

CHIPP Outreach Report

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

23 August 2010
CHIPP Plenary
Gersau

HP Beck

A thick black border runs along the right and bottom edges of the slide, framing the content.

Agenda

- CHIPP Outreach
- report from EPPOG
- report from EPPCN
- LHC collisions at 7 TeV
- status and possible use of the by the SER promised 50 kCHF
- status of web-sites: <http://www.chipp.ch> and <http://www.swiss-lhc.ch>
 - idea to merge the two and make one entry point for swiss particle physics
 - need to find resources (money, manpower, company) to get this done
 - Please check wether your institute could help (manpower, computing, ...)
- possible future projects (All)
- Meetings & Organization
- Varia

CHIPP Outreach Group

- **CHIPP Outreach Group meets ~ twice a year**
 - **last meeting was 19 March 2010 at CERN**
 - **next meeting: beginning of Fall semester (exact date by doodle)**

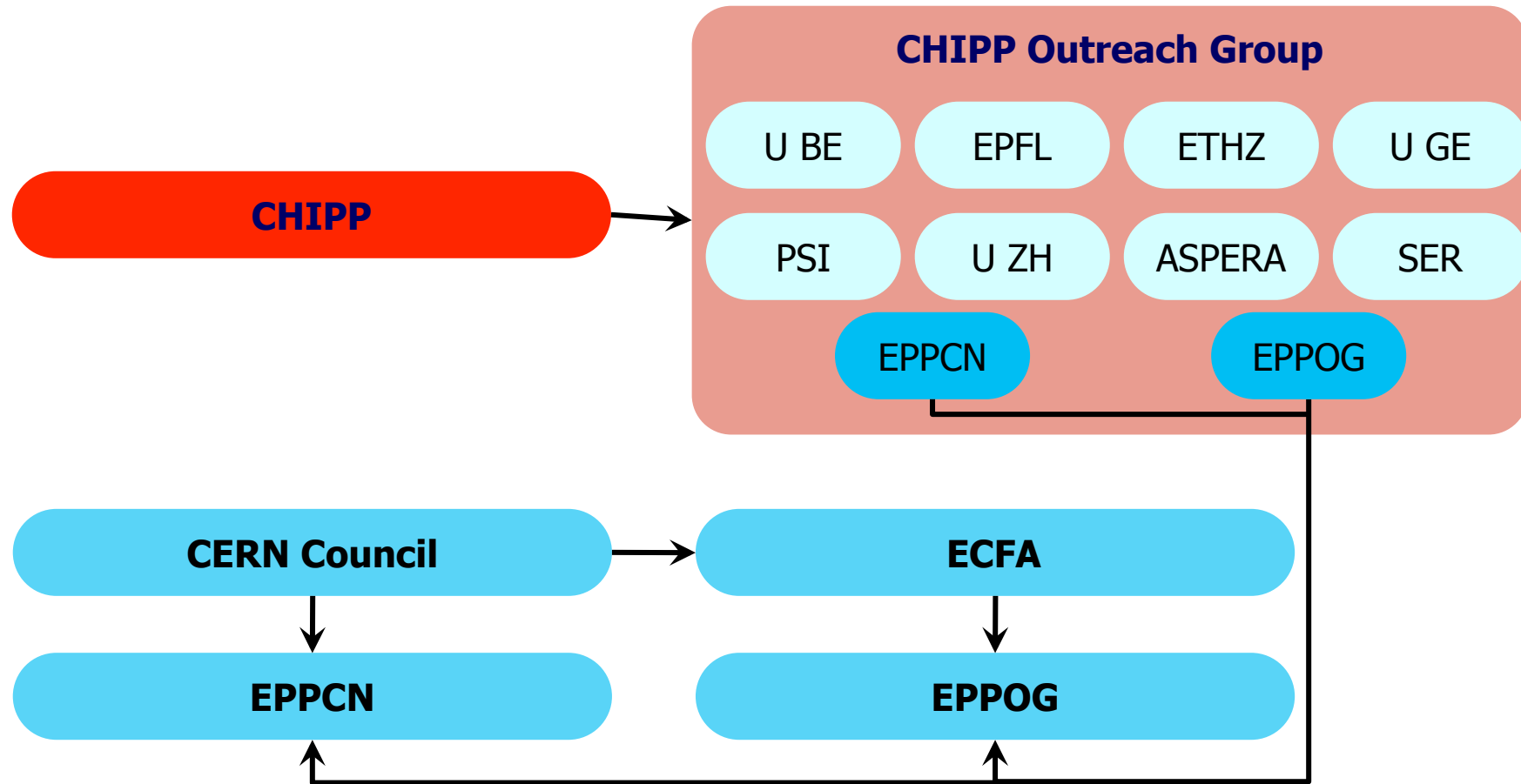
- The **primarily role** is **the coordination of outreach activities in Switzerland**
 - Outreach is normally be done by individual institutes
 - but should emphasize CHIPP and our common or related activities wherever this is sensible

 - **Benefit** from activities being done at one site to also be cloned at another site
 - good communication between Swiss groups → CHIPP Outreach Group
 - common web-site, mailing list, database of activities, exchange of material, brochures, etc.

- **Orchestrate** common (bigger scale, bigger money) outreach activities CHIPP wide
 - needs professional support (outsourcing activities to professionals)

- **Target Audience**
 - General Public
 - Schools
 - pupils
 - teachers
 - Universities
 - ...

CHIPP Outreach Group



- **EPPCN chair:** James Gillies
(CERN, Head of Communication and CERN's spokesman)
EPPCN Swiss delegate: vacant – Beat Gerber (ETHZ) interim till solution found
(see next slides for details)

- **EPPOG co-chairs** David Barney (CERN, CMS)
Michael Kobel (Dresden, ATLAS)
EPPOG Swiss Delegate Hans Peter Beck (Bern, ATLAS)

- **Last EPPOG Meeting:** 15-17 April 2010 @ Oslo
 - <http://indico.cern.ch/conferenceDisplay.py?confId=72419>
 - However - **Eyjafjallajökull** hampered the meeting considerably!

- **Next EPPOG Meeting:** October 14 – 16 with a **common session with EPPCN** to better define relative roles of communication vs. outreach and to strengthen impact

➤ EPPOG → IPPOG

- In view of the “Scientific and Geographical Enlargement” of CERN
- EPPOG, the European Particle Physics Outreach Group is preparing a new strategy to become the International Particle Physics Outreach Group → IPPOG

No decision yet, but document in preparation. Draft for comments circulated to all EPPOG members.

➤ IPPOG'S PLANNED ACTIVITIES

- **Increase membership** to more non-member states of CERN and widen its scientific disciplines
 - Continue to hold **twice-yearly meetings** to facilitate in-person information exchange, strengthen the IPPOG network and share best practices and lessons learned for outreach activities world-wide
 - Manage the **best-practices database of world-wide outreach activities**, containing a catalog of high quality tools, materials and templates from across the globe primarily in particle physics with a view that these can be replicated for other sciences
 - **Facilitate world-wide dialog** amongst outreach and education specialists on current and future endeavors through an on-line forum via a new inter-active IPPOG website including Web-2 functionalities
 - **Support projects in developing countries**, to help students and the general public appreciate the benefits of education and fundamental research for the benefit of humanity
- ➔ in-kind contributions from its members whenever possible (donations/loans of materials, people power, etc. to, for example, help others set up Masterclasses for science topics other than particle physics)

Few important activities from EPPOG / EPPCN

- **EPPCN multilingual proposal as stated in a paper for Council**
 - In order to improve its international visibility CERN should extend the set of languages supported for external communication to **English, French, German, Italian and Spanish**.
 - CERN's public web pages, print and multimedia material for communication and press releases should be made available in those five languages.
 - EPPCN proposes to appoint one **language person** per supported language working with the CERN communication group to coordinate the timely translation and validation of press releases and new material. The initial effort per newly supported language is estimated to be one FTE over **half a year**.
 - Member States not covered by this procedure are encouraged to define a **national contact person** to work in close contact with the CERN communication group and the EPPCN representative to coordinate the translation and validation of any material requested by the Member State.
 - **EPPCN welcomes the creation of national web pages on the International Relations web site** and proposes that EPPCN assist CERN's International Relations Office in keeping this information up to date.
 - **EPPCN encourages the creation of national web sites for CERN communication in the Member States**. The visibility of all Member States would be guaranteed through links from CERN to the national web sites.

Few important activities from EPPOG / EPPCN

➤ **perception of CERN in local area**

- External French communication agency (ANATOMIE) studied the local perception of CERN → CERN is, at best, accepted in the region
- CERN/EPPCN plan in preparation, and partly becoming implemented to be more pro-active in opening dialogue with local stake holders, teachers, pupils, general public
- New strategies in the up to now cumbersome handling of visitors at CERN. No delays when planning visits to CERN. Visitors should always have the opportunity to hop-on a tour when coming to CERN. No pre-arrangements needed, but still offered.
- Special busses and doubling the number of guides @ CERN
- Local events (e.g. draw a scientist), permanent exhibitions (Globe, microcosm)
- **CHIPP outreach can profit from better, more actual and accurate material to become available from CERN to be used when talking to media / teachers / pupils / general public**

EPPCN Swiss Delegate

Beat Gerber (ETHZ) resigned from his post as Swiss delegate to EPPCN
letter sent to CHIPP chair, CHIPP outreach coordinator on 4.11.2009

Successor not yet found !!

should be a communication expert with good network and ideas
and reasonable good understanding of scientific thinking
needs some funds for travel
EPPCN meetings at CERN and once a year in a European city

Many iterations with the rector of Bern University, the Bern university
communication office; and the PSI communication office

Main problem: loyalty of the EPPCN delegate to his/her home institute wrt to
CHIPP. Fear expressed by the communication offices that such a person can
not wear two hats. (As we experienced in the past with B.G.)

Therefore, CHIPP should fund the Swiss EPPCN delegate

Document with mandate, workpackages and funding request in preparation →
CHIPP board

LHC – first collisions @ 7 TeV

- Switzerland reported strong coverage of the LHC restart and the recent ICHEP conference in all media, attributing this partly to the fact that the seat of the Organization is on Swiss territory. Very effective for the spread of news from CERN has been the Swiss National News Agency, SDA, which installed in late 2008 a specific science news service, partly sponsored by the CRUS.
- CERN is an attractive visitors' centre for people in the Western part of Switzerland, e.g. to experience the unique exhibition «Universe of Particles». **But the population in the German and Italian speaking regions meets with two obstacles**, the great distance and the foreign languages (French/English). Therefore it's a great pity that other planned public relations activities such as exhibitions in public areas, educational material for schools or operating finally the new Swiss LHC website (www.swiss-lhc.ch) have been **cancelled** or **deferred due to lack of available money and a deficient commitment from the Particle Physics Community**.

Recent Outreach Activities

- **A lot of Outreach** is being done throughout Switzerland
 - small scale, individual initiatives, all Swiss sites are active, no (or only little) coordination

- **Everybody (Be, Ge, ETHZ, EPFL, PSI, ZH) active in**
 - 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

➤ Physics Masterclasses – EPPOG

➤ *International Masterclasses "Hands on Particle Physics"*

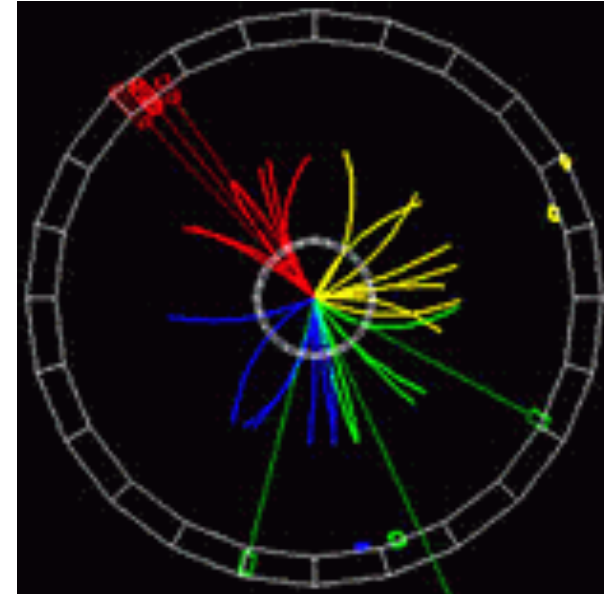
12.2. 2010 (Zürich)

17.2.2019 (Bern)

<http://www.physicsmasterclasses.org>

- **25** students to participate in Zürich
- **cancelled** in Bern lack of students
Problem with ski holidays!

2011 Masterclass: date to be optimized



23 Nations

~4800 students (~16-18 years old)

Switzerland: Bern & Zürich participated
Geneva & Lausanne expressed interest
to join for 2010 → did not receive feedback.

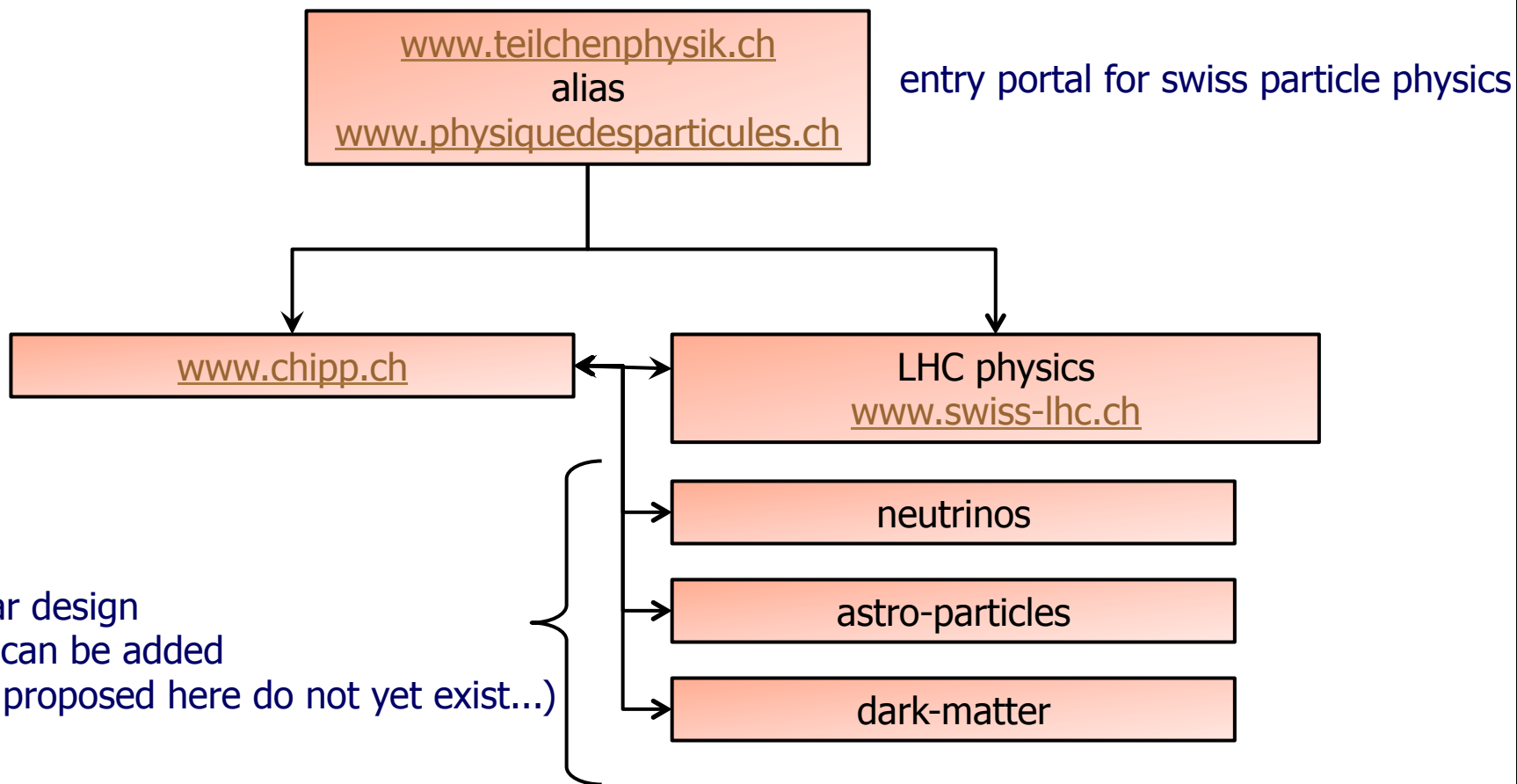
Teachers education (Zürich, Bern)

- **PH** (Pedagogical Highschool) organizes every year a series of teachers education programs.
 - **full day teachers session** – The Physics of Elementary Particles.
 - Zürich already active since few years
 - Bern scheduled 1st event for 11 September 2010

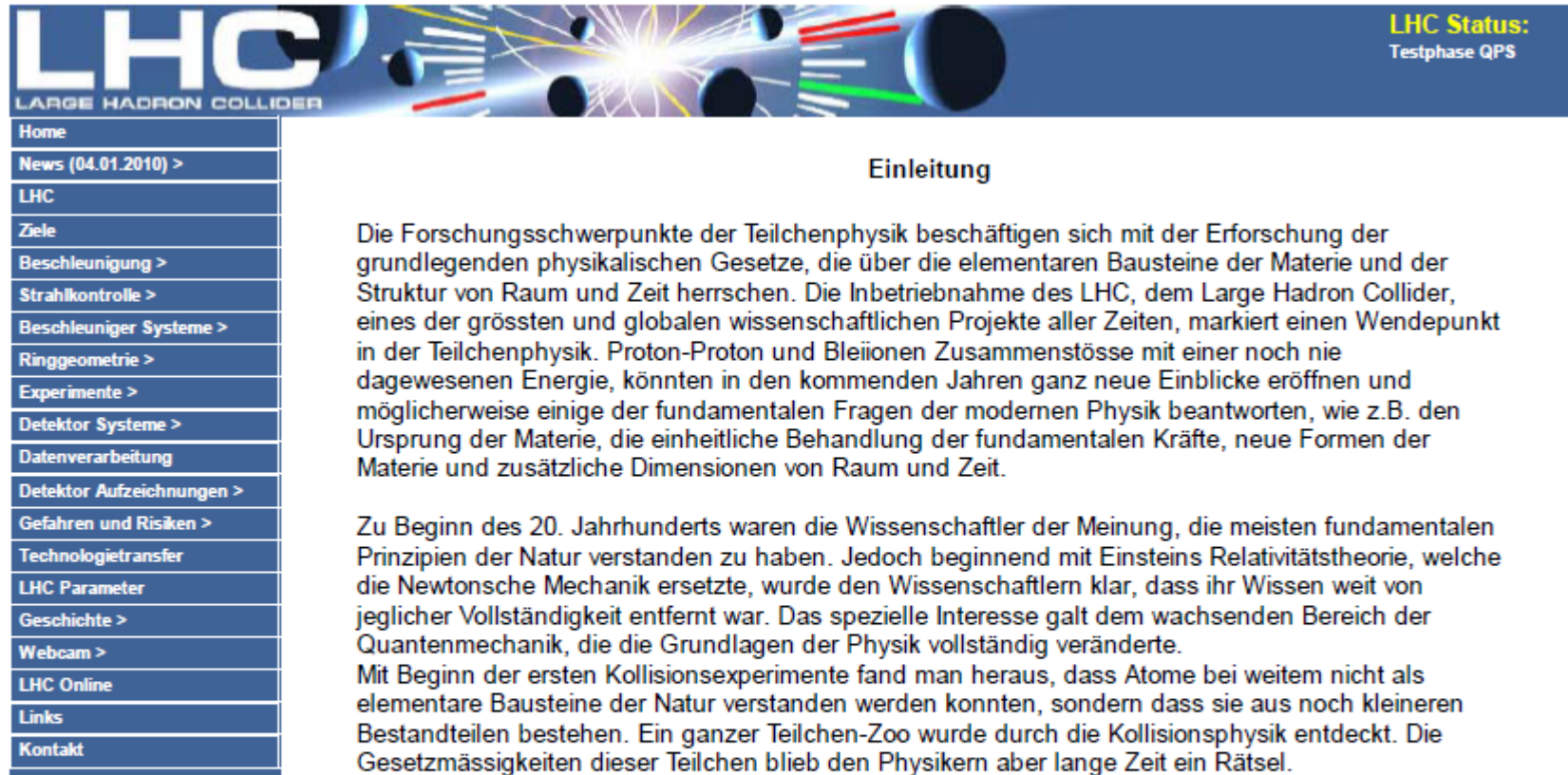
- In parallel want to use this contact to also convince Swiss teachers to participate at CERN teachers program

- <http://education.web.cern.ch/education/Chapter1/Intro.html>

Swiss Web Sites



work on web sites will resume with Bern communication office



LHC
LARGE HADRON COLLIDER

LHC Status:
Testphase QPS

Home
News (04.01.2010) >
LHC
Ziele
Beschleunigung >
Strahlkontrolle >
Beschleuniger Systeme >
Ringgeometrie >
Experimente >
Detektor Systeme >
Datenverarbeitung
Detektor Aufzeichnungen >
Gefahren und Risiken >
Technologietransfer
LHC Parameter
Geschichte >
Webcam >
LHC Online
Links
Kontakt

Einleitung

Die Forschungsschwerpunkte der Teilchenphysik beschäftigen sich mit der Erforschung der grundlegenden physikalischen Gesetze, die über die elementaren Bausteine der Materie und der Struktur von Raum und Zeit herrschen. Die Inbetriebnahme des LHC, dem Large Hadron Collider, eines der grössten und globalen wissenschaftlichen Projekte aller Zeiten, markiert einen Wendepunkt in der Teilchenphysik. Proton-Proton und Blei-Ionen Zusammenstösse mit einer noch nie dagewesenen Energie, könnten in den kommenden Jahren ganz neue Einblicke eröffnen und möglicherweise einige der fundamentalen Fragen der modernen Physik beantworten, wie z.B. den Ursprung der Materie, die einheitliche Behandlung der fundamentalen Kräfte, neue Formen der Materie und zusätzliche Dimensionen von Raum und Zeit.

Zu Beginn des 20. Jahrhunderts waren die Wissenschaftler der Meinung, die meisten fundamentalen Prinzipien der Natur verstanden zu haben. Jedoch beginnend mit Einsteins Relativitätstheorie, welche die Newtonsche Mechanik ersetzte, wurde den Wissenschaftlern klar, dass ihr Wissen weit von jeglicher Vollständigkeit entfernt war. Das spezielle Interesse galt dem wachsenden Bereich der Quantenmechanik, die die Grundlagen der Physik vollständig veränderte.

Mit Beginn der ersten Kollisionsexperimente fand man heraus, dass Atome bei weitem nicht als elementare Bausteine der Natur verstanden werden konnten, sondern dass sie aus noch kleineren Bestandteilen bestehen. Ein ganzer Teilchen-Zoo wurde durch die Kollisionsphysik entdeckt. Die Gesetzmässigkeiten dieser Teilchen blieb den Physikern aber lange Zeit ein Rätsel.

www.lhc-facts.ch created by a „fan“

not a physicist but laboratory worker in chemistry (Chemielaborant)

lot's of information about the LHC project in German

no Swissness i.e. no Swiss institutes, participation, contribution mentioned

50 kCHF from SER

The project must be further (financially) supported by all involved Universities and institutes. → CHIPP money table

The project should be for young people who are about to take the decision what to study (tbd)

Should be a global project targeted for young people.
Preferably the project is long term (3 years)

Discussion with Laurent Salzarulo end of July 2010

A well defined project and funding support established are indispensable for unlocking the 50 kCHF.

The current plan (document in preparation to hire EPPCN delegate with its work packages and funding) will be sufficient to unlock the 50 kCHF.

Laurent Salzarulo will cease to be the CHIPP outreach delegate from the SER (he leaves the SER but stays in admin.ch).
New delegate to be decided by SER.

moral obligation

- **DG Chris Llewellyn Smith explained in September 1997** at the first-ever EPPOG meeting, *“the particle physics community has a moral obligation to inform the public on its activities. To do this well”*, he explained, *“experiences must be shared among countries in view of the need to optimize the use of resources.”*
- **translated to CHIPP, this means**
 - *“The **Swiss** particle physics community has a moral obligation to inform the **Swiss** public on its activities. To do this well experiences **and resources** must be shared among **Swiss institutes and groups** in view of the need to optimize the use of resources.”*

Conclusion

- CHIPP Outreach Group organized
 - well established activities at all CHIPP sites
 - Masterclasses, teachers education, CERN visits, public talks, open days, talking to media, etc.
 - but not (yet) as effective as could be
 - better and swift response to actual particle physics results with adding Swissness to them and translating to local languages
 - Live and maintained particle physics web portal would play an important role in providing up to date and relevant information to teachers, pupils, general public, journalists, politicians
- EPPCN delegate to be found and financed by/via/through CHIPP with mandate to play a pivotal role in CHIPP outreach activities would be a big asset
- CHIPP outreach document in preparation with workpackages and financial figures in preparation → CHIPP board

Resources for LHC PR – Survey results

➤ 20 representatives – 11 answers

- Germany ca. 2 FTE, ca. 200,000 € per year
2008: 1.5 million €
- Poland 2 – 2.5 FTE, exhibition
(2008): 150,000 €
- Portugal 1.6 FTE, ca. 50,000 € per year
- N, S, Finland and CH 0.05 – ca. 0.3 FTE no specific budget
(project oriented)
- Italy integrated in INFN; no stable budget
- Spain unclear situation
- Czech Republic and NL not specified due to handover



BackUp

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, EPPOG & SER**

<u>Bern</u>	HP Beck (chair) & <u>EPPOG</u> Thomas Becher	contact alternate
<u>EPFL</u>	Frederic Blanc Aurelio Bay	contact alternate
<u>ETHZ</u>	Christoph Grab Marie-Christine Sawley	contact alternate
<u>Geneva</u>	Olivier Gaumer Bernard Révaz & <u>ASPERA</u>	contact alternate
<u>PSI</u>	Tilman Rohe Malte Hildebrand	contact alternate
<u>Zürich</u>	Angela Buechler-Gehrmann Teresa Marrodan-Undagoitia Vincenzo Chiochia	contact alternate
<u>SER</u>	Laurent Salzarulo	
<u>EPPCN</u>	vacant	

- **EPPCN is a network of closely cooperating professional communication officers from each Member State**, and reports on a regular basis to Council.

- **The EPPCN mandate**
<https://espace.cern.ch/forum-EPPCN/Shared Documents/1207CouncilEPPCN-3.pdf>
 - Strengthen communication between communications officers in the Member States;
 - Review existing communications practices at CERN and in the Member States with a view to sharing best practice and maximising benefit in the Member States;
 - Offer constructive advice on communication issues to Council based on consensus decisions made by the network;
 - Prepare and implement communication activities based around the start-up and results from the LHC;
 - Propose, implement and monitor strategies designed to foster long-term support for sciences related to CERN's mission, in support of the European strategy for particle physics.

EPPOG – European Particle Physics Outreach Group

- In addition to EPPCN, there is the **European Particle Physics Outreach Group (EPPOG – <http://www.cern.ch/eppog>)**, reporting to ECFA, installed in 1997.
- **EPPOG** is a **network of physicists from Member States** who are active in physics education and outreach, and its purpose is to allow scientists to share best practise in outreach across borders.
- The **EPPOG mandate**
 - 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 (normally the responsible person for outreach activities in the state concerned).
 - 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.

Teachers education

- CERN has a teachers program
- <http://education.web.cern.ch/education/Chapter1/Intro.html>
- The three-day **Physics Teachers Programme** is an international weekend course in English for teachers from all over Europe and includes seminars, visits and educational activities. Click [here](#) to find out more.
- The **High School Teacher Programme** is a comprehensive international course held in English, aimed at teachers who would like to spend the first three weeks of July at CERN. The next session will take place from 28 June - 18 July 2009. Click [here](#) to find out more.
- The **National Teacher Programmes** are held in the mother tongue language of the participants from CERN member states. Click [here](#) to find out more about their content, when the next session is planned for your country, to access the agenda, to find archived material of previous sessions and contact information.
- **Swiss teachers do not participate** (quote Rolf Landua, Head of CERN Education Group)
→ we are changing this