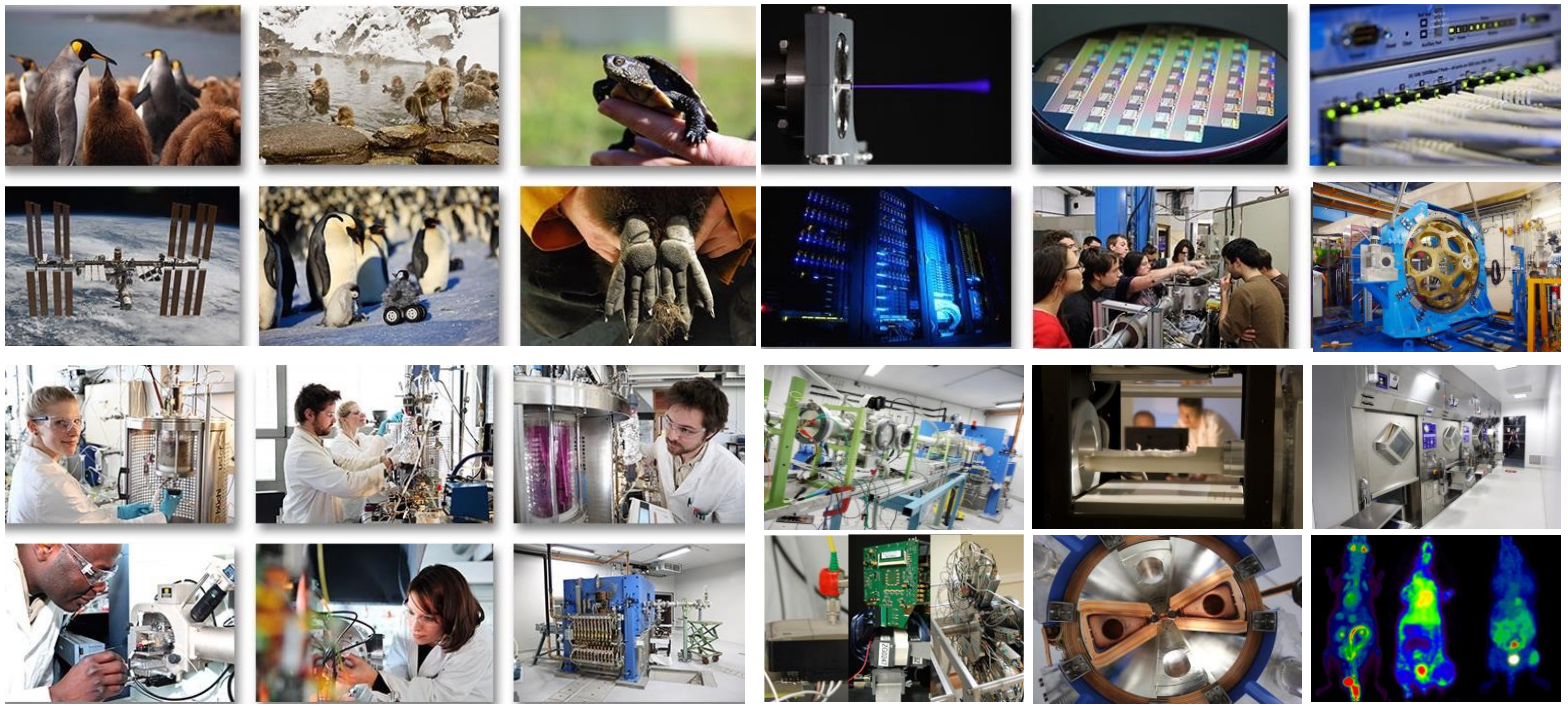
Institut Pluridisciplinaire Hubert Curien (IPHC)



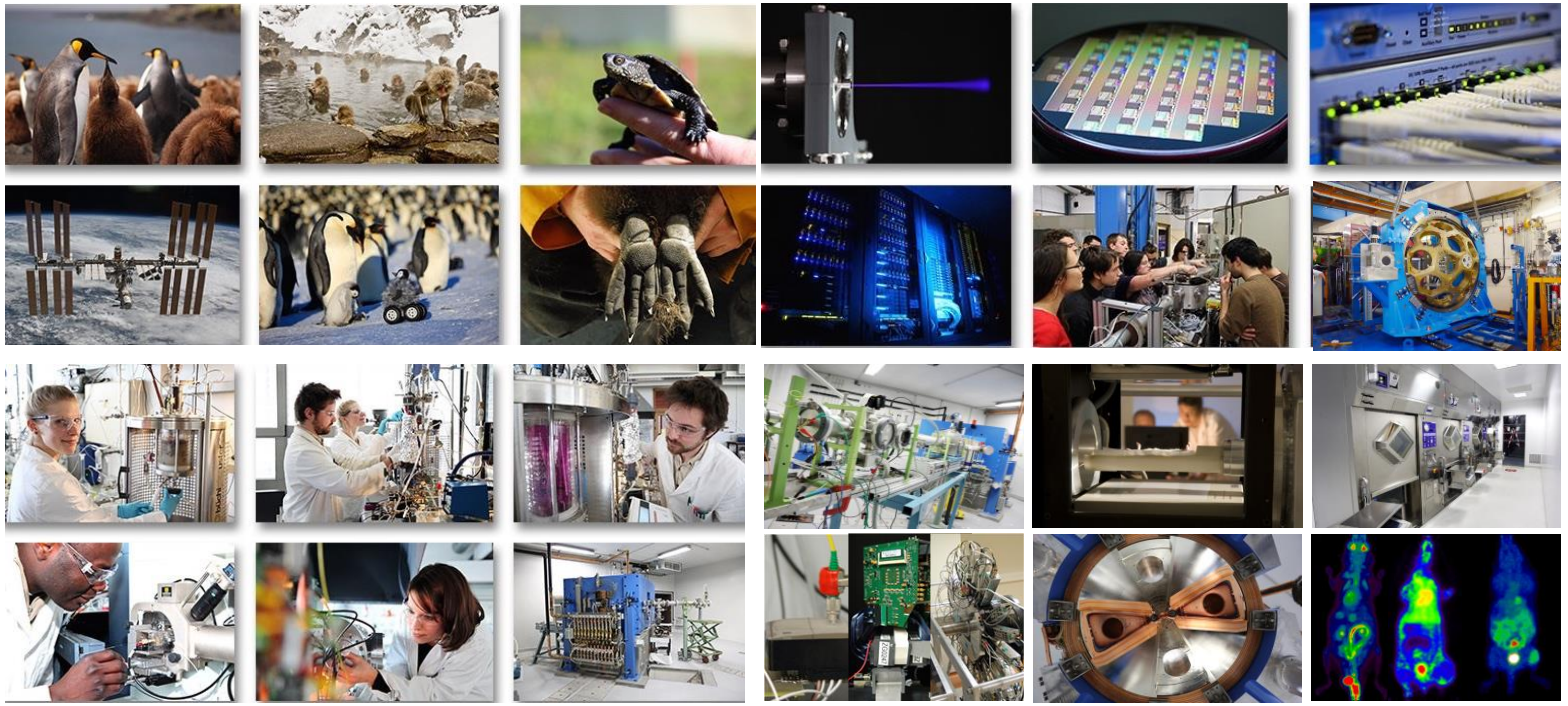
Auguste Besson
Responsible of the subatomic Research Departement
on Behalf of the laboratory Director Sandrine Courtin

IPHC Institut Pluridisciplinaire Hubert CURIEN STRASBOURG

Université de Strasbourg Excellence University

cnrs

IPHC today



- 3 Departments
- 140 Engineers and Technicians,
- 120 Researchers and lecturers,
- 110 PhD students, 51 fixed-term contracts, 170 interns,
- 4 CNRS Institutes,
- 7 accredited platforms, 3 start-ups,
- > 400 scientific publications per year.

Strong workforce
of engineers and Technical staffs

IPHC, our collaborations around the world

Institut Pluridisciplinaire Hubert Curien UMR 7178

Assistants de prévention : E. Schaeffer (coord), I. Chery, S. Georg, A. Lecointre
Communication : N. Busser
Publications : S. Molinet
Management Qualité : S. Suzanne-Ochsenbein
Valorisation : J. Schihin / N. Ollivier-Henry*
Correspondante Formation : C. Gallone
Référente parité : C. Gallone
CSSI: C. Muller

Directrice : S. Courtin
Assistante : F. Diemer

MiPHC
(Mission pour l'interdisciplinarité à l'IPHC)

Instances du Laboratoire

Conseil de Laboratoire
Conseil Scientifique
Cellule de Suivi Technique des Projets
Commission locale H&S et Conditions de Travail

Ecologie Physiologie Ethologie | **Recherches Subatomiques** | **Sciences Analytiques**

Ecology, Physiology and Ethology

Subatomic Researches

Connexions to Japan :
Belle-2
ILC
Radiochemistry
Superheavy nuclei (GARIS @ RIKEN)
RCMP Cluster (Osaka), Etc.

Analytic Sciences

DRS: Subatomic Research Department

Particle and hadronic physics

ALICE

CMS

Belle II

PICSEL

Astro-particle physics and gravitational waves

OGMA

Observations with Gravitational Waves & Multimessenger Astronomy

VIRGO

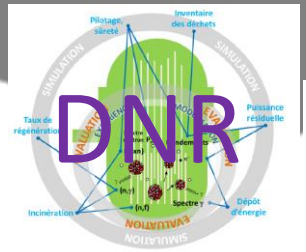
Nuclear Astrophysics

DNE

Nuclear physics

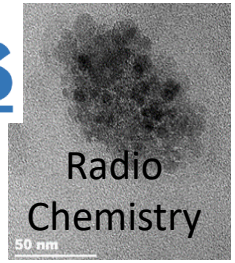
Theory

Nuclear Energy / Environment / applications



DeSIs

IMR



Recherches Subatomiques

Responsable : A. Besson

Administration : F. Hamel / M. Puerto

Eq. scientifiques — *Eq. Techniques & plateformes*

Théorie K. Sieja	EIA E. Bouquerel
Du noyau aux étoiles O. Dorvaux	RaMsEs A. Sellam
Imagerie Moléculaire et Radiobiologie F. Boisson	SMA C. Bonnin

Energie, environnement et dosimétrie :

DeSIs	M. Vanstalle
DNR	M. Kerveno
Radiochimie	Q. Raffy

Du big bang aux particules :

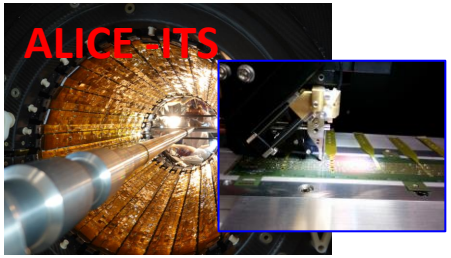
ALICE	A. Maire
Belle 2	I. Ripp- Baudot
CMS	A-C. Le Bihan
Neutrino	M. Dracos
OGMA	T. Pradier
PICSEL	Z. El Bitar

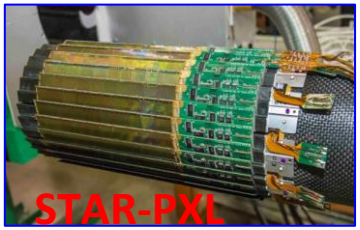
CYRCé	C4PI
Coord. Scientifique M. Rousseau (intérim)	Coord. Scientifique J. Baudot
Resp. Opérationnel M. Pellicioli	Resp. Opérationnel C. Hu-Guo

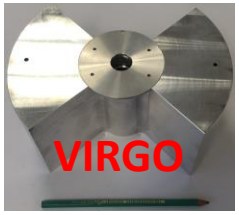
C4PI platform presented by J. Baudot

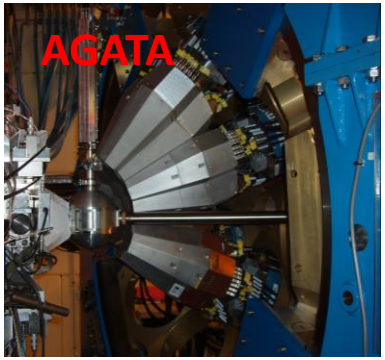
… A tale of both infinities

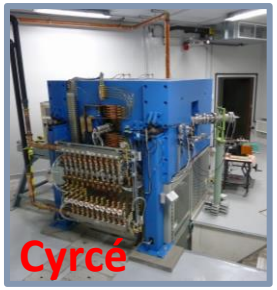
A long tradition of technical contributions

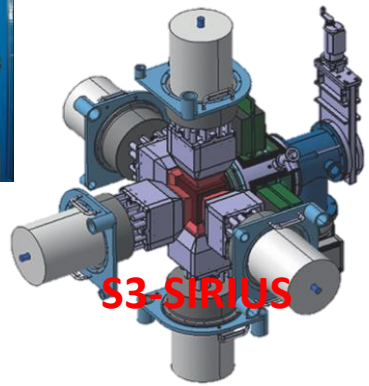


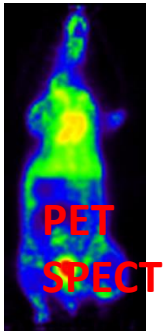




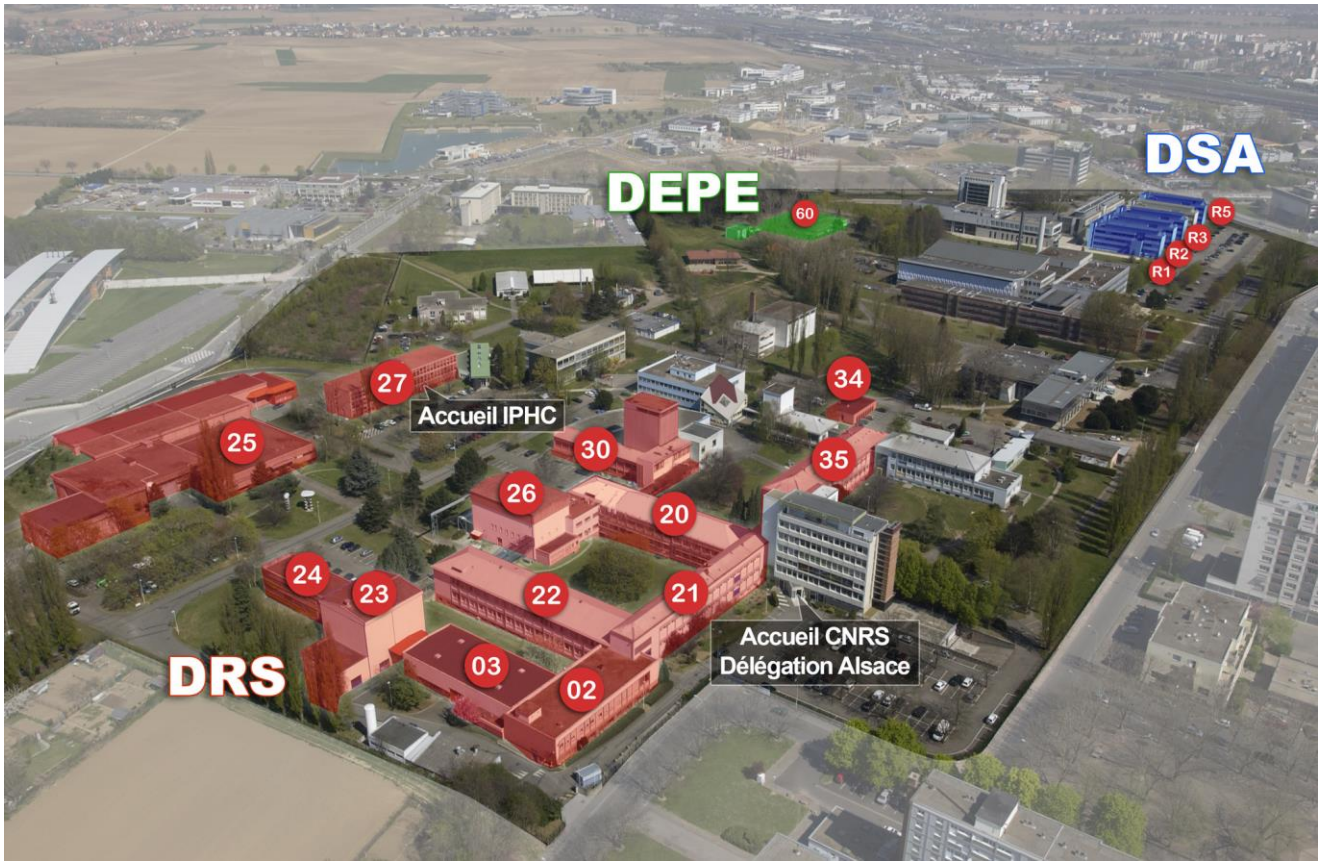








Infrastructures



24000 m^2 / 18 buildings / 2 sites (Illkirch),
3 Scientific Departments.

Welcome!

Back up

IPHC, history

1947 **IRNS**	1960 **CRN**	1971 **IN2P3**	1983	1991	1997 **IRES**	2000	2006 **IPHC**	2011	2012	2017	2024

S. Gorodetsky, F. Perrin, M. Perey, P. Chevallier, A. Gallmann, R. Seltz, F. Beck, B. Haas, D. Huss, C. Roy, R. Barillon, S. Courtin

The institute joins the CERN ISOLDE collaboration

Accelerators
Detectors : Q3D

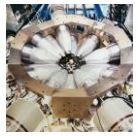
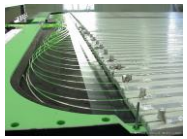
VIVITRON facility 1994 -2003,
Involvement at CERN,
CRN joins ALICE & CMS,
Château Cristal,
LEP opening,
EUROGAM – EUROBALL,
OPERA.

IPHC :
- IReS,
- Labo. Sciences, Analytiques, Interactions Ioniques Moléculaires & Biomoléculaires,
- Centre Ecologie et Physiologie Energétiques.

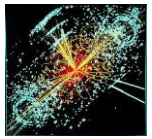
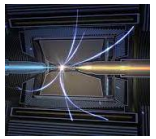
Computer grid, start of LHC,
CMS, ALICE runs,
AGATA,
Higgs Boson, CMS,
Cyrcé facility,
JUNO,
STELLA,
BELLE 2,
OHM Fessenheim decommisioning,
Ganil : NFS, S3.

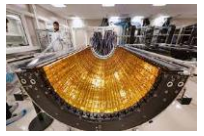
VIRGO


















F. Rami
Bronze 1986
F. Beck
Argent 1987

D. Curien
Bronze 1993

C. Kuhn
Bronze 2000
J.D. Berst
Cristal 2000

Y. Le Maho
Légion Honneur
2012

E. Dangelser
Cristal 2015

C. Carapito
Bronze 2018
C. Hu Guo
Cristal 2018

A. Nonat
Bronze 2019
B. Hippolyte
Argent 2020

C. Collard
Joliot-Curie
2022

Publications

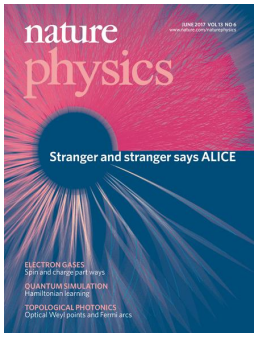
- >28 articles per publishing FTE (HCERES evaluation)
- 7/10 with PhD students
- Variety of topics, different sizes of collaborations

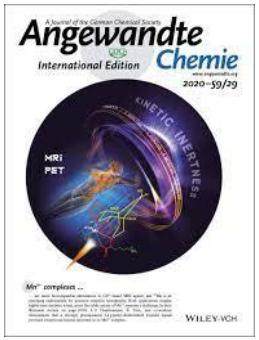
  → Different production (number)
  → Excellent journals

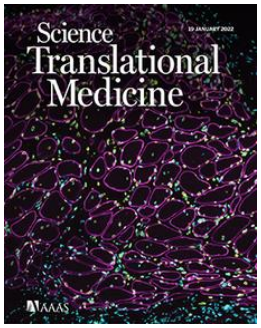
- 117 articles with IF > 10 (Science, Nature for ex.)

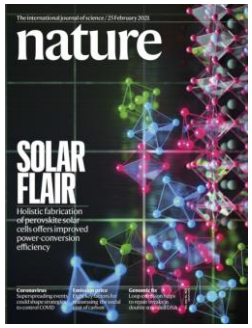
- > 11 presentations in international conferences / publishing FTE

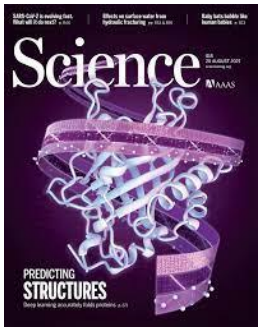
- Open Science











Links to the socio-economic world

- **Startups, 2018, 2021 + 2022 !**

POLY-DTECH

Smartium
Smartening radiation measurement

Accessing *in vivo* model d
your molecule developme

Pearl Bio System

- **Common laboratory 04/10/2021 (CNRS LabCom)**

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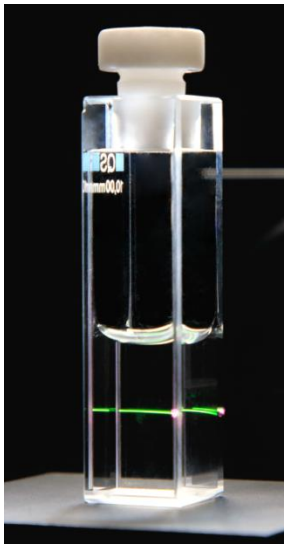
Aerial

DSA: tools for the analysis of human-environment interactions, diagnosis and imaging of diseases

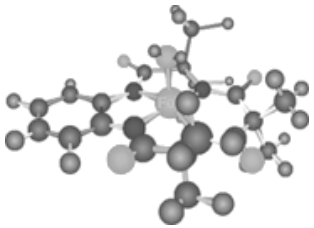
Modern man

Lack of physical exercise
Malnutrition

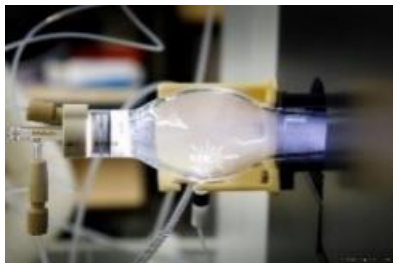
Studying hibernating bears to better fight muscle loss in humans. DSA-DEPE-DRS



Imaging :
Up-conversion
for better imaging



Proteomics :
direct diagnostic method Lyme disease
mechanism of toxicity
Alzheimer's disease



Metals :
Development of hydro-metallurgical processes for lithium extraction and recycling of lithium-ion batteries

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DEPE: Long-term monitoring projects in the natural environment

- Functioning of socio-ecosystems in a global manner, their resilience to environmental change,
- Study site: the Guiana coastline. A new tool: the West Guiana Research Station.

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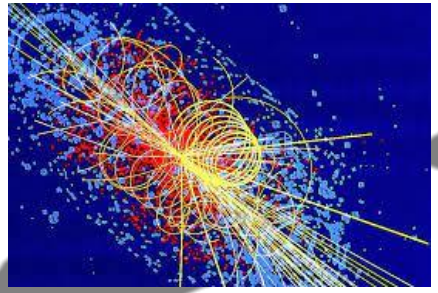
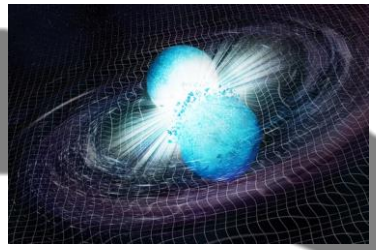
DRS: Subatomic Research Department

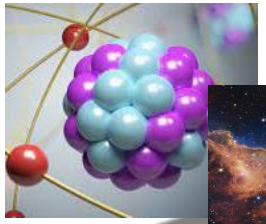
Particle and hadronic physics



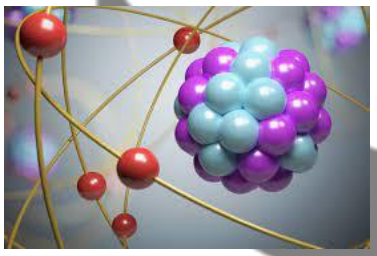
Astro-particle physics and gravitational waves



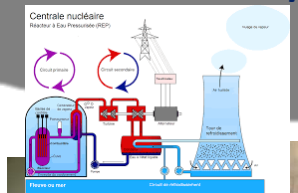
Nuclear Astrophysics



Nuclear physics

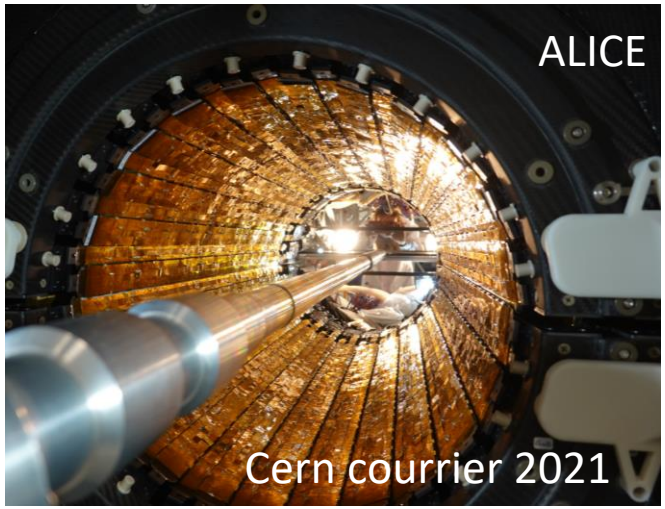


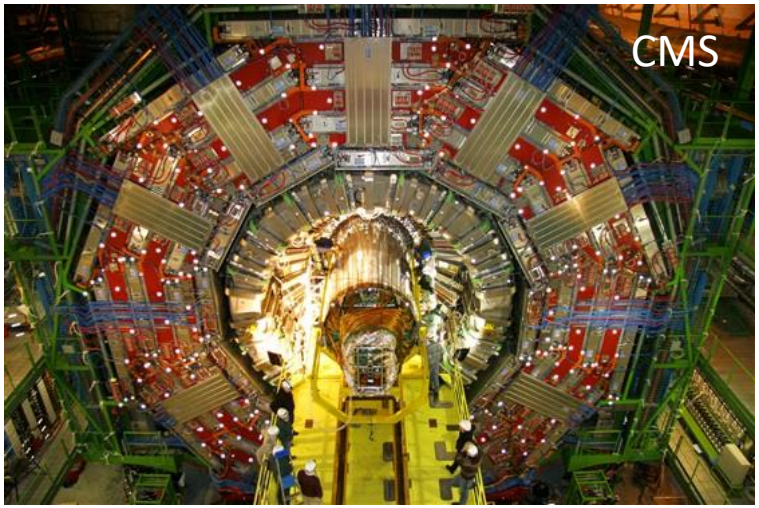
Nuclear Energy / Environment / applications



… A tale of both infinities

DRS: probing the infinites





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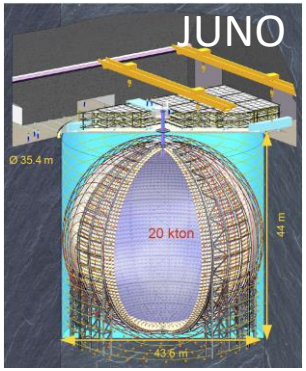
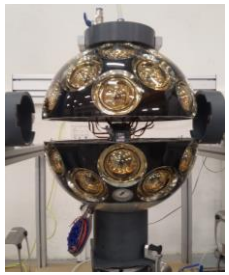
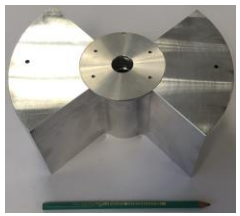
12500 t



KM3Net



Calibrator
VIRGO



- Matter in the early universe,
- New particles, new physics, new quantum aspects,
- Astroparticles and gravitational waves (2015),
- A strong technical common basis.

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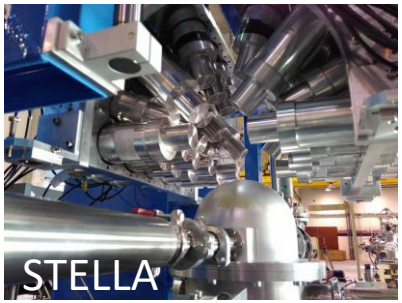
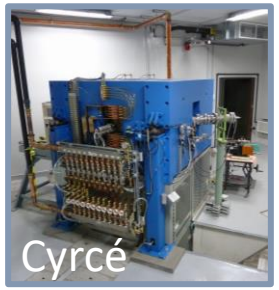
DRS: probing the infinites



PET
SPECT



- Nuclear Data for Reactors, neutron beams at Ganil,
- Technical advances in gamma spectroscopy,
- Study of superheavy nuclei, beam production,
- Dynamics of reaction, fission, fusion,
- Cluster configurations, Nuclear Astrophysics, fusion reactions at stellar energies,
- Radiochemistry, dosimetry, modelling and prospective studies of the environmental, impacts of dismantling / radiolysis of biomolecules / Medical applications / Molecular imaging.