

Exhibition

"The beginning of everything. About galaxies, quarks and collisions"

Jochen Schieck & Brigitte De Monte
EPS-HEP 2017
7th July 2017



- Natural History Museum Vienna (NHM Vienna)
- 19th October 2016 - 20th August 2017
- Cooperation between the NHM Vienna and the Institute of High Energy Physics (HEPHY) of the Austrian Academy of Sciences
- Exhibition space: about 550 m²
- ~ 530 000 visitors (from 19th October 2016 - 30th June 2017)
- HEPHY celebrated 50th anniversary in 2016

Natural History Museum Vienna

In an international ranking the Natural History Museum Vienna was rated one of the ten most important museums in the world. Its earliest collection are more than 250 years old. Today around 30 million objects are kept there.

- Famous, irreplaceable exhibits – e.g. the 25,000-year-old Venus of Willendorf
- World's largest and oldest meteorite exhibit



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Concept of the Exhibition

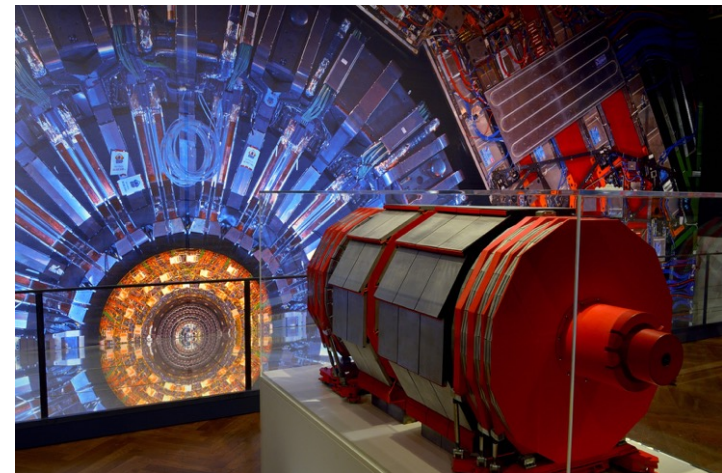
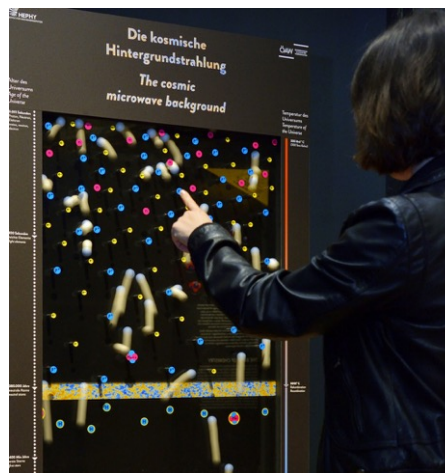
- **Basic idea:** What is particle physics and how can we put it in a general context?
- **What is particle physics:** **key findings of particle physics** and **tools/experiment used in research**
- **General context:** place key findings in timeline of the evolution of the universe – extend scope of the exhibition towards **astronomy**
- Exhibition subdivided in three main parts – reflected in the title:
“The beginning of everything. About **galaxies**, **quarks** and **collisions**”
- we start 13.8 Gy and take the visitor back to the Big Bang
→ blue time line with major time steps printed on a blue “carpet”



Curtain representing the border
between the visible and invisible universe

Story of „The beginning of everything“

The exhibition *“The beginning of everything”* taking visitors on a journey more than 13 billion years back into the past, to the start of the universe, and communicate the most recent scientific knowledge of particle physics and cosmology in a readily comprehensible manner.



Grand Opening



Guest of honour:

- Peter W. Higgs
- George F. Smoot
- Federal Minister Thomas Drozda
- Video greetings by Fabiola Gianotti
- ~ 700 guests





Peter Higgs in front of the art work of Brigitte Kowanz: „Dateline zero for space and time“

www.labiennale2017.at

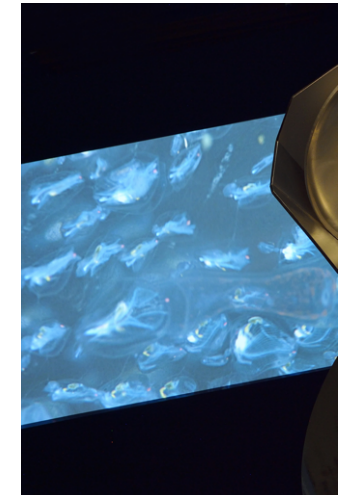
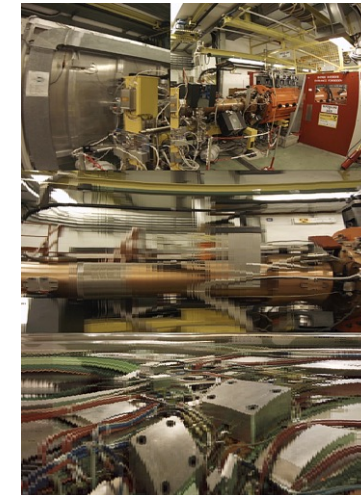
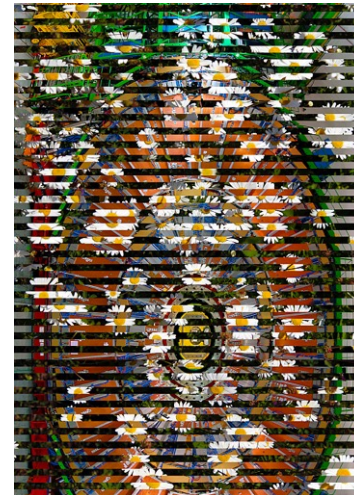
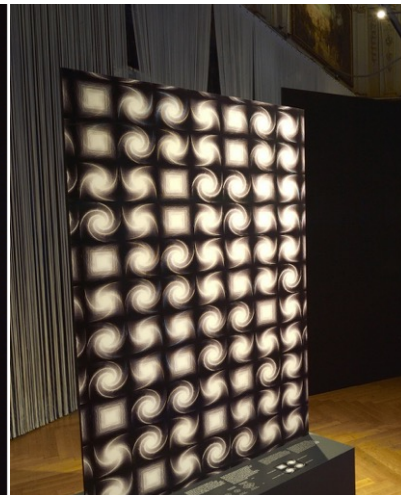
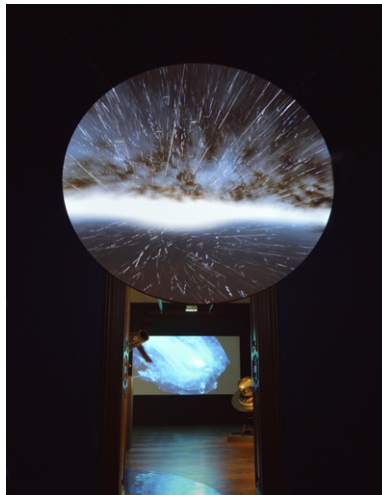
Visual, optical, and acoustic angles and perspectives from artists

Austrian artists:

- Barbara Imhof/Damjan Minovski/Eva Schlegel: „Cosmic Mist“
- Manfred Wakolbinger: „Galaxies“
- Brigitte Kowanz: „Dateline zero for space and time“
- Hofstetter Kurt: „Susys Fingerprint“
- Rudolf Wakolbinger: „Expansion of the Universe“ (from 25th May)

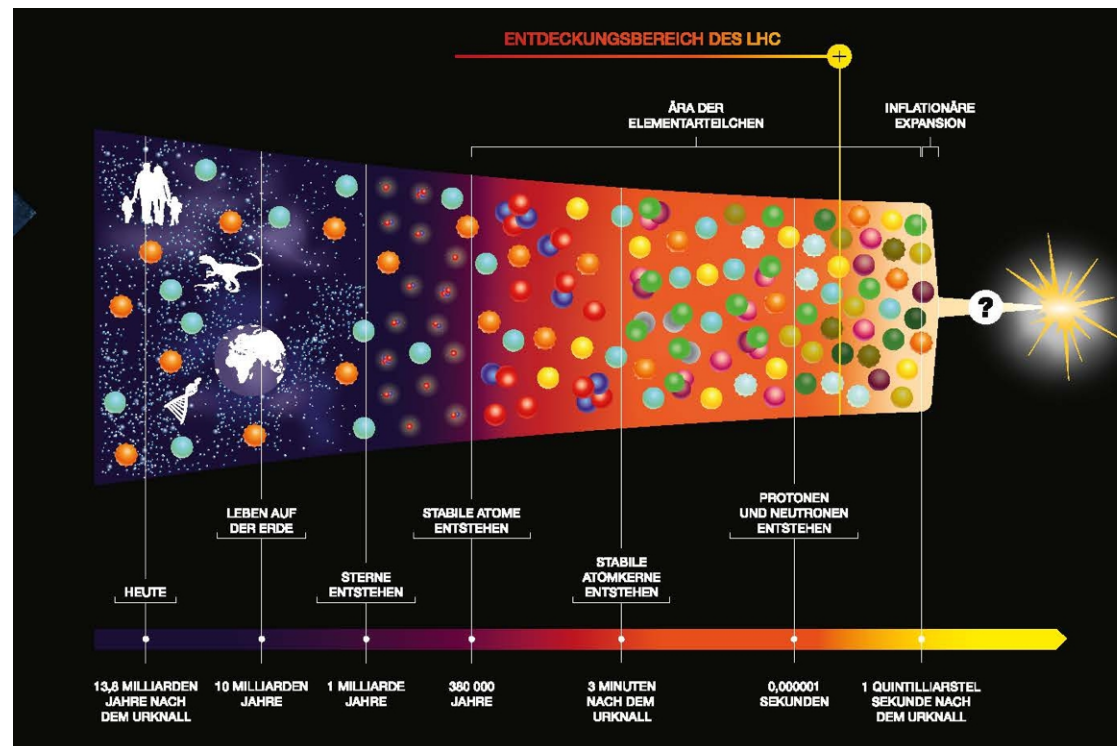
Art@CMS:

- Michael Hoch: „The GodParticleHuntingMaschine“
- Chris Henschke: „Nature of the Apparatus“



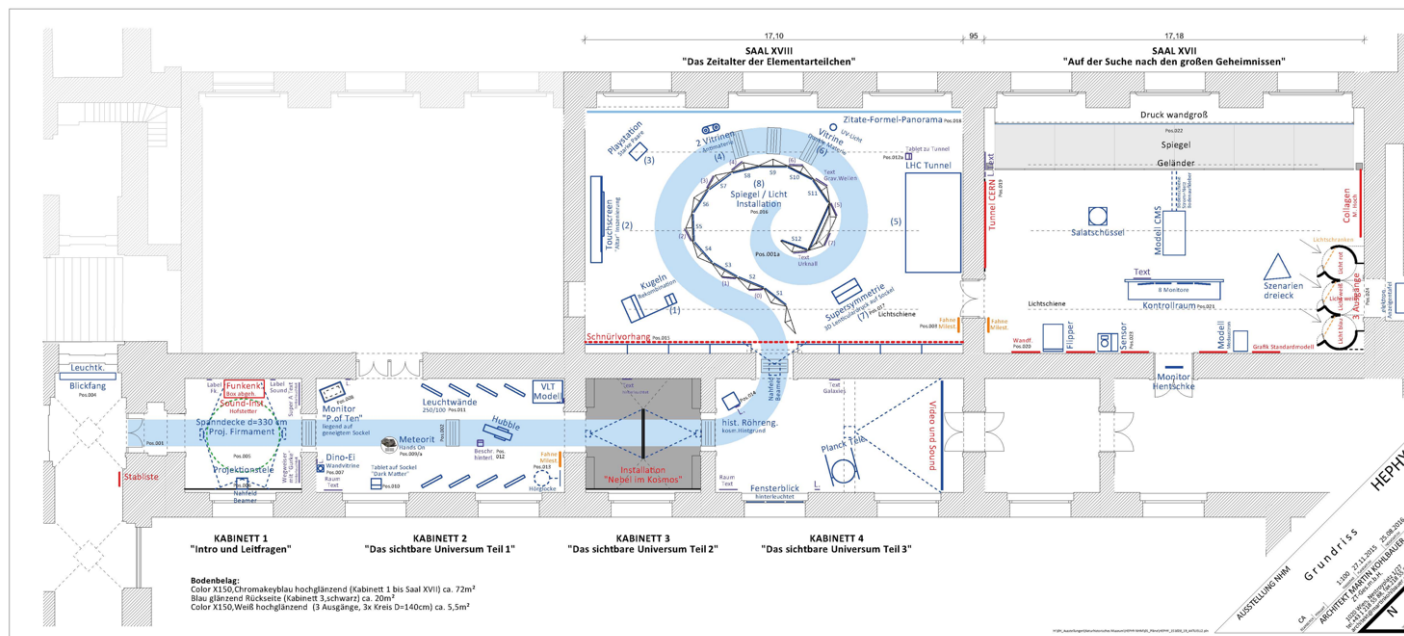
From the idea to concept

- October 2014: first contact with DG of the Natural History Museum Vienna, Christian Köberl
- January 2015: initial concept/story



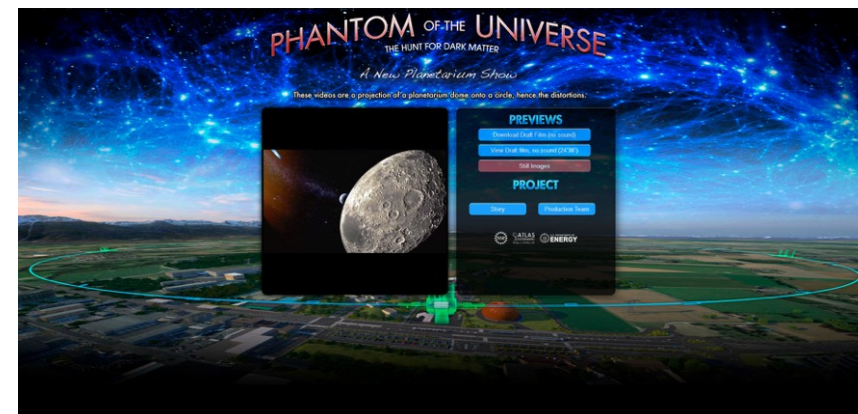
Creative process

- January – April 2015: finding Austrian artists by an art curator
- Mai – August 2015: creation of the scientific and art exhibition concept
 - jointly developed by the exhibition and education team of the NHM Vienna, HEPHY Vienna, Institute of Astronomy / University of Vienna, exhibition architect, and the artists.



Planning and realization

- September 2015 – September 2016:
 - detailed planning / scenography
 - realization of exhibits, interactive features, videos, and artwork
 - text development and graphic design
 - loan contracts for exhibits; licenses
 - Dubbing in German language of the full dome movie „Phantom of the Universe“
 - invitation of the guests of honor
 - preparing of the exhibition brochure
 - creating of a new website
 - etc.



New exhibits (e.g.)

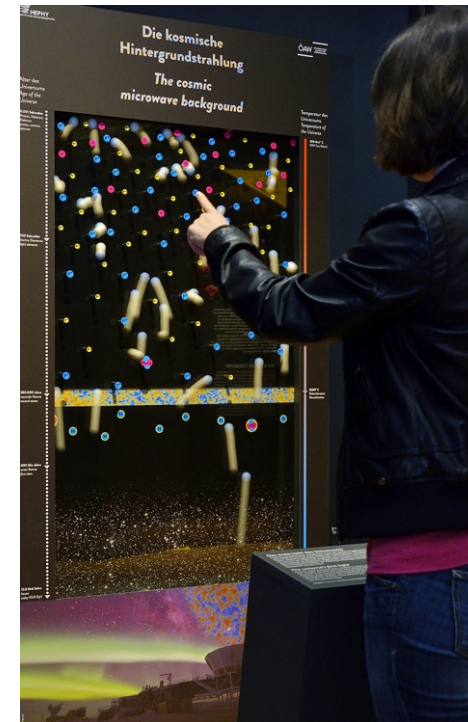
Interactive journey back to the „Big Bang“



Discover the early stage of the Universe and navigate through the era of elementary particles.

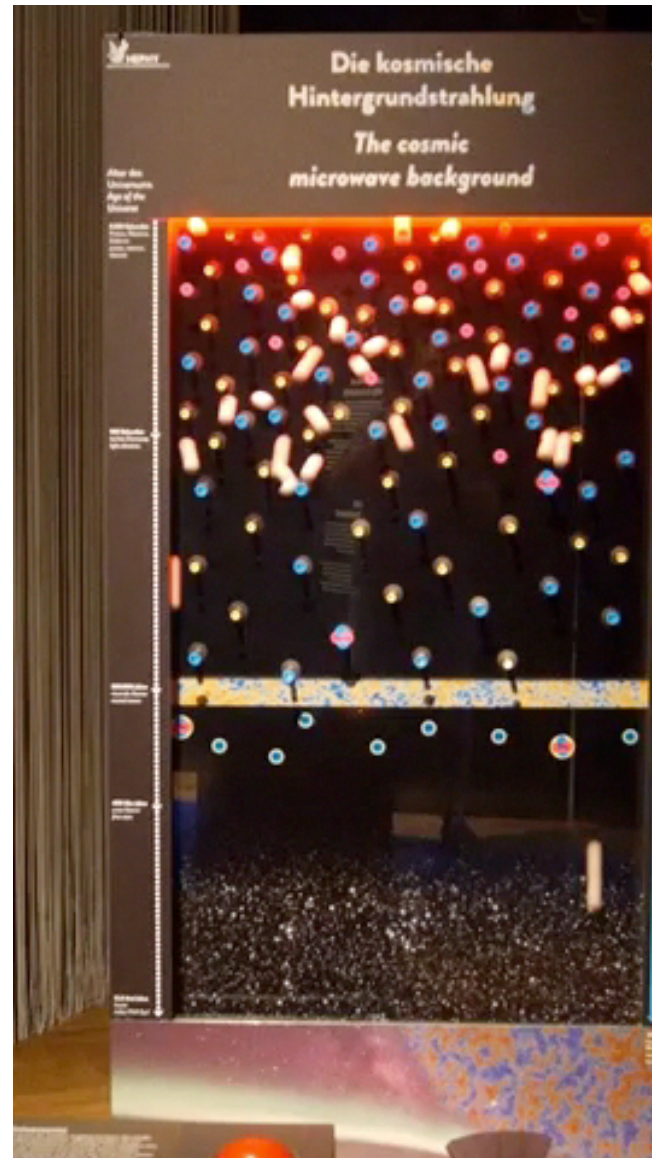
Idea and concept: J. Pradler and H. Eberl (HEPHY)

„Cosmic microwave background machine“



Idea and concept: J. Pradler and H. Eberl (HEPHY)

Development and construction: J. Pirker (HEPHY)



Setup and opening

- Mid September – 14th October 2016: setup
- 18. October 2016: press conference and grand opening



Grand opening

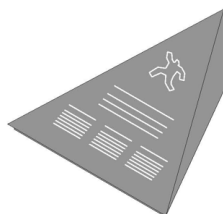
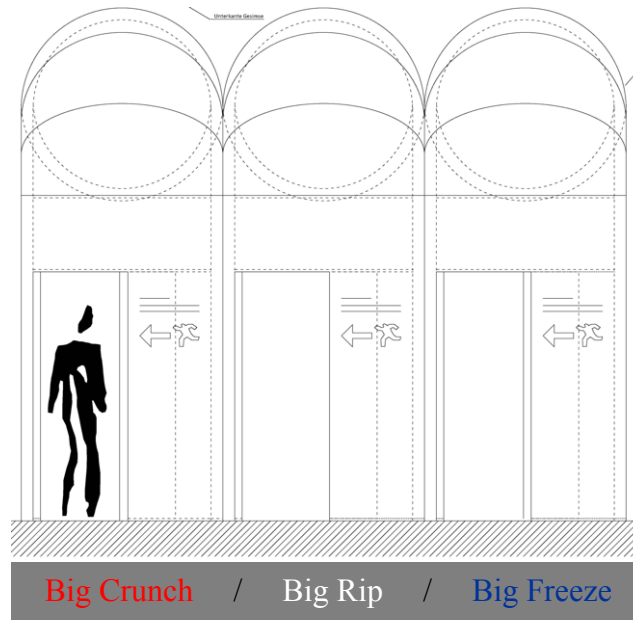


Queue in front of the NHM entrance end of October

The end

Visitors have the chance to create their favorite possible scenario for the end of the Universe. They can choose between:

- Big Crunch
- Big Rip
- Big Freeze



Team

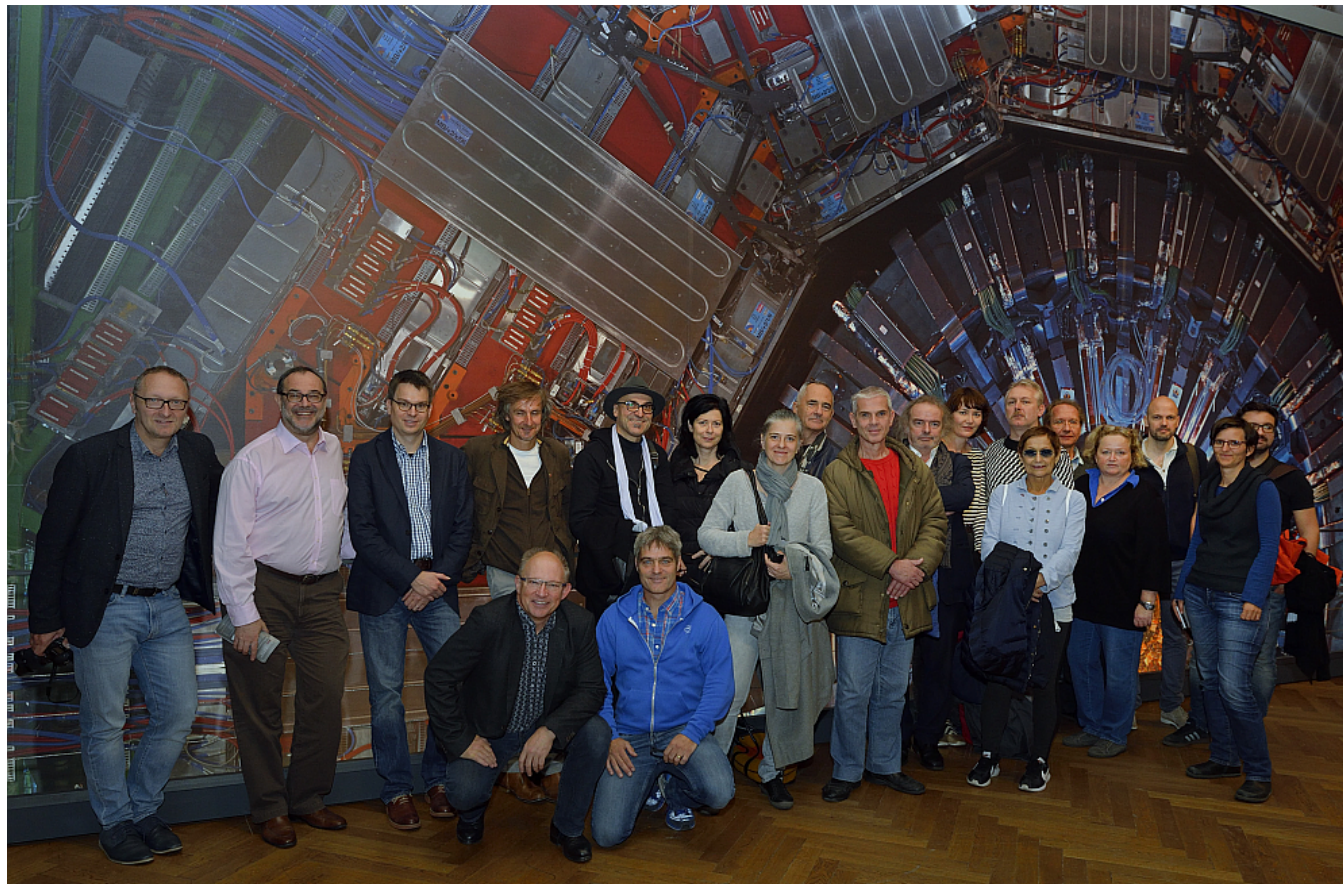
NHM Vienna:

- Head: Christian Köberl
- Concept/scenography/production: Reinhard Golebiowski
- Text/education: Agnes Mair
- Graphic design: Krimhild Repp
- Technique: Walter Hamp

HEPHY Vienna:

- Head: Jochen Schieck
- Project management/editing: Brigitte De Monte
- Curator and scientific concept particle physics:
 - Marko Dragicevic
 - Helmut Eberl
 - Wolfgang Lucha
 - Josef Pradler

- Curator astronomy: Franz Kerschbaum (Institute of Astronomy / University of Vienna)
- Curator art: Sárolda Schredl
- Exhibition architect: Martin Kohlbauer and Carl Auböck
- Coordination: Bertram Schütz



Real size picture of the CMS detector

Exhibition team

Accompanying program

- The full dome movie „Phantom of the Universe“
- Girls Day 2017
 - (with Fabiola Gianotti and the federal minister Reinhold Mitterlehner)
- Guided tours by experts
- Matinees with artists and physicists
- Readings by renowned writers
- Concerts and visuales
- Book presentation „CMS – the Art of Science“ (Michael Hoch)

Accompanying program

- Virtual CMS visit
- International Masterclass
- TEDXCERN
- Workshop „Sciences&Art@School“
- Opening of the sound installation „Expansion of the Universe“
 - (with Cardinal Schönborn and the director of the Vatican Observatory, Dr. Consolmagno)
- Workshops for students and kids
- Public lectures (Austrian and international physicists)
 - (e.g. Marc Kamionkowski/John Hopkins University and Sijbrand de Jong/Pierre Auger Observatory)

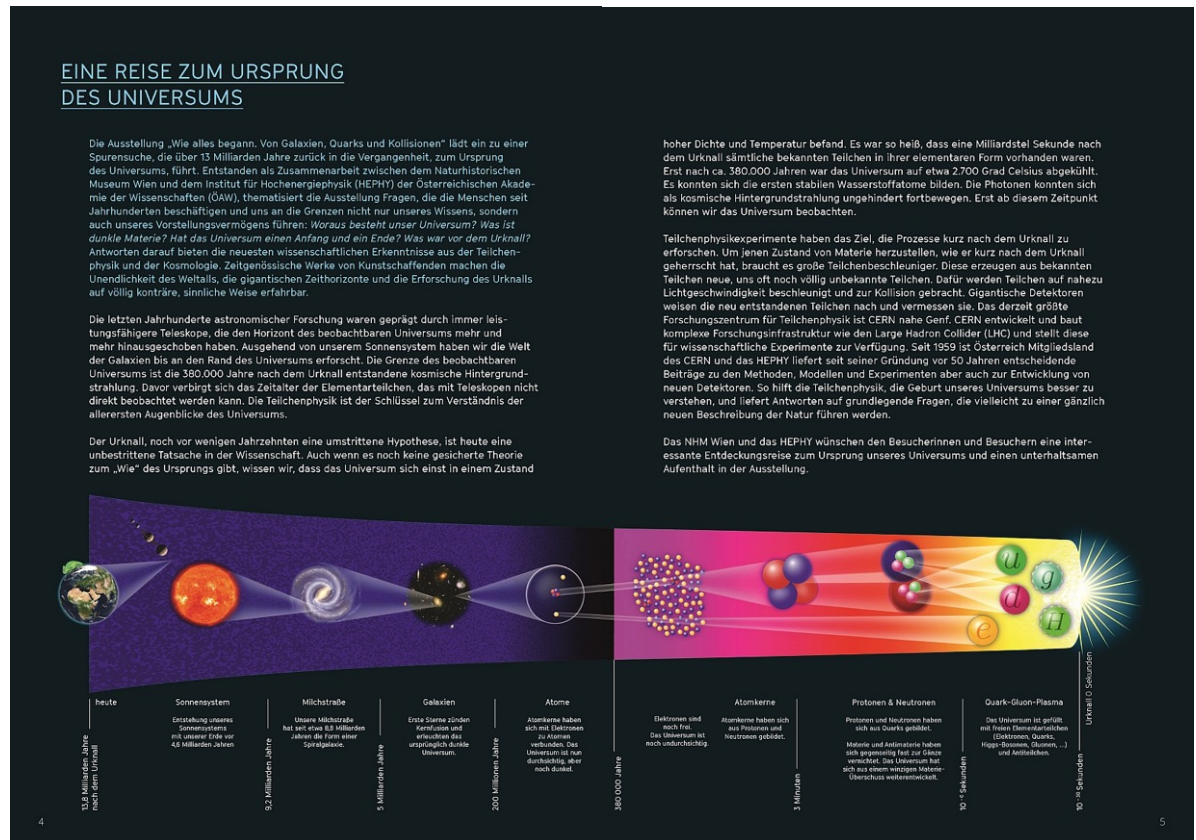


Girls Day 2017



Science&Art@School

Exhibition brochure



36-page brochure; publisher NHM Vienna and HEPHY

