

# Discussion of CMB-S4 Strategy 2024 Summer Collaboration Meeting July 31, 2024

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## **Discussion of CMB-S4 Strategy**

This is an opportunity for an open discussion by the full Collaboration about the strategy for CMB-S4 going forward, now that we have been excluded from using the South Pole.

The goal is identify and discuss any and all topics that could help us move forward most efficiently toward the best possible design of CMB-S4.

And it is important to give skeptics the opportunity to ask their questions, to ensure that we don't miss important things. This will help us plan how to move things forward.

All questions, comments and discussion topics are more than welcome - are solicited and encouraged.



## Back-up slides



## Example "big picture" discussion topics

- Should we plow forward in developing the Chile design, or hold back until more is known about the future availability of the SP? For example, in the Q&A at the May HEPAP meeting, Jean Cottam indicated that they would know much more about their plan for doing the infrastructure work by the end of this year.
- How do we best interact with the Simons Observatory?
  - o In the near term as we design CMB-S4 in Chile?
  - In the longer term, e.g., (how) do we cooperate or merge? with SO as CMB-S4 matures as a full construction project and then operating observatory?
- What role can or should SPO play in cooperating with or supporting CMB-S4 or vice-versa?
- Are there other collaborations or projects from which we should learn or with which we should cooperate for the good of CMB science?
- Is it acceptable to design CMB-S4 as an *incremental* experiment that achieves its goals in combination with other experiments, or must it be *stand-alone* and achieve its goals without input from others?
- How important is it to achieve all of the CMB-S4 science goals as originally stated? What compromises are we willing to make?
- Are the CMB-S4 science goals sufficiently ambitious given the longer timeframe to obtaining the results?



## Example "smaller picture" discussion topics

- Is the near-term plan of focusing on the two working groups the best way to proceed? Are there other activities that
  we should be undertaking to help us understand how to move forward?
- Are the charges for the two working groups appropriate, or could they be improved to help the working group process be more effective in planning the revised configuration of CMB-S4?
- What are the near-term opportunities for collaboration with SO and SPO?
  - To help the design of CMB-S4
  - To build confidence between collaborations
- Is the process for converging on a revised configuration that was sketched on slide 14 of Jim and John's Project talk this morning appropriate?
- What ideas should we explore to minimize the cost of CMB-S4 while maintaining full science capability (value engineering)?
- How should we prioritize work given the limited funding in the coming year?
- What else should we be doing to advance CMB-S4?

