Contribution ID: **7** Type: **Invited**

# Unveiling Early Quasars with Euclid: From candidates selection to follow-up spectroscopy

*Monday 18 November 2024 09:40 (30 minutes)*

The discovery and study of high-redshift quasars (z > 6) provides crucial insights into the first billion years of the Universe, particularly in relation to cosmic reionization, black hole growth, and galaxy formation. In the era of the JWST and Euclid, our ability to detect and characterize these distant quasars has significantly advanced. In this talk, I will summarize the efforts of the Primeval Universe QSOs Work Package within the Euclid Consortium. Euclid is providing deep photometric observations in the optical (VIS-band) and near-infrared (Y, J, H bands), covering a wavelength range from approximately 0.5 to 2 microns, and will cover a sky area of ∼14,000 square degrees. Additionally, Euclid's slitless grism spectroscopy, covering 0.9–1.85 microns, will enable the identification and characterization of distant quasars through broad emission lines. I will give an update on the status of the Euclid survey and provide an overview of the different selection methods being used to select quasar candidates at the highest redshift. I will also present results from the first spectroscopic follow-up campaigns, including the first confirmed high-redshift Euclid quasars. Finally, I will discuss the challenges encountered in this early phase of the survey and the ongoing efforts to overcome them. The initial campaign for identifying the first quasars with Euclid has yielded promising results, and we expect the survey to uncover hundreds of quasars at z > 7, exciting targets for follow-up characterization with JWST.

**Presenter:** BELLADITTA, Silvia (Max Planck Institute for Astronomy)