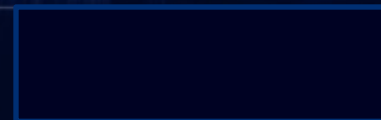


Parallel Worlds: Connecting the Micro and Macro

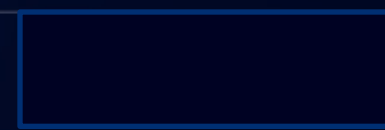
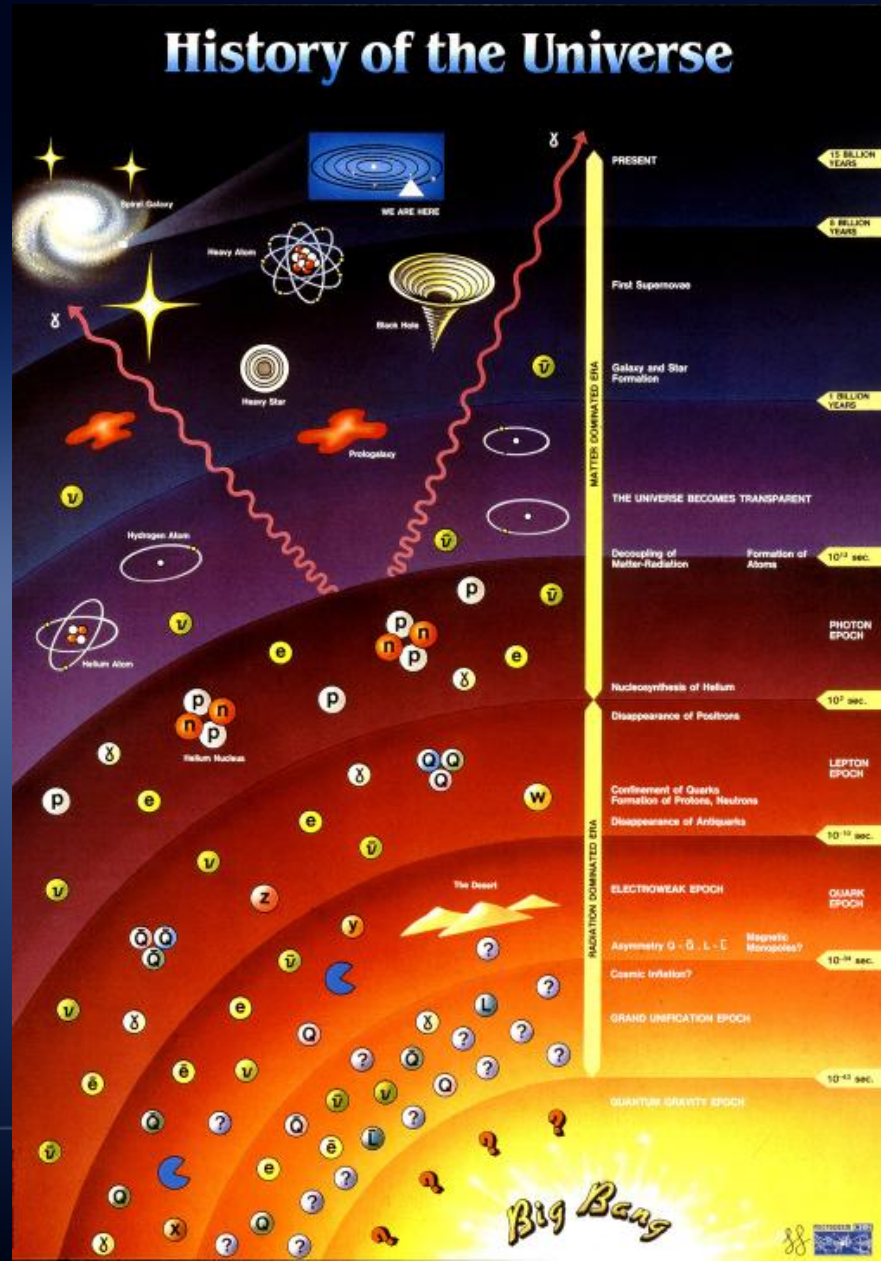
About CERN, Physics, and Innovation

CBI Course, September 14, 2015

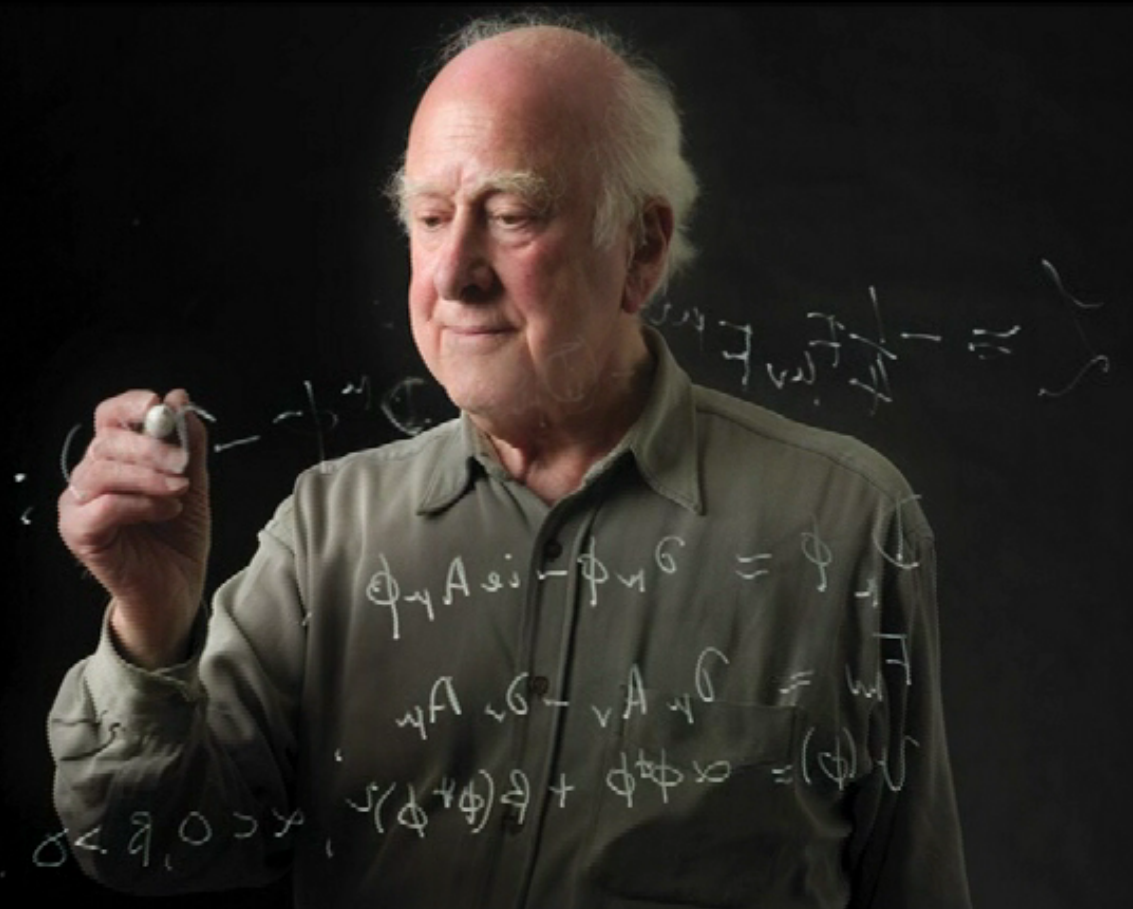
Markus Nordberg (CERN)



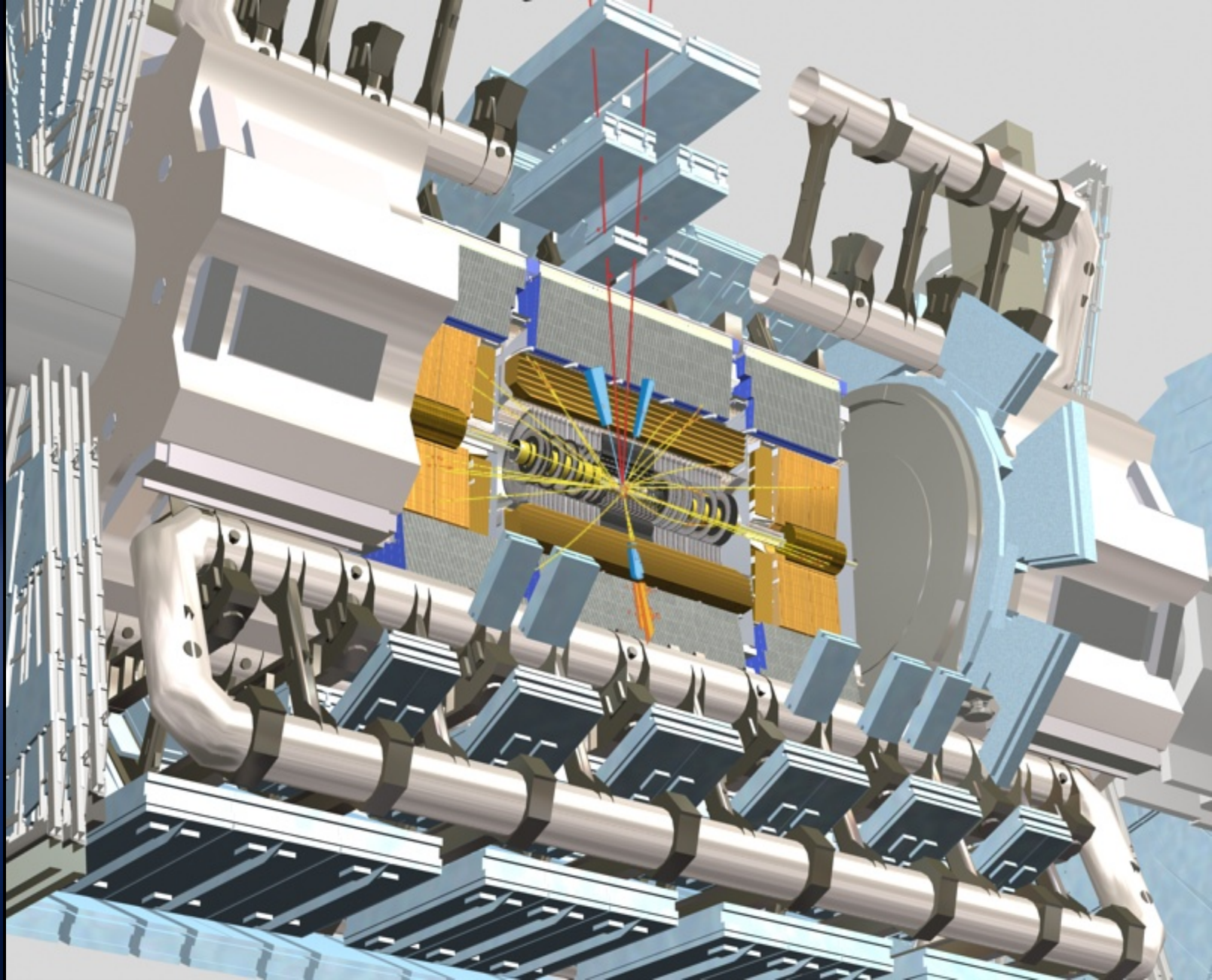
How does CERN Connect?

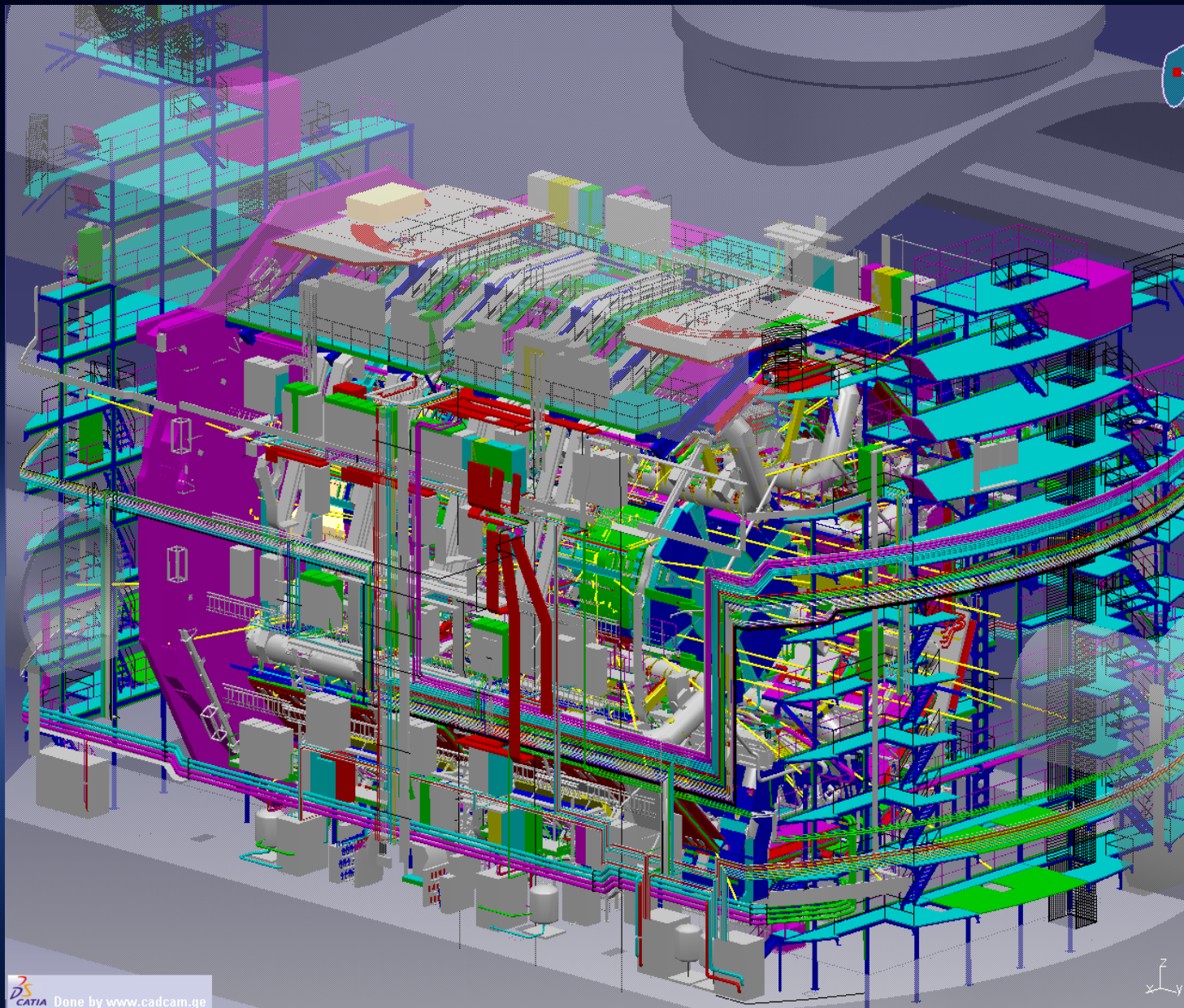


Where do we start?

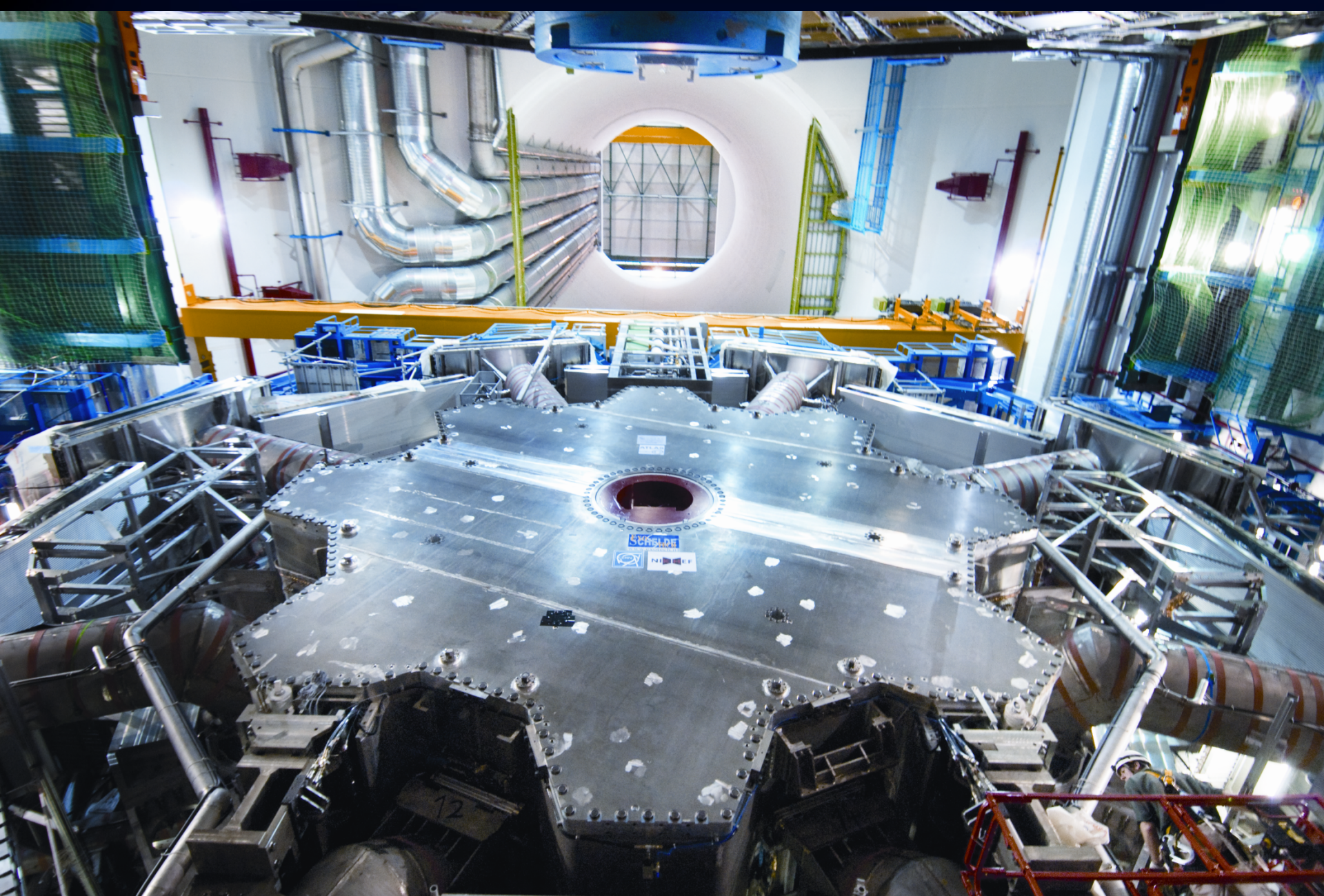




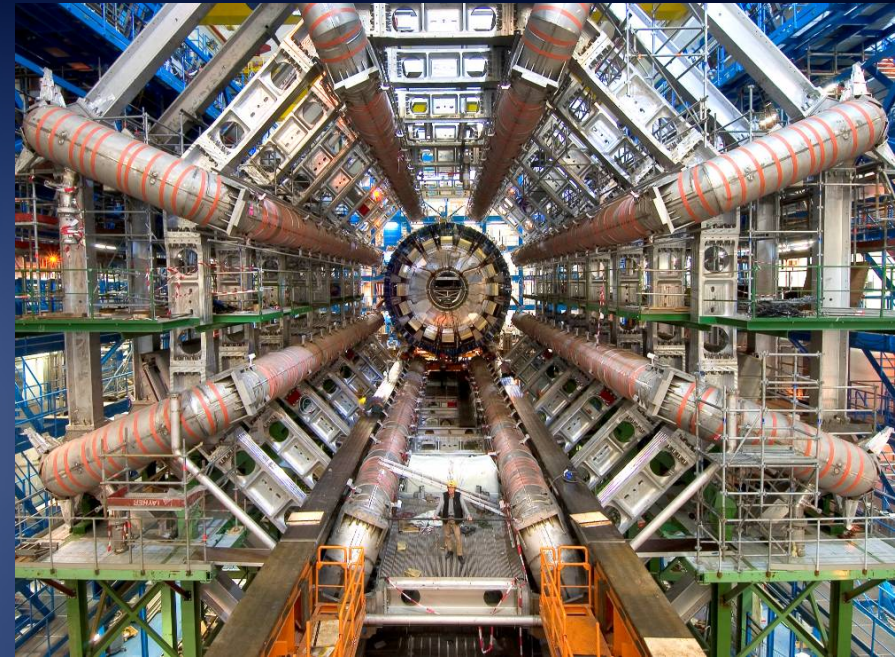
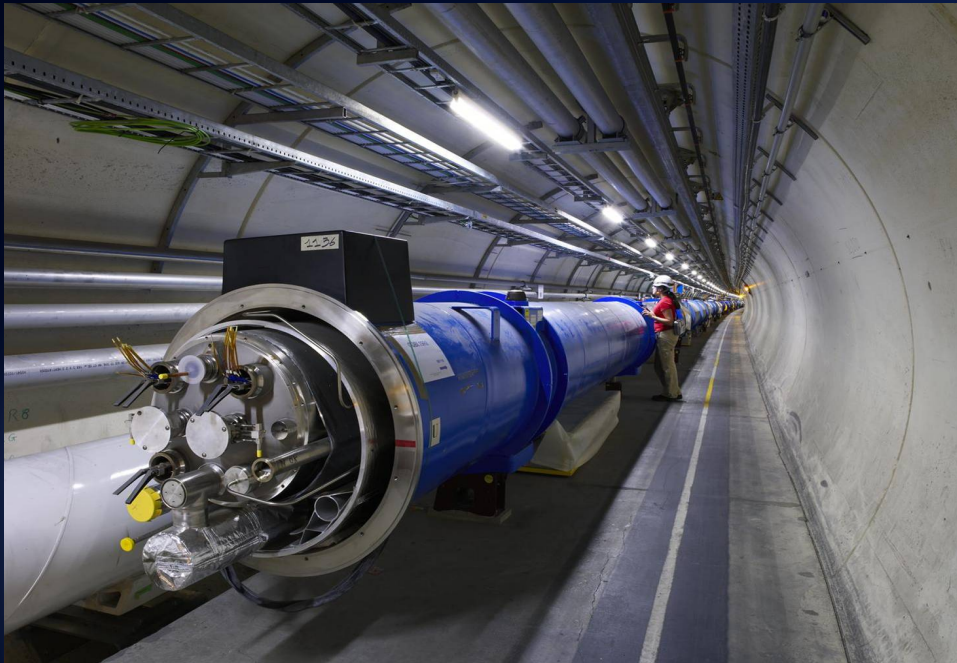


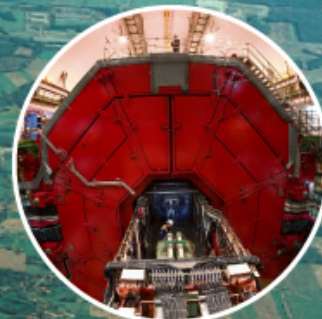


DS
CATIA Done by www.cadcam.ge



Seeing the Micro needs the Macro (scopes)





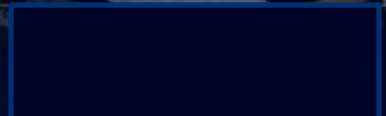


CERN was founded 1954: 12 European States Today: 21 Member States

- ~ 2300 staff
- ~ 730 other paid personnel
- ~ 10000 users
- Budget (2014) ~1100 MCHF

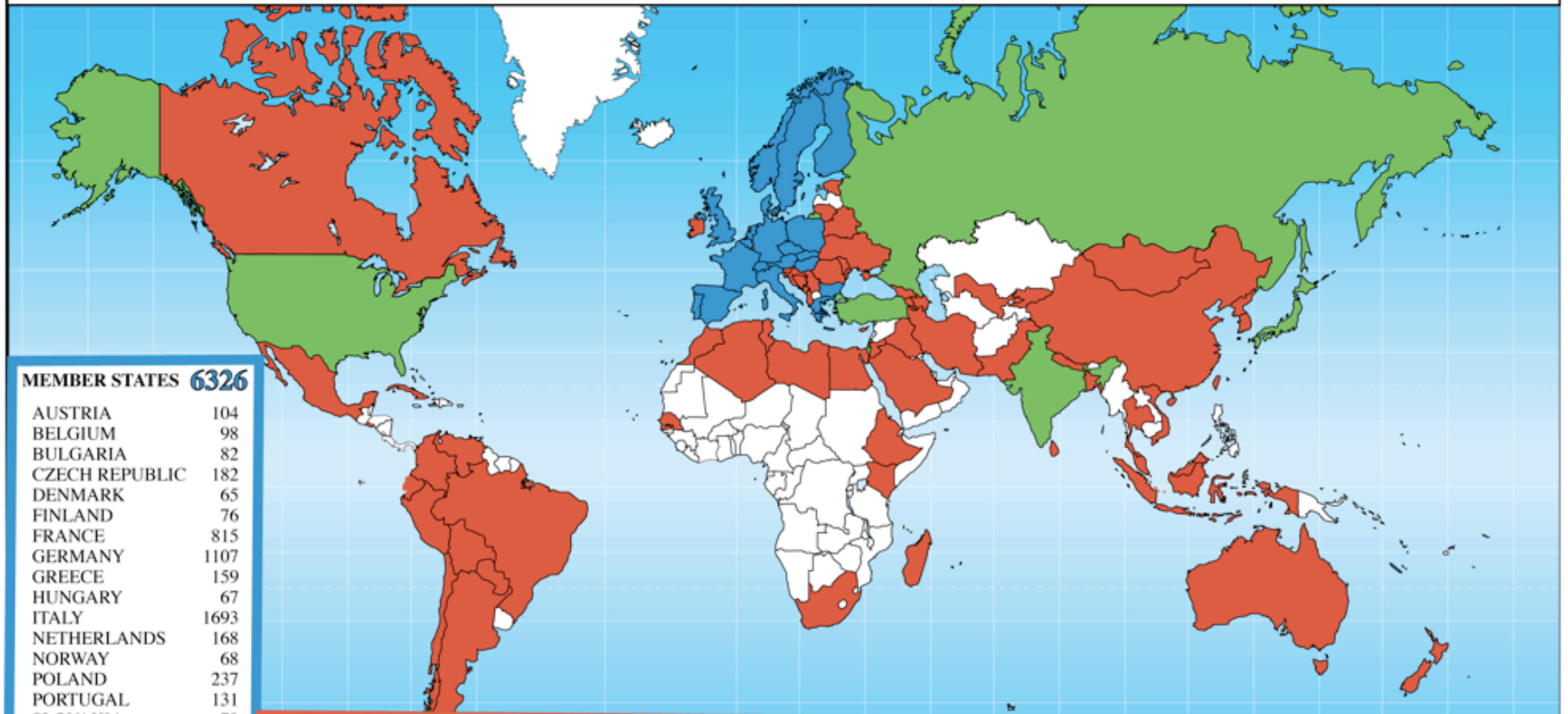
- **21 Member States:** Austria, Belgium, Bulgaria, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Israel, Italy, Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.
- **2 Candidate for Accession to Membership of CERN:** Serbia, Romania
- **8 Observers to Council:** India, Japan, the Russian Federation, the United States of America, Turkey, the European Commission and Unesco





A Global Reach

Distribution of All CERN Users by Nationality on 27 October 2009



MEMBER STATES 6326

AUSTRIA	104
BELGIUM	98
BULGARIA	82
CZECH REPUBLIC	182
DENMARK	65
FINLAND	76
FRANCE	815
GERMANY	1107
GREECE	159
HUNGARY	67
ITALY	1693
NETHERLANDS	168
NORWAY	68
POLAND	237
PORTUGAL	131
SLOVAKIA	79
SPAIN	323
SWEDEN	70
SWITZERLAND	203
UNITED KINGDOM	599

OBSERVER STATES 2496

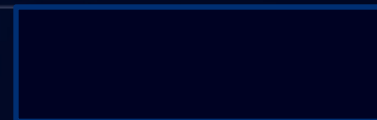
INDIA	167
ISRAEL	54
JAPAN	227
RUSSIA	1048
TURKEY	89
USA	911

OTHERS 1190

BRAZIL	72	ETHIOPIA	1	LEBANON	7	NEPAL	3	SINGAPORE	1
CANADA	135	GEORGIA	32	LITHUANIA	10	NEW ZEALAND	10	SLOVENIA	20
ALBANIA	2	GIBRALTAR	2	LUXEMBOURG	4	PAKISTAN	36	SOUTH AFRICA	8
ALGERIA	8	HONG KONG	2	LIBYA	1	PALESTININE (O.T.)	1	SRI LANKA	6
ARGENTINA	12	INDONESIA	1	MADAGASCAR	3	PARAGUAY	1	SYRIA	2
ARMENIA	24	IRAQ	1	MALAYSIA	7	PERU	1	THAILAND	2
AUSTRALIA	18	IRELAND	23	MALTA	1	ROMANIA	96	TUNISIA	5
AZERBAIJAN	5	JORDAN	1	MAURITIUS	1	SAN MARINO	1	UKRAINE	39
BANGLADESH	3	KENYA	1	MEXICO	43	SAUDI ARABIA	2	UZBEKISTAN	1
BELARUS	37	KOREA, D.P.R.	4	MOLDOVA	1	SENEGAL	1	VENEZUELA	5
BOLIVIA	2	KOREA REP.	82	MONGOLIA	1	SERBIA	33	VIET NAM	6
BOSNIA AND HERZEGOVINA	1	KYRGYZSTAN	2	MOROCCO	15				

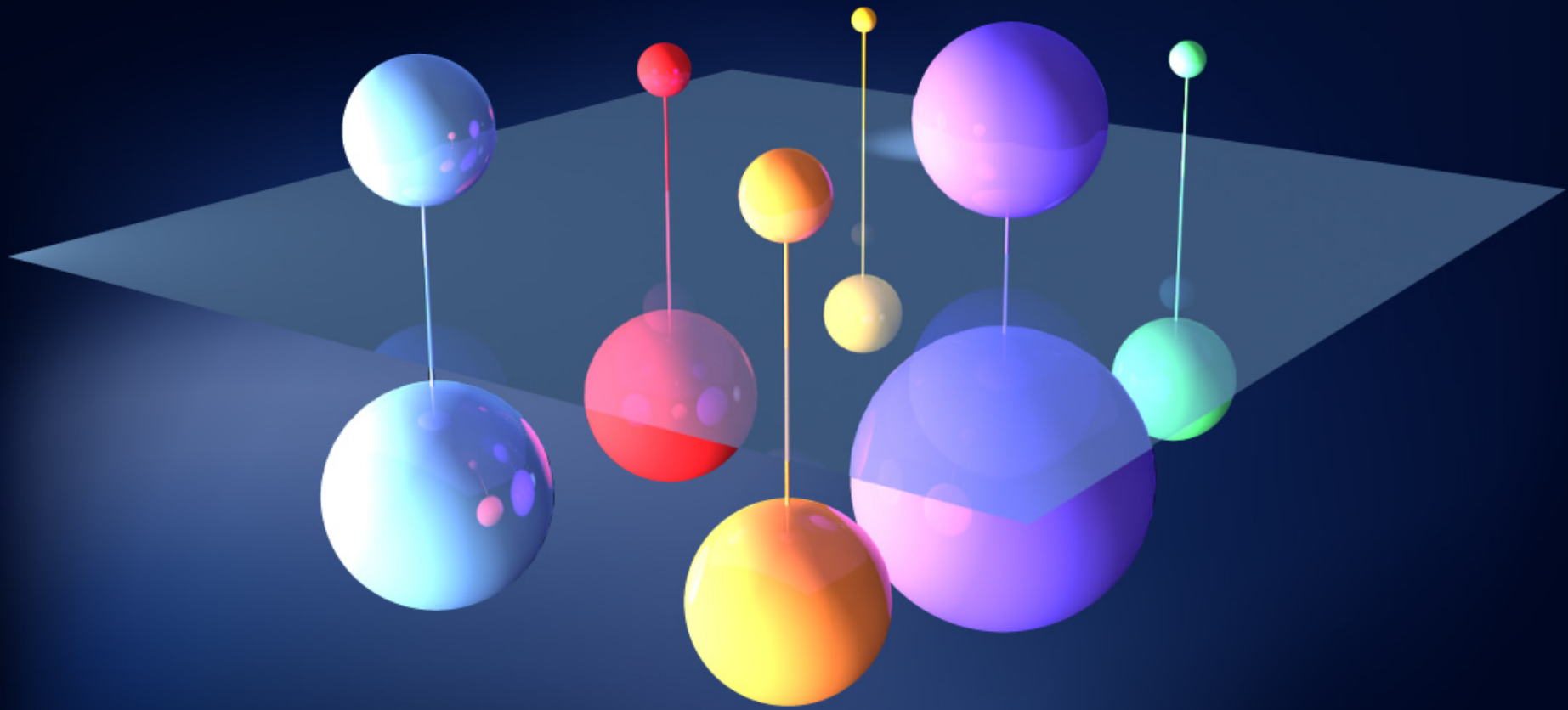
(How) Do We Manage This?

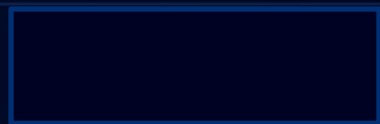
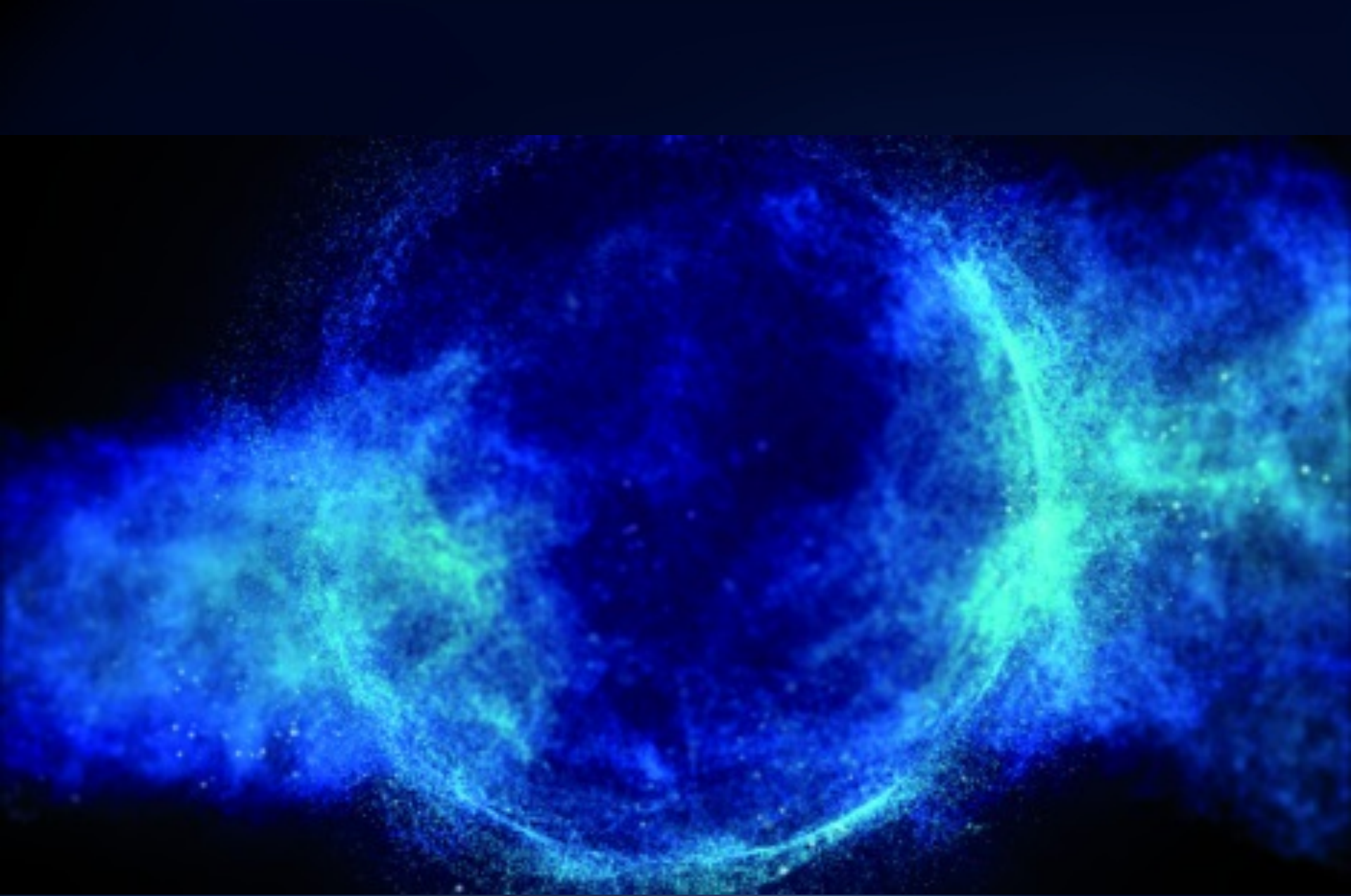
1. Vision
2. Commitment
3. Tolerance

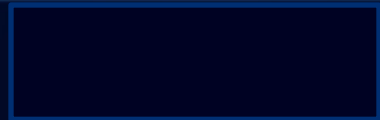


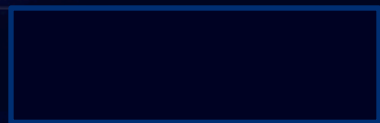
What is Wrong with this Picture?

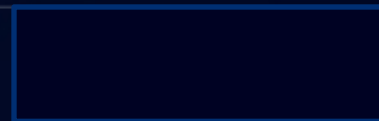
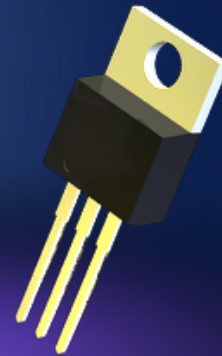
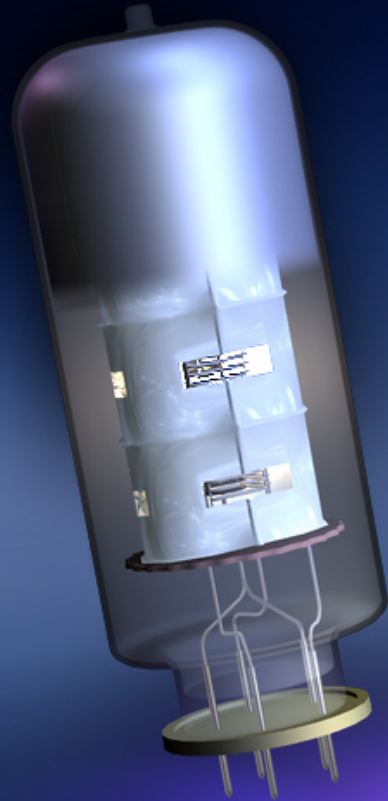














What do you see differently?