

Welcome to the



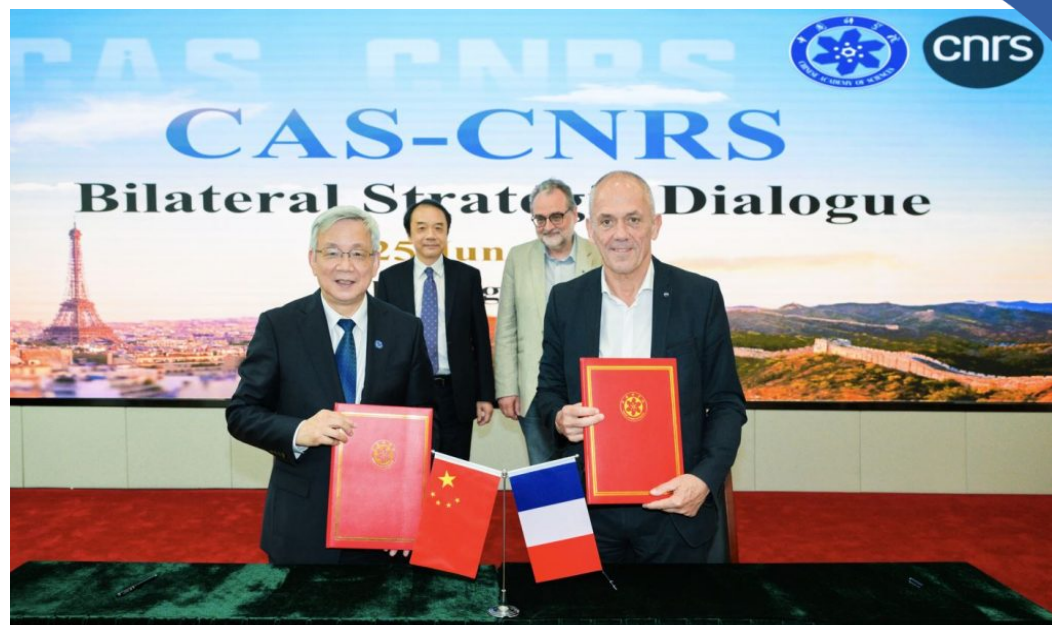
France-China Particle Physics Research Network
2025 Workshop in Qingdao



LIA FCPPL created on 10 Apr 2007, renewed in Apr 2011, again in Apr 2015 and:

24 Jun 2024

**CAS President and
CNRS CEO
sign the FCPPN
agreement at CAS
HQ in Beijing**



- **The aim of the new joint structures is to promote the cooperation between France and China** in particle and astroparticle physics between research groups from about **18 French laboratories (14 universities)** from **all over France** and research groups from **CAS** and from about **23 major universities in China**.
- **The IRN allows the partners to work together with the best research infrastructures in our fields**, to name just a few: LHC experiments at CERN, KM3NeT in France and Italy, CTAO, LSM (Laboratoire Souterrain de Modane) in France; JUNO (Jiangmen Underground Neutrino Observatory), CJPL (China Jinping Underground Laboratory), LHAASO and GRAND in China; SVOM a common Franco-Chinese space mission, ...
- **Relevant research fields have a broad spectrum**: Particle and Hadronic Physics, Neutrino Physics, Astroparticle Physics and High Energy Astrophysics, Cosmology, Accelerator Physics, together with Theoretical Physics and (accelerator-, detector-, computing-) related technologies to participate in collaborative efforts to better understand the physics of our Universe.

France China Particle Physics Net/Lab (FCPPN/L)

Numbers and Facts

over 460 members!

- **Web sites:** fcpl.in2p3.fr & fcppn.in2p3.fr
Mailing-list: FCPPL-L@in2p3.fr
Funding: ~ 160 to 200k€/yr (FR/CN ~ 1)
for mobility and exchange - *all sources included*
~ 30 collaborative projects funded each year
- **Yearly Workshop:**
5 day long
100+ participants
lively, dynamic and friendly community

Beijing (IHEP)
12/2006
(to prepare FCPPL)

Marseille, 01/2008

Wuhan, 03/2009

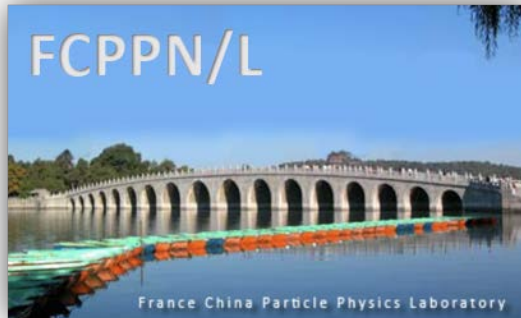
Lyon, 04/2010

Jinan, 04/2011

Orsay-Saclay, 03/2012

Nanjing, 03/2013

Clermont-Ferrand, 04/2014



Hefei, 04/2015

Strasbourg, 03/2016

Beijing (THU), 03/2017

Marseille, 05/2018



Shanghai, 04/2019

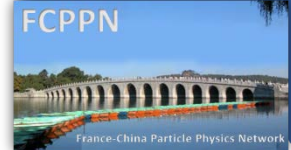
Zoom, 12/2021

Zhuhai, 11/2023

Bordeaux, 06/2024

Qingdao, 07/2025

France China Particle Physics Network (FCPPN)



Web site:



<https://fcppn.in2p3.fr/>



**The next yearly workshop will be held on
21-25 July 2025 in Qingdao, China.**

<https://indico.ihep.ac.cn/event/25400/>

This workshop

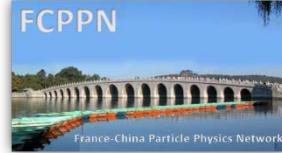


Next workshops:

- **2026 in France – Lyon**
- **2027 in China – Wuhan**
- **...?**

To be finalized at the Steering Committee on Thursday morning

FCPPN supported projects



Since 2005 – some 100 PhD students shared

2024 - 27 projects supported: 183 k€ requested (FR) and 71 k€ (FR) allocated

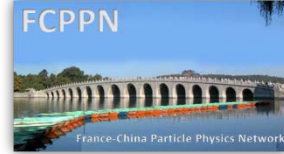
2025 - 31 projects to-be-supported: 189 k€ requested (FR) (pending FSD approval) and 68.5 k€ (FR) distributed (to attend Workshop)

| TITLE | PI FR | Lab FR | PI CN | Lab CN | TYPE |
|---|---------------------------------------|----------|----------------|-----------|------|
| Luminosity and injection background at SuperKEKB and CEPC | BAMBADE Philip | IJCLab | GAO Jie | IHEP | ACC |
| Polarized Positrons for Next Generation Circular Colliders | CHAIKOVSKA Iryna | IJCLab | LI Xiaoping | IHEP | ACC |
| Compton Sources for future accelerators for particle physics | DUPRAZ Kevin | IJCLab | YAN Lixin | THU | ACC |
| Design and implementation study of monochromatization scheme for the direct s-channel Higgs production at FCC-ee and CepC and feasibility experimental study in current low-energy e+e- colliders | FAUS-GOLFE Angeles | IJCLab | ZHOU Zusheng | IHEP | ACC |
| Future Colliders Compton Polarimeters for particle physics / France China Compton | MARTENS Aurélien | IJCLab | DUAN Zhe | IHEP | ACC |
| Multi-messenger study with KM3NeT | COYLE Paschal | CPPM | YANG Lili | SYSU | ACO |
| The Giant Radio Array for Neutrino Detection: GP300 stage | MARTINEAU Olivier | LPNHE | WU XiangPing | NAOC | ACO |
| BAORadio and Tianlai | PERDEREAU Olivier | IJCLab | CHENG Xuelei | NAOC | ACO |
| Directional Dark Matter Detection with MIMAC and Fast and Thermal Neutron Detection in underground laboratories | SANTOS Daniel | LPSC | YUE Qian | THU | ACO |
| Monitoring astrophysical sources with JUNO | SETTIMO Mariangela | SUBATECH | LI Yufeng | IHEP | ACO |
| Highest energy gamma-ray sky with LHAASO | NERONOV Andrii | APC | YUAN Qiang | PMO | ACO |
| LHC-IHEP-CPPM-ATLAS-detectorRnD | BARBERO Marlon | CPPM | WEI Wei | IHEP | DET |
| development for strip-pixel sensor | BECHETOILLE Edouard | IP2I | ZHANG Liang | SDU | DET |
| an SiW-ECAL optimized for e+e- collisions | BOUDRY Vincent | LLR | RUAN Manqi | IHEP | DET |
| R&D for CMOS-based detector in LHCb tracking for HL-LHC | GERMAIN Marie | SUBATECH | WANG Jianchun | IHEP | DET |
| CALO-SJTU-IPNL-SDHCAL | LAKTINEH Imad | IP2I | YANG Haijun | SJTU | DET |
| COMET Track Finding and Fitting | DA SILVA Wilfrid | LPNHE | LI Haibo | IHEP | ESC |
| COMPUTING TOOLS AND METHODS FOR DATA OF FUTURE HEP EXPERIMENTS | AAD Georges | CPPM | QI Fazhi | IHEP | ESC |
| Study of QCD matter with the ALICE detector | BASTID Nicole | LPCA | ZHANG Xiaoming | IOPP/CCNU | HAD |
| JUNO-IHEP-IPHC-muon-tracker: Installation and operation of the JUNO Top Tracker | ATHAYDE MARCONDES DE ANDRÉ João Pedro | IPHC | YANG Changgen | IHEP | NEU |
| The JUNO Small Photomultipliers Tube (SPMT) system | PERROT Frédéric | LP2I | HE Miao | IHEP | NEU |
| Charmonia in LHCb | BARSUK Sergey | IJCLab | HE Jibo | UCAS | PPA |
| Calorimeter for future tau-charm factory | BARSUK Sergey | IJCLab | PENG Haiping | USTC | PPA |
| Search for HH production at the LHC | BERNARDI Gregorio | APC | YANG Haijun | SJTU | PPA |
| Multi-boson Physics at LHC and future machines | CHARLOT Claude | LLR | LI Qiang | PKU | PPA |
| Higgs boson discovery and measurement with photons in CMS | GASCON Suzanne | IP2I | CHEN Guoming | IHEP | PPA |
| Associated quarkonia production | MIZUK Roman | IJCLab | LI Hengne | SCNU | PPA |
| Physics at LHC with the ATLAS detector | MONNIER Emmanuel | CPPM | JIN Shan | NJU | PPA |
| Bc studies and upgrade of ECAL for LHCb | ROBBE Patrick | IJCLab | ZHANG Liming | THU | PPA |
| Exploring t-channel charm-philic dark matter scenarios | FUKS Benjamin | LPTHE | LIU Bingxuan | SYSU | THE |
| Quarkonium studies at the LHC and future facilities | SHAO Hua-Sheng | LPTHE | MA Yanqing | SJTU | THE |

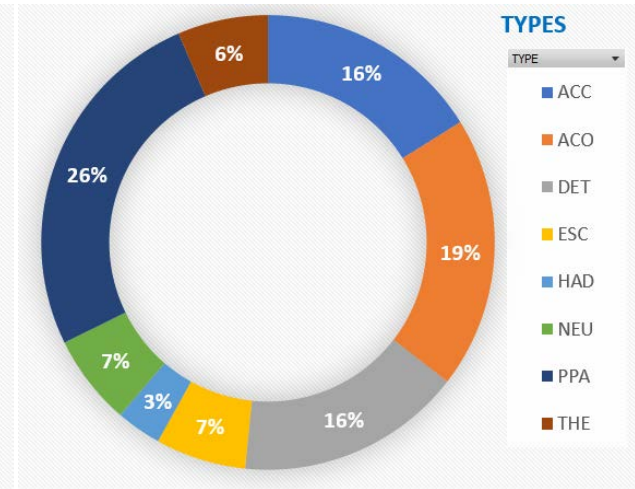
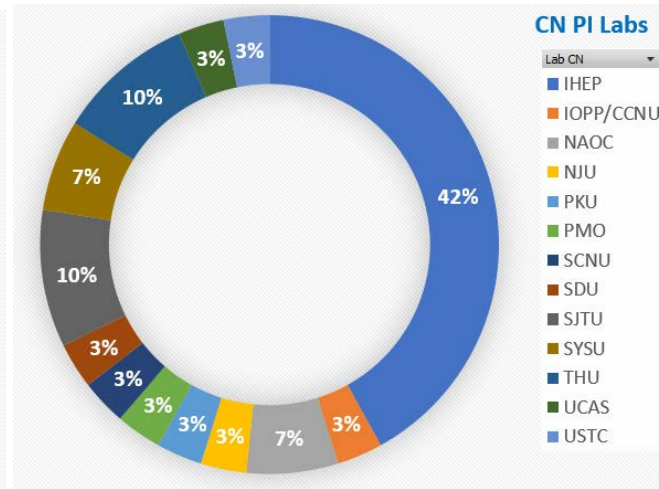
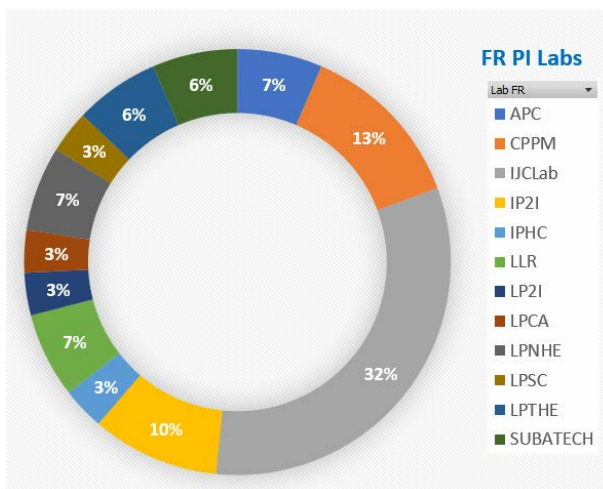
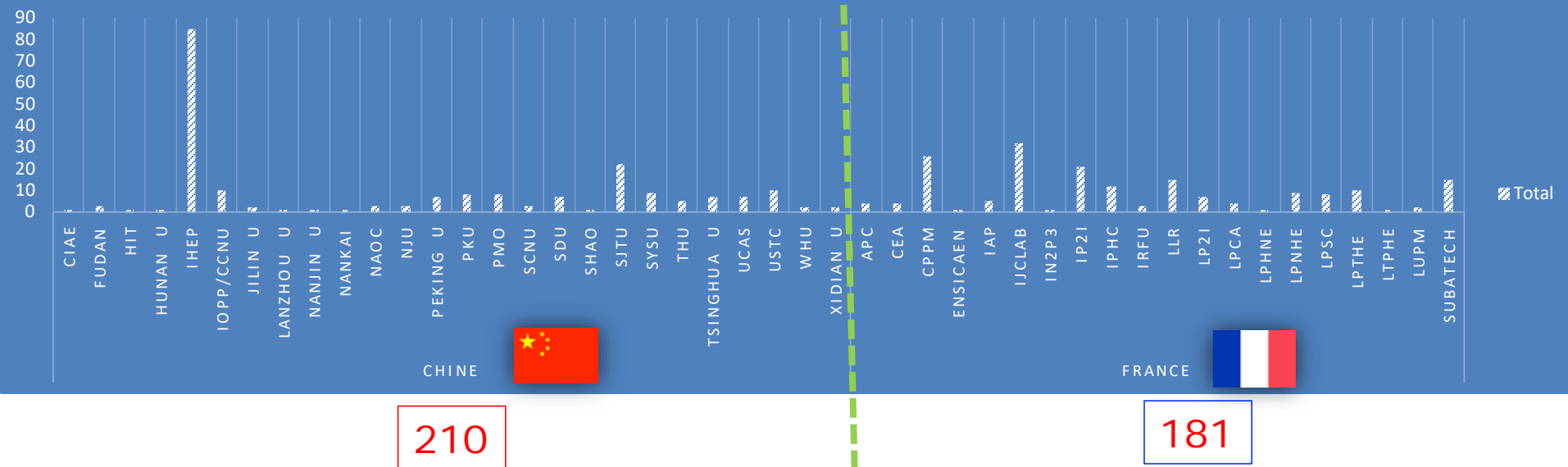
Next Call for Proposal: Dec 2025

Projects supported in 2025

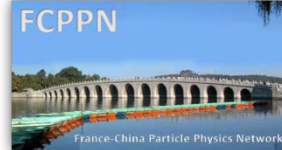
(pending FSD approval)



TOTAL # OF PEOPLE INVOLVED IN THE FCPPN COLLABORATIVE PROJECTS



LIA to IRN + IRL



FCPPN an International Research Network (IRN) that we want to combine to an International Research Lab (IRL) hosted on the IHEP Campus in Beijing.

A new combined Research Structure involving over 460 collaborators all over China and France

Two intertwined CNRS collaborative tools

IRN: to make emerge and actively support collaborative projects in general and an

IRL: to increase support to activities deployed in China; host French colleagues visiting Chinese labs for longer periods of time; **enhance the possibility of submitting proposals to calls for extra funding**

IRN + IRL

FCPPN

Agreement signed by
CAS and CNRS on 25 Jun 2024

FCPPL Joint Lab with walls @IHEP in Beijing

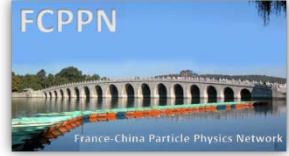
More specifically for experiments deployed in China

- Neutrinos (JUNO, Submarine neutrinos,...)
- Cosmic/Gamma Rays, Dark Matter
- Future colliders and detectors

Access to funding programs not possible with an LIA or an IRN

**Paperwork will be finalized after the 2025 workshop
for an implementation as soon as possible**

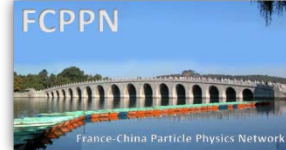
Foster new collaborations...



FCPPN & L: a vibrant framework to allow the community to brainstorm, setup and implement new projects and collaborations aiming at making breakthroughs in understanding the physics of the Universe

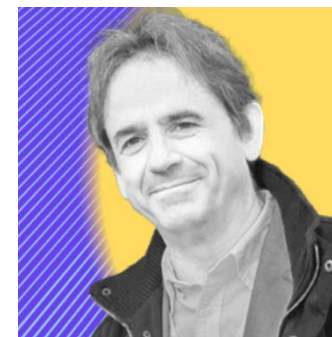
- R&D for future detectors in connection to ECFA DRDs @CERN
- Developments within DRD4@CERN for photo-detection between IP2I and Xi'an
- R&D for computing and advanced methods and tools for high energy physics
- Collaborations on submarine neutrino telescopes and their environments (IHEP, SJTU, SYSU,...) with KM3NeT (CPPM, APC, IPHC,...)
- Develop a project between LST (Large Telescopes for CTAO) and LHAASO collaborations to better study Pevatrons between CPPM (LST) and IHEP (LHAASO) ?
Possible synergy with the neutrino telescope projects as well
- Collaborative analysis projects on SVOM (already started w/ IHEP and LUPM; more?),
New projects on GW detectors and data analysis, large cosmological surveys?
- ... ???

30th Anniversary of CNRS Beijing Bureau



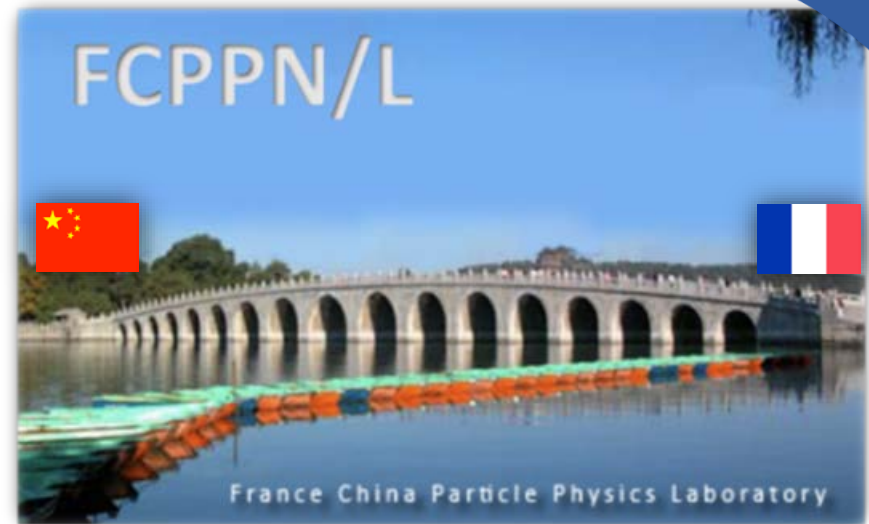
3-day long event in Nov 2025 in Beijing

- **Nov 3rd:** Event at the French Embassy in Beijing
- **Nov 4th:** Mini-workshops on 3 specific domains
 - Atmospheric Chemistry
 - Biological Imaging
 - **Particles, Astroparticles and Cosmology (FCPPN)**
- **Nov 5th:** Focus on collaborations with PKU (including FCPPN perimeter)
- **Workshop on FCPPN perimeter could be 2+4 hour long, dealing with few topics defining some specific actions that we would like to boost within the next 3 years**
The IRL could consolidate and organize these actions for which we could hopefully expect extra funding or co-funding for PhD and Postdoc grants
- **To be discussed with you and at the Steering Committee on Thursday as well.**
- **By Friday we should have:**
 - **Lists of topics**
e.g. New colliders and detectors for PP; experiments@CERN; Astroparticles & Cosmology, ...
 - **List of people who will attend**
20-30 colleagues from China
~ 10 colleagues from France [FCPPN expected to cover expenses of 4 of them]



Fermin Cuevas
New Director

**A solid bridge
for scientific collaborations
in High Energy Physics
and cultural exchanges
between our two countries**



**Also taking part in paving
roads for progress and peace
between our countries**

**Building a collaborative and
sustainable future for the
generations to come**

Let's work together to make this collaboration even stronger!