



# PIO Report

Hideaki Fujiwara

Public Information Officer/Scientist

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## Content

- Mission & Members of PIO Office
- Public Information: Press Release, Filming, Social Media
- Public Outreach: Engagement with Communities
- Facility Tour



# Mission Statement

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- “Public Information and Outreach (PIO) Office at Subaru Telescope continues to create awareness in the world-wide community through programs that share the information and the inspiration, while being sensitive to the issues in the diverse community, and having in mind that the long standing support of the public is an essential key for the stable operation of our organization.”
- Three Types of Activities
  - Public Information: Press Release, Introduction of Observatory’s Activities
  - Public Outreach: Engagement with communities, Education
  - Facility Tour

# Members



Manager  
Nakajima



Public Outreach  
Kakazu



Tour Guide  
Murai



Public Information  
Fujiwara

# Press Release

Press Release

 [Print This Article](#)

2019

Oct. 22 : [The Whole Picture of Distant Supercluster in Three Dimensions](#)

Oct. 7 : [Saturn Surpasses Jupiter After Discovery of 20 New Moons](#)

Oct. 3 : [Massive Filaments Fuel the Growth of Galaxies and Supermassive Black Holes](#)

Sep. 26 : [Oldest Galaxy Protocluster forms "Queen's Court"](#)

Aug. 23 : [Storms on Jupiter Seen by Multi-Wavelength Observations](#)

Jul. 25 : [Einstein's General Relativity Theory Is Questioned But Still Stands 'For Now,' Team Reports](#)

Jun. 21 : [Subaru Telescope Identifies the Outermost Edge of our Milky Way System](#)

May 29 : [Subaru Telescope Captures 1800 Exploding Stars](#)

May 20 : [Star Formation in Young Galaxies Not Affected by Environment](#)

May 13 : [Subaru Telescope Sheds New Light on an Obscured Infant Solar System](#)

Apr. 29 : [Star with Strange Chemistry is from Out of Town](#)

Apr. 9 : [Jupiter's Atmosphere Heats Up Under Solar Wind](#)

Apr. 1 : [Subaru Telescope Helps Determine that Dark Matter is not Made Up of Tiny Primordial Black Holes](#)

Mar. 13 : [Astronomers Discover 83 Supermassive Black Holes in the Early Universe](#)

- Press Release based on Subaru's achievement
- Most fundamental activity
  - 14 PRs in 2019 (and more)
  - 10-20 PRs /yr
- Four of recent PRs
  - Joint PRs with Gemini/Keck
  - Highlight MKO's collaboration
- If you have an interest in making PR, consult us at the latest 1 month before PR target date

# Media Coverage

## • Subaru Keeps high visibility in media

2018/9/26 Kyodo

### 宇宙は1400億年続くと発表

東大と国立天文台の研究チーム

2018/9/26 11:30 (JST) | 12/7 10:15 (JST) updated

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米ハワイ島にある「すばる望遠鏡」(国立天文台提供)

宇宙がそのまま膨張し続けたとしても、物質を構成する原子がばらばらになって世界が終わりを迎えるのは、少なくとも1400億年先だとする分析結果を、東京大と国立天文台の研究チームが26日発表した。

138億年前にビッグバンで始まった宇宙がどのように終わるかを巡っては、再び一点に収縮する「ビッグクランチ」や、無限大に膨張して物理法則が成り立たなくなる「ビッグリップ」などさまざまな説がある。

チームはすばる望遠鏡の観測から宇宙の質量は膨張を止めるほど大きくないと判断。ただ「無限大になるまで長い時間がかかり、宇宙はしばらく安泰だ」としている。

NHK NEWS WEB 2019/9/28

### 130億年前 最古の銀河団を観測 NHK

2019年9月27日 18時23分

宇宙誕生から8億年後の、130億年前にできたと見られるこれまで集団、「銀河団」の観測に、国立天文台などのグループが「すばる」成功し、宇宙の進化の過程の一端を明らかにする成果として注目さ

「すばる望遠鏡」が観測に成功したのは、くじら座の方角にある銀河の距離が129億7000万光年で、これまで見つかった最も遠い1億光年遠くにあります。

国立天文台などのグループによりますと、「すばる望遠鏡」に広い特殊なカメラを取り付けて観測したところ、銀河が密集している箇所です。

### 2019/3/14 Hawaii Tribune-Herald 83 supermassive black holes discovered by Subaru astronomers

By MICHAEL BRESTOVANSKY  
Hawaii Tribune-Herald

Astronomers at the Subaru Telescope on Maunakea discovered 83 supermassive black holes billions of light-years from Earth. The black holes, each surrounded by an extremely luminous disc of gas and dust called a quasar, are all about 13 billion light years away.

One of the quasars is the second most distant quasar ever discovered, said Subaru public outreach specialist Yuko Kakazu.

The most distant quasar was discovered in 2017 by astronomers at the Max Planck Institute for Astronomy, which was one of several institutions involved

in the Subaru discovery.

Kakazu said the team of 48 astronomers, led by Yoshiki Matsuoka from Ehime University in Matsuyama, Japan, used the Subaru Telescope's wide-field Hyper Suprime-Cam to capture images of a wide swath of the sky during a period of five years. Based on those images, astronomers selected star-like points of light as possible quasars and subjected them to a spectroscopic analysis.

Of the more than 100 quasar candidates, 83 were determined to be quasars, which Kakazu said represents the largest sample of quasars discovered.

Because of the quasars' extreme distance from Earth, the light

detected by the telescope is itself billions of years old, originating from a point in time less than 1 billion years after the Big Bang.

The discovery of such early-universe objects provides valuable insight into the history of the universe. Kakazu said the number of quasars discovered indicates that there might have been fewer quasars in the early universe than previously thought, casting some doubt on a theory about quasars role in shaping the young universe.

"The quasars we discovered will be an interesting subject for further follow-up observations with current and future facilities," said Matsuoka in a statement.

Email Michael Brestovansky at mbrestovansky@hawaii.tribune-herald.com.

### 2017/2/24 West Hawaii Today

WEST HAWAII TODAY | FRIDAY, FEBRUARY 24, 2017

7A



An infrared image of Saturn taken with the Subaru Telescope. COURTESY PHOTO

### Subaru takes infrared image of Saturn

WEST HAWAII TODAY

HILO — Astronomers are seeing Saturn's rings from a ground-based telescope, according to the observatory.

A team of researchers using the Subaru Telescope atop Mauna Kea recently measured the brightness and temperature of the planet's rings using infrared images taken in 2008.

They are the highest resolution images from a ground-based telescope, according to the observatory.

The images revealed the Cassini Division, a wide dark area in between rings, and the C ring were brighter than other rings in mid-infrared light, the opposite of what is seen in visible light.

Subaru spokesman

Hideaki Fujiwara said that means that particles in those rings, while less reflective, are better at absorbing heat from the sun and helps researchers better understand their composition.

He said Mauna Kea is particularly good for viewing mid-infrared light because of its low humidity.

# Filming/Social Media

- Filming

- Accept filming requests



- Social Media

- Twitter, Facebook, YouTube

**Subaru Telescope Hawaii Outreach**  
団体  
0.3マイル · 650 North A'ohoku Place, Hilo

**National Astronomical Observatory of Japan**  
ページ  
4.7  
2-21-1 Osawa, Mitaka, Tokyo, 東京都 三鷹市 181-8588  
298人がチェックインしました

**国立天文台**  
ページ  
4.5  
〒181-8588 東京都 三鷹市大沢 2-21-1  
5,810人がチェックインしました

**国立天文台 すばる望遠鏡**  
@SubaruTelescope  
ハワイ島のマウナケア山頂にある「すばる望遠鏡」は、運用する口径8.2mの光学赤外線望遠鏡です。最新の情報をお届けします。  
Maunakea, Hawaii | [subarutelescope](#)  
2010年6月からTwitterを利用しています  
22 フォロー中 4.9万 フォロワー  
フォローしているクマさん、イシツカ、ホセさん、他90人にフォローされています

**国立天文台 すばる望遠鏡** @SubaruTelescope · 22h  
【トピックス】2019年10月26日に開催された、国立天文台三鷹キャンパスの特別公開「三鷹・星と宇宙の日」。ハワイ観測所のスタッフや大学院生が拠点とするすばる棟でも、すばる望遠鏡20周年をテーマにした様々な企画展示がありました。 [subarutelescope.org/Topics/2019/11...](#)

# Regular Outreach Events

- AstroDay in Hilo (Prince Kuhio Plaza) and Kona (Kealahou High School)
- Onizuka Science Day at UH
- Journey Through The Universe
  - >10 Staffs visit local schools



**MAUNAKEA OBSERVATORIES**  
Exploring the Universe, Sharing its Wonders

**GEMINI OBSERVATORY**  
Inspire... Then Educate

**NASA**

**TMT**  
THIRTY METER TELESCOPE

**CFH**  
CROSSING FRONTIERS HAWAII

**NAOJ**  
National Astronomical Observatory of Japan

**SERVI**  
SOUTHERN REGIONAL VOYAGER INITIATIVE

**ILMLOA**  
International Lunar Mission Office

**UNIVERSITY OF HAWAII**

**UNIVERSITY OF HAWAII MANOA**

**HAWAII**

**UNIVERSITY OF OREGON**

**UCLA**

**PISCES**  
Public Outreach Exploration Systems

**NOAO**

**NRAO**

**W.M. KECK OBSERVATORY**

**Tribune Herald**

**Bank of Hawaii**

**KTA**  
KAWAIIAN TELEVISION ASSOCIATION

**BIG ISLAND**

**bigislandtoyota.com**

**deluzchevy.com**

**Rural Island Economic Development Board**  
Island of Oahu

**KWAX**  
KAWAIIAN NEWS

**HAWAII'S BEST LIGHT**

**KOHALA POSITIVE**  
KOHALA POSITIVE

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

**Astronomy Educators in the Community 2019**

For more information contact Julie Sherry at [jsherry@gemini.edu](mailto:jsherry@gemini.edu)

[www.gemini.edu/Journey](http://www.gemini.edu/Journey)

# Special Events in 2019

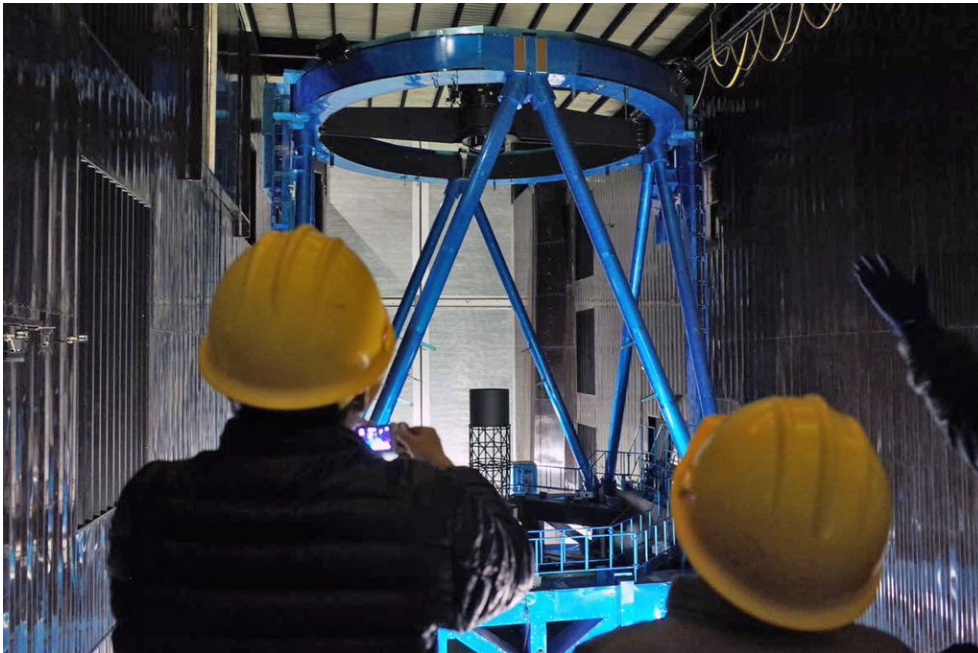
- Hosted/Sponsored special events
  - Enhance engagement with local community
- Tanabata Star Festival at ‘Imiloa
  - Celebrating Subaru’s 20th Anniversary
  - Co-hosted, co-sponsored with TMT-J and local organizations
  - Many volunteers from the observatory and local community
  - >2000 participants
- 20<sup>th</sup> Anniv. Event at Base Facility
- Hawaii Explorations Expo





# Facility Tour

- Public Tour at Summit Facility since 2004
  - The 1<sup>st</sup> MK observatory that started guided tour for the public
  - For free, but reservation is required via website
  - >10000 people visited



- Also accept groups of researchers, engineers, educators, as special tours
- Kama'aina Observatory Experience
  - Joint facility tour program on MK for local people

# Maunakea Fact Sheet

- Produced by MKO leadership
- Covering not only science, but environment, culture, education, employment...



MAUNAKEA OBSERVATORIES

## stewards of science and the environment

Maunakea is a deeply revered cultural landscape that also happens to be the premier site in the world to study the cosmos. We deeply respect its cultural importance and storied past. The decisions we make today are intertwined with the future of Maunakea and its cherished summit. We appreciate that Maunakea is sacred to many people in different ways, and we are thankful and privileged to study the universe from Maunakea's summit – a unique portal to the universe.

## Nonprofits for Research & Education

The Maunakea Observatories are a collaboration of nonprofit, 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 worldwide.

- Observing time is free. Everyone with a compelling research proposal is welcome to apply.
- We are supported by numerous international partners and research institutions worldwide.
- Nonprofit in nature, the Observatories do not generate revenue, rather are principally funded through Federal research agencies, such as the National Science Foundation.
- Our astronomical research is purely scientific in nature, dedicated solely to better understanding the universe around us.

## Commitment to Natural Resources

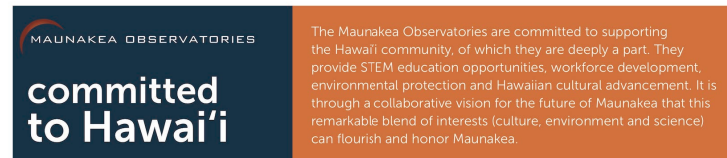
The Maunakea Observatories deeply value safety, environmental stewardship, science, cultural heritage and community.

- We support the Comprehensive Management Plan and the Office of Maunakea Management.
- We comply with strict guidelines that protect the natural environment.
- Maunakea watershed areas are replenished by rainfall below 8,000 feet. Observatories located above 14,000 feet do not impact Hawai'i Island aquifers, confirms hydrologists.
- Any chemicals used in operations are contained on-site for maintenance, properly handled by trained professionals and disposed of safely and immediately, once no longer necessary.

## The Maunakea Observatories

- Caltech Submillimeter Observatory
- Canada-France-Hawaii Telescope
- East Asian Observatory (JCMT)
- Gemini North Telescope
- Very Long Baseline Array
- NASA Infrared Telescope Facility
- Subaru Telescope (NAOJ)
- Submillimeter Array
- United Kingdom Infrared Telescope
- University of Hawai'i 2.2 Meter
- University of Hawai'i Hilo Educational Telescope
- W.M. Keck Observatory (Keck I and Keck II)

The telescopes on Maunakea are operated by separate nonprofit observatories. Each has its own strengths with varying fields of view and sensitivities to light: from radio to ultraviolet wavelengths. They are all important to the scientific productivity of Maunakea.



MAUNAKEA OBSERVATORIES

## committed to Hawai'i

The Maunakea Observatories are committed to supporting the Hawai'i community, of which they are deeply a part. They provide STEM education opportunities, workforce development, environmental protection and Hawaiian cultural advancement. It is through a collaborative vision for the future of Maunakea that this remarkable blend of interests (culture, environment and science) can flourish and honor Maunakea.

## Kama'aina Observatory Experience

The Kama'aina Observatory Experience, presented by Maunakea Observatories and Imiloa Astronomy Center, is a free monthly community event that seeks to inspire a passion for astronomy and an appreciation for the cultural and environmental future of Maunakea among Hawai'i residents. For the first time in the 50-year history of astronomy on Maunakea, the Kama'aina Observatory Experience provides local residents with an opportunity to visit the summit, see world-class telescopes and learn about the mountain in a holistic manner.



## Events for the Community

The Observatories enthusiastically share their love of science and technology with the community all year, especially with schoolchildren. The Maunakea Astronomy Outreach Committee organizes events and programs to engage the community, including Journey through the Universe and Astro Day. The THINK Fund sponsors dozens of STEM Learning Grants each year, college scholarships and equipment for classrooms across Hawai'i Island.

### JOURNEY THROUGH THE UNIVERSE

Each year, more than 70 observatory professionals and educators extend their reach to communities across Hawai'i Island to help students discover the magic of science and kindle their interest in becoming the next generation of engineers, researchers and visionaries that help guide Hawai'i's future.

### SOLAR SYSTEM WALK

The annual Solar System Walk turns Waimea into a scale model of our solar system with the sun at the W.M. Keck Observatory office and Pluto/dwarf planets at the Canada-France-Hawaii Telescope office with stations at each planet in between. Keiki learn about solar system discoveries made nearby from the summit of Maunakea.

### ASTRODAY

AstroDays in Hilo and Kona are the largest single outreach events organized by the Maunakea Observatories each year. Attended by thousands of community members, they provide Hawai'i Island residents with opportunities to meet observatory staff members and explore the science and technology that's unique to the Maunakea Observatories.



# Maunakea Fact Sheet

- MKO users are recommended to read
- Available on the conference website
- Please take a look!



**Maunakea Site Acknowledgement** - We wish to recognize and acknowledge the very significant cultural role and reverence that the summit of Maunakea has always had within the indigenous Hawaiian community. We are most fortunate to have the opportunity to conduct observations from this mountain. (Please see also [a summary of activities by Maunakea Observatories.](#))



# Contact



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- Website: <https://subarutelescope.org>
- Twitter: @SubaruTelescope (in Japanese)
- Facebook: “Subaru Telescope Hawaii Outreach” (in English), “National Astronomical Observatory of Japan” (in English), “国立天文台” (in Japanese)