

Habitable Worlds 2021 Workshop
Open Engagement – Group C

Abstract #	Title	Presenter(s)
36	Investigating the atmospheric evolution of habitable worlds with a coupled climate-interior-redox model	Joshua Krissansen-Totton
125	Stellar Flares and Habitable(?) Worlds from the TESS Primary Mission	Maximilian Günther
150	On the Potential of Silicon as a Building Block for Life	Janusz Petkowski
167	The Normal-incidence Extreme Ultraviolet Photometer (NExtUP)	Jeremy Drake
168	ELT Imaging of Protoplanetary Disks and, Eventually, Protoplanets	Joshua Eisner
169	Interdisciplinary Modeling of Planetary Habitability	Rory Barnes
170	Tracking Bioenergetic Shifts in Terrestrial Serpentinites	Dawn Cardace
171	A Search for Life in a Thousand Earths: The Nautilus Space Observatory	Daniel Apai
173	Phosphine In The Atmosphere Of Venus?	Irwin Shapiro
174	A High Quality Atmospheric Target in a Sparse Region of Mass-Radius Space around HD 63935	Nicholas Scarsdale
176	On the detectability of rocky exoplanet surfaces	Matej Malik
177	Planetary atmospheric response to the stellar energetic particles in the habitable zones of TRAPPIST-1-like systems	Federico Fraschetti
178	Carbon Dioxide Outgassing Constrains the Habitability of Rocky Planets after their Host M Dwarf's Pre-Main Sequence Phase	Rodolfo Garcia
179	Sulfur oxide profiles on Venus: Interactions among atmospheric chemistry, dynamics, and microphysics	Franklin Mills
182	Modeling Atmospheric Escape from Magnetized Rocky Exoplanets With (Exo) Planetary Ionosphere-Thermosphere Tool for Research (ExoPLANET-ITTR)	Suk-Bin Kang
183	A SmallSat to Study the Structure and Evolution of ExoJupiter Atmospheres (SEEJ)	Scott Wolk
185	Our Inhabited Heliosphere: The Implications of Stellar Motion through Galactic Interstellar Clouds On Planetary Atmospheres	Seth Redfield
186	Land planets in a ROCKE-3D GCM perturbed parameter ensemble: fractional habitability	Nancy Kiang
188	The PEACH Model: Physiology, Exoclimatology, and Astroecology for Characterizing Habitability	Alma Ceja
189	Towards New Frameworks for Identifying Statistical Laws in Elemental Use Across Ecosystems on Earth as Driven by Planetary Context	Pilar Vergeli
190	The impact of stellar flares and superflares on life: first experiments to reveal the UV surface habitability of exoplanets	Ximena Abrevaya
191	Assessment of Isoprene as a Possible Biosignature Gas in Exoplanets with Anoxic Atmospheres	Zhuchang Zhan

192	Evaluating Methane as a Biosignature on Habitable Anoxic Planets Orbiting FGKM Stars	Edward Schwieterman
194	Spin-Orbit Variations, Greenhouse Gases, and Superhabitable Conditions on Terrestrial Worlds in Multi-Planet Systems	Linda Sohl
195	A 1.5 Radiative-Convective Terrestrial Climate Model With Realistic Clouds	James Windsor
196	Analyzing the metallicities of Hot Jupiters in orbit around low-metallicity Population I stars and potential theories regarding their origin and propagation	Archit Kalra
198	MAGRATHEA: Terrestrial Planet Interior Solver and the Degeneracy of Interiors	David Rice
199	The Coupled Role of Stellar Abundances, Exoplanet Radiogenic Heat Budgets and the Lifetime of Temperate Climates on Rocky Exoplanets	Cayman Unterborn
201	High Orbital Obliquity Promotes Planetary Oxygenation	Megan Barnett
202	Modeling X-ray and EUV driven Hydrodynamics Escape from Earth-like (magnetized and unmagnetized) Exoplanets with Exo-GITM.	Jared Bell
203	Searching for biomarkers in the potentially habitable atmospheric zones of Y dwarfs	Eduardo Martin
204	Detection of Transiting Exoplanet Candidates at Austin College's Adams Observatory: Ground-Based Support for NASA's TESS Mission	David Baker
205	A Flare-Type IV Burst Event from Proxima Centauri and Implications for Space Weather	Andrew Zic
206	Are Giant Planets Necessary for Habitability?	Nader Haghighipour
207	Deep Imaging of Nearby Habitable Zones with VISIR-NEAR and an Upgraded LBT	Kevin Wagner
208	The Phosphorus-Potassium Abundance Telescope	Patrick Young
209	External Photoevaporation of Protoplanetary Disks in Strong and Intermediate UV Environments	Jinyoung Kim
210	Chemical Fingerprints of Formation in Rocky Super-Earths' Data	Mykhaylo Plotnykov
211	There's more to life than O ₂ : Simulating the detectability of a range of molecules for ground-based high-resolution spectroscopy of transiting terrestrial exoplanets	Miles Currie
212	Flaring effects form a M dwarf in a prebiotic Earth-like planet	A. Miranda
213	Missing evidence for giant impacts during terrestrial planet formation	Seth Jacobson
214	To Cool is to Keep: Residual H/He Atmospheres of Super-Earths and sub-Neptunes	William Misener
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216	Multi-broadband Transit Photometry at Wyoming Infrared Observatory	Cristilyn Gardner
217	Modeling Ionizing Radiation Outputs from Planet Hosts: Coronal X-ray/EUV and Wind Mass Fluxes of k1 Ceti	Vladimir Airapetian

218	An Initial Exploration of the 3-D Structure of Terrestrial-like Exoplanetary Atmospheres Orbiting Around Different Parent Star Types	Chris Parkinson
220	Earth-like: How Orbital Parameters Drive Detectable Atmospheric Chemistry and Aerosol Changes	Sonny Harman
221	The thermal field of “Los Azufres” as analog for the search of life on other planets	Hermes Bolivar-Torres
222	Nitrogen Fixation at Early Mars	Danica Adams
223	Antipodal Anticorrelations: Consequences of Tectonic Activity on Topography and Implications for Surface Mapping	Arthur Adams
229	Discovery of an Extremely Short Duration 'Building Block' Flare from Proxima Centauri	Meredith MacGregor
230	It’s Getting Hot in Here: The Effect of Giant Planet Core Formation on Surrounding Protoplanetary Disk Solids	Megan Barnett
231	The physics of falling raindrops: a robust starting point for understanding exo-water cycles	Kaitlyn Loftus
232	Developing simulated environments for studying habitability; Mistakes made and lessons learned	Dragos Zaharescu
235	Probing the capability of future direct imaging missions to spectrally constrain the frequency of Earth-like planets	Jade Checlair
236	Waterworlds May Have Better Climate Buffering Capacities than Their Continental Counterparts	Benjamin Hayworth
238	Efficiency of the oxygenic photosynthesis on Earth analogs	Covone Giovanni