



2017

Program Highlights



March 10 - 17, 2017
Hilo, Hawai'i



March 22, 2017
TO OUR JOURNEY FAMILY,

2017 marks our thirteenth year of Hawai'i Island's flagship education and outreach program, Journey Through the Universe. This year 70 astronomy educators visited over 8,800 students in 300 classrooms in the Hilo-Waiākea, Pa'auilo, Honoka'a and Waimea schools. In the Hilo-Waiākea complex every K-1 student had the StarLab visit their classroom. We also welcomed for the first time the Ka'ū-Kea'au-Pāhoā Complex schools into our Journey family. A workshop for 40 teachers was held with follow-up visits to the summit.

The Hawai'i State Department of Education has elaborated in the past that their "Stellar partnership with the business organizations and community is Journey Through the Universe: STEM initiative. As a part of the educational system, our complex areas are overwhelmed with appreciation for the enthusiasm and energy this initiative has generated for our schools, students, teachers, administrators and families. This concerted effort has made this grassroots program a sustaining reality. We humbly thank the community for their continued support as we all work together toward a common goal - building a better future." Our community partners include the Hawai'i State Department of Education, Maunakea Observatories, the University of Hawai'i at Hilo, 'Imiloa Astronomy Center, NASA Solar System Exploration Research Virtual Institute, the Institute for Astronomy, Bank of Hawai'i, Big Island Toyota, New West Broadcasting, Thirty Meter Telescope, KTA Superstores, HELCO, Big Island Candies, Hawai'i Tribune Herald, and more.

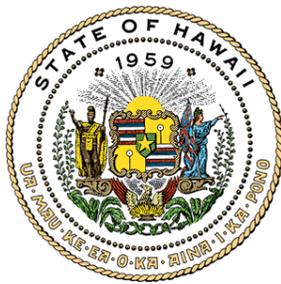
The Hawai'i Island and Japanese Chambers of Commerce have supported this effort monetarily, as well as hosted celebratory events for the past several years. The two Chambers' thank-you celebration provides a unique opportunity for astronomers, educators, and the business community to discuss and share another common goal – to enrich science education in our schools and inspire our children to aim high.

The Journey Team would like to thank everyone involved in the Journey program for their continued support and acknowledgement of this STEM initiative. A program of this magnitude could not happen without the dedication of our community partners and their ongoing support. As we enter into our second decade of the Journey Through the Universe program, we will continue to change our student's lives as we advance science literacy through astronomy and encourage all students to reach for the stars!

Much Aloha and our sincerest Mahalo,

Janice Harvey
Journey Team Leader
www.gemini.edu/journey





Proclamation

In Recognition of

Journey through the Universe 2017

WHEREAS, the Journey through the Universe program is a national science education initiative developed by the National Center for Earth and Space Science Education that promotes science, technology, engineering and mathematics (STEM) education; and

WHEREAS, the Journey through the Universe program will help continue America's legacy as a leader on the science and technology frontiers, inspiring and preparing the next generation of scientists and engineers to compete in global markets in the age of high technology; and

WHEREAS, Hilo, Hawai'i is currently one of ten communities around the nation that are designated Journey through the Universe sites;

WHEREAS, this fun-filled educational program has engaged tens of thousands of students in Hawai'i, allowing them to explore STEM opportunities, with a focus on earth and space and gain knowledge and 21st century skills that helps to ensure literacy in science; and

WHEREAS, the 13th Annual Journey through the Universe program on Hawai'i Island strengthens the community by partnering with the Gemini Observatory on Mauna Kea, University of Hawai'i-Hilo, Hawai'i Department of Education Hilo-Waiākea Complex Area, 'Imiloa Astronomy Center of Hawai'i, Japanese Chamber of Commerce & Industry of Hawai'i, Hawai'i Island Chamber of Commerce, as well as many other sponsors, organizations and businesses; and

WHEREAS, the 13th Annual Journey through the Universe program reaches out to members of the community to become part of the Ambassadors team and assist with classroom visits in the Hilo/Waiākea Complex schools, facilitate transportation, distribute educational materials, and coordinate classroom activities; and

WHEREAS, students, teachers, families and the public at-large are provided with an intensive week of programming which includes teacher workshops, classroom visits by astronomers and scientists, public lectures and family science nights;

THEREFORE I, DAVID Y. IGE, Governor, and I, SHAN S. TSUTSUI, Lieutenant Governor of the State of Hawai'i, do hereby proclaim March 10 - 17, 2017 as

"JOURNEY THROUGH THE UNIVERSE WEEK"

in Hawai'i and ask the people of the Aloha State to join us in recognizing the national importance of science education and encourage our keiki to pursue the explorers within them.

DONE at the State Capitol, in Executive Chambers, Honolulu, State of Hawai'i, this fourteenth day of February 2017.


DAVID Y. IGE
Governor, State of Hawai'i


SHAN S. TSUTSUI
Lt. Governor, State of Hawai'i

COUNTY OF HAWAII

Proclamation

WHEREAS, Journey Through the Universe promotes sustained education in the critical areas of science, technology, engineering and mathematics (STEM), and is a celebration of exploration and the joys of learning science. In 2016, the program celebrated its 12th anniversary on Hawaii'i Island where it has engaged over 56,000 students in the past decade in STEM education in local schools; and

WHEREAS, developed by the National Center for Earth and Space Science Education (NCESSE), Journey through the Universe is a national science education initiative that engages entire communities - students, teachers, families, and the public - using educational programs in the earth and space sciences, and space exploration to inspire and educate; and

WHEREAS, the Department of Education Hilo/Waiākea Complex and Gemini Observatory began the partnership in 2004, agreeing to work together and share Mauna Kea astronomy with students. Over the past decade students, teachers and the community-at-large have benefited from Journey Through the Universe which has grown to include dozens of local and national research and education institutions, as well as local businesses, government agencies, and individuals; and

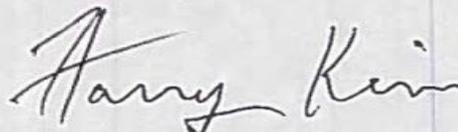
WHEREAS, the County of Hawaii'i fully encourages and supports the educators who perpetuate learning and exploration of our universe in order to excite our youth about the future, and the astronomers and engineers who instill excitement and understanding about the diverse careers available at the telescopes,

NOW, THEREFORE, I, HARRY KIM, Mayor of the County of Hawaii'i, do hereby proclaim March 10-17, 2017, as

JOURNEY THROUGH THE UNIVERSE WEEK

in the County of Hawaii'i and urge all citizens to be mindful of the great contributions that astronomy makes to the educational and economic betterment of our island's people.

IN WITNESS WHEREOF, I have hereunto set my hand and caused The Seal of the County of Hawaii'i to be affixed. Done this 7th day of February, 2017 in Hilo, Hawaii'i.



Harry Kim
MAYOR

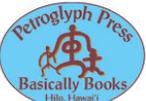


Journey Through the Universe Hawai‘i Island

Astronomy Educators in the Community

	Alexis Acohido	Gemini Observatory
	Virginia Aragon-Barnes	Thirty Meter Telescope
	Nobuo Arimoto	Subaru Telescope
	Brad Bailey	SSSERVI NASA Ames Research Center
	Jennie Berghuis	Subaru Telescope
	Kelly Blumenthal	UH Institute for Astronomy
	Jerry Brower	Gemini Observatory
	Joanna Bulger	Subaru Telescope
	Andre-Nicolas Chene	Gemini Observatory
	Devin Chu	UCLA/TMT
	Christophe Clergeon	Subaru Telescope
	Kathy Cooksey	University of Hawaii Hilo
	Sandra Dawson	Thirty Meter Telescope
	Brian Day	SSSERVI NASA Ames Research Center
	Daniel Devost	Canada France Hawaii Telescope
	Jeff Donahue	Gemini Observatory
	Angelica Ebberts	Gemini Observatory
	Scott Fisher	University of Oregon
	Miriam Fuchs	Submillimeter Array
	Tom Geballe	Gemini Observatory
	Jeff Goldstein	NCSSE
	Alyssa Grace	Gemini Observatory, UHH
	Kathy Guyon	Subaru Telescope
	Olivier Guyon	Subaru Telescope
	John Hamilton	UHH, PISCES
	Janice Harvey	Gemini Observatory
	Guenther Hasinger	UH Institute for Astronomy
	Saeko Hayashi	Subaru Telescope
	Stephanie Henry	NASA Marshall Space Flight Center
	Michael Hoerig	Gemini Observatory
	Stewart Hunter	Mauna Kea Support Services
	Masa Imanishi	Subaru Telescope
	Russell Kackley	Subaru Telescope
	Carolyn Kaichi	UH Institute for Astronomy
	Yuko Kakazu	Subaru Telescope
	Markus Kissler-Patig	Gemini Observatory
	Scott Kleinman	Gemini Observatory
	Shintaro Koshida	Subaru Telescope
	Sylvia Kowalski	Gemini Observatory
	Mary Beth Laychak	Canada France Hawaii Telescope
	Chien-Hsiu Lee	Subaru Telescope
	Julien Lozi	Subaru Telescope
	Nadine Manset	Canada France Hawaii Telescope
	Callie Matulonis	JCMT/East Asian Observatory
	Tony Matulonis	NASA Infrared Telescope Facility
	Peter Michaud	Gemini Observatory
	Joseph Minafra	SSSERVI NASA Ames Research Center
	Brian Mitchell	NASA Marshall Space Flight Center
	Junichi Noumaru	Subaru Telescope
	Emily Peavy	Imiloa Astronomy Center
	Yvonne Pendleton	SSSERVI NASA Ames Research Center
	Andrea Petric	Canada France Hawaii Telescope
	Tae-Soo Pyo	Subaru Telescope
	Bo Reipurth	UH Institute for Astronomy
	Marc Roberts	University of Hawaii Hilo
	Rodrigo Romo	PISCES
	Dennis Schatz	Pacific Science Center
	Sharon Schleigh	East Carolina University
	Greg Schmidt	SSSERVI NASA Ames Research Center
	Doug Simons	Canada France Hawaii Telescope
	Christopher Simpson	Gemini Observatory
	Breann Sitarski	University of California Los Angeles
	Barbara Small	Maunakea Visitor Information Station
	Teague Soderman	SSSERVI NASA Ames Research Center
	Robert Sparks	NOAO
	Gordon Squires	Thirty Meter Telescope
	Jessica Stasik	UH Institute for Astronomy
	Tomonori Usuda	TMT/Japan
	John Vierra	Gemini Observatory
	Tom Winegar	Subaru Telescope
	Sherry Yeh	Keck Observatory

For more information contact Janice Harvey at jharvey@gemini.edu www.gemini.edu/journey



For Release on: February 7, 2017
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Gemini Observatory Hosts Annual Journey Through the Universe
*Local Students Receive First-hand Opportunity to Collaborate with
Maunakea Observatories' Astronomers*

Hilo, Hawai'i - The Universe is expanding... and so is the Journey Through the Universe program! From March 13-17, 57 observatory professionals and informal educators are extending their reach to districts across the Big Island. Journey Through the Universe includes classroom visits for students in Hilo-Waiākea, Honoka'a, Pa'auilo, and Waimea in grades 2-12, StarLab Portable Planetarium shows for Hilo-Waiākea students in K-1, workshops for teachers including a NASA Lunar and Meteorite Sample Certification Workshop led by NASA SSERVI's Brian Day and Joseph Minafra, and a public colloquia titled, "Discovery, New Frontiers, and Solar System Exploration," by NASA's Brian Mitchell.

Journey Through the Universe is returning to Honoka'a Schools, and will also visit classrooms in Pa'auilo and Waimea this year. Additionally, Journey Through the Universe and the Ka'ū-Kea'au-Pāhoa (KKP) Complex Area are joining forces to introduce Next Generation Science Standards (NGSS) through relevant interactive phenomena, and exposing 40 KKP Complex Area teachers to diverse observatory careers through a career panel.

"The Ka'ū-Kea'au-Pāhoa Complex Area is excited about partnering with the Journey Through the Universe program, and looks forward to our teachers and students participating in real-world experiences that can be used to make sense of Next Generation Science Standards," said Chad Keone Farias, the Hawai'i Department of Education (DOE) KKP Complex Area superintendent. "Furthermore, exposure to the various occupations within Gemini and other neighboring astronomy centers will help our students develop their future story - the idea that students can visualize and attain their maximum potential."

The Journey Through the Universe program's Astronomy Educator's Reception, sponsored by the Hawai'i Island Chamber of Commerce and Japanese Chamber of Commerce and Industry of Hawai'i, will feature program alumnus Devin Chu. Chu graduated from Hilo High School in 2010 and participated in the Journey Through the Universe program for six years. He went on to receive his Bachelor's degree in astrophysics from Dartmouth and most recently received his Master's degree in astronomy from UCLA this past May. He is currently a PhD candidate at UCLA, and his research involves studying the orbits of stars around the supermassive black hole at the center of the Milky Way.

“Being a part of the Journey Through the Universe program was very influential in developing my interest in physics and astronomy,” said Chu. “Seeing local people involved in the field of astronomy has motivated me to return to Hawai‘i Island as an astronomer.”

“The Journey Through the Universe program would not exist without the time, energy, and resources from our community partners including the Department of Education, Hawai‘i Island business community, Maunakea Observatories, NASA, and more,” said Janice Harvey, Journey Through the Universe program coordinator from the Gemini Public Information and Outreach department. “Their ongoing support is a testament to their commitment to our children’s futures.”

For more information about the Journey Through the Universe program, its partners, sponsors, as well as past images, visit: <http://www.gemini.edu/journey>.

About Gemini Observatory

The Gemini Observatory is an international collaboration with two identical 8-meter telescopes. The Frederick C. Gillett Gemini Telescope is located on Maunakea, Hawai‘i (Gemini North) and the other telescope on Cerro Pachón in central Chile (Gemini South); together the twin telescopes provide full coverage over both hemispheres of the sky. The telescopes incorporate technologies that allow large, relatively thin mirrors, under active control, to collect and focus both visible and infrared radiation from space. The Gemini Observatory provides the astronomical communities in five partner countries with state-of-the-art astronomical facilities that allocate observing time in proportion to each country’s contribution. In addition to financial support, each country also contributes significant scientific and technical resources. The national research agencies that form the Gemini partnership include: the US National Science Foundation (NSF), the Canadian National Research Council (NRC), the Argentinean Ministerio de Ciencia, Tecnología e Innovación Productiva, the Brazilian Ministério de Ciência, Tecnologia e Inovação and the Chilean Comisión Nacional de Investigación Científica Tecnológica (CONICYT). The observatory is managed by the Association of Universities for Research in Astronomy, Inc. (AURA) under a cooperative agreement with the NSF. The NSF also serves as the executive agency for the international partnership. For more information, visit www.gemini.edu.

About the Maunakea Observatories

The Maunakea Observatories are a collaborative of independent institutions with telescopes located on Maunakea on the island of Hawai‘i. Together, the Observatories make Maunakea the most scientifically productive site for astronomy world-wide. The Maunakea Observatories include: Caltech Submillimeter Observatory, Canada-France-Hawai‘i Telescope, Gemini International Observatory, James Clerk Maxwell Telescope (EAO), NASA Infrared Telescope Facility, Subaru Telescope, Submillimeter Array, United Kingdom Infrared Telescope, University of Hawai‘i Hilo Educational Telescope, University of Hawai‘i 2.2 Meter Telescope, Very Long Baseline Array, and W. M. Keck Observatory (Keck I and Keck II).

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By **KIRSTEN JOHNSON** Hawaii Tribune-Herald

When Kae-Lee Rapozo grows up, she wants to become a lawyer.

"I want to help people," the Waiakeawaena Elementary School fourth-grader said. "Like (helping) when someone gets hurt because of somebody else."

On Tuesday, Kae-Lee, 9, was mulling a legal career at a place seemingly unlikely to employ attorneys — NASA.

Representatives from the California-based NASA Ames Research Center were in Hilo, telling Kae-Lee and her roughly 20 classmates how the space agency employs people from all sorts of occupations: marine biologists, geologists, plant scientists — even artists.

"NASA needs all kinds of people," Jennifer Baer, a NASA graphic artist, told the room of wide-eyed keiki, describing the various types of materials she designs and illustrates for her job.

The hourlong classroom visit was among several happening islandwide this week as part of the 13th annual Journey Through the Universe Week. The program, headed by the Gemini Observatory, brings together more than 70 astronomers and educators who lead classroom visits, planetarium shows and career panels for high school students — to name a few.

Activities run throughout the year, Gemini spokeswoman Janice Harvey said, but a large concentration of them are happening this week.

This year, Journey Through the Universe hopes to reach more than 8,000 students, Harvey said. Ultimately, it wants to inspire students to consider careers in astronomy and related fields.

Program alum Devin Chu, a Hilo High School graduate, helped conduct some of the classroom visits this week. Chu completed an astrophysics degree at Dartmouth University in New Hampshire and now is working on a doctorate degree at the University of California at Los Angeles.

"(Our goal for the students) is exactly what happened to Devin Chu," Harvey said. "He was exposed to the (program), and we showed him different pathways. We also want to show these kids careers happening at the observatory."

"I don't think children always understand how many job opportunities there are out there and how they can be anything they want to be," Harvey added. "I think the main thing Journey does, is it inspires kids."

The program wants to continue reaching more students in the future, particularly in Kona-area schools, Harvey said. Activities this year are happening at schools in Hilo, Honokaa, Waimea and Paauilo. Journey Through the Universe also led a workshop for teachers in the Ka'u-Keaau-Pahoa Complex Area.

Elementary and early teen years are a prime time to reach kids — particularly young girls — before “they’ve decided they can’t do something,” said Yvonne Pendleton, a NASA astrophysicist who joined Baer on Tuesday to present to the Waiakeawaena students.

“I want to get to them before they get to an age where they have to make a decision between some social norm and science,” said Pendleton, who also is director of the NASA Solar System Exploration Research Virtual Institute. “I know I struggled with that — I used to wrap my textbooks in brown paper because I didn’t want people in high school to see I was taking third-year chemistry. I wanted to be with the cool kids. But it shouldn’t be that hard. It should be something where, if you are who you are, you can like that stuff and it can all work.”

Fourth-grader Kallen Fujioka said he already was considering a career as an astronaut or a pilot. He said he enjoyed learning about different occupations at NASA and liked a refresher on subjects with which he already was familiar — the atmosphere, asteroid belts and Pluto, to name a few.

“I like learning about space, it’s really interesting,” Kallen said. “I think it’d be pretty cool to work at NASA.”

Email Kirsten Johnson at kjohnson@hawaiitribune-herald.com.

<http://hawaiitribune-herald.com/news/local-news/journey-possibilities-annual-education-program-exposes-keiki-careers-astronomy-otherwise>



Superintendent's EDUCATION UPDATE

HAWAII STATE DEPARTMENT OF EDUCATION | MARCH 2017

MAR 10-17

JOURNEY THROUGH THE UNIVERSE

This 13th annual event promotes sustained education in STEM, and is a celebration of exploration and the joys of learning science and astronomy. In Hilo-Waiakea, dozens of researchers from the telescope array and UH-Hilo will visit classrooms and offer workshops to share the excitement and inspiration about the life-long career possibilities and learning opportunities available in STEM fields.

www.gemini.edu/journey



JCCIH, HICC along DOE and the astronomy community are hosting the 13th annual "Journey Through the Universe," on Monday, March 13, 2017, 5-8 pm at the Grand Naniiloa Hotel Sandalwood Room. Meet and greet national science team members, plus many of our astronomers and educators who deliver this educational program to our K-12 schools. Hilo-raised **Devin Chu** will be the guest speaker and share how the Journey Program helped to guide his dream of being an astronomer. Let's support astronomy for our island.



[Registration Form Here>](#)



During the month of March, please consider supporting the 13th annual Journey Through the Universe Educator's Reception that will be held at the Grand Naniiloa Hotel. This year, our featured guest speaker will be Hilo's own Devin Chu. Devin, the son of Roberta and Newton Chu, will share his experiences in astronomy and how the Journey program helped to guide his dream of becoming an astronomer.

 **Gemini Observatory**
February 13 at 8:47am · 🌐

Today's Journey Through the Universe KKP Complex Teacher workshop blasts off with a presentation from Gemini Director, Markus Kissler-Patig!



 **Gemini Observatory**
February 13 at 10:30am · 🌐

Journey Through the Universe KKP Complex Teacher Workshop career panel. Canada-France-Hawai'i Telescope Director Doug Simons shares his story, followed by (right to left) Lucio Ramos (Subaru), Therese Glowania (Gemini), Bobbi Kikuchi (Gemini), Kiaina Schubert (Subaru), and Joy Pollard (Gemini).



Gemini e-Newscast #92

February 16, 2017

Journey Through the Universe 2017 Kicks off With Teacher Workshop

The 2017 edition of Gemini's longest-running and most successful local outreach program, Journey Through the Universe (JTTU), kicked off with a teacher workshop at Hilo's 'Imiloa Astronomy Center on February 13th. The diverse workshop, which attracted over 40 Big Island educators, featured an observatory career panel, sessions on the integration of the Next Generation Science Standards (which Hawai'i teachers are now integrating into their classrooms), and a special presentation by Gemini Director Markus Kissler-Patig on Maunakea astronomy (see image). The JTTU program will continue throughout 2017 with the program's next milestone being a week of classroom presentations on the Big Island by over 60 observatory staff and science educators.



Gemini Director Markus Kissler-Patig shares insights on astronomy – and the role of Maunakea in modern astronomical research – with local Big Island educators.



Gemini Observatory

February 22 at 6:00pm · 🌐

Journey Through the Universe Ambassadors... Assemble!

The annual week of Journey Through the Universe 2017 classroom presentations is just two weeks away! Each year our ambassadors are recruited from our community and happily accompany and support our astronomy educators in 2nd-12th grade classrooms in local Big Island schools. 20 ambassadors met at our Hilo Base Facility to go over logistics, ask any last minute questions, and pick up their schedules. They are a vital part of our Journey Through the Universe program, and are much appreciated!

Visit the Journey Through the Universe website for more information about our programs throughout the week: <http://bit.ly/1DOYx30>



Gemini Observatory

March 6 at 9:00am · 🌐

Pre-K-1 Students are Over the Moon for StarLab!

While students in grades 2-12 are getting ready for astronomy educators to visit their 200+ classrooms next week, over 1,100 Pre-K-1 students from 59 classrooms in the Hilo-Waiākea area zoomed through the Solar System using Gemini's StarLab Portable Planetarium. Over the past four months, students in Pre-K and K took a trip to each planet in our Solar System, while first grade students explored the Moon and its phases and features using Gemini's newly acquired Moon cylinder projections.

Thanks to staff from Imiloa Astronomy Center, Subaru Telescope Hawaii Outreach, UH Institute for Astronomy, and Gemini Observatory, who helped with our StarLab presentations!

Click the link to learn more about the Journey Through the Universe Program: <http://bit.ly/1DOYx30>



UH Institute for Astronomy

March 15 at 12:44pm · 🌐

Dr. Guenther Hasinger at #WaiakeaIntermediateSchool for the 2017 Journey Through the Universe #GeminiObs <https://t.co/Cw5lbOrFGP>



UH IfA (@UHIfA) posted a photo on Twitter

Get the whole picture - and other photos from UH IfA

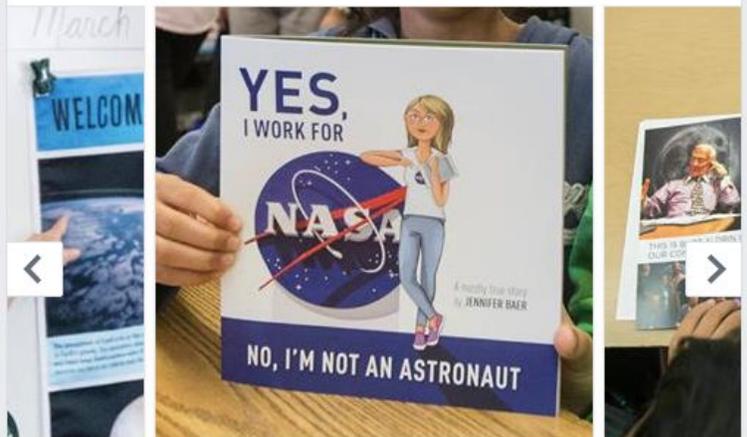
[PIC.TWITTER.COM/CW5LBORFGP](https://pic.twitter.com/cw5lbOrFGP)



UH Institute for Astronomy

March 15 at 10:01am · 🌐

The entire Hawaii Island astronomy community, including the IfA, is out in classrooms this week as part of the annual Journey Through the Universe Program, organized by Gemini Observatory



education n

A journey into possibilities; Annual education program exposes keiki to careers in

A journey into program expos

Gemini's StarLab Portable Planetarium

Journey through the Universe

When: Wednesday, September 7, 2016; 3:00 - 5:00 PM
Where: 67 Keokea Lp, Hilo, HI 96720

Contact Alexis Acohido
e-mail: aacohido@gemini.edu
phone: 808-974-2528

Contact Keahi Warfield
e-mail: infopueo@gmail.com
phone: 808-895-8666

Lead your own team of explorers!



Join us for a Journey through the Universe StarLab presentation for kids to explore the stars at 3-4pm. Followed by your chance to learn how to borrow our planetarium and host your own shows. Both events are hosted by Perpetuating Unique Educational Opportunities (PUEO).

Gemini Observatory's StarLab program aims to educate students about the wonders of the Universe in a fun and interactive environment. Several projection cylinders provide a diverse range of concepts to tailor presentations for all ages. For more information about our StarLab program, visit our website at: <http://tinyurl.com/zsym78f>

Aloha PUEO

Perpetuating Unique Educational Opportunities
<http://alohapueo.org>
infopueo@gmail.com



Family ASTRO Training Discovering Strange New Planets!

When: Thursday, September 22, 2016; 3:00 - 5:00 PM

Where: 'Imiloa Astronomy Center - Classroom

Contact Christine Copes
e-mail: ccopes@gemini.edu
phone: 808-974-2531

Contact Janice Harvey
e-mail: jharvey@gemini.edu
phone: 808-974-2603



Join us for a new take on Family ASTRO! Learn about our Solar System by exploring other stellar systems. Why is it so difficult to hunt for extrasolar planets? How do we go about detecting them? Use current findings and events as practical applications of classroom astronomy!

This training is open to teachers, parents, organizations and/or community members.

Gemini Observatory along with the Astronomical Society of the Pacific has developed Family ASTRO to help families, youth groups, after-school clubs, and everyone in between enjoy learning about our Universe.

For more information about our Family ASTRO program, visit our website at

<http://tinyurl.com/honaa87>



Gemini's StarLab Portable Planetarium Training

When: Monday, October 3, 2016; 3:00 - 5:00 PM
 Where: 'Imiloa Astronomy Center - Moanahoku Hall

Contact Alexis Acochido
 e-mail: aacochido@gemini.edu
 phone: 808-974-2528

Contact Janice Harvey
 e-mail: jharvey@gemini.edu
 phone: 808-974-2603

Lead your own team of explorers!



Training on how to operate the StarLab is open to teachers and community members looking to borrow the portable planetarium for their school or organization. Lesson plans will be discussed at the training.

Gemini Observatory's StarLab program aims to educate students about the wonders of the Universe in a fun and interactive environment. Several projection cylinders provide a diverse range of concepts to tailor presentations for all ages. For more information about our StarLab program, visit our website at: <http://tinyurl.com/zsym78f>



Journey Through the Universe 2017 Greatest Hits!

When: Wednesday, October 19, 2016; 10:00 - 12:00 PM
 Where: Gemini Observatory Hilo Base Facility - Lecture Hall

Contact Christine Copes
 e-mail: ccopes@gemini.edu
 phone: 808-974-2531

Contact Janice Harvey
 e-mail: jharvey@gemini.edu
 phone: 808-974-2603

Please join us for five highly successful classroom presentations that our astronomers/astromy educators have been presenting to our Journey students over the past years!

Interaction, comments, and suggestions will be encouraged.

Presenters:

Gemini PIO Team

Angelic Ebbers - The Zipline Ping Pong Ball Challenge

Sherry Yeh - Working with Young Minds

Jerry Brower - Computer Science without Computers: Teaching Kids Science Without Slides

André-Nicholas Chené - 3D Star Constellations

Yuko Kakazu - TBD



For more information about our Journey Through the Universe program, visit our website at: <http://www.gemini.edu/journey>





Journey Through the Universe Ka'ū-Kea'au-Pāhoā Teacher Workshop

Part I: 'Imiloa, Moanahōkū Hall

Monday, February 13, 2017; 8:00AM-3:00PM

Part II: TBD

Journey Through the Universe, led by Gemini Observatory and in partnership with the Ka'ū-Kea'au-Pāhoā (KKP) complex, is offering an opportunity for educators to connect classroom to careers by participating in this two part workshop. Snacks and lunch will be provided.

Part I Workshop will include:

- Presentation from Dr. Markus Kissler-Patig, Director of Gemini Observatory
- Career Panel with a diverse group of observatory professionals
- An introduction to Next Generation Science Standards through local scientific phenomenon

Part II Huaka'i will include:

- Career exploration with guided tour of the Gemini North telescope on Maunakea

Part I Workshop Agenda

- 8:00AM** - Arrival and Sign-In
- 8:30AM** - Introductions
- 8:45AM** - Presentation from the Director of Gemini Observatory, Dr. Markus Kissler-Patig
- 9:45AM** - Break
- 10:00AM** - Career Panel consisting of six observatory professionals from Gemini Observatory, Canada-France-Hawaii Telescope, and Subaru Telescope
- 11:45AM** - Lunch
- 12:30PM** - Elementary and secondary breakout sessions will focus on developing an understanding of the three dimensions of the Next Generation Science Standards (NGSS) framework through experiences with local scientific phenomena
- 1:30PM** - Break
- 1:40PM** - Continuation of NGSS Session
- 3:00PM** - Conclusion/Evaluation

Registration form: <https://goo.gl/forms/CZAWIAaWF4VboQaX2>

For questions, please contact Janice Harvey at jharvey@gemini.edu or (808) 974-2603



Free, Frozen,
Family Fun!
Auntie Mimi's ASTRO-BASH

January 11, 2017 Hilo Public Library 4:30 - 6:30PM



Experience the dynamic world of astronomy with hands-on science projects from 4:30-5:30 pm, and a live science show with Auntie Mimi to explore the frigid world of space from 5:30-6:30 pm! Don't forget giveaways, face painting and a chance to win some super cold prizes! Free and suitable for all ages.



Presented by Gemini Observatory, The Hilo Public Library and The Submillimeter Array as part of the Journey Through the Universe program. For more information, please visit <http://www.gemini.edu/journey>. Contact the library 15 days in advance to request a sign language interpreter or if special accommodations are needed.

Journey Through the Universe 2017

Classroom Visits and Events

The Universe is expanding... and so is the Journey Through the Universe program! From March 13-17, over 60 observatory professionals and informal educators are extending their reach to districts across the Big Island. Journey Through the Universe (to be referred to as Journey in the rest of this post) includes: classroom visits for students in Hilo-Waiākea, Honoka‘a, Pa‘auilo, and Waimea in grades 2-12, StarLab Portable Planetarium shows for Hilo-Waiākea students in K-1, workshops for teachers, including a workshop for 40 teachers from the Ka‘ū-Kea‘au-Pāhoa Complex area to introduce the Next Generation Science Standards (NGSS) and a NASA Lunar and Meteorite Sample Certification Workshop led by NASA (Solar System Exploration Research Virtual Institute’s (SSERVI) Brian Day and Joseph Minafra, as well as a public colloquia titled, “Discovery, New Frontiers, and Solar System Exploration,” by NASA’s Brian Mitchell.

“Sustaining a program the size and magnitude of Journey is no small feat,” says Journey Team Leader Janice Harvey. “With the continual expansion of the Journey program year after year, it’s obvious that the impact this program has on our local students and the community is substantial.”

All text can be found on the Journey Blog at:

<http://www.gemini.edu/blog/blog/2017/03/10/journey-through-the-universe-2017/>

EXPLORING THE STARLAB MOON CYLINDER

On Thursday, March 9th, Gemini staff and NASA SSERVI’s Brian Day explored Gemini’s newly acquired Moon Cylinder before Day held a StarLab presentation for the after school group Perpetuating Unique Educational Opportunities (PUEO). Day currently acts as SSERVI’s project manager for NASA’s Lunar Mapping and Modeling Portal, which is a set of tools designed for mission planning, lunar science, and public outreach. Students learned about geological features and phases of the Moon, as well as past and current NASA Moon missions.



NASA SSERVI’s Brian Day directs students on modeling the movement of the Moon around the Earth. The students held actual lunar rock samples that Day had brought.

NASA LUNAR AND METEORITE SAMPLE CERTIFICATION WORKSHOP

On Saturday, March 11th, Brian Day and Joseph Minafra, both from NASA SSERVI, held a workshop that certifies teachers to borrow lunar and meteorite samples from the historic Apollo missions. Teachers attending this workshop will also learn how to use NASA online tools to explore and visualize the surfaces of the Moon, asteroids, and Mars as seen through the eyes of many different instruments aboard a great range of spacecrafts.



NASA SSERVI's Brian Day (six from the left) and Joseph Minafra (four from the left) led 10 teachers through a workshop that certifies them to borrow lunar and meteorite samples as teaching tools. One teacher holds up the sample plate for a better look.

CLASSROOM VISITS – MONDAY, MARCH 13TH

Our Public Information and Outreach department followed Devin Chu to Hilo Intermediate School and Teague Soderman to Kaumana Elementary School. Chu was born and raised in Hilo, Hawai'i and graduated from Hilo High School in 2010, where he was an ongoing participant in the Journey Through the Universe program. He received his Bachelor's in Physics and Astronomy from Dartmouth in 2014, and his Master's of Science in Astronomy from UCLA in 2016. He is currently working towards his PhD at UCLA while working under Andrea Ghez.



Chu demonstrated how celestial objects move using a "gravity well," a simulation of a point of strong gravitational pull. Teague Soderman from NASA SSERVI showed Kaumana students some of the technology that NASA has sent to space.

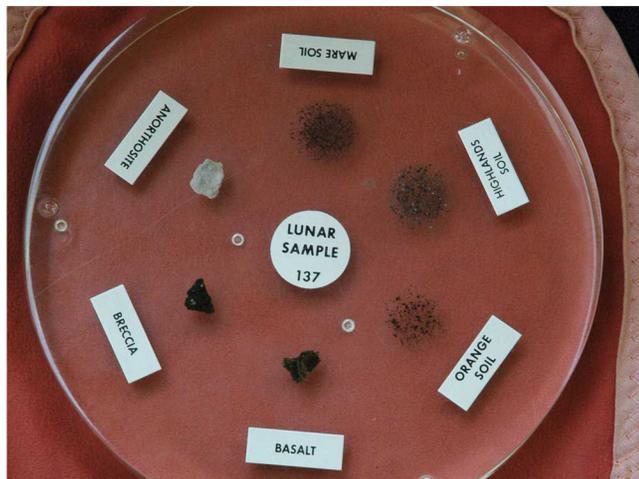
NASA Lunar and Meteorite Sample Certification Workshop

When: Saturday, March 11; 8:00 AM - 12:00 PM

Where: 'Imiloa Astronomy Center Classroom

Contact Christine Copes
e-mail: ccopes@gemini.edu
phone: 808-974-2531

Contact Janice Harvey
e-mail: jharvey@gemini.edu
phone: 808-974-2603



Joseph Minafra



Brian Day

Rocks from space help us understand how the solar system formed, how individual planets and moons formed and evolved, and even how life may have gotten started on Earth. The excitement of these concepts is brought to life when a teacher is able to bring actual samples of space rocks into the classroom. In this workshop, K-12 teachers will get the opportunity to examine firsthand samples of material from the Moon, Mars, and asteroids. They will get an introduction to the science of the study of astromaterials, learn how to bring this exciting topic into their classes, and become certified to borrow lunar and meteorite samples from the historic Apollo missions available to lent to teachers. NASA also lends samples of meteorites for students to examine. Teachers attending this workshop will also learn how to use NASA online tools to explore and visualize the surfaces of the Moon, asteroids, and Mars as seen through the eyes of many different instruments aboard a great range of spacecraft. Teachers must attend a certification workshop such as this to bring the excitement of real NASA Moon rocks and meteorite samples to their students. This workshop will be conducted by Brian Day and Joseph Minafra of NASA's Solar System Exploration Research Virtual Institute.

Participation is limited. Lunch will be available for all participants.

For more information about our Journey Through the Universe program, visit our website at: <http://www.gemini.edu/journey>



ASTRONOMY EDUCATOR'S RECEPTION AT THE NANILOA

The Hawai'i Island Chamber of Commerce (HICC) and the Japanese Chamber of Commerce and Industry of Hawai'i (JCCIH) hosted a welcome celebration for the astronomy community, the Department of Education and the business community. Superintendents from the Hilo-Waiākea Complex, Ka'ū-Kea'au-Pāhoa Complex, and representatives from the Honoka'a-Kealakehe-Kohala-Konawaena Complex also attended the event. Guest speakers included: Janice Harvey, Journey Team Leader, Mayor Harry Kim, Gemini Director Markus Kissler-Patig, and PhD candidate and Hilo native Devin Chu. Chu shared his experiences in astronomy and how the Journey program influenced and helped guide his dream of becoming an astronomer.



Newton (left) and Roberta Chu (right) introduce their son and guest speaker Devin by showcasing his 3rd grade timeline, which stated that he wanted to be an astronomer since he was 8! The Naniiloa was beyond capacity, with educators, the business community, and the astronomy community, totaling over 170 guests.

CLASSROOM VISITS – TUESDAY, MARCH 14TH

Today we followed Tomonori Usuda to Hilo Intermediate School. Usuda earned his PhD in Astronomy at the University of Tokyo and is an optical-infrared astronomer for the National Astronomical Observatory of Japan. He currently leads the Thirty Meter Telescope (TMT) project as the director of TMT-Japan. Previously, he was the associate Director of Subaru Telescope from 2006-2013.



Tomonori Usuda traces the path the light travels to get to the instruments on Subaru Telescope. Usuda explains the process behind changing out the instruments on the telescope.

Thirteen years... the Journey Continues...

**Journey through the Universe
Hawai'i Island**



Astronomy Educators Reception

Monday March 13, 2017

5:00 - 8:00pm, The Grand Naniloa Hotel Sandalwood Room

\$35 Pupu and No-host Cocktail Reception

**Presented by the Japanese Chamber of Commerce & Industry of Hawaii and the
Hawai'i Island Chamber of Commerce**



We invite you to celebrate **Journey Week!** Meet and greet National Science Team members plus the many astronomers and educators who are delivering this fantastic educational program to our K-12 schools. Join the business community in thanking them for their commitment to the Journey Through the Universe program.

Hear from our guest speaker, Hilo-raised **Devin Chu** who will share his experiences in astronomy and how the Journey program helped to guide his dream of becoming an astronomer. A graduate of Hilo High School, Devin received his Bachelor's degree from Dartmouth College in Physics and Astronomy in 2014 and Masters of Science in Astronomy from UCLA in 2016. He is currently a graduate student at UCLA.

www.gemini.edu/journey for additional information



REGISTRATION DEADLINE: Monday, March 6
No-shows or cancellations after March 6 will be charged in full.



Name: _____ amt. \$35.00 Company _____

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Program

Master of Ceremonies

Newton Chu

Welcome Remarks

Mike Kaleikini, President

Hawaii Island Chamber of Commerce

Russell Arikawa, President

Japanese Chamber of Commerce & Industry of Hawaii

Introductions

Janice Harvey

Gemini Observatory, Journey Through the Universe Team Leader

Harry Kim, Mayor

County of Hawaii

Markus Kissler-Patig, Director

Gemini Observatory

Guest Speaker

Devin Chu

Hilo High School Graduate,
Journey Graduate, UCLA Graduate Student

Mahalo!



Mahalo to our 2017 Astronomy Educators

Alexis Acohido	Stephanie Henry	Peter Michaud
Mike Aina	Michael Hoenig	Joseph Minafra
Virginia Aragon-Barnes	Stewart Hunter	Brian Mitchell
Nobuo Arimoto	Masa Imanishi	Les Mizuba
Jennifer Baer	Russell Kackley	Junichi Noumaru
Brad Bailey	Carolyn Kaichi	Emily Peavy
Jennie Berghuis	Yuko Kakazu	Shelly Pelfrey
Kelly Blumenthal	Jason Kalawe	Yvonne Pendleton
Jerry Brower	Leslie Kissler	Andreea Petric
Joanna Bulger	Markus Kissler-Patig	Tae-Soo Pyo
Andre-Nicolas Chene	Scot Kleinman	Lucio Ramos
Devin Chu	Shintaro Koshida	Bo Reipurth
Christophe Clergeon	Sylvia Kowalski	Marc Roberts
Kathy Cooksey	Mary Beth Laychak	Rodrigo Romo
Sandra Dawson	Chien-Hsiu Lee	Dennis Schatz
Brian Day	Julien Lozi	Sharon Schleigh
Daniel Devost	Nadine Manset	Greg Schmidt
Jeff Donahue	Rich Matsuda	Kiana Schubert
Angelic Ebberts	Grant Matsushiga	Doug Simons
Scott Fisher	Callie Matulonis	Christopher Simpson
Miriam Fuchs	Tony Matulonis	Breann Sitariski
Tom Geballe		Barbara Small
Jeff Goldstein		Teague Soderman
Alyssa Grace		Robert Sparks
Kathy Guyon		Gordon Squires
Olivier Guyon		Jessica Stasik
John Hamilton		Tomonori Usada
Janice Harvey		John Vierra
Guenther Hasinger		Tom Winegar
Saeko Hayashi		Sherry Yeh



A Guided Tour of Mars

**A talk by Brian Day
NASA Ames Research Center**



**3:30pm Tuesday, March 14th
at the Honokaa HS auditorium**

Free and open to the community

CLASSROOM VISITS - WEDNESDAY, MARCH 15TH

Yvonne Pendleton and Jennifer Baer of NASA SSERVI visited Kapiolani Elementary School. Pendleton obtained her PhD in astrophysics from the University of California at Santa Cruz and is currently the Director of NASA SSERVI. Baer is a graphic designer at NASA SSERVI and regularly works with scientists and engineers to take complex data and turn it into easily digestible media.



Students at Kapiolani Elementary were surprised and excited that NASA had graphic designers like Jennifer Baer! Baer shows students that they can edit pictures with available software.

DISCOVER, NEW FRONTIERS, AND SOLAR SYSTEM EXPLORATION

Wednesday evening, NASA's Brian Mitchell gave a talk at the University of Hawai'i at Hilo about NASA's current and future vision for planetary exploration. Mitchell has more than 25 years at the Marshall Space Flight Center and has worked on various Space Shuttle payload missions including ASTRO, ATLAS, and Spacelab, as well as several experiments for the International Space Station. Mitchell is currently the Education and Public Outreach manager for NASA's Discovery/New Frontiers/Lunar Quest Program Office, where he is tasked with communicating Planetary Missions Program Office science goals and objectives to the public in order to promote Science, Technology, Engineering, and Mathematics (STEM) participation. Mitchell talked about the past and present NASA spacecrafts and the science they were doing at the University of Hawai'i at Hilo.



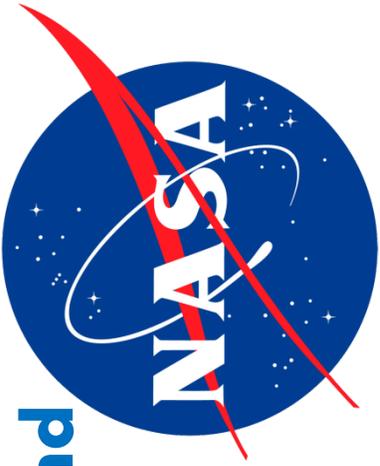
Brian Mitchell (right) presents NASA's past, current, and future space exploration missions.

Discovery, New Frontiers, and Solar System Exploration

March 15, 2017

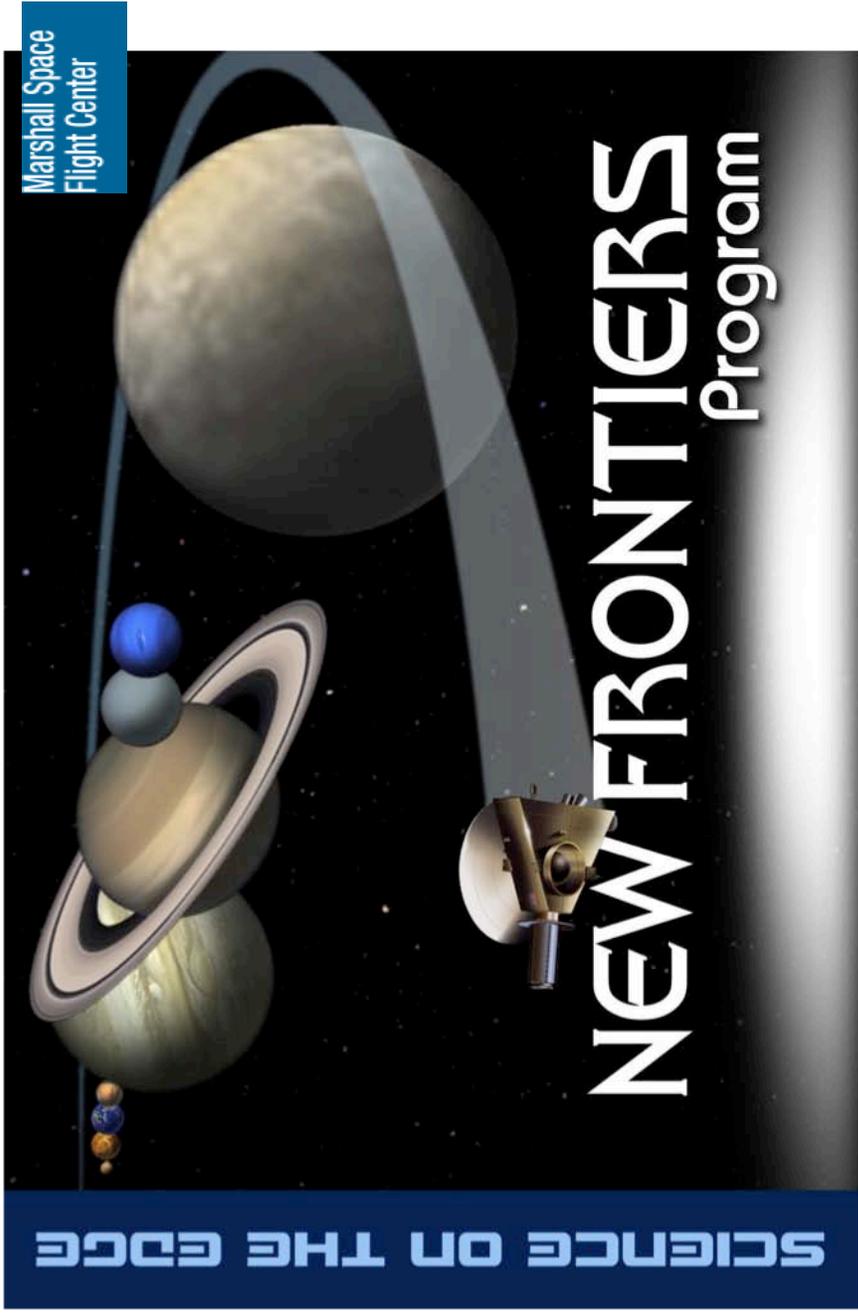
Science & Technology Bldg STB 108

5:30-7:00 pm Talk starts @ 6pm



Join engineer **Brian Mitchell** as he shares NASA's current and future vision for planetary exploration.

Brian is the Education and Public Outreach Manager at the Flight Programs and Partnerships Office, NASA Marshall Space Flight Center, Huntsville Alabama



Marshall Space Flight Center

Mahalo to our Sponsors!

Exploring the Universe, Sharing its Wonders

Dept. of Physics & Astronomy



CLASSROOM VISITS – THURSDAY, MARCH 16TH

We followed Scot Kleinman and Sylvia Kowalski to Keaukaha Elementary School. Kleinman received his PhD from the University of Texas in 1995. Currently, he is the Associate Director of Development at Gemini North, where he helps bring and develop the next generation of instruments to Gemini. Kowalski is the current Public Information and Outreach Intern at Gemini North. She graduated from the University of Washington with degrees in Physics, Astronomy, and Drama. Kleinman taught the kids how to program and they got to simulate programming the movement of the Mars Rover.



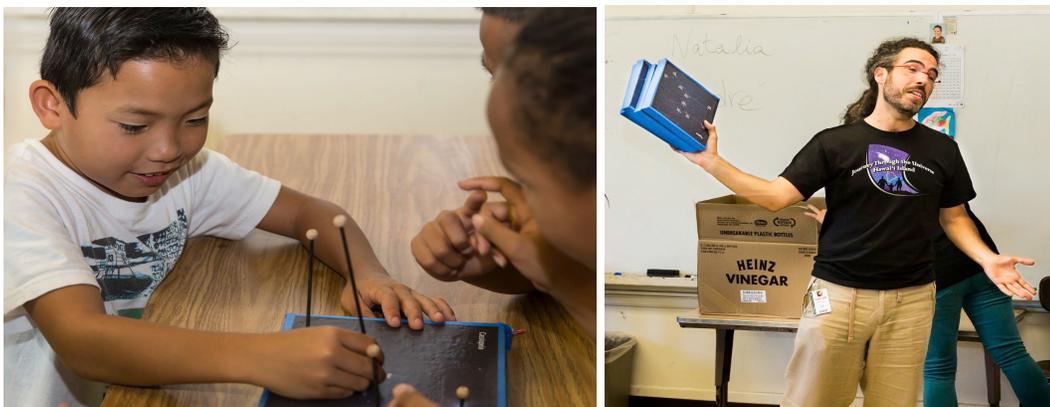
Kleinman explained how Mission Control “talks” to the Mars Rover and tells it what to do. Kowalski (left) played the Mars Rover and the students told Kowalski what to do and where to move.

CAREER PANEL AT WAIĀKEA HIGH SCHOOL

One of the newer additions to the Journey program is the inclusion of career panels made up of local observatory professionals. Wednesday’s panel included: Canada-France-Hawai’i Telescope (CFHT) Director Doug Simons and Les Mizuba, Subaru Telescope’s Kiaina Schubert, W. M. Keck’s Mike Aina, and Gemini’s John Vierra and Alexis Acohido. Thursday’s panel included: W. M. Keck’s Rich Matsuda, Shelly Pelfrey, Leslie Kissner, CFHT’s Grant Matsushiga, Subaru Telescope’s Lucio Ramos, and Gemini’s Jason Kalawe. Panelists shared how they got involved in working for the observatories and the path they took to get there. The panel included a wide range of careers: astronomers, engineers, human resources, web architects, and more. Students learned that having a PhD in astronomy isn’t a requirement to working at an observatory, and in fact, astronomers only make up around 20% of an observatory’s staff.

CLASSROOM VISITS – FRIDAY, MARCH 17TH

On the last day of classroom visits, we followed Gemini astronomer André-Nicolas Chené and administrative specialist Natalia Gonzalez to Kalaniana’ole Elementary and Middle School. Students built 3-D models of well-known constellations and discovered that, although the constellations may look 2-D to us on Earth, each star in the constellation is a certain distance away and are often not right next to each other!



Students construct their own 3D constellations! Chené hands out styrofoam boards with constellations attached.

*It Takes a Community!
Thank You to All of Our Project Partners Involved!*

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KWXX Radio Station/New West Broadcasting
Mauna Kea Astronomy Outreach Committee
Mauna Kea Observatories
Mauna Kea Support Services
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NASA Infrared Telescope Facility
NASA Marshall Space Flight Center
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National Optical Astronomy Observatory
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NAOJ
Pacific Science Center
PISCES
Project Astro/Family Astro
Rotary Club of Hilo Bay
Smithsonian Submillimeter Array
Subaru Telescope
Thirty Meter Telescope
Thirty Meter Telescope - Japan
UH Hilo, College of Pharmacy
UH Hoku Ke'a and 2.2 Meter Telescopes
UH Institute for Astronomy
United Kingdom Infrared Telescope
University of California - Los Angeles
University of Hawai'i at Hilo
University of Hawai'i-Manoa
University of Oregon
Very Long Baseline Array
W.M. Keck Observatory

Astronomy Educator Profiles



Alexis Ann Acohido
Gemini Observatory
Contact: aacohido@gemini.edu

Alexis Ann Acohido graduated of the University of Hawaii at Manoa in 2015, where she obtained her Bachelor's of Science in mathematics. Born and raised on Oahu, she moved to Hawai'i island last year and is currently part of the Public Information and Outreach department at Gemini Observatory in Hilo, Hawai'i. In 2013, she was part of the Akamai Workforce Initiative and interned at the Institute for Astronomy on Maui where she worked on parallax ranging methods for point source objects.



Virginia Aragon-Barnes
Thirty Meter Telescope Project
Contact: varagon@tmt.org

Virginia Aragon-Barnes had a passion for science and a natural curiosity about how and why things worked from a very early age. After a few earthquakes and a one-day lesson on volcanoes in a junior high physical science course she was hooked on Geology. She moved to Hawai'i to pursue and successfully obtain a Bachelor's in Geology at the University of Hawai'i at Hilo and is currently pursuing a Master's degree. Since graduation, her career has taken her to workplaces such as the active lava flows of Kilauea, the beautiful summits of Mauna kea and Mauna loa and the lush native forests cared for and protected by our state. Currently, Virginia is the Environmental, Health & Safety Compliance Engineer for the Thirty Meter Telescope. Virginia continues to pursue her personal commitment of inspiring Hawai'i's keiki to become future scientists through educational outreach.



Nobuo Arimoto

Subaru Observatory

Contact: arimoto@naoj.org

Nobuo Arimoto's intense interest in astronomy began when a neighbor showed him how to use a telescope when he was 11 years old. He went on to become a student of astronomy at Tohoku University, where he received his Ph.D. in astronomy in 1980. He has held positions the Observatoire de Paris-Meudon in France (1984-1988), the University of Durham in the United Kingdom (1988-1991), the Universitaet der Heidelberg in Germany (1991-1993), the Institute of Astronomy at the University of Tokyo in Japan (1993-2001), and NAOJ in Japan (2001-2012). He served as part of Subaru's Time Allocation Committee (2000-2004) and as Chair of the Subaru Advisory Committee (2004-2012). He took over Director of the Subaru Telescope in April of this year (2012). A heavy user of Subaru's telescope (59 nights as a principal investigator in a little over a decade), Dr. Arimoto focuses his scientific research on understanding galaxy evolution and the properties of individual stars within galaxies.



Brad Bailey

SSERVI/NASA

Contact: brad.bailey@nasa.gov

Brad Bailey will always be an Astrobiologist... dedicated to discovering the origin and evolution of life, both here on Earth and beyond! Brad's road to Astrobiology began with his B.S. in Physics with minors in optics, chemistry and Japanese from the Rose-Hulman Institute of Technology. In 1998, Brad was accepted into the NASA Ames Astrobiology Academy where he worked on determining the composition of the interstellar medium. From there, he received his M.S. in Astrophysics from New Mexico Tech where he used the Very Large Array (VLA) (seen in the movie "Contact"!) to look at pulsars. After working for two years at NASA Ames as a hardware engineer for the International Space Station, Brad went back to graduate school at Scripps Institution of Oceanography in San Diego and completed his Ph.D. in marine microbiology and geochemistry. His Ph.D. work included diving into submarine volcanoes in Hawai'i and Samoa via small submersibles to study how life can survive in extreme environments. Brad is now the NASA Solar System Exploration Institute Staff Scientist at NASA Ames Research Center and also directs the NASA Ames Academy, a summer student research and leadership development program. He actively speaks to the public on a wide variety of topics from astrobiology and planetary science to robotics and exploration.



Jennie Berghuis
Subaru Telescope
Contact: Berghuis@naoj.org

Jennie Berghuis is an Observation System Associate for Subaru Telescope. She completed her education at the University of Hawai'i at Hilo, graduating with a B.S. in Astronomy in 2007. She gained experience through locally offered internships including studying and reducing asteroid research data collected at NASA's Infrared Telescope Facility (IRTF), working as a Night Attendant for IRTF, assisting in the fabrication, assembly, and organization of Subaru's HiCIAO instrument project, and building a remotely-controlled telescope dome currently in operation on Mauna Loa. She is also currently helping to build a new telescope container that will be placed on Mauna Loa, and is taking classes towards a Physics degree at UHH. She enjoys adventure, backcountry hiking, skydiving, surfing, paddling, snowboarding, movies, playing music, and most importantly: looking up!



Kelly Blumenthal
UH Institute for Astronomy
Contact: kblumy@ifa.hawaii.edu

Kelly Blumenthal is a second year graduate student at the Institute for Astronomy at UH Manoa, and received her B.A. in astronomy and physics, with a minor in saxophone performance from Boston University in 2014. She is interested cosmology, or the study of how the Universe (and everything in it) formed and evolved. If you manage to find her not ruining her eyesight in front of a computer, Kelly is likely either reading some overly dense sci-fi novel, or trying desperately to teach herself to play the ukulele.



Jerry Brower
Gemini Observatory
Contact: jbrower@gemini.edu

Jerry Brower is the self proclaimed "Information Systems guy to the stars!" (literally the stars) He has over 25 years in the information technology field, including designing data centers, cyber security, and many industry certifications from Microsoft, Cisco, Comp TIA, SANS, and others. As a security consultant, he performed audits/penetration testing on financial institutions and performed independent security research. When not on the computer at work, he can often be found in such cyber places as Tatoonie, Azeroth, or Jita in The Forge.



Joanna Bulger
Subaru Telescope
Contact: jbulger@naoj.org

Joanna Bulger is a Support Astronomer at Subaru Telescope since 2015. Originally from the UK, she obtained her Master's degree in Physics with Astrophysics at the University of Exeter, and there subsequently went on to obtain a PhD in Astronomy in 2014. Joanna first experienced observing at the summit of Maunakea in 2010 and was hooked on both the operations and environment ever since. Throughout her graduate studies Joanna has observed at a wide variety of telescopes across Northern and Southern America such as the Large Binocular Telescope (LBT) in Arizona, and the Atacama Large Millimeter Array (ALMA) in Chile. Now at Subaru Telescope, she assists astronomers with their observations, and also carries out her own research, which focuses on the formation of low-mass stars, brown dwarfs, and exoplanets. Having fallen in love with the Island since her first visit, Joanna enjoys spending her spare time outdoors exploring the beautiful landscape and ocean.



Andre-Nicholas Chene
Gemini Observatory
Contact: achene@gemini.edu

André-Nicholas Chéné is an assistant scientist at the Gemini North Observatory since early 2013. He obtained his Ph.D. in astrophysics from the Université de Montréal in 2007. He then moved across his home country ("A Mari Usque Ad Mare") to become a research associate for the National Research Council Canada at the Herzberg Institute of Astrophysics from 2007 to 2010. From 2010 to 2013, he held a joint post-doctoral position between the Universidad de Concepcion and the Universidad de Valparaiso, in Chile, and joined the science team of the VISTA Variable in Via Lactea survey. His main scientific interests are massive stars and young stellar open clusters. His expertise covers optical and near infrared imaging and spectroscopy. Two things he enjoys a lot since he moved to Hawai'i are long observing runs at Mauna Kea, and his daily bike ride to work up and down Puainako St.



Devin Chu
Univ. of California Los Angeles
Contact: dchu@astro.ucla.edu

Devin Chu was raised in Hilo, Hawaii and graduated from Hilo High School in 2010. He received his Bachelor's degree from Dartmouth College in Physics and Astronomy in 2014 and Masters of Science in Astronomy from UCLA in 2016. He is currently a graduate student at UCLA working with Professor Andrea Ghez. His research involves studying the orbits of stars around the supermassive black hole at the center of the Milky Way. Devin was a frequent participant in Journey Through the Universe while growing up.



Christophe Clergeon

Subaru Telescope

Contact: christophe@naoj.org

Christophe Clergeon has recently graduated with his PhD. Christophe was involved in many rebuilds and upgrades of SCEXAO, and instrument for Subaru Telescope, throughout his PhD. His project focused on the design, build and early implementation of the non-modulated pyramid wavefront sensor for high-order wavefront correction on SCEXAO. Christophe demonstrated the closed-loop operation of the wavefront sensor for the first 10 Zernike modes and 900 Fourier modes in the laboratory. Christophe is also the head of the laser guide star spotters for Subaru. Christophe is based at Subaru Telescope.



Kathy Cooksey

UHH Physics & Astronomy

Contact: kcooksey@hawaii.edu

Kathy Cooksey, an assistant professor in astronomy, received her PhD in 2009 from UC Santa Cruz and was an NSF postdoctoral fellow at MIT until starting at UH Hilo in January 2014; both institutions enabled her to learn about science pedagogy and practice teaching. She researches the large-scale gaseous structure in the universe to understand how various elements cycle in and out of galaxies, over cosmic time. As for hobbies, she enjoys soccer, hiking, and camping (and crocheting and watching anime, on the sedentary side).



Sandra Dawson

TMT International Observatory

Contact: sdawson@tmt.org

Sandra Dawson is Manager, Hawai'i Community Relations, for the Thirty Meter Telescope Project. Dawson has a Bachelor of Arts degree in Political Science and a Master's Degree in International Studies from Claremont Graduate University. For 20 years as an employee of the California Institute of Technology (Caltech) she worked at Caltech's Jet Propulsion Laboratory on some of JPL's largest projects for NASA, including the Galileo, Cassini and Mars missions, and received numerous group and individual awards. With her husband, Dwayne, she moved to Hilo six years ago to work on the Thirty Meter Telescope project and has been engaged in many civic, nonprofit, and educational programs.



Brian Day

SSERVI/NASA

Contact: brian.h.day@nasa.gov

Brian Day is the Lead for Citizen Science and Community Development at the Solar System Exploration Research Virtual Institute (SSERVI). In this role, he coordinates programs with numerous internal and external partnering organizations, focusing on providing opportunities for students and the public to directly participate in NASA science and exploration. He currently acts as SSERVI's project manager for NASA's Lunar Mapping and Modeling Portal (<http://lmmmp.nasa.gov>), a set of tools designed for mission planning, lunar science, and public outreach. From 2010-2014, Brian served as the Education/Public Outreach Lead for NASA's Lunar Atmosphere and Dust Environment Explorer (LADEE) mission to the Moon, which flew through and studied the Moon's tenuous atmosphere. From 2007-2010 he served as the E/PO Lead for NASA's LCROSS lunar impactor mission which discovered deposits of water ice at the Moon's South Pole. He has also participated in producing the Education/Public Outreach sections for numerous NASA mission proposals. Brian has played key roles in various NASA Mars Analog Field Studies, providing technical support in the field for webcasts and robotic rover tests in extreme environments here on Earth. In 2007, he flew on the Aurigid-MAC mission to record fragments of comet Kiess entering Earth's upper atmosphere. Brian is a frequently-requested speaker at local schools and community organizations. As a member of NASA's Speakers Bureau, he is sent by NASA to give talks on a wide range of NASA missions and research topics.



Daniel Devost

**Canada-France-Hawaii
Telescope**

Contact:

devost@cfht.hawaii.edu

Daniel Devost is the Director of Science Operations at the Canada-France-Hawaii Telescope since 2008. He started at CFHT in 2007 as a Canadian Resident Astronomer and was the WIRCam Instrument Scientist. Before Moving to Hawaii, Daniel worked at Cornell University from 2000 to 2007 as an Instrument Scientist for the Infrared Spectrograph. The spectrograph is one of three instruments on board the Spitzer Space Telescope that was launched in August 2003. Daniel did his PhD at the Université Laval in Québec City, Canada in collaboration with the Space Telescope Science Institute in Baltimore where he spend three years. His science interests are the formation of massive stars and the amount of metals in the Universe.



Jeff Donahue
Gemini Observatory
Contact: jdonahue@gemini.edu

Jeff Donahue is Senior Laser Technician at Gemini Observatory. He supports the laser guide star, preparing the laser for each laser run. Jeff and his wife came from Oregon, where he spent 17 years at Hewlett Packard. Jeff also worked in Corvallis, Oregon as an electronic and laser maintenance technician supporting Inkjet Manufacturing. Jeff has a B.S. degree in Industrial Technology from Central Washington University and an A.S. degree in Electronic Engineering Technology from Linn Benton Community College. In addition to his laser activities, Jeff enjoys snorkeling and exploring the Big Island.



Angelic Ebbers
Gemini Observatory
Contact: aebbers@gemini.edu

Angelic Ebbers is a Senior Software Engineer for Gemini Observatory. She is part of the Software Operations group as well as a Telescope Technical Manager. Angelic specializes in motion control systems, EPICS real-time development, and troubleshooting. Angelic earned a B.Sc. from York University in the Space and Communications Sciences stream, with Honors in Computer Science and Physics, plus a minor in Astronomy. Prior to joining Gemini, Angelic worked for The Herzberg Institute of Astrophysics as well as the University of Toronto Southern Observatory in Chile. Outside of work, Angelic can be found training/competing in Dog Agility, scuba diving, or reading a good science fiction book.



Scott Fisher
University of Oregon
Contact: rsf@uoregon.edu

Scott Fisher is a faculty member within the University of Oregon, Department of Physics, where he teaches astronomy courses and serves as the Director of Outreach for the department. Scott previously worked at the National Science Foundation in Washington, DC where he was responsible for selecting and funding astronomy programs across the United States. Before his time in Washington, Scott worked as a staff member of the Gemini Observatory as an instrument scientist and as a member of the Gemini Outreach team. Scott lived in Hilo-town for just over 10 years while he worked at Gemini. He obtained his Ph.D. from the University of Florida in 2001 after working his way through the Florida state school system, including a stint at Lake Sumter Community College. Scott's main area of research is searching for and studying planet-forming disks around young stars. He is also involved with the design, construction, and use of infrared camera systems that are used on some of the biggest telescopes in the world. He has spent approximately 350 nights observing from the summit of Mauna Kea since his first trip to Hawai'i in 1996. In addition to his love of astronomy, Scott is an amateur photographer and a Geocacher.



Miriam Fuchs
Submillimeter Array

Contact:

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Miriam (Mimi) Fuchs is a telescope operator and outreach coordinator for the Smithsonian Astrophysical Observatory's Submillimeter Array on the Big Island of Hawai'i. She received her B.S. in Astrophysics and History at Haverford College in 2013. She went on to work in informal science education, and has helped run public observing programs, astronomy clubs and space camp. Mimi loves to spend her days making astronomy more accessible and engaging for learners of all ages! When she's not on the summit of Mauna Kea, you can find her snorkeling, dancing, and eating lots of Thai food.



Tom Geballe
Gemini Observatory

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Tom Geballe obtained a PhD in physics in 1974 under Prof. Charles Townes at U.C. Berkeley. Following postdoctoral fellowships at Berkeley and Leiden, and a Carnegie Fellowship at Hale Observatories in Pasadena, he became a staff astronomer at the United Kingdom Infrared Telescope in 1981. He was Astronomer-in-charge, Associate Director, and Head of Operations at UKIRT from 1987 until 1998, when he joined Gemini. Among his research interests are the Galactic center, the late stages of stellar evolution, H3+ as a probe of interstellar gas, the composition of interstellar dust, the surfaces, atmospheres, and aurorae of planets and moons, and brown dwarfs.



Jeff Goldstein
National Center for Earth and Space Science Education

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Jeff Goldstein is a nationally recognized science educator and planetary scientist who has dedicated his career to the public understanding of science and the joys of learning. As Center Director for the National Center for Earth and Space Science Education, Jeff oversees the creation and delivery of programs that engage entire communities, train 3,000 teachers annually, and emphasize family learning. He led the inter-organization team that permanently installed the Voyage model Solar System on the National Mall in Washington, D.C., in front of the Smithsonian. The Voyage National Program is permanently installing low-cost replicas in 100 communities world-wide. Jeff also oversees the Student Spacelight Experiments Program (SSEP) that provides real research opportunities for pre-college students on the Space Shuttle and International Space Station. Jeff was the Keynote Speakers for the NSTA National Conference in San Francisco, California, in March 2011. Jeff was at the National Air and Space Museum for 8 years, departing in 1996 as acting Chair of the Lab for Astrophysics. He was on the senior staff at Challenger Center from 1996-2005. In 2005 he created the National Center for Earth and Space Science Education. Visit Jeff's website at <http://blogontheuniverse.org>.



Alyssa Grace
Gemini Observatory, UHH
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Alyssa Grace is the administrative assistant for Journey through the Universe and a University of Hawaii at Hilo senior studying Psychology, Astronomy, and Biology. She also works as a Science and Travel writer for UHH's school newspaper, Ke Kalaheka and teaches yoga at the Student Life Center. During her internship at Gemini Observatory in the Public Information and Outreach department, she developed a science communication program for college students and participated in various outreach events. Alyssa is from Oahu but loves the Big Island. Her favorite activities include photography, hiking, yoga, and karaoke.



Olivier Guyon
Subaru Telescope
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Olivier Guyon is an astronomer at the Subaru Telescope. He started looking at stars from the age of 10, and he is now both an avid amateur astronomer and a professional astronomer. Olivier graduated from University of Paris 6 in 2002 (Ph.D. research topic: wide field interferometry), and now works with other scientists to directly observe exoplanets. Olivier has been developing new techniques for imaging exoplanets (planets around other stars) from telescopes on Earth and also future telescopes in space. With these new techniques, astronomers will soon be able to observe planets like ours and start to find out if there is life elsewhere in the Universe. In 2007, Olivier received a Presidential Early Career for Scientists and Engineers award from President Bush at the White House. Olivier received in 2012 the MacArthur fellowship (nicknamed the "Genius grant") for his innovative work in astronomical optics. In his spare time, he builds telescopes which he then uses to observe from the clear skies of Mauna Kea and Mauna Loa.



John Hamilton
**UHH Physics & Astronomy,
PISCES**
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John Hamilton is currently serving as Education/Public Outreach and Logistics Manager of the Pacific International Space Center for Exploration Systems (PISCES) based at the University of Hawai'i at Hilo. An astronomer by trade, he has been associated with space exploration since 1972 with the Skylab missions, spent most of his career supporting astronomical observations at multiple observatories in Hawai'i on Haleakala and Mauna Kea and also in Chile. He has most recently managed the first two International ISRU analog field tests in Hawai'i in 2008 and 2010 and is currently working on the 2012 deployment. John currently teaches undergraduates in Physics and Astronomy courses at UH Hilo. He also serves as co-founder and chief scientist for a local high-tech R&D company Akeakamai Enterprises LLC.



Janice Harvey
Gemini Observatory
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Janice Harvey is the Community Outreach and Education Programs Leader at Gemini Observatory and serves as the director of the nationally recognized Journey through the Universe Program on the Big Island. Janice is also the National Team Site Leader for the Family Astro/Project Astro program in Hawaii and serves as the StarLab Portable Planetarium instructor and trainer.

In 2010 she was awarded the *Outstanding Individual in Business* award by the Rotary Club of Hilo. She is a member of the Astronomical Society of the Pacific, the International Planetarium Society, and the National Science Teachers Association. Janice has a BS in mathematics and went back for her associate degree in astronomy in 2000 at UHH. She has lived on the Big Island for 46 years and has worked as the Mayor's Executive Assistant, owned and operated Sylvan Learning Centers and three travel agencies in Hawaii. Janice's passion is bringing science and astronomy into the local classrooms.



Guenther Hasinger
UH Institute for Astronomy
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Günther Hasinger is a world leader in the field of X-ray astronomy and in the study of black holes, having received numerous awards for his achievements. Before becoming Director of the IfA in 2011, he was Director of the Max-Planck-Institutes for extraterrestrial Physics and for Plasma Physics, where he also was responsible for space technology and X-ray detector development. Prof. Hasinger gained his doctorate at the University of Munich and holds an honorary professorship at the Technical University Munich. He began his research career in astrophysics, receiving numerous awards for his contributions in this area, including the Leibniz prize in 2005, for his work on cosmic background x-radiation and black holes, and the Cospar award in 2010 for outstanding contributions to space science. He has also been active in explaining cosmology to a wider audience, winning a Science Book of the Year Award in 2008 for his book "Fate of the Universe". His new book "Astronomy's Limitless Journey" has been published by UH Press in 2015. He used to be a rock musician.



Saeko Hayashi
Subaru Telescope
Contact: saeko@naoj.org

Saeko S. Hayashi grew up in Tohoku, a northeastern rural part of Japan, where she spent part of her childhood in Fukushima. After graduating from a local high school, she boldly went on to attend the University of Tokyo as one of the few women undergraduates in STEM majors; she continued there and became the first woman to pursue Ph.D. in astronomy. She conducted her graduate research at the 45-m radio telescope in Nobeyama, Japan. After receiving her doctorate, she worked at the 15-m James Clerk Maxwell Telescope in Hawai'i and then joined the 7.5-m Japan National Large Telescope (JNLT) project, which began at the National Astronomical Observatory of Japan in 1990, and later became known as the Subaru Telescope with 8.2-m diameter. She has performed a variety of roles at Subaru from taking care of telescope optics, managing day crews to currently managing the

Public Information and Outreach Office. She hopes to participate in the publication of research that will lead to major discoveries of Earth-like exoplanets, possibly with water and vegetation. She says, "Subaru Telescope, where people from all over the world come together and work with each other [as ancient Japanese word "Subaru" stands for], is a great place to work. The technical and other challenges at work and the laid back life in this beautiful island is an ideal combination for me".



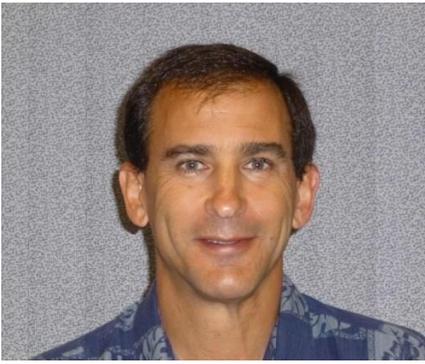
Stephanie W. Henry
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Stephanie W. Henry serves as a Communications Strategist with Arctic Slope Regional Corporation, Inc. in Huntsville, AL. Stephanie's duties include external communications for the Planetary Missions Program at NASA's Marshall Space Flight Center. Stephanie assists in developing communication products and materials for the programs. She visits schools, museums, and community organizations to excite students and teachers about NASA's mission and encourages the students to study science, technology, engineering, and math. Stephanie is a graduate of the University of North Alabama where she received a Bachelor of Arts degree in Spanish/Political Science and a Master of Arts in Community Counseling. Stephanie also attended Belmont University in Nashville, TN where she earned her teacher certification for kindergarten through eighth grade. Before joining ASRC, Stephanie's experience includes work in a variety of educational arenas. Stephanie spent seven years working in Student Affairs at different universities and seven years teaching in the classroom, formal and informal instruction. Stephanie is a native of Tupelo, MS and has lived in the Huntsville, AL area for the past 11 years. She is married and has a 18-year-old stepson. Stephanie enjoys traveling, shopping, tennis, and spending time with her family in her spare time.



Michael Hoenig
Gemini Observatory
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Michael Hoenig is a Science Operations Specialist at Gemini Observatory. He did his undergraduate degree in Astrophysics at the University of Sussex (England) in the last millennium, and then went on to do a Ph.D. at the University of Cambridge, which he completed in 2004. His thesis centered on the construction of a wide field infrared camera called CIRSI, which meant he ended up going on a number of observing trips to Mauna Kea and the Canary Islands. Once all the data from the instrument was properly reduced and calibrated, it was used to search for distant clusters of galaxies - and he is happy to report he actually found some, too. After his Ph.D. he worked in translation and publishing for a few years. But the call of the cosmos was impossible to ignore! Which is why in 2008 he packed his bags and moved to Hilo, and the rest, as they say, is history... When he's not up at the telescope observing the night sky, or reviewing the images back down in Hilo, he likes to paddle canoes, dance Argentine tango or read a good book.



Stewart Hunter

Mauna Kea Support Services

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Stewart Hunter has been the General Manager at Mauna Kea Observatories Services (MKSS) since 2010. MKSS operates and maintains the mid-level astronomy facilities at Hale Pohaku on Mauna Kea. This includes the astronomy dormitories, the dining facility and the Visitor Information Station as well as maintaining the summit roads. Prior to working at MKSS, Stewart spent 24 years in the Navy, serving on submarines as an electronics technician, then after receiving a commission, a logistics officer until retiring in 2004 as a Lieutenant Commander. He received a BS in Earth Science from Oregon State University in 1991 and a MS in Systems Management from the Naval Postgraduate School in 1999. Stewart and his wife Lory have been Hilo residents since 2000, where they also own and operate a local Bed and Breakfast.



Masa Imanishi

Subaru Telescope

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Masatoshi Imanishi works at Subaru Telescope. He studies merging galaxies and supermassive blackholes in the universe.



Russell Kackley

Subaru Telescope

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Russell Kackley holds a Bachelor of Science in Mechanical Engineering from Wayne State University and a Master of Science in Mechanical Engineering from Stanford University. He worked for 16 years on spacecraft design and analysis at Lockheed-Martin before moving to Hawai'i. Here in Hilo, he worked for 11 years at the Joint Astronomy Centre and was responsible for the Telescope Control System software. Since April 2011, he has been working at the Subaru Telescope in the Observation Control Software group. He also mentors the Waiakea Intermediate and Honoka'a High School robotics teams.



Carolyn Kaichi
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Carolyn Kaichi is the Education/ Outreach Specialist for IfA-Hilo. She has always been fascinated by astronomy, and with a background in news media, it was a perfect fit for her to pursue a career in communicating her love of astronomy and space science. Carolyn (Ms. Kaichi?) was born and educated in Hawai'i and enjoys working with students and the public. "It is incredibly exciting to see peoples' eyes light up with wonder when you share the excitement of the Universe with them", she says. Prior positions include: Imaginarium Manager for the Center for Aerospace Studies at Windward Community College, Hawaii State Science Fair Director and Planetarium Manager for Bishop Museum. Carolyn enjoys astronomical observing, travel and has practiced yoga for many years.



Yuko Kakazu
Subaru Telescope
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Yuko Kakazu joined the Subaru Telescope as an outreach specialist in 2013. A native Okinawan, she began her journey into astronomy when she attended the NASA U.S. Space Camp program at age 13. Yuko graduated from Tohoku University in Japan and then obtained her Ph.D. at the Institute for Astronomy, University of Hawai'i at Manoa. Since then she has worked as a researcher in Paris, France (Institut d'Astrophysique de Paris), California (California Institute of Technology), and Chicago (University of Chicago). Her research focuses on metal poor galaxies and distant galaxies with the aim of improving our understanding of galaxy formation and chemical enrichment history of the Universe. At Subaru, Yuko arranges and conducts public outreach events and lectures for the local and the international communities, including Japanese audiences. She is hoping to help fill the gap between scientists and the public and wants to encourage young people, especially women and minorities, to engage in science and technology. When Yuko is not talking about astronomy or playing with her baby galaxies, she enjoys dancing Argentine tango, cooking (as well as eating), listening to piano jazz and classical music, and taking yoga or Zumba class at the gym. She is a certified Zumba fitness instructor.



Markus Kissler-Patig
Gemini Observatory
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Markus Kissler-Patig grew up in Switzerland and France before moving to Germany for his university studies. He obtained his PhD in astrophysics in 1997 from the University of Bonn and held post-doctoral positions at the University of California Santa Cruz and the European Southern Observatory (ESO) in Germany. He joined the latter as faculty in 2000 as instrument scientist for a series of instruments for ESO's Very Large Telescope. In 2008, he took up the position of project scientist for the 40m European Extremely Large Telescope. In August 2012, Markus Kissler-Patig joined the Gemini Observatory as director. He remains an adjunct professor at the Ludwig-Maximilians University in Munich where he has been teaching astrophysics and astrobiology since 2005.



Scot Kleinman

Gemini Observatory

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Scot (there was a shortage of "t"s when he was born) **Kleinman** is the Associate Director of Development at Gemini North. He helps developing and bringing to fruition the next generation of Gemini instruments. He joined Gemini from the Subaru Telescope where he served as the Instrument Division Chief. Prior, he served as the Site Science Manager/Deputy Head of Survey Operations for the Sloan Digital Sky Survey. He has been the Associate Director of the Whole Earth Telescope and still sits on its board. Scot received his Ph.D. from the University of Texas in 1995. He studies various aspects of white dwarf stars, the longest lived (and final) stage of most stars in the Universe. Scot also works with data from large astronomical surveys which are ushering in a new era of observational astronomy. When not working (when is that?), Scot likes surfing, live music, and maintaining/modifying his car.



Shintaro Koshida

Subaru Telescope

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Shintaro Koshida is a support astronomer at Subaru telescope since September 2014 and working on supports for observations using a wide field-of-view camera for taking images in visible light, "Hyper Suprime Cam (HSC)". He is originally from Japan and have been interested in looking up night skies and watching the celestial objects since his childhood, which led to his Master's degree and PhD in astronomy at the University of Tokyo. Meanwhile studying about structures around super massive black holes at centers of galaxies, he has been interested in actual operations of telescopes and instruments for astronomy. He has worked for the telescopes at Maui (MAGNUM telescope), Chile (miniTAO telescope at Atacama Desert, Santa Martina observatory of Pontificia Universidad de Catolica de Chile), and the Big Island (Subaru). He is enjoying very much not only a great quality of HSC data, but also great people, natures and cultures in the islands of Hawaii.



Sylvia Kowalski

Gemini Observatory

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Sylvia Kowalski is the current Public Information and Outreach Intern for Gemini Observatory. She graduated from the University of Washington with degrees in Physics, Astronomy and Drama and spent her college career working at science museums, observatories and presenting planetariums shows and public lectures with a dramatic twist! When she is not stargazing, Sylvia can be found eating, singing, playing her trumpet or doing Zumba. Happy Journey!



Mary Beth Laychak
Canada-France-Hawaii
Telescope

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Mary Beth Laychak is the outreach program manager at the Canada-France-Hawaii Telescope, her second time working at CFHT. Previously, Mary Beth was one of CFHT's service observers and outreach coordinator before moving to Oahu. On Oahu, she worked as the manager at the Imaginarium planetarium and astronomy lecturer at Windward Community College. Mary Beth has a BA in astronomy and astrophysics from Penn State University as well as a MA in Education from San Diego State.



Chien-Hsiu Lee
Subaru Telescope

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Chien-Hsiu Lee is a Support Astronomer at Subaru Telescope. He obtained a BS in Physics from National Taiwan University, a MSc in Astronomy from National Central University, and a PhD in Astronomy from Ludwig Maximilians University of Munich in 2011. Before joining Subaru Telescope, he was a postdoc research fellow at National Central University in Taiwan (2011-2013) and at University Observatory of Munich in Germany (2013-2015). His research focuses on variable stars and transients in the Milky Way and in our neighboring galaxy M31.



Julien Lozi
Subaru Telescope

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Julien Lozi is senior optical scientist at Subaru Telescope, National Astronomical Observatory of Japan. Born in France in 1985, he was introduced to astronomy at the age of 10 and has been avidly pursuing this subject ever since. A 6-month internship at Subaru Telescope in 2008 first introduced him to Hawai'i, before he went back to France to study for his PhD in instrumentation for Astronomy. After earning his doctorate from Université Paris-Sud XI in 2012, Lozi worked in Silicon Valley for two years at the NASA Ames Research Center, to work on space telescopes that can look at extrasolar environments. In 2014, he returned to Hilo to accept his "dream job" at Subaru Telescope, where he is currently working on a first generation high contrast imaging instrument dedicated to the direct observation and characterization of exoplanets.



Nadine Manset
**Canada-France-Hawaii
Telescope**
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Nadine Manset has been a resident astronomer at CFHT since 1999, right after finishing her PhD thesis at Universite de Montreal. Over the years, she has helped astronomers observe in classical mode at CFHT, with spectrographs and imagers. Now in charge of the Queued Service Observing mode, she prepares observations for CFHT's spectropolarimeter and oversees the nightly observations taken with the various instruments. In addition to chairing the Maunakea Astronomy Outreach Committee, Nadine participates to public outreach events a few times every year.



Callie Matulonis
James Clerk Maxwell Telescope
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Callie Matulonis is currently a Telescope System Specialist at the James Clerk Maxwell Telescope. Callie graduated from the University of Hawai'i at Manoa in the Spring of 2012 with a Master's degree in Educational Technology. Callie has worked for several Mauna Kea observatories over the past ten years fulfilling a variety of positions including public outreach, laser operations, and telescope operations.



Tony Matulonis
**NASA Infrared Telescope
Facility**
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Tony Matulonis works at NASA Infrared Telescope Facility (IRTF). He earned his Bachelor of Science in Astronomy from the University of Hawai'i at Hilo in 2002. After working as an Interpretive Guide at the Ellison Onizuka Center for International Astronomy Visitor Information Station, Telescope Operator at the UH 2.2-meter telescope, Science Operations Specialist at Gemini Observatory, he joined IRTF in 2013.



Peter Michaud

Gemini Observatory

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Peter D. Michaud, Gemini's Public Information and Outreach Manager, has pursued a career that has provided a broad set of experiences in education, media relations and photography. These have ranged from the initiation and management of many informal science education programs to the authoring of a monthly newspaper column on astronomy. Prior to moving to Honolulu in 1989 to manage the Bishop Museum Planetarium, Peter obtained his Bachelor's Degree in Atmospheric Physics and certification in Physical Science Education in 1985. This led to his selection for the highly competitive annual planetarium education internship at the Strasenburg Planetarium in Rochester N.Y. in 1985 - 86. During almost a decade at the Bishop Museum Planetarium, Peter worked closely with local educators as well as the Mauna Kea astronomical community and initiated many new projects that included a NASA-funded project to produce a nationally distributed planetarium program about Mauna Kea. In June 1998, Peter accepted his current position at the Gemini Observatory in Hilo. Since arriving here, Peter has been involved in a variety of projects that have included the management of multiple outreach, education and media relations initiatives. An example of the innovative products produced by his office is the Gemini Observatory Virtual Tour CD-ROM/Kiosk which is currently being translated into multiple languages and has been installed in a variety of public facilities around the world.



Joseph Minafra

NASA Ames Research Center

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At the NASA Ames Research Center, **Joseph Minafra** serves as Lead of Technical Systems and Collaborative Technology Specialist for the NASA Solar System Exploration Research Virtual Institute (SSERVI). Joe has an extremely diverse background that ranges from Meteoritic studies, biology, project management, software development including web design, collaborative technology development to Scientific Illustration and graphic design, even a few years as a professional Chef. With his varied background, Joe has been responsible for a broad set of technical tasks for the NASA Ames Center Director as well as the Space and BioSciences Divisions, Astro and Synthetic Biology workshops just to name a few. Currently, his work is to oversee technology innovation and Robotics education initiatives in order to enable collaboration and communication between competitively selected science and research teams across not only the United States but internationally as well. Joe has a long history of integrating government work with commercial enterprises and bringing that message to the public through the education and public outreach sectors. He is excited to share his NASA experiences with the Journey through the Universe communities! Ad Astra!



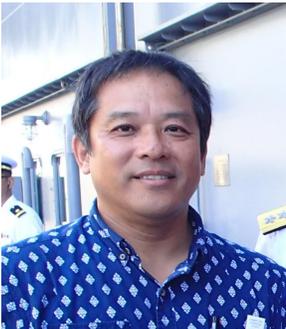
Brian Mitchell

NASA

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Brian Mitchell is the Education and Public Outreach manager for NASA's Discovery/New Frontiers/Lunar Quest Program Office. He has more than 25 years at the Marshall Space Flight Center located in Huntsville, Alabama and has worked on various Space Shuttle payload missions including ASTRO, ATLAS, and Spacelab, as well as several experiments for the International Space Station. He has been the Program Office Education and Outreach lead during the LRO, LCROSS, LADEE, JUNO, GRAIL, and IML missions to our Moon, Jupiter and Mars. Future missions in his Office include the asteroid sample return mission OSIRIS-REx, INSIGHT seismic mission to Mars, and the New Horizon spacecraft nearing Pluto now. Brian is tasked with communicating Planetary Missions Program Office (Discovery, New Frontiers, and Solar System Exploration programs) science goals and objectives to the public in order to promote STEM participation and inspire the general public by using new and existing opportunities. He spends much of his time speaking in classrooms and public venues, as well as designing innovative interactive exhibits that travel the country. When not talking about space, Brian keeps his 1965 Ford tractor alive, competes in shooting events, and occasionally gets to swing a golf club with his two teenagers.



Junichi Noumaru

Subaru Telescope

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Junichi Noumaru is the Associate Professor, Subaru Telescope, National Astronomical Observatory of Japan. He was born in Japan, graduated from Kyoto University, Japan and earned Ph.D in Astronomy. Junichi studied optical property of young stellar object such as emission nebulae and Herbig-Haro objects. He also joined instrumentation such as prototyping fiber-fed multi-object spectrograph and control system of the telescope. At National Astronomical Observatory of Japan in Tokyo, he joined the team to design control system and instrument interface of Subaru Telescope. He moved to Hilo in 1996 for Subaru Telescope Project and oversaw progress of construction of Subaru Telescope. After the first light of the telescope, he was in charge of operator's group and Instrument Division. Currently he is the division chief of Computer and Data Management Division and the Safety Officer of Subaru Telescope.



Emily Peavy

Emily Peavy is a recent graduate of UH Hilo's Astronomy program and a full time Planetarium Support Facilitator and Technician at 'Imiloa Astronomy center; where she worked as a student employee since January 2012. Emily also enjoys volunteering at the Maunakea Visitor Information center whenever she gets some free time. Emily plans on going into the outreach and education side of astronomy but is still intrigued and excited by much of the research that is occurring in the field.

Imiloa Astronomy Center

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Yvonne Pendleton

**Solar System Exploration
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Dr. Yvonne Pendleton is the Director of the Solar System Exploration Research Virtual Institute. Pendleton joined NASA Ames in July 1979 having earned her Bachelor of Aerospace Engineering degree from the Georgia Institute of Technology. Under NASA sponsored programs, she obtained a Master's Degree in Aeronautics and Astronautics from Stanford University (1981) and a Ph.D. in Astrophysics from the University of California at Santa Cruz (1987). As a research astrophysicist in the Space Science and Astrobiology Division from 1979-2005, Yvonne published 80 scientific papers and contributed significantly to our understanding of the origin and evolution of organic material in the universe. The goal of her ongoing research program is to understand the composition of the organic material found in the interstellar medium and to investigate the incorporation of the organic material from space into the early Earth environment. She is an elected fellow of the California Academy of Science and Asteroid 7165 Pendleton was named in honor of her research contributions. Appointed Chief of the Space Science and Astrobiology Division at NASA Ames Research Center in 2005, she led a scientific and technical staff of 160 people. When asked to serve as the senior advisor for research and analysis programs for the Science Mission Directorate at NASA Headquarters, she moved to Washington, DC from 2007-8. There she provided independent assessments and guidance to the Associate Administrator of the Science Mission Directorate concerning NASA's science research programs and increased scientific productivity across the nation as the time required to evaluate and award research grants was significantly reduced. During that time she was also responsible for the Education and Public Outreach of NASA's Science Mission Directorate and led a team that managed the nearly 50 million dollar investment made in EPO activities, including those from NASA's science missions. Returning to NASA Ames in July of 2008, Yvonne became the deputy associate director where she provided guidance and direction to several collaborative scientific and technical efforts and served as an academic Dean of Students for the several hundred students on the Ames campus each summer. Yvonne has been very active in education and public outreach throughout her career. She served as the Director for Research for the NASA Ames Astrobiology Academy in 2004, developed the Voyages Through Time education curricula with the SETI Institute, served as an astronomer to local classrooms for over a decade with the Astronomical Society of the Pacific, and taught astronomy at the college level as an adjunct lecturer at Santa Clara University. To read more about Yvonne, please read "A Lifetime Spent Studying

the Stars, Searching for Answers”, a biography of Dr. Yvonne Pendleton on the official NASA-Ames Research Center website.



Andreea Petric
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Andreea Petric is the IfA, UH resident astronomer at CFHT. She has received her PhD from Columbia University with a thesis on X-ray scattering halos and was a postdoctoral fellow at Caltech working on IR and millimeter observations of interacting galaxies and galaxies hosting Active Galactic Nuclei (AGN). Her current research focuses on optical and near-IR observations of the impact of AGN on the interstellar medium of their host galaxies and the fate of molecular gas in merging galaxies. She has been a mentor for the Maunakea scholars program since its inception. A. Petric taught Galaxies and Cosomology, Quantum Mechanics at UH Hilo, and will teach Basic Astronomy at the North Hawai'i Education and Research Center in Waimea in addition to making regular class room visits both on the Big Island and Oahu.



Tae-Soo Pyo
Subaru Telescope
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Tae-Soo Pyo is an Assistant Professor at the Subaru Telescope. His research focuses on star and planet formation, especially outflows and jets from young stellar objects. He has been working at Subaru Telescope since 2000 December. He was a Support Astronomer engaging in management and night support of InfraRed Camera and Spectrograph (IRCS) and Adaptive optics system (AO188) and other instruments. He got Bachelor and Master degrees in Astronomy from Seoul National University at Seoul in South Korea in 1992 and a PhD in Astronomy from the University of Tokyo at Tokyo in Japan in 2003. Tae-Soo loves Ukulele and various music including heavy metal and reading books.



Bo Reipurth
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Bo Reipurth graduated from the University of Copenhagen in Denmark. After spending some years as a postdoc there, he took up a position as staff astronomer with the European Southern Observatory in Chile for 11 years. Subsequently, he worked at CASA in Colorado as a Research Professor, and later joined the Institute for Astronomy at the University of Hawaii in Manoa in order to pursue studies of star and planet formation. "One of my first astronomical experiences as a small kid was to see the craters of the Moon and the rings of Saturn through the telescope at the public observatory on top of the Round Tower in Copenhagen. After that I was never in doubt that I had to become an astronomer. Conditions in Copenhagen were already in those days not ideal for looking at the night sky, but instead I spent innumerable hours with my small telescope drawing sunspots as they crossed the Sun. I took out a subscription to Sky and Telescope, which I then painstakingly read through with the help of a dictionary. One day I read an article about small mysterious blobs called Herbig-Haro objects which might be signposts of stars

in the making. I was completely captivated by the possibility that we might actually be able to see stars in the process of being born, and I have spent most of my professional career trying to learn about how stars are formed."



Marc Roberts
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Marc Roberts is the Physics Lab Coordinator and Lecturer at the University of Hawaii, Hilo (UHH). He has a B.Sc. from Trent University, Canada and a M.Ed. from The College of New Jersey. Marc has taught in the USA, Canada, Japan, Korea, and Vietnam. He has taught at many levels from Kindergarten through College. He loves to tinker with computers and electronics and is currently the faculty lead for the UHH NASA RMC Robotics team. He is an avid cyclist and has traveled extensively by bicycle in the above mentioned countries, as well as a one month tour of France. He can speak multiple languages as he put effort in learning the language of each of the foreign countries he has lived in.



Rodrigo Romo
**Pacific International Space
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(PISCES)**
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Rodrigo Romo is the Project Manager for the Pacific International Space Center for Exploration Systems (PISCES), and is primarily in charge of the Robotic Village – an initiative to test in-situ resource utilization (ISRU) and robotics at planetary analogue testing sites. He is currently leading and supervising the development of PISCES' Alpha Argo planetary exploration rover, as well research and integration of future components for the Robotic Village. Romo began his career near Tucson, Arizona at Biosphere II - the largest fully enclosed facility dedicated to researching climate change, ecosystem interactions, and space colonization during its time. From 1992 through 1997, he held several key positions overseeing instrumentation and air monitoring systems, as well as working in research and engineering departments. Romo held his last position at Biosphere as the Plant Manager for a 6 megawatt cogeneration power plant on site. From 1997 through 2014, Romo served as the Vice President of Engineering for the Zeta Corporation, researching and developing new applications for the company's technologies. He is originally from Guadalajara, Mexico and earned his undergraduate degree in Chemical Engineering from ITESO University in 1992. He later obtained his Master's degree in Business Administration from the University of Arizona.



Dennis Schatz
Pacific Science Center

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Dennis Schatz is Senior Advisor at Pacific Science Center in Seattle, Washington. A research solar astronomer prior to his career in science education, he worked at the Lawrence Hall of Science at the University of California, Berkeley, prior to moving to Seattle in 1977. At Pacific Science Center he has held a broad range of positions from Director of the Planetarium in his early years to VP for Exhibits and VP for Education to Senior VP in more recent years. In the last 4 ½ years, he was a Visiting Scholar at the University of Queensland, Brisbane, Australia, followed by four years as a Program Director at the National Science Foundation (NSF). He has provided leadership to several of Pacific Science Center's major initiatives, including Washington State LASER and Portal to the Public. He is active in the Association of Science-Technology Centers (ASTC), being a past member of its Program Committee, Professional Development Committee and past chair of its Education Committee, and its Leading Edge Awards Selection Committee. He is also active in the National Science Teachers Association, having been Program or General Chair for three of NSTA's Conventions. He has dedicated many years to identifying effective ways to teach astronomy concepts, especially through his involvement with the Astronomical Society of the Pacific (ASP), the largest international society dedicated to astronomy education in and out of school. He is a past board member and a past president of the ASP. He has received numerous honors, including the 1996 Distinguished Informal Science Educator Award from the National Science Teachers Association (NSTA). He received NSTA's 2005 lifetime achievement award (Distinguished Service to Science Education). In 2006 ASTC made him an ASTC Fellow for his lifetime achievement in service to the field and furthering the public's understanding of science. He is only one of 24 ASTC Fellows awarded in the history of ASTC and the first non-CEO or public official to receive the award. In March, 2009 he received the Faraday Science Communicator Award, presented annually by the National Science Teachers Association (NSTA). This award recognizes and honors an individual or organization that has inspired the public's interest in and appreciation of science. He joins an elite group of highly prestigious honorees, including the PBS series NOVA and NPR Science Correspondent Ira Flatow. Most recently, he received the 2014 Klumpke-Roberts Award from the Astronomical Society of the Pacific for outstanding contributions to the public understanding and appreciation of astronomy. Past awardees include stellar astronomy communicators, such as Carl Sagan, Isaac Asimov, Timothy Ferris and Dava Sobel. He is the author of 23 science books for children, including Uncover A T.rex, the Fossil Detective series of four books and the popular Totally series of six books (Totally Dinosaurs in 2000 to Totally Sea Creatures in 2003). His most recent book is The Amazing Squishy T.rex. His books have sold

almost 2 million copies worldwide and have been translated into 23 languages. His Uncover A T.rex book was a 2003 Parents Choice Award Winner, and his Fossil Detective Woolly Mammoth received a 2006 iParenting Media award. He is also co-author/editor of several curriculum resources for teachers, including Astro-Adventures, Universe At Your Fingertips and More Universe At Your Fingertips.



Sharon Schleigh
East Carolina University
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Sharon Price Schleigh, originally from Hawaii, has been an educator for over 20 years, teaching all ages, from preschool to university. She received the Distinguished Award for Innovative College Science Teaching from the Hoosier Science Teacher Association in 2013. She earned her BS from the University of Hawaii, Hilo, has earned two masters degrees, and has earned a doctoral degree from Arizona State University. Her research interests include understanding how people think about and engage in science. This has led to research projects that have examined argumentation in a science classroom; authentic research in astronomy and problem-based curriculum designs; how students, teachers and scientists think about the nature of science; and how curriculum impacts content knowledge and attitudes about science. She has been involved in projects such as the NASA Deep Impact Mission (Institute for Astronomy, Hawaii); Toward Other Planetary Systems (IFA/NSF); Ali'i Astrobiology Summer Workshops; and Teacher Leaders in Research-Based Science Education (NOAO, Kitt Peak). She is sought out across the country to lead teacher and k-12 science workshops and presentations, focusing on argumentation and on astronomy content (building telescopes and image analysis). She has been on the education board for the Las Cumbres Observatories of Global Telescopes network (LCOGT), the Faulkes Telescopes, and GoScience. She has served as the director of the Research Engaged Science Teacher Education Program to improve STEM (RESTEP to STEM), funded by NASA and the NC Space Grant to promote astronomy/science education with pre-service teachers. She has also served as a Regional Science & Engineering Fair Director, a Regional Science Olympiad Director, a trainer and presenter of the ECU Portable Planetarium program, an AAPT State Representative (HI), as the Mentor Coordinator for the Near East School Alliance Virtual Science Fair, and is the Chair of the Advisory Board for the NSTA Journal of College Science Teaching. Dr. Schleigh is the co-author of the Scientific Argumentation in the Biology Classroom, and the soon to be released Scientific Argumentation in the Earth & Space Science Classroom.



Jasmin Silva
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Jasmin Silva is a senior majoring in Physics and Astronomy at UH Hilo. She had a NASA Hawaii Space Grant Consortium fellow in the Spring 2015 and Fall 2015 semesters. Through her fellowship she studied the evolution of the gaseous regions surrounding galaxies with Dr. Kathy Cooksey. She is interested in science education and particle astrophysics, and hopes to pursue those interests in the future. In her free time, Jasmin enjoys reading, hiking and trying to learn German.



Doug Simons
Canada-France-Hawaii
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Doug Simons received his B.S. in astronomy at the California Institute of Technology in 1985, and a Ph.D. in astronomy at the University of Hawai'i in 1990, before working as a staff astronomer at the Canada-France-Hawaii Telescope (CFHT) for 4 years. Doug joined Gemini in May of 1994 as the Systems Scientist, then managed Gemini's instrument development program for 5 years before becoming Gemini's Director from 2006-2011. Doug returned to CFHT in 2012 where he now serves as Executive Director. Principal areas of interest include infrared instrumentation and studies of the Galactic center, low mass stars, and star formation regions.



Christopher Simpson
Gemini Observatory
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Chris Simpson became fascinated by astronomy at the age of nine after watching Carl Sagan's TV series "Cosmos" and that fascination has stayed with him ever since. After obtaining his doctorate in astrophysics from the University of Oxford in 1994, he pursued a research career that saw him head west across the USA, via Space Telescope Science Institute and the Jet Propulsion Laboratory, to become the first support astronomer at Subaru Telescope in 1998. In 2003 he returned to the UK to continue his research on galaxy evolution from large surveys, focusing on the role of supermassive black holes at the centers of galaxies and what we can learn from deep surveys at radio wavelengths. After growing disenchanted with the English weather, he returned to Hilo in 2016 as a Data Process Developer at Gemini.



Breann Sitarski is a graduate student researcher in the Galactic Center Group at UCLA. She got her Bachelor's degree in Astrophysics from UCLA, and continued there for graduate school, where she is currently working on her Ph.D. in Astronomy. Breann studies dusty objects near the supermassive black hole at the center of our Galaxy to try to understand where they come from, what they are, and how they survive in such a hostile environment. She also studies the adaptive optics system on the Keck II telescope to try to correct for aberrations that the NIRC2

Breann Sitarski

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instrument itself is making on astronomical data. She was the lead coordinator for Astronomy Live!--the award-winning astronomy outreach group at UCLA--for four years. Breann also likes studying history, traveling, playing various sports, and reading!



Barbara Small

Mauna Kea Visitor Information Station

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Teague Soderman

SSERVI/NASA

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Teague Soderman is a science writer with a background in creative writing and graphic design. He received his MA in English and MFA in Creative Writing from San Francisco State University and has been writing for the scientific community for over thirteen years. Prior to joining the Solar System Exploration Research Virtual Institute, he worked for the American Institutes for Research and for the California Department of Education. He has taught at San Francisco State University, at De Anza College, and at the High School level. Teague continues to explore creative expression via image and text; his work has appeared in several literary magazines, poetic anthologies, and small-press chapbooks.



Robert Sparks

NOAO

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Rob Sparks earned his B.A. in Physics from Grinnell College and M.S. from Michigan State University. He taught high school physics, math and astronomy for 11 years at schools on St. Croix, Florida and Wisconsin. He spent the 2001-2002 academic year at Fermilab working on the Sloan Digital Sky Survey as part of the Fermilab Teacher Fellowship Program. He spent 13 years as a NASA Astrophysics Educator Ambassador for the Swift Satellite and spent the summer of 2003 at the National Radio Astronomy Observatory in Green Bank as part of the Research Experience for Teachers program. He joined the Education and Public Outreach Group at the National Optical Astronomy Observatory in 2005 where he has worked on a variety of educational programs and is currently the Tucson Project Astro Site Director. He is also part of the resident improv troupe at Unscrewed Theater where he also teaches improv classes and is a member of the creative team.

Rob performs with Musical Mayhem Cabaret and is an avid distance runner.



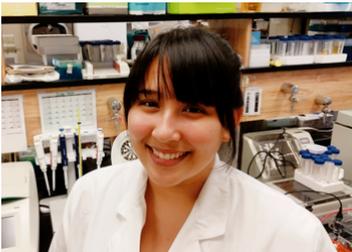
Jessica Stasik
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Jessica Stasik is currently working as an intern at the Institute for Astronomy. She will be working in Hilo for a year, before moving back to the UK to finish her Degree in Astrophysics. This year she is looking at asteroseismic data and working on various projects. In England, she studies at the University of Hertfordshire just north of London and works at the university observatory, Bayfordbury giving planetarium shows to curious members of the public as well as working with the telescopes. Her hobbies include music, which she studied before moving to astrophysics, and photography.



Gordon Squires
Thirty Meter Telescope Project
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Gordon K. Squires is an astronomer at the California Institute of Technology, working with the Thirty Meter Telescopes as well as NASA's Spitzer Space Telescope, the Herschel Space Observatory, the Galaxy Evolution Explorer and other space telescopes with Caltech involvement. His research explores the old, cold and distant universe, understanding how galaxies formed billions of years ago, and the nature of the dark matter and dark energy that fills space.



Niki Thomas
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Niki Thomas is an undergraduate student at the University of Hawaii at Hilo majoring in Astronomy and Biology. She has interned at the Pacific International Space Center for Exploration Systems and currently does research under the Hawaii Space Grant Consortium related to looking at Hawaii as an analog to early and present day Mars. She is also currently working on a NASA funded project called B.A.S.A.L.T. and is part of a UH Hilo team aiming to choose the first human landing site on Mars. In her spare time Niki likes to do challenging calculus problems, play with her pet chicken, watch movies, and eat delicious food.



Tomonori Usuda
National Astronomical
Observatory of Japan

Tomo Usuda earned his PhD in Astronomy at the University of Tokyo in 1997. He is an Optical-Infrared astronomer at NAOJ (National Astronomical Observatory of Japan) currently leading TMT (Thirty Meter Telescope) project as the director of TMT-Japan project. Previously, he was the associate director of Subaru Telescope from 2006 to 2013. His research interests are telescope & science instruments and spectroscopic studies of interstellar medium and star/planet formations.

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John Vierra
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John Vierra was born and raised in Hilo and graduated from Hilo High School. He joined the United States Airforce after graduation and spent the next 10 years in the US Airforce as a firefighter, earning a degree in Fire Science. He left the Airforce in 1992 to move back home and be close to his family. Upon returning to Hilo he was hired as a firefighter at Pohakuloa Federal Fire Department. He spent 22 years with the Federal Fire Department retiring as an Assistant Fire Chief. During his time at the Fire Department he also worked as a Flight Medic/Rescue Specialist with Priority 1 Air Rescue simultaneously teaching Emergency Medical Responder classes around the island. He has been a CPR instructor since 1989. Since 2008 he has worked with Gemini as a Safety Trainer. In November 2014 he starting working full-time as Gemini's Safety Manager and ensures the Safety of all Gemini employees at the telescope and base facilities in Hawaii and Chile.



Tom Winegar
Subaru Observatory
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Tom Winegar works as the archive administrator for the pictures of the Subaru Telescope in Hilo, Hawaii. After graduating from UC Berkeley in 1982, Tom has worked as a database programmer and administrator for 30 years - the last 17 at the Subaru developing web-based query and archive software used by astronomers to retrieve observation data from an international-mirrored 100TB archive. In his spare time, he submerges himself in the ocean and mows.



Sherry Yeh
Keck Observatory
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Sherry Yeh joined Subaru Telescope in 2013 as a NAOJ-Subaru Research Fellow. She knew she wanted to become a scientist at a young age, and she made up her mind to become an astronomer after attending summer schools at the Ken-Ting Observatory and Academia Sinica Institute of Astronomy and Astrophysics in Taiwan. Sherry received her PhD at the University of Toronto in Canada; using near- and mid-infrared instruments on telescopes around the world, her research focuses on the interplay between massive star clusters and their interstellar medium in nearby galaxies. When not exploring the Universe, Sherry enjoys knitting, long-distance cycling, and wandering in the volcano park.
