

FCC Design Study

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General News

Informations générales
CECP
Prochain RV

ON THE MAP!

Future high-energy circular colliders

Parameters are indicative and fast evolving, as no CDR yet

China: 50-70 km $e^+e^- \sqrt{s}=240$ GeV (CepC) followed by 50-90 TeV pp collider (SppC) in same tunnel

50 km e^+e^- machine + 2 experiments:

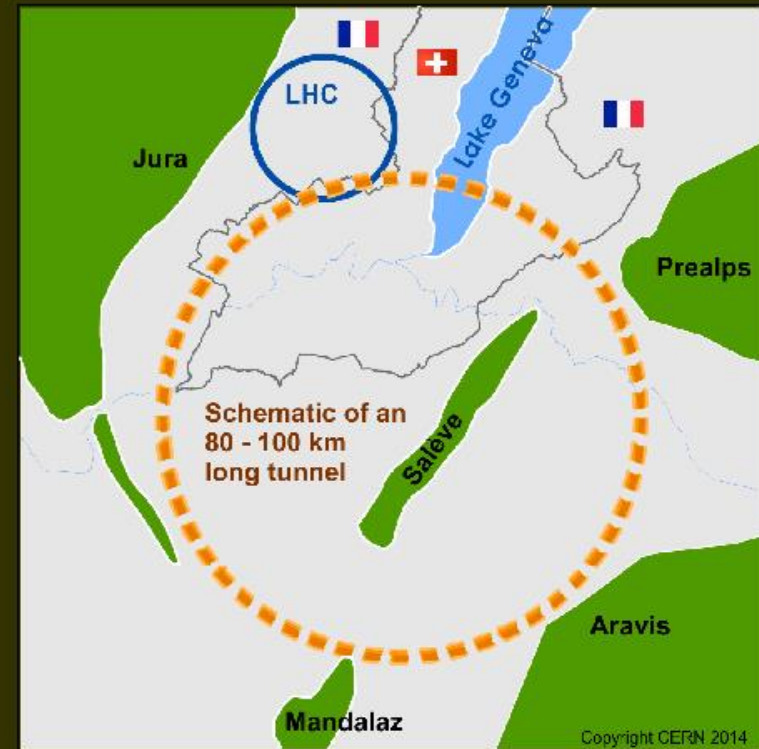
- pre-CDR: end 2014
- construction: 2021-2027
- data-taking: 2028-2035
- cost (material): ~3 B\$

CERN FCC: international design study for Future Circular Colliders in 80-100 km ring:

- 100 TeV pp: ultimate goal (FCC-hh)
 - 90-350 GeV e^+e^- : possible intermediate step (FCC-ee)
 - $\sqrt{s} = 3.5-6$ TeV ep: option (FCC-eh)
- Goal of the study: CDR in ~2018.

Best beach & cleanest air
Summer capital of China

Possible site:
Qinghungdao



H2020: Past calls

3 DS (INFRADEV-1) projects submitted

Calls	2014 (M€)	«Max.» EC co. (M€)	Deadline
INFRADEV-1 (DS)	15	« 3 »	2 Sept. 2014

EuroCIRCOL: FCC-hh 100km Circular collider (Core part of FCC)

EuPRAXIA: European Plasma Accelerator with High Beam Quality and Pilot Applications

ESSnuSB : neutrino Super-Beam based on ESS linac

39 projects submitted (expected success rate ~13%)

Notification from the EC received in January 2015

DS Results

Outcome very good in general (all project in top 25%) but in practice only one funded for the moment

**FCC approved with a score of 15/15 (ranked #1)
Full requested budget accepted (3M€)**

**EuPRAXIA in the reserve list with a score of 14/15
(ranked #8)**

**ESSnuSB rejected with a score of 13.5/15
(ranked #9)**

Contract and MoU

Contract with the EC for EuroCIRCOL

MoU with CERN for FCC

2 parts:

- **General framework**
- **Addendum with specific activities**
 - **Study of TPC for FCC-ee**
 - **Study of magnetic configuration for FCC-hh detectors**
 - **Design and arcs layouts for FCC-hh**
 - **Study and design of dipole magnets for FCC-hh**


Objective CepC:

- **End 2014: First Draft pre-CDR** collection of existing information
 - from ILC, FCC on physics and accelerator
 - for detector (ILD)
- **On-going internal review of the document with external reviewer also**
 - **Accelerator part done**
 - **Physics : this week**
 - **Detector (?)**
- **Spring 2015: Submission for funding CDR during next 5 years**
- **Request in the range 500-800MYuan (70-100M€)**
- **Summer/fall 2015: Decision from Government for R&D support**

Etudes conjointes IHEP/Tsinghua - Saclay



Fort souhait des physiciens IHEP et Tsinghua (CEPC) de collaborer avec Saclay



Il est aussi de notre intérêt de collaborer avec eux pour suivre les développements de CEPC et éventuellement de faire des études conjointes



Après discussions lors de la réunion FCPPL, nous avons convenu

- R&D communes sur la TPC
- accueil de thésard chinois vers 2nd semestre 2015

Mais peu d'action jusqu'à présent :

- Manque de temps du côté Chine à cause du pre-CDR
- Pas vraiment près de notre côté

Discussion récente avec GAO Yuanning

Difficulté de trouver un étudiant de niveau suffisant

Si bon candidat, pourrait l'envoyer pour quelque mois cette année

Financement ne semble pas poser de pb.

Si OK pourrait rester plus longtemps en 2016

On pourrait finaliser cela lors du meeting FCPPL à Hefei du 8 au 10

Avril 2015: <https://indico.cern.ch/event/348717/>

FCC-ee (TLEP) VIDYO meetings & Workshops



FCC-ee vidyo meetings:

<http://tlep.web.cern.ch/node/1553/indico-events>

Last FCC-ee workshop Feb. 3-5 see

<https://agenda.infn.it/conferenceDisplay.py?ovw=True&confId=8830>

Next Physics meeting March 2nd

<https://indico.cern.ch/event/375193/>

Next accelerator meeting March 2nd

<https://indico.cern.ch/event/373936/>

FCC-hh (VHELHC) VIDYO meetings

<https://indico.cern.ch/categoryDisplay.py?categId=5258>



Many vidyo meeting done:

Next workshop scheduled: <https://indico.cern.ch/event/352868/>

March 11-13 (Higgs and BSM at 100 TeV)

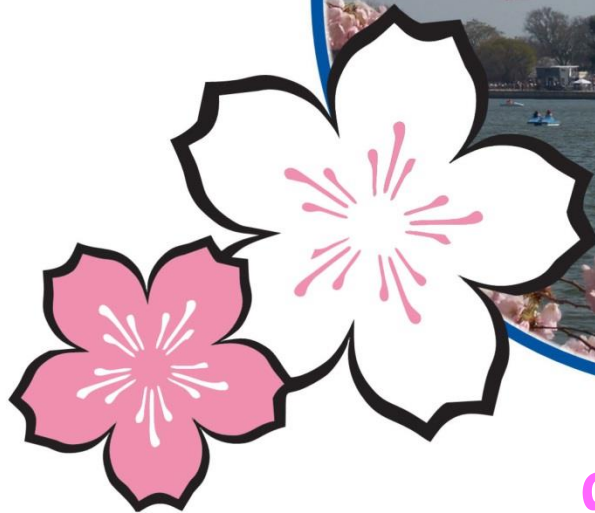
FCC Week 2015

IEEE International Future Circular Collider Conference
March 23 - 27, 2015 | Washington DC, USA

Organisers:

Bruce Strauss (US DoE)
Abid Patwa (US DoE)
Suzanne Strauss
Michael Benedikt (CERN)
Frank Zimmermann (CERN)
Johannes Gutleber (CERN)

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draft poster

More information and registration
<http://cern.ch/fccw2015>

First FCC Week

Conference

Washington DC 23-27 March 2015

<http://cern.ch/fccw2015>