

# Joint Discussion 7

## The Universe at $z > 6$

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### Preface

The exploration of the earliest phase of star and galaxy formation after the Big Bang remains an important challenge of contemporary astrophysics and represents a key science driver for numerous future facilities. During this phase the first stars and galaxies appear and start to light up and ionize the then neutral Universe ending thereby the so called cosmic dark ages and leading progressively to the complete reionization we observe now at redshift  $z \simeq 6$  or earlier.

Important theoretical and numerical advances have been made in the modeling of the early Universe. Also, it has recently become possible to obtain direct observations of galaxies, quasars, and the intergalactic medium (IGM) out to redshift  $z \simeq 7$ . Furthermore new optical to near-IR observations using ground-based and space-borne telescopes are now opening up the view to even higher redshift, directly probing for the first time galaxies during the first billion years after the Big Bang.

Motivated by these facts Joint Discussion 07 on “The Universe at  $z > 6$ ” was organised during the IAU General Assembly as a forum to present and discuss the latest results both from numerical modeling and from observations in this rapidly advancing field.

Judging at least from the attendance – a very full room with up to  $\sim 150$  persons! – this Joint Discussion was a success. We hope that all participants, speakers, poster presenters, and the ‘audience’ felt the same. In any case we thank all the persons who have contributed to this Joint Discussion 07, the SOC members, all the local organisers, and the participants.

### Scientific Organizing Committee

Andrea Ferrara (Italy, co-chair), Esther M. Hu (USA), Matthew D. Lehnert (Germany), Roser D. Pelló (France), Daniel Schaerer (Switzerland), and Yoshiaki Taniguchi (Japan).

*Daniel Schaerer and Andrea Ferrara, co-chairs SOC and editors*  
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