

## **P-ECFA: *Nomination of one member***

June 2013/JPR

### **Introduction**

The decision regarding the Swiss representatives in ECFA belongs to the CHIPP Plenary. The decision is taken on the basis of a recommendation of the Board.

### **Proposal**

At present, CHIPP (and Switzerland) is represented at ECFA by L. Rivkin (at R-ECFA and P-ECFA), and by M. Weber, T. Garvey, and O. Steinkamp (at P-ECFA). One of them (M. Weber) will come to the end of his mandate on 31 December 2013; after having served for two terms, a prolongation is not possible. The call for nominations among the Board Members has resulted in three candidates for P-ECFA having received the largest number of nominations (in alphabetical order): S. Haug, W. Lustermann, and M. Schumann.

All three candidates have indicated their willingness to serve in this function for the years 2014-2016. Their CVs are attached.

**The Board** (in conformity with Article 19, litt. e) is requested

- **to recommend to the Plenary** the election of S. Haug, W. Lustermann, or M. Schumann for a first term (2014-2016) as P-ECFA representative.

Required majority: simple

The CHIPP Chair will submit the names of the recommended candidates to the Plenary for decision.



## Curriculum Vitae 2013 Brief

### Dr. Sigve Haug

<i>Address</i>	Albert Einstein Center for Fundamental Physics Laboratory for High Energy Physics Sidlerstrasse 5, CH-3012 Bern, Switzerland
<i>Email</i>	sigve.haug@lhep.unibe.ch
<i>Phone (private)</i>	+41 (0)78 653 6251
<i>Phone (work)</i>	+41 (0)31 631 4062
<i>Date of birth</i>	23 October 1972, Oslo.
<i>Citizenship</i>	Norwegian.
<i>Personal status</i>	Married, one child.
<i>Current employment</i>	Postdoc researcher ( <i>Oberassistent</i> ), Bern University.
<i>Current offices</i>	Swiss Council Representative in European Grid Infrastructure Executive Board Member in Swiss National Grid Association National Grid Infrastructure Manager CHIPP Computing Board Member Swiss Representative in ATLAS International Computing Board NordGrid Steering Board Member
<i>Languages</i>	English, German, Norwegian, Spanish.
<i>h<sub>HEP</sub> index</i>	60 (Source : <a href="http://inspirehep.net/author/S.Haug.1/">http://inspirehep.net/author/S.Haug.1/</a> )

### Brief Chronology

<i>Apr 2006 –</i>	Postdoc researcher with teaching and supervision duties Main research: ATLAS, LHC (SUSY). University of Bern
<i>Aug 2005 – Apr 2006</i>	Postdoc researcher (ATLAS, NordGrid), University of Oslo.
<i>2001 – 2005</i>	Occasional lecturer of mathematics and physics Oslo University College.
<i>Jan 1999 – Aug 2004</i>	PhD on Higgs search at LEP (DELPHI) with 25% teaching, University of Oslo.
<i>Oct 1998 – Jan 1999</i>	Diploma in physics (KARMEN neutrino experiment) University Erlangen-Nuremberg, Germany



## CURRICULUM VITAE

### Personal Data

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**Name:** Werner Lustermann

**Date of Birth:** June 16, 1965 in Jena, Germany

**Nationality:** German

**Civil status:** Married

**Children:** Hannes (born in 1987),  
Leonore (born in 1996),  
Gayaneh (born in 2003)

**Home address:** 491 rue du Mont Blanc, F-01170 Cessy, France

**Professional address:** ETH Hönggerberg, Institute for Particle Physics, Schaffmattstr. 20,  
CH-8093 Zurich, c/o CERN, Div. EP, CH-1211 Geneva 23,  
Switzerland

**Phone:** prof. +41 22 76 76520  
priv. +33 4 50 20 38 14

**E-mail:** [Werner.Lustermann@cern.ch](mailto:Werner.Lustermann@cern.ch)

**Languages:** German (mother tongue), English, French, Russian

## Education and Employment

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- 1996 – now** Research Physicist (since 2004 senior scientist) at the Institute for Particle Physics, ETH Zurich, since 2008 coordinator of the institute's pool of technicians and engineers
- 1996** **Ph. D. Thesis** in experimental High Energy Physics  
“Das anomale magnetische Moment des  $\tau$ -Leptons”,  
Swiss Federal Institute of Technology (ETH), Zurich, Switzerland
- Dec. 1992 – May 1996** Ph. D. student at Paul Scherrer Institute, Villigen, Switzerland
- 1992** **Diploma in Physics** “Messung der Photonenspektren im Prozess  $e^+e^- \rightarrow Z^0 \rightarrow \tau^+\tau^-\gamma$  auf der  $Z^0$  Resonanz und Bestimmung einer Obergrenze für das anomale magnetische Moment des  $\tau$  Leptons”,  
Diplomprüfung “sehr gut”
- Jan. 1992 – Aug. 1992** Technical Student at CERN, Geneva, Switzerland
- 1991** Summer Student at DESY, Hamburg, Germany
- Oct. 1987 – Nov. 1992** Studies of Physics at University of Jena, Germany
- May 1986 – Sept. 1987** Military service, Erfurt, Germany
- Sept. 1985 – April 1986** Work at “VEB Mikroelektronik Wilhelm Pieck”, Mühlhausen, Germany in the department of computer fabrication
- Oct. 1984 – Aug. 1985** Assistant educator in a children home, Jena, Germany
- 1985** Students Award (Schülerpreis) of the Physical Society of the Academy of Sciences, German Democratic Republic
- 1984** Final school exam (Abitur)
- 1980-1984** Student at “Spezialschule Carl Zeiss”, Jena, Germany, Secondary School with emphasis on mathematics and physics

## Scientific Research

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### Experiment FACT (since 2008)

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#### **Development of a 144 channel prototype (M0) of G-APD camera for an imaging air shower Cherenkov telescope (2008-2009):**

- Technical coordination of the project comprising: Light collection and photo-sensor (G-APD), electronics systems, mechanics, cooling
- Prototype testing at the roof of IPP building

#### **Development of a 4.5 deg G-APD camera for the re-furnished Hegra CT3 telescope in La Palma (2009-2011):**

- Technical coordination and various contributions to all parts and systems including basic control software
- Electronics system concept
- Camera integration and testing,
- Installation and Commissioning in La Palma (Oct. 2011)
- Camera calibration

**Responsibilities:** Technical coordinator

### Experiment AX-PET (since 2007)

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- Design studies and conceptual tests with LYSO crystals and G-APDs
- Development and production of readout electronics
- Bias supply calibration and control software development
- Detector integration and testing
- Contributions to the data analysis

**Responsibilities:** Electronics systems

### Experiment CMS (since 1998)

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#### **Development of readout electronics for the CMS electromagnetic calorimeter:**

- analogue readout electronics (Very Front End readout cards -VFE)
- Prototyping and test of the so called mother boards
- Development of a Low Voltage Distribution System
- Electronics integration with the cooling system, cooling tests

#### **Detector components production, integration and commissioning:**

- Coordinator of the ECAL electronics integration center at CERN: Installation of the readout electronics and services into the ECAL barrel and end-cap modules and commissioning of the completed detector modules
- Production and test of 15000 VFE readout cards
- Production and test of 2700 EB motherboards and 600 EE motherboards

#### **Pixel detector upgrade:**

- Prototype and series production of the pixel digital test boards (180 pieces)

- Instrumentation of the thermal duplicate, a dedicated setup for the validation of the pixel detector CO<sub>2</sub> cooling system

**Responsibilities (now):**

- Team leader of the ETH electronics group at CERN
- Deputy CMS ECAL electronics coordinator

**Experiment AMS (since 1996)**

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**Active participation in the ongoing data taking effort (since March 2012)**

**AMS Si-Tracker**

- Production and test of AMS01 Si-Tracker modules
- Wire bonding and testing of AMS02 Si-Tracker modules

**AMS-01 Slow Control and Monitoring System (1996 – 1998)**

- Test of slow control components and system, including configuration and test of the flight software for the corresponding micro controllers
- Development of a slow control monitoring program (used during the AMS flight)
- June 1998: Operation of the AMS slow control system during the STS91 mission, Kennedy Space Center, Houston, Texas

**Responsibilities:** ETH clean-room in Zurich and ETH bonding laboratory at CERN

**Experiment PEBS (2008-2013)**

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**Development, prototyping and testing of an electromagnetic calorimeter:**

- Preparation of three calorimeter prototypes: mechanical design, assembly, using Pb and W absorbers, plastic scintillators with embedded wavelength shifting fibers and SiPM (Hamamatsu MPPC and Zecotek MAPD) readout
- Beam tests of the calorimeter prototypes at the CERN's SPS and PS accelerators in 2009, 2010 and 2012
- Participation in the calibration and data analysis

**Responsibilities:** mechanics design, production and integration, test beam coordination

**Project ASIPET (2007-2009)**

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**Development of a semi-monolithic pixel detector using thin film on ASIC technology for PET applications**

**Responsibilities:** Thesis supervisor

## Experiment L3 at CERN – LEP physics (1990 - 1996)

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**April 1990 – June 1991, Participation in the construction of the L3 Z-chamber at DESY-Zeuthen**

**Jan. 1992 – Aug. 1992 Technical Student at CERN, Div. PPE, Geneva, Switzerland, working in the group of the Institute for High Energy Physics DESY-Zeuthen:**

- Study of the alignment between Z-detector and the BGO electromagnetic calorimeter.
- **Diploma Thesis:** “Messung der Photonenspektren im Prozess  $e^+e^- \rightarrow Z^0 \rightarrow \tau^+\tau^-\gamma$  auf der  $Z^0$  Resonanz und Bestimmung einer Obergrenze für das anomale magnetische Moment des  $\tau$  Leptons”

**Dec. 1992 – May 1996 Paul Scherrer Institute, Villigen, Switzerland:**

- Development, test and installation of an alignment system for the L3 forward-backward muon chambers, including analytical modelling of the muon momentum resolution depending on the alignment sensor resolution.
- Study of Michel parameters of the  $\tau$  lepton with the L3 detector
- **Ph. D. Thesis:** “Das anomale magnetische Moment des  $\tau$ -Leptons”, Swiss Federal Institute of Technology (ETH), Zurich, Switzerland

## Students

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- Jannis Fischer, “Tungsten Electromagnet Calorimeter for PEBS”, Bachelor Thesis, Freie Universität Berlin, 2010
- Wieland Hintz, “Electron identification with the CMS detector and applications for Higgs and W boson searches”, Ph. D. Thesis, ETH-Zurich, 2010
- Alessandro Nardulli, “Development of a low noise optoelectronic integrated readout with a hydrogenated amorphous silicon photodiode array for Positron Emission Tomography”, PhD Thesis, ETH-Zurich 2009
- Matthias Pestalozzi, “CMS ECAL Niederspannungssystem, Entwicklungen und Tests”, Diploma Thesis, ETH-Zurich, 2003
- Stève Udriot, “Development of a Radiation Monitoring System for the CMS Electromagnetic Calorimeter”, Diploma Thesis, ETH-Zurich, 1999

## Talks / Seminars

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- LHC-Days in Split, “First G-APD Cherenkov Telescope, Status and Results”, Oct 2012, Split, Croatia
- CTA general meeting plenary session, “FACT First G-APD Cherenkov Telescope”, Nov. 2011, Madrid, Spain
- Light 2011, “FACT First G-APD Cherenkov Telescope”, Nov 2011, Rottach, Germany
- JENAM 2011, “FACT First G-APD Cherenkov Telescope”, July 2011, Saint Petersburg, Russia
- CHIPP plenary meeting, “FACT First G-APD Cherenkov Telescope”, Aug 2010, Gersau, Switzerland

- LHC-Days in Split, “FACT First G-APD Cherenkov Telescope”, Oct 2010, Split, Croatia
- 11<sup>th</sup> ICATPP, “AX-PET Demonstrator”, Oct 2009, Como, Italy
- CHIPP plenary meeting, “AX-PET Demonstrator”, June 2008, Geneva, Switzerland
- XIII International Conference on Calorimetry in High Energy Physics, “The CMS Crystal Calorimeter”, May 2008, Pavia, Italy
- CHIPP plenary meeting, “CMS Status”, Oct 2007, PSI, Switzerland
- LHC-Days in Split, “ECAL Construction Status”, Oct 2006, Split, Croatia
- 16<sup>th</sup> International Conference and Workshop “Robotics and Mechatronics”, “Status of ECAL Construction”, Oct 2006, Drjanovo, Bulgaria
- 11<sup>th</sup> Workshop on Electronics for the LHC and future Experiments, “Installation and Test of the CMS Crystal Calorimeter Electronics”, Sep. 2005, Heidelberg, Germany
- IEEE IMTC 2004, “The CMS Crystal Calorimeter”, 18-20 May 2004, Como, Italy
- 9<sup>th</sup> Workshop on Electronics for the LHC-Experiments, “CMS ECAL Low Voltage System”, Oct. 2003, NIKHEF, Amsterdam
- Seminar: “The AMS detector”, 1998, DESY-Zeuthen
- Colloquium on particle physics: “ $\tau$  Physics with the L3 Detector”, 1994, University Zurich

## **Publications**

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The list of publications includes a number of detectors papers related to the above mentioned contributions to the various experiments. There are as well many important particle physics results published by these experiments, like for instance the discovery of a new boson at  $\sim 125$  GeV or the measurement of the positron fraction in primary cosmic rays up to 300 GeV. My contributions to these publications typically concern the aspects of detector development, construction, calibration and operation.

A detailed list of publications can be found at SPIRES:

[http://inspirehep.net/search?ln=en&p=find+a+werner+lustermann&of=hb&action\\_search=Search](http://inspirehep.net/search?ln=en&p=find+a+werner+lustermann&of=hb&action_search=Search)



# CV Marc Schumann

*Born:* 15.06.1978 in Göppingen (Germany)  
*Address:* Albert Einstein Center for Fundamental Physics  
Universität Bern  
Sidlerstr. 5  
CH-3012 Bern, Switzerland  
*Phone:* +41 31 631 3837  
*Email:* marc.schumann@lhcp.unibe.ch  
*URL:* <http://www.lhcp.unibe.ch/schumann>

## Professional Experience

01/2013–present Assistant Professor for Experimental Astroparticle Physics  
(Succession Prof. J.-L. Vuilleumier),  
Albert Einstein Center for Fundamental Physics (AEC),  
Universität Bern (Switzerland)  
09/2009–12/2012 Senior Researcher (Oberassistent), Universität Zürich (Switzerland)  
09/2007–09/2009 Postdoctoral Research Associate, Rice University (USA)  
05/2007–08/2007 Postdoctoral Research Assistant, University of Heidelberg (Germany)  
03/2004–05/2007 Research Assistant  
Physikalisches Institut, University of Heidelberg (Germany)  
10/2006–12/2006 Visiting Scientist  
06/2004–09/2004 Institut Laue-Langevin (ILL), Grenoble (France)

## Fellowships

09/2007–09/2009 G. K. Walters Postdoctoral Fellowship, Rice University (USA)  
01/2007–08/2007 Fellow of the *Heidelberg Graduate School of Fundamental Physics*

## Education

03/2004–05/2007 University of Heidelberg (Germany), PhD in Physics (“very good”)  
Thesis: *Measurement of Neutrino and Proton Asymmetry in the Decay of polarized Neutrons*  
03/2004 University of Heidelberg (Germany), Diploma in Physics (“very good”)  
Thesis: *Probing the Standard Model: Preparation of a new Electron Asymmetry Measurement in the Decay of polarized Neutrons*  
2001/2002 Queen’s University Kingston (Canada), Studies of Physics  
1998–2004 University of Heidelberg (Germany), Studies of Physics

### **Talks at Conferences and Seminars (2012/2013)**

- BLV2013, Heidelberg (Germany), 10/04/2013
- University of Bern (Switzerland), Physikalisches Institut (Outreach Talk), 31/01/2013
- TU/LMU München, Garching (Germany), MLL-Kolloquium, 25/10/2012
- DESY Hamburg (France), Seminar, 23/10/2012
- CEA Saclay (France), Seminar, 22/10/2012
- DESY Zeuthen (Germany), Seminar, 17/10/2012
- Rotary Mainz (Outreach talk), Mainz (Germany), 01/08/2012
- Fermilab Seminar / PATRAS12, Fermilab (USA), 20/07/2012
- What is  $\nu$ ? Galileo Galilei Institute, Florence (Italy), 27/06/2012
- SPS Meeting 2012, Zurich (Switzerland), 21/06/2012
- University of Bern (Switzerland), AEC Seminar, 10/05/2012
- University of Mainz (Germany), Nuclear Chemistry Seminar, 02/05/2012
- Rencontres de Moriond Cosmology 2012, La Thuile (Italy), 14/03/2012

### **Professional Memberships**

- Member of the XENON Collaboration, Principal Investigator since 01/11/2012  
*work areas:* analysis coordination, data acquisition, TPC design
- Member of the DARWIN Consortium, Principal Investigator since 01/01/2013  
*work areas:* electronics and trigger, detector design
- Swiss Physical Society (SPS)
- German Physical Society (DPG)
- Swiss Institute of Particle Physics (CHIPP)
- Invisibles: European Initial Training Network (ITN)  
(association with UZH node, AEC Bern has “Friend of Invisibles” status)

### **Organization of Conferences and Meetings**

- ICRC 2013, Rio de Janeiro (Brasil), July 2–9, 2013.  
Rapporteur for the Dark Matter branch.
- EPS HEP 2013, Stockholm (Sweden), July 18–24, 2013.  
Convener of the Astroparticle Physics session.
- 9th Patras Workshop on Axions, WIMPs and WISPs,  
Mainz (Germany), June 24–28, 2013. Organizing Committee.  
<http://axion-wimp.desy.de/>
- 6th – 8th Patras Workshop on Axions, WIMPs and WISPs,  
Chicago (USA, 2012), Mykonos (Greece, 2011), Zurich (Switzerland, 2010)  
Member of the organizing Committee.