

FCC-contacts – December 17th

- News from FCC
- Calorimetry and Detector concepts
- Tour de table / Objectifs

PED Coordination

- **Reminder: Gavin stepped down from the PED coordinator position (for family reasons)**
 - ◆ It has been a great pleasure to work with Gavin as co-coordinator for the past few months
 - Thank you Gavin for all your contributions so far
 - We certainly wish that you continue to work with us in the Physics Programme activities
- **It is an equally great pleasure to announce that**
 - ◆ Christophe Grojean picked up the baton, and took over the responsibility
- **Welcome, Christophe !**

EPJ+ Special Issue on FCC-ee: Dashboard

□ All our essays have been accepted for publication – most of them (30/34) are published

The European Physical Journal Plus
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Focus Point on A Future Higgs & Electroweak Factory (FCC): Challenges towards Discovery - Introduction and Overview

ISSN: 2190-5444 (Online)

2/2

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Stephen Myers
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Alein Blondel, Eliana Gianfelice
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IR challenges and the machine detector interface at FCC-ee
Manuela Boscolo, Helmut Burkhardt, Katsunobu Oide...
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K. Oide, J. Wenninger
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The W mass and width measurement challenge at FCC-ee
Paolo Azzurri
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Regular Article
Exploring requirements and detector solutions for FCC-ee
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Regular Article
Muon detection at FCC-ee
Sylvie Braibant, Paolo Giacomelli
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Calorimetry at FCC-ee
Martin Aleksa, Franco Bedeschi, Roberto Ferrari...
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Review
The τ challenges at FCC-ee
Monens Dam

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Jorge de Blas
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ISSN: 2190-5444 (Online)

3/4

In this topical collection (1 articles)

Regular Article
Online computing challenges: detector and read-out requirements
Richard Brenner, Christos Leonidopoulos
» Download PDF (250 KB) » View Article Article:1198

P. Janot, A...

Check your reference in this Overleaf document:
<https://www.overleaf.com/read/xcssxqyhtrgt>

“Liverpool” PED Workshop

- Due to the current wave of the pandemic, the workshop will be an online-event only
 - ◆ All 317 registered participants have been warned on 15 January

gavin.salam@cern.ch

Inbox - Cern 15 January 2022 at 08:17



[Indico] 5th FCC Physics Workshop → online only

To: Patrick Janot

Dear Patrick Janot,

We are writing to let you know that, regrettably, owing to the impact of the current wave of the pandemic, it has been decided to make the 5th FCC Physics Workshop an online-only event.

If you have already have paid the registration fee, you will be contacted separately in the coming days regarding reimbursement.

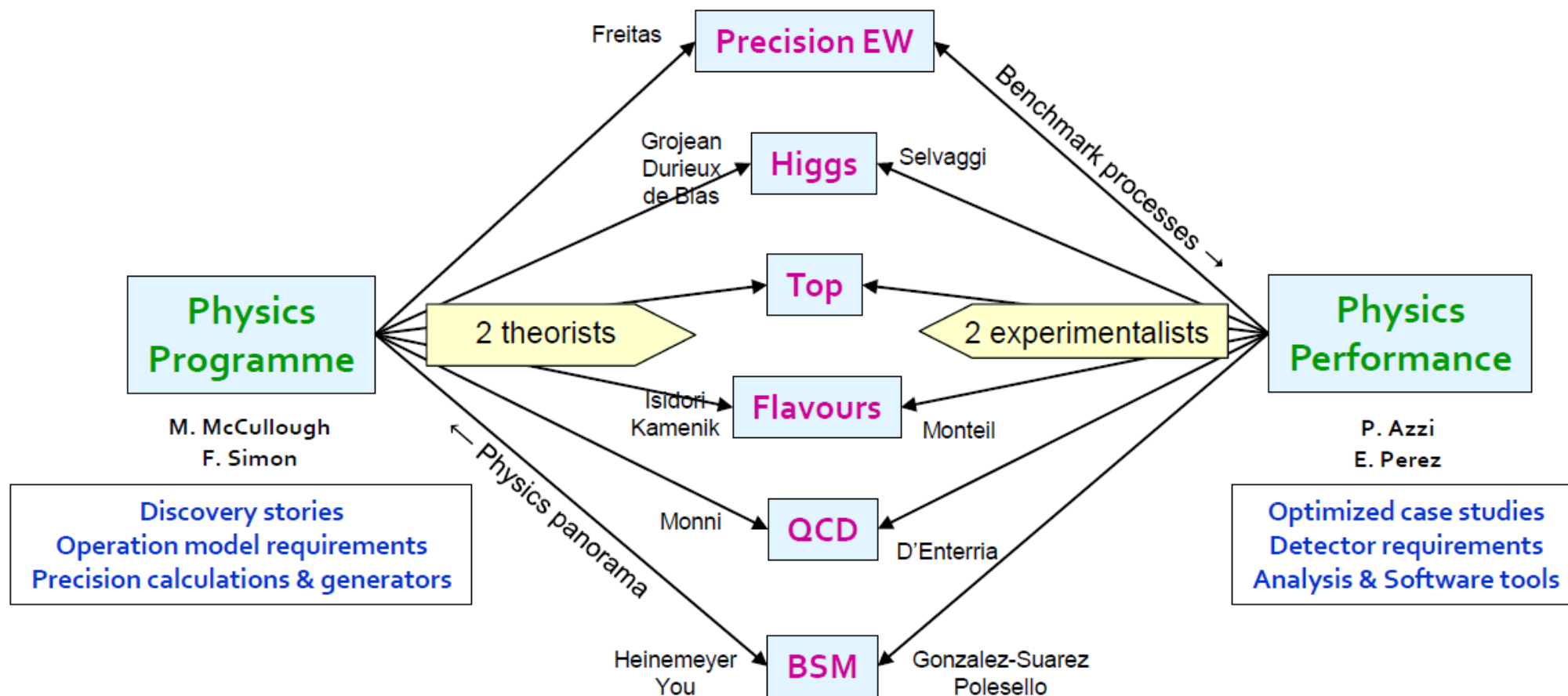
We look forward to interacting with you at the online workshop next month.

Best regards,
Carsten Welsch (for the local organising committee)
Alain Blondel and Gavin Salam (for the scientific programme committee)

- ◆ The program is being adapted to this new configuration
 - Presentation by Alain and Gavin
- ◆ Another (smaller?) event will be organized in Liverpool this year
 - Possibly at the end of June / beginning of July, when university students are not around

Physics groups

- Following previous PED coordination meetings
 - We have converged towards “common” groups rather than “mirrored” groups



- Experimentalist conveners invited – More details in presentation from Emmanuel

Monthly General Meetings – Evolution

- The PED work-packages will soon all have their own work-in-progress meetings
 - ◆ The general monthly meetings will evolve to take place for everyone in the study
 - Inform of the progress of the study
 - Discuss new ideas, developments, and results
 - Address issues of interest shared by several study pillars
 - Provide updates on organizational matters
- Mandate being finalized
 - ◆ Chairs: Michael Hofer (Accelerator pillar) and Christos Leonidopoulos (PED pillar)
 - More details next time
- First meeting at the end of February
 - ◆ “Our slot” (i.e., the last Monday of each month at 3pm) is kept
 - ◆ The PED general meeting of January is cancelled

FCC Week 2022: Update

From Michael Benedikt

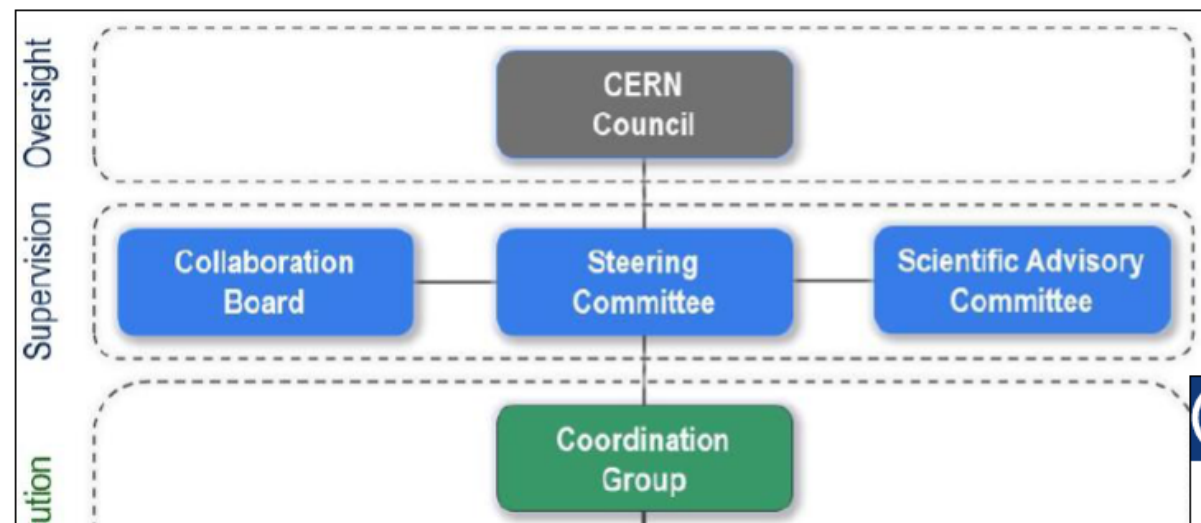
Recent evolution

- Following the visits to the Pullman hotel and the Issy conference centre in October 2021, the CERN procurement service continued negotiations with the Pullman hotel. Unfortunately no flexibility was offered by the hotel with respect to number conference participants and room reservations. Given the past and present evolution of the sanitary situation the risk was considered to high for place a contract with Pullman.
- It is proposed instead to target at a combined in-person and virtual event, with a somewhat lower number of participants (250 +/- 50 persons present) and an adapted program with possibly reduced number of parallel sessions (3 or minimum 2). Virtual poster session as option, no posters session at conference location.

Next steps

- Two options are under consideration, either a hotel (could be somewhat smaller than the Pullman) with adequate conferencing infrastructure or a university location with amphitheater and lecture rooms for parallel sessions. (University locations, if large enough, might even offer more flexibility for larger participant numbers (>300 in person) in case of positive evolution of sanitary situation.)
- The exhibition “code of the universe” should accompany the FCC Week. The location identified in 2020 (place de la Sorbonne) is considered ideal and contacts with the relevant authorities should be reestablished.
- Within coming 10 days:
 - CERN procurement service will launch a new search for conference hotels.
 - Gregorio will check availability of university facilities.
 - Philippe will relaunch CEA/CNRS contacts for organization of the exhibition.

Collaboration Board, Steering Committee



FCC Collaboration Board

FCC Collaboration Board meetings on 14 September & 12 October 2021

- **Prof. Philippe CHOMAZ** from CEA.IRFU (France) has been elected as CB Chair for entire Feasibility Study period (end 2025)

CB Executive Committee (CBEC) with 2 vice chairs:

- **Dr. Manuela BOSCOLO** from INFN-LNF (Italy) and
- **Prof. Andrew LANKFORD** from UC Irvine (USA) have been elected as CB vice chairs

Next step: **CB appointment of five Steering Committee Members**



FCC Feasibility Study Status
Michael Benedikt
Plenary ECFA Meeting, 19 November 2021

□ **Steering Committee CB appointment**

- ◆ Mike Seidel (PSI)
- ◆ Lia Merminga (FNAL)
- ◆ Tadashi Koseki (KEK)
- ◆ Beate Heinemann (DESY)
- ◆ Marina Cobal (INFN)

□ **Ex-officio members**

- ◆ CERN directorate (Chair: CERN DG), CERN Council chair, FCC FS leader, CB chair

Host State news

❑ 8 Nov 2021

- ◆ The Préfet de la region Auvergne-Rhone-Alpes was nominated by the French Prime Minister Jean Castex as “interlocuteur unique des autorités Suisses et du CERN” to accompany CERN during the FCC Feasibility Study for all infrastructure related aspects, in concertation with Switzerland and to ensure the compliance with all relevant rules.
 - In particular, the Prime Minister asked the Préfet to establish, by the end of the year 2021, an organization diagram for the management of his mission, as well as a calendar identifying the actions to be taken in order to respond to CERN’s requests, and to report regularly on the progress of the mission and make proposals to allow France to facilitate the execution of the feasibility study.

❑ 10 Dec 2021

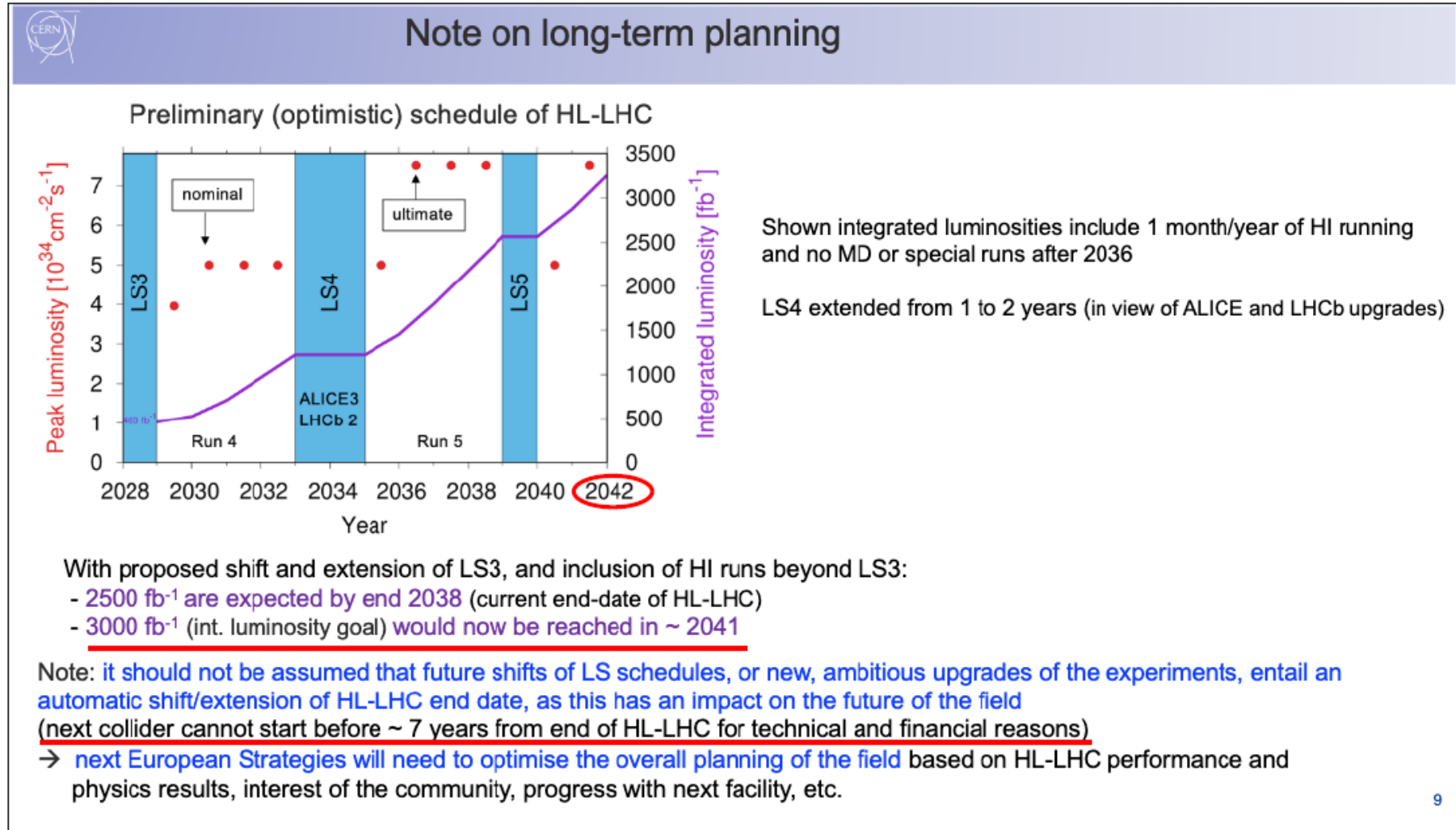
- ◆ The Swiss Federal Council announced that it will draw up a federal sectoral plan in order to clarify and facilitate the administrative procedures for spatial planning and to improve planning security for all CERN projects, including the FCC in the event of its implementation.
 - The sectoral plan, which also responds to a request from the Republic and Canton of Geneva, will provide a framework for balancing the objectives of research policy, host-state policy and spatial planning policy.

❑ Excellent news altogether

New Year's Directorate Meeting (13-Jan-2022)

From Fabiola's presentation

<https://indico.cern.ch/event/1106493/>



New Year's Directorate Meeting (13-Jan-2022)

□ A few preliminary remarks

- ◆ The way the slide is written might not mean that FCC-ee will start in 2050
 - But this is how people understand it, as we can judge from reactions received so far
 - If unattended, it will certainly increase the motivation for people to explore other options
 - It also reduces the sense of urgency (thus motivation) for the whole project
- ◆ We don't know of technical reasons that would prevent a seamless transition from HL-LHC to FCC-ee
 - Because FCC-ee and HL-LHC are physically disconnected, the situation is different from LEP-LHC transition
 - A better reference is the SppS – LEP transition: LEP started in 1989, and SppS was shutdown in 1990.
 - Because experts on the machine/technical side and on the detector side will become available in 2028
 - Once HL-LHC is fully implemented and running
- ◆ Financial reasons could be alleviated if significant financial contribution (~1 BCHF) came from outside
 - By making the project truly global (e.g., with resources from the US)
- ◆ We plan to give/get inputs to/from Fabiola on these aspects

□ Reactions ?

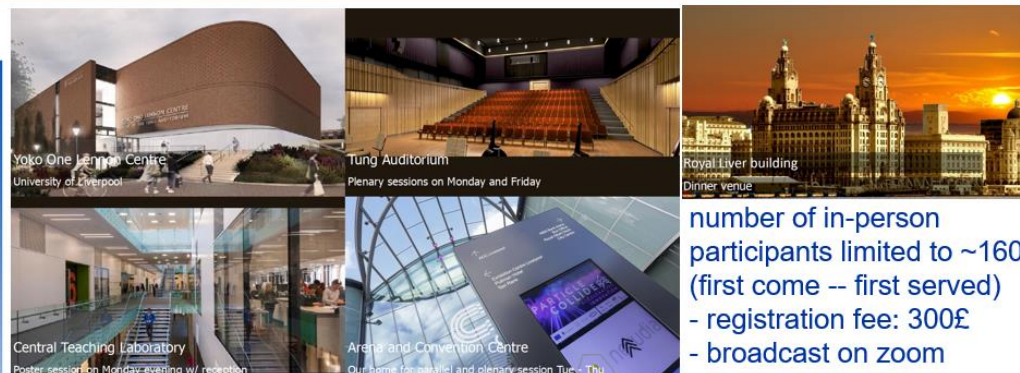
FCC Snowmass White paper

The goal is to have a first draft by the middle of January.

The current outline (subject to change in response to input before and during the meeting) is

Section	Primary authors	Secondary input	Corresponding snowmass subgroups
Introduction	Eno, Denisov		
Accelerator	Raubenheimer		
Higgs	Brost, Paus	Klute, Grojean, Bernardi	EF01, EF02
Precision EWK	Hildreth	Blondel, Gluza, Alcaraz, Mateo	EF04
Top	Demina		EF03
BSM	Willocq		
Other standard model	Thomson, Barberis	D'Enterria	EF05, RF1, RF4, RF5
FCC-hh	Harris	Mangano, Selvaggi	all
Detectors	Seidel, Qian	Bedeschi, Giacomelli, Aleksa	
Summary	Eno, Denisov		

Liverpool, UK



number of in-person participants limited to ~160 (first come -- first served)
 - registration fee: 300£
 - broadcast on zoom

Date	Monday 7.2.22		Tuesday 8.2.22		Wednesday 9.2.22		Thursday 10.2.22		Friday 11.2.22	
Location	UoL Campus		ACC		ACC		ACC		UoL Campus	
	Coffee/Tea		Coffee/Tea		Coffee/Tea		Coffee/Tea		Coffee/Tea	
Morning	Plenary	Yoko Ono LT	Parallel	Rm 4A, 4B, 14, 12	Parallel	Rm 4A, 4B, 14, 12	Plenary	Rm 11	Plenary	Yoko Ono LT
	Coffee Break		Coffee Break	Rm 12	Coffee Break	Rm 12	Coffee Break	Rm 11	Coffee Break	
	Plenary	Yoko Ono LT	Parallel	Rm 4A, 4B, 14, 12	Parallel	Rm 4A, 4B, 14, 12	Plenary	Rm 11	Plenary	Yoko Ono LT
	Lunch		Lunch	Rm 12	Lunch	Rm 12	Lunch	Rm 11		
Afternoon	Plenary	Yoko Ono LT	Parallel	Rm 4A, 4B, 14, 12	Excursion	Around Liverpool City Centre	Plenary	Rm 11		
	Coffee Break		Coffee Break	Rm 12			Coffee Break	Rm 11		
	Plenary	Yoko Ono LT	Parallel	Rm 4A, 4B, 14, 12			Plenary	Rm 11		
Evening	Drinks and Posters	Atrium CTL	Outreach Event	Anglican Cathedral	Dinner	Liver Building				



FCC Feasibility Study Status
 Michael Benedikt
 Annecy, 30 November 2021

Etes vous inscrit ? Dans votre groupe ?

Quels talks ?

Questions to the National Contact

What were the Physics-Expts and Detectors (PED) Activities in 2021 in your country (type and FTE) ?

What is the situation with the MOU and Addenda for your country ? Are there commitments related to PED ?

Relations between PED and the Accelerator community working on FCC ?

How is the FCC vs. other ee-colliders situation evolving in your country ?

Estimate of the resources (human and funds) that the labs in your country or your national institute plan to commit for FCC PED in 2022 and 2023 ?

What are the initiatives to recruit new people and to connect to other groups internationally ?

Do you plan a National (or Regional) FCC workshops in 2022?


Are you building or planning to join a Regional FCC “cluster” with neighboring nations (cf. Nordic countries) ?

Can you list the persons involved at 15% FTE or more in PED activities in your country

Objectif pour prochains workshops

Several ECFA Higgs+EW+Top Factory workshops in the coming months (hopefully Hybrid)


+ Big gatherings :



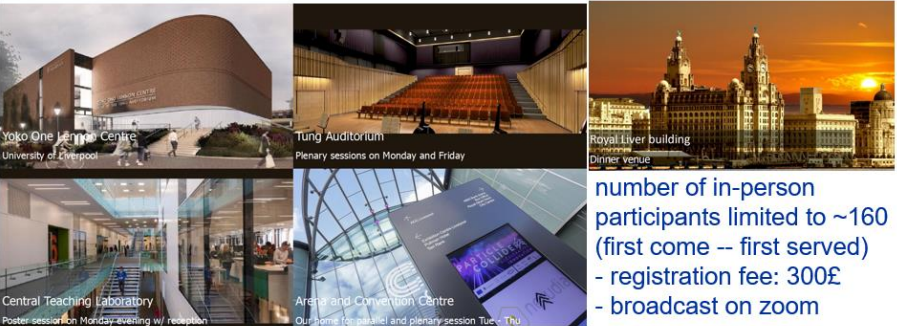
FUTURE CIRCULAR COLLIDER
Innovation Study

FCC Physics Workshop 7-11 February 22

Liverpool, UK



5th FCC PHYSICS WORKSHOP
LIVERPOOL
07 - 11 February 2022
In-person meeting for the first limited number of registering attendees
www.cern.ch/FCCPhysics2022




Yoko One, Tung Auditorium, Royal Liver building, Central Teaching Laboratory, Arena and Convention Centre

Plenary sessions on Monday and Friday
Dinner venue
Poster session on Monday evening w/ reception
Our home for plenary and plenary session Tue - Thu

number of in-person participants limited to ~160 (first come -- first served)
- registration fee: 300£
- broadcast on zoom

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	Plenary	Parallel	Parallel	Plenary	Plenary
	Lunch	Lunch	Lunch	Lunch	
Afternoon	Plenary	Parallel	Excursion	Plenary	
	Coffee Break	Coffee Break	Around Liverpool City Centre	Coffee Break	
	Plenary	Parallel		Plenary	
Evening	Drinks and Posters	Outreach Event	Dinner		



FCC Feasibility Study Status
Michael Benedikt
Annex, 30 November 2021



FUTURE CIRCULAR COLLIDER

FCC Week 2022



In Paris 30 May to 3 June 2022

We are looking forward
to seeing you there !



FCC Feasibility Study Status
Michael Benedikt
Annex, 30 November 2021

+ Jamboree (Juin-Juillet 2022)

+ ECFA Higgs/EW/Top Factory (Octobre 2022) Paris or Desy or Katowice

+ FCC France (Novembre 2022) Lyon

Support 2022

	2021	2022	DEMANDES
CPPM	3	2	5
IJC Lab	3	5	5
IPHC	4	3	5
IP2I	5	6	18,8
LAPP+LPSC		4	8,5
LLR	3	4	5
LPNHE	4	5	7,5
LPC	4	4	5
APC+FCC-FR	10	12	17
TOTAL	36	45	76,8

Augmentation de 25% du budget 2022 / 2021

