

Research & Innovation
WEEK MARCH 3 - MARCH 9, 2017
Lakehead University



Dr. James L. Green

Director, Planetary Science Division
NASA Headquarters, Washington DC

Dr. James L. Green received his Ph.D. in 1979 and began working at NASA, where he developed and managed NASA's first internet. Several missions have been successfully executed under his leadership at the Planetary Science Division, including spacecrafts to the moon, the Pluto flyby, and the landing of the Curiosity rover on Mars.

Jim has received numerous awards, and has written over 115 scientific articles about Earth and planetary science, as well as over 50 technical articles on data systems and networks. In 2015 Jim was part of NASA's involvement in the film "The Martian".

EXCEPTIONAL.
UNCONVENTIONAL.



The Search for Life Beyond Earth in Space and Time

About 4.5 billion years ago a supernova exploded, causing a nearby interstellar cloud to collapse—creating our solar system. What emerged first was our sun, blowing the lighter gases outward. This allowed the heavier elements to remain in the inner solar system, forming our terrestrial planets. We are lucky to have Venus and Mars, two terrestrial planets that are very similar to the Earth and with significant atmospheres.

Planetary scientists have developed the capability to model how these planets have evolved since their birth and what may happen to them in the distant future. Comparative planetology tells us that terrestrial planetary atmospheres have been in a process of continual change. 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. In addition, Europa and Enceladus are thought to have an ocean of liquid water beneath their icy crust in contact with mineral-rich rock. These icy moons may have the three ingredients needed for life as we know it: liquid water, essential chemical elements for biological processes, and sources of energy that could be used by living things.

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

Wednesday, March 8, 2017
ATAC 1003, Lakehead University
7:30 pm - 8:30 pm

Event open to all, no registration required
Refreshments will be available



The Chronicle Journal
THE NEWSPAPER OF THE NORTHWEST



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