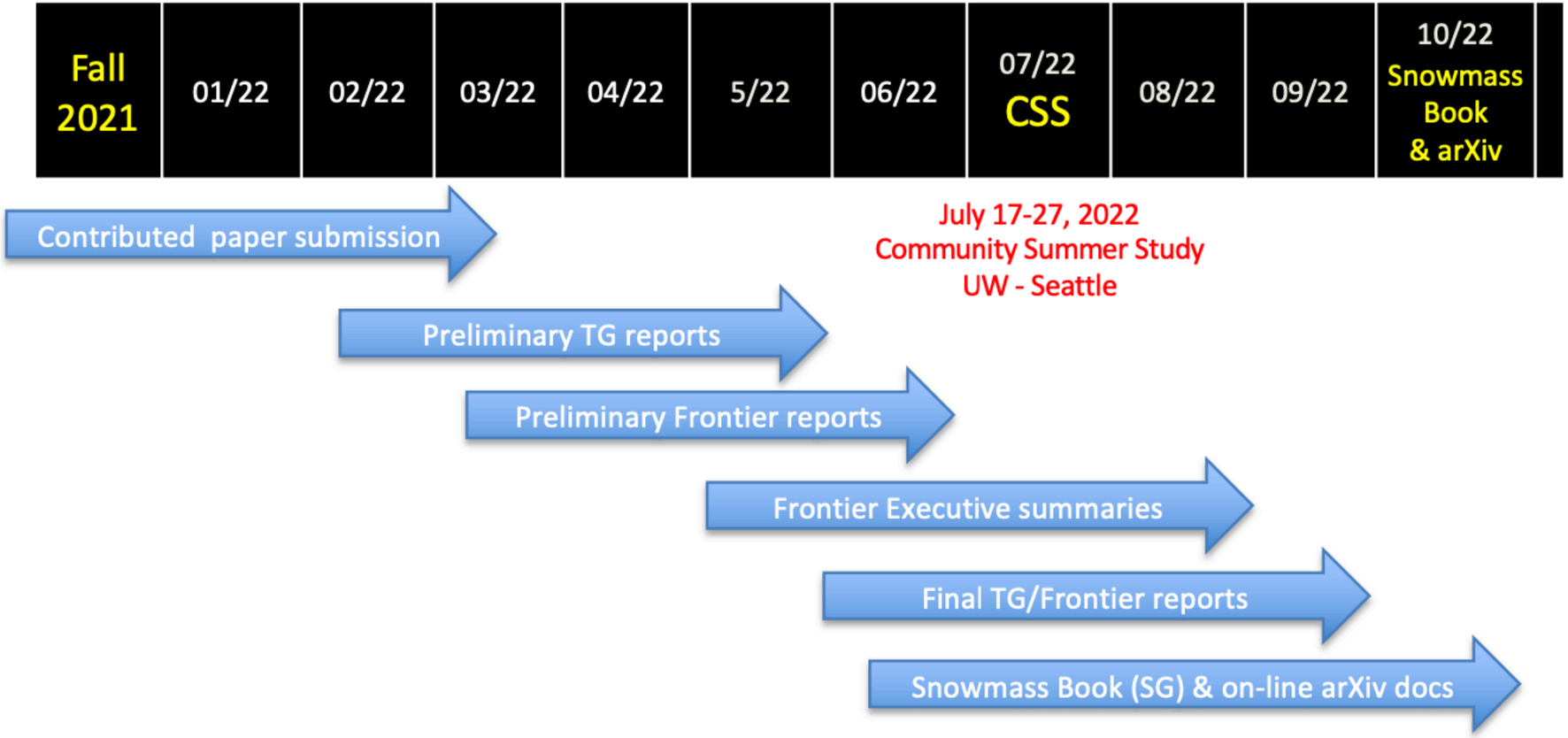
CF5

Dark Energy and Cosmic Acceleration: Cosmic Dawn and Before
Conveners: Clarence Chang, Laura Newburgh, and Deirdre Shoemaker

Deirdre Shoemaker, University of Texas at Austin

Aug 12 2021

Timeline for Snowmass



Please join the Snowmass activities for an exciting year to come!

CF5

- CF5 Working Group: Adrian Liu, Emanuele Castorina, Neimack, Kevin Huffenberger, Dan Green, Reness Hlozek, Robert Caldwell
- Goal is to put forth the future needs of the community in the Snowmass final report
- 23 Letters of Intent to submit white papers were received from the community
- We are soliciting White papers (deadlines could change)
  - Feb 15 2022: draft of executive summary, key tables and figures to working group
  - Mar 15 2022: white papers due on arXiv for inclusion in working group report
  - May 31 2022: working group report due
  - Jul 22 2022: Community Summer Study at UW-Seattle
  - Sep 30 2022: Final reports due from CF
  - Oct 31 2022: Snowmass Books and online archive documents due
- CF5 will write a report based on the white papers to synthesis the needs of our community and to work with the other conveners when appropriate

White Papers

- “Theory” white papers that synthesize the theoretical landscape highlighting the interest and importance of these topics to High Energy Physics.

  First section of https://arxiv.org/pdf/1309.5381.pdf

- “Measurement” white papers that discuss how different experimental approaches advance our understanding of the above topics including projected experimental reach. These papers can also include discussing the current and future state of the field and associated technical challenges.

  Second section of https://arxiv.org/pdf/1309.5381.pdf

- For each topic, we have identified community volunteers but you are all welcome to contribute.

White Papers

Theory

- Inflationary science through non-gaussianity, primordial features & B-modes with Dan Green, Marilena Loverde
- Light relics with Dan Green, Marilena Loverde, Renee Hlozek
- BSM Cosmology (e.g. early universe phase transitions) with Robert Caldwell
- Beyond Standard Cosmology (e.g. cosmological low/high-z cosmology) with Robert Caldwell, Renee

Measurement

- Stochastic GW Background with Robert Caldwell, Deirdre Shoemaker
- 21cm (PUMA, “Cosmic Dawn Array”) with Adrian Liu, Danny Jacobs, Laura Newburgh
- Mm-wave LIM with Clarence Chang, Adrian Liu, Jeff McMahon
- CMB (e.g. CMB-HD, CMB from ground & space) with Kevin Huffenberger, Clarence Chang
- Optical Survey (e.g. Megamapper) with Laura Newburgh & Clarence Chang

Community volunteers