



# Workshop Closeout

# Excellent progress on our goals

## Workshop Goals

To advance CMB-S4, both the science and the community

- Science: engage with the broad community that is addressing science topics similar to those being pursued with CMB-S4, but using different techniques. We will discuss how CMB-S4 measurements can be used to advance these science topics in unique and complementary ways, and work on exploring powerful joint analysis of CMB and other probes.
- Community: raise awareness of systemic racism in general, as well as in our field and in our actions. We most strongly encourage all of you to participate in the next plenary session, ***Let's Talk about Anti-Racism***.
- Community: support the advancement of our Junior Scientists. We are looking forward to hearing their presentations in the Friday JSAC plenary sessions.

CMB-S4

CMB-S4 Summer Collaboration Meeting - Aug 10th 2020

Slide from Workshop Welcome and Overview [presentation](#)

# Science

We heard a lot about the power of cross-correlation analyses and cross-collaboration efforts; inspiring talks and many exciting ideas.

This will take resources and time. It is not too early to start. Some ideas:

- Additional focused workshops
- Follow up with Rapporteurs in a few months on progress; inform our next workshop
- Time to start the CMB-S4 External Collaborators Committee (ECC)
  - “The role of the External Collaborators Committee (ECC) is to provide the necessary link to external follow-up observations or survey data that are required to maximize the science return from CMB-S4.”
- Submit Snowmass Letters of Intent (LOI) due August 31st; (next slides)  
CF Snowmass conveners include CMB-S4 members: Anže Slosar, Masao Sato, Laura Newburgh, Clarence Chang, Brenna Flaugher & Chihway Chang
- Please send suggestions to CMB-S4 executive team [ET@cmb-s4.org](mailto:ET@cmb-s4.org)

# SNOWMASS process is just ramping up

- Now is a perfect time to get involved
- Topical working groups holding regular meetings
- Sign up for email lists, Slack Channels, google calendar
- <https://snowmass21.org/>
- <https://snowmass2021.slack.com/>
  
- LOIs Due Aug. 31 – link to some ideas: [LOI-Ideas](#)
- Snowmass Planning meeting Oct. 5-9:  
[https://snowmass21.org/2020\\_oct\\_cpm](https://snowmass21.org/2020_oct_cpm)
  
- Midterm Assessment at 2021 April APS meeting
- Summer Study meeting UW Seattle July 11-20, 2021

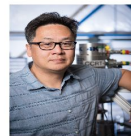
4

# We need your ideas for how to facilitate combining analyses.

- CF5 Cosmic Dawn & Before
- CF6 Dark Energy, **Combined Probes** and new facilities [web page](https://indico.fnal.gov/event/44969/)
- CDF4, CF5, CF6, CF7 Townhall today at 3pm CDT: <https://indico.fnal.gov/event/44969/>

## Snowmass 2021 : Cosmic Frontier

### Conveners



Aaron Chou  
Fermilab



Marcelle Soares-Santos  
University of Michigan



Tim Tait  
UC Irvine

Topical Group	Co-conveners			
CF1: Particle DM	Jodi Cooley SMU	Tongyan Lin UCSD	Hugh Lippincott UCSB	Tracy Slatyer MIT
CF2: Wavelike DM	Joerg Jackel Heidelberg	Gray Rybka UW	Lindley Winslow MIT	
CF3: DM Astro Probes	Alex Drica-Wagner Fermilab	Chanda Prescod-Weinstein UNH	Haibo Yu UC Riverside	
CF4: DE & CA The Modern Universe	Jeff Newman Pittsburgh	Masao Sako U Penn	Anze Slosar BNL	
CF5: DE & CA Cosmic Dawn & Before	Clarence Chang ANL	Laura Newburgh Yale	Deirdre Shoemaker Georgia Tech	
CF6: Dark Energy Complementarity	Chihway Chang Chicago	Brenna Flaugher Fermilab	David Schlegel LBNL	
CF7: Cosmic Probes	Rana Adhikari Caltech	Luis Anchordoqui CUNY	Ke Fang UW Madison	B.S. Sathyaprakash Penn State Kirsten Tollefson MSU

# Community

Many thanks to Neli Fanning, Vickie Sides, and Tiana Pyer-Pereira for facilitating the ***Let's Talk about Anti-Racism*** plenary session. It was excellent.

Some take-aways:

- We are just beginning the conversation...
- We encourage you to educate yourself and practice anti-racism; resources listed on the workshop wiki
- We will continue the social justice conversation at future meetings
- Please send feedback and suggestions for next steps to the executive team [ET@cmb-s4.org](mailto:ET@cmb-s4.org)

# Community

- Many thanks to Junior Scientist Advancement Committee, especially Darcy Barron, for arranging the Junior Scientist talk sessions this morning, and special thanks to the speakers for excellent presentations!
  - Yuto Minami, Dongwon 'DW' Han, Suvodip Mukherjee, Omar Darwish, Heather McCarrick, Benjamin Beringue, Max Abitbol, Jahmour J. Givans, Lindsay Ng Lowry, Shouvik Roy Choudhury, Ruby Byrne, Anna Ho, Charles Hill, Tucker Elleflot, Kirit Karkare, Theodore Macioce, John Groh, Tyler St Germaine, & Tashalee Billings.
- Also thanks to the Darcy for arranging the Social/Networking Events, including one more this afternoon starting at 1:30 pm PDT / 3:30pm CDT / 4:30pm EDT, which is open to all.
- To provide feedback and suggestions for future JSAC events, email [jsac@cmb-s4.org](mailto:jsac@cmb-s4.org)

# Community

- Many thanks to EPO committee, especially Tom Crawford, for arranging “**A Scientist Walks Into a Bar.**” And thanks to Kimmy Wu and Renée Hložek and to all of you who walked into the virtual bar.
- To provide feedback and suggestions for future EPO events, email [epoc@cmb-s4.org](mailto:epoc@cmb-s4.org)



# Lessons learned and advice for future workshops

- This workshop was the 11th major CMB-S4 collaboration workshop, and the first one to focus on the broader science case and reach out to the broader community. It was purposely held during the summer to allow participation of faculty and students. It was also the first week long workshop.
- The structure of the science programs with the internal/external Rapporteurs worked well.
- The remote format has its obvious deficiencies, but it does allow broad participation.
- There were 485 registered participants!
- The SOC will have a debrief meeting, please provide feedback and suggestions to [soc@cmb-s4.org](mailto:soc@cmb-s4.org)

# Key CMB-S4 activities between now and the next major collaboration workshop (~6 months)

- Agency Status Review of CMB-S4 (**next week!**)
- DOE lead lab decision (next week?)
- Draft the Preliminary Baseline Design Report (PBDR)
  - This will be a major effort of the collaboration and project.
  - Builds on the Decadal Survey Report (DSR) and its reference design
  - The PBD defines the project for CD-1/PDR
- ASTRO2020 outcome (March 2021?)
- Reviews!
  - Director's Review,
  - NSF PD / DOE CD-1 review

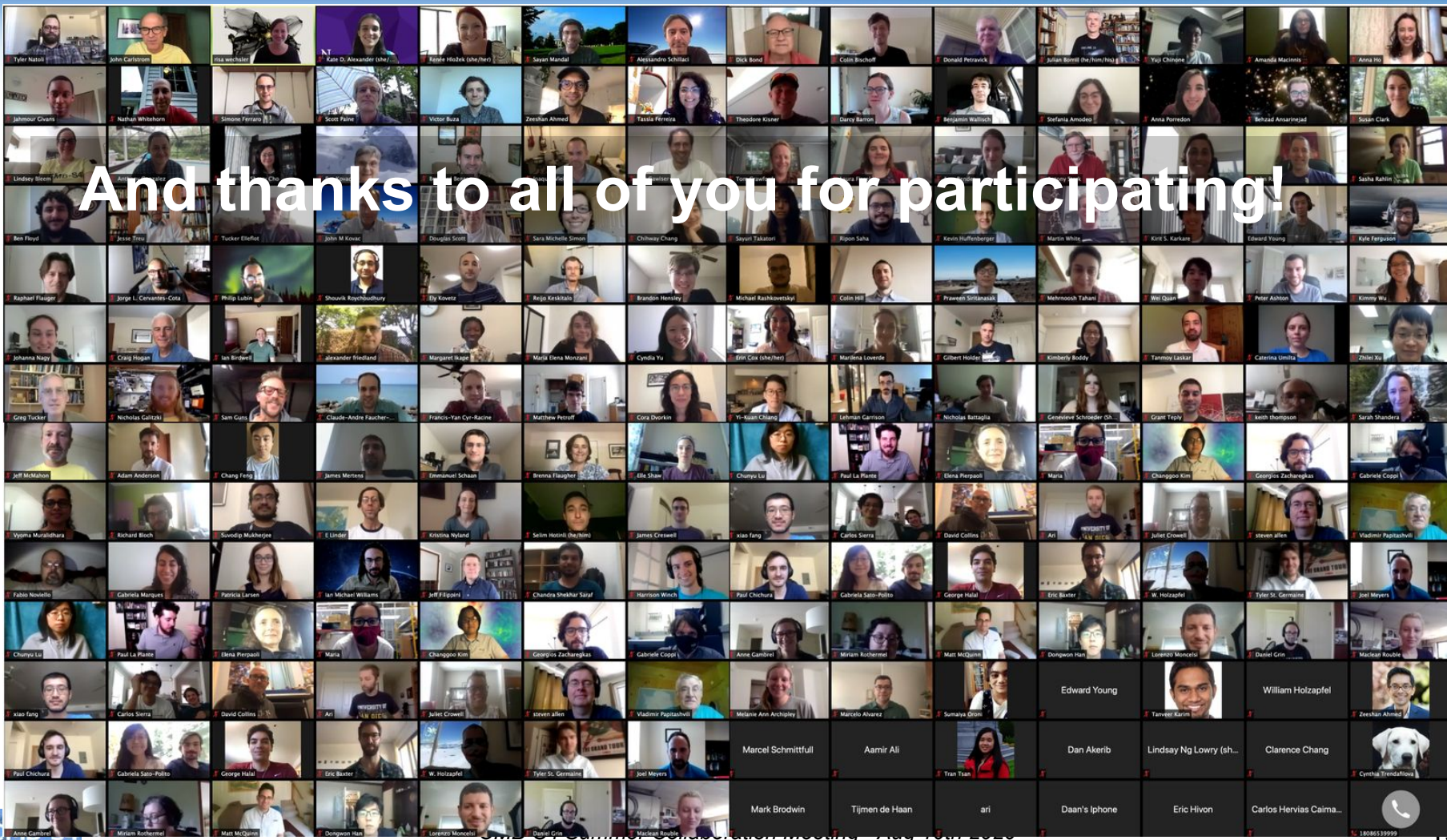
# Get involved!

- CMB-S4 Collaboration members
  - Thanks to everyone serving on committees and volunteering to serve, and to the outgoing committee members
  - Join working groups; see CMB-S4 [mailing lists](#), [wiki pages](#) and [google calendar](#)  
Contact working group leads
- Non-collaboration workshop participants
  - Become a CMB-S4 member! [membership application form](#)
  - Sign up for CMB-S4 “friends” email list [here](#)

# Thanks to a productive workshop and an enjoyable week!

- The Rapporteurs and Science Session organizers, esp our non-CMB-S4 Rapporteurs:
  - Risa Wechsler, Kate Alexander, Laura Fissell, Peter Graham, Anthony Gonzalez, Steve Furlanetto, Bryce Littlejohn & Matt McQuinn
- All the parallel session contributors
- The scientific organizing committee:
  - Z. Ahmed, N. Battaglia, L. Bleem, J. Borrill, J. Carlstrom, C. Chang, S. Clark, A. Crites, S. Ferraro, L. Knox, E. Linder, J. Meyers, A. Slosar, A. Vieregg, J. Vieira & N. Whitehorn
- The local (remote) organizing committee:
  - Brad Benson, Lindsey Bleem, John Carlstrom & Tyler Natoli, and also website support from Elena Galtsev

And thanks to all of you for participating!



Open for Town Hall

Questions, comments?

10086539999