

Großes Physikalisches Kolloquium an der Universität zu Köln



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On the Search of the First Galaxies with the JWST

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16³⁰ Uhr
HS III

The first deep images with the James Webb Space Telescope (JWST) have transformed our view of the Universe. With its unparalleled imaging and spectroscopic capabilities, JWST finally provides deep restframe optical observations to $z=10$ -- a huge leap from the current $z=3$. Additionally, JWST immediately extended our cosmic horizon into uncharted territory, with galaxy candidates now identified out to $z\sim 14-16$, only $\sim 250-300$ Myr after the Big Bang. We are thus at the brink of finding the first galaxies that ended the cosmic Dark Ages and started the reionization of the Universe.



In this talk, I will show how far we have come in understanding early galaxy build-up over the last years. I will start with the state of knowledge from three decades of Hubble and Spitzer Space Telescope datasets before JWST, and will then present an overview of our current understanding of early galaxies based on early results from the first JWST images that have become available since last summer.