

Welcoming Remarks

***Jim Crisafulli, Director
Hawaii Office of Aerospace Development***

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Fairmont Orchid Resort
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On behalf of the Office of Aerospace Development and our State Administration, I'm delighted to join our JUSTSAP Executive Steering Committee in welcoming all of you to the 2009 JUSTSAP Forum at the Fairmont.

Former Governor George Ariyoshi – our United States Advisor for JUSTSAP – was also planning to be here to greet you this morning, but unfortunately had to undergo emergency surgery on his back last Thursday and was unable to travel to the Big Island this week. He asked me to convey his deep appreciation for the sustained and enthusiastic support many of you have contributed to JUSTSAP over the years, and looks forward to working with all of us as we continue to expand and diversify this organization's mission and diverse contributions to the global space community.

As I'm sure most of you are aware, this year will mark a turning point in JUSTSAP's development – especially in response to the major transformations in space science and exploration currently underway worldwide – and this Forum will play an instrumental role in helping us define why and how JUSTSAP can enhance both its relevance and effectiveness in advancing humankind's exploration and utilization of space.

Over the years, the Asia-Pacific community has played a significant role in the development of the global space industry. Hawaii in particular has contributed much to this effort – largely because our State’s diverse natural resources, Moon-Mars like terrain, and resident scientific and engineering expertise have made our island community an ideal location to catalyze, grow and sustain a wide variety of aerospace-related activities – including programs like JUSTSAP.

This year, Hawaii is celebrating its 50th Anniversary of admission to Statehood, and for the past half-century has been instrumental in advancing national programs in both aeronautics and space exploration – beginning with the training of Apollo astronauts in the 1960s and the development of world-class observatories atop Hawaii’s volcanic peaks.

Today, Science City on Maui hosts our nation’s most sophisticated deep space surveillance site, while the Pacific Missile Range Facility on Kaua’i supports the world’s largest multi-environment testing and training platform for a broad range of technologies.

The University of Hawaii is home to scores of principal investigators supporting both basic and applied research in space-based ocean, terrestrial and atmospheric studies.

Locally grown companies on Oahu, Maui, Kauai and the Big Island are developing new products and services supporting advanced weather monitoring and forecasting, land and coastal resource assessment, optical communications and electro-optical tracking.

And major aerospace corporations such as Boeing, Lockheed Martin, BAE Systems, Raytheon and Northrop Grumman maintain Hawaii-based operations to support both military and civilian programs in space research and development.

In years to come, we believe these strategic technological assets and capabilities, coupled with our State's unique geographical location and broad international connectivity, will enable Hawaii to sustain and expand its leadership role in advancing the global aerospace industry – most notably as:

- a testbed for the development of next generation aviation technologies to enhance the efficiency and safety of air travel worldwide;
- a regional hub for advanced pilot training, air traffic control, and aircraft maintenance to service international air carriers throughout the Asia-Pacific region;
- a pioneer in the development of adaptive optics and advanced sensor technologies, with broad applications in astronomy, atmospheric and oceanic reconnaissance, and disaster management and mitigation;
- a versatile platform from which to launch experimental payloads, small satellites and people to space using both expendable rockets and reusable spaceplanes;
- a global testbed for prototyping clean, sustainable energy technologies, including space-based solar power systems, that can energize our planet; and perhaps most importantly,
- an international center promoting multinational collaboration in the development, testing and evaluation of new aerospace technologies; aerospace education and training; and the formation of trans-Pacific partnerships for future space missions to the Moon, Mars and beyond.

This last opportunity has clearly been championed and advanced within JUSTSAP – especially through the development of the Pacific International Space Center for Exploration Systems, or PISCES, at the University of Hawaii at Hilo, which, during its first two years of operation, has achieved some truly remarkable milestones – including groundbreaking multinational field tests on the slopes of Mauna Kea demonstrating new technologies to extract water and oxygen from volcanic soils simulating the lunar regolith; robust aerospace education and training curricula to help educate the next generation of scientists and engineers; and extensive community outreach programs to inform and inspire the general public on the potential and promise of future space exploration.

We are indebted to the PISCES advisory team, and in particular to PISCES Director Frank Schowengerdt and Deputy Director Robert Fox, for their extraordinary efforts to launch PISCES in Hawaii. Thank you for your sustained insight, vision and perseverance in moving this outstanding program forward.

In this International Year of Astronomy and 400th Anniversary of the invention of the Telescope, it is also emblematic of Hawaii's space research potential that our State has been selected as the preferred site for both the Thirty Meter Telescope and the Advanced Technology Solar Telescope – the largest instruments of their kind in the world, representing a collective investment of \$1.5 billion in our local economy – that will revolutionize both the science of astronomy and our understand of the Cosmos. In addition, the International Astronomical Union has recently chosen Hawaii as the global site for its 2015 General Assembly, which will bring the world's preeminent astronomers to the islands for ten days of deliberations that will set the course for global astronomical research for years to come.

Our nation's future potential in space, and indeed the next chapter of humankind's rendezvous with the Cosmos, will be intertwined with development of innovative technologies and protocols – articulated and sustained through both public-private partnerships and multinational alliances – that can cost-effectively advance space science and exploration to improve our collective abilities to engineer global communications and renewable energy systems, enhance our surveillance and stewardship of our home planet, and ultimately carry us back to the Moon, on to Mars and beyond.

To meet these challenges, substantial resources will need to be devoted to pioneering commercial spinoffs from basic research that will provide sustainable economic drivers for future space missions; to training new scientists, engineers and other professionals to help design, validate and implement revolutionary technologies; and to both inspiring and engaging the public at large in the vision and promise of future space exploration.

We believe the State of Hawaii – especially through programs like JUSTSAP and PISCES – can and will play a seminal role in achieving these objectives, and thank all of YOU for your vision, insights and perseverance in working with our island community to help realize these phenomenal opportunities.

I now would like to introduce Drs. Osamu Odawara and Frank Schowengerdt, our Japan and U.S. vice chairmen for JUSTSAP, who will share some of their thoughts with us on the importance and future potential of JUSTSAP and the Japan-U.S. Space Alliance.

Dr. Odawara.