

# General News

S. Muanza: CPPM Marseille, CNRS-IN2P3 & AMU

FC-CPPM Monthly Meeting

May 26, 2020



## “News” from the European Strategy

ECFA

European Committee for Future Accelerators

Jorgen d’Hondt (ECFA Chair)  
@FCC France

### Brief report from the Bad Honnef meeting

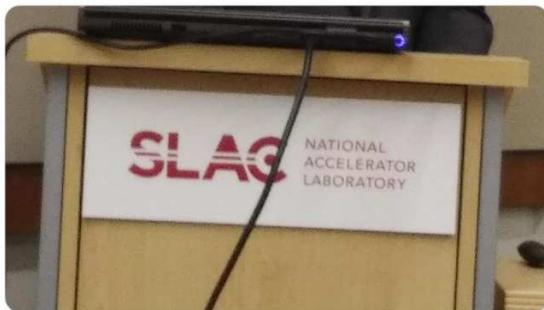
- A very intensive week opened with overview presentations informing the discussions
- A series of topical plenary sessions followed on a variety of topics resulting in few pages of core “strategy statements” followed in the weeks after the meeting by a longer “deliberation document”
- Following the procedures, the ESG members endorsed the strategy statements unanimously
- The communication related to the convergence of the ESG:  
<https://europeanstrategyupdate.web.cern.ch/node/32>
- Both the “strategy statements” and the “deliberation document” have been submitted to Council, but due to the COVID-19 pandemic, the special session of CERN Council for approval of the strategy, originally scheduled for 25 May 2020, has been postponed.

Statements from the US



**Nigel Lockyer** @Nigel\_Lockyer · Feb 20

Dr. Chris Fall, Director of the Office of Science @doescience expresses commitment to remain partners with @CERN and support for the FCC if supported by the European Strategy. He stated strong interest by the US Government for an ILC hosted in Japan @kek\_en



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**Important US input to ESPP:**

- \*commitment\* expressed for CERN and FCC if supported by ESPP
- strong \*interest\* for an ILC hosted in Japan.

## Current Hot Topics

Actions

-- if we want to leave it open, 4 IP issue is urgent.

-- FIVE specific physics topics for which a factor in luminosity makes a big difference were communicated to M. Benedikt. **Action has been followed to organize effort \*→**

-- create task force to investigate s-channel Higgs production

**Theoretical Motivation / Experiment/ Monochromator design**

**Started. contact: David d'Enterria**

Patrick and Patrizia are back in action!

-- investigate need to run from 30 to 90 GeV for  $\alpha_s$  measurement, compare with  $e^+e^- \rightarrow \gamma + \text{hadrons}(\sqrt{s} \in 30-90 \text{ GeV})$

**Action pending** Bogdan Malaescu [bogdan.malaescu@cern.ch](mailto:bogdan.malaescu@cern.ch) (LPNHE Paris) similar work at b-factory is interested + MPI Group (Andrii Verbytskyi [andriish@mpp.mpg.de](mailto:andriish@mpp.mpg.de), Gabor Somogyi [gabor.somogyi@cern.ch](mailto:gabor.somogyi@cern.ch)), Stefan Kluth [skluth@mpp.mpg.de](mailto:skluth@mpp.mpg.de))

-- need to generate table of benchmark measurements for detector requirements

→ (see talk by Alain/Mogens later today)

-- connect with «case studies» -- see list later in this talk.

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## FCC Snowmass 2020-2021

- Workshop series to prepare the update of the American Strategy for Particle Physics
- Mainly held at Fermilab

# Snowmass 2021 - Organization

**Energy Frontier** (convener: Meenakshi Narain, Laura Reina, Alessandro Tricoli) consists of **ten Topical Groups** focusing on both Standard Model and Beyond Standard Model physics.

**EW Physics** (including EW gauge bosons, Higgs, top)

1. Higgs Boson properties and couplings (incl. self-coupling) - Andrey Korytov, Caterina Vernieri, Sally Dawson
2. Higgs Boson as a portal to new physics - Isobel Ojalvo, Patrick Meade
3. Heavy flavor and top quark physics (top, bottom, charm) - Reinhard Schwienhorst, Doreen Wackerroth
4. EW precision physics and constraining new physics - [Junping Tian](#), [Alberto Belloni](#), [Ayres Freitas](#)

**QCD and strong interactions**

1. Precision QCD - Michael Begel, Michael Schmitt, Stefan Hoeche
2. Hadronic structure and forward QCD - Pavel Nadolsky, Huey-Wen Lin, Christophe Royon
3. Heavy Ions - Yen-Jie Lee, Swagato Mukherjee

**BSM Physics**

1. Model-specific explorations - Jim Hirschauer, Elliot Lipeles, Nausheen Shah
2. More general explorations - Simone Pagan Griso, Tulika Bose, Zhen Liu
3. Dark Matter (at colliders) - Caterina Doglioni, LianTao Wang

## Snowmass Meetings

# Snowmass 2021 - Meetings

Meetings are available from here: <https://indico.fnal.gov/category/1100/>

**Town Hall Meeting: April 18, 2020** (<https://indico.fnal.gov/event/23601/>)

**Energy Frontier Kick-off Meeting: Thursday, May 21, 2020**  
(<https://indico.fnal.gov/event/24264/>)

**Energy Frontier Workshop: July 9-10, 2020**

**First general Snowmass 2021 community meeting on Nov. 4-6 at Fermilab**

## Involvement in Snowmass

# Snowmass 2021 - How to get involved

- Sign up to email lists and slack channels for individual working groups  
→ for instructions go to Frontier pages on <https://snowmass21.org/start>
- Submit Letter of Interest (until Aug 31, 2020) to make a proposal for a study and encourage the community to pursue it: <https://snowmass21.org/loi>  
→ may be original work or literature review
- Contributed papers (white papers)  
→ until July 31, 2021 -- but March 2021 for full consideration in summary docs  
→ may be (but need not be) outcome of LoI studies
- Email topical group conveners with suggestions

## Snowmass Contacts

### □ Memorandum sent to Snowmass by FCC Physics Coordination

#### ◆ See following link

<https://www.snowmass21.org/docs/files/summaries/EF/SNOWMASS21-EF-RF-TF-IF-CompF-TOPIC0-003.pdf>

#### ◆ Snowmass contacts

- Overall contact: [Markus Klute](#), plus [Alain Blondel](#), [Patrick Janot](#) and [Michelangelo Mangano](#)
- Energy Frontier: [Patrizia Azzi](#) and [Gregorio Bernardi](#) (FCC-ee), [Michele Selvaggi](#) (FCC-hh), [Christophe Grojean](#) (Phenomenology)
- Frontiers in Rare Processes and Precision Measurements: [Stéphane Monteil](#) (b and c physics) and [Mogens Dam](#) ( $\tau$  physics)
- Theory Frontier: [Matthew McCullough](#)
- Instrumentation Frontier: [Mogens Dam](#) and [Franco Bedeschi](#)
- Computational Frontier: [Luc Poggioli](#)

Software support can be obtained from the FCC software group (see [C. Helsens](#) and [G. Ganis](#) in [14]) who will be happy to integrate software contributions.

#### ◆ Task of Snowmass contacts

- Understand what happens at SNOWMASS21 in your track, and inform regularly the FCC physics coordination group.
- Inform and sensitize the Snowmass working groups of the pertinent elements concerning FCC, get FCC members invited to the Snowmass working groups, welcome individual Snowmass group members to work with us.
- As opportunities or questions arise, call for FCC community action.



### Workshop FCC-France in "Paris"

- Held remotely on 14-15 may 2020
- Large attendance: 138 registered persons
- Details at [Link](#), in particular
  - [Introductory talk by Laurent Vacavant: Link](#)
  - [ECFA Objectives by Jorgen D'Hondt: Link](#)
  - [Overview of FCC-Phys Activities within french labs: Link](#)

### Next Meetings in France

- Workshop FCC-France in "Annecy" (late 2020 or early 2021)
- FCC General Meeting in Paris, April 2021

### Next Meetings at CERN

- 4<sup>th</sup> FCC Physics Workshop at CERN, 9-13 November 2020
- FCC Innovative Studies Kick-Off Meeting at CERN, 9-11 November 2020

## Outline

# FC-CPPM Monthly Meeting



mardi 26 mai 2020 à 10:00 → 12:00 Europe/Paris

Vidyo

Patrick PANGAUD (Aix Marseille Univ, CNRS/IN2P3, CPPM, Marseille, France), Steve Muanza (CPPM Marseille)

10:00 → 10:25 **General News**

Orateur: Steve Muanza (CPPM Marseille)

🕒 25m

10:25 → 10:40 **News from the ILC**

Orateur: Claude Vallee (Centre de Physique des Particules de Marseille)

🕒 15m

10:40 → 11:00 **R&D on Pixels and their Electronics**

Orateurs: Marlon Barbero (CPPM), Patrick PANGAUD (Aix Marseille Univ, CNRS/IN2P3, CPPM, Marseille, France)

🕒 20m

11:00 → 11:20 **Search for a Heavy Charged Higgs Boson at FCC-ee**

MC Production

Orateur: M. Mouad Hilali (AMU P3TMA)

🕒 20m