



Geophysical Fluid Dynamics Program

Planetary Atmospheres and the Search for

Signs of Life Beyond Earth

2023 Sears Public Lecture

Tuesday, July 18
5:00 pm

Redfield Auditorium, WHOI

Reception to follow
on the lawn

For thousands of years, inspired by the star-filled dark night sky, people have wondered what lies beyond Earth. Today, the search for signs of life is a key motivator in modern-day planetary exploration. The newly launched James Webb Space Telescope will enable us to study gases in rocky exoplanet atmospheres, possibly including “biosignature” gases that might be attributed to life. Closer to home, a now controversial detection of phosphine gas in the Venus atmosphere has reignited interest in Venus, from re-investigation of decades' old atmosphere anomalies to new laboratory investigations of organic molecules' stability and chemistry in sulfuric acid (the composition of Venus' cloud particles). New exoplanet atmosphere discoveries as well as intriguing evidence for Venus as a potentially habitable planet give us hope towards making progress on answering the ancient questions about the possibility of life beyond Earth.



Professor Sara Seager, MIT