



FONDATION H. DUDLEY WRIGHT

**CERN**  
TRAVELLING EXHIBITION  
PRESENTATION

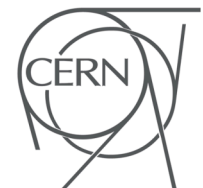
“An exciting educational experience  
about the universe, particles and the  
value of fundamental science”

# Exhibition overview

- The experience seeks to inspire a sense of wonder and curiosity about the origins of the universe and particle physics, and to build an appreciation of the value of pure scientific research.
- Every part of the story is communicated in two languages – the host country’s primary language and English.
- The exhibition is divided into an entrance tunnel and five zones. Each space is distinctly different and uses a range of media including dramatic imagery, sound, lighting, video, effects and interactive media.



FONDATION H. DUDLEY WRIGHT



# Entrance

***“You, the people you love and everything around you are made from particles that originated at the very beginning of the Universe.”***

This extraordinary idea brings together the universal and the personal in a very powerful way. It is reinforced by the mirror at the entrance in which every visitor sees themselves and by a tiny red dot representing a fundamental particle in all of us. The dot recurs throughout the exhibition.



FONDATION H. DUDLEY WRIGHT



# ACCELERATING SCIENCE

A JOURNEY THROUGH TIME & SPACE TO THE BEGINNING OF THE UNIVERSE

sponsored by



CO-ORGANIZING EXHIBITION BY

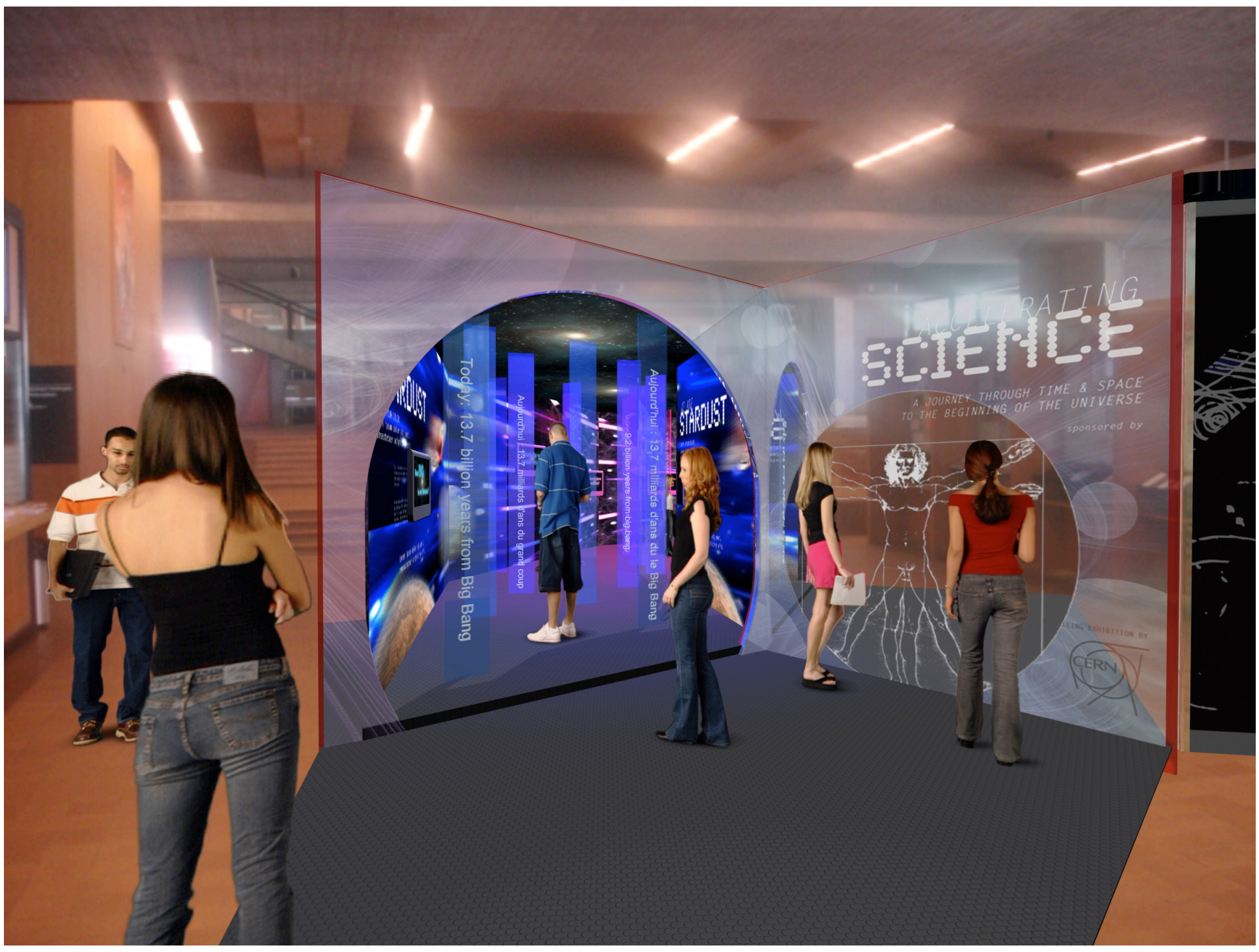


Today: 13.7 billion years from Big Bang

Aujourd'hui : 13,7 milliards l'ans du grand coup

Aujourd'hui : 13,7 milliards d'ans du le Big Bang

92 milliards d'ans from big bang



# Time tunnel

- The entrance tunnel, takes the visitor on a trip back from today to the moment just after the Big Bang.
- The visitor enters a darkened tunnel where a combination of dramatic images on semi-translucent panels and information on monitors trace the history of the universe from the present day back to the moment just after the Big Bang.



FONDATION H. DUDLEY WRIGHT





13.7 milliards d'ans du

200 million years from the big bang

0.000 001 seconds from the big bang

0.000 001 secondes du le Big Bang

9.2 billion years from big bang

WE ARE STARDUST

LOREM IPSUM DOLOR  
Lorem ipsum dolor sit amet  
consectetuer adipiscing elit

How BIG is our U

Lorem ipsum do  
consectetuer a

Where do we come from?

# The Big Bang theatre

- The climax of the cosmology phase of the journey is an experiential theatre. Around the entire wall surface of this zone is a graphic treatment which traces the story of the universe from Big Bang to the present, giving additional details such as the origins of particles.
- In the centre of the zone, visitors lean over a safety rail to peer into the void beneath as if suspended over space. A dynamic, timed audio visual show, projected into this space, tells the story – from the moment of Big Bang to the present day.



FONDATION H. DUDLEY WRIGHT





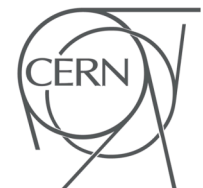


# Transition Pod 1 – Space, energy and pressure

- Visitors walk through this transition pod which elegantly illustrates the fact that as space expands energy density decreases – the dynamic behind our expanding universe.



FONDATION H. DUDLEY WRIGHT





# Particles matter

- This zone explains the nature of particles, introduces the particle ‘families’ found in the standard model, and inspires visitors to ask big questions about particles.
- Around the walls the graphic treatment explores two big questions:  
How big are particles?  
What are particles?
- The interactive elements to the pod include a facebook-type treatment explaining particle relationships, a video showing the astonishingly small scale of fundamental particles and an interactive game showing the relationship between energy and mass by enabling the visitor to ‘create’ each of the fundamental particles in the standard model.





# PARTICLES MATTER

WHAT IS MATTER?  
Lorem ipsum dolor sit amet,  
consectetur adipiscing elit.



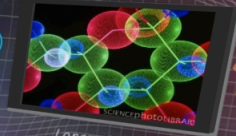
>Lorem  
consect

INTERACTIV

olor sit amet,  
ipiscing elit.

# PARTICLES MATTER

WHAT ARE PARTICLES?  
Lorem ipsum dolor sit amet,  
consectetur adipiscing elit.



>Lorem ipsum dolor sit  
consectetur adipiscing

SCIENCE

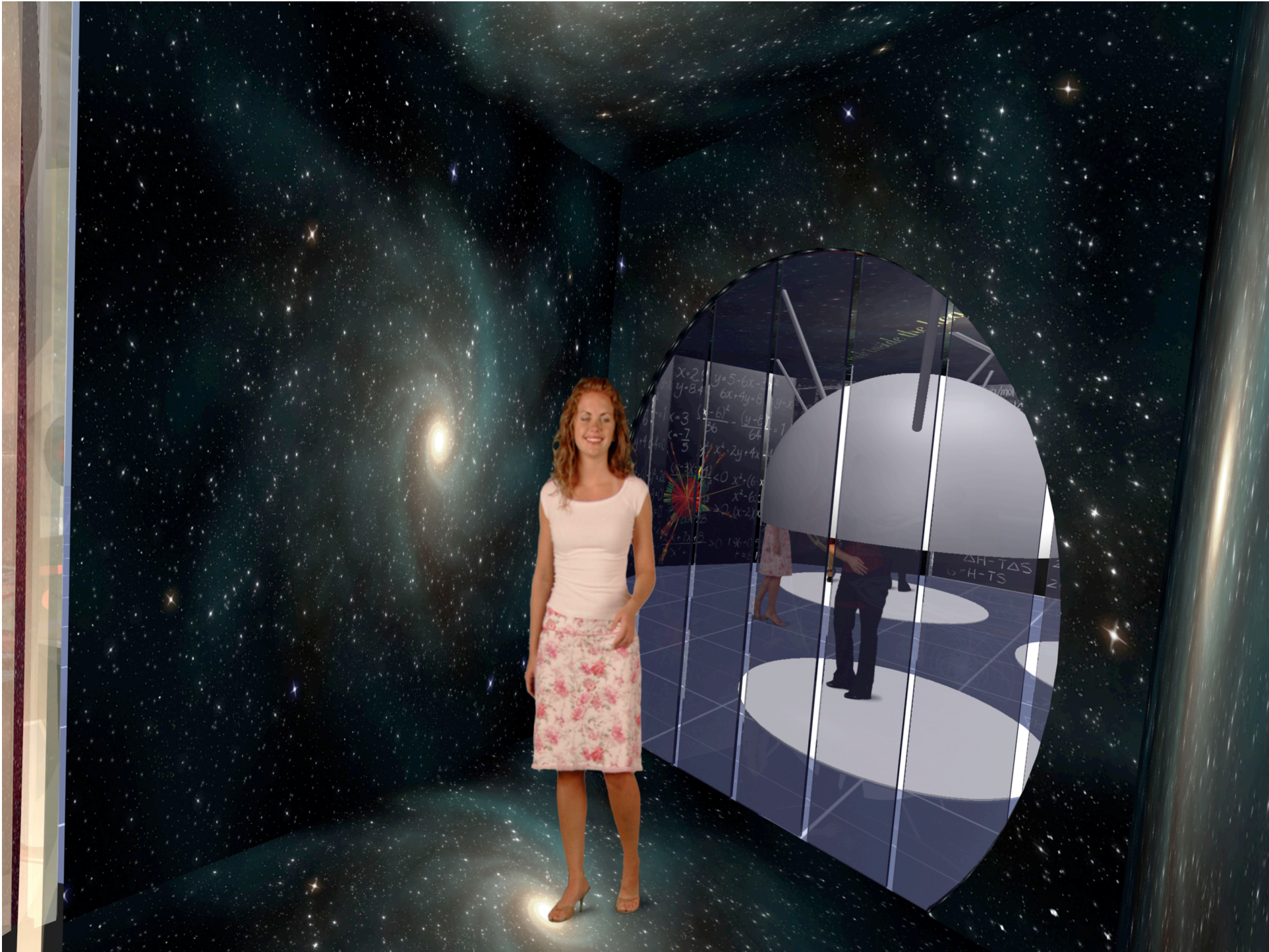
## Transition Pod 2 – Infinity tunnel

- Visitors walk through this darkened tunnel which will give the impression that they are travelling through space.



FONDATION H. DUDLEY WRIGHT





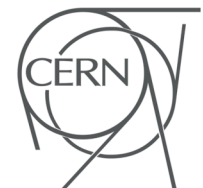
# Mysteries of the universe

***“All visible matter accounts for just 4% of the universe. So where’s the rest of it?”***

- A series of big questions on the walls are explored in greater depth via audio visual treatments inside three giant domes. The visitor steps inside a dome to hear scientists talk about the mysteries and possible answers - where particles get their mass from (the Higgs field), dark matter, anti-matter and quark-gluon plasma.



FONDATION H. DUDLEY WRIGHT





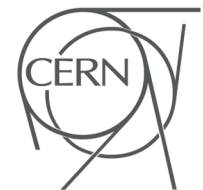


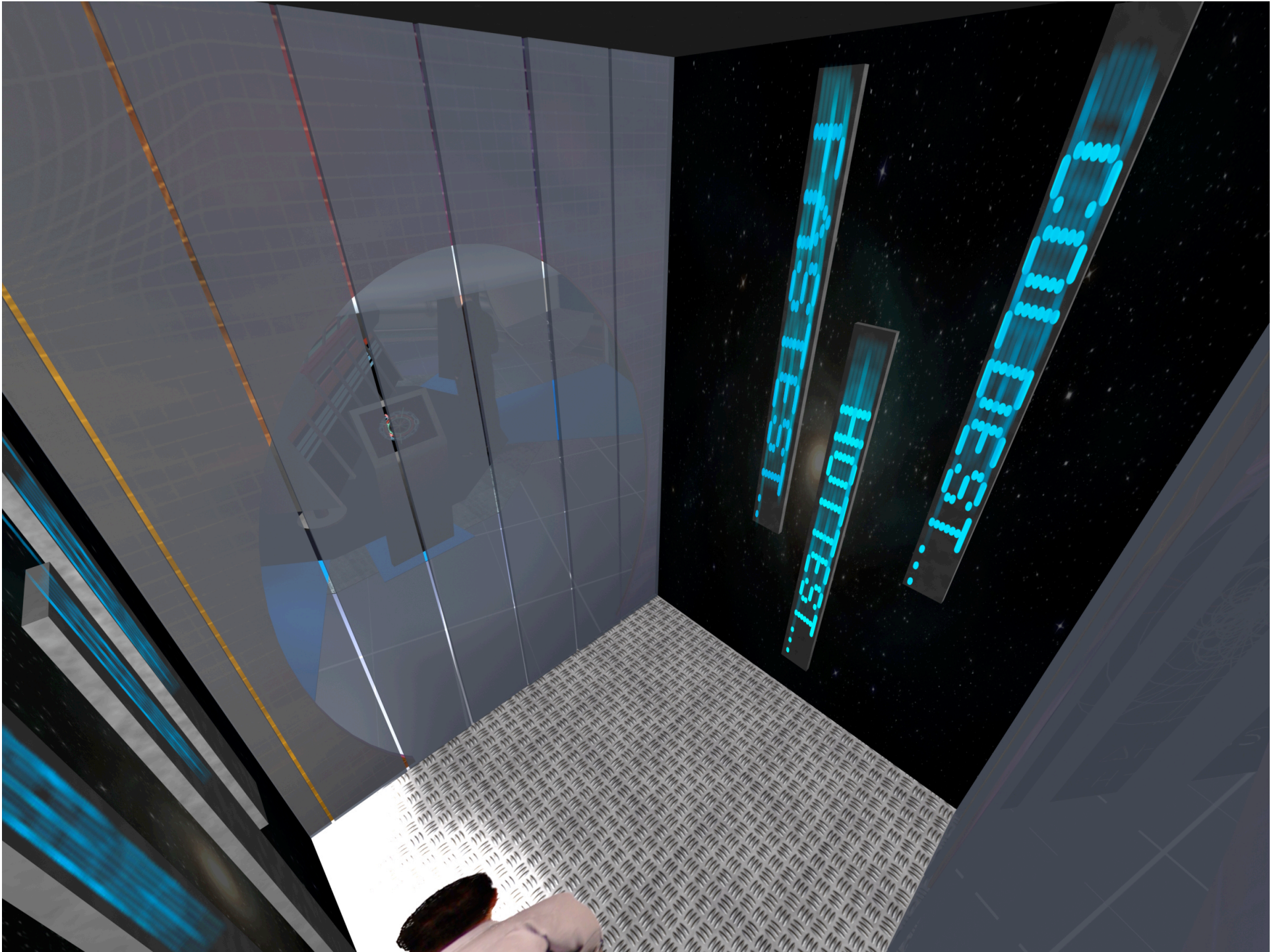
## Transition Pod 3 – LHC elevator shaft

- Short LED phrases stream up the walls at high speed, suggesting a moving elevator shaft underground. They communicate some of the unique properties of the Large Hadron Collider – ‘fastest on earth...emptiest space in the solar system...colder than outer space...’



FONDATION H. DUDLEY WRIGHT





# Exploring Matter

- This zone is dedicated to an explanation of the Large Hadron Collider (LHC). At the centre of the space is a three-dimensional model featuring a topographical map of the countryside above the LHC with a transparent side, enabling the visitor to look at what happens below ground.
- There is a graphic image of the tunnel on the wall, out of which a transparent tube fires LEDs into a three-dimensional model of a detector. The visitor interacts with the model to see how particles can pass through layers of the detector during collisions. Screen animations capture the moment of actual ‘events’.
- A video screen shows highlights of the LHC engineering story and an interactive screen offers the opportunity to explore fascinating facts about the LHC – its amazing scale, speed and accuracy and the extraordinary amount of data that must be analysed.





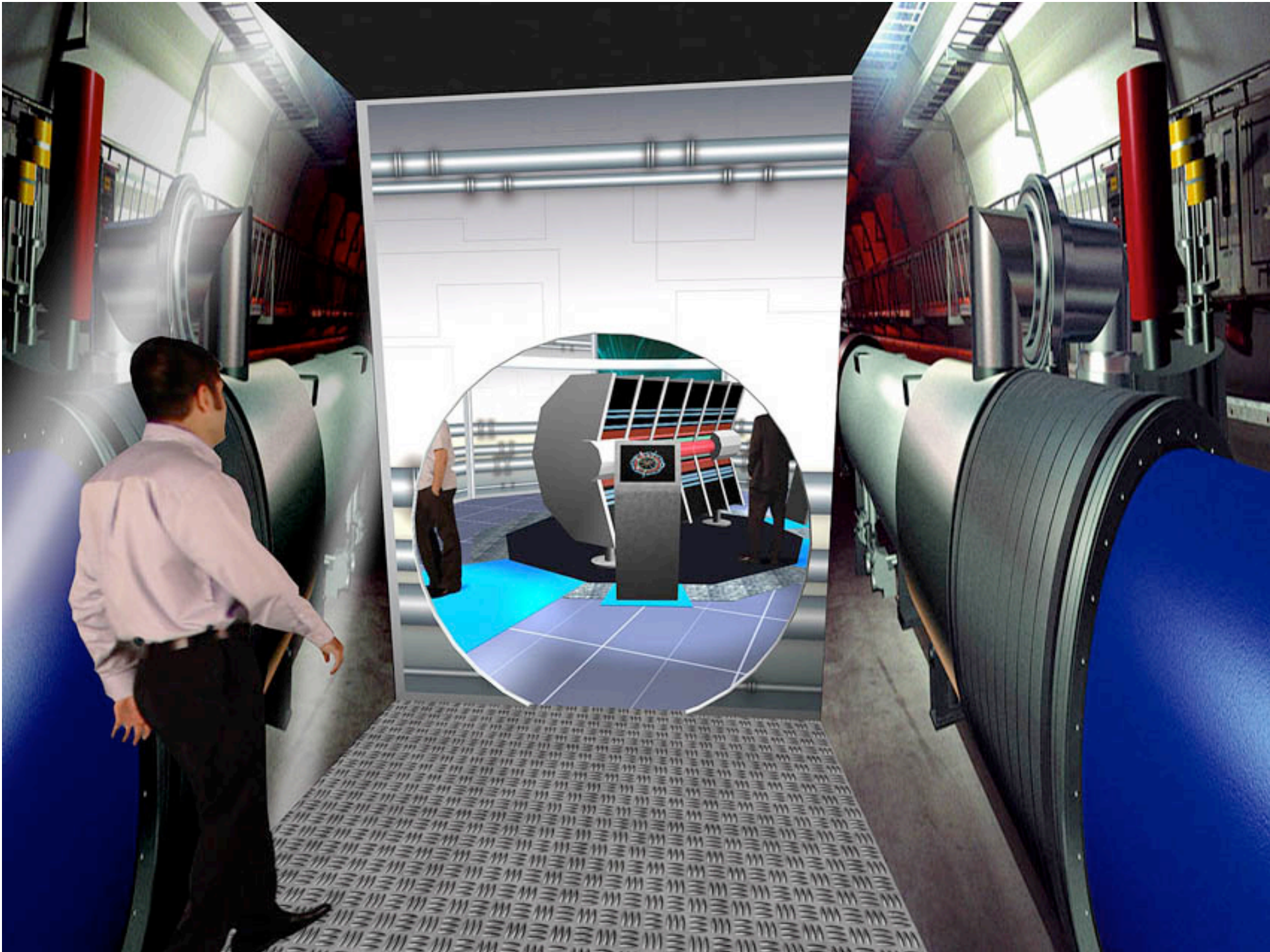
## Transition Pod 4 - LHC

- The visitor walks through a transition tunnel that features a cut-through model of the LHC, and into the final zone.



FONDATION H. DUDLEY WRIGHT





# A world of fundamental research

- The final zone seeks to inspire visitors with the value of fundamental research. Copy around the walls explains the relationship between the visitor and fundamental scientific research, the collaborative international role of CERN and the value of scientific curiosity.
- In the centre of the space are two curved light boxes. They form dramatic image grids, illustrating the amazing range of technologies that enrich our lives in every field – from television to radar to GPS to medical applications to the internet. The visitor is asked to imagine what the world would be like if great scientists hadn't asked fundamental questions. By pressing a button next to the name of a scientist or group of scientists at a moment in history the visitor makes all of the applications that resulted from that question disappear.



FONDATION H. DUDLEY WRIGHT



