FC-CPPM
General News

S. Muanza, CPPM, CNRS-IN2P3 & AMU

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FC-CPPM Budget 2021

- Travels, M2 Traininghip: 3 k€ (out of 6 requested), from FCC-France
- Travels, Meetings: 2k€, from CPPM (scientific animation)

FCC-France

Laboratory	Physics Case Studies	R&D Detector	M2 Trainingship	FCC+X PhD	Person (part-time) [Contact]
CEA Irfu, Saclay	• EWK physics: m_W, Z-ν_e-ν_e coupling • B-Physics	• TPC (read-out, ion backflow) • Wireless detetctor data transmission			5 [R. Aleksan]
CPPM, Marseille	• MC Generators • BSM Higgs	• Dep. CMOS sensors • Hybrid Pixels	A. Ettarky (01/05-30/08)	No	3 [S.M.]
IJCLab, Orsay	• Higgs & EWK Physics • B-Physics	• LAr calo (high granularity) • Powder-O calo concept	Yes		3 [N. Morange]
IPHC, Strasbourg	• Top physics • B-Physics	• Pixel detector			2 [J. Andrea]
IP2I, Lyon	• Higgs Physics (SM+BSM)	• MAPS • ½-digital HCAL			5 (incl. 2 TH) [S. Gascon-Shotkin]
LAPP, Annecy	• Higgs properties & couplings	• FCC-ee Tracker (micro-channel cooling)			3 [L. Di Ciaccio]
LPC, Clermont-Fd	• B-Physics	• CALICE (ILC)			3 (incl. 2 TH) [S. Montoil]

FCC-France

Laboratory	Physics Case Studies	R&D Detector	M2 Trainingship	FCC+X PhD	Person (part-time) [Contact]
LPNHE, Paris	• EWK: E calibration, beam polarization • Dijet mass resolution • α_S measurements	• Si-sensors for calo or for tracking	Sukyun Kim	S. Kim FCC+ATLAS 2021-2024	3 [L. Poggioli]
APC, Paris	• Higgs couplings (b,c,g) • HZ cross section		Ang Li	A. Li FCC+ATLAS 2021-2024	2 [G. Marchiori]
LLR, Palaiseau	• EWSB (scalar sector, Higgs self-couplings, VBS)	• High granularity SI-based calo			3 [R. Salerno]
L2IT, Toulouse	• Higgs quartic couplig (FCC-hh)				1 [J. Stark]

FCC-France
Coordination Discussions

CALORIMETRY: 4 Options

- Meeting of FCC-France Representatives, 12th February:
  - CALICE Calorimeter for FCC-ee? (V. Boudry)
    - LRR Palaiseau, IP2I Lyon, LPC Clermont-Fd
    - High granularity Si-based calorimeter system
    - Optimized for Particle Flow Algorithm (PFA)
    - Timing: 0.1-1 ns

  - LAr Calorimeter for FCC (N. Morange)
    - IJCLab Orsay
    - 10 x ATLAS granularity (200k cells → few million cells)
    - Around IDEA tracker, 20-22 X_0
    - Mechanical R&D: thin cryostats, high density feedthroughs

FCC-France
Coordination Discussions

CALORIMETRY: 4 Options

- Meeting of FCC-France Representatives, 19th March:
  - Crystal Calorimeter (S. Gascon-Shotkin)
    - IP2I Lyon, CEA Irfu Saclay?, LLR Palaiseau?, (CPPM?)
    - High resolution ECAL (à la CMS)
    - Crystal (or crystal-fiber) calorimeter, readout by Si-PM
    - Context of IDEA tracker
    - Timing: σ_t ~ 20ps
    - ECAL and HCAL: $\frac{\sigma_E}{E} \approx \frac{3\%}{\sqrt{E}}$ $\frac{\sigma_E}{E} \approx \frac{27\%}{\sqrt{E}}$
  - Reminders on IDEA Calorimeter for FCC-ee (G. Bernardi)
    - FCC-ee Italy
    - Dual readout calorimeter:
      - Cerenkov light: produced by ultra-relativistic particles, dominated by EM shower component
      - Scintillation light: measures –dE/dx
    - Compensation, high resolution