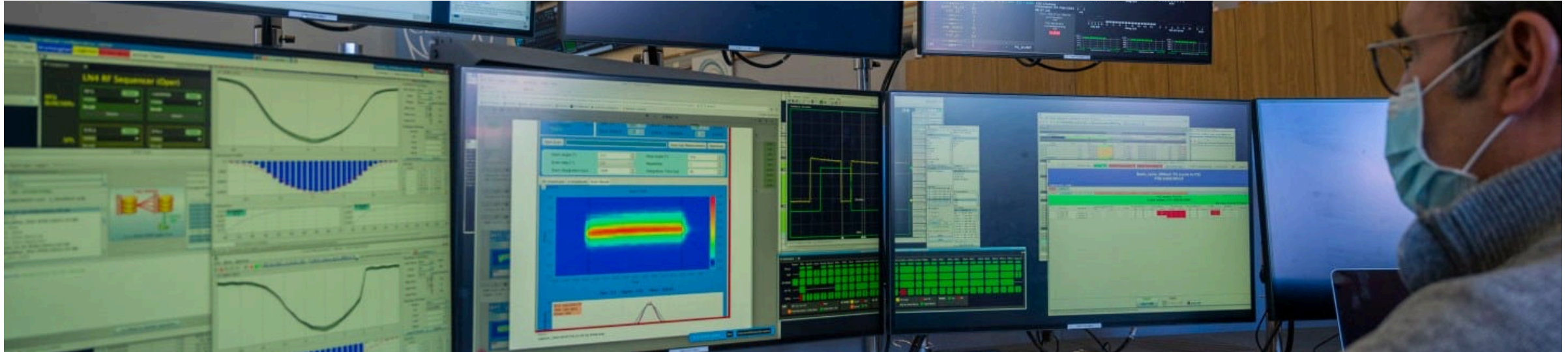
**If you are interested by media
and how we welcome them,
feel free to reach out:**

press@cern.ch

**If you have ideas and
want to collaborate,
feel free to reach out:**

social.media@cern.ch

About social media data



Why impressions?

Impressions allow to evaluate how our posts spread on all social media. They are a common metric for all channels (whereas reach is not available on Twitter for instance). Beside, impressions can be used for all formats, from stories to posts in the timeline.

How do we find it?

Iconosquare for Facebook and Instagram, native platforms for LinkedIn and Twitter.

Why reactions?

Reactions allow to measure the engagement. Again, they are common to all social media (even though they are only likes on Twitter and Instagram). Reactions can be added up, whereas engagement rate can't. Beside, engagement rate is calculated differently on all social media.

How do we find it?

Iconosquare for Facebook and Instagram, native platforms for LinkedIn and Twitter.

Hashtag uses are found by Meltwater – it searches for mentions on social media – numbers presented are from 8th of February to 10th of May

Mentions = same as hashtags but with more keywords (restart, restarting, upgrade, upgrades, engineer, engineering, engineers, restarting LHC, restartingLHC).

About the media coverage data

- **Data about LHC restart clippings has been extracted from the Press Office's media monitoring system, Cision.**
- **Following keywords have been used to identify articles for this media coverage report:**
 - **Higgs@10**
 - Higgs and CERN OR LHC
 - **Run 3**
 - Run 3 OR first physics OR collisions OR third run OR high energy collisions OR 5 July OR July 5 OR 5th of July OR record OR record energy OR TeV OR trillion electronvolts
 - **Restarting LHC**
 - restart OR restarts OR starts OR relit OR resumption OR resume OR return OR Ignites OR started OR reinizializar
 - CERN OR LHC



home.cern