



2027 **WINTER CONFERENCE**

COSMOLOGICAL SIGNALS FROM THE DARK AGES TO THE PRESENT

MARCH 7 - 12, 2027

**Sunday evening welcome reception
Meetings Monday through Friday morning**

The early Universe, from the dark ages through cosmic dawn, reionization, and beyond, holds the key to understanding the first luminous structures and their role in shaping cosmic history. Rapid advances in theory, simulations, and observations are converging to reveal this exciting period for the first time.

Our goal is to foster collaboration and synthesis across disciplines to interpret current and upcoming data, refine theoretical frameworks, and chart the next decade of discovery in high-redshift cosmology.

Topics to be covered include:

- Formation of the First Luminous Structures: The first stars, star clusters, and black holes.
- Theory of the 21-cm Signal: Simulations and predictions for the dark ages, cosmic dawn, and the epoch of reionization.
- Observations of the High-Redshift Universe: Current and upcoming surveys targeting 21-cm emission, line intensity mapping, and high-redshift sources.
- Synergies Across Probes and Simulations: Integrating theoretical models, numerical simulations, and multi-wavelength observations.
- Connecting the Early Universe to Current Observations: Linking the astrophysics and cosmology that can be studied with the first galaxies to JWST and various cosmological probes.

APPLICATION DEADLINE – SEPTEMBER 30, 2026

PLEASE COMPLETE YOUR APPLICATION AT
<https://aspenphys.org/winter-conferences/>

CONFERENCE WEBSITE
<http://wise-obs.tau.ac.il/~barkana/darkages.html>

ORGANIZERS
Rennan Barkana, Tel Aviv University
Anastasia Fialkov, University of Cambridge
Smadar Naoz, University of California Los Angeles

**PROPOSALS FOR THE 2028 WINTER CONFERENCES ARE INVITED
AND MUST BE SUBMITTED BY JANUARY 15, 2027**

