

## Ursula BASSLER

Scientific Director IN2P3 - France  
Born: July 9 1965 in Weil am Rhein, French-German Nationality

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## Professional Experience

### 1991-1998: H1 experiment at HERA, DESY, Hamburg, Germany

- Study of the hadronic final state on the first Deep Inelastic Scattering events at H1 (HERA): Development of the  $\Sigma$  method for the kinematical reconstruction of DIS events;
- Structure function measurements over the entire kinematic range on the data taken by H1 between 1993 and 1997 through four distinct data analysis campaigns;
- Improvements of the H1 Liquid Argon calorimeter reconstruction, in particular the electromagnetic and hadronic energy resolution and the alignment of the calorimeter.
- Software development for the commissioning and the online calibration of the H1 SpaCal calorimeter electronics.

### 1998-2011: DØ experiment at the Tevatron, FNAL, Chicago, USA

- Lead scientist for the online calorimeter calibration system, the French hardware contribution to the D0 Run II detector upgrade;
- Co-coordinator of the calorimeter commissioning during the Run II start-up;
- Design and implementation of calorimeter calibration database and reconstruction software;
- Convener of various calorimeter related algorithm groups;
- Participation in the top cross-section measurement and indirect top mass extraction;
- Member and Chair of the Editorial Board “Searches of the Higgs boson in the di-lepton channel”.

## Research Management

**2005-2007: Deputy Director** of J.-E. Augustin and P. Debu at LPNHE Paris;

**2007-2013: Head of the Particle Physics Division** at CEA Saclay – (French Atomic Energy Commission);

**2014-2015: Scientific Director for Particle Physics and Computing** at IN2P3 (French National Institute for Particle and Nuclear Physics coordinating 20 joint CNRS-University laboratories):

First preparations of IN2P3 budget request for HL-LHC detector upgrades;

Lead of CERN-IN2P3 collaboration on the French Open Archive HAL and HEP-INSPIRE;

Lead of the French participation in the European Open Science Cloud.

**2016-2018: Deputy Director of IN2P3.**

International Relations, European Contracts, Research Infrastructures, Laboratories and Universities, Communication and Outreach.

**2019-2021: CERN Council President**, and Adviser for parity and scientific impact at IN2P3.

European Strategy Update, Director General Selection, Chair of Governance Working Group,

**2022: Scientific Director for Laboratories, EU and ANR funding** – IN2P3

## Major Councils and Committees (*ad personam participation*)

**2003-2009:** International Evaluation Committee (CVI), INFN, Italy.

**2004-2007, 2008:** European Committee for Future Accelerators (Plenary ECFA).

**2008-2013:** Scientific Council of DESY, Germany.

**2010-2013:** European Astroparticle Network (ASPERA), Governance board.

**2010-2014:** LHC Experiments Committee (LHCC), CERN.

**2011-2013:** Scientific Council of IN2P3, France.

**2012-2014:** High Energy Physics Advisory Panel (HEPAP), USA.

**2009-2015:** European Research Council (ERC), Evaluation Committee of Starting Grants.

**2014-2016:** European Grid Initiative (EGI), Council.

**2014-2018:** Update of the French National Roadmap of Large Research Infrastructures and the ESFRI Roadmap, Working Group on “Physical Sciences” appointed by the French Research Ministry.

**2015:** Long Baseline Neutrino Committee (LBNC), FNAL, USA.

**2016-2018:** CERN Council, Scientific Delegate of France.

**2020:** University Zurich, Evaluation Committee of the Physics Department, Switzerland.

**2020:** Scientific Council of Joint Institute of Nuclear Research (JINR).

**2020:** Chair of the Strategic Review of the Research Field Matter for the Helmholtz Association, Germany.  
**2021:** Member of IFAB scientific board, Bologna, Italy.  
**2022:** Chair of the Scientific Council of the Frascati National Laboratory, INFN, Italy.

## Publications

- “Measurement of the  $t\bar{t}$  production cross-section in  $p\bar{p}$  collisions at  $\sqrt{s}=1.96$  TeV using kinematic characteristics of lepton+ jets events” D0 Collab. V.M. Abazov et al., Phys. Rev. **D76** (2007) 092007.
- “The Upgraded D0 Detector” D0 Collab. V.M. Abazov et al., Nucl. Instr. Meth. **A565** (2006) 463.
- “Measurement of the Neutral and Charged Current Cross-Section in Positron-Proton Collisions at Large Momentum Transfer” H1 Collab. C. Adloff et al., Eur. Phys. J. **C13** (2000) 609.
- “Some Properties of the Very High  $Q_2$  Events at HERA” U. Bassler, G. Bernardi, Z. Phys **C76** (1997) 223.
- “On the kinematic reconstruction of Deep Inelastic Scattering at HERA” U. Bassler, G. Bernardi, Nucl. Instr. Meth. **A361** (1995) 197.

549 journal publications, 42 with important personal contribution;  
27 conference and colloquium presentations, 12 with published proceedings, 7 seminars ;  
23 internal H1 or D0 Collaboration notes;  
Summer school course at “Hadron Collider Physics 2008” on Calorimetry;  
Member of the organization and advisory committees of national and international conferences.

## PhD supervision and appointment committees

1995-1999 Ijaz Ayyaz “Measurement of the proton structure function  $F_2(x, Q_2)$  at low  $x$  and low  $Q_2$  with the H1 detector at HERA”  
1998-2001 Bob Olivier (co-direction with G. Bernardi) “Calorimetry at D0 and stop quark searches”  
2002-2005 Jean-Roch Vlimant “Measurement of the  $t\bar{t}$  pair production cross-section in  $pp$  collisions at  $\sqrt{s}=1.96$  TeV at the D0 experiment”  
2007-2010 Solène Chevalier-Thery (co-direction with M. Cacciari) « Measurement of the top quark cross-section and determination of the top quark mass using this measurement at the Tevatron D0 experiment »

Member of 15 PhD evaluation committees, comprising 8 examination reports.  
Member of 8 Habilitation committees.  
Member of appointment committees for university and research positions in France (University Pierre et Marie Curie, Ifu/SPP) and Germany (DESY-Univ. Potsdam, DESY-Univ. Hamburg, MPI Munich),  
Evaluation of Marie Curie Fellowship.  
Chair of several search committees for IN2P3-laboratory directors (IPNO Orsay, IPHC Strasbourg, APC Paris, Subatech Nantes, IPNL Lyon, CENBG Bordeaux).

## Major Outreach contributions

2005: “Quantum Diaries” blog hosted by Interactions.com for the World Year of Physics;  
2006-2008: Author and co-director of “Collisions” - 52' documentary broadcast on *CinapsTV* and selected in 2009 for “Vedere la Scienza” and “Pariscience” international science film festivals;  
– cross-media project for the LHC start-up: 30 portraits of physicists and engineers on internet (*Dailymotion official content*) accompanied by an internet game;  
2009: Author and co-director of “Etienne Klein - *libido sciendi*” – 52' documentary, portrait to broadcast on *TeleNantes* and *Universcience web-TV*, projected at Chamonix Science Festival 2010;  
2011: “Prix Nobel 2050” podcasts with Philippe Chomaz and Alain Cirou (Ciel & Espace).  
Publications in *The Economist* (2020); *CERN Courier* (2019, 2021); *La Recherche* (2020).

Participation in Radio and TV programs, public conferences and round tables and press conferences.

## Distinction

2010 Palmes académiques