

NOW Newsletter- January 2022

This newsletter is also accessible via our website oceanworlds.space

Making Waves with NOW

- This month's new releases:
- David Dubois: Investigating Benzene Cloud Formation in Titan's South Polar Votex.
- Call for future <u>NOW Waves</u>, please submit slide (pptx, jpg, pdf) to: <u>kpietro@whoi.edu</u>

NOW Upcoming Events

- February 28th 1pm ET/ 10am PT <u>NOW Lecture Series</u> Season 2, Episode 4
 - Science Motivations behind OW Exploration, "Sensing the Environment"
 - Dr. Charity Lander, SWRI
 - Dr. Ved Chirayath, NASA Ames
- April 21st NOW Steering Committee "Annual" Meeting

OW Themed AbSciCon Sessions Convened by NOW Colleagues (Abstract Deadline: Jan 19th, 2022)

- <u>Titan as a Prebiotic Laboratory</u>
- <u>A New Era for Ocean Worlds Science, Systems-Level Studies to Inform Future Mission and Assess the</u> <u>Possibility and Detectability of Life</u>
- Deep Dive into the Geophysics of Ocean Worlds
- <u>Crossing the Threshold: In Situ Instrumentation to Seek Like, its Precursors, and Geophysical Context on</u> <u>Europa and other Ocean Worlds</u>
- Earth Geysers and Ocean World Plumes: The Challenges of Characterizing a Unique Environment
- Assessing Ocean Worlds: Challenges and technologies for sub-ice sampling and exploration
- Preparing for in-situ life-detection and habitability investigations through modeling, laboratory, and field analog experiments
- <u>Prebiotic/ Abiotic Chemistry in Alternative Solvents</u>
- In-situ instrumentation and novel analytical techniques towards discovery-based chemical research
- General principles of life: towards understanding universal biology
- <u>Life in Deep Subsurface Ice</u>
- Life at high pressure: the Astrobiology of deep subsurface environments
- Hydrocarbon Worlds: Titan as an Exoplanet Analogue
- <u>Resources for and Initiatives within the Early Career Astrobiology Community</u>
- <u>Chemometric, Chemoinformatic, and Machine Learning Strategies to Characterize Complex Organic and</u> <u>Inorganic Mixtures</u>
- <u>Prebiotic Chemistry and Early Earth Environments (PCE3): Origins, Inventories, and Geologic Settings of the Building Blocks of Life</u>
- DEIA in Astrobiology—What's Working, What's Not, and What Could Be
- Geochemistry and Habitability of Alkaline Hydrothermal Vents on Earth and Beyond

Other Meetings, Workshops and Activities

- Feb 6-11 Winter School on Atmosphere-Ocean-Sea Ice Interaction Processes
- Feb 27-Mar 4 Ocean Sciences 2022
 - Session <u>HL18 Ocean Science for Ocean Worlds</u>
- Mar 4 <u>Seafloor Fluid Sampling (C-DEBI)</u>
- Mar 7-12 Lunar and Planetary Science Conference
- Mar 14-18 ICAT Ice Core Analysis Techniques PhD school
- Mar 21-25 Space Science Week
- Mar 21-25/ April 11-15 NASA Life-Detection Science & Technology Workshop
- April 19-20 <u>OPAG</u>
- May 15-20 AbSciCon
- July 16-24 COSPAR
 - Session <u>B5.1: Ocean Worlds; B0.1: Comparative Planetology</u>

Recent Publications Relevant to Ocean Worlds

- Rhoden, A.R. and M.E. Walker (2022). The case for an ocean-bearing Mimas from tidal heating analysis. Icarus 376, 114872. <u>https://doi.org/10.1016/j.icarus.2021.114872</u>
- Styczinski et al. (2022). A perturbation method for evaluating the magnetic field induced from an arbitrary, asymmetric ocean world analytically, Icarus, Volume 376, 2022, 114840, ISSN 0019-1035, https://doi.org/10.1016/j.icarus.2021.114840.
- Hoehler, T.M. (2022) Implications of H₂/CO₂ disequilibrium for life on Enceladus. *Nat Astron*. https://doi.org/10.1038/s41550-021-01583-x

Career Opportunities

- <u>Senior Staff Scientist</u>, Lunar and Planetary Institute
- <u>Postdoctoral Researcher</u>, Laboratory for Agnostic Biosignatures
- <u>Tenure Track Scientists (10 Positions)</u>, Woods Hole Oceanographic Institution
- Associate or Full Professor of Geobiology, University of Southern California (open until filled)
- <u>Postdoc with Rensselaer Astrobiology research and Education Center</u> (open until filled)
- Department Chair-Earth and Planetary Sciences, University of Texas San Antonio (open until filled)
- Research Scientist in Marine Geology and Geophysics, Columbia LDEO (open until filled)
- <u>Postdoctoral positions in Fluid-Rock Interactions & Investigation of Deep Subsurface Life</u>, Stable Isotope Laboratory, University of Toronto (open until filled)
- Assistant Professor in Geology, West Texas A&M University (open until filled)
- <u>Assistant Professor in Sedimentary Processes</u>, Boston College (open until filled)

Proposal Calls

- <u>FINESST</u>, Future Investigators in NASA Earth and Space Science Technology (2/11/2022)
- <u>TWSC</u> Topical Workshops, Symposia, and Conferences (5/13/2022)

News, Education, and Outreach

- New *ExOW* Outreach Video: Life on an Ocean World: Can We find Life using chemistry?
- Earth's Oceanography Helps Demystify Jupiter's Flowing Cyclones
- Subscribe to the <u>NASA Astrobiology Mailing List</u>