

Majarra

Exoplanets: The New Frontier

Ethnoastronomy: Stories of the Sky

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Exoplanets: The New Frontier

Exoplanets, or extra-planetary planets, are planets that orbit a star other than our sun. As of April 2023, there were a total of 4,203 confirmed exoplanets. Some have massive atmospheres, making them hot and hell-like. Others are rocky, with some having liquid water. Some are in the habitable zone, where conditions might allow for life. The search for habitable exoplanets is a major goal of modern astronomy. The discovery of exoplanets has opened up a new frontier in our understanding of the universe. It has shown us that we are not alone in the galaxy. The search for life on other planets is a major goal of modern astronomy. The discovery of exoplanets has opened up a new frontier in our understanding of the universe. It has shown us that we are not alone in the galaxy.

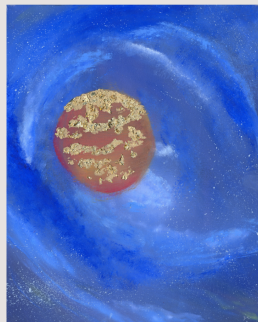
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Gliese 581 g

Within the Ursa constellation, Gliese 581 g is potentially host to a wealth of knowledge that can inform our understanding of exoplanets that can sustain life. This exoplanet is likely locked to the star, meaning that the side facing the star is always looking at night while the other face of the planet is in constant darkness. The line between the shadow and light is called the terminator. The most habitable zone on the surface. This blue planet exoplanet was inspired by Earth's imagery.



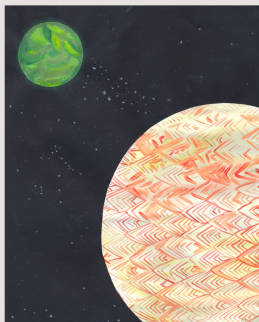
55 Cancri e, Jannan

Twice as big as our planet, this super-Earth is capturing for more than its size. Some astronomers believe that 55 Cancri e may have low levels on the surface, a hazy orange and red-orange. First discovered in 2004 by a team from the University of Texas, researchers have estimated the surface temperature to be around 2,300 degrees Celsius. The bright, glowing quality of this painting was inspired by this super-hot, super-sized exoplanet.



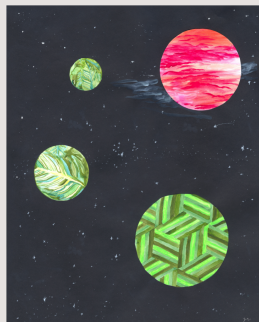
18 Delphini b, Acton

So luminous that it is fairly visible to the naked eye, 18 Delphini b is a gas giant exoplanet in the constellation Delphinus. This exoplanet has a mass of 0.3 Jupiter and was discovered in 2008 through radial velocity measurements. Also known as Delphini b, this method is used to locate exoplanets, and works by measuring the light spectrum and searching for periodic shifts towards the blue or red. Layers of dust and surrounding of the spectrum inspired the painting.



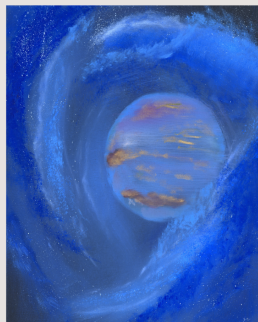
WASP-12 b

Differing by about 10% from a spherical planet, WASP-12 b's orbital shape is visually unique. This exoplanet demonstrates how tidal heating occurs, where a planet's proximity to a star warms an exoplanet's orbit. Unlike other exoplanets are seen through, but this planet is among the hottest known. It is also the first planet found where the Carbon Dioxide ratio is increased. With more carbon than oxygen, rocks of graphite and diamonds may be produced, inspiring artistic geometry.



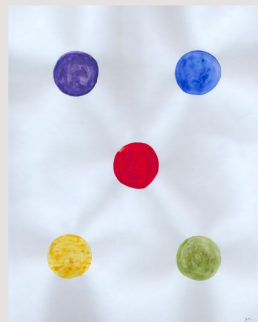
TOI-270

At a mere 12 light years away from Earth, a red dwarf named TOI-270 is surrounded by three small planets. Though it is not fully habitable, TOI-270 is a 20 times Earth's size and completes its orbit in an incredible time of only 1.6 days. The largest of the three planets depicted in this painting has an orbit of 1.6 days. Though this planet TOI-270 is in a habitable temperature range, the exoplanet has a hot surface due to its thick atmosphere.



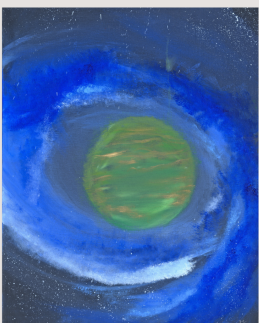
Trappist-1 d

Total habitable exoplanets Trappist-1 d, one of seven exoplanets in the Trappist-1 system. With the highest number of exoplanets found in a single system to date, Trappist-1 could have a relatively low density to indicate the presence of water in some form, one of the main criteria for the possibility of life.



K2-138

As the first multi-planet system discovered by citizen scientists, this planetary system around the star K2-138 is remarkable for a number of reasons. In an effort called Planet Hunters Exoplanet Explorers, the online exoplanet group created to connect volunteers with a few research projects, the public found these four planets. Each planet has a unique composition, ranging from potentially rocky to gaseous. All are readily hot, ranging from 400 to 500 degrees Celsius.



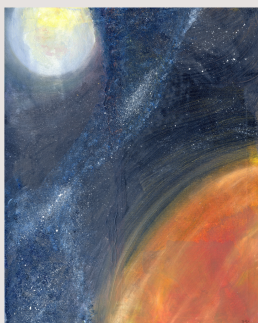
YZ Ceti b

A terrestrial exoplanet with a mass of 1.9 Earth, YZ Ceti b orbits at a dwarf star in the constellation Cetus. Occupying exoplanet a mere 12 light years away from our home planet, this exoplanet is a member of the great diversity of new habitable worlds that are scattered across the universe.



51 Eridani b

51 Eridani b is a gas giant that has certainly spent its life as the a swirling mass of two halves. Taking nearly 12 years to complete one orbit of its star, this exoplanet is a member of the constellation Eridanus in the southern celestial hemisphere. It is the tenth largest of the modern constellations.



Kepler-16 b

As an exoplanet in Kepler-16, another exoplanet in the Kepler-16 system, this exoplanet has a unique composition. It is a gas giant with a mass of 1.2 Jupiter and was discovered in 2004 by a team from the University of Texas. The exoplanet is a member of the constellation Cygnus in the northern celestial hemisphere. It is the tenth largest of the modern constellations.



HD 209458 b, Oavis

The famous Oavis, HD 209458 b is a member of the constellation Oavis. It is a gas giant with a mass of 1.2 Jupiter and was discovered in 1996 by a team from the University of Texas. The exoplanet is a member of the constellation Oavis in the northern celestial hemisphere. It is the tenth largest of the modern constellations.

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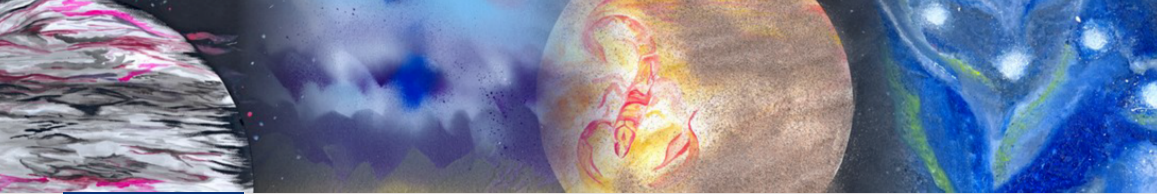
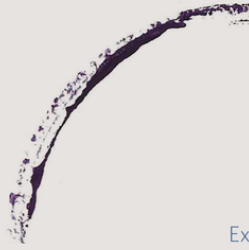


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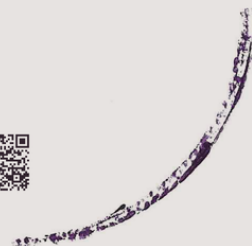
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Exoplanets, or extrasolar planets, are planets that orbit a star other than our sun. As of April 2020, there were a total of 4,241 confirmed exoplanets. Some have extreme environments, reaching wildly hot and frigid temperatures. Others are neither comparatively hot nor cold, a niche environment called the habitable zone, offering tantalizing clues to what life outside of Earth could be like. Efforts to study exoplanets are numerous, and their reasons abundant: not only could exoplanets offer insight into Earth-like planets that may harbor water, but they may someday answer questions about our existential loneliness. Scientifically and artistically inspiring, the abundant number of exoplanets scattered all around us are full of data. Extracting and understanding the information they provide is simply a matter of time and technology, a new frontier in astronomy that could tell us more about where we come from — and where we are going.

Explore this frontier in *Majarra* — Arabic for galaxy — an exhibition on the 1st floor of McCardell Bicentennial Hall.

QR Codes

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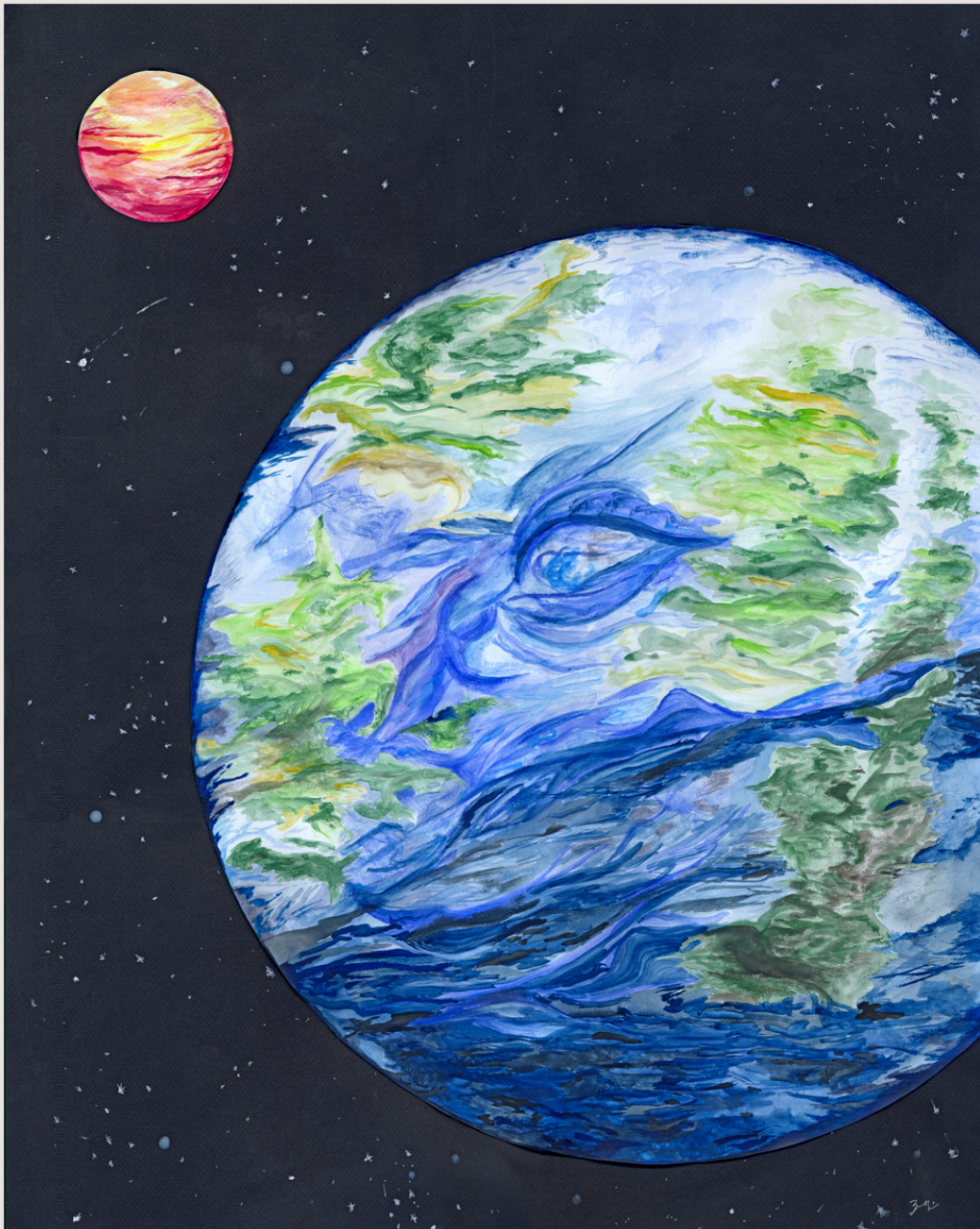
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Medium

Watercolor on Paper

Artist

Eva Bod '20

Curated Resources

Steven Vogt, Paul Butler, Eugenio Rivera, Nader Haghighipour, Gregory Henry, & Michael Williamson, "The Lick-Carnegie Exoplanet Survey: A 3.1 M_{\oplus} Planet in the Habitable Zone of the Nearby M3V Star Gliese 581", *Astrophysics Journal*, 15 October 2010

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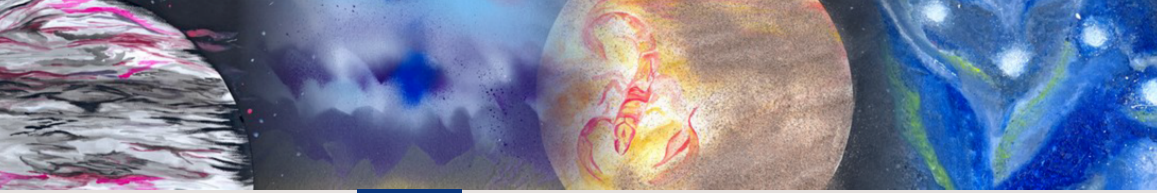
"The Different Kind of Exoplanets You Meet in the Milky Way," *The Planetary Society*

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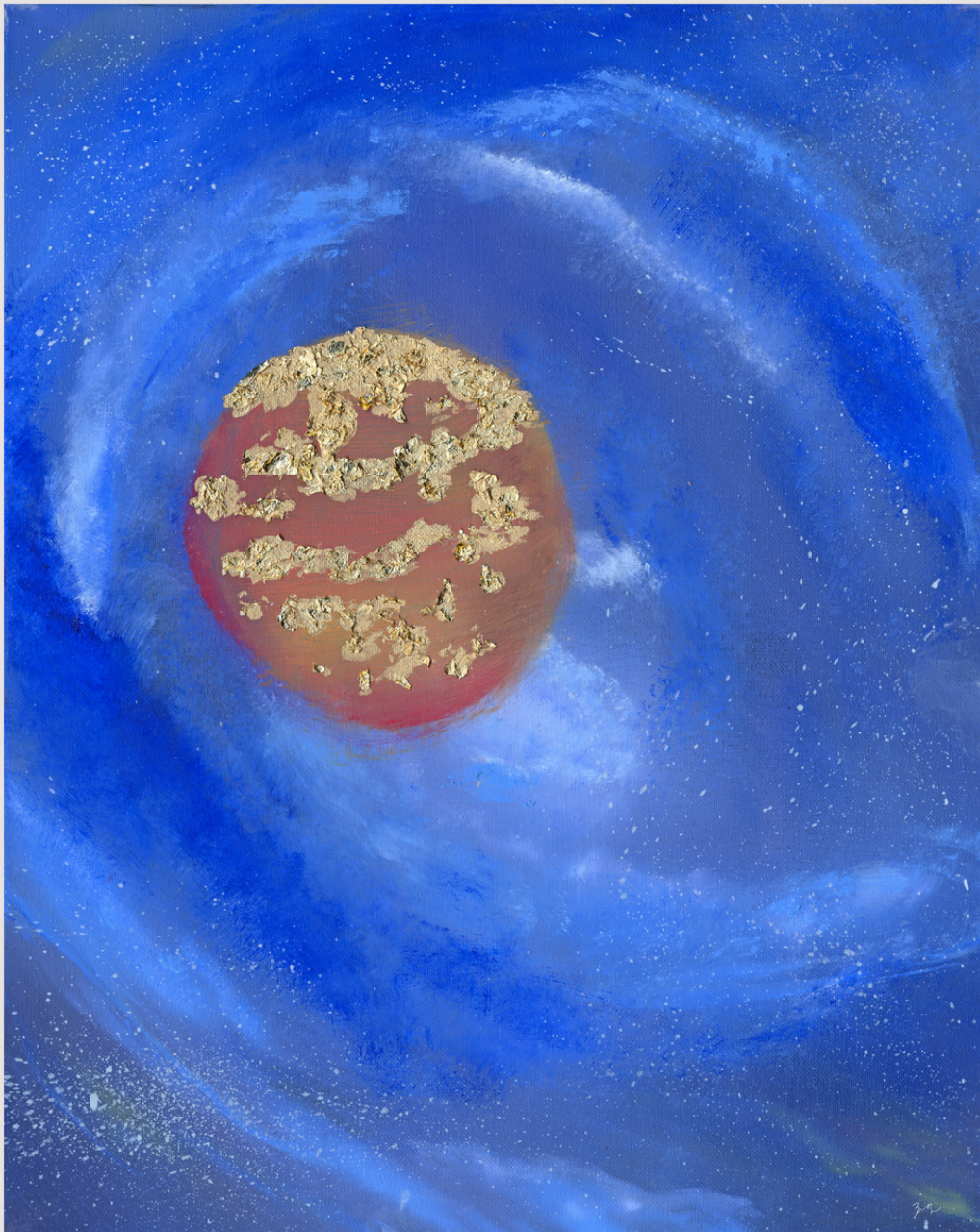
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55 Cancri e, Janssen

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Oil on Canvas

Artist

Eva Bod '20

Curated Resources

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55 Cancri e, *Eyes on Exoplanets*, Exoplanet Exploration, NASA

55 Cancri e, *Exoplanet Travel Bureau*, Exoplanet Exploration, NASA

Barbara McArthur, Michael Endl, William Cochran, Fritz Benedict, Debra Fischer, Geoffrey Marcy, Paul Butler, Dominique Naef, Michel Mayor, Didier Queloz, Stephane Udry, & Thomas Harrison, "Detection of a Neptune-Mass Planet in the p¹ Cancri System Using the Hobby-Eberly Telescope", *Astrophysics Journal, Letters*, 8 September 2004

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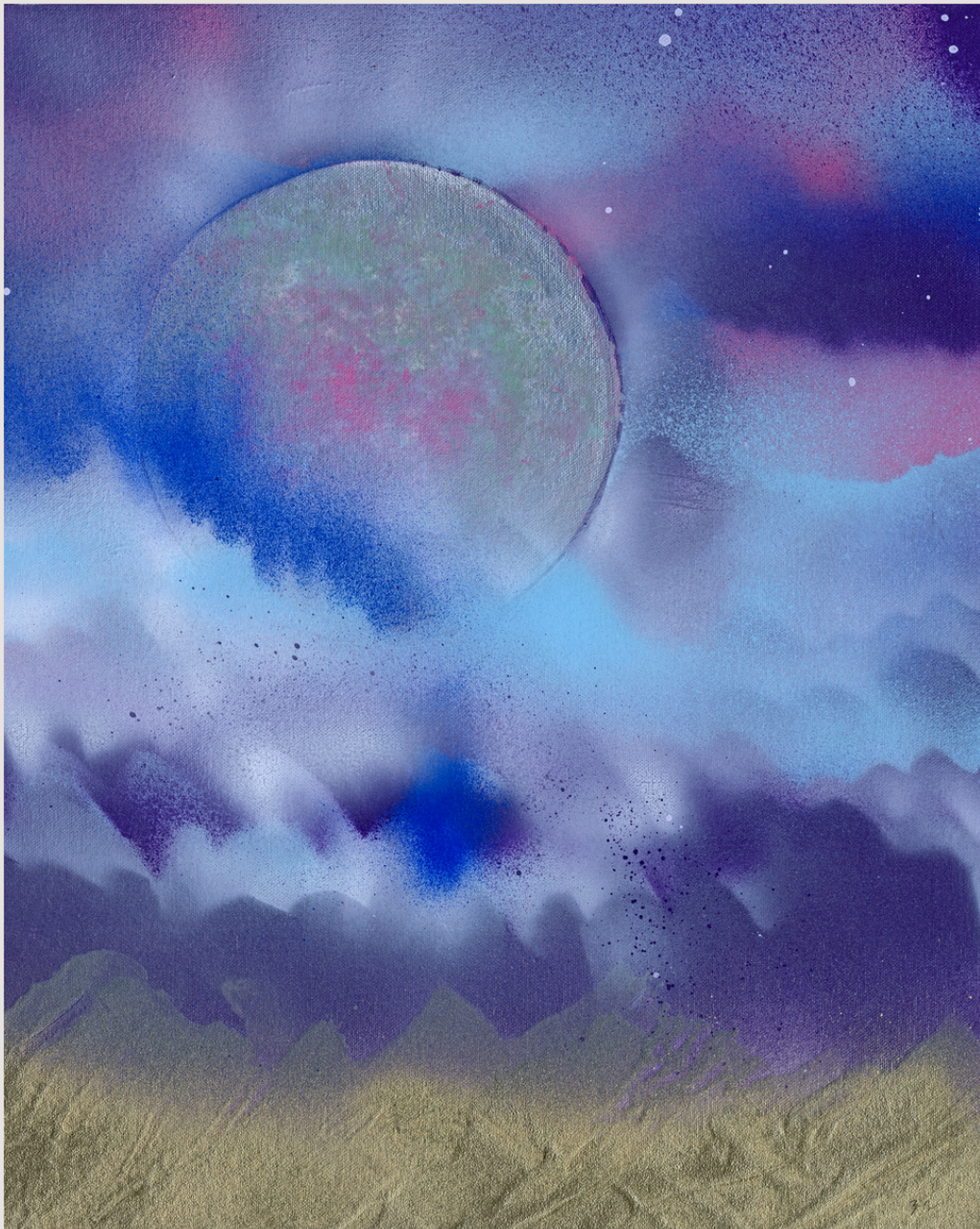
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18 Delphini b, Arion

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Artist

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18 Delphini b, *Exoplanet Catalog*, Exoplanet Exploration, NASA

18 Delphini b, *Eyes on Exoplanets*, Exoplanet Exploration, NASA

Bun'ei Sato, Hideyuki Izumiura, Eri Toyota, Eiji Kambe, Masahiro Ikoma, Masashi Omiya, Seiji Masuda, Yoichi Takeda, Daisuke Murata, Yoichi Itoh, Hiroyasu Ando, Michitoshi Yoshida, Eiichiro Kokubo, & Shigeru Ida, "Planetary Companions around Three Intermediate-Mass G and K Giants: 18 Delphini, ξ Aquilae, and HD 81688", *Publications of the Astronomical Society of Japan*, 25 June 2008

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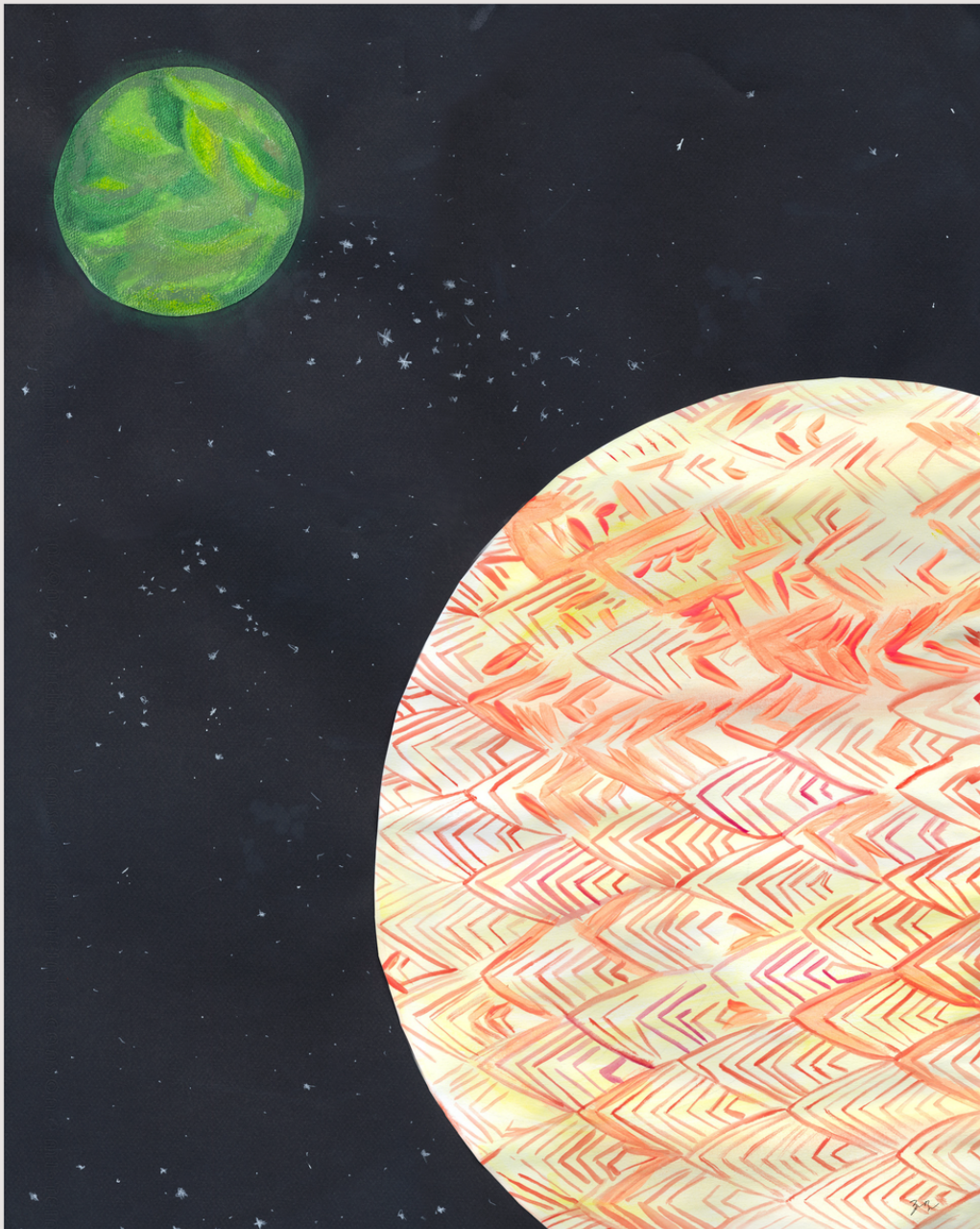
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WASP-12 b

Differing by about 10% from a spherical planet, WASP-12 b's prolate shape is visually unique. This exoplanet demonstrates how tidal heating occurs, when in close proximity to a sun and in an eccentric orbit. Similar Jupiter-mass planets are awe-inspiring, but this planet is among the hottest known. It is also the first planet found where the Carbon-Oxygen ratio is reversed. With more carbon than oxygen, rocks of graphite and diamond may be produced, inspiring artistic geometry.



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Medium

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Artist

Eva Bod '20

Curated Resources

WASP-12 b, *Exoplanet Catalog*, Exoplanet Exploration, NASA

WASP-12 b, *Eyes on Exoplanets*, Exoplanet Exploration, NASA

Leslie Hebb, Andrew Collier-Cameron, Benoît Loeillet, Don Pollacco, Guillaume Hébrard, Rachel Street, François Bouchy, Eric Stempels, Claire Moutou, Elaine Simpson, Stéphane Udry, Yogesh Joshi, Richard West, Ian Skillen, David Wilson, Iain McDonald, Neale Gibson, Suzanne Aigrain, David Anderson, Chris Benn, Damian Christian, Becky Enoch, Carole Haswell, Coel Hellier, Keith Horne, Jonathan Irwin, Tim Lister, Pierre Maxted, Michel Mayor, Andrew Norton, Neil Parley, Frédéric Pont, Didier Queloz, Barry Smalley, & Peter Wheatley, "WASP-12b: The Hottest Transiting Extrasolar Planet Yet Discovered", *Astrophysics Journal*, 10 March 2009

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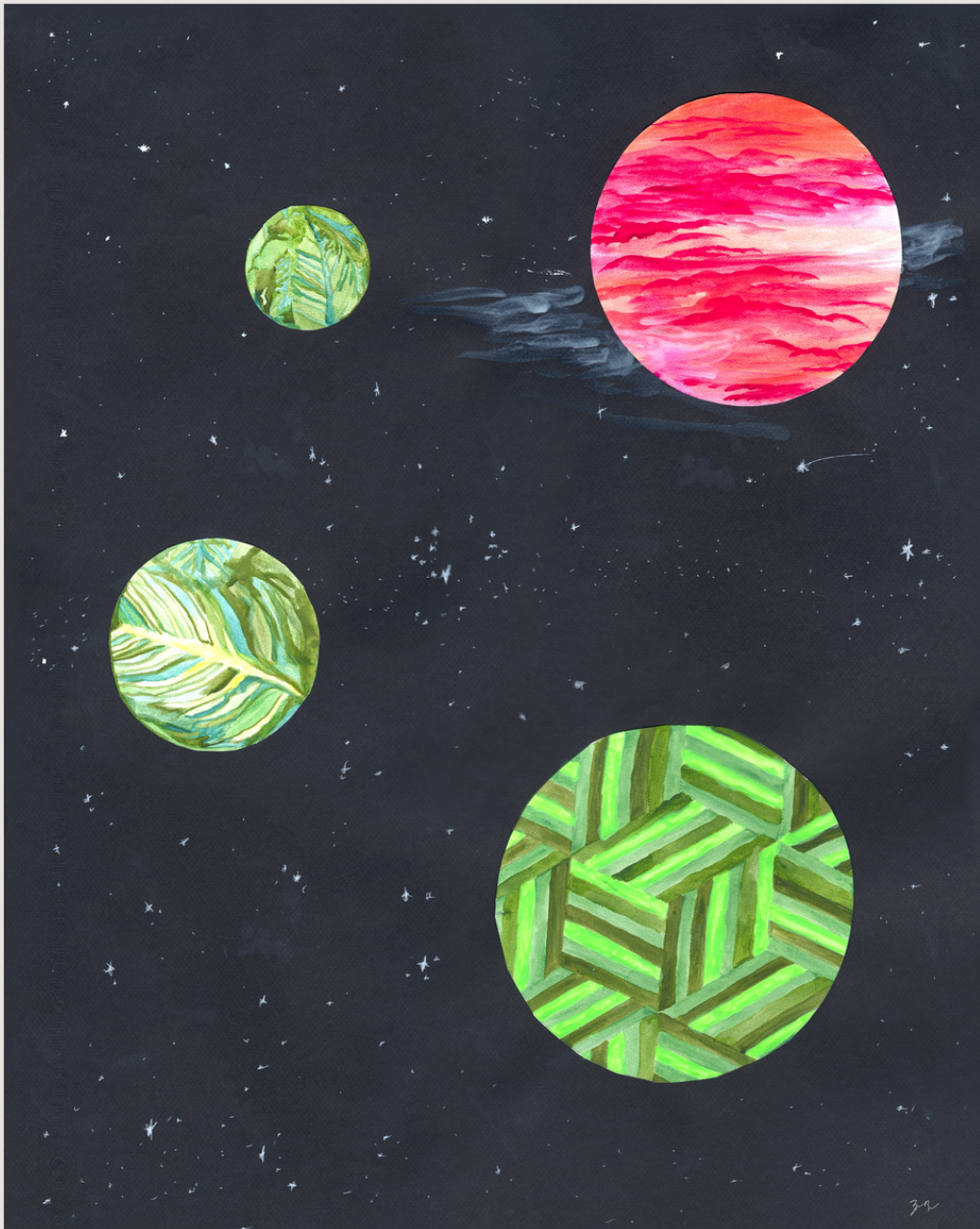
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TOI-270

At a mere 73 light-years away from Earth, a red dwarf named TOI-270 is surrounded by three small planets. Though it is not likely habitable, TOI-270 b is 1.25 times Earth's size and completes its orbit in an incredible time of only 3.4 days. The largest of the three planets depicted in this painting has an orbit of 11.4 days. Though this places TOI-270 b in a habitable temperature range, the exoplanet has a hot surface due to its thick atmosphere.



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TOI-270 b, *Exoplanet Catalog*, Exoplanet Exploration, NASA

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Maximilian Günther, Francisco Pozuelos, Jason Dittmann, Diana Dragomir, Stephen Kane, Tansu Daylan, Adina Feinstein, Chelsea Huang, Timothy Morton, Andrea Bonfanti, Luke Bouma, Jennifer Burt, Karen Collins, Jack Lissauer, Elisabeth Matthews, Benjamin Montet, Andrew Vanderburg, Songhu Wang, Jennifer Winters, George Ricker, Roland Vanderspek, David Latham, Sara Seager, Joshua Winn, Jon Jenkins, James Armstrong, Khalid Barkaoui, Natalie Batalha, Jacob Bean, Douglas Caldwell, David Ciardi, Kevin Collins, Ian Crossfield, Michael Fausnaugh, Gabor Furesz, Tianjun Gan, Michaël Gillon, Natalia Guerrero, Keith Horne, Steve Howell, Michael Ireland, Giovanni Isopi, Emmanuël Jehin, John Kielkopf, Sebastien Lepine, Franco Mallia, Rachel Matson, Gordon Myers, Enric Pallé, Samuel Quinn, Howard Relles, Bárbara Rojas-Ayala, Joshua Schlieder, Ramotholo Sefako, Avi Shporer, Juan Suárez, Thiam-Guan Tan, Eric Ting, Joseph Twicken & Ian Waite, "A super-Earth and two sub-Neptunes transiting the nearby and quiet M dwarf TOI-270", *Nature*, 29 July 2019

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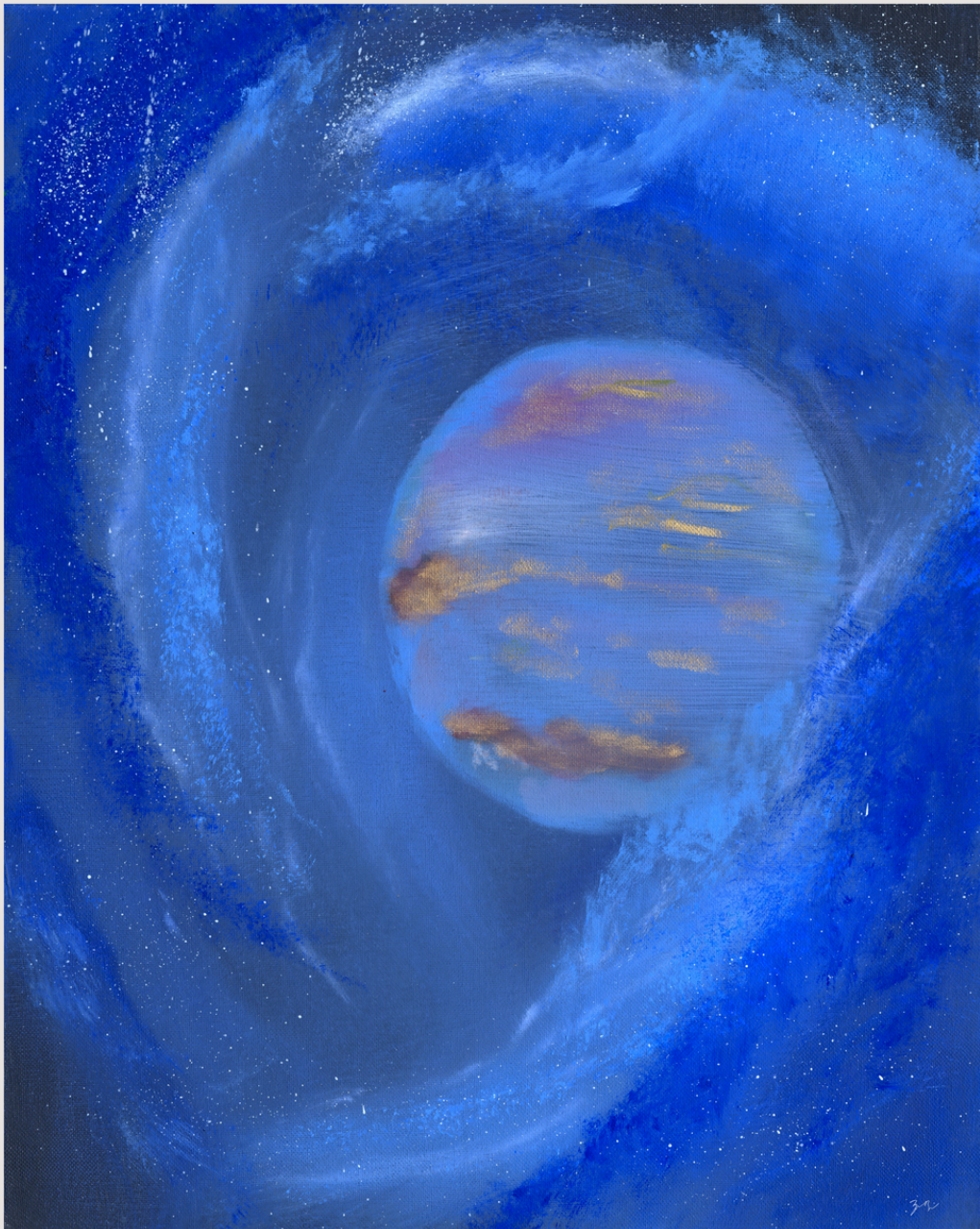
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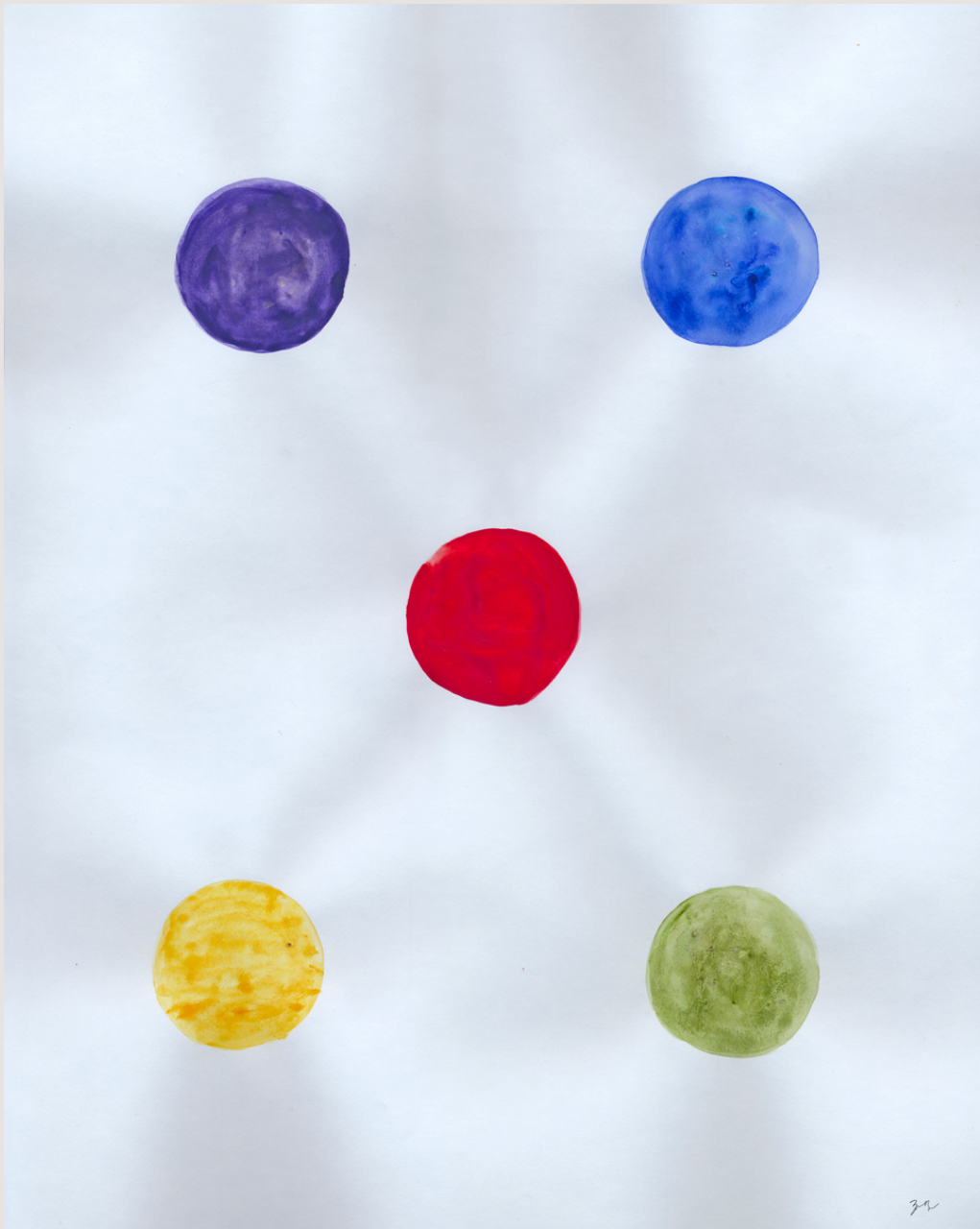
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K2-138

As the first multi-planet system discovered by citizen scientists, this planetary system around the star K2-138 is remarkable for a number of reasons. In an effort called Zooniverse Exoplanet Explorers, the online exploratory group created to connect volunteers with active research projects, the public found these five planets. Each planet may have a unique composition, ranging from potentially rocky to gaseous. All are notably hot, ranging from 400 to 550 degrees Celsius.



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Medium

Watercolor on Paper

Artist

Eva Bod '20

Curated Resources

K2-138 b, *Exoplanet Catalog*, Exoplanet Exploration, NASA

K2-138 c, *Exoplanet Catalog*, Exoplanet Exploration, NASA

K2-138 d, *Exoplanet Catalog*, Exoplanet Exploration, NASA

K2-138 e, *Exoplanet Catalog*, Exoplanet Exploration, NASA

K2-138 f, *Exoplanet Catalog*, Exoplanet Exploration, NASA

K2-138 b, *Eyes on Exoplanets*, Exoplanet Exploration, NASA

K2-138 c, *Eyes on Exoplanets*, Exoplanet Exploration, NASA

K2-138 d, *Eyes on Exoplanets*, Exoplanet Exploration, NASA

K2-138 e, *Eyes on Exoplanets*, Exoplanet Exploration, NASA

K2-138 f, *Eyes on Exoplanets*, Exoplanet Exploration, NASA

Jessie Christiansen, Ian Crossfield, Geert Barentsen, Chris Lintott, Thomas Barclay, Brooke Simmons, Erik Petigura, Joshua Schlieder, Courtney Dressing, Andrew Vanderburg, Campbell Allen, Adam McMaster, Grant Miller, Martin Veldthuis, Sarah Allen, Zach Wolfenbarger, Brian Cox, Julia Zemiro, Andrew Howard, John Livingston, Evan Sinukoff, Timothy Catron, Andrew Grey, Joshua Kusch, Ivan Terentev, Martin Vales, & Martti Kristiansen, "The K2-138 System: A Near-resonant Chain of Five Sub-Neptune Planets Discovered by Citizen Scientists", *Astrophysics Journal, Letters*, 11 January 2018

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"The Different Kind of Exoplanets You Meet in the Milky Way," *The Planetary Society*

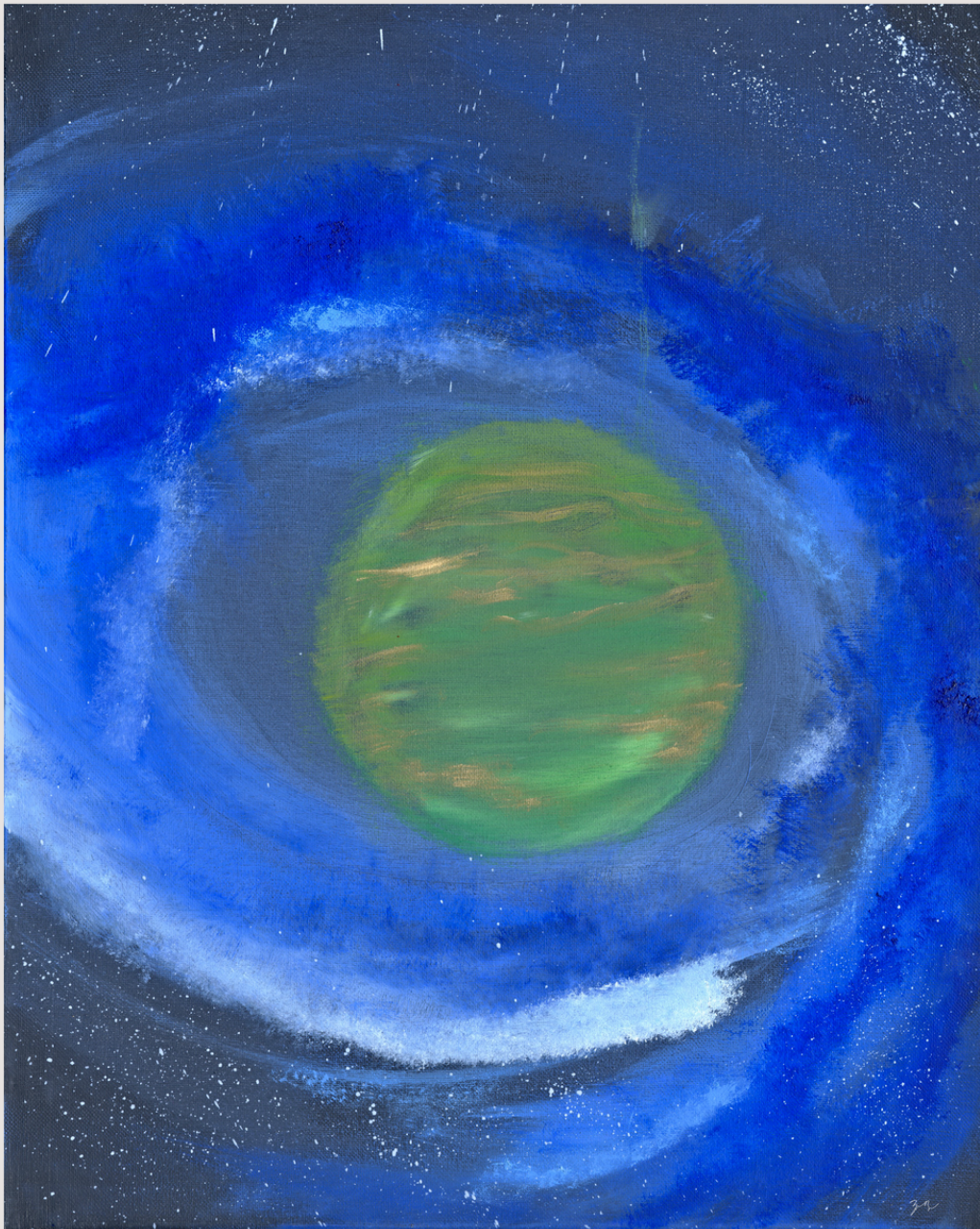
"How to Search for Exoplanets", *The Planetary Society*

"What Is the Habitable Zone?," *The Planetary Society*

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YZ Ceti b

A terrestrial exoplanet with a mass of 0.75 Earths, YZ Ceti b orbits a red dwarf star in the constellation Cetus. Occupying a system a mere 12 light-years away from our home planet, this exoplanet is a reminder of the great diversity of non-habitable worlds that are scattered across the universe.





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Medium

Oil on Canvas

Artist

Eva Bod '20

Curated Resources

YZ Ceti b, *Exoplanet Catalog*, Exoplanet Exploration, NASA

YZ Ceti b, *Eyes on Exoplanets*, Exoplanet Exploration, NASA

Jessie Christiansen, Ian Crossfield, Geert Barentsen, Chris Lintott, Thomas Barclay, Brooke Simmons, Erik Petigura, Joshua Schlieder, Courtney Dressing, Andrew Vanderburg, Campbell Allen, Adam McMaster, Grant Miller, Martin Veldthuis, Sarah Allen, Zach Wolfenbarger, Brian Cox, Julia Zemiro, Andrew Howard, John Livingston, Evan Sinukoff, Timothy Catron, Andrew Grey, Joshua Kusch, Ivan Terentev, Martin Vales, & Martti Kristiansen, "The K2-138 System: A Near-resonant Chain of Five Sub-Neptune Planets Discovered by Citizen Scientists", *Astronomical Journal*, 11 January 2018

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51 Eridani b

51 Eridani b is a gas giant that has certainly earned its title as it has a whopping mass of two Jupiters. Taking nearly 32 years to complete one orbit of its star, this exoplanet is a member of the constellation Eridanus in the southern celestial hemisphere. It is the sixth largest of the modern constellations.



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Medium

Watercolor on Paper

Artist

Eva Bod '20

Curated Resources

51 Eridani b, *Exoplanet Catalog*, Exoplanet Exploration, NASA

51 Eridani b, *Eyes on Exoplanets*, Exoplanet Exploration, NASA

Bruce Macintosh, James Graham, Travis Barman, Rob De Rosa, Quinn Konopacky, Mark Marley, Christian Marois, Eric Nielsen, Laurent Pueyo, Abhijith Rajan, Julien Rameau, Didier Saumon, Jason Wang, Jennifer Patience, Mark Ammons, Pauline Arriaga, Etienne Artigau, Steve Beckwith, James Brewster, Sebastian Bruzzone, Joanna Bulger, Ben Burningham, Adam Burrows, Christine Chen, Eugene Chiang, Jeffrey Chilcote, Rebekah Dawson, Ruobing Dong, René Doyon, Zachary Draper, Gaspard Duchêne, Thomas Esposito, Daniel Fabrycky, Michael Fitzgerald, Katherine Follette, Jonathan Fortney, Benjamin Gerard, Stephen Goodsell, Alexandra Greenbaum, Pascale Hibon, Sasha Hinkley, Tara Cotten, Li-Wei Hung, Patrick Ingraham, Mara Johnson-Groh, Paul Kalas, David Lafreniere, James Larkin, Jinhee Lee, Michael Line, Doug Long, Jerome Maire, Franck Marchis, Brenda Matthews, C. E. Max, Stanimir Metchev, Mac Millar-Blanchaer, Tushar Mittal, Caroline Morley, Katie Morzinski, Ruth Murray-Clay, Rebecca Oppenheimer, David Palmer, Rahul Patel, Marshall Perrin, Lisa Poyneer, Roman Rafikov, Frederik Rantakyö, Emily Rice, Patricio Rojo, Alexander Rudy, Jean-Baptiste Ruffio, María Ruiz, Naru Sadakuni, Leslie Saddlemyer, Maissa Salama, Dmitry Savransky, Adam Schneider, Anand Sivaramakrishnan, Inseok Song, Rémi Soummer, Sandrine Thomas, Gautam Vasisht, Kent Wallace, Kimberly Ward-Duong, Sloane Wiktorowicz, Schuyler Wolff, & Ben Zuckerman, "Discovery and spectroscopy of the young jovian planet 51 Eri b with the Gemini Planet Imager", *Science*, 2 October 2015

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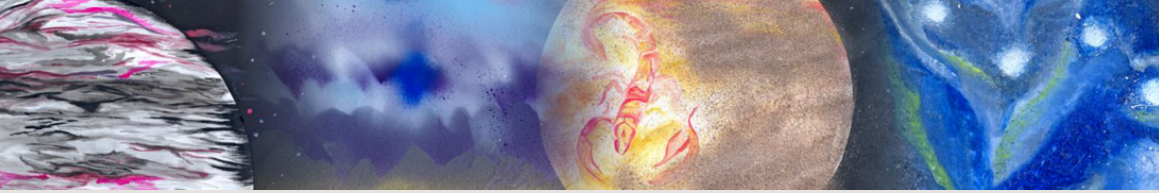
"How to Search for Exoplanets", *The Planetary Society*

"What Is the Habitable Zone?," *The Planetary Society*

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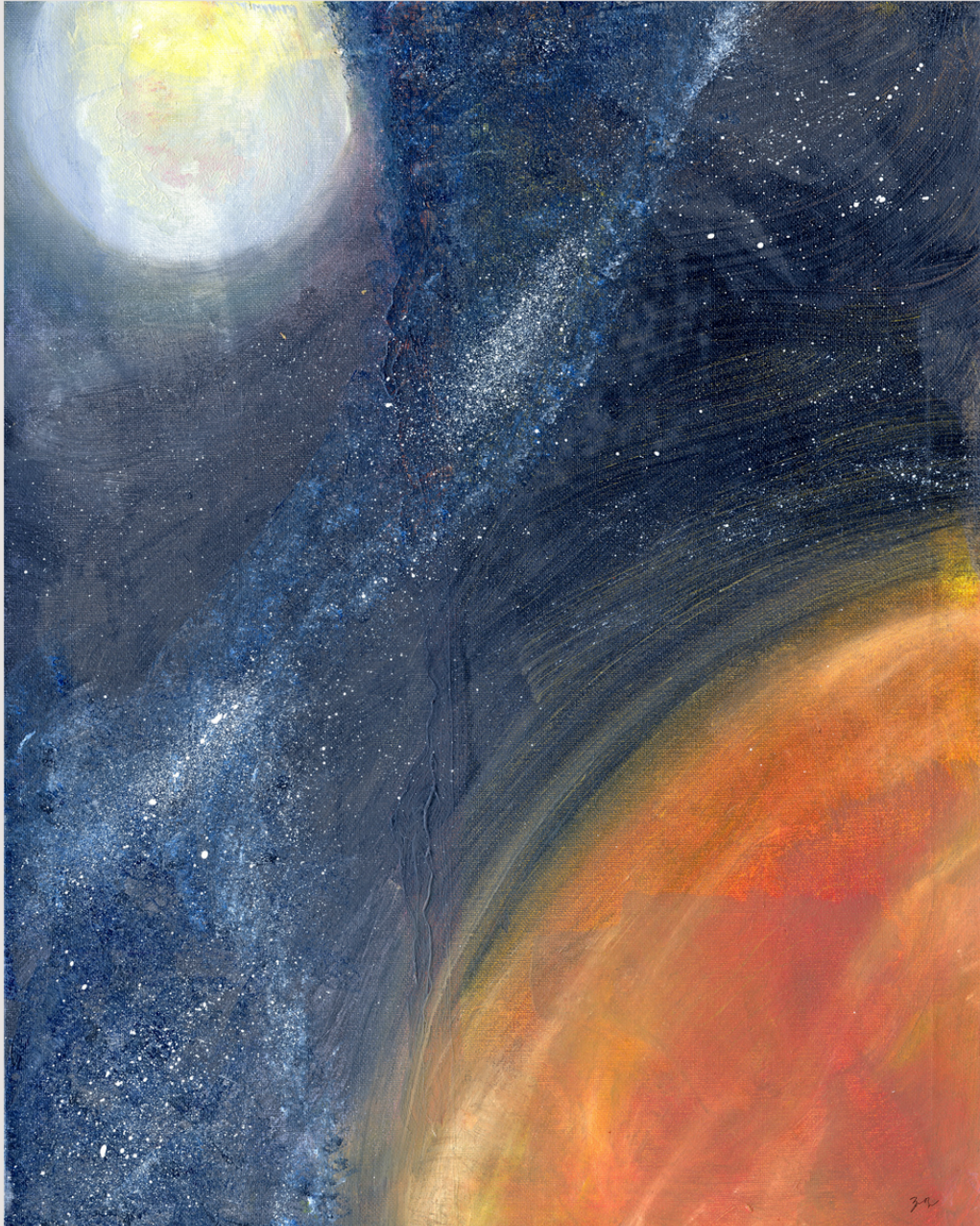
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Kepler-16 b

As one sun sets on Kepler-16 b, another is still visible in the sky. This planet has a circumbinary orbit, moving around two stars at once. Sometimes called Tatooine after the Star Wars film series, this two-sun planet was first noticed when one of the system's stars grew dim while the other was not eclipsing. The planet has a mass comparable to Saturn and orbits its stars every 229 days.

For an orbit to be stable, experts believed a planet in a two-star system would have to be at a far greater distance to survive. A planetary scientist at the Massachusetts Institute of Technology states that "this planet broke the rule." In 2014, the planet completed transiting the dimmer star. Using a method that allows long-distance observation, its path will remain undetectable until about 2042 when Kepler-16 b emerges from transiting the brighter star.



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Medium

Oil on Canvas

Artist

Eva Bod '20

Curated Resources

Kepler-16 b, *Exoplanet Catalog*, Exoplanet Exploration, NASA

Kepler-16 b, *Eyes on Exoplanets*, Exoplanet Exploration, NASA

Kepler-16 b, *Exoplanet Travel Bureau*, Exoplanet Exploration, NASA

Laurance Doyle, Joshua Carter, Daniel Fabrycky, Robert Slawson, Steve Howell, Joshua Winn, Jerome Orosz, Andrej Prša, William Welsh, Samuel Quinn, David Latham, Guillermo Torres, Lars Buchhave, Geoffrey Marcy, Jonathan Fortney, Avi Shporer, Eric Ford, Jack Lissauer, Darin Ragozzine, Michael Rucker, Natalie Batalha, Jon Jenkins, William Borucki, David Koch, Christopher Middour, Jennifer Hall, Sean McCauliff, Michael Fanelli, Elisa Quintana, Matthew Holman, Douglas Caldwell, Martin Still, Robert Stefanik, Warren Brown, Gilbert Esquerdo, Sumin Tang, Gabor Furesz, John Geary, Perry Berlind, Michael Calkins, Donald Short, Jason Steffen, Dimitar Sasselov, Edward Dunham, William Cochran, Alan Boss, Michael Haas, Derek Buzasi, & Debra Fischer, "Kepler-16: A Transiting Circumbinary Planet", *Science*, 16 September 2011

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HD 209458 b, Osiris

Nicknamed Osiris, HD 209458 b tops a number of lists for first discoveries. It has detectable oxygen and carbon in its atmosphere, and is also evaporating at such a fast rate that scientists have created a new classification of exoplanets, Chthonian planets. The nomenclature is a gift from Greek mythology, and H.P. Lovecraft's later usage for his space monsters. This oil painting weaves themes of the ancient Egyptian image of Osiris, lord of the underworld, the mythological Cthulhu, and the psychedelic feeling of being on the brink of something new.



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Artist

Eva Bod '20

Curated Resources

HD 209458 b, *Exoplanet Catalog*, Exoplanet Exploration, NASA

HD 209458 b, *Eyes on Exoplanets*, Exoplanet Exploration, NASA

David Charbonneau, Timothy Brown, David Latham, & Michel Mayor, "Detection of Planetary Transits Across a Sun-like Star", *Astrophysical Journal, Letters*, 16 September 1999

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Ethnoastronomy: Stories of the Sky

One of humanity's greatest gifts is storytelling. Stories shape history, develop culture, and inform our children about the past in the hopes of making a better future. Long before GPS and Google, a map in the sky was read by countless curious people. From the dawn of time, we have looked up and drawn narratives between the stars.

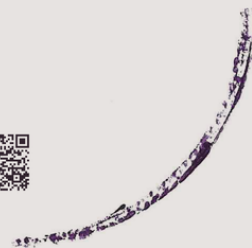
Astrology is an ancient form of celestial study, dating back over 4,000 years. Astrology is a pseudoscience that divines information of terrestrial phenomena based on celestial movements. This practice is not to be confused with astronomy, the branch of science that studies celestial objects, space, and the physical universe.

Ethnoastronomy is the study of beliefs and practices of cultures as they pertain to celestial bodies and phenomena. This discipline documents the various stories that humans have told of the night sky. In order to understand the significance of groundbreaking discoveries made by scientists today, it is important to appreciate the other forms of knowledge that people have presented. Take a trip through time and space, looking at the sky through someone else's eyes.

Explore these stories in *Majarra* — Arabic for galaxy — an exhibition on the 1st floor of McCardell Bicentennial Hall.

QR Codes

As you travel through the exhibition, you can use the QR codes associated with each panel to access sources and other information on your phone. Additionally, the entire exhibition is available online at <http://go.middlebury.edu/majarra>.



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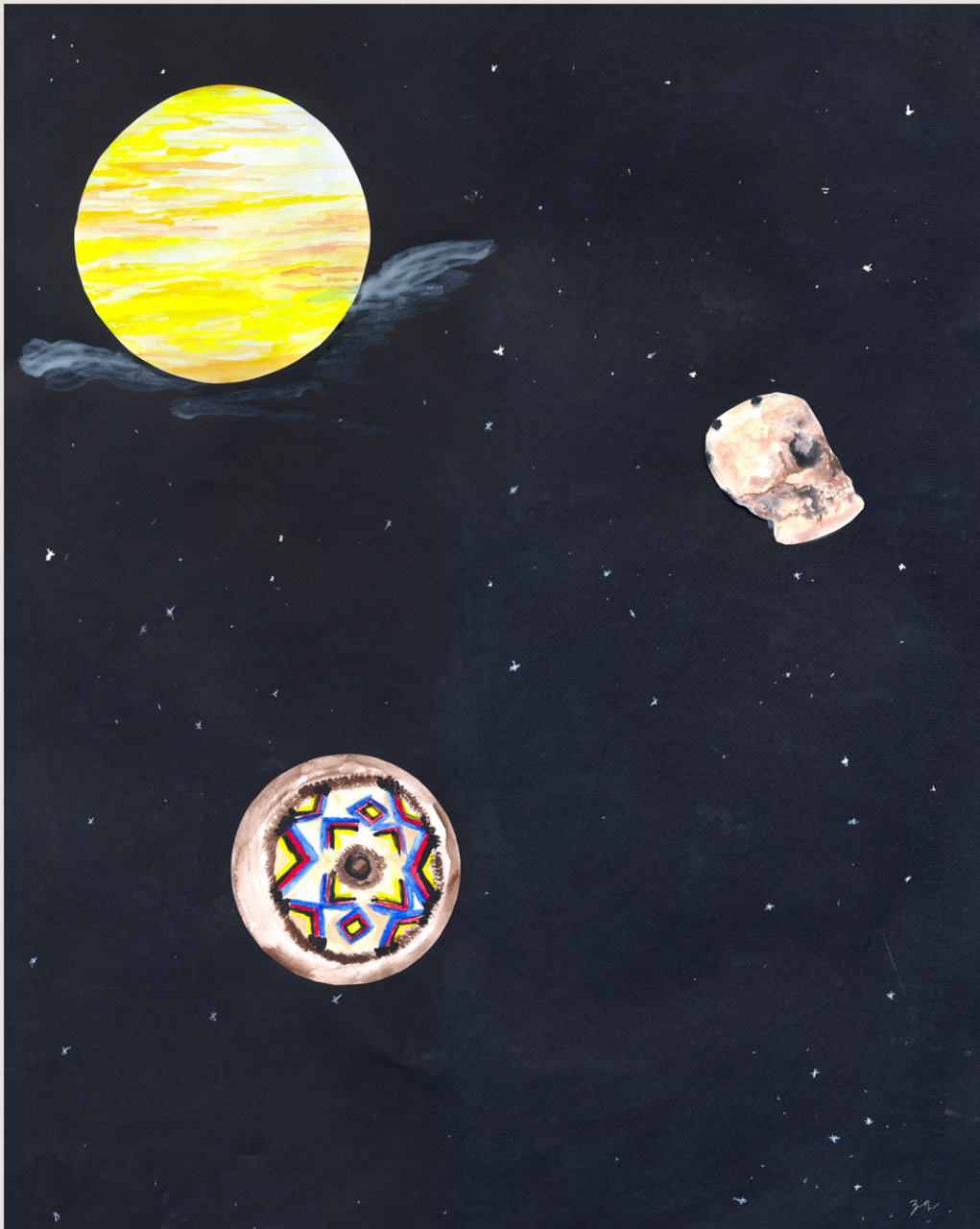
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Naka, the Horn Star

Canopus, one of the brightest stars in the night sky, is known in South Africa as *Naka*, the Horn Star. According to Sotho tradition, the day of the first sighting spurs a meeting of the medicine men. The medicine men roll bone dice to determine whether the new season will be good or bad, bringing in winter and the sheep breeding season. The Zulu know this star as *Inkwenkwezi*, the Brilliant Star. The pattern for this painting was inspired by a traditional Zulu beading design.



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Medium

Watercolor on Paper

Artist

Eva Bod '20

Curated Resources

Clive Ruggles, *Handbook of Archaeoastronomy and Ethnoastronomy*, 2015

Springer Press Historical and Cultural Astronomy Series, 2016-present

Archaeoastronomy, 1978-2014

Journal of Astronomy in Culture, 2016-present

Ocarina Books

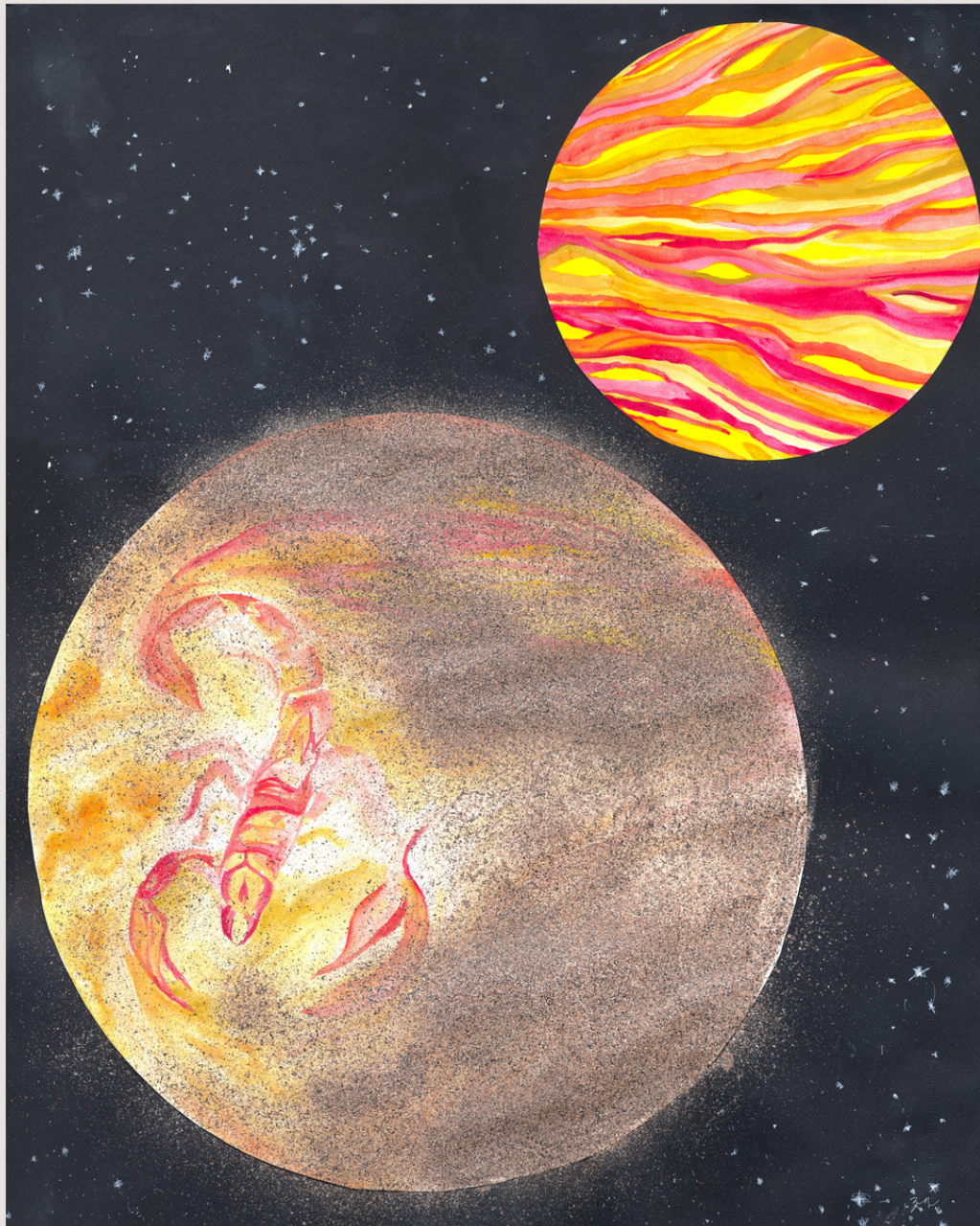
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PSR B1620-26 b, Methuselah

Nicknamed Methuselah, PSR B1620-26 b resides in the constellation Scorpio. At 12.7 billion years old, this exoplanet is one of the oldest known. Nearby in the same constellation is Mu Scorpii. Called *Xamidimûra*, the Eyes of the Lion, by the Khoekhoen, this eclipsing binary star system appears in several sub-Saharan African folklore stories. For the |Xam Bushmen of South Africa, celestial bodies were once people, as exemplified in the nearby constellation Corona Australis, the Southern Crown. The |Xam tell a story of a bewitched girl who looks upon a group of men eating together one evening, later turning them into these stars.



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Medium

Watercolor on Paper

Artist

Eva Bod '20

Curated Resources

PSR B1620–26 b, *Exoplanet Catalog*, Exoplanet Exploration, NASA

PSR B1620–26 b, *Eyes on Exoplanets*, Exoplanet Exploration, NASA

Stephen Thorsett, Zaven Arzoumanian, Fernando Camilo, and Andrew Lyne, "The Triple Pulsar System PSR B1620–26 in M4", *Astrophysical Journal*, 1 October 1999

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Clive Ruggles, *Handbook of Archaeoastronomy and Ethnoastronomy*, 2015

Springer Press Historical and Cultural Astronomy Series, 2016-present

Archaeoastronomy, 1978-2014

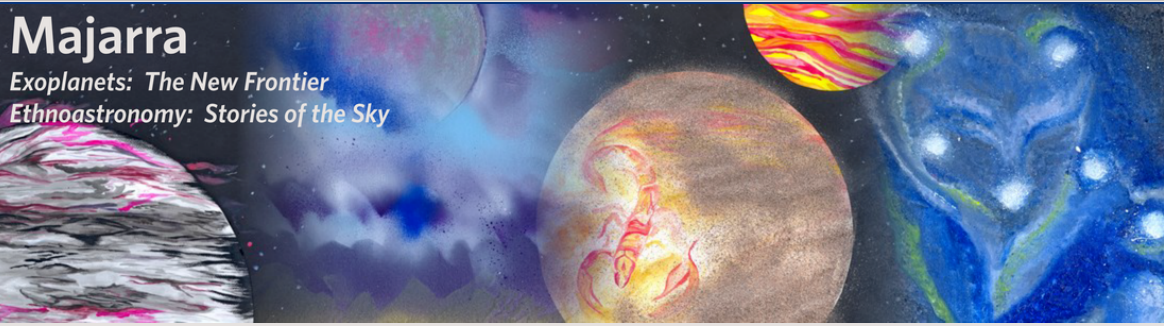
Journal of Astronomy in Culture, 2016-present

Ocarina Books

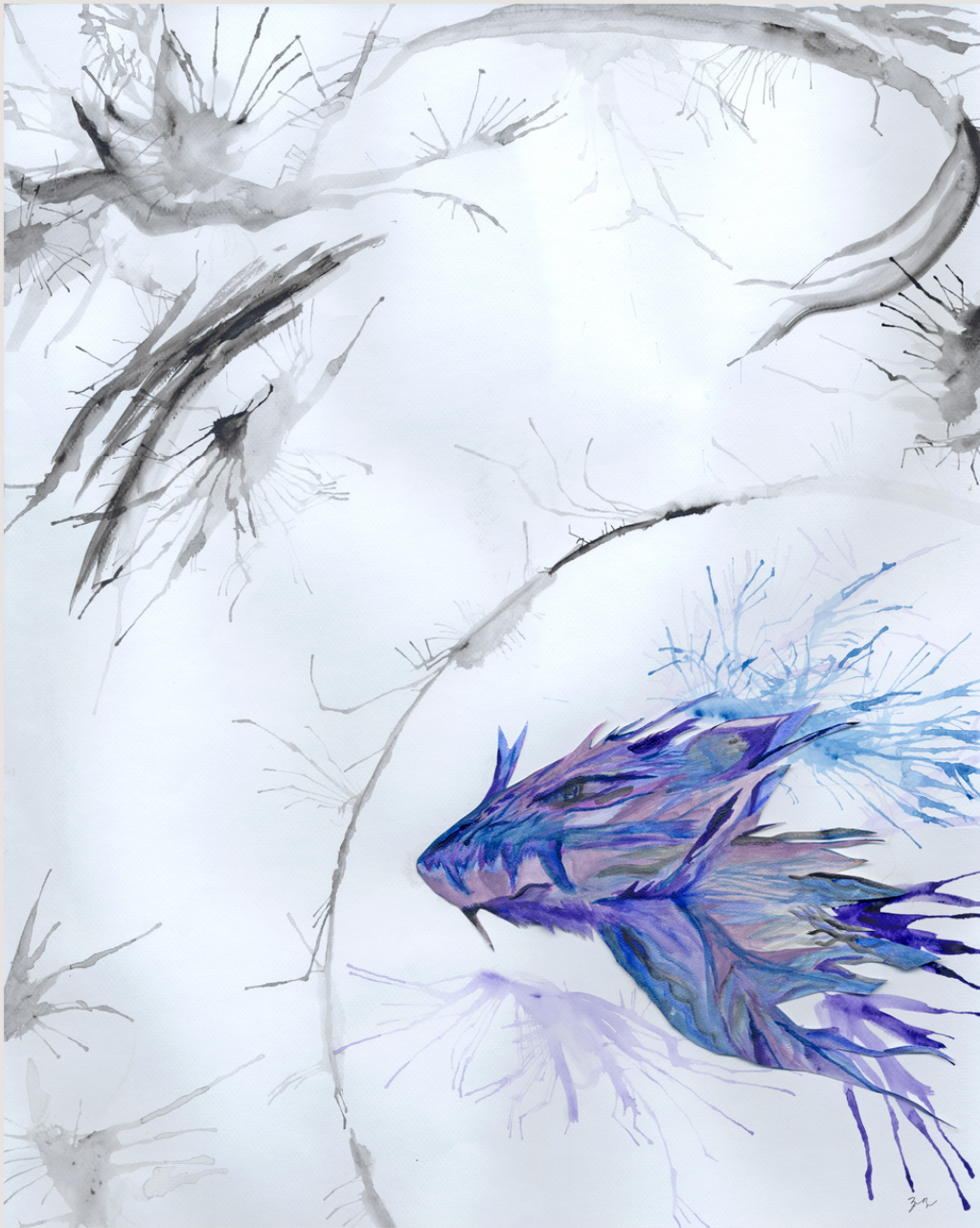
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Draco, the Dragon

One of the largest constellations in the northern sky, Draco represents the Dragon and protects the gardens of Hesperides in Greek mythology. Draco is home to many famous stars, like Delta Draconis. This star is about 800 million years old and 59 times more luminous than our Sun.





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Gitchi Odjig, the Great Fisher

Gitchi Odjig, the Great Fisher, appears in Ojibwe and Algonquin myths and is known as the Big Dipper constellation in Western literature. It is the third largest of the 88 modern constellations. Used as a navigational tool, the Great Fisher points to the current northern pole star, Polaris. Preceding the widespread Western-constructed narratives of Ursa Major (the Big Bear) and the Big Dipper, *Gitchi Odjig* is the name of the constellation that brings summer to the world and serves as a mythic friend, distinguished for his bravery and courage in the face of danger.



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Medium

Oil on Canvas

Artist

Eva Bod '20

Curated Resources

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About the Creator

Eva Bod '20 is a contemporary painter originally from Minnesota. Having grown up with the northern lights above chilly farmland, her love for the stars has been a passion throughout her life. Eva is inspired by the connection between science and art, an interest represented by this ethnoastronomy collection. Her fascinations with natural illustration and the fine arts are expressed through charcoal, watercolor, oil paints, and spray paints.

She earned her B.A. in Sociology and Anthropology at Middlebury College, where she delved into the arts to depict the relationship between human culture and our understandings of the cosmos. As the artist explains, "bridging art and science can tell stories that unite us in our humanity, inviting all people to embrace the unknown."

Commissioned to create a series of paintings for the Mittelman Observatory, she used multiple media to depict exoplanets and astronomical lore from many cultures. Her ultimate goal is to ignite curiosity, and to inspire others to look up.

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Exoplanets: The New Frontier
Ethnoastronomy: Stories of the Sky

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