**Fundamental Components of Scientific Research**

**Communication**
- Develop messages & strategies
- Optimise platforms & networks
- Create effective material
- Implement and evaluate

**Education & Outreach**
- Establish understanding of scientific process
- Instil appreciation of fundamental research
- Build trust with communities
- Train the next generation of scientists

The Education, Outreach & Communication we do today lay the foundation for tomorrow's support and secure the next generation of scientists.

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**IPPOG Timeline**

1997 Birth of European Particle Physics Outreach Group (EPOG) formed under the joint auspices of ECFA and EPS-HEPP

2005 Birth of International Particle Physics Masterclasses

Now in over 60 countries worldwide

2011 Global Expansion to IPPOG

Israel, Australia, USA, South Africa, Brazil, India, Mexico,…

2016 Formal Scientific Collaboration

Memorandum of Understanding

2022 Celebrating 25 Years of Outreach Excellence

Dedicated workshops to extend our capability

"...the particle physics community has a moral obligation to inform the public on its activities. To do this well, experiences must be shared among countries in view of the need to optimize the use of resources."

- Chris Llewellyn-Smith, CERN Director General, 1997

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**IPPOG’s Worldwide Activities**

**International Particle Physics Masterclasses**
- Students invited to local institutes to become “Researchers for a Day”
- Introductory lectures, analysis of real data, worldwide videoconference
- 2019: 60 countries, 230 labs, 14,000 students
- 2022: 24 Feb - 9 Apr & 11 Feb (UN Day for Women & Girls in Science)

[physicsmasterclasses.org](http://physicsmasterclasses.org)

**Global Cosmos Portal**
- Central Hub for worldwide classroom cosmic ray programmes

[globalcosmics.org](http://globalcosmics.org)

**Organisational Support and Promotion of**
- International Muon Week, Worldwide Data Day (QuarkNet)
- International Cosmos Day (DESY)
- Beamline for Schools (CERN, DESY)

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**Preparation the Future**

**Support for particle physics and related fields**
- Develop material and activities in support of European Strategy Update 2020
- Extend partnerships in scientific, educational and communication societies and networks, including APS, EPS, NuPECC, APPEC, IAPS, EPPCN, Interactions

**Support for science education**
- New online platforms for educational programmes
- New resource database targeting teachers and students worldwide

**Support for everyone**
- Continued global expansion of membership and programme reach
- Diversity, Inclusion Accessibility Working Group to support new audiences

IPPOG’s efforts stretch well beyond particle physics by teaching students to think critically, thus becoming knowledgeable and productive citizens.

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**The IPPOG Collaboration**

**International Scientific Collaboration**
- Active researchers, experts in communication and education
- 32 countries, 6 experiments, 1 int'l. lab (CERN), 2 assoc. members (DESY, GSI)
- Twice annual collaboration meetings

**Goals**
- Sustainable development of particle physics outreach
- Improvement of scientific educational standards worldwide

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**New online platforms for 2022**

[ippog.org](http://ippog.org)

[ippog.org/ippog-resource-database](http://ippog.org/ippog-resource-database)

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