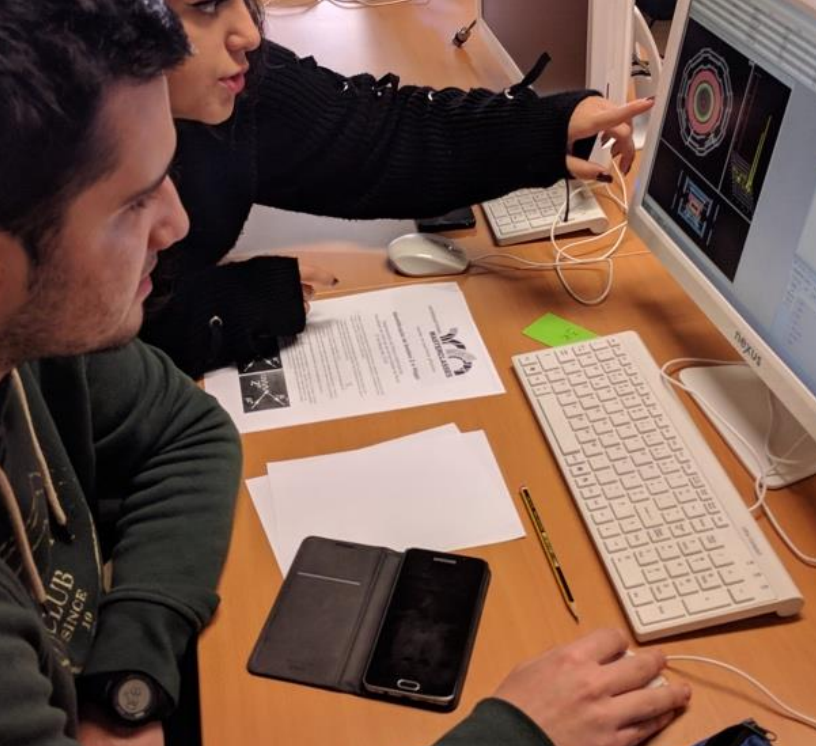


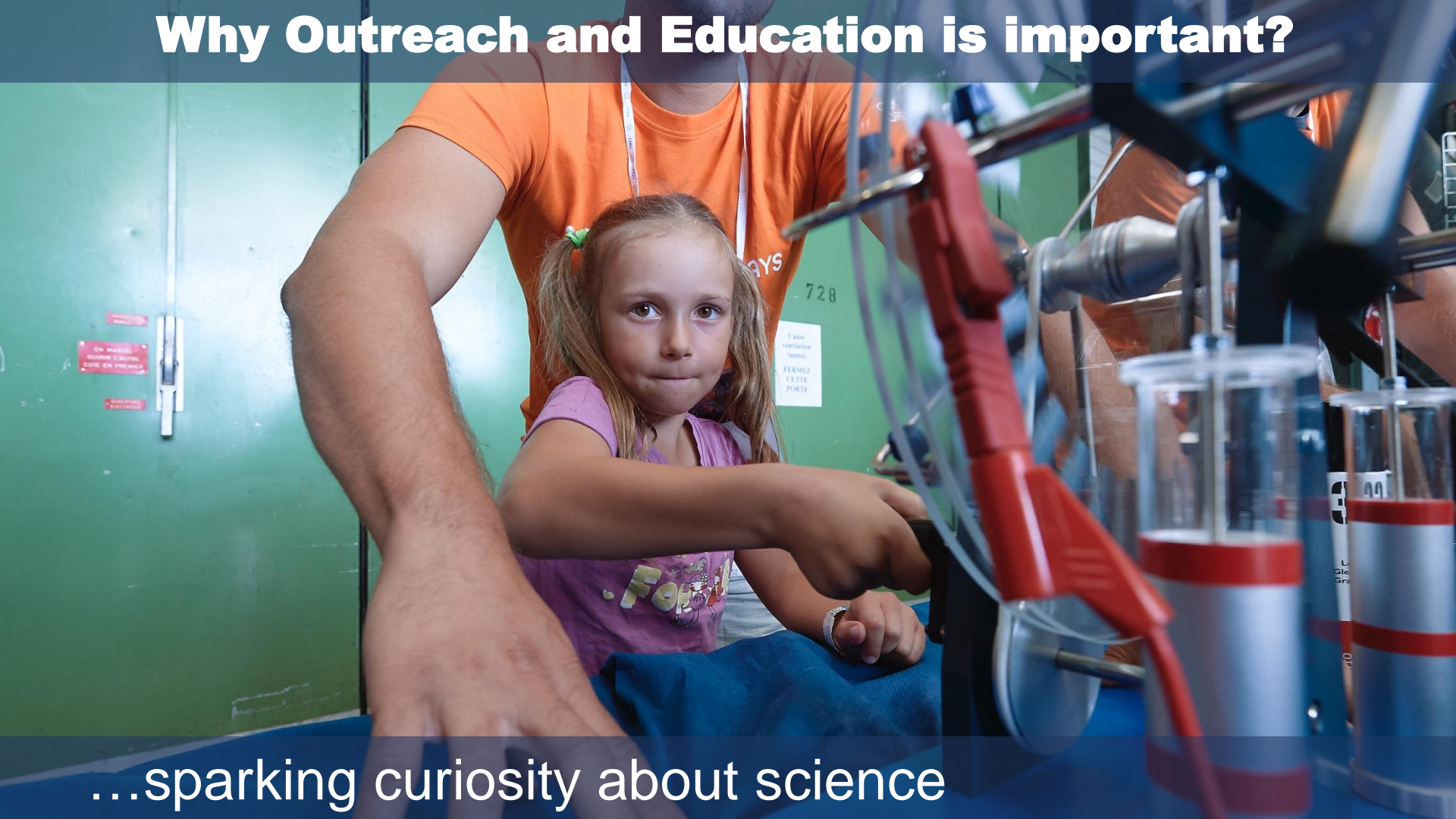
Making Particle Physics Outreach & Education Available Worldwide

The IPPOG Resource Database



Marzena Lapka, CMS Experiment at CERN, on behalf of the **IPPOG Collaboration**
24th International Conference on Computing in High-Energy and Nuclear Physics, Adelaide, 5 November 2019

Why Outreach and Education is important?



...sparking curiosity about science



Our Members
give us the Resources
to make so many Activities

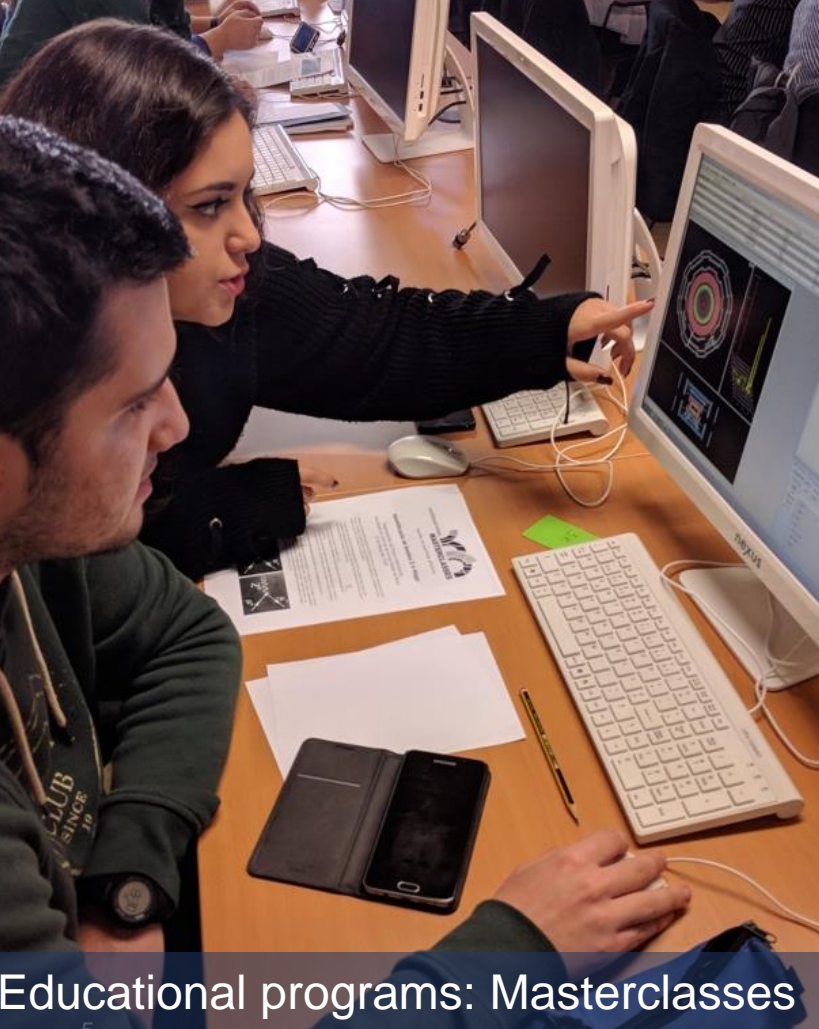


Universal Science

Public Events

03 November 2019 - 17:30

The Braggs Building, University of Adelaide



Educational programs: Masterclasses

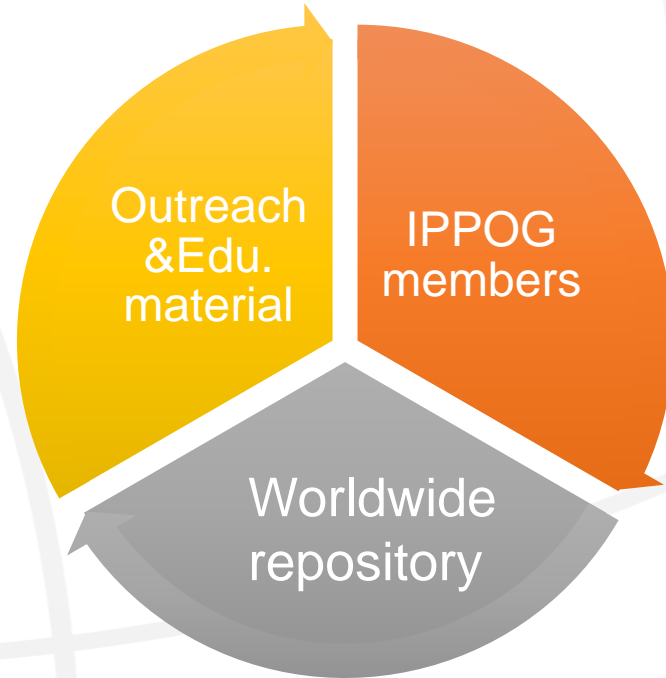


World Wide Data Day

IPPOG Resources Database

2011

Creation



IPPOG Resources Database

For use by **anyone everywhere:**

- Informal science educators & explainers
- Teachers & educators
- Students
- Other IPPOG present and potential stakeholders and partners
- General public, decision makers, politicians, funding agencies

IPPOG Resources Database

The Little Book of the Big Bang: A Big Scientific Adventure



Audience	Rankings
9 to 12 years 12 to 15 years 15 to 18 years 18 to 25 years 25 years+	☆☆☆☆☆ No votes yet
Language	Tags
English	Dark Energy computing grid
Credit	Copyright
STFC	STFC
Contact	
STFC	

- b. The scientists involved. (highlights Lyn Evans, Dave Barney, Aliston Bates, Lily Asquith)
7. The international Collaboration
8. Development of state of the art technologies
9. The computing grid

The project was funded by the Science and Technology Facilities Council in the UK.
Layout concept & text by David Brodie.
Design by Real Affinity Agency.

Published in 2010
Copyright STFC
<http://www.scribd.com/doc/48983125/null>

Post date: Fri, Mar 18, 2011 — 11:34
Updated date: Tue, Nov 20, 2012 — 04:54

Learning Topics

Dark Matter
Extra / Multi Dimensions
Forces
Higgs Boson
Mass
Matter / Antimatter
Particles
Quark Gluon Plasma
Standard Model

Files

-  [Book-The Little Book of the Big Bang](#)
-  [Jpeg file of cover](#)
-  [Tiff file of cover](#)

Purpose

To improve understanding of the Large Hadron Collider and what it is trying to do

Information

This bright and colorful book uses quirky art, humor, and good science to drive its points home for a general audience. Subjects covered include:

1. Our universe
2. LHC-what it is, how it works, what it studies
3. Dark Energy
4. The scientific process
5. A bit about mass (& the Higgs particle)
6. The scientists involved. (highlights Lyn Evans, Dave Barney, Aliston Bates, Lily Asquith)

Example

IPPOG Resources Database

2011

Creation

2017/
2018

Review

2019

Redesign

IPPOG Resources Database

2017/
2018

Review



Gathered input from the teachers



CERN HST Teachers 2017 IPPOG Working Group

Curated Categories



IPPOG Resources Database

2019

Redesign



Developing new IPPOG digital portfolio, including the database

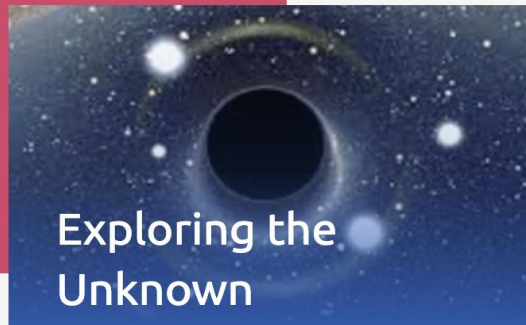
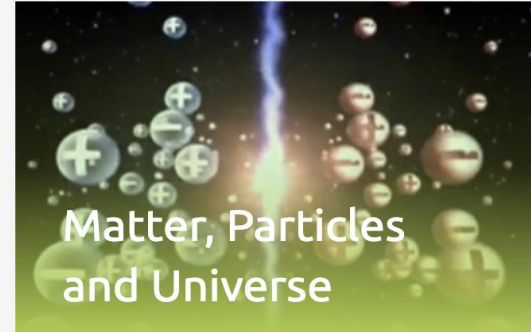
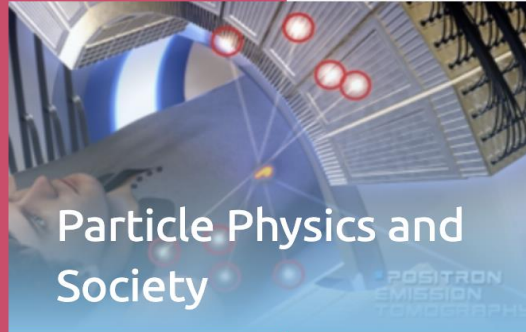
- consulted with the CERN web team
- developed new design (with initial implementation in Drupal 8)



IPPOG RESOURCE DATABASE

From wonders to excitement

We contribute to global efforts in strengthening cultural awareness, understanding and support of particle physics and related sciences and in developing the next generation of researchers. More specifically, IPPOG's purpose is to raise standards of public outreach and science education efforts.



[Search for more](#)

IPPOG Resources Database

2019

Redesign



Developing new IPPOG digital portfolio, including the database

- consulted with the CERN web team
- developed new design (with initial implementation in Drupal 8)
- formed a Steering Group
- working on the integration with [CERN Document Server \(CDS\)](#)

CERN Document Server (CDS)

✓ Presentations & Talks (18,193)

[Conference Announcements](#) (7,340) [Academic Training Lectures](#) (874)
[Summer Student Lectures](#) (1,547) [General Talks](#) (8,430)
[E-learning modules](#) (52)

✓ Periodicals & Progress Reports (2,405)

[Periodicals](#) (2,326) [Progress Reports](#) (79)

✓ Multimedia & Outreach (107,118)

[Photos](#) (18,201) [Press](#) (70,939) [Audio Archives](#) (504) [Exhibition Objects](#) (319)
[Posters](#) (1,261) [Brochures](#) (246) [HEP Institutes](#) (2,982)
[Experiments at CERN](#) (1,257) [Education and Outreach Resources](#) (125)
[Video Lectures](#) (11,339) [Graphics](#) (3)

Videos collection has been moved to: videos.cern.ch

CERN Departments (292,094)

[Physics \(EP\)](#) (28,506) [Research & Computing Sector](#) (135,820) [Theoretical Physics \(TH\)](#) (15,078) [Information Technology \(IT\)](#) (77,293)
[Accelerators & Technology Sector](#) (23,771) [Beams Department \(BE\)](#) (1,624) [Engineering Department \(EN\)](#) (658) [Technology Department \(TE\)](#) (205)
[Directorate Services Unit](#) (28,539) [International Relations](#) (89,792) [Procurement and Knowledge Transfer](#) (14,158) [Human Resources \(HR\)](#) (1,459)
[Finance and Administrative Processes \(FAP\)](#) (68) [Pension Fund](#) (0)

CERN Accelerators (34,005)

[All CERN Accelerators documents](#) (29,279) [PS Complex](#) (2,087) [SPS and CNGS](#) (7,671) [LHC](#) (4,786) [Projects, Upgrade and Consolidation Projects](#) (393)
[R&D and Studies](#) (260) [EU Funded Projects](#) (1,237) [Decommissioned Facilities](#) (2,841) [Accelerators and Facilities outside CERN](#) (18)
[Technologies, Systems, Accelerator Physics and Processes](#) (5,629)

CERN Experiments (95,895)

[LHC Experiments](#) (78,555) [LEP Experiments](#) (10,608) [SPS Experiments](#) (1,548) [PS Experiments](#) (727) [ISOLDE](#) (3,243) [MEDICIS Internal Notes](#) (24)
[Recognized Experiments](#) (836) [CERN Test Beams](#) (661)

CERN R&D Projects (4,614)

[EU Projects](#) (3,140) [CERN Detector R&D Projects](#) (709) [CERN Accelerator R&D Projects](#) (1,434)

Archives (45,727)

[CERN Archives](#) (36,015) [Pauli Archives](#) (3,819) [DSU Archives](#) (713) [CERN Website](#) (4,835) [Software Documentation](#) (345)

International Collaborations (28)

[IPPOG](#) (28)

IPPOG Resources Database

FUTURE PLANS:

- Strengthen the IPPOG brand online
- Foster partnerships with other O&E portals e.g. globalcosmics.org, <https://quarknet.org>, and many more
- Develop an environment to not only find material, but to rate it, suggest improvements, share it (e.g. lesson plans)

Enabling Outreach Globally

Vision: IPPOG Resources Database to become the primary source of high-energy physics outreach material in the world, to be used freely by everybody.

IPPOG (11 Oct 2019)

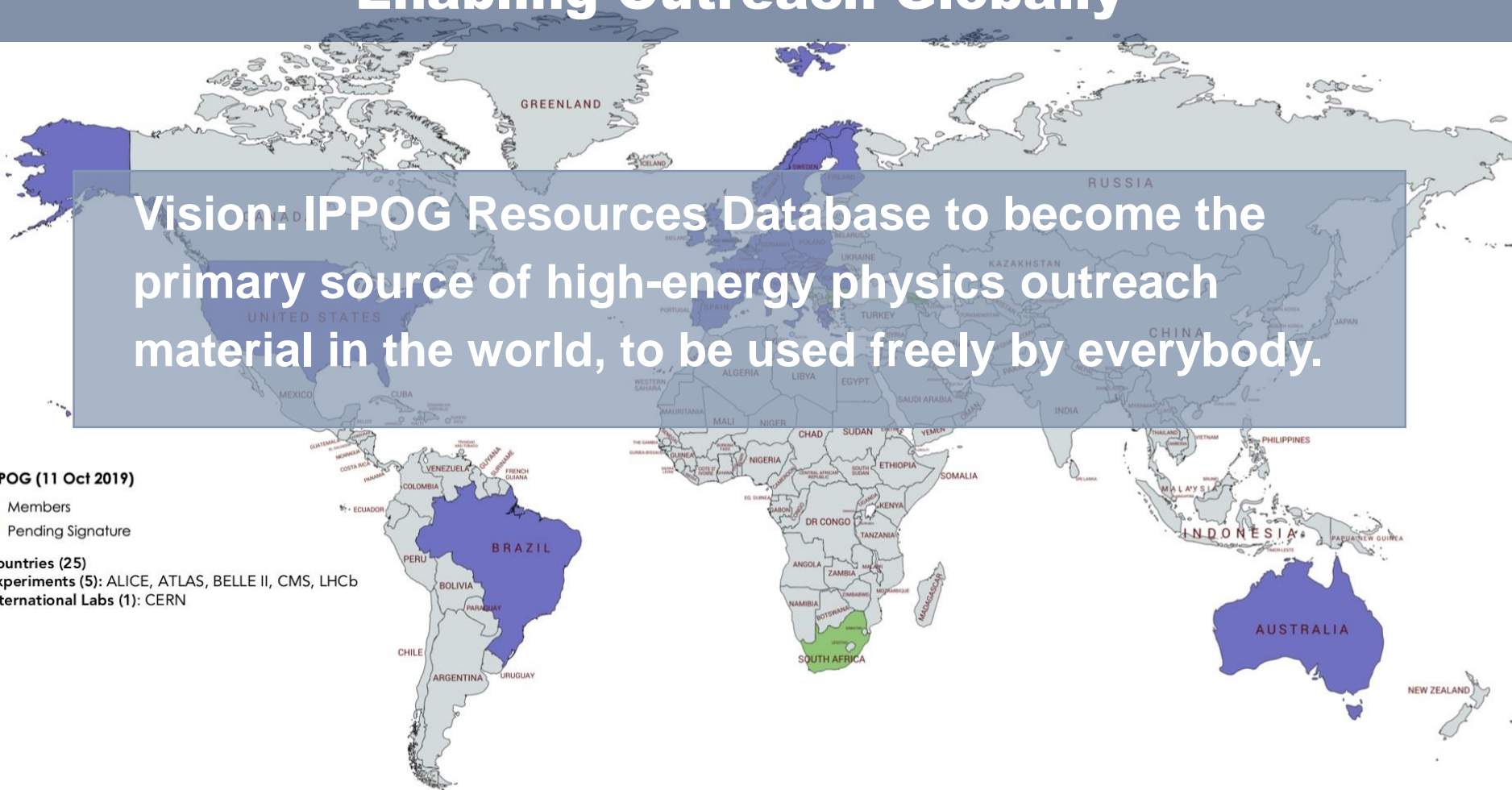
Members

Pending Signature

Countries (25)

Experiments (5): ALICE, ATLAS, BELLE II, CMS, LHCb

International Labs (1): CERN



Enabling Outreach Globally

Reach out to us if you know any education and outreach resources/activities that should be included in the IPPOG Resources Database.

And use the database!

Your country/lab/experiment representative:
http://ippog.web.cern.ch/ippog_membership

IPPOG Resource Database - links

<http://ippog.org/resources>

Follow us:

<http://ippog.org>

<http://facebook.com/ippog>

<http://facebook.com/groups/friends.ippog>

<http://twitter.com/ippogOrg>

<http://instagram.com/ippogOrg>

Contact ippog-friends@cern.ch

THANK YOU!
