

SB 112

RELATING TO TOURISM.

Appropriates funds in FY 2011-2012 and FY 2012-2013 for the application of a spaceport license from the Federal Aviation Administration to establish space tourism in Hawaii.

George R. Ariyoshi
999 Bishop Street, 23rd Floor
Honolulu, HI 96813

TESTIMONY

February 4, 2011

Re: Testimony in support of SB 112 relating to Space Tourism

Dear Members of the Twenty-Sixth Legislature:

I am writing this testimonial in strong support of SB 112, which provides state support for the environmental studies required to obtain a commercial spaceport license for Hawaii airports from the Federal Aviation Administration.

The effort to establish an international commercial spaceport in Hawaii builds upon the ongoing development of innovative "spaceplanes" that can take off and land at local airports using existing runways that service commercial jet aircraft, but which also employ advanced propulsion technologies to carry satellites, experiments and tourists to space.

Over the past decade, private companies in both the U.S. (e.g., Virgin Galactic, XCOR Aerospace) and foreign nations (e.g., EADS Astrium, Dassault Falcon) have been developing prototype spaceplanes for commercial space transportation. Between 2012 and 2015, at least three and as many as six suborbital spaceplane companies are projected to be in operation worldwide, and the commercial space transport market will be in a major expansion mode - both in terms of the number of people flying suborbitally each year and the number of spaceports working to build market share.

To date, ten states have already obtained or are currently in the process of applying for commercial spaceport licenses to accommodate this anticipated demand. It takes on average approximately three years to complete the spaceport licensing process, including 12 to 18 months to complete the environmental and safety studies required for the license, six to nine months for public review and comment, and an additional six months for the formal license application process with the FAA. Thus, for Hawaii to be "in on the ground floor" when spaceplanes begin operating, we need to initiate the licensing process now.

In contrast with the continental United States and Alaska, Hawaii is in a unique position to support and benefit from spaceplane operations. Situated in the middle of the Pacific, we are ideally located to serve as a node on the soon-to-emerge spaceplane transportation network. In addition, with major airport runways proximal to the ocean, Hawaii can use existing aviation infrastructure to enable the launch and landing of spaceplanes at local airports (the landlocked

state of New Mexico, by contrast, has had to invest over \$200 Million in public funds to build a commercial spaceport that can safely accommodate such operations). And establishing spaceplane operations in Hawaii would bring a new dimension to our visitor industry – space tourism (projected to be a multi-billion dollar industry over the next decade).

Several U.S. and foreign entrepreneurial aerospace companies have approached our State to explore opportunities for launching spaceplanes from Hawaii. Their business plans include initial intra-state flight trajectories (launching from and returning to Honolulu and Kona International airports), with future trans-Pacific flights between Hawaii, Japan, and the continental U.S. Several plans also include development of space-themed education and training centers, proximal to airports, that would provide opportunities for both tourists and local residents to experience “virtual reality” simulations of space flight and exploration missions to the Moon and Mars, as well as “space camp” experiences involving simulated interplanetary space travel.

In order for spaceplanes to launch and land from Hawaii’s airports, our State must obtain a commercial space transport license from the Federal Aviation Administration (FAA). Funding requested through this legislation will enable the State’s Office of Aerospace Development to conduct the environmental and safety assessment studies required for this license to certify that spaceplane operations can be conducted safely in Hawaii.

Commercial space transport will help drive the “next generation” of global aviation technologies, systems and protocols, and states that engage in this industry from its inception will help establish and mature spaceplane operation centers and flight corridors to be networked worldwide. Hawaii is uniquely qualified to assume a leadership role in this effort for the entire Asia-Pacific region – but only if we act proactively to realize this exceptional opportunity.

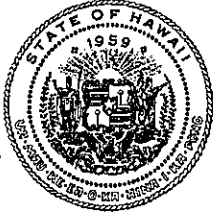
As you may recall, the twenty-fifth State Legislature passed a measure similar to SB 112 during the 2009 Session (Act 187). Unfortunately, the previous Administration did not release funding appropriated through this legislation. As such, I would strongly encourage you to pass SB 112 this Session, and will work with our new Administration to encourage its execution.

Thank you for the opportunity to provide these comments.

Sincerely,


George R. Ariyoshi

GRA:khy



NEIL ABERCROMBIE
GOVERNOR

RICHARD C. LIM
INTERIM DIRECTOR

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

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Statement of
RICHARD C. LIM
Interim Director
Department of Business, Economic Development & Tourism
before the

**SENATE COMMITTEES ON
PUBLIC SAFETY, GOVERNMENT OPERATIONS AND MILITARY AFFAIRS
ECONOMIC DEVELOPMENT & TECHNOLOGY
AND
TOURISM**

Thursday, February 10, 2011
2:45 p.m.
State Capitol, Conference Room 224

in consideration of
SB 112
RELATING TO TOURISM.

Chairs Espero, Fukunaga and Kim, Vice Chairs Kidani, Wakai and Kouchi, and members of the Committees. The Department supports the intent of SB 112 to provide state support for the environmental studies required to obtain a commercial spaceport license for Hawaii airports from the Federal Aviation Administration.

The effort to establish an international commercial spaceport in Hawaii builds upon the ongoing development of innovative "spaceplanes" that can take off and land at local airports using existing runways that service commercial jet aircraft, but which also employ advanced propulsion technologies to carry satellites, experiments and tourists to space.

Between 2012 and 2015, at least three and as many as six suborbital spaceplane companies are projected to be in operation worldwide. To date, ten states have already obtained or are currently in the process of applying for commercial spaceport licenses to accommodate this anticipated demand. Given its location, Hawaii is ideally located to serve as a node on a global spaceplane transportation network. In addition, with major airport runways proximal to the ocean, Hawaii can use existing aviation infrastructure to enable the launch and landing of spaceplanes at local airports (the landlocked state of New Mexico, by contrast, has had to invest over \$200 Million in public funds to build a commercial spaceport that can safely accommodate such operations). And establishing spaceplane operations in Hawaii would bring a new dimension to our visitor industry – space tourism (projected to be a multi-billion dollar industry over the next decade).

In order for spaceplanes to launch and land from Hawaii’s airports, our state must obtain a commercial space transport license from the Federal Aviation Administration (FAA). Funding requested through this legislation will enable our department to conduct the environmental and safety assessment studies required for this license to certify that spaceplane operations can be conducted safely in Hawaii. Similar studies at airports nationwide have universally resulted in “FONSI”s – “findings of no significant impact”.

Commercial space transport will help drive the “next generation” of global aviation technologies, systems and protocols, and states that engage in this industry from its inception will help establish and mature spaceplane operation centers and flight corridors to be networked worldwide. Hawaii is uniquely qualified to assume a leadership role in this effort for the entire Asia-Pacific region.

Thank you for the opportunity to testify on this bill.

February 8, 2011

Hawaii State Legislature
Hawaii State Capitol
415 S. Beretania Street
Honolulu, HI 96813

Re: Support for Senate Bills 112, 165 and 1496

Members of the Twenty-Sixth State Legislature:

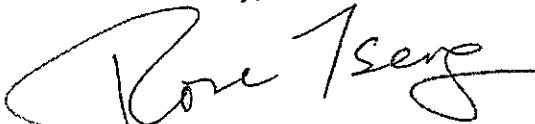
As a member of the Hawaii State Aerospace Advisory Committee, I am pleased to provide testimony in strong support of Senate bills 112, 165 and 1496, which, respectively, appropriate funds for a spaceport license from the Federal Aviation Administration, provide the Office of Aerospace Development with funding and staff support, and establish "development and operation of space exploration and lunar research related activities" as "eligible business activities" for enterprise zones in Hawaii.

I firmly believe that a strong aerospace industry in Hawaii is critical to developing an innovative and progressive "knowledge economy" for our state. Just as aviation was the industry of the future at the beginning of the 20th century, aerospace today represents the hopes and dreams of the young scientists, entrepreneurs and innovators being educated right now for the brightest jobs of the future.

Moreover, the state of Hawaii possesses attributes and resources found nowhere else on Earth which, if appropriately developed and used, will establish an important niche for the state in the aerospace industry.

This is an industry that can help sustain and keep our talented, well educated youth at home, help stabilize and diversify our state's economy, and help improve the quality of life in our state. Support for an aerospace industry today will provide a substantial return of investment for many years to come.

Sincerely,



Rose Y. Tseng
Professor and Chancellor Emerita
University of Hawaii at Hilo



UNIVERSITY
OF HAWAII
HILO

February 7, 2011

Testimony in support of SBC 112

Relating to Tourism

Submitted by: Judith Fox-Goldstein

Administrative Director, University of Hawai'i at Hilo Conference Center

Dear Members of the Twenty-Sixth State Legislature:

In my capacity as the Administrative Director of the University of Hawai'i at Hilo Conference Center, an active member of the Big Island Visitors Bureau (BIVB) Board, and the BIVB representative to the Hawaii Visitors and Convention Bureau's Marketing Advisory Committee, I would like present my unqualified support for SB 112.

Hawai'i has long been known as one of the premier tourism destinations on Earth. As one of our state's major economic drivers, it is critical that we keep our tourism product fresh, innovative, exciting, experiential and appealing to potential visitors from around the world. With growing global competition for "sun and surf" destinations, we in the education, business and visitor industry should feel compelled to bring innovation to this field. At the same time, our mission must include respect for our host culture and protection for our native environments.

Diversity in the field of tourism is key to sustaining the flow of visitors to our island state, and space tourism would offer yet another unique experience attracting visitors to Hawai'i, with significant economic benefits for residents statewide.

Space tourism will increase jobs in the fields of hospitality, as well as help improve our visitor industry image by putting an extra "S" ("Science"!) in our Sun, Sand, Sea and Surf marketing message. Hawai'i has long been referred to as the "Greatest Outdoor Classroom in the World". Taking, this message even further, it is now time to expand this "classroom" to space, which we can do by appropriating funds for the environment assessment studies required to secure a spaceport license for Hawai'i from the Federal Aviation Administration.

Conference Center

200 W. KAWILI STREET
HILO, HAWAII 96720-4091
PHONE: (808) 974-7555
FAX: (808) 974-7684

In pioneering the field of space tourism, Hawai'i will send its message of Aloha to a much larger global community. By supporting this bill, we will continue to expand our local visitor industry through both innovation and a sustained commitment to economic growth and diversification.

I therefore respectfully ask for your support in joining those of us testifying today in favor of this timely legislation.

Thank you for the opportunity to provide these comments before your Committees.

Judith Fox-Goldstein

Judith Fox-Goldstein, Administrative Director
February 7, 2011
University of Hawaii at Hilo Conference Center
200 West Kawili Street
Hilo, HI 96720

Conference Center

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HAWAII AEROSPACE
ADVISORY COMMITTEE

Elliot Holokauahi Pulham, Chair

February 4, 2011

Senator Will Espero, Chair
Committee on Public Safety, Government Operations and Military Affairs
Hawai'i State Legislature

Senator Carol Fukunaga, Chair
Committee on Economic Development and Technology
Hawai'i State Legislature

Senator Donna Mercado Kim, Chair
Committee on Tourism
Hawai'i State Legislature

SUBJECT: Senate Bill No. 112

Dear Senators Espero, Fukunaga and Kim:

On behalf of the Hawai'i State Aerospace Advisory Committee, I am writing to encourage your strongest possible support for S.B. No. 112, which would appropriate funding for the Office of Aerospace Development, DBEDT, to pursue a commercial spaceport license from the Federal Aviation Administration (FAA) for the State of Hawai'i.

As you know, the creation of the Hawai'i Aerospace Advisory Committee was authorized by the Legislature (Act 52, 2009 Session) and approved by the Governor on May 6, 2009. Our purpose, per this Act, is to advise and assist the Legislature and State agencies in monitoring, assessing and promoting aerospace development statewide. The Committee is comprised of leading aerospace industry executives, distinguished academicians from across the state, and economic development executives from Oahu, Kauai, Maui and Hawai'i – all united with a common purpose to help the State diversify its economy and promote innovative education and employment opportunities for the people of Hawai'i.

The Hawai'i Aerospace Advisory Committee met in Honolulu on January 11, 2011 to explore these opportunities and ways to realize them. During this meeting, we discussed the merits of obtaining a commercial spaceport license for the State, and are unanimously in favor of doing so.

The commercial space transportation industry is taking root quickly, and poised to grow dramatically in the years ahead. Companies like Space Exploration Technologies (SpaceX) and Orbital Sciences Corporation are successfully demonstrating the ability to provide space transportation services to the government on a commercial basis. Other companies, like Sir Richard Branson's Virgin Galactic, are preparing to launch commercial, suborbital tourism enterprises.

Many states and nations are investing substantial sums to attract this burgeoning industry – yet Hawai'i has unique advantages that would allow it to successfully compete for this industry with minimal investment of public funds. These competitive advantages include a world class tourism infrastructure, an international aviation hub, and several airport runways (including those Honolulu and Kona International Airports, as well as Keahole Airport in West Oahu) that are long enough to accommodate suborbital spaceflight operations, as well as proximal to the ocean (so that operations can be conducted without overflying populated areas).

The commercial space transportation industry accounted for more than \$1 billion in revenue in 2009, and will grow many fold over the years ahead. The key enabler for Hawai'i to compete for the prestige, jobs, and tourism revenue at stake is a commercial spaceport license, to be issued by the FAA's Office of Commercial Space Transportation. Funding appropriated through SB 112 would enable the State to conduct the environmental assessment studies required to obtain this crucial permit and open new aerospace development opportunities for Hawai'i – including space tourism!

As such, and on behalf of the Hawai'i Aerospace Advisory Committee, I strongly encourage your support of S.B. No. 112.

Me ka ha'aha'a,

A handwritten signature in black ink, appearing to read 'E. Pulham', with a long horizontal line extending to the right.

Elliot Holokauahi Pulham

cc: Governor Neil Abercrombie
Lt. Governor Brian Schatz
Senator Brickwood Galuteria, Majority Leader
Senator Sam Slom, Minority Leader
Richard Lim, Interim Director - DBEDT
Jim Crisafulli, Director - Office of Aerospace Development



PACIFIC AVIATION MUSEUM PEARL HARBOR

FORD ISLAND, HAWAII

February 5, 2011

The Honorable Will Espero
The Honorable Carol Fukunaga
The Honorable Donna Mercado Kim
Hawaii State Senators
Hawaii State Capitol
415 South Beretania Street
Honolulu, HI 96813

Subject: Senate Bill 112

Dear Senators:

I am pleased to provide testimony in strong support of SB 112 to appropriate funds for the application of a spaceport license from the Federal Aviation Administration.

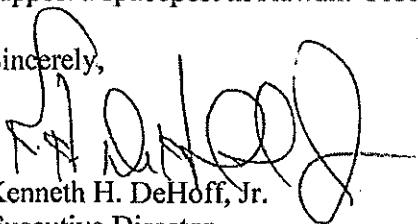
The mission of the Pacific Aviation Museum Pearl Harbor is to develop and maintain an internationally recognized aviation museum on historic Ford Island that educates young and old alike, honor aviators and their support personnel who defended freedom in the Pacific Region, and preserves Pacific aviation history. Supporting the growth of aviation in the state outlined in this bill is certainly within our mission and vision.

The Pacific Aviation Museum supports the Hawaii Aerospace Program. This is important as it educates those future leaders of the aerospace industry. Creating jobs and a work force in the state is essential for its success. Providing the infrastructure is equally important. This bill is crucial.

The Pacific Aviation Museum Pearl Harbor commits to providing hands-on education for students interested in aerospace, in joint programs with the state providing yet another piece of the overall program. Our unique perspective on aviation gives students a front row seat to space exploration and Hawaii's role with it. While our museum spotlights the history and achievements in aviation, it also provides insight in the science, math, physics and fundamentals of flight and life in space.

In this Centennial of Aviation, the Pacific Aviation Museum Pearl Harbor is honored to support a spaceport in Hawaii. I recommend SB 112 be funded.

Sincerely,


Kenneth H. DeHoff, Jr.
Executive Director



Pacific International
Space Center for
Exploration Systems

TESTIMONY

Date: February 9, 2011

To: Members of the Twenty-Sixth Hawaii State Legislature

From: Dr. Frank Schowengerdt

Subj: Testimony in Support of SB112, SB165 and SB1496

I write in strong support of the aerospace-related bills SB112, SB165 and SB1496. These bills deal with a commercial spaceport license for Hawaii from the FAA; funding for the Office of Aerospace Development (OAD), the Pacific International Space Center for Exploration Systems (PISCES) and the Pacific International Space Alliance (PISA); and inclusion of space exploration and lunar research activities as eligible business activities for enterprise zones in Hawaii.

A measure similar to SB112 was passed in the 2009 legislature, but Hawaii's former Administration did not release funding appropriated through this bill. While commercial space transportation represents a long-range economic development opportunity, it is important that the licensing process begin now so that your state will be ready to launch (literally!) when the technology for sub-orbital point-to-point transportation matures. Other states are much further along in this process than Hawaii, even though your State has many demonstrable advantages over the others. In addition, private investors critical to developing the commercial space transportation network will send their dollars to states that have demonstrated both an interest in and commitment to grow this industry. The best way Hawaii can evidence this interest and commitment is by funding the environmental studies required to obtain a commercial spaceport license from the Federal Aviation Administration. SB 112 will provide the critical funds needed for this purpose.

For the past four years, your State Office of Aerospace Development (OAD), created through State statute, has been working to promote Hawaii's future in aerospace. Hawaii clearly has significant advantages in terms of location, geographical resources and international connectivity that well position aerospace as a strategic growth industry for your State. This is one of the most progressive and forward-looking industries in the world, and Hawaii can play a leadership role, both for our nation and the global space community, in pioneering new vistas for aviation, aeronautics, and space exploration. But to succeed in this endeavor, OAD needs adequate funding and staff support, and SB 165 would provide what I feel is the minimum amount of support this office requires to responsibly carry out its mandate - especially when other states, with significantly fewer advantages than Hawaii, are moving aggressively to expand their aerospace programs as drivers for economic development.

PISCES is one of the unqualified success stories of OAD's efforts to make a mark in space exploration. Through its testing, research, education and public outreach activities, PISCES has put Hawaii on the map in a way that no other activity has in this area. Tests at our site on the lower slopes of Mauna Kea have brought hundreds of scientists, engineers, technicians, government officials, public figures and members of the news media to the Big Island in recent years, and have injected millions of dollars into Hawaii's economy. The tests at PISCES also have demonstrated many new technologies that can help sustain life on the Moon and beyond, but again, which will also benefit the local economy.

For example, during the 2010 tests powerful solar concentrators were used to process the lunar-like soil at the PISCES test site in the same way that they will be used on the Moon to extract oxygen and water for life support. This and similar technology can help make Hawaii more energy-independent through widespread application of solar power in residential and commercial buildings. In addition, technologies tested at PISCES involving communication, robotics, and materials processing can help provide sustainable, high-paying jobs in non-polluting industries that are crucial to economic development in the State. We are also currently planning a robotics challenge involving students and a ground-penetrating radar study at our test site, in addition to a proposed life-support habitat for a human-factors study of interest to NASA.

Support of PISCES through SB165 will also enable us to move forward on developing the International Lunar Research Park (ILRP) initiative on the University of Hawaii at Hilo campus. The prototype ILRP to be developed on the Big Island (simulating one to eventually be deployed on the lunar surface) will provide the space, infrastructure and field areas needed to develop and test technologies for sustaining life on the Moon and beyond, while spinning off technologies to benefit the local economy.

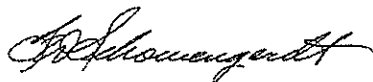
The ILRP will be built in or adjacent to the existing Science and Technology Park at the university, where the base facilities for many of the Mauna Kea telescopes are located, and would be part of the enterprise zone as requested in SB1496. With this designation, companies could lease space in the park to conduct research with government and university personnel, developing and validating technologies that will figure prominently in their business plans for space commerce. The ILRP has received enthusiastic response both inside and outside of NASA, and will be the subject of a workshop at NASA Ames Research Center on April 5th of this year involving such space luminaries as Buzz Aldrin and high-ranking officials from space companies and international space agencies.

In summary, I believe the State of Hawaii could find no better area for economic development to complement its existing traditional sectors than aerospace. This industry produces jobs that pay roughly twice the U.S. national average, that are clean and attractive, and that cannot be outsourced to other countries. In fact, the space exploration activities in which we are currently engaged and that are supported through this legislation can attract people and businesses from all over the world.

We have already demonstrated this at PISCES by bringing in sustained business from the Canadian and German space agencies, in addition to research support from NASA. Rather than competing with current economic drivers in Hawaii such as tourism and agriculture, aerospace activities will attract more tourists to the Big Island to see what it will be like to live and work on the Moon, and will contribute new technologies to the agriculture sector as spin-offs from the sustainability research to be conducted at the ILRP.

I therefore urge your State Legislature to support these bills for the good of the state, the nation and the world.

Sincerely,



Frank Schowengerdt
Director

HAWAI‘I ACADEMY OF SCIENCE

Educational Programs Office

c/o College of Education, UHM • 1776 University Avenue • Honolulu, HI 96822
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Website: www.hawaii.edu/acadsci

February 9, 2011

Testimony in Support of SB112, SB165, SB1496
Hawai‘i State Legislature – 2011 Session

Aloha,

On behalf of the Hawai‘i Academy of Science, we are providing testimony in strong support of bills **SB112, SB165 and SB1496**, which offers our state viable avenues for employment, growth and sustainability.

As sponsors and coordinators for the annual State Science and Engineering Fairs since 1957, the Academy has witnessed the potential of thousands of Hawaii’s top students in the science and engineering fields, and has seen many of these students go on to excellent universities and careers. However, many of those high-level technical and research jobs remain on the mainland, leaving our young professionals to make the decision to live and work away from home, or come back to compete for a smaller pool of desired careers.

Hawai‘i needs sources of industry not only for the sake of our future generations, but for the sustainability of our islands as well. The aerospace industry is a tremendous opportunity for our children and a “high-tech” bridge between east and west that also secures Hawai‘i as an integral part of the U.S. economy. Please join with us in our effort to build Hawaii’s future.

Mahalo,



Carolyn Kaichi
Director
Hawai‘i State Science and Engineering Fair

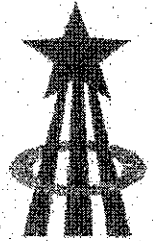


Dr. Gareth Wynn-Williams
Past-President
Hawai‘i Academy of Science
University of Hawai‘i Institute for Astronomy



ONIZUKA MEMORIAL COMMITTEE

DEDICATED TO THE MEMORY OF CAPTAIN ELLISON S. ONIZUKA



To: Hawaii Legislators
From: Nancy C. Tashima
RE: Support of SB112, SB165 & SB1496
Date: February 8, 2011

Dear Members of the Twenty-Sixth Legislature:

I am pleased to provide testimony in very strong support of SB112, SB165, and SB1496 advocating support of aerospace related funding.

Considering the current financial situation of Hawaii, it is imperative and prudent that our State seek inventive and innovative methods of improving our economy for all of its citizens. We can no longer depend on the traditional tourist or agriculture industries to provide enough jobs to sustain our economy. As a science teacher for the past forty-one years in Hawaii, I envision our students being educated and trained to support aerospace related professions along with the improvement of their Science, Technology, Engineering, and Mathematics skills. Hawaii's youth need the desire to remain in our State and the possibilities afforded by the aerospace industry will allow them to have the vision and inspiration to succeed in professional careers here in Hawaii.

SB112 will expand our traditional tourism based industry by providing funds for a spaceport license application. This Federal Aviation Administration license will afford the possibility of many new jobs and professions for Hawaii's citizenry. An international commercial spaceport will allow the stabilization and expansion of our economic base.

SB165 will fund several aerospace related possibilities and as a science teacher, I especially support the public education and community outreach aspects of the bill. Additionally, I strongly support the funding for the Office of Aerospace Development and the NASA related programs. These programs will undoubtedly benefit our students and the general public by providing the education, skills, and support to allow them to remain in Hawaii rather than moving to other locations to secure good jobs.

I also support SB1496 since it makes possible the creation of businesses related to lunar and space research which would not only broaden our economic base, but motivate our Hawaii residents to succeed in their desires to become business entrepreneurs within their own communities. With opportunities afforded by SB1496, many new space related businesses will be created to sustain Hawaii in the future.

I strongly urge you to support SB112, SB165, and SB1496 since they expand the aerospace related industries and therefore, create jobs and careers for Hawaii's population.

Respectfully submitted,

Nancy C. Tashima
Onizuka Space Center, Curator
Hawaii Resource Science Teacher
NASA Solar System Educator
NASA Messenger Educator Fellow
NASA New Horizons Educator Fellow

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MORRIS Y. KIMURA • CLAUDE S. ONIZUKA • DIANE QUITDOUT • NORMAN M. SAKATA • LARRY TANIMOTO
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PACIFIC INTERNATIONAL SPACE ALLIANCE

"To promote and facilitate multinational space enterprise"

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Junichi Yamasaki
NHK Engineering Services, Inc.

SENIOR ADVISORS:

The Honorable George Ariyoshi
Former Governor of Hawaii

Senator Will Espero
Hawaii State Legislature

Stephen Day
Chairman Emeritus, JUSTSAP

Takaji Kuroda
Vice-Chairman Emeritus, JUSTSAP

Frank Schowengerdt
Vice-Chairman Emeritus, JUSTSAP
Director, PISCES

SECRETARIAT:

Jim Crisafulli
Office of Aerospace Development
State of Hawaii

February 9, 2011

Testimony in Strong Support of SB 165 and SB 1496 Hawaii State Legislature - 2011 Session

Dear Members of the Twenty-Sixth Legislature:

I am pleased to submit this testimony in strong support of S.B. 165 and S.B. 1496, which together will provide both critical State support as *well* as help attract significant private sector investment to help expand and diversify Hawaii's aerospace industry.

Over the past two decades, our Japan-U.S. Science, Technology & Space Applications Program (JUSTSAP), which has now been expanded into the Pacific International Space Alliance (PISA), has worked closely with the Hawaii State Government to spawn a broad range of innovative projects promoting advanced satellite communications, remote sensing for disaster management, microgravity research, the development of solar-powered alternative energy systems, and other space-related applications benefiting communities within the Asia-Pacific region. The Pacific International Space Center for Exploration Systems (PISCES), the most recent brainchild of PISA, is now being developed in Hawaii as an international center for space-related research and development, aerospace education, professional training, and the formulation of collaborative multinational space exploration missions – including a potentially "game-changing" program to establish an International Lunar Research Park (ILRP) on the Moon, prototyped through analog facilities in Hawaii! All of these programs have engaged the substantial scientific and technological expertise resident statewide to promote collaborative research and educational partnerships with University of Hawaii faculty and students, as well as with local business entrepreneurs.

Looking to the future, innovative programs like PISA, PISCES, and the ILRP will be able to leverage Hawaii's diverse natural resources, abundant scientific and technological expertise, unique geographical terrain, and strategic mid-Pacific location to support the development and implementation of pioneering global space missions, including Earth orbiting systems supporting global communications and space-based observations of our planet, as well as robotic and manned missions to the Moon, Mars, and other solar system bodies. Collectively, these efforts will provide a broad range of scientific, economic, and educational opportunities to help grow Hawaii's research and development infrastructure, expand and diversify private sector initiatives in aerospace-related technology, enhance secondary and college-level training and mentorship programs in advanced mathematics, engineering and science disciplines; and ultimately strengthen Hawaii's role as a globally-recognized leader in space exploration.

S.B. 165 and SB. 1496 will enable Hawaii to help realize this phenomenal potential in aerospace, and as such I strongly recommend their expeditious approval.

Respectfully submitted,

Chairman Emeritus

February 9, 2011



Jim Crisafulli
Office of Aerospace Development
Dept. of Business, Economic Development & Tourism
State of Hawaii
Honolulu, Hawaii 96813

Dear Jim:

Per our recent discussions concerning aerospace initiatives in Hawaii, I commend your State for its visionary efforts to help grow and diversify both your local aerospace industry and our national space program. Hawaii has many diverse resources, capabilities and advantages that can positively contribute to our national space endeavors.

For example, your strategic mid-Pacific location and long-standing ties with nations across Asia and the Pacific make the islands an ideal site to support collaborative international scientific, educational, and commercial development programs related to space exploration. In particular, the Big Island's diverse volcanic terrain is most suitable for developing an analog lunar base to test and evaluate new technologies to support future robotic/human missions to moon and Mars.

Hawaii also has resident expertise in space-related fields, with over forty NASA principal investigators at the University of Hawaii performing ongoing research in astronomy, planetary geosciences, robotics, satellite communications, laser-based power systems, and other technologies critical for supporting future space exploration missions around and beyond planet Earth.

The NASA Space Portal fully recognizes these strategic advantages, and looks forward to our continued partnership with the State of Hawaii in advancing our nation's space exploration efforts, especially through a new annex to our Space Act Agreement that will focus on developing an analog test site on the Island of Hawaii to support development of a multinational research park on the Moon – a program that will not only extend humankind's exploration of our solar system, but also help bring the manifold scientific, educational, economic and humanitarian benefits of space back to Earth.

With best wishes,

A handwritten signature in black ink, appearing to read "Dan J. Rasky".

Dr. Daniel J. Rasky
Director, Space Portal
Senior Staff Scientist
NASA Ames Research Center, M/S 555-3,
Moffett Field, CA 94035
Phone/fax: (650) 604-1098/4666

Lockheed Martin Commercial Launch Services
12257 South Wadsworth Blvd., MS 1003
Littleton, CO 80125, U.S.A.
Telephone: 800.328.1665

In reply, please refer to: CLSB0-1102-0007

February 9, 2011

Members of the Twenty-Sixth State Hawai'i State Legislature

Subject: Senate Bills No. 112, 165 and 1496

Dear Representatives:

President Obama, in the State of the Union address on January 25, challenged America to win the future by creating an environment, through innovation, education, and infrastructure, that will "make America the best place on Earth to do business." By this measure, Hawai'i has been winning its future.

Hawai'i has employed its greatest assets and resources in productive, profitable and sustainable industry to make it the best place on Earth for astronomical research, as well as tourism. With its stunning beauty and idyllic location, Hawai'i is the very definition of "vacation destination." The world's astronomers have established unparalleled observatories on its 14000-foot peaks, standing tall into clean, unobstructed air. The same high, dry peaks offer unmatched opportunity to recreate conditions on other planets we will soon visit, and test our methods and machines where the consequences of failure are not so dire.

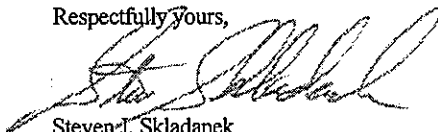
Hawai'i cannot rest on these successes if it is to continue to win its future. As the world changes, so must Hawai'i change to address and accommodate new challenges and opportunities.

A new concept in tourism – space tourism – is yet in its infancy, but is gaining momentum. Virgin Galactic, Space Exploration Technologies, Orbital Sciences Corporation, Blue Origin, Bigelow Aerospace, and Sierra Nevada Corporation are among the companies developing systems with the goal to offer tourists, as well as scientists and businesses, a means into space. These are the very companies that the President's Administration holds up as examples of the innovative spirit required to win the future. Hawai'i has the opportunity to establish itself as a founding member of this new industry, by helping to develop the infrastructure, spaceports with unique services and capabilities, on which this new industry will be built. Hawai'i can capitalize on its investments and experience in exploration research to encourage the development of new and expanded research and commercialization opportunities, and foster international cooperation for space initiatives, such as the Pacific International Space Center for Exploration Systems (PISCES) and the International Lunar Research Park (ILRP).

As a member of the Hawai'i State Aerospace Advisory Committee, I am writing to encourage your strongest possible support for Senate Bill 112, which would appropriate funding for the Office of Aerospace Development, DBEDT, to pursue a commercial spaceport license from the Federal Aviation Administration (FAA) for the State of Hawai'i; for Senate Bill 165, which would promote the continuing development of the aerospace industry in Hawaii by providing the office of aerospace development with sufficient funding and staff support to effectively carry out its statutory duties; and Senate Bill 1496, which would establish "development and operation of space exploration and lunar research related activities" as "eligible business activities" for enterprise zones in Hawai'i

The President, quoting Robert Kennedy, reminded us that "the future is not a gift. It is an achievement."

Respectfully yours,



Steven J. Skladanek
Director of Marketing, Lockheed Martin Commercial Launch Services
Member, Hawai'i Aerospace Advisory Committee

PTC[®]



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Phone: 703-298-6630
Fax: 703-871-5111
Email: rcoppola@ptc.com

February 8, 2011

Dear Members of the Twenty-Sixth Legislature:

On behalf of the 40 Real World Design Challenge partner organizations in government, industry and academia, I am pleased to provide testimony in strong support of SB112, SB165 and SB1496, which collectively advocate aerospace as a strategic and timely growth industry for Hawai'i.

The aerospace industry is a vital part of the economy of the United States and the State of Hawaii. It is critical for both national security and global economic competitiveness. Space tourism can provide an additional dimension to Hawaii's economy and enhance the existing tourist industry with billions of dollars in revenue. Lunar research and development also has the potential to stimulate the state's economy through industry contracts and tourism (a lunar research center is likely to become an exciting tourist destination!). For the past half century, Hawaii has been a leader in aerospace, and should consider this sector as a key part of the state's strategic economic development portfolio as you reach for the future.

We are delighted that Hawaii has been a partner in the Real World Design Challenge since its inception – with exceptional results (Iolani School on Oahu won the 2008/2009 National Championship and placed second in the 2009/2010 national competition!). The Real World Design Challenge in "green aviation", along with other educational initiatives, is enabling Hawaii to build the education and workforce pipeline needed to support the aerospace industry and other Science Technology, Engineering and Mathematics (STEM) disciplines. Much of the innovation in our society emanates from aerospace research and development and related spinoff technologies. These technologies are spawning new industries, which students in Hawaii (as "innovators of tomorrow") can help develop to grow the "innovation economy" of the 21st Century.

Innovation is a key driver of the economy. SB112, SB165 and SB1496 collectively afford substantial opportunities to help catalyze and sustain innovation in Hawaii. As such, I hope all of these measures will receive strong bi-partisan support during the 2011 Session.

Thank you for the opportunity to testify on this legislation.

Sincerely,

Dr. Ralph K. Coppola
Director, Real World Design Challenge &
Senior Director of Global Government & Strategic Education Programs at PTC



STRATEGIC THEORIES
u n l i m i t e d , L L C .

9 February 2011

Testimony in Support of SB112

Dear Members of the Twenty-Sixth Legislature:

I support SB112 because the State of Hawaii is the perfect place for a spaceport. The location in the middle of the Pacific, the closeness to the equator and the cleanness of the atmosphere are benefits for a spaceport. Even the reef runway at the Will Rogers International Airport is an added benefit.

The 2009 Session of the Legislature recognized the benefits for Hawaii when they passed a similar bill, but, unfortunately, the funds were never released. It is now time for the present Legislature to “step-to-the-plate” and approve/release funds for an environmental assessment, considering risk management ideals, to help put Hawaii on the World map of Spaceports.

Mahalo!

Stewart V. Burley

Stewart V. Burley
President
www.stu@stukauai.com



MARS INSTITUTE

10 Feb 2011

Attn: 26th Legislature of the State of Hawaii

RE: Mars Institute Testimony to the State of Hawaii Legislature in Support of Senate Bills 112, 165 and 1496.

Dear Members of the Twenty-Sixth Legislature,

I am happy to provide testimony in strong support of Hawaii State Senate Bills 112, 165, and 1496, scheduled for consideration today.

I am chairman of the Mars Institute, a 501 c3 non-profit research organization whose mission is the advance the scientific study, exploration, and public understanding of the planet Mars. The Mars Institute is a world leader in space research, with focus on not just Mars itself, but also on the stepping stones that will allow humans to explore Mars: the Moon, near-Earth asteroids, and Mars's moons, Phobos and Deimos.

The Mars Institute has collaborations and partnerships with academia and industry across the nation and internationally, including with emerging space-faring nations of the Pacific Belt, particularly Australia and Japan. The Mars Institute is internationally recognized for its expertise in planetary analog research (research at sites on Earth that resemble the Moon or Mars and allow simulations of their exploration), and is the organization operating the *Haughton-Mars Project Research Station*, the world's largest privately operated polar research station (on Devon Island, in the Arctic). The Mars Institute collaborates with PISCES in Hawaii to advance Moon and Mars exploration, and views Hawaii potential in helping advance space exploration as critical and of strategic importance, for scientific, economic, and national security reasons.

We are 100% behind Senate Bills 112, 165, and 1496.

A handwritten signature in black ink, appearing to read "Pascal Lee".

Pascal Lee, Ph.D.
Chairman, Mars Institute
NASA Research Park
Moffett Field, CA 94035-0006
Tel: (408) 687-7103; E-mail: pascal.lee@marsinstitute.net

From: mailinglist@capitol.hawaii.gov [mailto:mailinglist@capitol.hawaii.gov]
Sent: Wednesday, February 02, 2011 11:31 AM
To: PGM Testimony
Cc: pennysfh@hawaii.rr.com
Subject: Testimony for SB112 on 2/10/2011 2:45:00 PM

Testimony for PGM/EDT/TSM 2/10/2011 2:45:00 PM SB112

Conference room: 224
Testifier position: oppose
Testifier will be present: No
Submitted by: Penny Levin
Organization: Individual
Address: Wailuku, Maui
Phone:
E-mail: pennysfh@hawaii.rr.com
Submitted on: 2/2/2011

Comments:

Aloha Honorable Committee Members;
You're kidding right? This is a boondoggle from the Lingle administration that has already wasted our money and will continue to do so.

In the budget shortage we've got now, this shouldn't even be on the table.

Before you even consider the potential of such a project, consider that there is no "viability" for such a project; it would always be a tremendous cost to Hawaii's and the nation's taxpayers and to our aina. NASA is a huge drain on our national budgets and resources. What this seems to be is a way for the federal government to continue its space program but get states and individuals to pay for it. Like the Superferry, they will wait for it to be completed and then step in at use the facility for their own purposes. We've had enough federal/state projects double-dipping into our tax dollar pockets in the last decade.

The private operations described in this bill are paper earnings only. No space station is up and functioning and it will be decades and billions of dollars before that is even remotely possible. The projected revenues are not real. Like all other national and international companies here; the dollars would go out of state the same day they come in. The only jobs locals are likely to get are the short term construction jobs (if they are lucky)and greeters; the high tech space jobs will go to people from the mainland for the most part.

Before you get excited about potential tax revenues - please consider at what expense? The potential costs from the pollution fallout of such a project - into our ocean, fresh water sources, our beautiful Hawai'i atmosphere, and our soils, including heavy metals from the fuels and exhaust, visual and noise pollution would be tremendous. People

here struggle already with the vog created by our spectacular volcanoes. We don't need rocket fuel added to the fire.

Short term jobs will never offset such long term damages. Let Florida and New Mexico do this. Let Hawaii be unique and distinctive in its own way - who else has active volcanoes?! Perhaps, of all the tourist destinations, we will be the last ones left with a truly beautiful natural environment - because we've protected and restored it rather than hammered away at it with every little 'get rich quick' scheme like this.

A lot of us are getting tired of the race to be like everyone else. That is not what will keep visitors coming. They will go to Florida and New Mexico to ride into space - because it is cheaper all the way around. To compete, Hawaii would end up giving this industry tax breaks on the backs of already strapped residents.

Please, put this idea to rest and focus on what truly makes Hawai'i unique. When you sustain aina and culture, you will lift our economy with it.

Mahalo for this opportunity to testify.

From: mailinglist@capitol.hawaii.gov [mailto:mailinglist@capitol.hawaii.gov]
Sent: Wednesday, February 02, 2011 1:35 PM
To: PGM Testimony
Cc: c_pomponio@yahoo.com
Subject: Testimony for SB112 on 2/10/2011 2:45:00 PM

Testimony for PGM/EDT/TSM 2/10/2011 2:45:00 PM SB112

Conference room: 224
Testifier position: comments only
Testifier will be present: No
Submitted by: Cathleen Pomponio
Organization: Individual
Address: Honolulu, Hawaii
Phone: 8084572914
E-mail: c_pomponio@yahoo.com
Submitted on: 2/2/2011

Comments:

I believe the entire concept is based on a flawed logic that: "The legislature finds that tourism is the chief generator of employment and revenue in the State...increased visitor sophistication [sp - sic]..."

The addition of a launching pad and all of its paraphenellia would increase air pollution to the extent that anyone wanting to visit Hawaii for it's beaches and fine weather, it's hiking trails and so forth will be very disappointed. I would rather see upgrading the trail systems that are already in place, upgrading and cleaning up the beach areas, hiring more lifeguards to safeguard the beaches, put more money into the park system and hire security for public safety; create more eco-friendly tours for incoming visitors who really want to bike, hike, kyack, and so forth. There is far more liability in creating a space station and shooting visitors off into the galaxy, and far more costly, though more EXCITING I am sure; but for those less jaded people, I would prefer to see the tax base spent on creating a more georgeous environment for the visitor to enjoy; and employ the local people to help maintain these properties.