



# Update on Snowmass Community Process

**Introduction/Overview**

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# Snowmass overview

- Snowmass is a community planning exercise organized by the Division of Particles and Fields (DPF) of the American Physical Society (APS).
- It provides an opportunity for the entire particle physics community to come together to identify and document a scientific vision for the future of particle physics in the U.S. and its international partners.
- Snowmass will define the most important questions for the field of particle physics and identify promising opportunities to address them.
- Snowmass is coupled to P5

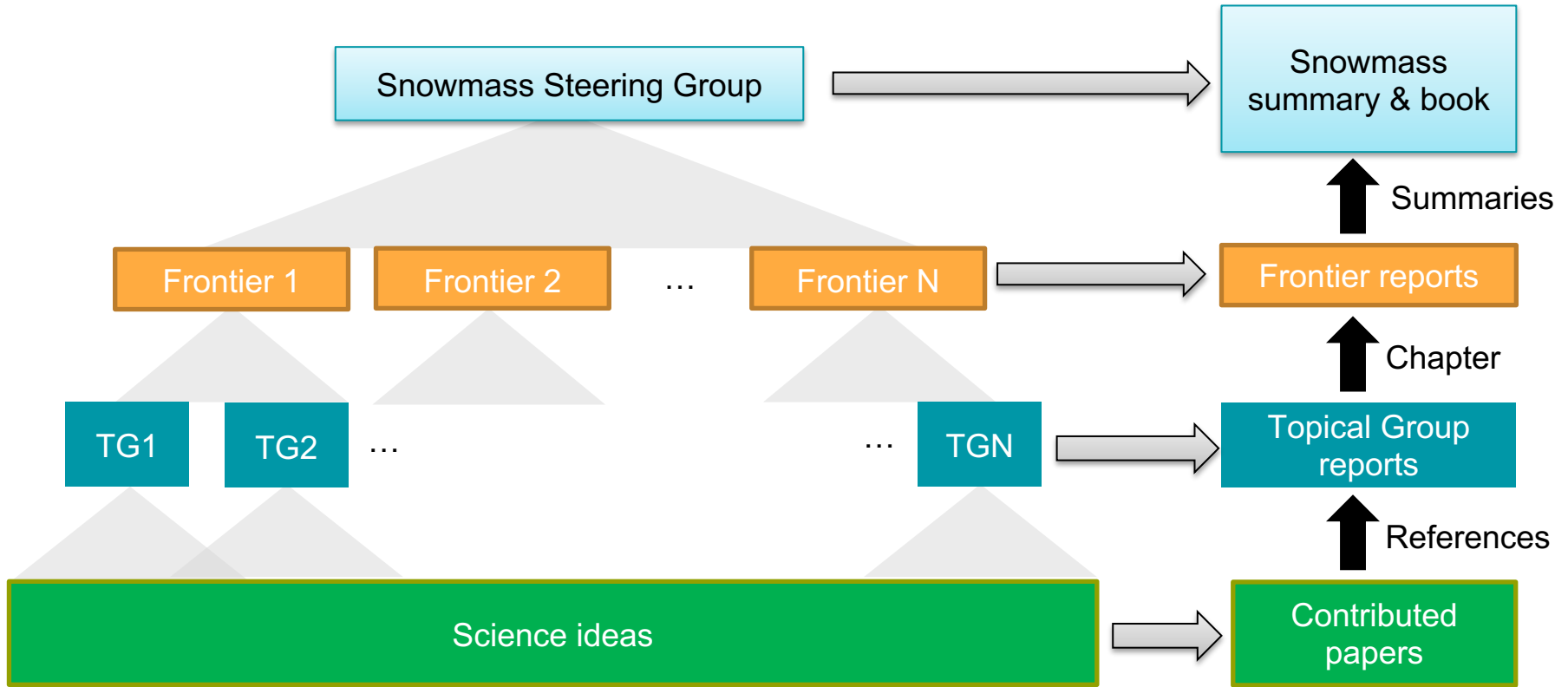
# P5

- Particle Physics Project Prioritization Panel
  - Subpanel of High Energy Physics Advisory Panel (HEPAP)
  - HEPAP: Advisory panel to DOE Office of HEP and NSF Math. & Physical Science Directorate
- P5 will take the scientific input from Snowmass and develop a strategic plan for U.S. particle physics that can be executed over a 10 year timescale, in the context of a 20-year global vision for the field.
  - The 2014 P5 report has been highly successful in that the advice has been followed (reasonably) closely.
- Currently assembling the P5 sub-panel
  - Chair: Prof. Hitoshi Murayama, UC Berkeley
  - Have solicited nominations from the broader community

# Snowmass messaging

- More than just aggregating ideas across the community
- Snowmass is an opportunity to synthesize and convey a message to the entire HEP community, P5, and sponsoring agencies. Our message is conveyed through:
  - Meetings
  - Reports
- Ideally, our community message is
  - Coherent
  - Compelling
  - Credible

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# Overall Snowmass Structure

- Snowmass Frontiers
    - Energy Frontier
    - Neutrino Physics Frontier
    - Rare Processes and Precision
    - **Cosmic Frontier** →
    - **Theory Frontier**
    - Accelerator Frontier
    - Instrumentation Frontier
    - Computational Frontier
    - Underground Facilities
    - Community Engagement Frontier
  - Each Frontier has subgroups (7 on average)
- ❖ CF1. Dark Matter: Particle-like
  - ❖ CF2. Dark Matter: Wave-like
  - ❖ **CF3. Dark Matter: Cosmic Probes**
  - ❖ **CF4. Dark Energy and Cosmic Acceleration: The Modern Universe**
  - ❖ **CF5. Dark Energy and Cosmic Acceleration: Cosmic Dawn and Before**
  - ❖ **CF6. Dark Energy and Cosmic Acceleration: Complementary Probes and New Facilities**
  - ❖ **CF7. Cosmic Probes of Fundamental Physics**

# Snowmass input & participation

- Thank you for all of your effort!
  - Prior work (e.g. Science Book, DSR, PBDR) was invaluable.
  - Snowmass is “chaotic” in nature, and especially challenging in light of COVID.
- Whitepapers
  - Members of CMB-S4 have led over a dozen CF whitepapers
- Topical Group reports
  - Members of CMB-S4 have directly contributed to more than four Topical Group reports
  - Initial drafts of the TG reports have been distributed for feedback
- Frontier Conveners are working on next steps
  - Have presented a synthesis of our CF community input at the Seattle Snowmass meeting
  - Are assembling the Frontier report

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