



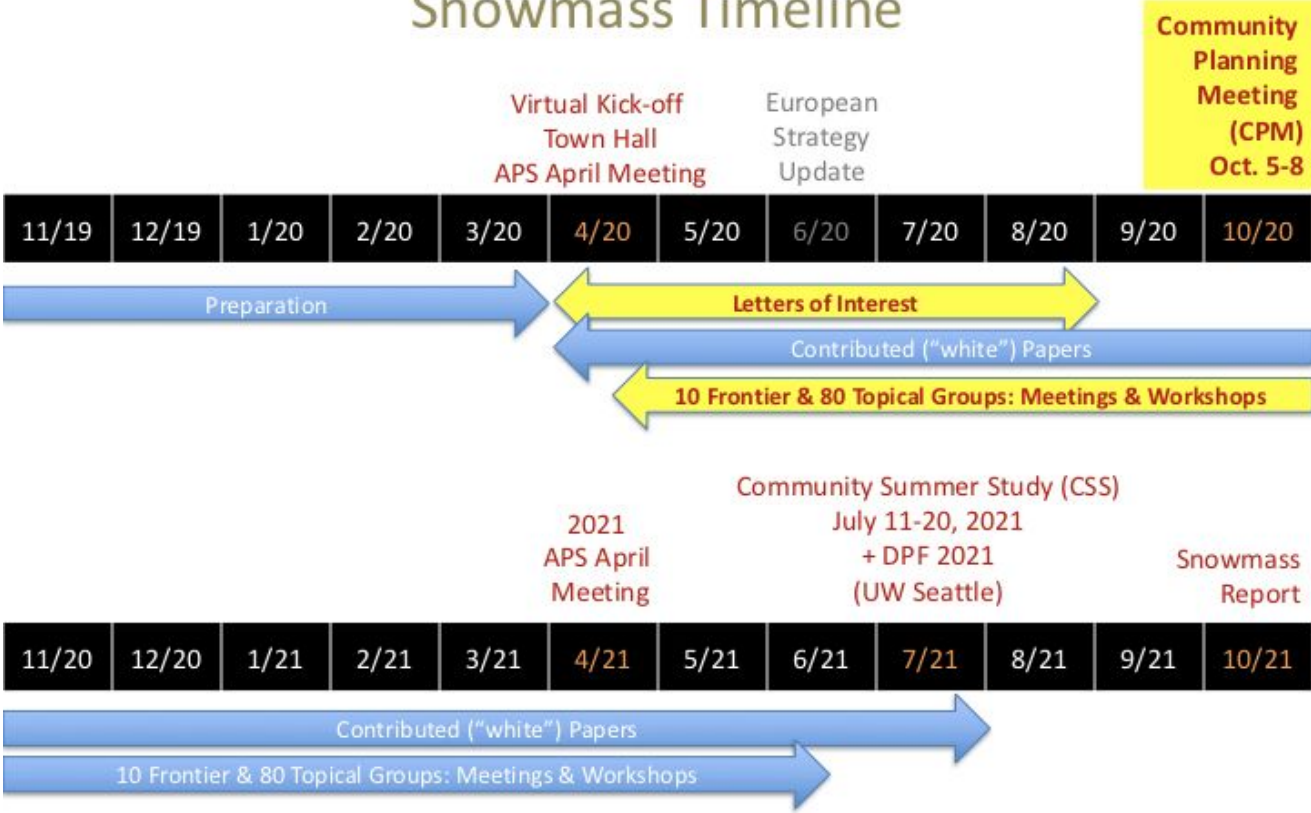
Snowmass 2020 Community Planning Meeting

Bo Jayatilaka, Brendan Kiburg (Fermilab)
IRIS-HEP Virtual Meeting on Virtual Meetings
May 5, 2021

<https://indico.fnal.gov/event/44870/>

The Pre-COVID Snowmass Plan

Snowmass Timeline



CPM Organization and Planning

- Fermilab offer to host CPM was accepted in **March 2020**
 - Would follow the successful 2012 format (at Fermilab, ~400 attendees)
 - Agreed to have a 2.5 day meeting in early late Oct/early Nov 2020
- In July 2020, the decision was finalized to **virtualize** the meeting
 - Dates moved to October 5th-8th
 - The meeting duration was extended to 4 half-days, respecting Zoom fatigue
 - The meeting times were established from **11am - 4pm central** such that the meeting occurred during the traditional workday for all continental US time zones

CPM Organization

- The scientific program was developed by the Program Committee
 - Membership consisted of Snowmass frontier conveners+Steering Group
 - Tried to balance competing interests
 - Parallel discussions often cross-cut multiple frontier groups
- The Local Organizing Committee (chaired by BJ and BK) implemented the meeting logistics
 - Learned from hosting Neutrino 2020 and Fermilab Users' Meeting virtually
 - Overlap with LOC for those two meetings, as well as CSS 2021
 - Less than three months after meeting virtualization decision and final dates selected

The Organizers established some goals for the meeting

- The primary goal of the Community Planning Meeting is **to develop plans and steps to take (“Snowmass Planning”) between October 2020 and the Snowmass Community meeting in July 2021, leading to a final report in October 2021.**
- Other goals include:
 - Inspire the community about the field, and encourage them to engage broadly in the Snowmass process
 - Inform the community about plans from other regions and from related fields and planned Snowmass activities
 - Listen to the community
 - **Provide space for members across the field to talk to each other and to discuss, promote, and develop new ideas**
 - **Establish cross working-group connections and identify gaps**

Achieving meeting goals in a virtual format

- Technology choices
 - **Zoom webinar** for plenary sessions (Fermilab license allows 5k participants)
 - **Zoom meetings** for parallel sessions (300/500 licenses were primarily used)
 - **Slack** for text-based/asynchronous discussion
- Registration
 - Via Indico and **free** for all participants
 - APS code of conduct and DPF core principals agreement was required
 - Format allowed elimination of nationality restrictions for in-person Fermilab events
 - Final registration total exceeded 3000
- Accessibility
 - Captioning service via Ai-Media (Fermilab contract)
 - Only for **plenaries**
 - LOC explored alternatives as well (including auto-captioning, scientific transcription)
 - Recording
 - Managed by LOC for plenaries and posted to agenda within 1-2 days
 - Left to session organizers for parallels

CPM Structure

- Day 1:
 - Started with input from other regions and agencies
 - Snapshot of LOIs at a 3MT Town Hall session
- Day 2-3
 - Focused on breakouts for individual frontiers and cross-frontier planning
- Day 4
 - Accelerator directors panel
 - Frontier summaries

Time (US Central)	Oct 5 (Mon)	Oct 6 (Tue)	Oct 7 (Wed)	Oct 8 (Thu)
9:00 AM				Plenary Future Global Accelerator Facility Panel Discussion Zoom Webinar
10:00 AM				
11:00 AM	Plenary <ul style="list-style-type: none"> • Introduction • Strategies and Plans from Other Regions • Strategies and Plans from Other Fields • Remarks from Funding Agencies Zoom Webinar	Frontier Intros Zoom Rooms <i>(see schedule for details)</i>	Plenary Community Engagement Zoom Webinar	Plenary <ul style="list-style-type: none"> • Early Careers Report • Frontier Summary Reports • Closing Zoom Webinar
12:00 PM		Breakouts Zoom Rooms <i>(see schedule for details)</i>	Breakouts Zoom Rooms <i>(see schedule for details)</i>	
1:00 PM	Breakouts Zoom Rooms <i>(see schedule for details)</i>			
2:00 PM	Plenary Voices from the Community Town Hall Zoom Webinar	Frontier Planning Zoom Rooms <i>(see schedule for details)</i>		
3:00 PM				
4:00 PM				

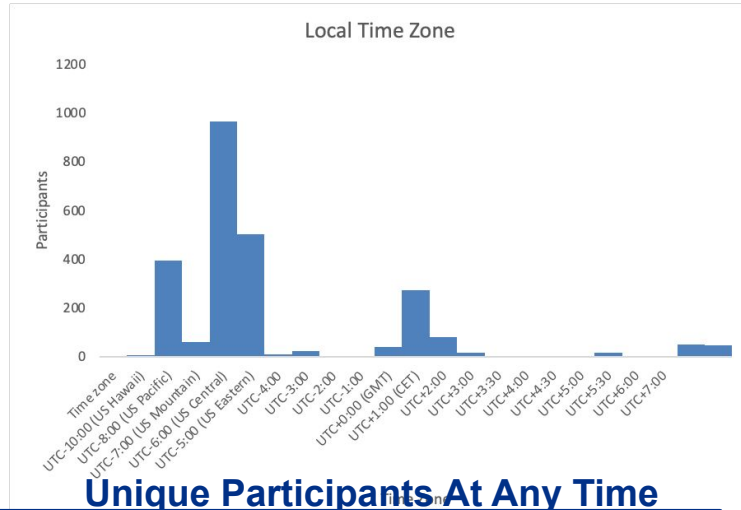
CPM Structure

- Opened with planning intros for each frontier
- Most of the day had 21 parallel Zoom sessions
- To facilitate discussion, most Zoom rooms were held open between sessions
- Shorter session Wednesday, including planning session for each frontier

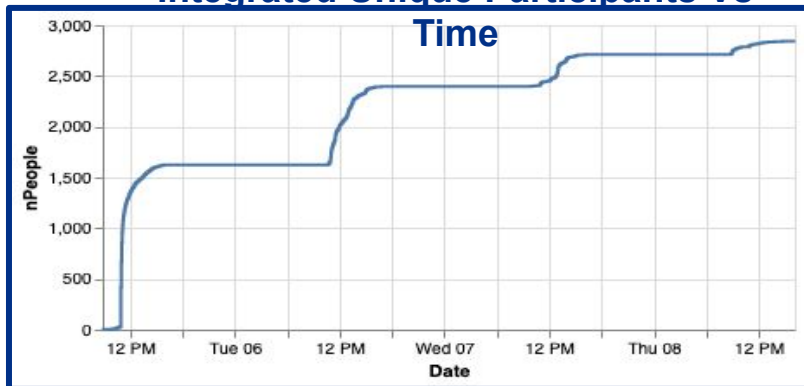
	Monday 05/10				Tuesday 06/10				Wednesday 07/10				Thursday 08/10									
Time: (CDT)	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	
Join Webinar																						
Join Zoom 1	1. EF Intro (#cpm_ef_intro)		129. Higgs Factories						Zoom 1 Break and Chat				127. Searches for dark sectors									
Join Zoom 2	2. NF Intro		109. Determining the Masses and Nature of Neutrinos						Zoom 2 Break and Chat		71. Instrumentation for Future radio intensity mapping surveys				Break and Chat		97. Neutrinos as Probes of Standard and BSM Particle Physics					
Join Zoom 3	3. CF Intro		77. Quantum Sensors for Wave and Particle Detection				Break and Chat		102. The Roles of QIS in HEP						Break and Chat		Zoom 3 Break					
Join Zoom 4	4. AF Intro		Zoom 4 Break and Chat						126. BSM: direct and indirect searches						Break and Chat		101. Higgs as a probe of new physics					
Join Zoom 5	5. RF Intro		108. Accelerator Probes of Light Dark Matter (keV-GeV)				Zoom 5 Break and Chat		108. Accelerator Probes of Light Dark Matter (keV-GeV)		Zoom 5 Break and Chat				Break and Chat		29. Low-energy precision experiments					
Join Zoom 6	6. TF Intro		125. EFIs for new physics sensitivity studies						Zoom 6 Break		128. From Amplitudes to Precision Theory for Future Colliders						Zoom 6 Break		141. Gravitational wave source modelling			
Join Zoom 7	7. UF Intro		Zoom 7 Break and Chat						122. Capabilities needed to execute underground experiments in a broad range of research categories						Break and Chat		Zoom 7 Break					
Join Zoom 8	8. CEF Intro: CEF Introduction		Zoom 8 Break and Chat						118. Cross-community Mobility in Science						Zoom 8 Break and Chat		Break and Chat		Zoom 8 Break			
Join Zoom 9	9. IF Intro and LOIs				Zoom 9 Break and Chat				69. Instrumentation for 54. Machine Detector Interface for Future Future Optical Surveys Colliders - #cpm_topic_69						Break and Chat		51. Requirements for low background and underground detectors					
Join Zoom 10	10. CompF Intro and LOIs				Zoom 10 Break and Chat				81. Computing Requirements/Opportunities NF						Break and Chat		123. Data Handling and AI/ML					
Join Zoom 11	92. Non-perturbative QCD dynamics at colliders						Zoom 11 Break and Chat		124. Lattice Gauge Theory for High Energy Physics						Break and Chat		40. Exotic Hadron Spectroscopy and Interpretation					
Join Zoom 12	130. Enabling technologies for low mass and ps timing detectors				131. Physics requirements for HEP colliders				Break and Chat		70. Instrumentation for Future sub-mm Surveys				Break and Chat		64. Computing Needs of the Accelerator Frontier					
Join Zoom 13	136. Heavier particle dark matter >~ 10 GeV				Zoom 13 Break and Chat		74. Atomic to Cosmic: Wave Dark Matter and Beyond				Break and Chat											
Join Zoom 14	72. Dark Energy, Origins (Inflation), and Light Relics - #cpm_topic_72				139. Testing LambdaCDM cosmology at low and				Zoom 14 Break and Chat		140. Future medium to ultrahigh energy gamma-ray detectors - #cpm_session_140				Break and Chat							
Join Zoom 15	Zoom 15 Break						149. Organizing the Early Universe: origins, relics, and BSM				68. Computing in Cosmic Frontier Surveys		142. Analysis/theory techniques for joint cosmological constraints		143. Simulations for joint cosmological constraints							
Join Zoom 16	Zoom 16 Break						146. Small Projects to Enhance Stage IV photometric surveys				147. Novel Ideas in Astronomical Observations		Break and Chat		132. Collider Data Analysis Strategies							
Join Zoom 17	145. QCD phase transitions and ultra-high density matter: Zoom 18 Break				Zoom 17 Break and Chat		61. Energy and Power and Time structure goals for Neutrino Frontier programs						80. Computing Requirements & Opportunities for the Energy Frontier				Zoom 17 Break and Chat					
Join Zoom 18																						
Join Zoom 19	171. AF2 organization with contributors						Zoom 19 Break and Chat		172. Near-term applications of plasma accelerators				173. AF5 organization with contributors		Zoom 19 Break and Chat		174. Cancelled: AF1 organization with contributors					
Join Zoom 20	175. Accelerator research centers and test facilities for future accelerators						Zoom 20 Break and Chat		176. Grand challenges of ultimate beams and ultimate high energy colliders: Grand challenges of ultimate beams and ultimate high energy colliders				Zoom 20 Break and Chat		177. AF7_rf organization with contributors		178. Common accelerator goals/technology at the intermediate					
Join Zoom 21	179. AF7_Targets and Sources organization with contributors				Zoom 21 Break and Chat		180. SRF and magnets for Higgs factories		181. Merged with Session 173 in Zoom 19		182. Energy and power limits for plasma accelerators		Zoom 21 Break and Chat		183. Intermediate lepton collision energies between 500 GeV and 3 TeV							

Participation in the CPM

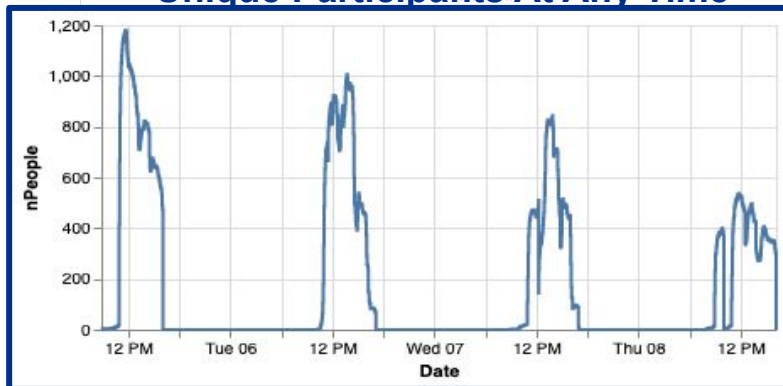
- 3028 Registrants, over 90% logged into part of the meeting
- 100 Parallel Sessions



Integrated Unique Participants Vs



Unique Participants At Any Time



Plots from <https://gordonwatts.github.io/snowmass-cpm-attendance/>

Meeting organization

- Plenary sessions (Zoom webinar)
 - Implemented checklists with specific roles for LOC members
 - Roles included dedicated question-wrangers
 - Checklists were inspired primarily by Neutrino 2020
 - Held rehearsals to iron out details in checklists
 - Required all plenary speakers to test connections before sessions started
- Parallel sessions (Zoom meetings)
 - Assigned a room “host” to handle Zoom issues/logistics for each room
 - Host was **not** the session chair/organizer
 - Held a short “training session” for all room hosts
 - Hosts were also empowered to lock rooms/remove participants in case of conduct violations or other issues

Meeting format observations/issues

- Virtual meeting format allowed for much more inclusive attendance than an in-person meeting would have had
 - ~20% of registered participants were outside of continental US time zones (more registered CET participants than PST!)
- Casual/side conversations which can be easily had in-person were more difficult to provision
 - Particularly a hard loss for a planning meeting
 - Attempted encouragement with dedicated break blocks and Slack discussions
 - Utilization was mixed
 - Gather.town or similar would have possibly helped with this
- Participants found the **meeting guide** to be helpful (inspired by ICHEP2020)
- Distilled lessons learned to provide for Snowmass community in planning other large virtual events
 - Including this presentation

Questions?