

# CERN's Enlargement Policy

*Unity through Global Science*

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March 2017

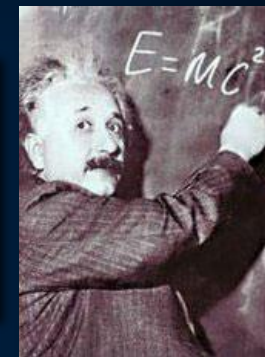




# The Mission of CERN

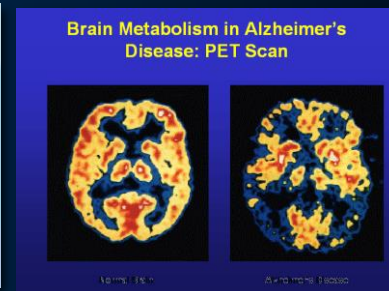
## ❑ Push back the frontiers of knowledge

E.g. the secrets of the Big Bang ...what was the matter like within the first moments of the Universe's existence?

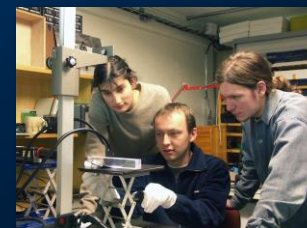


## ❑ Develop new technologies for accelerators and detectors

Information technology - the Web and the GRID  
Medicine - diagnosis and therapy



## ❑ Train scientists and engineers of tomorrow



## ❑ Unite people from different countries and cultures



# CERN: founded in 1954: 12 European States

“Science for Peace”

## Today: 22 Member States

~ 2500 staff

~ 1800 other paid personnel

~ 13000 scientific users

Budget (2017) ~1100 MCHF

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

**Associate Member States:** India, Pakistan, Turkey, Ukraine

**Associate Members in the Pre-Stage to Membership:** Cyprus, Serbia

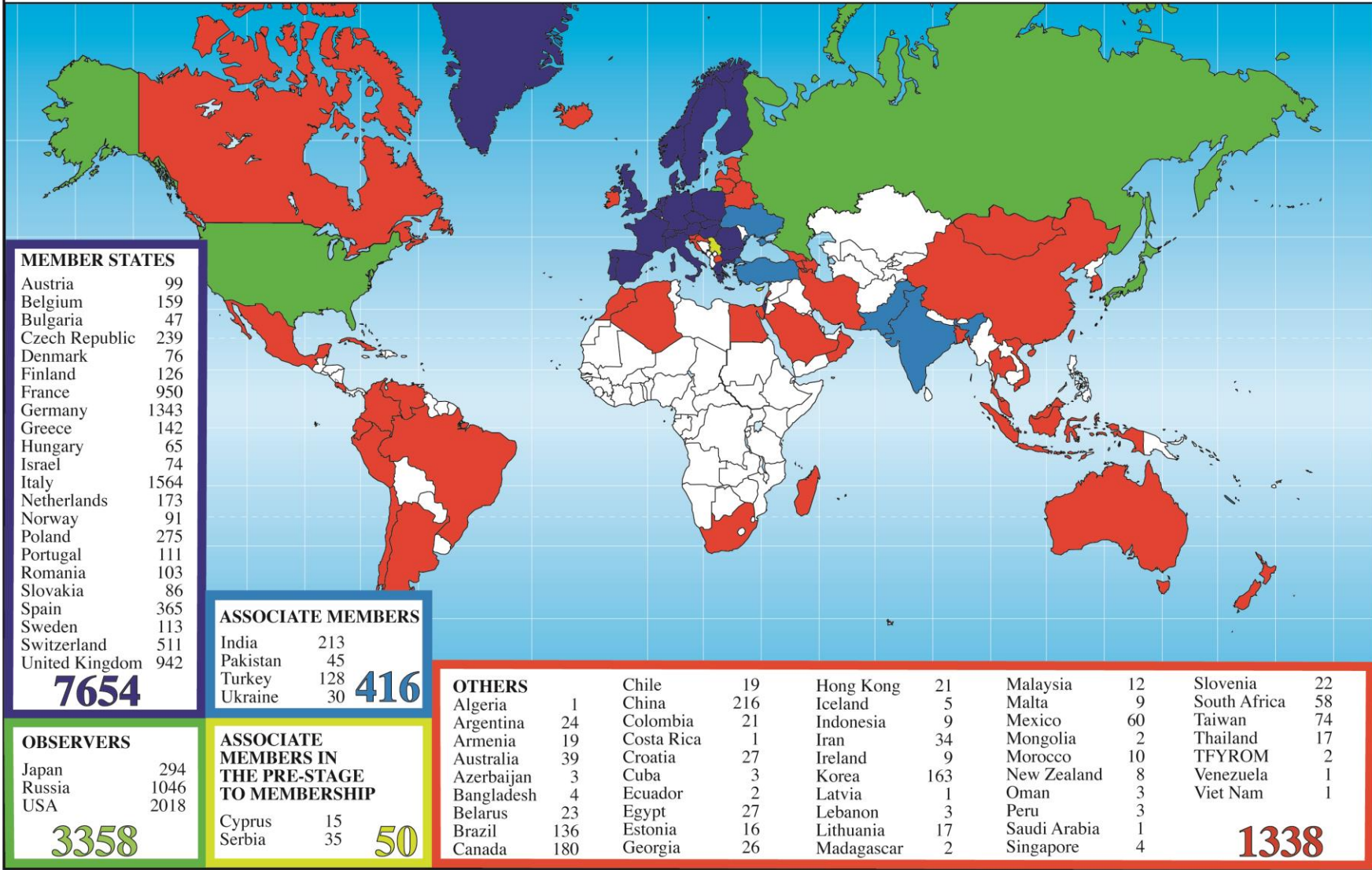
**Applications for Membership or Associate Membership:**

Brazil, Croatia, Lithuania, Russia, Slovenia

**Observers to Council:** Japan, Russia, United States of America; European Union, JINR and UNESCO

# Science is getting more and more global

## Distribution of All CERN Users by Location of Institute on 12 January 2017





# Participation of NMS

- CERN continues to attract an increasing/record number of Users (visiting scientists) – 13 000 (January 2017)
  - Participation of NMS Users on LHC is about 40% and on non-LHC about 20%.
  - NMS Users dominated by North America; increase mostly driven by Asia-Pacific and Latin America.
- Number of States involved/interested in accelerator R&D is growing beyond restricted circle of NMS that contributed to the LHC accelerator construction (which were mostly Observer States with the addition of Canada).

# International Cooperation

- Particle physics is becoming more international, with major projects becoming increasingly global.
  - LHC has unprecedented Member State investments and non-Member States have made significant contributions.
- Research infrastructures and labs must evolve in order to address these challenges.
  - New modes of participation in CERN's activities needed.

# International Cooperation II

- Basis for initial formal participation in Organization's scientific activities:
  - International Co-operation Agreements
  - Together with associated Protocols and Memoranda of Understanding
- Thereafter, States that already participate in CERN's scientific programme could establish more formal institutional links with the Organization.
  - Member State or Associate Member irrespective of the geographical location of the State.



# Membership Principles

- Introduction of new Associate Membership (regular & in the pre-stage to Membership) status to allow non-Member States to establish or intensify their institutional links with the Organization.
- Associate Membership is obligatory pre-stage for Membership and Membership may only be granted to States once they have completed at least two years of Associate Membership (*‘Associate Membership in the pre-stage to Membership’*).

# Membership Criteria

- Existence in applicant State of solid basis in particle physics.
- Sufficiently-developed industry in applicant State.
- Willingness of national authorities of applicant State to support basic research.
- Mutual benefit which CERN & applicant State can derive from Membership.
- Applicant State's long-term commitment to particle physics research.

# Obligations of Associate Member

- Annual financial contribution to CERN budget.
- Associate Membership (regular)
  - Shall be at least 10% of the State's theoretical Member State contribution. The annual contribution shall amount to not less than 1 MCHF.
- Associate Membership (in pre-stage to Membership)
  - Initial annual contribution shall be at least 25% of the State's theoretical Member State contribution. The annual contribution shall amount to not less than 1 MCHF and shall increase from initial value at a rate agreed by the Council.

# Rights of Associate Members I

- Participation in CERN's programmes
  - Scientific, Training & Education
- Attendance at Council & its Committees
  - Open (& Restricted Council), Finance Committee, Scientific Policy Committee.
  - States in the pre-stage to Membership also entitled to attend European Strategy Sessions.

# Rights of Associate Members II

- Member of personnel posts
  - Limited Duration contracts and fellows.
  - In exceptional and well-justified cases, staff members who are nationals of Associate Member States that are in the pre-stage to Membership shall be eligible to apply for indefinite contracts.
  - The number of such appointments shall be limited, with a ceiling that takes account of the State's percentage contribution to the CERN budget.
- Firms in Associate Member States shall be entitled to bid for CERN contracts.
  - Industrial return & total value of contracts shall be limited, with ceiling that takes account of the State's percentage contribution to CERN budget.

# Overview of Developments since Adoption of Policy in 2010

## 2 new Member States

Israel, previously Observer Status, expression of interest in 2008; full membership since January 2014

Romania, candidate for Accession since 2010; full membership since July 2016

## 2 States in pre-stage of Membership

Serbia, application in 2009; Membership in the pre-stage since 2012

Cyprus, application in 2009; Membership in the pre-stage since 2016

## 4 Associate Member States

Turkey, application in 2012; Associate Member in 2015

Pakistan, application in 2013; Associate Member in 2015

Ukraine, application in 2011; Associate Member in 2016

India, application in 2015; Associate Member in 2017

# Overview of Developments since Adoption of Policy in 2010

## 5 applications at different stages of progress

|                           |  |
|---------------------------|--|
| <b>Brazil</b>             | authorization to discuss Association Agreement 2013                        |
| <b>Croatia</b>            | application file received May 2014; setting-up Task Force                  |
| <b>Lithuania</b>          | application March 2016, Council authorized DG to sign Agreement Sept. 2016 |
| <b>Russian Federation</b> | authorization to discuss Association Agreement 2013                        |
| <b>Slovenia</b>           | signed Association Agreement in December 2016                              |

## 1 expression of interest **Ireland**

## 1 application 'postponed' **Azerbaijan**

**14 International Co-operation Agreements** **Australia, Estonia, Colombia, Costa Rica, Tunisia, Albania, Mongolia, Bangladesh, US, Lebanon, Palestine, Qatar, Latvia, Sri Lanka**

**Observer Status with JINR (Dubna) on a reciprocal basis**

## Concluding Remarks & Future Directions



Particle physics is becoming increasingly global and the opportunities available require coordination and collaboration, as well as competition > enlargement is an important component in this environment

The key objective is to ensure that geographical enlargement supports and reinforces the long-term scientific aspirations of the Organization by consolidating the institutional base. **Enlargement is not an aim in and of itself.**

**The focus should therefore be on reinforcing relations with countries that can bring scientific and technological expertise to the work of the Organization and can, in turn, benefit from a closer engagement, while helping to build capacity in countries with developing communities.**





SUISSE  
FRANCE

LHCb

ATLAS

CERN Meyrin

CERN Prévessin

SPS 7 km

CMS

ALICE

# Thank You!

LHC 27 km



***Accelerating Science and Innovation***