

# **CHIPP Outreach Report**

A thick, horizontal yellow brushstroke with a textured, painterly appearance, extending across the width of the page below the title.

***2 September 2011***  
***CHIPP Plenary***  
***Leysin***

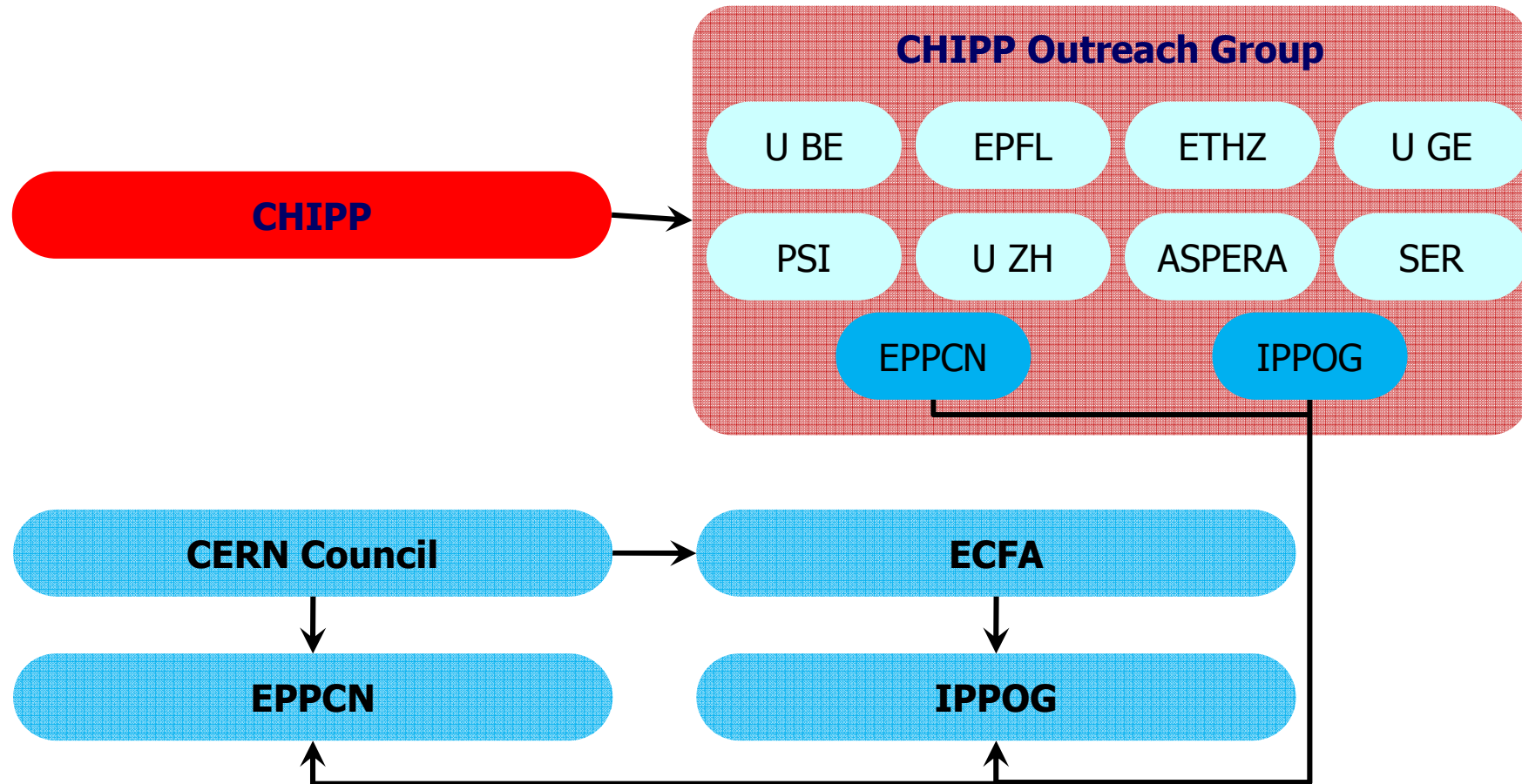
***HP Beck***

# CHIPP Outreach Group

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- The **primarily role** shall be **the coordination of outreach activities in Switzerland**
  - Outreach will normally be done by individual institutes
    - but should emphasize CHIPP and our common or related activities wherever this is sensible
  
- **Target Audience**
  - General Public
  - Schools
    - pupils
    - teachers
  - Universities
  - ...
  
- **Changes since last CHIPP Plenary meeting**
  - **Marie-Christine Sawley** left ETHZ; replacement not yet identified
  - **Laurent Salzarulo** changed department in SER; replacement: **Bettina Mühlebach**

# CHIPP Outreach Group



# CHIPP Outreach Group

One **delegate** (+one **alternate**) physicists from every CHIPP site  
 – alternate physicist to ensure better coverage of activities at each site  
 not (necessarily) required to participate in meetings

One **delegate** from **ASPERA, EPPCN, IPPOG & SER**

<u>Bern</u>	HP Beck (chair) & IPPOG Thomas Becher	contact alternate
<u>EPFL</u>	Frederic Blanc Aurelio Bay	contact alternate
<u>ETHZ</u>	Christoph Grab	contact
<u>Geneva</u>	Olivier Gaumer Bernard Révaz	contact alternate
<u>PSI</u>	Tilman Rohe Malte Hildebrand	contact alternate
<u>Zürich</u>	Angela Buechler-Gehrmann Teresa Marrodan-Undagoitia	contact alternate
<u>ASPERA</u>	Bernard Révaz Arnaud Marsolier	
<u>SER</u>	Bettina Mühlebach	
<u>EPPCN</u>	vacant	
<b>CMS</b>	Vincenzo Chiochia (Uni ZH)	
<b>ATLAS</b>	Alison Lister (Uni GE)	

# 9 March 2011 at the Geneva physicscope

**CHIPP Outreach Group**  
 created by H.P. Beck (LHEP - Bern)  
 Wednesday 09 March 2011 from 09:00 to 18:00 (Europe/Zurich)  
 at University Geneva ( Physicscope )

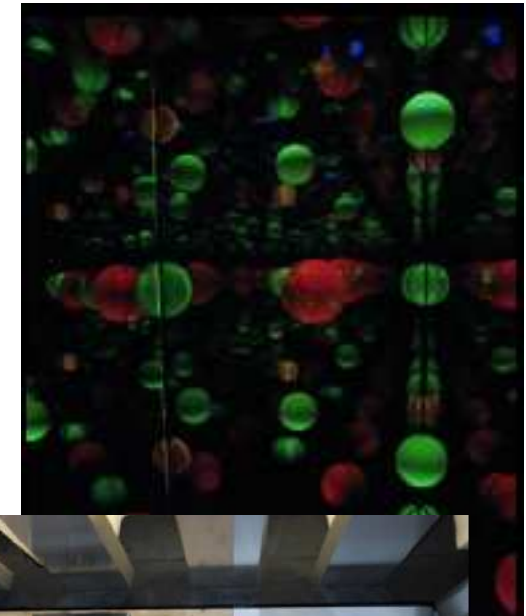
**Description:** Annual meeting of the CHIPP Outreach Group  
**Meeting Access Information:**  
 - Meeting URL:  
<https://www.sfn.ch/education/Meetings/physicscope/2011/03/09/CHIPP2011>  
 - Password: chipp  
 - Place: Bldge  
 ID: 303 8417  
 Password: 4447

**Material:** [Abstracts](#) [documents](#)

<https://indico.cern.ch/conferenceDisplay.py?confId=127507>

## Wednesday 09 March 2011

- 09:00 - 11:20 **Welcome 20'**  
 Speaker: H.P. Beck (LHEP - Bern)  
 Material: [Slides](#)
- 11:20 - 11:40 **Report from Zurich University 20'**  
 Speaker: Yana Harroñin Undagotia  
 Material: [Slides](#)
- 11:40 - 12:00 **Report from ETHZ 30'**  
 Speaker: Christophorus Gies (ETH Zurich (ETHZ))  
 Material: [Slides](#)
- 12:00 - 12:20 **Report from PSI 20'**  
 Speaker: Ylmar Robe (Nuclear and Particle Physics Department)  
 Material: [Slides](#)
- 12:30 - 13:30 **Lunch**
- 13:30 - 15:00 **Physiscopes demonstration 150'**  
 Speaker: Olivier Guzman (Universite de Geneve)
- 15:00 - 15:20 **Report from Bern 30'**  
 Speaker: H.P. Beck (LHEP - Bern)  
 Material: [Slides](#)
- 15:20 - 15:40 **Report from EPFL 30'**  
 Speaker: Frederic Blanc (EPFL)  
 Material: [Slides](#)
- 15:40 - 16:00 **Report from Geneva 30'**  
 Speaker: Olivier Guzman (Universite de Geneve)  
 Material: [Slides](#)
- 16:00 - 16:20 **Statement from SER 30'**  
 Speaker: Mrs. Bettina Nichteback (SER)
- 16:20 - 16:50 **Discussion 20'**  
 Speaker: All
- 16:50 - 18:25 **acb 60'**



## *plenty of activities at all CH-sites*

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### **continuous contact with teachers, schools, pupils**

physicists going to schools

to give talks

run exhibitions, set up stands

getting teachers to university site

in the context of 'Fachdidaktik courses'

PHZH, PHBern

getting pupils to universities

Masterclasses, Physik am Samstag,

'one week at ETH to do physics', ...

### **outreach talks**

particle physics, cosmology, big bang,

### **visits to CERN**

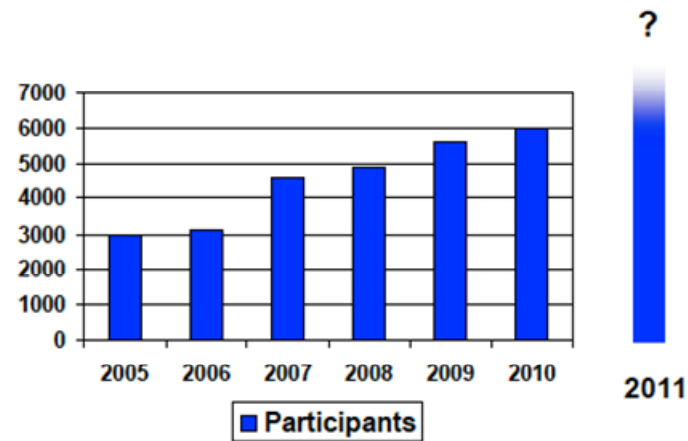
### **media interviews**

newspaper, radio, TV (Einstein)

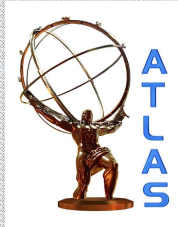
# Masterclasses 2011



**8000 pupils** in 2011 from Europe, South- and North America were analyzing real data from particle collisions (**LHC data**)



- new: LHC real data
- 4 different measurements with data from:



## Students' tasks (selection):

- reveal the inner structure of the proton / search for Higgs (49 MCs)
- rediscover the Z-Boson and measure its mass / discover  $Z'$  (31 MCs)
- study decays containing muon pairs to determine  $J/\psi$  candidates (26 MCs)
- Identification of  $K^0$ ,  $\Xi$ ,  $\Lambda$  based on topology of decay, and calculation of invariant mass (10 MCs)



# Masterclasses 2011 in Switzerland

**Masterclass** events in **Bern, Geneva and Zurich** (ETHZ+UNIZH)

**16, 11, 24 March 2011** respectively

No more LEP data, but now first time with **LHC data!**

About **80 pupils** trained to analyse LHC event display data from ATLAS & CMS !

**Preparations for 2012  
have already started!**

## Funding and in kind contributions

- Helmholtz-Alliance: Project manager (1/2 time; until end of 2012)
- Wolfgang-Gentner studentship for Konrad Jende (PhD thesis, ending 2012)
- BMBF: upgrade for LHC (development, technical needs, test, translation, CD/DVD, student assistants; ending 2012)
- EPS HEP division (production and shipping of CD)
  
- CERN IT:
  - Marek Domaracky, CALTECH (CERN)
  - Philippe Galvez, EVO Project Manager (CERN IT)
  
- CERN outreach (prizes)
- Moderators



- **The International Particle Physics Outreach Group (IPPOG) (Formerly EPPOG)**
  - promotes the outreach activities of particle physics institutes and laboratories in the CERN Member States.
  - acts as a forum for the exchange of ideas and experiences related to particle physics outreach.
  - was formed under the joint auspices of the European Committee for Future Accelerators (ECFA) and the High Energy Particle Physics Board of the European Physical Society (EPS-HEPP Board).
  - is composed of
    - **one member** nominated by the particle physics community **of each CERN Member State** (HP Beck for CH).
    - **one member** each from **DESY** and **CERN**, appointed by the managements of those laboratories.
    - **additional representatives** from **particle physics experiments, astroparticle physics** and **non-Member States** of CERN.
  
- Last IPPOG meeting: 14-16 April in Kosice

## 1st Meeting of the International Particle Physics Outreach Group (IPPOG - formerly EPOG)

chaired by David Barney (CERN), Michael Kobel (TU Dresden)  
from Thursday 14 April 2011 at 15:30 to Saturday 16 April 2011 at 13:00 (Europe/Zurich)  
at Kosice, Slovakia

### Thursday 14 April 2011

- 15:30 - 19:00 **2011 Masterclass Debriefing**  
Conveners: Uta Bilow (TU Dresden), Uta Bilow (Inst. fuer Kern- und Teilchenphysik (IKTP)-Technische Universität)
- 15:30 **Welcome and Practical Details 05'**  
Speaker: Ivan Melo (Institute of Computer Technology)
- 15:35 **Video about Masterclasses from Matt Ryan and CMS team 10'**
- 15:45 **International Masterclasses 10'**  
Speaker: Uta Bilow (TU Dresden)  
Material: [slides](#) [video](#) [audio](#)
- 15:55 **U.S. Masterclasses 10'**  
Speaker: Kenneth William Cedre (Hampton University, Dept. of Phys.)  
Material: [slides](#) [video](#) [audio](#) [download](#)
- 16:05 **ATLAS W-path measurement 20'**  
Speaker: Mr. Konrad Jende (Technische Universität Dresden)  
Material: [slides](#) [video](#) [audio](#)
- 16:25 **ATLAS Z-path measurement 20'**  
Speakers: Maliken Pedersen, Farid Ould-Seade (Oslo University, Norway)  
Material: [slides](#) [video](#)
- 16:45 **CMS measurement 20'**  
Speaker: Kenneth William Cedre (Hampton University, Dept. of Phys.)  
Material: [slides](#) [video](#) [audio](#)
- 17:05 **Coffeebreak 20'**
- 17:25 **ALICE measurement 20'**  
Speaker: Despina Hatzifotiadou (Univ. + INFN)  
Material: [slides](#) [video](#) [audio](#)
- 17:45 **Evaluation of new Masterclasses in Slovakia 10'**  
Speaker: Boris Tomašik (Univerzita Mateja Bela-Unknown-Unknown)  
Material: [slides](#) [video](#)
- 17:55 **Masterclasses in France 10'**  
Speaker: Nicolas Arnaud (LAL (CNRS-IN2P3))  
Material: [slides](#) [video](#)
- 18:05 **Video Conference - success, disaster, or somewhere in between? 15'**  
Speakers: Uta Bilow (TU Dresden), Kenneth William Cedre (Hampton University, Dept. of Phys.)  
Material: [slides](#) [video](#) [audio](#) [download](#)
- 18:20 **Wrap-up: How can we improve for the future 40'**  
Material: [slides](#) [video](#) [audio](#)

- Material: [slides](#) [video](#) [audio](#)
- 09:35 **e-learning with LHC data 20'**  
Speakers: Marjorie Bardeen (Fermilab), Dr. Thomas McCauley (Northeastern University)  
Material: [slides](#) [video](#) [audio](#)
- 10:00 **The "Pathway" European Union project 15'**  
Speaker: Mick Storr (CERN)
- 10:20 **IPPOG Database - status and plans 20'**  
Speaker: Lisa Mc Carthy (Fermi National Accelerator Lab. (Fermilab)-Unknown-Unknown)  
Material: [slides](#) [video](#) [audio](#)
- 10:45 **Coffee break 20'**
- 11:10 **Presentation/discussion/vote on IPPOG logo & slogan 30'**  
Speaker: David Barney (CERN)  
Material: [slides](#) [video](#) [audio](#) [drawings](#) [download](#)
- 11:45 **Discussion on IPPOG expansion 1h00'**  
Material: [slides](#) [video](#) [audio](#) [more information](#) [video](#) [audio](#)
- 13:00 - 13:30 **Audience with the Deputy Major of Kosice**
- 14:30 - 19:00 **IPPOG "Discovery Packages"**  
Conveners: David Barney (CERN)
- 14:30 **Introduction & objectives of the Working Groups 20'**  
Speaker: David Barney (CERN)  
Material: [slides](#) [video](#) [audio](#)
- 14:50 **Practical Considerations 10'**  
Speaker: Lisa Mc Carthy (Fermi National Accelerator Lab. (Fermilab)-Unknown-Unknown)
- 15:00 **Working Group Discussions 1h00'**
- 16:00 **Working Group Wrap-Ups 15'**
- 16:15 **Afternoon Tea 15'**
- 16:30 **Working Group Reports & Discussions 1h50'**
- 18:20 **Wrap-Up 25'**  
Material: [slides](#) [video](#) [audio](#) [more information](#) [video](#) [audio](#)

### Saturday 16 April 2011

- 09:00 - 12:30 **National and Experiment Reports**
- 09:00 **Virtual services supporting EVO communication in Slovakia 10'**  
Speaker: Dr. Pavel Murlin
- 09:15 **Masterclasses and Cascade in Slovakia 15'**  
Speaker: Ivan Melo (Institute of Computer Technology)  
Material: [slides](#) [video](#) [audio](#)
- 09:35 **Detection of cosmic rays in the SKALTA experiment 10'**  
Speakers: Marek Bombara (Faculty of Science, Pavol Jozef Safarik University, Kosice, Slovakia), Marek Bombara (Institute of Experimental Physics)  
Material: [slides](#) [video](#)
- 09:50 **CERN Travelling Exhibition in Denmark 15'**  
Speaker: Rasmus Moller (Niels Bohr Institute)  
Material: [slides](#) [video](#) [audio](#)
- 10:10 **Education & Outreach in Portugal 15'**  
Speaker: Pedro Abreu (LIP Laboratório de Instrumentação e Física Experimental de Partículas)  
Material: [slides](#) [video](#)
- 10:30 **Coffee Break 20'**
- 10:55 **Klub ALF Teachers Programme and 3D movie project 15'**  
Speaker: Dr. Laurenz Widhalm (HEPHY)  
Material: [slides](#) [video](#) [audio](#)
- 11:15 **Social media for E&O 15'**  
Speaker: Mrs. Claudia Marcelloni (LBNL)  
Material: [slides](#) [video](#) [audio](#)
- 11:35 **The "Prezi" tool - an introduction 10'**

**Discussions on how to improve Masterclasses,  
exchange of experiences from various sites  
improve exercises, documentation  
keep level right**

**explain particle physics topics  
Higgs, Standard Model, SUSY,**

**explain infrastructure  
particle detection  
acceleration  
Labs (CERN,...)**

**Create interest**

**Working groups have been established to come up with clear proposals**

# Funding CHIPP Outreach

## ➤ CHIPP Outreach needs funds to effectively do its job

3/3/2011

### Taking science into the public

## ➤ AGORA new tool of SNF to fund dialogue between science & public

With its new funding scheme "Agora", the Swiss National Science Foundation (SNSF) wishes to intensify the dialogue between science and society. "Agora" is open to researchers from all disciplines for communication projects. The first call for proposals will be launched in mid-May 2011.



Science explained and discussed: "Agora", the SNSF's new funding scheme, supports public science communication projects by researchers. (c) Philippe Wagneur

One of the strategic objectives of the SNSF is to have more and better communication between science and society. This does not imply merely spreading scientific knowledge among members of the public, rather the aim is to offer insights into scientific working methods and discuss the societal significance of research. Which is why the SNSF encourages researchers from all disciplines to venture forth into the marketplace of Greek antiquity: "Agora" is the SNSF's new funding scheme for public science communication projects. It has been allocated a budget of one million Swiss francs for the 2011 call for proposals, which must be submitted between mid-May and mid-August 2011.

### Creative freedom for projects

Researchers can plan and conduct projects in collaboration with the public relations offices of universities or with museums, journalists and artists. "Agora" does not set any limits on the form and content of projects: whether exhibitions, books, films, discussions or art/multimedia projects, anything is conceivable as long as it brings science to life. This does not include projects comprising marketing campaigns or institutional communication and media relations. Projects must refer to research of high quality and provide an impetus for true dialogue with the public, in which the researchers are expected to play an active role. As far as possible, the project should be recyclable, generate sustainable interest and form part of a wider regional, national or international framework.

Projects linked to scientific work under a National Research Programme (NRP) or a National Centre of Competence in Research (NCCR) cannot be funded as separate communication budgets have been allocated for such research.

**CHIPP Outreach Group discussed and prepared an AGORA request to fund creation of a [www.teilchenphysik.ch](http://www.teilchenphysik.ch) web-portal**

**hire a communication officer at 50% FTE level  
as EPPCN delegate,  
handle press releases and adding Swissness to them  
CHIPP common publications (brochures, flyers,...)  
organize and contribute to extra events (Nacht der Forschung,  
Physics-stand, etc.)**

**requesting 200 kCHF/3years from Agora (maximum possible)  
confirmed pledge-money over 50 kCHF from SER, and also from CHIPP**

**Request submitted on 15. August 2011 and confirmed by SNF → CRAGI2\_139918**

**If accepted, money can be spent from 1 February 2012.**

## *Conclusion*

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- **CHIPP Outreach activities ongoing**
  - **individual initiatives, all Swiss sites are active**
  - **regular exchange of activities, events via CHIPP Outreach Group**
    - **Visits to Experiment sites (ATLAS, CMS, LHCb, ...)**
      - **Schools, Journalists, VIPs**
    - **Open day events at local site**
    - **Student/Fresher days at local site**
    - **Public talks at schools, clubs (rotary, lions,...), industry, ...**
    - **Interviews @ TV / Radio / Printed press**
    - **Maturitätscommissionen**
  
- **Looking for funds from SNF (Agora) to professionalize CHIPP Outreach and its impact**
  - **would also unlock SER money**