

COSPAR 2026 Interdisciplinary Lecture
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Title:

The James Webb Space Telescope: Expanding Our Cosmic Horizons

Abstract:

The James Webb Space Telescope is one of the most technologically challenging and innovative space missions ever developed for astronomy. In some wavelength bands, it has achieved a leap in sensitivity of up to three orders of magnitude relative to previous facilities. Such an extraordinary advance has occurred very rarely in the history of astronomy - and, more broadly, in science - opening the exploration of uncharted territories of the cosmos, while also revealing new astrophysical phenomena.

In this lecture, I will provide a brief overview of some of the remarkable discoveries made possible by Webb across multiple areas of astrophysics. I will discuss how several of these findings are both fascinating and puzzling, potentially pointing toward profound paradigm shifts in our understanding of astrophysical processes.