

# View from a Co-convener of the Computational Frontier

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# Introduction



- ◆ My past experience with Snowmass 2013
- ◆ What Snowmass is all about
- ◆ Computational Frontier is different from Energy Frontier
- ◆ Having an impact
  - seeking advice in 2020
- ◆ *In case it is not obvious, almost everything is my own opinion.*

# My Past Experience (2013)

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- ◆ Co-convenor with Lothar Bauerdick of Computing Frontier
  - Appointed Tom Blum and Ruth Van de Water as topical group convenors for Lattice Field Theory
  - Andreas Kronfeld was a contributor to that topical group
- ◆ Also a member of the DPF appointed Dine Panel to report on theoretical physics
  - Do not really consider that part of the Snowmass process

# What Snowmass is All About

- ◆ Snowmass is a community driven, planning process to provide input to HEPAP and the P5 panel for planning the future of particle physics
  - HEPAP=High Energy Physics Advisory Panel: provides advice to Department of Energy and National Science Foundation
  - P5=Particle Physics Project Prioritization Panel: appointed by HEPAP chair to set priorities for next 5-10 years
  - Name derives from the historical multi week planning workshop held in Snowmass, Colorado. Now, we have more than a year-long series of meetings, workshops to prepare for a big multiday meeting to try to achieve consensus.
- ◆ Product of topical group is research and report to Frontier
- ◆ Product of Frontier is report/presentation to steering committee/community
- ◆ Overall summary report and collected documents input to P5

# Topical Group Goal



- ◆ Provide input to plans put forward by the frontier to justify the excitement/potential of the physics and thus influence P5 to prioritize a project, e.g., new accelerator or experiment
- ◆ Help to honestly assess the importance of a potential initiative so its priority can be accurately judged
- ◆ Ultimate goal of Snowmass is to help influence funding to produce the strongest possible future HEP program in the US and maximize scientific output
  - Also to reach a community consensus
  - Disparate voices do not instill confidence in funding agencies or Congress

# Computational Frontier

- ◆ My experience is a little different as HEP is driven by accelerators and experiments
- ◆ Computing though very important to success is not likely to become a project by itself
  - our main recommendations involved issues
- ◆ Instrumentation for example is highly customized, while computing is so ubiquitous that we rely on commercial hardware for the most part—but we do have challenges in using it
  - Lack of P5 or HEPAP presentation
- ◆ **Your** impact will come through how you can support plans of Energy Frontier

# Having an Impact

- ◆ This meeting is an important first step in figuring out how to maximize your impact
- ◆ Frankly, I was disappointed in lack of attention to computing in 2013 P5 report: (<https://www.usparticlephysics.org>)
- ◆ Computing Frontier co-conveners have contacted representatives of DOE and NSF to ask how to maximize impact
- ◆ Have also interviewed one P5 member and may contact more
- ◆ Your group should be well situated to have an impact as Energy Frontier is one of the major focusses of HEP
  - only issue is how strong US Energy Frontier effort will be...