

The Keck Institute for Space Studies  
presents the following lecture:

# Origins and Evolution of Life in Space and Time

Dr. James L. Green  
Former NASA Chief Scientist

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Wednesday, June 5, 2024

4:30 PM Refreshments  
5:00 PM Lecture

Lees-Kubota Lecture Hall  
California Institute of Technology

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Join Dr. James L. Green as he discusses the origins and evolution of life in space and time. It is estimated that life started on Earth approximately 3.9 billion years ago. By studying the evolution of our own planet and Sun, it may give us some clues as to what to look for life at other locations in our own solar system and in the solar systems of other stars.

Comparative planetology tells us that terrestrial planetary atmospheres have been in a process of continual change within an ever changing solar and galactic environment. We are finding some startling parallels that suggest both Venus and Mars had environments that would have been habitable for life in their distant past. New observations in the outer part of our solar system indicate that Europa and Enceladus have an ocean of liquid water beneath their icy crust in contact with mineral-rich rock. These icy moons may have the ingredients needed for life as we know it.

With these discoveries, and many others in mind, we are looking for potentially habitable exoplanets and have made some significant discoveries.

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