



ASPEN CENTER
FOR PHYSICS



2024 WINTER CONFERENCE

DIFFUSE COSMIC BACKGROUNDS AND THE LOW SURFACE BRIGHTNESS UNIVERSE

MARCH 31 – APRIL 5, 2024

Sunday evening welcome reception
Meetings Monday through Friday morning

The background radiation at optical and near-infrared wavelengths is thought to be sourced largely by stars in galaxies, but tensions in recent measurements indicate that our census of galaxy populations might be incomplete. A significant missing fraction of the starlight might be sourced by low surface brightness populations that are difficult to observe, and indeed searches for faint and diffuse extragalactic sources have found a wealth of new populations. These faint sources contain important information to understand star formation in low-mass galaxies, the hierarchical assembly of galaxies and galaxy clusters over cosmic history, and the nature of dark matter. Progress in this regime has been slow due to the scarcity of high-quality, wide-area, ultra-deep images needed to produce statistically significant and homogeneous samples, but dramatic improvements in telescope and detector technology will lead to a wealth of exciting scientific discoveries to emerge from the low surface brightness universe.

In this conference, we will bring together experts in the history of galaxy formation, low surface brightness populations, the cosmic background light, and astrophysical theory to discuss how to reconcile the observations and their implications for cosmic structure formation.

APPLICATION DEADLINE – SEPTEMBER 30, 2023

PLEASE COMPLETE YOUR APPLICATION AT

<http://www.aspenphys.org/physicists/winter/winterapps.html>

Conference Website:

<https://sites.google.com/view/aspen-2024-diffuse-universe/>

ORGANIZERS:

Kenneth M. Lanzetta, SUNY Stony Brook

***Mireia Montes**, Instituto de Astrofísica de Canarias

***John Webb**, Cambridge University

Michael Zemcov, Rochester Institute of Technology

*PHYSICIST IN CHARGE OF DIVERSITY

PROPOSALS FOR THE 2025 WINTER CONFERENCES ARE INVITED
AND MUST BE SUBMITTED BY JANUARY 15, 2024

The Aspen Center for Physics is committed to a significant participation of women and under-represented groups in all of its programs.

ASPEN CENTER FOR PHYSICS

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