SnowMass2021

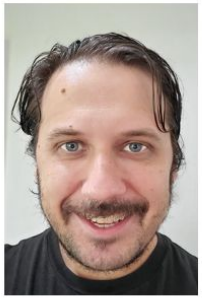
APS DIVISION OF PARTICLES & FIELDS

DPF Core Principles and Community Guidelines (CP&CG)

- By participating in this meeting, you agree to adhere to the CP&CG
  - **Respect and support community members**
  - **Commit to constructive dialogue and take initiative**
  - Details of what this means, expectations for behavior, and accountability procedures are provided in the CP&CG document linked at: https://snowmass21.org/cpcg/start
- Everyone is invited to invoke the CP&CG as needed to encourage constructive and supportive collaboration
- The conveners of this meeting are your recommended first point of contact for reports of CP&CG violations occurring here
  - The conveners have received training in the CP&CG and how to handle reports
  - The CP&CG accountability procedure is designed to encourage early intervention and is flexible enough to appropriately address issues ranging from the discourteous to the egregious
  - Please do not hesitate to contact us!
- Snowmass is most successful when everyone's voice can be heard!

CPM Local Organizing Committee

Bo Javatilaka
Fermilab



Brendan Kiburg
Fermilab

(Co-chairs of CPM Organizing Committee)

Jonathan Asaadi
UT, Arlington

Saptaparna Bhattacharya,NW

Zoltan Gecse
Fermilab

Erica Snider
Fermilab

Tiziana Spina
Fermilab

Yuanyuan Zhang
Fermilab

Gordon Watts
UW Seattle

Shih-Chieh Hsu
UW Seattle

(Co-chairs of 2021 CSS)

Please don’t forget to thank the Local Organizing Committee. They have not slept well in a looooong time!

Computational Frontier - Planning

Steve Gottlieb (Indiana University),
Oli Gutsche (Fermilab),
Benjamin Nachman (Berkeley Lab)
for the Computational Frontier

CPM October 2020

This session

- 30 min session
- Break for 30 min
- 60 min session

- Start with planning discussion
- Take the break, it is (was) a long day!
- Conclude the planning discussion
- If time allows, discuss findings from the breakout sessions following our notes google doc: https://docs.google.com/document/d/1Xa_mYki7SSbLzJc5I8eO9oprrgV6CVSgjgFArM1ewNM/edit?usp=sharing

Goal of the planning session

- Plan timeline of different steps to write Snowmass 21 reports for the Computational Frontier

  - What are the parts of the Snowmass 21 reports that the Computational Frontier has to deliver?
  - What are the steps to deliver these parts?
  - Do we have all the necessary input from the community? Do we have to organize discussions/workshops?
  - Discuss currently proposed plan and solicit community input

This is a discussion, the frontier conveners act as moderators. Please raise your hands and wait to be called upon before unmuting. We will try to facilitate a lively discussion while we go through the planning materials on the next slides.

Snowmass 21 report

Preliminary Report Structure: Adopting Snowmass 2013

Executive Summary (~50 pages)

Introduction + a few pages from each frontier

Frontier Report

- Frontier Summary (~20-50 pages)
- Topical Group Reports (~20-50 pages per TG)

Contributed Papers as Reference (LOIs will be available publicly but will not be references in the TG reports)

Computing Frontier

Chapter 9: Computing Frontier
Conveners: L. A. T. Bauerdick and S. Gottlieb

Working Group Summary (arXiv:1401.6117)

Subgroup Reports:

40.	Computing for the Cosmic Frontier	1311.2841
41.	Computing for the Energy Frontier	1401.1840
42.	Computing for the Intensity Frontier	1310.6964
43.	Computing for Accelerator Science	1310.2203
44.	Lattice Field Theory	1310.6087
45.	Computing for Perturbative QCD	1309.3598
46.	Distributed Computing and Facilities Infrastructure	1311.2208
47.	Networking	1311.2478
48.	Software Development, Personnel, and Training	1311.2567
49.	Storage and Data Management	1311.4580

Contributed Papers:

Accelerator Science:

160	J.-L. Vay, *et al.*	White Paper on DOE-HEP Accelerator Modeling Science Activities	1309.3541 (PDF)

Distributed Computing:

168	A. Avetisyan, *et al.*	Snowmass Energy Frontier Simulations using the Open Science Grid	1308.0843 (PDF)

Software:

083	P. Canal, *et al.*	A Vision on the Status and Evolution of HEP Physics Software Tools	1307.7452 (PDF)
090	S. V. Chekanov, *et al.*	Next generation input-output data format for HEP using Google's protocol buffers	1306.6675 (PDF)
105	P. Elmer, *et al.*	The Need for an R&D and Upgrade Program for CMS Software and Computing	1308.1247 (PDF)
111	M. Asai, *et al.*	Geant4 - Current and Future	1308.1994 (PDF)

Intensity Frontier:

104	D. M. Asner , *et al.*	Belle II Experiment Network and Computing	1308.0672 (PDF)

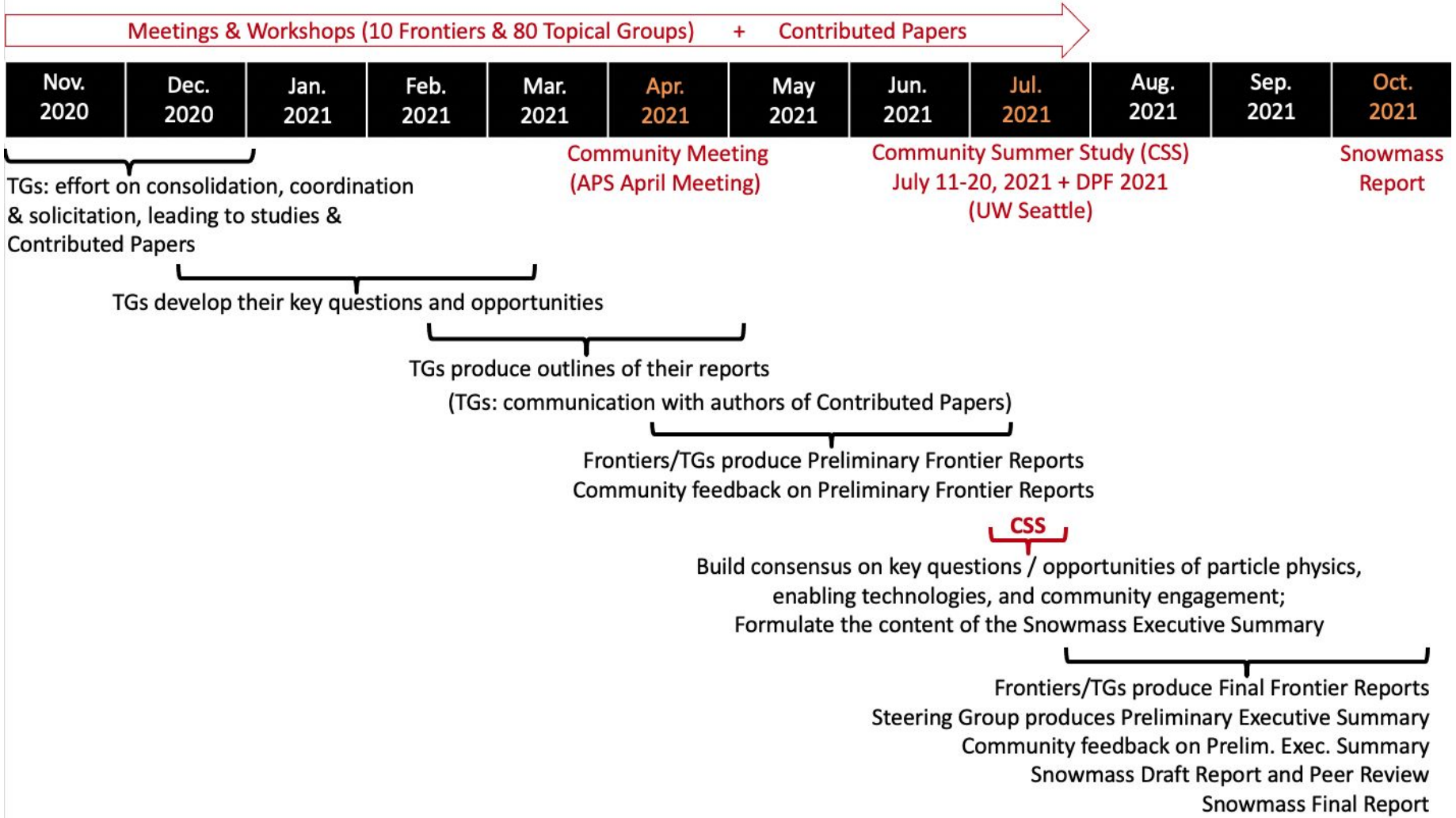
Lattice Gauge Theory:

144	T. Appelquist, *et al.*	Lattice Gauge Theories at the Energy Frontier	1309.1206 (PDF)

White Papers

- Role of white papers:
  - Document that we captured the input from the community
  - Provide more detailed information than what is written in the reports
  - They are valuable references for our reports

White papers are important for our Snowmass 21 process and we need to make sure that we solicit and receive the appropriate white papers from the community.


Meetings & Workshops (10 Frontiers & 80 Topical Groups) + Contributed Papers
Nov. 2020
Dec. 2020
Jan. 2021
Feb. 2021
Mar. 2021
Apr. 2021
May 2021
Jun. 2021
Jul. 2021
Aug. 2021
Sep. 2021
Oct. 2021
TGs: effort on consolidation, coordination & solicitation, leading to studies & Contributed Papers
Community Meeting (APS April Meeting)
Community Summer Study (CSS) July 11-20, 2021 + DPF 2021 (UW Seattle)
Snowmass Report
TGs develop their key questions and opportunities
TGs produce outlines of their reports
(TGs: communication with authors of Contributed Papers)
Frontiers/TGs produce Preliminary Frontier Reports
Community feedback on Preliminary Frontier Reports
CSS
Build consensus on key questions / opportunities of particle physics, enabling technologies, and community engagement;
Formulate the content of the Snowmass Executive Summary
Frontiers/TGs produce Final Frontier Reports
Steering Group produces Preliminary Executive Summary
Community feedback on Prelim. Exec. Summary
Snowmass Draft Report and Peer Review
Snowmass Final Report

- Nov. 2020 - Dec. 2020
  - TGs: effort on consolidation, coordination & solicitation, to studies & Contributed Papers
- Dec. 2020 - Mar. 2021
  - TGs develop their key questions and opportunities
- Feb. 2021 - May 2021
  - TGs produce outlines of their reports communication with authors of Contributed Papers)
- Apr. 2021 - Jul. 2021
  - Frontiers/TGs produce Preliminary Frontier Reports
  - Community feedback on Preliminary Frontier Reports
- **Deadline for White Papers: Jul. 2021**
- Community Summer Study (CSS) Jul. 11-20, 2021(UW Seattle)
  - Build consensus on key questions / opportunities of particle physics, enabling technologies, and community engagement;
  - Formulate the content of the Snowmass Executive Summary
- Jul. 2021 - Oct. 2021
  - Frontiers/TGs produce Final Frontier Reports
  - Steering Group produces Preliminary Executive Summary
  - Community feedback on Prelim. Exec. Summary
  - Snowmass Draft Report and Peer Review
  - Snowmass Final Report