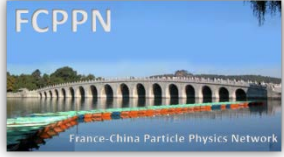
16th France China Particle Physics Network Workshop

Qingdao, France on July 21-25, 2025

- Short « just-out-of-the-oven » minutes of the Steering Committee
- Wrap-up

Agenda



- IRN creation
  Governance of the IRN
  Enforcement of stricter rules for PSST

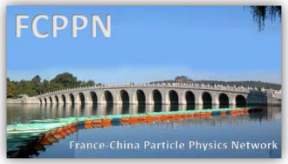
- Projects supported this year
  Fostering of new collaborations

- Towards 2 intertwined “CNRS/CAS + partners” collaborative tools
  IRN + IRL to keep an active support to projects in general, increase number of French colleagues in China, increase extra funding

- Funding now and in the future

- Location of the next FCPPN yearly Workshop

- AOB

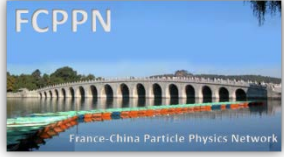


LIA FCPPL created on 10 Apr 2007, renewed in Apr 2011, again in Apr 2015 and:

24 Jun 2024
CAS President and CNRS CEO sign the FCPPN agreement at CAS HQ in Beijing

- **The aim of the new joint structure 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.

IRN Governance



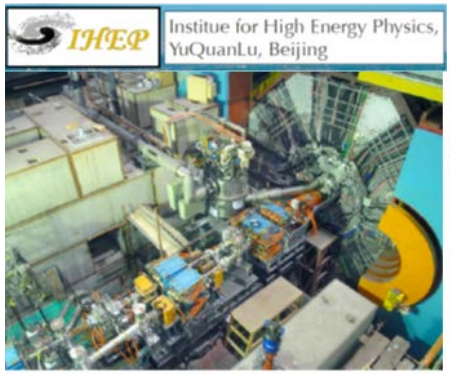
Steering Committee (ST)

The ST validates the proposal of the BoD for the use of the resources allocated to collaborative projects as well as to the other activities undertaken by the IRN.
It is composed of representatives of all institutions contributing to the IRN resources: the director of IN2P3 or his/her representative, the director of IHEP or his/her representative, the director of CPPM (IRN admin. HQ) or his/her representative, and representatives of the governance of the other contributing partners.
It is co-chaired by a representative of the Chinese and French parties

Currently: **Hesheng CHEN and Imad LAKTINEH**

Hesheng CHEN steps down and **Yifang WANG** appointed

France China Particle Physics Net/Lab



BEPC & BES and upgrades

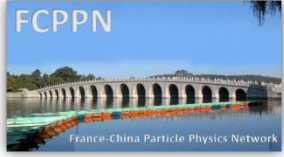
1988

Thank you Hesheng!

and best wishes to Yifang

FCPPL created on 10 Apr 2007, renewed in Apr 2011, again in Apr 2015 and as FCPPN in 2024

IRN Governance



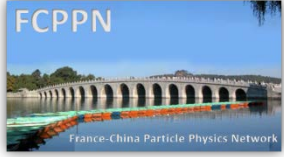
Board of directors (BoD)

The IRN is co-directed by a Director from IHEP and a Director from IN2P3 and a deputy director representative of the cluster of Chinese Universities participating.

Currently: Gang CHEN & Eric KAJFASZ (co-directors); Meng WANG (deputy-director);
Paola BERTELLI (admin. manager)

The term of the BoD is normally 5-years and related to the duration of the IRN.
Both the IRN and the BoD can be renewed.

IRN Governance



Scientific Evaluation Committee (SEC)

The IRN BoD appoints a scientific evaluation committee in charge of the evaluation of the scientific collaborative projects proposed within the IRN. Following this evaluation, the IRN directorate presents a proposal for the allocation of the resources to the Steering Committee.

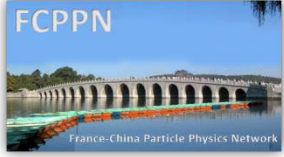
The evaluation committee comprises an equal number of Chinese and French Scientists, at least four from each country, validated by the SC. 5yr-mandate

SEC members were identified on both Chinese and French sides.

We need to live and comply with the stricter rules related to the Protection of the Scientific and Technical potential (PPST)

We need to have a FSD – IN2P3 – FCPPN discussion to setup a clear PPST validation procedure and timeline for presenting the contents of the projects and the identity of people likely to work on them, ahead of time, so it does not induce time delays.

FCPPN supported projects



Since 2005 – some 100 PhD students shared

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

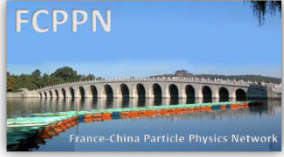
2025 - 31 projects to-be-supported: 189 k€ requested (FR) **(pending FSD approval)** and 68.5 k€ (FR) distributed (to attend Workshop)

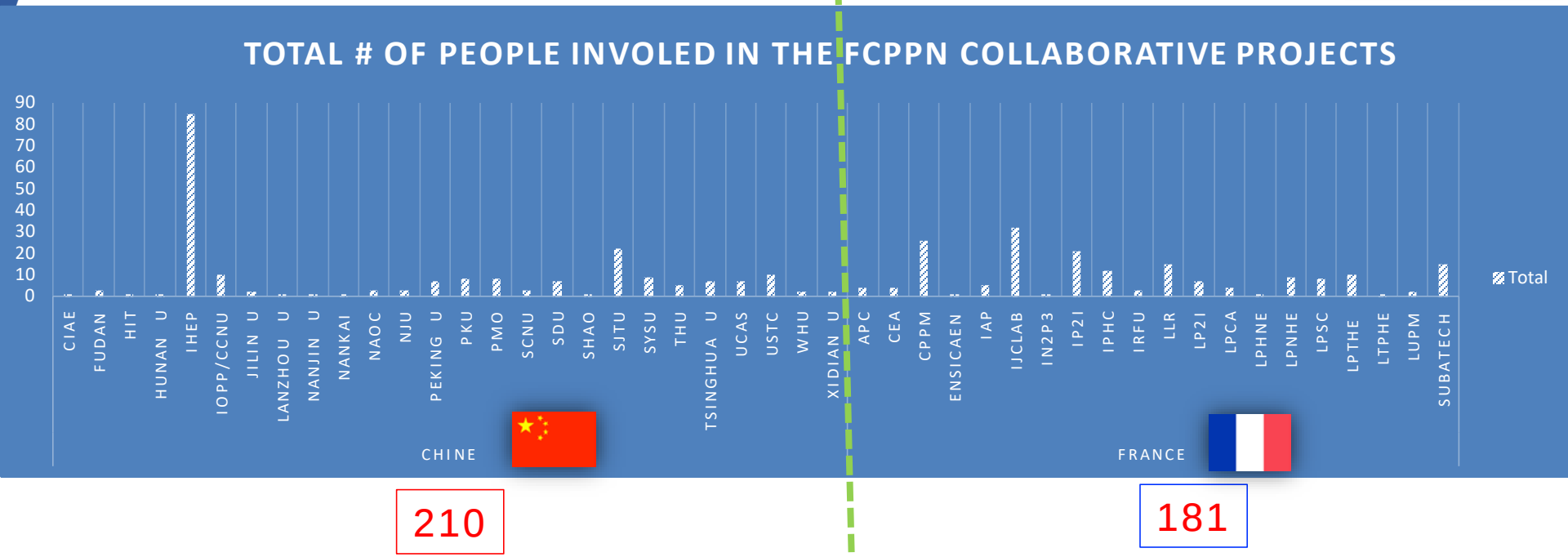
TITLE	PI FR	Lab FR	PI CN	Lab CN	TYPE
Luminosity and injection background at SuperKEKB and CEPC	BAMBADE Philip	IJCLab	GAO Jie	IHEP	ACC
Polarized Positrons for Next Generation Circular Colliders	CHAIKOVSKA Iryna	IJCLab	LI Xiaoping	IHEP	ACC
Compton Sources for future accelerators for particle physics	DUPRAZ 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

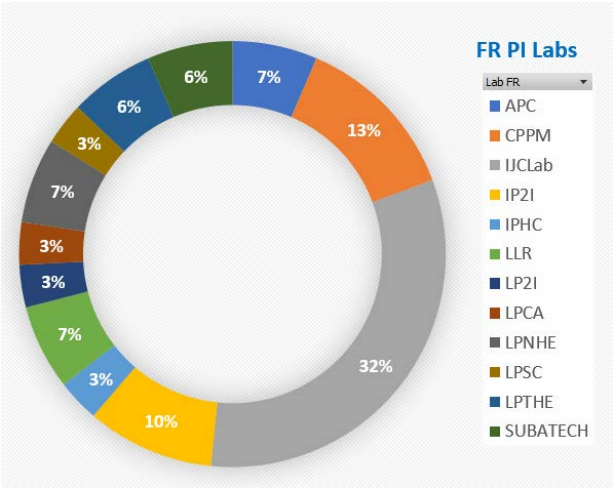
(pending FSD approval)

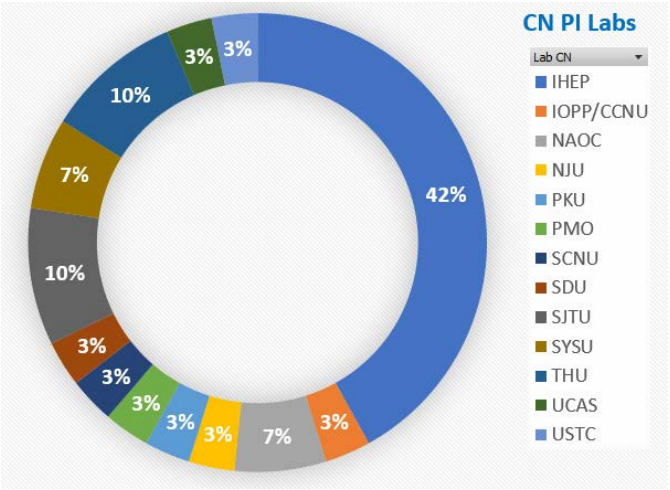


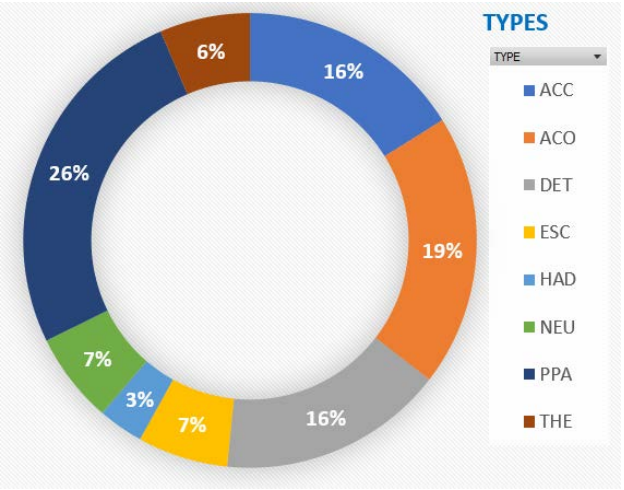


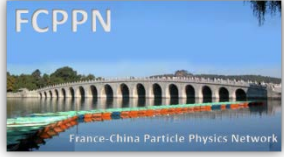
210

181









Since last year, fostered emergence of new collaborations…

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

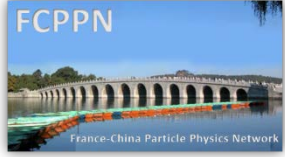
- R&D for future detectors in connection to ECFA DRDs @CERN
- Developments within DRD4@CERN for photo-detection between IP2I and Xi'an
- R&D for computing and advanced methods and tools for high energy physics

- 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)
  With 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,
  New project on large cosmological surveys

IRN + IRL



FCPPN: 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

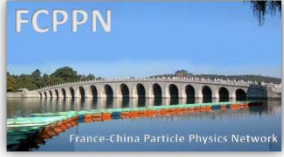
Agreement signed by
CAS and CNRS on 25 Jun 2024

FCPPL **Joint Lab with walls** @IHEP in Beijing
More specifically for experiments deployed in China like…
- Neutrinos (JUNO, Submarine neutrinos,…)
- Cosmic/Gamma Rays, Dark Matter
- Future colliders and detectors

Access to funding programs that are not possible with an IRN

Paperwork will be finalized by Gang & Eric just workshop
for an implementation in November 2025

Funding available for the IRN



Already available now

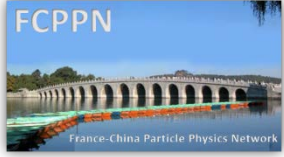
- Direct funding
  - CNRS (IN2P3) : 60 k€ in 2024 and 70k€ en 2025 (used to be 85k€ before CoVid)
  - Same budget met (and even more) by Chinese teams involved

- CSC grants:
  - 3-yr CSC grants (not necessarily co-tutored PhD thesis btw CN and FR teams)
  - 2-yr CSC grants for co-tutored PhD theses btw CN and FR teams
    Possibly completed by an Eiffel grant

- French Embassy in China (~ 3*15k€):
  Workshop CEPC 2024 in Marseille (from budget obtained in 2020), Workshop ALICE 2024 in Wuhan, Workshop FCPPN 2025 in Qingdao
- **Need to use more thoroughly the Cai Yuanpei programmes** ("Découverte", "Tremplin", "Doctorants", "Partenariat Hubert Curien") **from the French Embassy**:
  https://cn.ambafrance.org/programmes-de-cooperation-scientifique-et-universitaire

- Gang CHEN (FCPPN co-director) managed to get extra funding from grants from CAS and MoST to establish the IRL

Funding available after IRL created?



Hopefully available in the near future

- **Apply to Marie-Curie EU Calls**
  - In particular **MSCA - Staff Exchanges** and **MSCA - Doctoral Networks**
  - In addition to **CN** and **FR** since 3 EU or EU-associated countries are required, exploring to have **Italy, Spain, Germany and/or UK interested and involved?**
- **Apply to some possible specific call from CAS and MosT?**
- Hopefully get from time to time **CNRS funded or co-funded PhD and Postdoc grants**
- **Have the French Universities involved contribute to the direct budget of the structures**
- Other ideas? …

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)

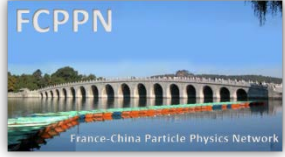
Fermin Cuevas
New Director

- **Nov 5th: Focus on collaborations with PKU**
  4 FCPPN projects with PKU collaborators; 2 with PKU co-PI
  - Kuang-Ta Chao (PKU) & Hua-Sheng Shao (LPTHE)
  - Qiang Li (PKU) & Claude Charlot (LLR)

- **Workshop on FCPPN perimeter could be up to 6 hour long, discuss few topics to define some specific actions that we would like to boost within the next 3 years**
  The IRL could consolidate and organize these actions, as baseline of the scientific roadmap of the IRL

- **Will try to take this opportunity to also have the signature of the creation of the IRL in Beijing by CAS president and CNRS CEO**

30th Anniversary of CNRS Beijing Bureau

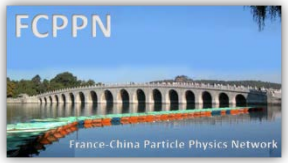


3-day long event in Nov 2025 in Beijing

Proposal: focus the mini-workshop on axes of the to-be-created IRL

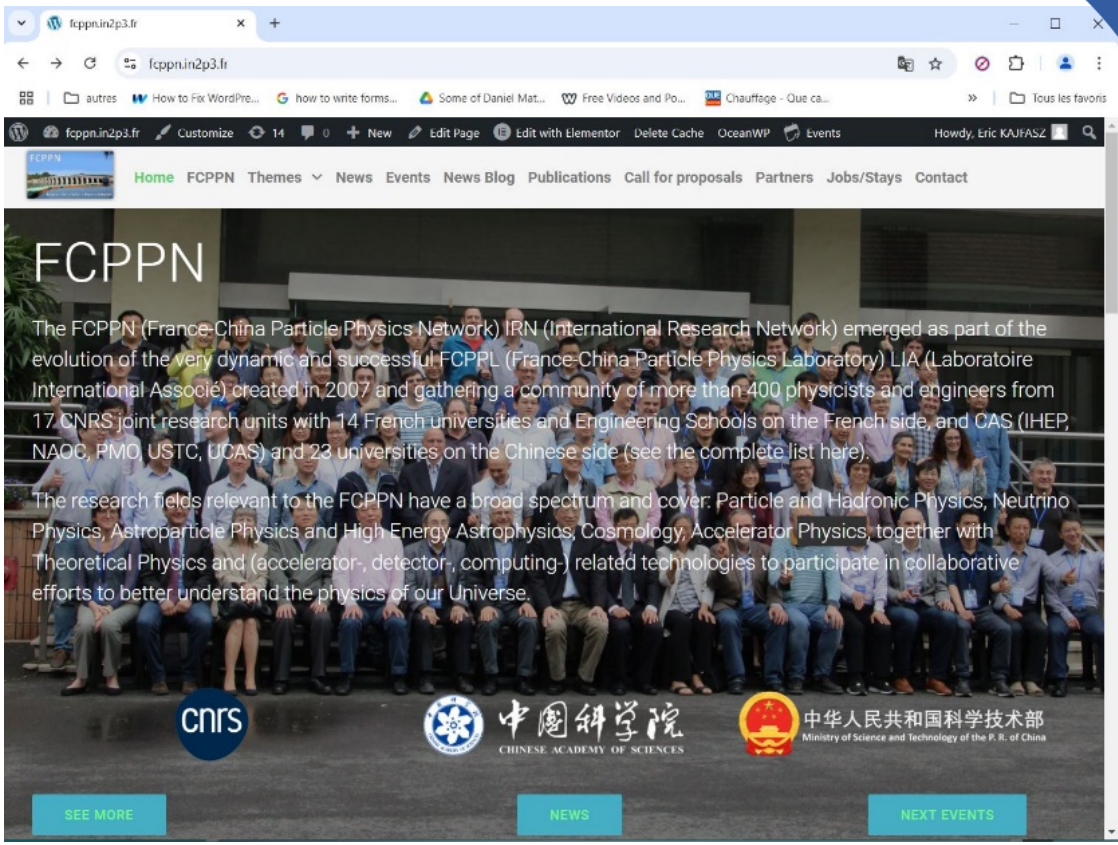
- **By Friday we should have:**
  - **Lists of topics**
    Future colliders and detectors;
    Neutrinos;
    Multi-messenger High Energy Astro-particle/physics

  - **CNRS bureau prefers limited number of attendees**
    20-30 colleagues from China
    ~ 10 colleagues from France
    [FCPPN expected to cover expenses of 4 of them]



France China Particle Physics Network

New Web site: https://fcppn.in2p3.fr/
Please send comments, news, etc… to improve it and make it useful



Next workshops:

- **2026 in France – Lyon ongoing selection of dates given local availability of rooms. We'll keep you posted**
- **2027 in China – Wuhan**
- **2028 in Clermont-Ferrand**
- **2029, 2030, are they candidates?**

Great thanks to all of you for having made this workshop a success!

A very successful workshop in many ways:

- **It was really great to meet with so many of you (175 including 40 from Europe) in Qingdao!☺**

- **Great thanks to Prof. Wang Meng and our SDU colleagues for hosting the 16th edition of the FCPPN Workshop!**
  You really made us feel at home (如家)!☺
- **You did an outstanding job and raised the bar really high in preparing, organizing and running the workshop!**
  Great organization! Awesome banquet!

Great thanks to all of you for having made this workshop a success!

A very successful workshop in many ways:

- **The quality of the work and talks presented is impressive**
  Thanks to the speakers, the session conveners and the scientific organizing committee. We had a great and wide-spectrum program!

Great thanks to CAS, MoST and university groups, CNRS/IN2P3 and the French Embassy for their continuous support!

Have a nice trip back home

and see you next year in Lyon for the FCPP**N** Workshop!