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## **Exoplanet atmospheres from space: From the era of HST and Spitzer to the era JWST and Ariel.**

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For the last decade, exoplanet atmospheres have been observed from space using transits, eclipses and phase-curves with the Hubble and Spitzer Space Telescopes. About a hundred exoplanets were characterised, providing crucial clues about their nature and formation. However, due to the narrow wavelength coverage and low signal-to-noise, inference of complex properties at the population level have remained challenging. Promising higher quality data for thousands of exoplanets, the NASA/ESA/CSA-JWST and the ESA-Ariel mission marks the new era of exo-atmospheric characterisation. This presentation will explore past and present discoveries made using HST and Spitzer, highlighting the capabilities of those telescopes but also their limitations. It will also discuss how those limitations can be overcome by the revolutionising power of JWST and Ariel, using recent observations and simulation.