

# Inter-university Institute for High Energies

(IIHE ULB-VUB)

since 1972







universe

sun

Earth

human

**Visible with our eyes**

~ 100.000.000.000.000.000.000.000 meter

~ 0,0000000000000000000000000001 meter

*gravitational waves interferometer*

*neutrino observatories*

biological cell

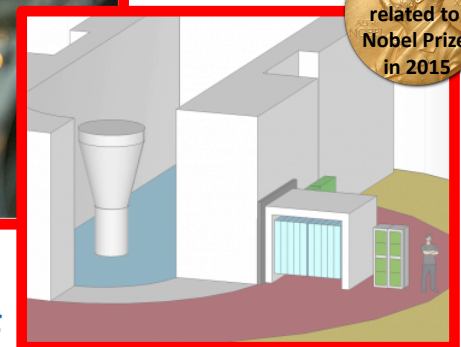
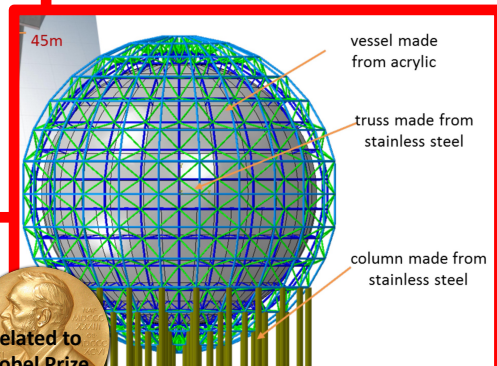
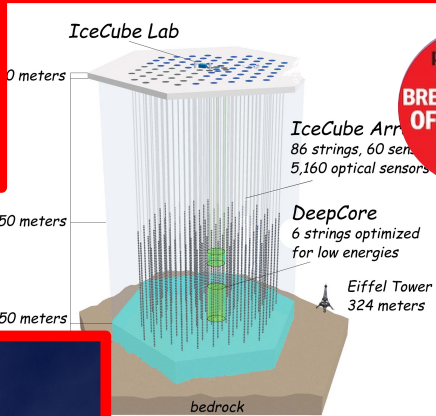
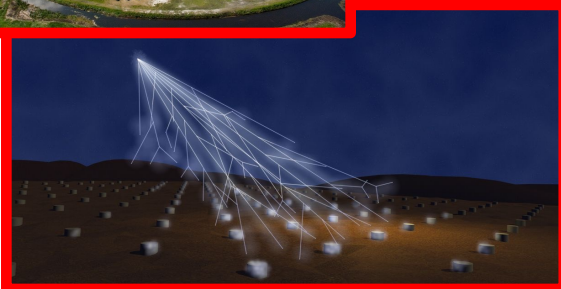
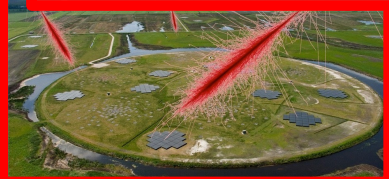
atoms

quarks

*particle colliders*

*nuclear reactors*

*cosmic rays observatories*





**ULB**

UNIVERSITÉ  
LIBRE  
DE BRUXELLES

**VUB**

VRIJE  
UNIVERSITEIT  
BRUSSEL

ULB-IIHE director  
Prof. Laurent Favart

**iihe**  
BRUXELLES BRUSSEL

VUB-IIHE director  
Prof. Jorgen D'Hondt

## Inter-university Institute for High Energies

since 1972

### Physics at Colliders

CMS@LHC  
H1@HERA  
Future Colliders

### Neutrino Physics

JUNO  
SoLiD

### Astroparticle Physics

IceCube & RNO-G  
ARA  
LOFAR  
Auger

### Phenomenology

Beyond the Standard Model

### Instrumentation and Computing

Radar and Radio detection  
DAQ systems  
Silicon Tracking devices

National anchors: EoS be.h, HEP@VUB, ...

[w3.iihe.ac.be](http://w3.iihe.ac.be)

23 professors  
27 postdocs  
39 PhD students  
15 support staff

Vastly international

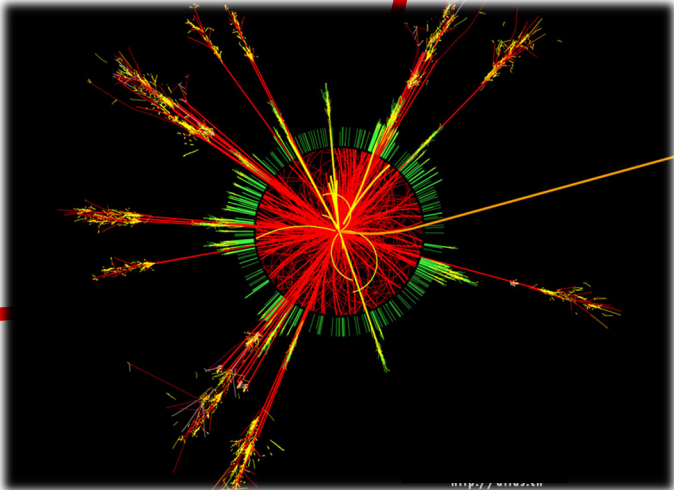
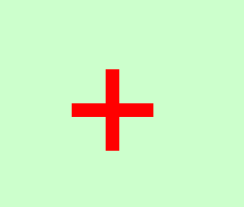
Timescale of  
projects is decades

Huge data volumes

Experimental  
infrastructures and  
maintenance funded  
by FNRS and FWO  
(+ some ERC grants)



store, distribute and analyse ~30 PB of data annually  
generated by the LHC (after filtering 99,999%)



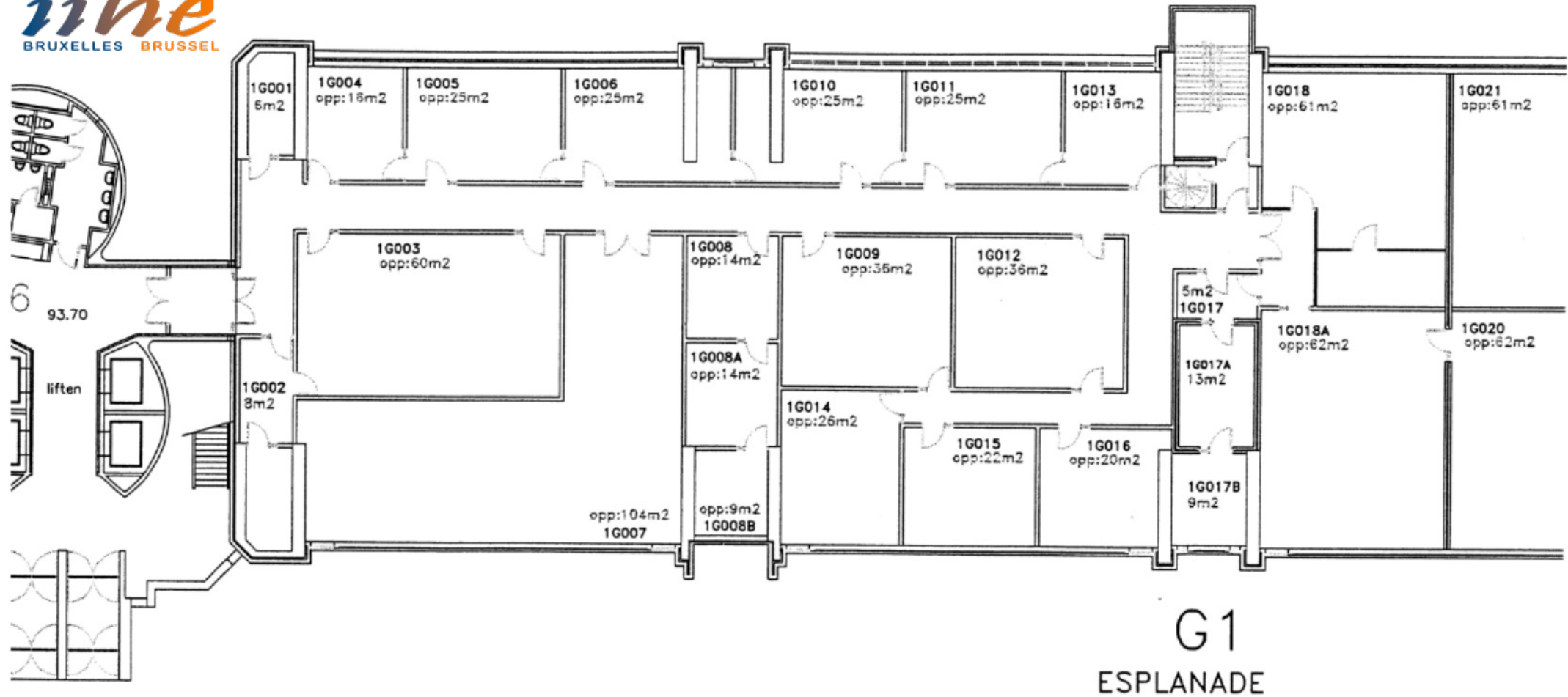
... 40 million times per second  
... 1 MB each



**IIHE**  
**0G en 1G**



**i** Infopunt Studenten



Spaces for teaching, offices, instrumentation, collaboration, ICT  
(in most cases we build instruments in-house for installation in international laboratories)



G0

computing room at the IIHE



# Inter-university Institute for High Energies

