

International Particle  
Physics Outreach Group

IPPOG Collaboration Meeting, Lisbon, Portugal

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# Public Web Pages & External Communication

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## International Particle Physics Outreach Group

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### The International Particle Physics Outreach Group (IPPOG)

IPPOG is a network of scientists, science educators and communication specialists working across the globe in informal science education and outreach for particle physics. Particle physics is the science of matter, energy, space and time. IPPOG brings new discoveries in this exciting field to young people and conveys to the public that the beauty of nature is indeed becoming understandable from the interactions of its most fundamental parts - the elementary particles.

Current members come from the 22 member states of CERN, Australia, Ireland, Slovenia, South Africa, the USA, and from DESY, CERN and five of the major experiments at the Large Hadron Collider (LHC).

Hans Peter Beck (University of Bern) and Steve Goldfarb (University of Melbourne), IPPOG Chairs

#### Dans la peau d'un chercheur

To educate and enthuse 9-12 year olds in the world of Particle Physics and general science exploration.

Classroom Outreach Program



### Latest Resources



#### Das Verflixte Higgs...

Article published originally in the German journal 'Astronomie & Raumfahrt 51 (2014) 6...

0 comments



#### Quiz for IMC17

This multiple-choice quiz is designed for high school students and will be used in the...

2 comments



#### Cloud Chamber - DIY...

show how to build a cloud chamber explain the physics behind

0 comments

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Activities  
Programs & Events  
Media  
Professional Development  
& Coaching  
Exhibits  
Souvenir / Novelty Item

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# Findings: Web & DB

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## Until Now

- 2014 Working Group on Resource DB
- 2015 Working Group on Web Pages
- 2016 Panel on Resource DB and Web Pages

## Proposed New Structure and Layout of DB

- Curated categories (17 from 44 topics, 9 from 41 item types, 4 from 6 filtering options, etc.)
- Searching by filter on the left & 4 big topic categories in the middle
- Evaluation by visitors

## TODO

- Curation Committee
- Select Resources to be transferred to new DB
- Assign new tags and categories

# Findings: Web & DB

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## Website Requirements

- Sustainable
  - Theme we can develop and maintain
- Professionally Designed
  - Proposed Organisational Structure
    - **Main menu bar:** Home, Members, Resources, Masterclasses, Cosmic Rays, National Resources, Publications, ...
    - **Sidebar:** New DB resources, Events calendar, Upcoming conferences, Newsletter, Social media links
- Appealing
  - Professional Graphics

## TODO

- Develop Design Guidelines, Theme, and Graphic Elements

# Development Strategy

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## Development Steering Group

- Goal
  - Oversee new design and implementation
- Members
  - B. Gulejova (principle developer), S. Boutas (CERN webmaster), M. Lapka, P. Watkins, S. Goldfarb, H.P. Beck

## External Web Design Expertise

- Prepare Design Guidelines
  - Clarified Goals, Messages, Target Audiences
  - Layout that enforces organisational structure
- Develop Drupal Theme
  - CERN approved (for maintenance)
  - Drupal 8
- Provide Graphic Elements

# Progress So Far

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## Steering Group





- In place, ready to work
- Iterating on Technical Specifications for Design Experts
- Preliminary budget proposed

## We are now [ippog.org](http://ippog.org)

- Login: [ippog.web.cern.ch](http://ippog.web.cern.ch)

## Graphical Elements

- INFN (Catia)
  - provided original logo design
- CERN Design Team
  - developed vectorised files
  - defined colours and font (Arial)

|   | Print                 | Web                 |
|---|-----------------------|---------------------|
|    | C 0, M 100, Y 20, K 0 | R 196, G 0, B 107   |
|    | C 90, M 15, Y 0, K 0  | R 41, G 151, B 215  |
|   | C 45, M 0, Y 100, K 0 | R 172, G 196, B 53  |
|  | C 0, M 0, Y 35, K 0   | R 187, G 187, B 187 |

# Findings: External Communication

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## Discussion Group on IPPOG Advertising and External Communication (Nov. 2015)

### Audiences

- Particle Physics community
- Teachers
- Schools / Students
- Broad Public
- Politicians, decision makers, public opinion makers

### Messages

- we exist
- what we do
- how to contact us
- how they can get involved

# Findings: External Communication

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## Communication Channels

- **Delegates** - it should be stated in the MoU Addenda
- **Conferences** - limited audience
- **Meetings**
  - Experiments: weekly meetings, collaboration weeks
  - Labs, Boards,...
- **Keen young students**
- **E-Mail**
- **Screens at Labs and Institutes**
- **Articles in PP community journals**
- **Newsletters of other communities / professional societies**
- **IPPOG newsletter**
- **Social Media**
- **Wikipedia** ([https://en.wikipedia.org/wiki/Physics\\_outreach](https://en.wikipedia.org/wiki/Physics_outreach))



# Progress So Far

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## Social Media Set Up

- Facebook: @ippog
- Twitter: @ippogorg (working on getting @ippog)

## External Communication Coordination

- Develop strategy for posting material to home, social media
- Coordinate content development
- Encourage activity from IPPOG members:  
Sharing, following, reposting, liking, etc.


## Call for Volunteers to Maintain Social Media

- Must be regularly fed by content

International Particle Physics Outreach Group

Steven Home 20+


Page Messages Notifications 5 Insights Publishing Tools Settings Help



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@IPPOG








International Particle Physics Outreach Group

Home About Photos Likes Events Videos Posts Services Shop Notes Offers Advertise



Liked Following Share + Add a Button

Write something...

|   |  |  |  |
|---|--|--|--|
| <br>Share a photo or video | <br>Advertise your business | <br>Get messages  | <br>Help people find your business |
| <br>Create an event       | <br>Create an offer        | <br>Write a note | <br>Start a Live Video            |

This Week


Educational Research Center

Page Tips See All

- What's a Boosted Post?**  
A boosted post is the easiest way to reach more people on Facebook.
- Know Friends Who Might Like Your Page?**  
Invite friends to like International Particle Physics Outreach Group and help you connect with more people.
- How Do Facebook Ads Work?**  
Reach all the right people where they're active and engaged.


See All Page Tips 4

**Posts**



**International Particle Physics Outreach Group**  
Published by Daily Herald [?] · 18 hrs · 🌐

UK IPPOG representative Pete Watkins talks to the Daily Herald about the Higgs boson. #ParticlePhysics



**Higgs boson, quarks, leptons and particle physics**


The existence of Higgs boson, which was confirmed in 2012, contributes to a clearer picture of the underlying principles of our universe.


DAILYHERALD.COM


24 people reached Boost Post

👍 Like    💬 Comment    ➔ Share


👍 International Particle Physics Outreach Group and Daily Herald

 Write a comment...  
Press Enter to post.

 **International Particle Physics Outreach Group** shared LIP - Laboratório de Instrumentação e Física Experimental de Partículas's post.  
Published by Steven Goldfarb [?] · April 18 at 1:07pm · 🌐




**International Particle Physics Outreach Group** shared CERN's post.  
Published by Steven Goldfarb [?] · April 12 at 8:55pm · 🌐



**CERN**  
April 12 at 4:41pm · 🌐

Step into the ATLAS Experiment at CERN cavern before the restart of the Large Hadron Collider (LHC) in a few weeks. Explore and stay tuned, we'll be live next Wednesday!

#WhatsUpLHC



**Visit the ATLAS experiment in 360°**


Step into the cavern of the ATLAS experiment before the restart of the Large Hadron Collider (LHC) in a few weeks. Find out more about...


YOUTUBE.COM

24 people reached Boost Post

👍 Like    💬 Comment    ➔ Share


👍 Delma Rodriguez

 Write a comment...  
Press Enter to post.



**International Particle Physics Outreach Group**  
Published by Steven Goldfarb [?] · April 7 at 3:38pm · 🌐

Let's have a coffee with the Standard Model of particle physics! - <http://iopscience.iop.org/article/10.1088/1361-6552/aa5b25> via IOP Science!



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International Particle Physics Outreach Group

TWEETS 16 FOLLOWING 48 FOLLOWERS 14 LIKES 18

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@IppogOrg

An international collaboration of researchers, educators, and science communication specialists, dedicated to developing and promoting particle physics outreach

Geneva, Switzerland  
ippog.org  
Joined March 2017

Tweet to IPPOG

6 Followers you know

Tweets Tweets & replies Media

**IPPOG** @IppogOrg · 9h  
Preparations start tomorrow at the IPPOG meeting for the #marchforscience - Map at [marchapelaciencia.pt/festa-da-cienc...](http://marchapelaciencia.pt/festa-da-cienc...) via @ScienceMarchPT

| Debates informais   | Actividades  | Open-Mic   |
|---|--|--|
| <p><b>Grupo de Sociologia</b><br/><i>Qual a responsabilidade social das ciências sociais?</i><br/>Livraria Sá da Costa, Rua Garret, 100<br/>16h30-17h30</p> <p><b>COMCEPT - Comunidade Céptica Portuguesa</b></p> | <p><b>CERN-IPPOG</b> [INGLÊS]<br/><b>CERN-ICTP</b> [INGLÊS]<br/><i>A física das partículas e a física sem fronteiras actividades dinamizadas por dois grupos internacionais do CERN<br/>BRIO</i></p> | <p><i>Inscreva-se para falar ou fique para ouvir discursos sobre ciência!</i><br/>Largo do Carmo<br/>16h30-17h30</p> |

Pocket-Science

Who to follow · Refresh · View all

- Ezoic** @ezoic Follow Promoted
- PhD Forum** @PhDForum Follow
- Academia Obscura** @Aca... Follow

Find friends

Worldwide Trends · Change

- #FelizJueves**  
8,467 Tweets
- #showhello**  
5,255 Tweets

IPPOG Retweeted

**CERNpress** @CERNpress · Apr 11

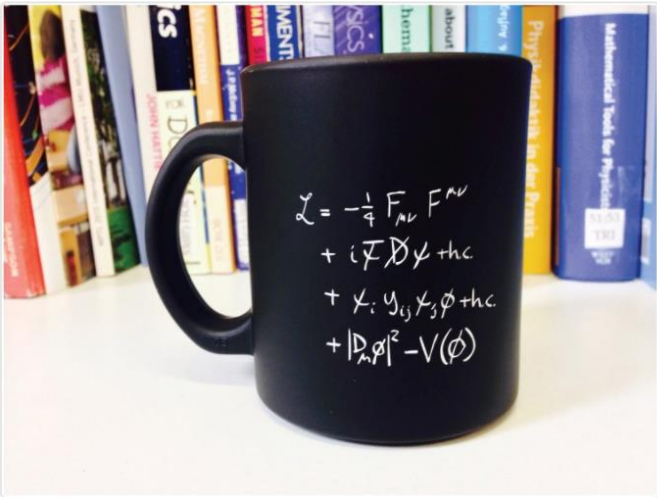
Have a look at our new 360° pictures of the @ATLASexperiment [cds.cern.ch/record/2259303...](https://cds.cern.ch/record/2259303...)  
#WhatsUpLHC



36 51

IPPOG @IppogOrg · Apr 7

Let's have a coffee with the Standard Model of particle physics!  
[iopscience.iop.org/article/10.1088...](https://iopscience.iop.org/article/10.1088...) via @IOPscience

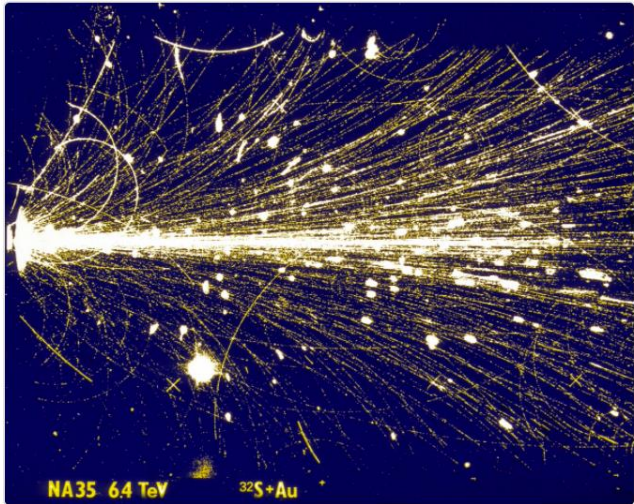


2 3

IPPOG Retweeted

**CERN** @CERN · Apr 6

1986: The first ultra-relativistic collisions produced at #CERN [cern.ch/go/L7dj](https://cern.ch/go/L7dj)  
#TBT



3 213 429

IPPOG Retweeted

**symmetry magazine** @symmetrymag · Apr 4

We know which way the dark matter wind should blow. Now we just have to find it: [symmetrymagazine.org/article/wimps-...](https://symmetrymagazine.org/article/wimps-...)



2 31 34

# Spare slide – new DB categories

## CURATED CATEGORIES

### TOPICS:

From 44 to 16

#### 1) MATTER, PARTICLES AND UNIVERS (KNOWN PHYSICS)

PARTICLES AND THEIR INTERACTIONS

COSMOLOGY

HIGGS

ANTIMATTER

QUARK-GLUON PLASMA

NEUTRINOS

#### 2) EXPLORING THE UNKNOWN (BEYOND KNOWN PHYSICS)

SUPERSYMMETRY

DARK MATTER

DARK ENERGY

EXTRA DIMENSIONS

#### 3) TECHNOLOGIES and EXPERIMENTS

ACCELERATORS

DETECTORS

#### 4) PARTICLE PHYSICS AND SOCIETY

WHY FUNDAMENTAL RESEARCH

INTERNATIONAL COLLABORATION

APPLICATIONS & SPIN-OFFS

PEOPLE BEHIND THE SCIENCE

### ITEM TYPES / CATEGORIES:

Photos/ Posters/ Charts

Videos

Animations / Simulations

Presentations (ppt,pdf)

Games

Classroom materials / Tutorials / Lesson plans / Text books

Books

Projects / Competitions

Exhibition items

Souvenirs (*could go also to separate item on the website*)

From 41 to 10

### FILTERING / SEARCH BY:

From 6 to 4

1) **Topic** (see above = 17)

2) **Type / Category** (see above = 19)

- 3) **Language**
- |                                    |                                     |
|------------------------------------|-------------------------------------|
| <input type="checkbox"/> Arabic    | <input type="checkbox"/> Japanese   |
| <input type="checkbox"/> Catalan   | <input type="checkbox"/> Norwegian  |
| <input type="checkbox"/> Chinese   | <input type="checkbox"/> Polish     |
| <input type="checkbox"/> Czech     | <input type="checkbox"/> Portuguese |
| <input type="checkbox"/> Danish    | <input type="checkbox"/> Romanian   |
| <input type="checkbox"/> Dutch     | <input type="checkbox"/> Russian    |
| <input type="checkbox"/> English   | <input type="checkbox"/> Serbian    |
| <input type="checkbox"/> Finnish   | <input type="checkbox"/> Slovak     |
| <input type="checkbox"/> French    | <input type="checkbox"/> Slovenian  |
| <input type="checkbox"/> German    | <input type="checkbox"/> Spanish    |
| <input type="checkbox"/> Greek     | <input type="checkbox"/> Swedish    |
| <input type="checkbox"/> Hungarian | <input type="checkbox"/> Turkish    |

4) **Audience**

- Primary school level
- Lower secondary school level
- Upper secondary school level
- Broad public
- Educators

5) **Keyword**

*We should think first carefully how to address keywords, if we can manage to be coherent or not...otherwise could be confusing, like CDS*

Additional tag will be added to all items in database to sort out and show the resources by their **quality** (IPPOG recommended, good, old but still ok)

# Spare slide – Searching in DB



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## PARTICLE PHYSICS RESOURCES DATABASE

Idea is that one can search by the filter on the left, but also use the quick search by topics in the middle, while at every moment there is a possibility to refine the search by the filter on the left, which will always appear there.

A collection  
wonders and

Filter:

Topic ▼

Item type ▼

Language ▼

Audience ▼

Free text search

[IPPOG DB FAQs](#)

### Particle Physics Learning Topics

**Matter, Particles, and the Universe**

atom  $\sim 10^{-10}$  cm  
nucleus  $\sim 10^{-14}$  cm  
proton (neutron)  $\sim 10^{-15}$  cm  
quark  $\sim 10^{-16}$  cm

**Exploring the unknown**

74% DARK ENERGY  
22% BARYON MATTER  
4% DARK MATTER

**Technologies & Experiments**

**Particle Physics and Society**

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