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# Séminaire joint DPhP-DAP de Cosmologie

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CEA-Saclay Bât. 141, salle André Berthelot

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## **JWST, the promise of the dawn of the universe**

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Designed to reach farther back in time than its predecessor the HST, the JWST was conceived to study the dawn of the universe, i.e., the moment when the first stars and galaxies were born. Since the release of its first observations, scientific papers have followed one another at an accelerated pace and the first discoveries have already raised concerns about our models. The long-awaited discoveries are well underway. Maybe even too well?

How is JWST changing our understanding of the history of the universe? Are we witnessing unexpected developments, what impact do they have on our theories, on what we know about the composition of the universe?

Papers have already been published calling for a revision of our cosmology, but many reasonable physical mechanisms must first be taken into account before such conclusions can be drawn. However, several unexpected results have already emerged concerning not only the first stars and galaxies, but also the first black holes and the origin of the shape of galaxies. I will review these first results.

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