

Exploring New Frontiers in Exoplanetary Science with JWST

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Abstract: The recently commissioned James Webb Space Telescope (JWST) is set to become humanity's sharpest eye to look at the infrared Universe. From being able to detect the faint glow of the first galaxies to being able to characterize the atmospheres of Earth-sized worlds, the observatory's unique capabilities will allow it to perform a wide range of exciting science, that will undoubtedly revolutionize our understanding of the Universe. In this talk, I will introduce the new frontiers JWST will be – and already – exploring in the field of exoplanetary science during its very first year of scientific operations, with a special focus on transiting exoplanets. Through some early results on new dimensions being explored for gas giant exoplanets, as well as first looks at the atmospheres and surfaces of small, rocky exoplanets, I will show how JWST is already dramatically changing our understanding of planetary systems in the cosmos, allowing us to put our own Solar System in this exoplanetary context.