

Welcome to CERN



European Organization for Particle Physics
Organisation européenne pour la physique des particules

CERN was founded in 1954 by 12 European States

“Science for Peace”

Today there are 23 Member States

~ 2.400 staff
~ 1.600 other paid personnel
~ 11.000 users
Budget (2022) ~1.400 MCHF

Member States: Austria, Belgium, Bulgaria, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Israel, Italy, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Spain, Sweden, Switzerland, and the United Kingdom

Associate Member States: India, Pakistan, Turkey, Ukraine, Croatia, Latvia, Lithuania, Brazil; **States in Accession to Membership:** Cyprus, Estonia, Slovenia

Interested States (not exhaustive): Australia, Canada, Croatia, Ireland, Lithuania, Republic of Korea, Russian Federation

Observers to Council: Japan, Russian Federation, United States of America; EUComm, JINR, and UNESCO

The Mission of CERN



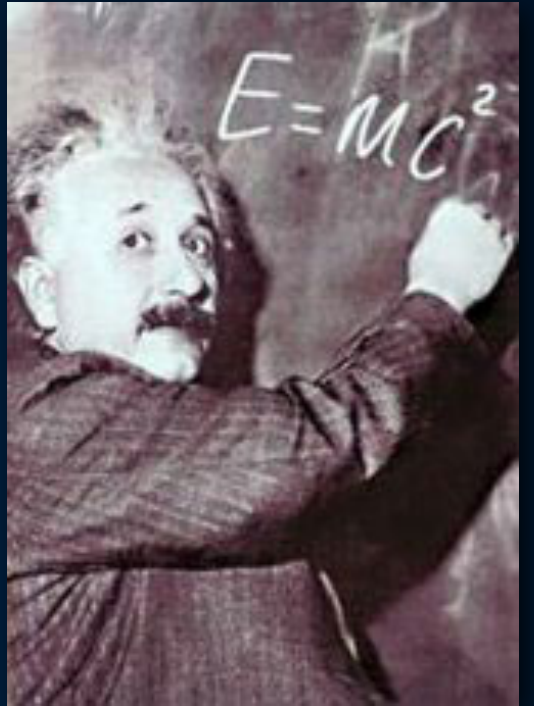
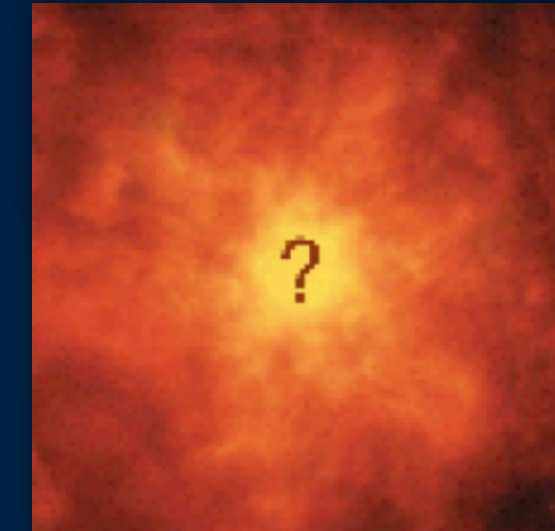


The Mission of CERN

- ❑ **Push back** the frontiers of knowledge

E.g. the secrets of the Big Bang ...

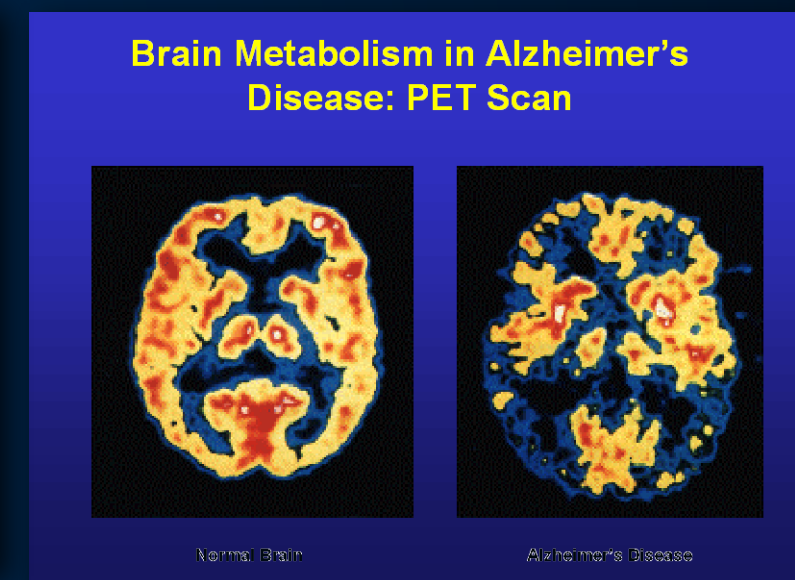
... what was the matter like within the first moments of the Universe's existence?



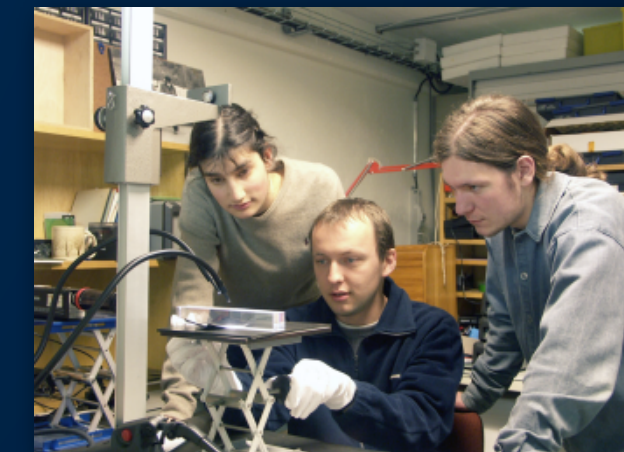
- ❑ **Develop** new technologies for accelerators and detectors

Information technology - the Web and the GRID

Medicine - diagnosis and therapy



- ❑ **Train** scientists and engineers of tomorrow



- ❑ **Unite** people from different countries and cultures



Council Secretariat
Legal Service

**Director General
Fabiola Gianotti**

Internal Audit
Health, Safety, and Environment Unit

Finance and Human
Resources
Raphaël Bello

Research and Computing
Joachim Mnich

Accelerators and
Technology
Mike Lamont

International Relations
Charlotte Warakaulle

**Finance and
Administrative Procedures**
Florian Sonnemann

Experimental Physics
Manfred Krammer

Beams
Rhodri Jones

Relations
Charlotte Warakaulle

Human Resources
James Purvis

Theoretical Physics
Gian Giudice

Technology
Jose Miguel Jimenez

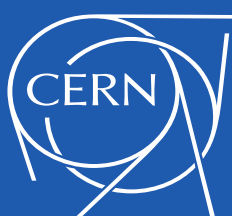
**Education, Communication,
and Outreach**
N.N.

**Industry, Procurement, and
Technology Transfer**
Christopher Hartley

Information Technologies
Enrica Porcari

Engineering
Katy Foraz

Site and Civil Engineering
Mar Capeans



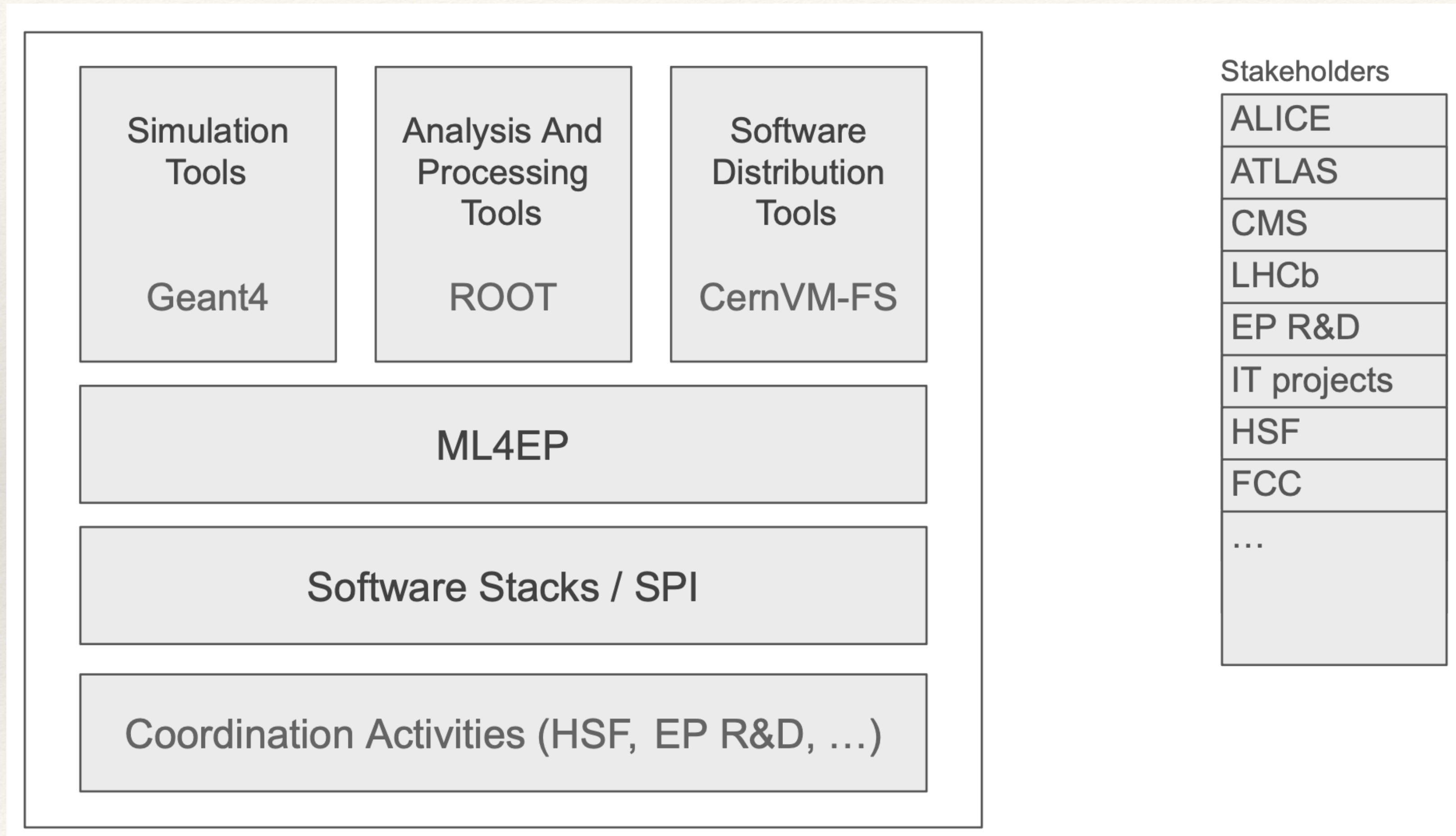
SFT Group

- ❖ The SFT group is a software support group in the Experimental Physics Department (same level as the detector and electronics support groups)
- ❖ Our Mandate:
 - ❖ Develop and maintain **common scientific software** for physics experiments in close collaboration with the other EP experimental groups, the IT department, and collaborating HEP institutes
 - ❖ Provide a **common infrastructure and expertise** to the stakeholders
 - ❖ Provide qualified **people to fulfill key roles** in the experiments

Current Group Activities

- ❖ Main activities
 - ❖ Providing deliverables critical for the community
 - ❖ **Geant4, ROOT, LCG stacks, CernVM/FS, ML/AI**
- ❖ R&D activities (connected or not to a given main activity)
 - ❖ Techniques to speed-up simulation (AdePT, ML, ...)
 - ❖ Techniques to improve analysis efficiency (RDF, RNtuple, ...)
 - ❖ Stacks for future experiments (Key4HEP)
 - ❖ Evaluation of new programming languages (Julia, ...)
- ❖ Support of FCC feasibility study
 - ❖ Host CERN software core group

SFT Projects



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- ❖ I wish you a very productive meeting at CERN this week
 - ❖ Looking forward to identify new collaboration opportunities of our group with the ePIC experiment
 - ❖ Enjoy CERN and the Geneva region!