



2019 Astrobiology Meeting

Bellevue, Wa. June 24–28

Media Tips by Topic

The following is a list of potentially newsworthy research selected by AGU's public information office:

Binary star exoplanets

Talk	Habitability of Planets and Moons in Binary and Higher Order Systems	Monday, June 24,	11:00 AM	Auditorium
Talk	Obliquity Variations and Habitability in Alpha Centauri AB	Monday, June 24,	11:15 AM	Auditorium
Talk	On the habitability of eccentric planetary S-type motion in binary stars	Monday, June 24,	11:25 AM	Auditorium
Talk	Habitable Environments Surrounding Moderately Close Binaries	Monday, June 24,	11:45 AM	Auditorium
Talk	Climate Extremes and Habitability Constraints for Circumbinary Planets	Monday, June 24,	11:55 AM	Auditorium
Poster	Modeling the Stellar Flux of Circumbinary Planets	Monday, June 24,	7:00 PM	Evergreen Ballroom

Contagion

Poster	Analysis of Human-commensal Microbes at a Mars Analog Habitat	Monday, June 24,	7:00 PM	Evergreen Ballroom
Poster	Expression of dsrAB in Desulfotalea psychrophila Subjected to Simulated Martian Conditions.	Monday, June 24,	7:00 PM	Evergreen Ballroom
Talk	Biochemical and Bioinformatic Insights into the Metabolism of Spacecraft Cleaning Agents	Wednesday, June 26,	3:00 PM	Auditorium
Poster	The Mammalian Immune System Recognizes and Responds to Peptides containing Rare Amino Acids found on Meteorites	Wednesday, June 26,	7:15 PM	Evergreen Ballroom
Talk	Fungal Spore Resistance to Space Radiation	Friday, June 28,	10:15 AM	Cedar Ballroom

Early Earth & solar system

Poster	A cold and alkaline Hadean ocean resulted from carbonate-silicate geochemical cycle	Monday, June 24,	7:00 PM	Evergreen Ballroom
Talk	Comets as Tracers of the Origin and Evolution of Volatiles throughout the Solar System	Wednesday, June 26,	10:15 AM	Cedar Ballroom
Talk	Oxygenation of the 2.2 Ga Deep Ocean: Evidence from Birimian Greenstone Belt, Ghana	Wednesday, June 26,	11:45 AM	Regency EFG
Talk	The Devonian Plant Revolution: Roots, Weathering and the Impact on Global Biogeochemical Cycling	Wednesday, June 26,	12:00 PM	Regency EFG
Poster	Extra-large and morphologically unique microfossils of the 2.52 Ga Gamohaam Formation, South Africa	Wednesday, June 26,	7:15 PM	Evergreen Ballroom

Extreme Earth environments

Talk	Microbial communities and impact enhanced habitats in the Chicxulub impact crater	Wednesday, June 26,	5:45 PM	Regency ABC
Poster	Nanosecond Freezing of Water at High Pressures Relevant to Astrobiology	Wednesday, June 26,	7:15 PM	Evergreen Ballroom
Talk	Competition and Cooperation at the Uppermost Temperature Limits to Life	Thursday, June 27,	11:00 AM	Auditorium

Habitable zones

Poster	White Dwarfs and Icy Worlds - Evolving Habitability	Monday, June 24,	7:00 PM	Evergreen Ballroom
Poster	Oxidation of the Interiors of Carbide Exo-Planets	Wednesday, June 26,	7:15 PM	Evergreen Ballroom
Poster	A limited habitable zone for complex life	Wednesday, June 26,	7:15 PM	Evergreen Ballroom

Intelligence

Talk	Cognitive Planetary Transitions: An Astrobiological Perspective on the "Sapiezoic Eon".	Wednesday, June 26,	10:15 AM	Auditorium
Talk	Intelligence as a planetary process	Wednesday, June 26,	10:30 AM	Auditorium
Talk	The Coupled History of Planets and Civilizations.	Wednesday, June 26,	11:05 AM	Auditorium
Talk	Dissipation, Biosignatures and Technosignatures: A Planetary Classification	Wednesday, June 26,	2:52 PM	Cedar Ballroom

Life origins & alien biochemistry

Talk	Incorporating Lessons from Geoarchaeology and Geoforensics into the Search for Non-Terrestrial Agnostic Biosignatures	Monday, June 24,	12:00 PM	Cedar Ballroom
Poster	Testing methods to detect 3D vegetation structure on exoplanets	Monday, June 24,	7:00 PM	Evergreen Ballroom
Talk	Autonomous synthesis and boot-up from a homogeneous chemical mixture of populations of giant vesicles showing birth, growth, self-replication, extinction and competition cycles	Wednesday, June 26,	2:15 PM	Grand IJ
Talk	Collective cognition in the arms of the octopus	Wednesday, June 26,	6:00 PM	Regency EFG
Poster	Towards Creation of a U-DNA Genome Using Synthetic Biology Tools	Wednesday, June 26,	7:15 PM	Evergreen Ballroom
Poster	Spontaneous emergence of chirality and chiral domains in proto-nucleobase assemblies: Implications for the origin of bio-homochirality	Wednesday, June 26,	7:15 PM	Evergreen Ballroom
Poster	De novo Origins of Multicellularity in Response to Predation	Wednesday, June 26,	7:15 PM	Evergreen Ballroom
Talk	An in vitro approach to the geochemical, protocellular, and genomic environments of early evolution	Thursday, June 27,	11:15 AM	Grand IJ
Talk	Catabolisms 'Missing in Nature'	Friday, June 28,	1:30 PM	Grand IJ
Talk	Iron-Sulfur Deposits Could Indicate Ecological Niches of the Extant Martian Life	Friday, June 28,	2:15 PM	Grand IJ

Life signs

Talk	Gaseous Biosignatures on Anoxic Exoplanets: The Curious Case of Phosphine	Monday, June 24,	11:30 AM	Cedar Ballroom
Poster	Assessment of Isoprene as a Possible Biosignature Gas in Exoplanets with Anoxic Atmospheres	Monday, June 24,	7:00 PM	Evergreen Ballroom
Poster	Spectral Kurtosis Identification of Deep-Space Technosignatures	Wednesday, June 26,	7:15 PM	Evergreen Ballroom

Ocean exoplanets

Talk	Wind-driven Ocean Circulation on Tidally Locked Aquaplanets	Monday, June 24,	2:45 PM	Regency EFG
Talk	(How) Do oceans overturn on other worlds?	Monday, June 24,	3:00 PM	Regency EFG
Poster	Ocean ventilation, nutrient cycling, and oxygen-based biosignatures on exoplanet waterworlds	Monday, June 24,	7:00 PM	Evergreen Ballroom
Poster	Quantifying the Atmospheric Response of Earth-like Planetary Bodies to Varying Levels of Stellar EUV/UV	Monday, June 24,	7:00 PM	Evergreen Ballroom
Talk	Oceans Across Space and Time: Windows into Ocean World Evolution	Wednesday, June 26,	5:15 PM	Auditorium
Poster	Exo-oceanography and the Search for Life in Uncharted Waters	Wednesday, June 26,	7:15 PM	Evergreen Ballroom
Poster	Ocean Planets on Eccentric Orbits: Effects of Rotation Rate on Observables	Wednesday, June 26,	7:15 PM	Evergreen Ballroom

Enceladus, Europa, Mars, Titan

Talk	Age of Enceladus and its ocean	Monday, June 24,	1:30 PM	Regency EFG
Poster	The Acetylene-Butane Co-Crystal: A Potentially Abundant Molecular Mineral on Titan	Monday, June 24,	7:00 PM	Evergreen Ballroom
Poster	Unlocking Europa's Ocean	Monday, June 24,	7:00 PM	Evergreen Ballroom
Poster	High Gas Concentrations in Enceladus' Ocean, Potential Fuel for Microbial Life	Monday, June 24,	7:00 PM	Evergreen Ballroom
Poster	Nature, distribution and origin of CO₂ on Enceladus	Monday, June 24,	7:00 PM	Evergreen Ballroom
Talk	The Energetic Habitability of Enceladus may be Tenuous	Wednesday, June 26,	5:45 PM	Auditorium
Poster	Rock-water interactions on icy ocean worlds as a mechanism for production of chemical energy to support life	Wednesday, June 26,	7:15 PM	Evergreen Ballroom
Talk	A 4D Perspective on Aerobic Subsurface Habitats on Mars and How to Search for Them	Thursday, June 27,	4:00 PM	Regency ABC
Talk	Salts in Gale Crater, Mars: Constraining Habitable Ancient Lake and Groundwater Environments	Friday, June 28,	2:45 PM	Regency EFG