

LIP 2019/2020



No attempt to be complete !!!

Gaspar 1940-2019

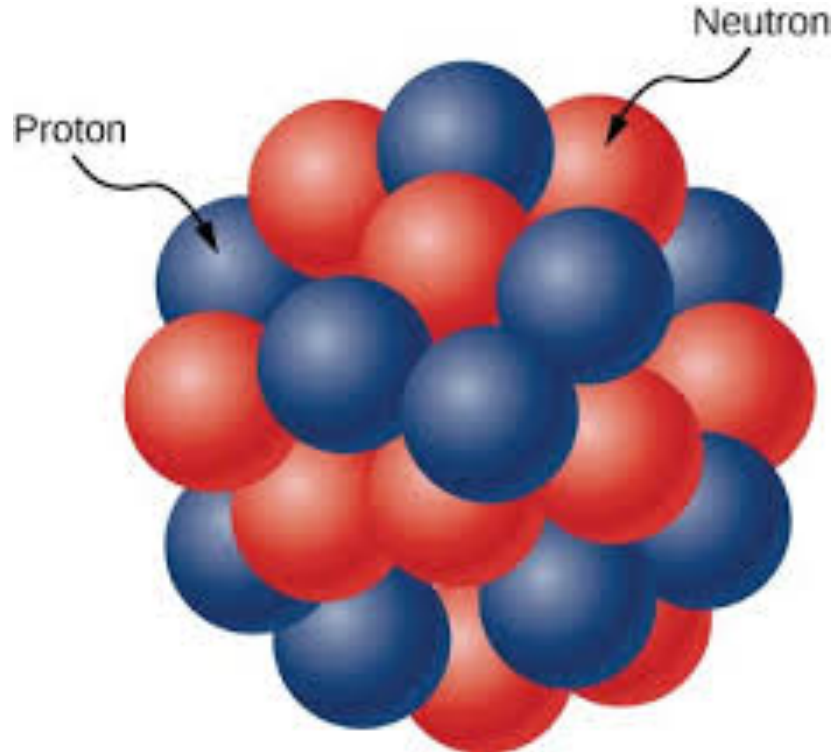


If today we have LIP, which is not just a group of physicists participating in experiments at CERN, but rather a diverse but **coherent community of physicists, engineers, technicians, administrative and students, engaged in the challenges of particle physics but also of instrumentation, computing and technology**, deeply embedded in international and national collaborations, we owe much of it to Gaspar.

Evaluation R&D units

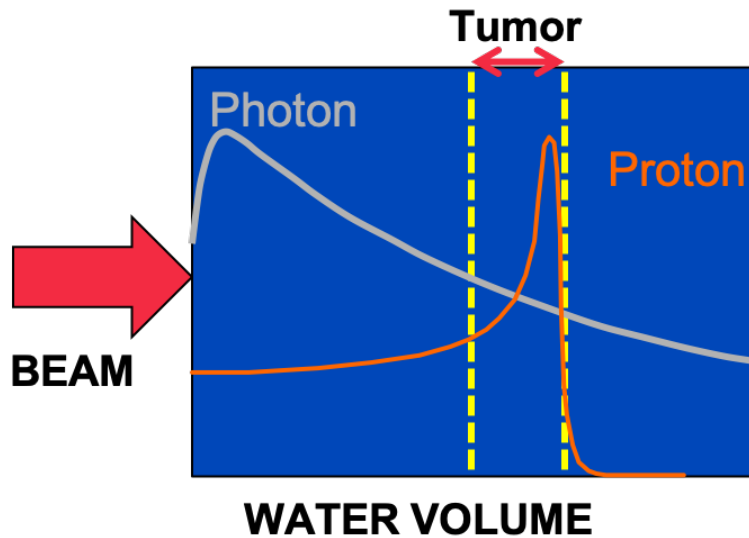


Enlargement of LIP



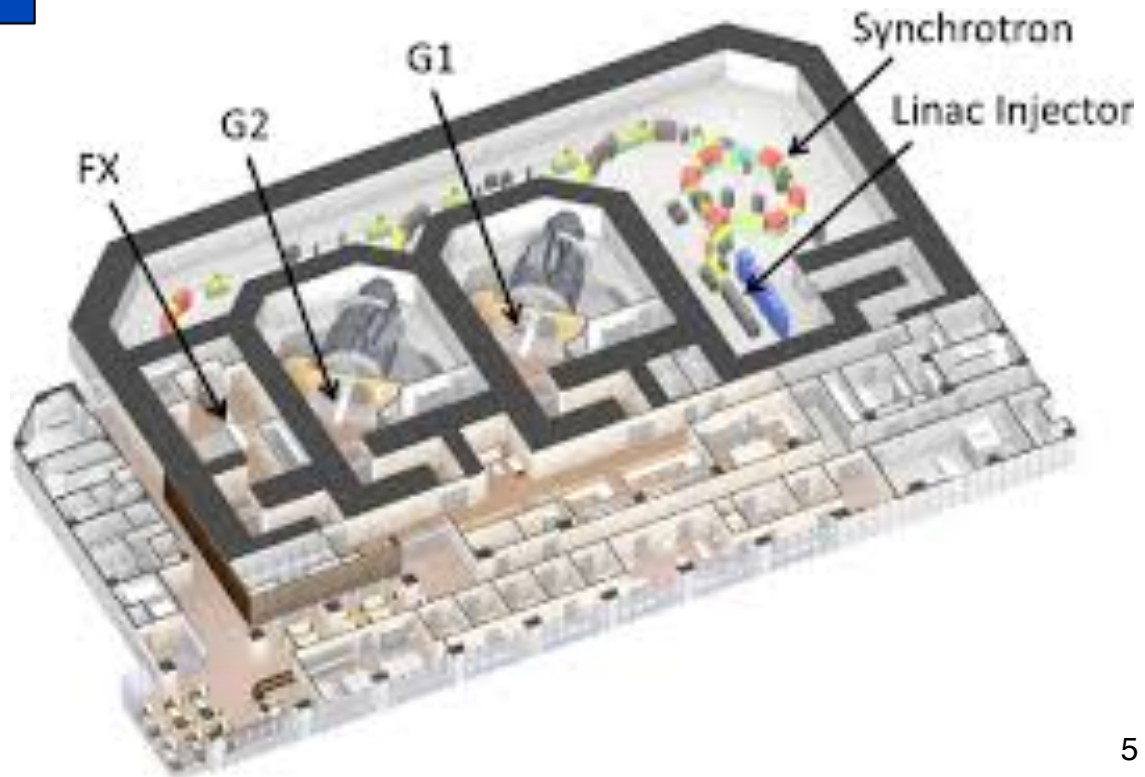
Theoretical Nuclear Physics
group joined LIP

Proton-therapy

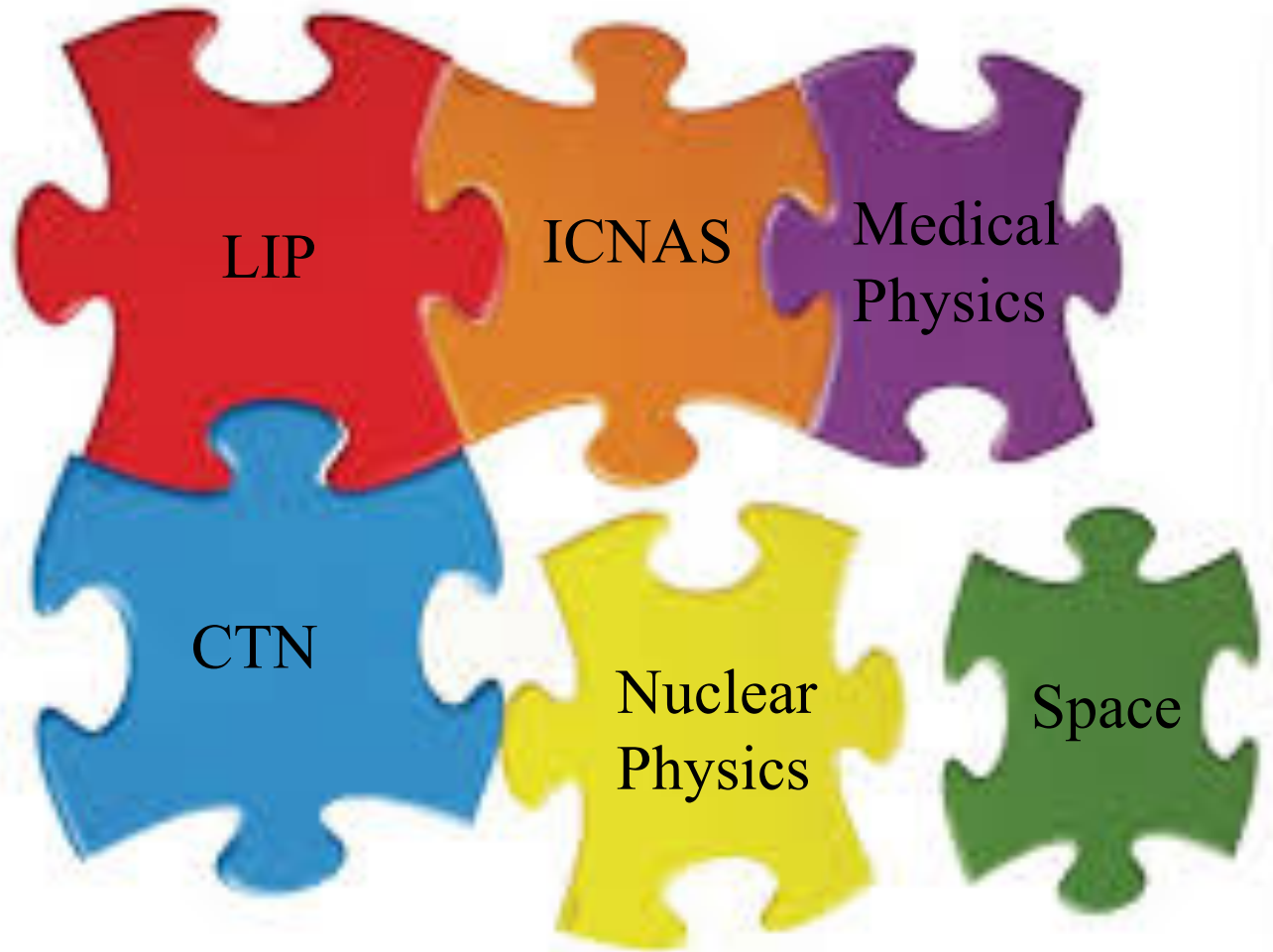


New Projects (UT Austin, Fundo CERN)
ProtoTera

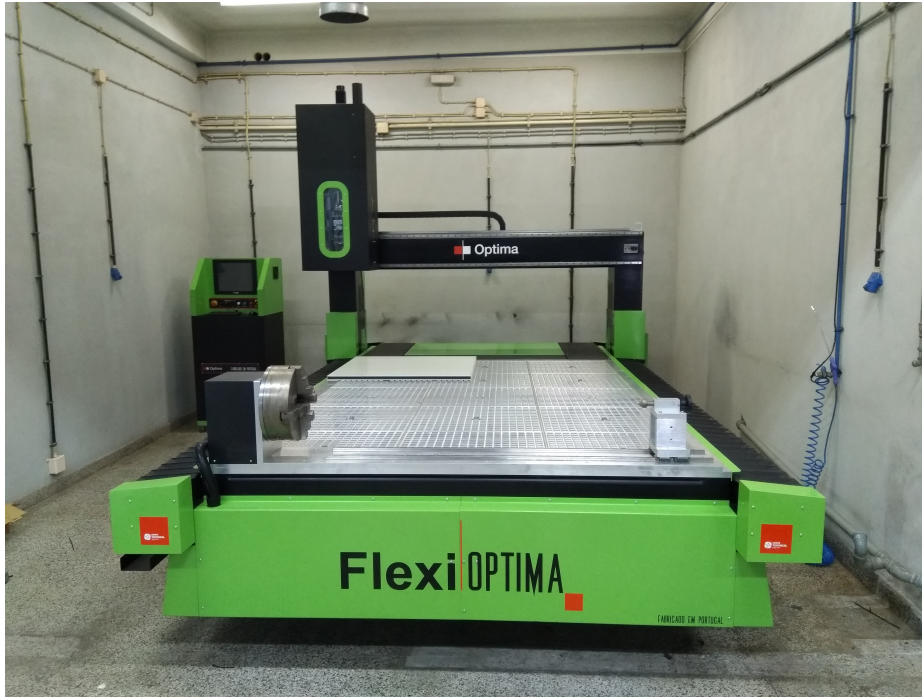
An opportunity , an enormous
challenge !!!



LIP-CTN-ICNAS

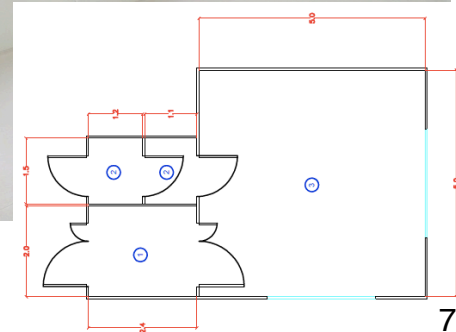
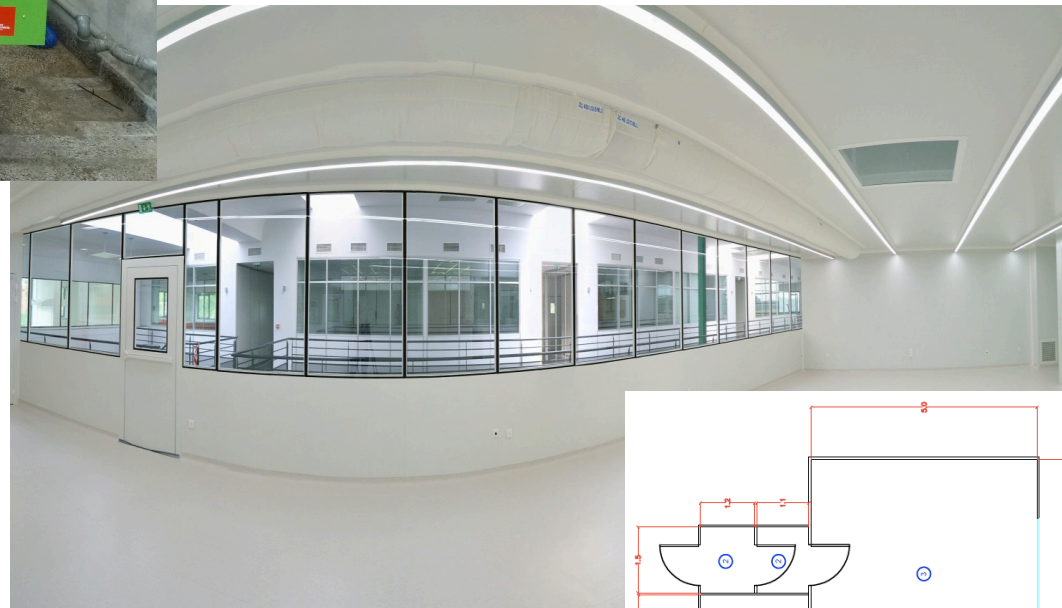


Detectors Lab

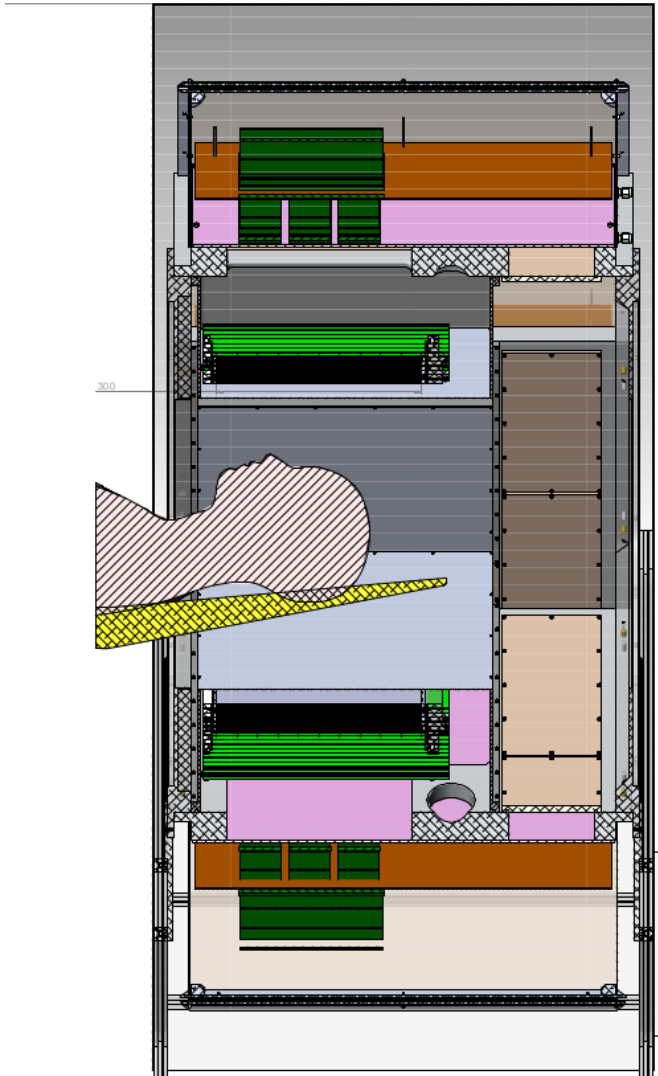


Cut machine installed!

Clean room ISO6 to be installed in the next months



Brain – RPC_PET



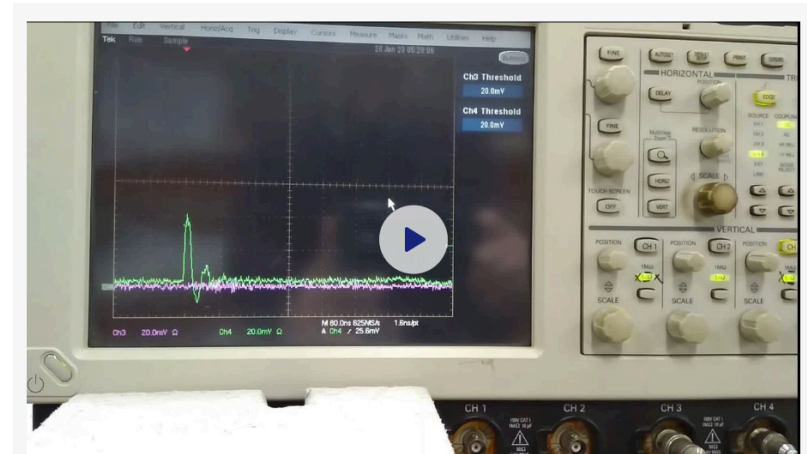
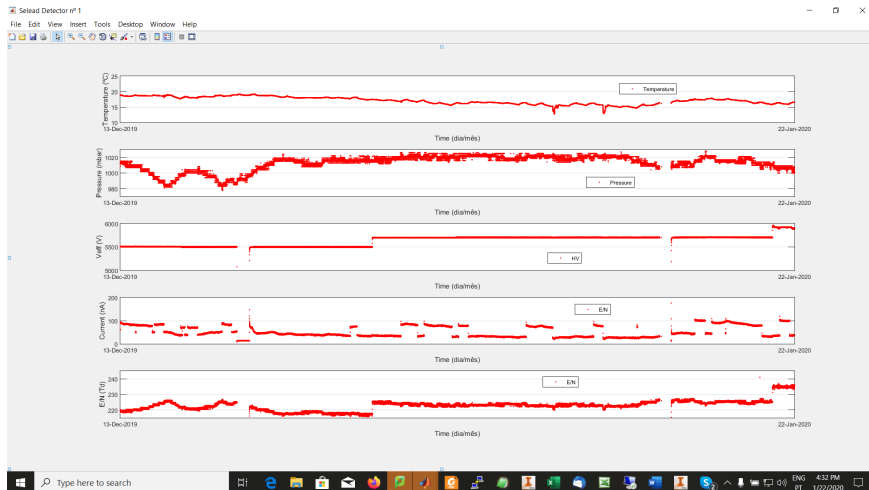
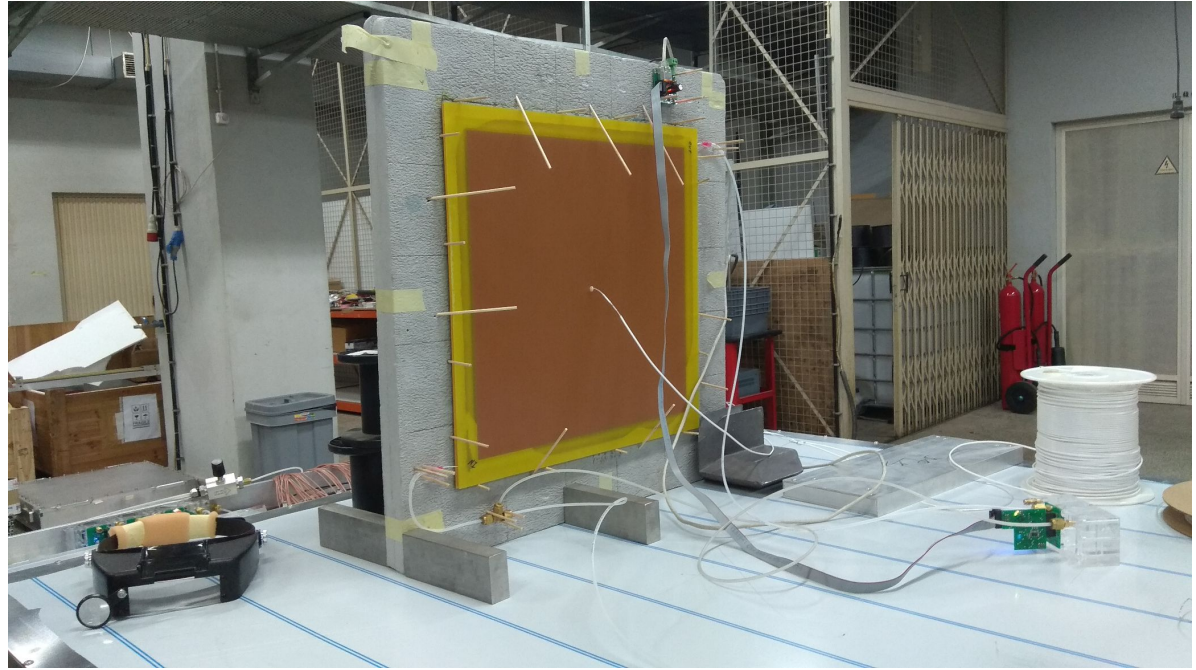
Prototype well advanced!
(Paulo Fonte)

S



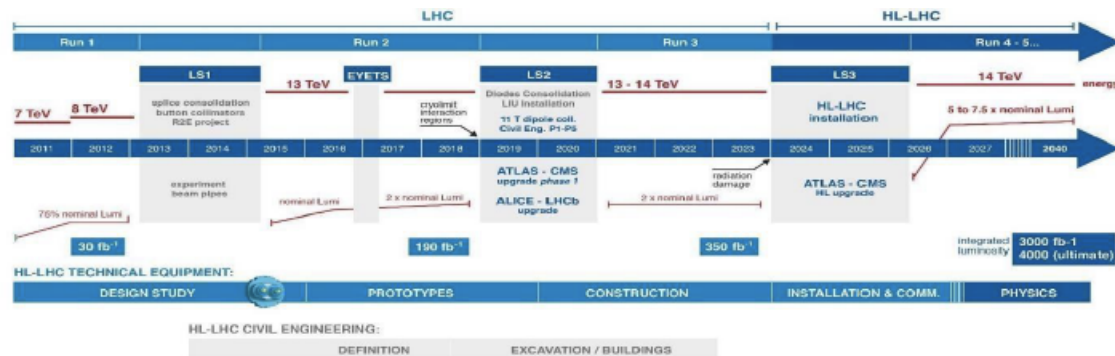
Sealed RPCs

They do exist at LIP!
(Luis Lopes)



LHC-HI LUMI

Upgrade MOUs signed !!! (ATLAS and CMS)



CMS COLLABORATION

CERN-MoU-2019-036

ATLAS COLLABORATION

CERN-MoU-2019-017

The European Organization for Nuclear Research (CERN)

and

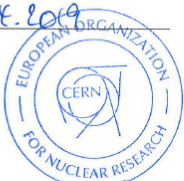
Fundação para a Ciência e a Tecnologia (FCT), Lisbon, Portugal

declare that they agree on the Present Addendum to the Memorandum of Understanding for Collaboration in the Construction of the CMS Detector.

Signed in Geneva, Switzerland

on 26.4.2019

for CERN



Eckhard Elsen

Prof. Eckhard Elsen
Director for Research and
Computing

Signed in Lisbon

on 27.5.2019

for FCT



Helena Pereira
President

Addendum No. 19 to the

Memorandum of Understanding for
Collaboration in the Construction of the
ATLAS Detector

Construction of the
ATLAS Trigger/DAQ
Phase-II Upgrade

ATLAS COLLABORATION

CERN-MoU-2019-020

Addendum No. 22 to the

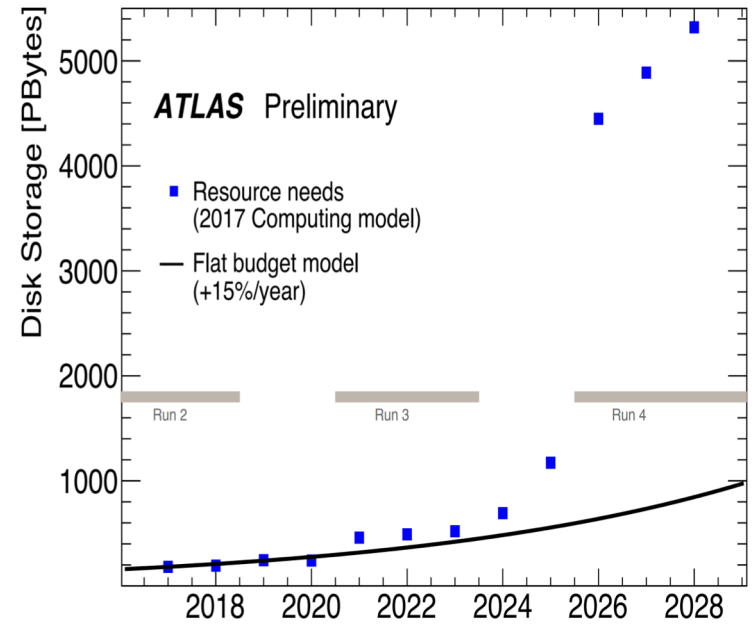
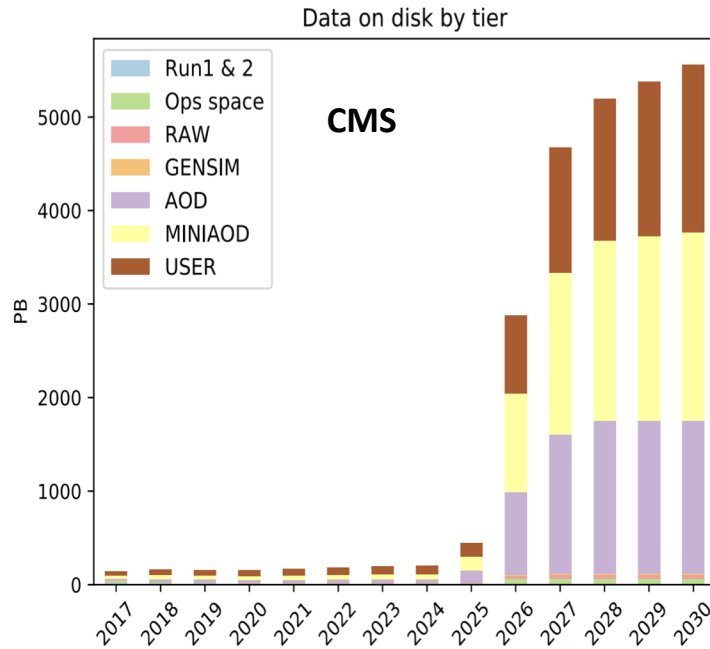
Memorandum of Understanding for
Collaboration in the Construction of the
ATLAS Detector

Construction of the

ATLAS Tile Calorimeter
Phase-II Upgrade

Scientific Computing

HL-LHC - An enormous challenge



And at last but not at least



Data Repositories
Services for Science
Further EOSC activities

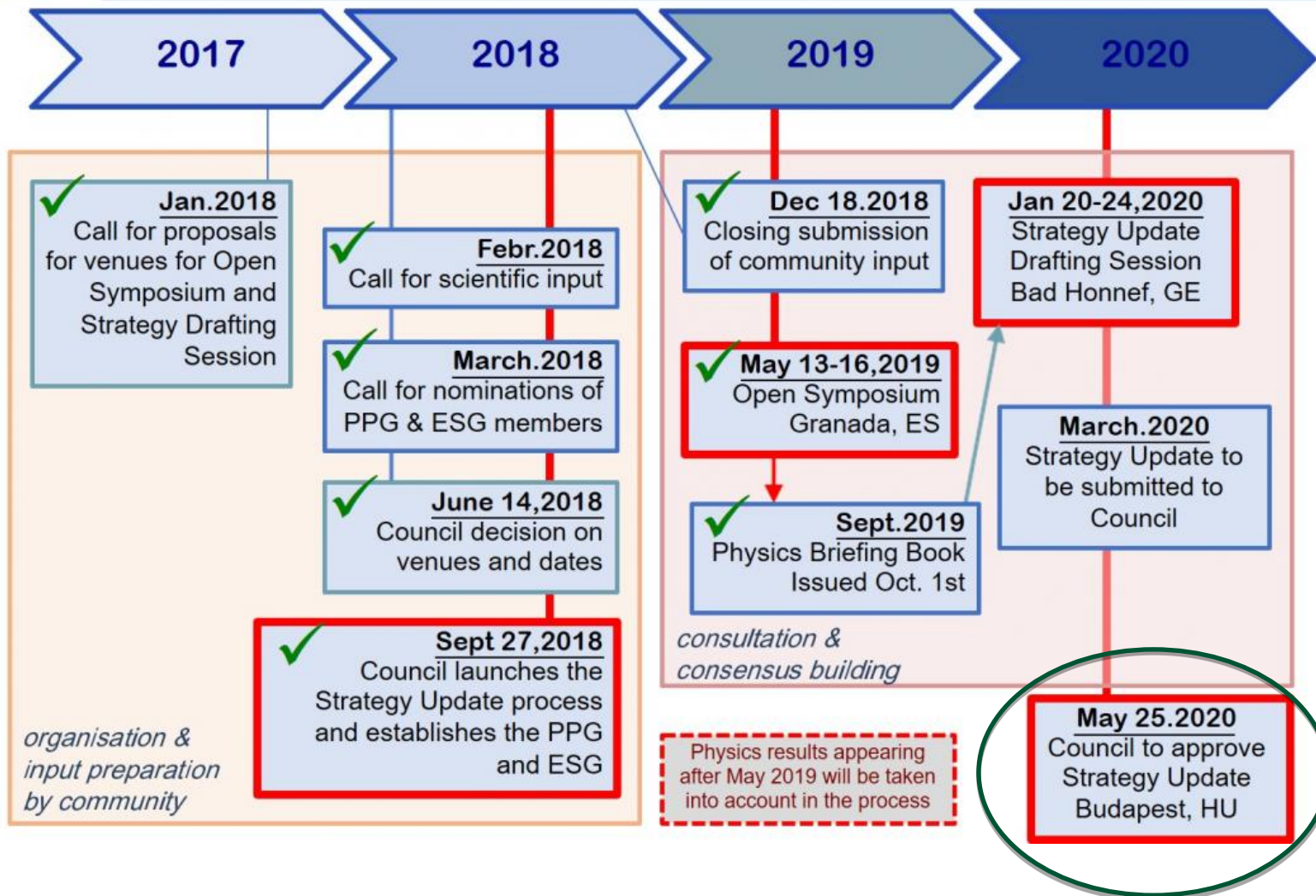
FCT

Rede
Nacional
Computação
Avançada



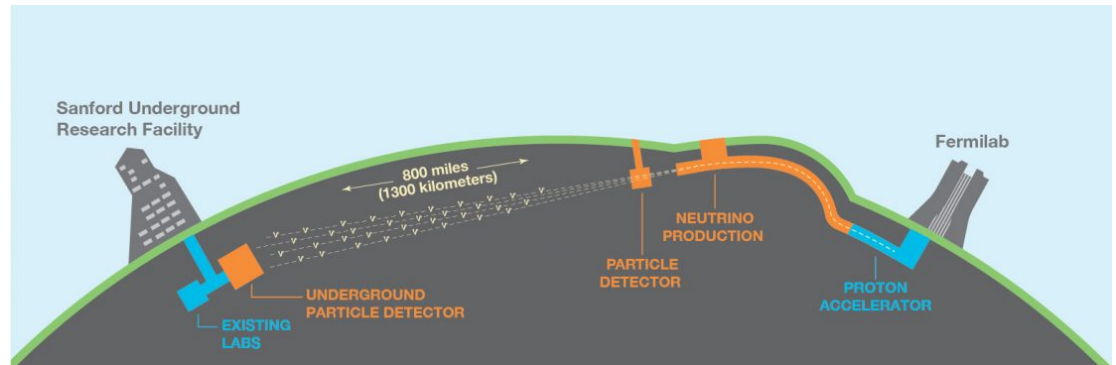
EuroHPC
Joint Undertaking

EPPSU 2020 timeline

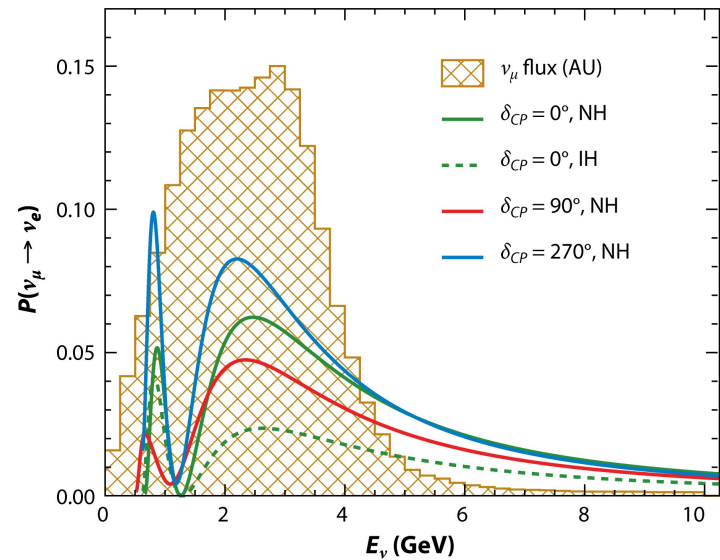


DUNE

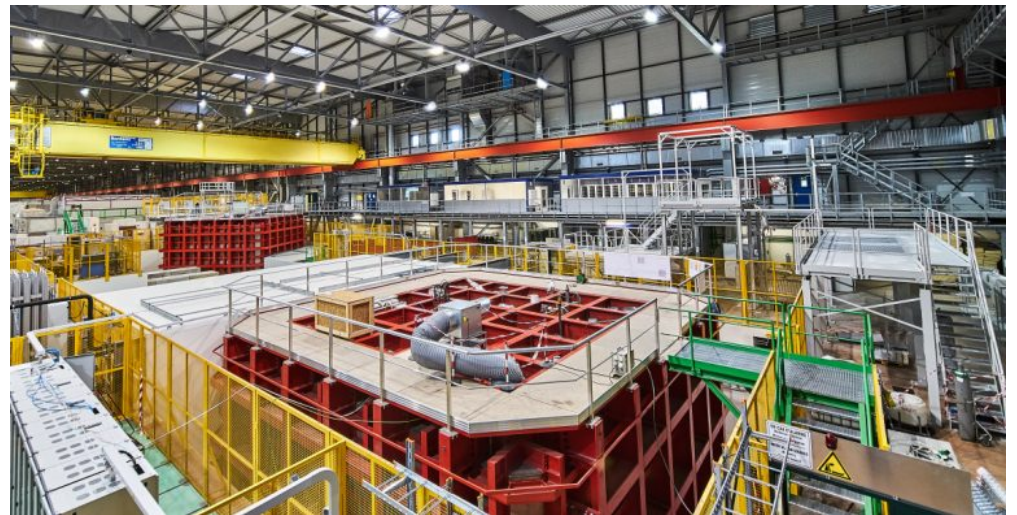
CP violation in
neutrino sector ???



Oscillation patterns



Proto-DUNE @ CERN

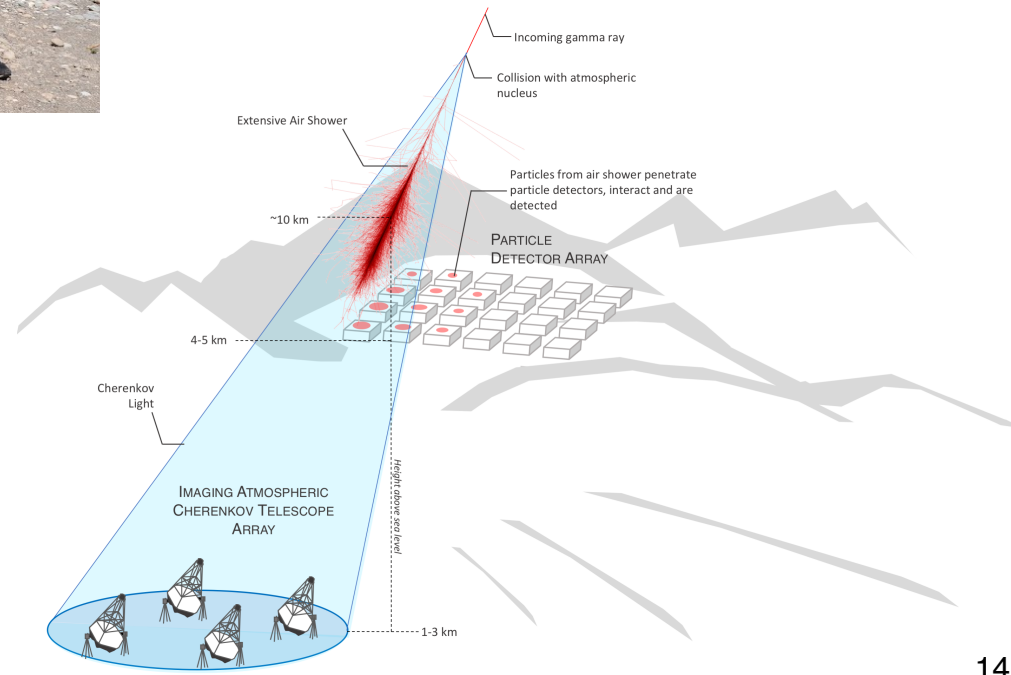


Cosmic-Rays



First station of MARTA EA
@ Malargue

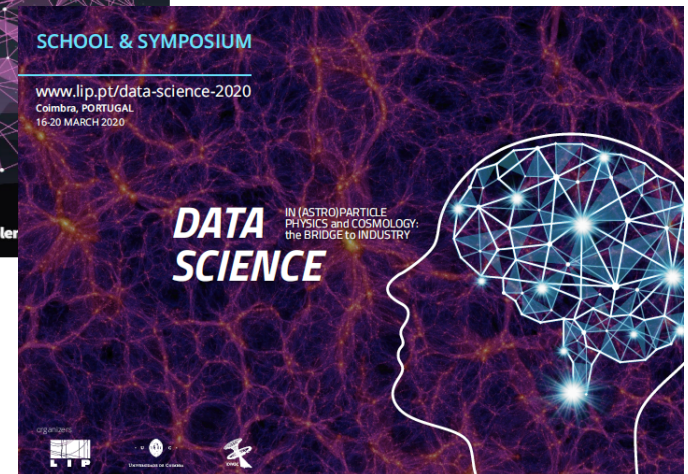
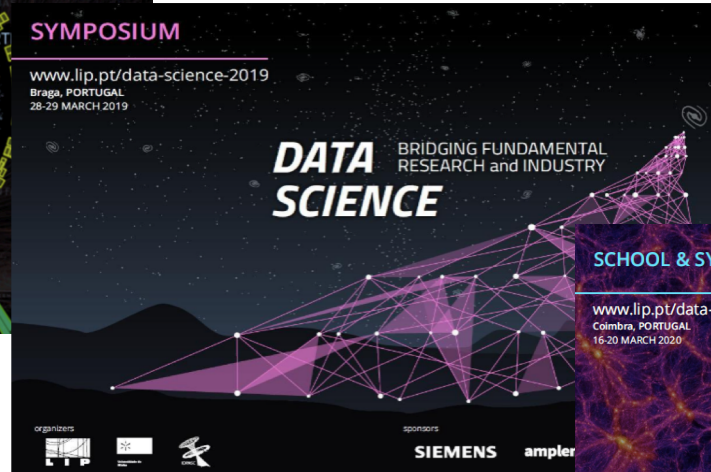
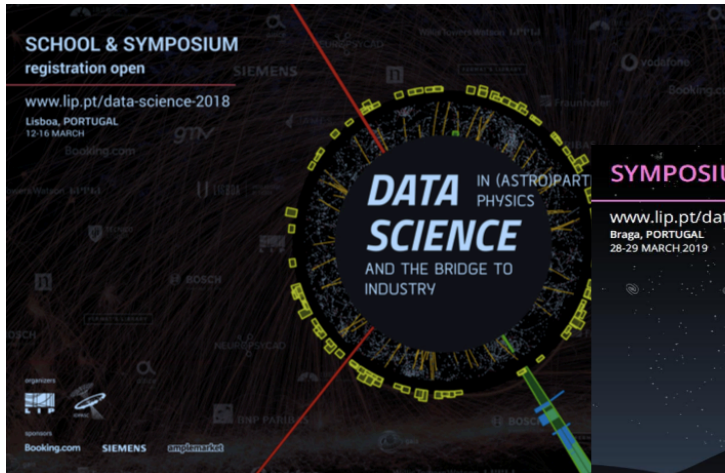
SWGO launched



Not to scale

Data Science

Data science schools and Workshops – 2018, 2019, 2020



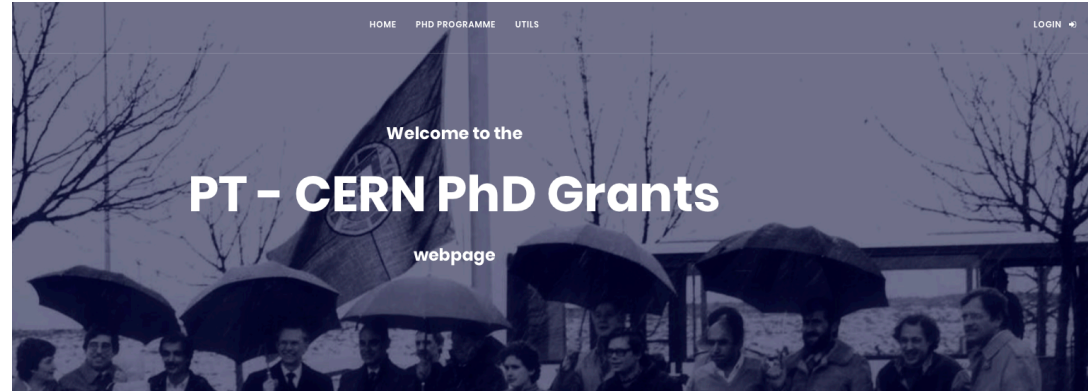
Social Physics and Complexity Group
is joining LIP

Students

A new body:
the LIP student council

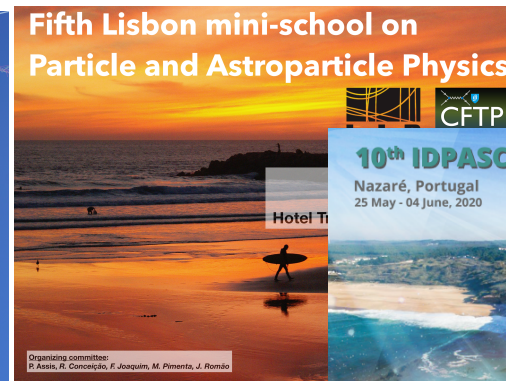
A new program:
Portugal-CERN PhD Grants

Summer internship program,
Schools, Workshops, ...



OPEN CALL PT-CERN 2020/1

The call will be open from 10th February to the 30th April 2020
Supervisors can propose thesis from 10th to 27th February



Outreach



flagship programs
and many other activities in
schools and for general public

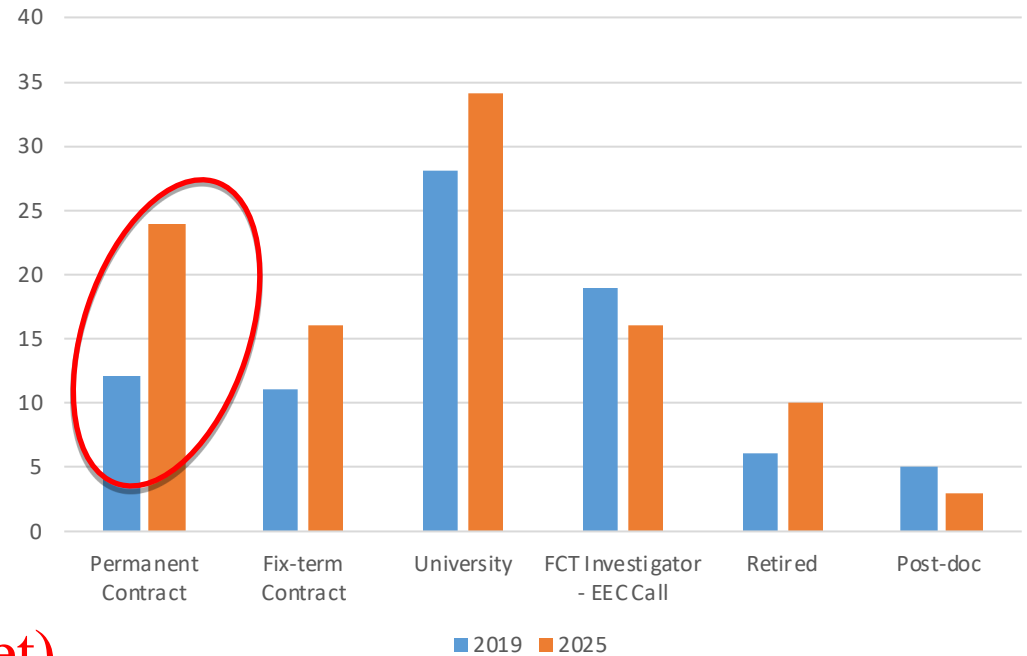


Employment

LIP integrated PhDs

2019 : 81

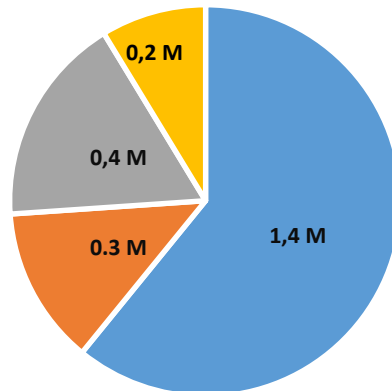
2025 : 103 ??



Human resources (LIP budget)

2019 : 2.3 M€

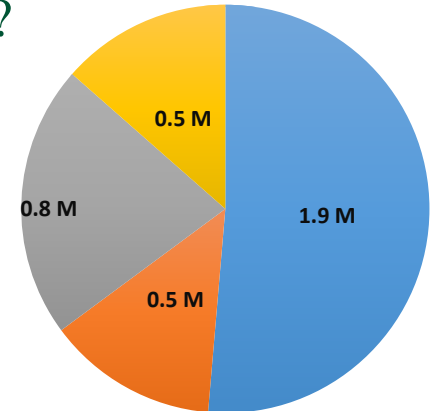
with PhD : 1.25 M€
without PhD : 1.05 M€



■ FCT (LA + Quotas) ■ Overheads ■ European Projects ■ National Projects

2025 : 3.7 M€ ??

with PhD : 2.2 M€
without PhD : 1.5 M€



Associated Laboratory

Call to open soon ...



**REGULAMENTO DE ATRIBUIÇÃO
DO ESTATUTO E FINANCIAMENTO
A LABORATÓRIOS ASSOCIADOS**

The travel must goes on!



