

## Second Announcement for the Institute of Astronomy's 2011 Summer Conference:

### "NEW HORIZONS FOR HIGH REDSHIFTS"

to be held at the University of Cambridge IoA  
July 25-29, 2011.

<http://www.ast.cam.ac.uk/meetings/hiz11/>

**REGISTRATION DEADLINE** is April 1st.

The final list of participants, including those giving talks and posters, is expected to be announced by May 1st.

An outline of the scientific program is given below.  
Inquiries should be sent to [hiz11@ast.cam.ac.uk](mailto:hiz11@ast.cam.ac.uk).

We look forward to seeing you at the IoA in July!

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### Scientific Motivation:

The last decade has witnessed a dramatic increase in our knowledge of the  $z > 5$  Universe. Ground and space-based studies have uncovered primordial galaxies that formed within 1 Gyr of the Big Bang. Spectra of the highest-redshift known QSOs have offered a glimpse of the intergalactic medium near the reionization epoch. Observations of the CMB and other probes have clarified the cosmological context in which the IGM and galaxies evolve. Meanwhile, increasingly sophisticated numerical simulations have provided laboratories for exploring many of the unseen processes that shape the early Universe.

Despite these advances, however, many of our most basic questions remain largely unanswered: What were the properties of the first stars, galaxies, and AGN? How and when was the IGM reionized? How did interactions between galaxies, QSOs, and the IGM at early times shape the Universe we observe at later epochs? The goal for this meeting will be to address these questions in the context of progress that can be made over the next three to five years. By combining insights from a wide variety of current observational and theoretical programs, we aim to deliver a more robust understanding of the  $z= 5-10$  Universe that will guide scientific exploitation of next-generation facilities.

### Topics to be covered:

- High-redshift galaxy evolution & star formation
- Hydrogen Reionization
- Evolution and enrichment of the early IGM
- High-redshift QSOs and AGN
- Lessons from He II Reionization
- Other probes of the  $z > 5$  Universe, including 21cm experiments

**Invited speakers:**

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|-------------------|---------------------|------------------|
| - Frank Bertoldi  | - Richard Ellis     | - Martin Rees    |
| - Jamie Bolton    | - Steven Furlanetto | - Mike Shull     |
| - Rychard Bouwens | - Piero Madau       | - Chuck Steidel  |
| - Chris Carilli   | - Matt McQuinn      | - Chris Willott  |
| - Joanna Dunkley  | - Masami Ouchi      | - Saleem Zaroubi |

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**SOC:**

George Becker (chair), Sebastiano Cantalupo, Bob Carswell, Scott Chapman, Martin Haehnelt, Paul Hewett, Regina Jorgenson, Rob Kennicutt, Anthony Lasenby, Richard McMahon, Max Pettini, Dan Stark

LOC: Paul Aslin, George Becker, Jeannette Gilbert (sec), Martin Haehnelt, Paul Hewett, Max Pettini, Amanda Smith