



‘IMILOA

Astronomy Center of Hawai‘i

Educational Highlights January-February, 2008

K-12 Student Field Trips				
Date	School / Youth Group	Location	Grades	Student #
Jan 3	Kawananakoa Gym	Hilo	1-6	49
Jan 3	Hilo United Methodist Church	Hilo	6-12	17
Jan 15	Hawai‘i Academy of Arts and Science	Pāhoa	12	17
Jan 18	Hawai‘i Academy of Arts and Science	Pāhoa	4-7	30
Jan 18	West Hawai‘i Explorations	Kona	7-8	43
Jan 24	Hawai‘i Preparatory Academy	Waimea	8	51
Jan 25	Ka `Umeke Ka`eo PCS	Hilo	2-3	43
Jan 29	Sanbonmatsu High School	Japan	9-12	15
Jan 29	Maryknoll School	O`ahu	6	65
Jan 30	Waiākea High School	Hilo	SpEd	11
Jan 31	Montessori Country School	Pāhoa	Pre-K	35
January Total				376
Feb 3	Sacred Hearts Academy	O`ahu	11-12	9
Feb 5	Haili Christian School	Hilo	K-2	36
Feb 8	Lauhuki PreSchool	Hilo	Pre-K	22
Feb 8	Kamehameha Elementary School – Kapalama Campus	O`ahu	6	78
Feb 12	Waikoloa Elementary School	Waikoloa	2	58
Feb 12	Maryknoll School	O`ahu	6	53
Feb 13	Keiki Steps Pre-School	Hilo	Pre-K	25
Feb 14	Seabury Hall School	Maui	9-12	12
Feb 14	Hōnaunau Elementary School	Kona	5	19
Feb 15	Honoka`a Elementary School	Honoka`a	5	55
Feb 19	Waiākea Elementary School	Hilo	5	125
Feb 19	St. Michaels School	O`ahu	8	17
Feb 20	Mauna Loa School	Hilo	K-9	24
Feb 20	Hawai‘i Montessori School	Waimea	1-6	12
Feb 20	Kanu O Ka `Aina NCPCS	Waimea	6-11	16
Feb 20	Connections PCS – High School	Hilo	9-11	7
Feb 20	Hawai‘i Academy of Arts and Science (Science Fair only)	Pāhoa	7-8	15
Feb 21	Kea`au Elementary School	Kea`au	4-5	27
Feb 21	Pāhoa Elementary School	Pāhoa	6	40
Feb 21	Honoka`a Intermediate and High School	Honoka`a	7	48
Feb 21	Kua O Ka Lā PCS	Pāhoa	6-12	59
Feb 22	Keaukaha Elementary School	Hilo	5	35
Feb 22	Kea`au Middle College High School	Hilo	11-12	18
Feb 22	Pa`auilo Elementary and Intermediate School	Pa`auilo	6-9	11
Feb 22	Hawai‘i Preparatory Academy	Waimea	4	20
Feb 22	Stars Home School Network	Kona	7-10	9
Feb 26	Waiākea High School	Hilo	9	34
Feb 26	Honoka`a Intermediate and High School	Honoka`a	8	58
Feb 27	Hilo Union Elementary School	Hilo	5	60
Feb 27	Hawai‘i Academy of Arts and Science	Pāhoa	9	19
Feb 27	Hawai‘i Academy of Arts and Science	Pāhoa	3-4	12

Feb 27	Keaukaha Elementary School	Hilo	6	37
Feb 28	Ke Kula `o Nāwahīokalani`opu`u PCS	Kea`au	7-8	29
Feb 28	Pāhoa Elementary School	Pāhoa	4	40
Feb 28	Kona Christian Academy	Kona	4	16
Feb 28	Connections PCS – Middle School	Hilo	7-8	80
Feb 28	Kona Christian Adventist School	Kona	5-8	10
Feb 29	St. Joseph Elementary School	Hilo	4-6	62
Feb 29	Kaūmana Elementary School	Hilo	5	18
Feb 29	Volcano School of Arts and Sciences	Volcano	4-5	27
Feb 29	Kapi`olani Elementary School	Hilo	6	63
Feb 29	E Maka`ala School	Hilo	3-4	10
Feb 29	Kahakai Elementary School	Kona	5	75
Feb 29	Kamehameha Elementary School – Kapalama Campus	O`ahu	6	78
Feb 29	Kealakehe Intermediate School	Kona	8	7
February Total				1585

K-12 Student Programs

“Explore Our Solar System”

This program for students in grades 1-6 began with “Secret of the Cardboard Rocket,” an animated planetarium show about two young adventurers who build a “rocket” from an old cardboard box and “blast off” to explore the Solar System. After the show, keiki were engaged in a hands-on activity using Play-Doh to learn about the relative sizes of planets in our Solar System. Sixty-six people (46 children and 20 adults) participated in the program, which was conducted twice during the winter break—January 4 and 11.



“Cosmic Questions: Our Place in Space and Time”

On January 9, students in grades 7-12 attended an afternoon program focusing on concepts presented in `Imiloa’s new *Cosmic Questions* exhibits, including the composition and scale of the universe, physical and analytical tools of astronomers, and scientific theories of the universe, such as the Big Bang. Through engaging activities, students investigated models of and theories about the universe, explored the electromagnetic spectrum and its importance to observing celestial objects, and contemplated the possibility of life on other worlds.

Hawai`i District Science and Engineering Fair

`Imiloa hosted the annual Hawai`i District Science and Engineering Fair for the third time this year. More than 125 students competed in the fair with projects in life, earth, physical, computer, environmental, and health sciences and engineering. Judging took place and awards were presented to students on Saturday, February 16.

Based on last year’s success of keeping the projects on display for a week after the Science Fair, they were kept on display for two weeks this year—February 17-29. The public was invited to view the projects in `Imiloa’s Doris and Earl Bakken Moanahōkū Hall at no charge, and many families came to see their students’ work. *(continued on next page...)*





Island schools were also invited to participate in special Science Fair Field Trips conducted to encourage more students to participate in future science fairs. Each field trip began with `Imiloa's new 3-D planetarium show, "Dawn of the Space Age," followed by time to view the research projects and displays and a guided tour of the Exhibit Hall. The Science Fair Field Trips attracted 1218 students from 30 schools during the weeks of February 19-22 and 26-29.



K-12 Teacher Programs

Ka`ū-Kea`au-Pāhoa Complex Area Day



On January 30, `Imiloa's education team, with the help of volunteer June Conant, participated in the K-K-P Complex Area Day, a professional development day for Ka`ū, Kea`au, and Pāhoa teachers. Janet Babb staffed a display featuring educational opportunities at `Imiloa, while Gail Loeffler conducted two workshops: "Cosmic Questions," and "Mirrors and Multiple Reflections: How Kaleidoscopes Work." About 100 teachers picked up information at the display and 55 attended the workshops.



Family Programs

`Ohana Discovery Day

On January 13, Tom Cummings, Culture Education Manager at Bishop Museum, presented "Hawaiian Canoes and Mythic Heroes," a program in which families explored how voyaging canoes were built and sailed by early Hawaiians. Children helped assemble a model canoe, and then learned about traditional navigation techniques using stars, the Sun, Moon and other elements of nature. Thirteen families (16 children and 14 adults) attended this program, which concluded with Tom telling the stories of Maui, Ka Lā, Kamapua`a, Pele, and other mythic heroes.



Outreach

Onizuka Day

On January 26, `Imiloa participated in a day honoring astronaut Ellison Onizuka and focusing on space and science at the University of Hawai'i at Hilo. `Imiloa staff and volunteers set up a booth where they provided general information about the Center, and with NOAA's assistance, featured digital displays and programs on the Magic Planet. They also conducted two workshops for students and families, which included hands-on activities about thermal mapping and the electromagnetic spectrum.



Observatory Collaboration

ʻImiloa collaborated with Gemini Observatory and the Mauna Kea Observatories Outreach Committee on **Journey Through the Universe (JTTU)**, a weeklong program based on an astronomy education curriculum developed by the National Center for Earth and Space Science Education. Training sessions for astronomers and teachers and a Family Science Night were conducted at ʻImiloa as part of the program.

Master Teacher Training

JTTU week began on February 1 with training for a group of “Master Teachers” consisting of one teacher from each of the 18 schools in the Hilo-Laupāhoehoe-Waiākea Complex Area that elected to participate in the program this year. This special training session introduced the JTTU curriculum to the Master Teachers, who served as mentors to colleagues in their schools during the week—and who will continue to assist classroom teachers using the JTTU curriculum throughout the year.



Teacher Training

About 100 classroom teachers from the participating schools attended a JTTU training session conducted by Tim Slater (*left*), Associate Professor of Astronomy at the University of Arizona. During this February 2 training, the teachers learned how to conduct hands-on activities to introduce their students to the wonders of space and the science of astronomy.



Astronomer Training

On February 3, a training session was held to prepare astronomers—especially those without teaching experience—



on what to expect during their visits to K-12 school classrooms. More than 20 astronomers and outreach specialists from Mauna Kea observatories participated in the training, which included tips on how to do successful presentations for students. These folks then braved relentless



rain and flooded roads during the week of February 4-8 to present astronomy programs in 18 Hilo-Laupāhoehoe-Waiākea schools—reaching about 7400 students (*one class shown at left*).



Family Science Night

A highlight of JTTU week was the Family Science Night held at ʻImiloa the evening of February 6. Nearly 750 people took advantage of this event hosted by Gemini Observatory (at no charge to the families), which included a series of talks by visiting astronomers, tours of the Exhibit Hall, and live night sky planetarium programs.