

The Caltech Submillimeter Observatory
GEORGINA and WILLIAM GIMBEL BUILDING
.... the story of the CSO base facility in Hilo

The Caltech Submillimeter Observatory was the direct consequence of the Barrett Committee report which recommended that a mm-wave interferometer be developed and later a small high-altitude dish for submm astronomy. Already in 1982, Tom Phillips had in mind a site on Mauna Kea for the submm telescope and had started work on a search for a sea-level base facility. He began by searching the west coast of the Big Island for a suitable location. Realizing that the Hawaii Natural Energy Laboratory research center on the west coast was also a National Science Foundation funded facility, he inquired on the feasibility of sharing some space, but was firmly rejected. Searches for rental space in down-town Kailua-Kona were unsuccessful, as was a suggestion from IfA for a site along Route 190. However, the Hawaii politicians in Hilo were very affirmative and CSO turned to UHH and obtained some unused space at the old Community College Campus on Manono Street.

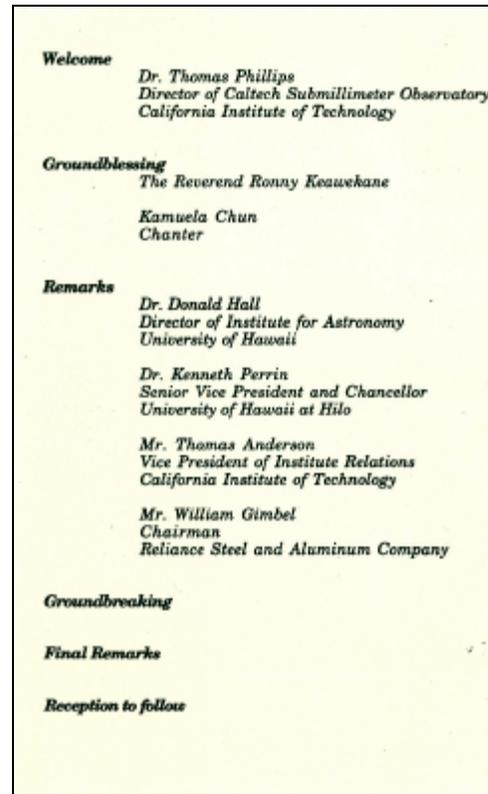
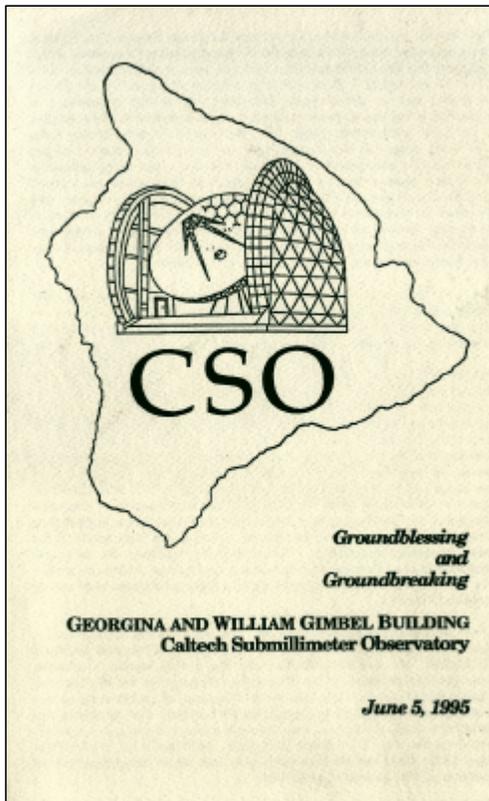
Thus, when CSO first started operations on Mauna Kea (~1985), it shared space with CARA (California Association for Research in Astronomy, the Caltech / Univ. of California group that developed the Keck Observatory) on the Hawaii Community College campus. This included one of the old shop buildings for storage and work space, and the main administration building which had been vacated by the community college. (This is a long story related to the dissolution of the Community College and uniting it with the UH-Hilo. Years later this was reversed and the separate Community College re-established.) For CSO this was a fine arrangement for we had lots of space and plenty of parking and access to the excellent food at the cafeteria! When CARA moved out to occupy its new facilities in Waimea, we had even more space. But this was too good to last. The time came when the UH-Hilo began to feel the crunch for space on the main campus and so one day we got a notice to vacate the space.

That sent us scrambling to find commercial space. A site was found along Kilauea Avenue in a small building between Hawaii Motors and Café 100, with a dentist upstairs and CSO occupying the

ground floor. It was not ideal but served the purpose. The UHH had already set aside space on the upper campus for future research facilities and had notified CSO of the availability of space for building. The United Kingdom's Joint Astronomy Centre had already begun construction of its facility in the Research Park, but CSO had no funds for any such construction. Nevertheless, we put in our bid for one of the vacant lots and CSO Director Tom Phillips went to work to interest Caltech administrators in raising funds for the base facility. A year or two went by with no luck so finally the administration budgeted a million dollars for a building. This then allowed us to hire an architect, the Oda-McCarty Architects of Hilo, and to begin our planning. The first of many meetings with the architects Russ Oda and Harrel McCarty took place on July 12, 1993.

While we worked with the UHH administration on matters of the lease and building requirements, the architects were hard at work on the schematic phase, producing a preliminary plan on July 23 with a cost estimate of 972k. It was deemed that this was too close to what we had and did not leave enough for contingencies. An 8% reduction in space and other costs was agreed upon.

The next year and a half was occupied with working out the lease conditions and with solving problems of utilities access, driveway and parking locations, building location on the lot, environmental assessment, and development of the building plans. Alternatives to consider were whether to build on the upper or lower part of the lot, and correspondingly have the access directly from Nowelo Street or from the lower A`ohoku Street. Fortunately, the final decision was to build on the upper part of the lot which allowed a fine view over Hilo. After a seemingly endless series of trials and tribulations everything finally came together except the funding! At the last minute this problem, too, found a solution by the offer of a generous grant from a California business man and his wife, William and Georgina Gimbel. The gift was in the form of a house which Caltech sold and later monetary grants were also made. William T. Gimbel was Chairman of the board and CEO of Reliance Steel & Aluminum Co. of Los Angeles. (see Gimbel.doc) And so, at last, the project went out to bid, with bid openings on January 19, 1995. The low bidder was the Hilo Construction Company, with a bid of \$1,154,000. Ground breaking and blessing took place on June 5, 1995.



Mr. and Mrs. Gimbel are breaking the ground with their O`o sticks, in typical Hawaiian fashion. On the right is Steven Yamashiro, Mayor of the Big Island





Mr. and Mrs. Gimbel are greeted with Maile leis by CSO Site Manager Antony Schinkel

In the following weeks and months it was very gratifying to see the building rise. Gary Mizuno, president of the Hilo Construction Company, was a pleasure to work with and his estimator, Kit Callison, was also very knowledgeable and helpful.



The future entry way.



The east-facing façade. Each window will be a separate office.



The west-facing façade with the main entry in center and the workshop on the left.

Construction proceeded on schedule without any major problems so that a dedication and blessing was held on February 23, 1996.



The eastern face of the new Gimble Building

The western face of the new Gimbel Building



The spacious new office for Administrative Assistant Diana Bisel. The view is of Hilo town and Hilo Bay.

*Dedication
of the*

**GEORGINA AND WILLIAM
GIMBEL BUILDING**

Caltech Submillimeter Observatory

*Friday
February 23, 1996*

Welcome

**Dr. Thomas Everhart, President
California Institute of Technology**

Remarks

**Dr. Donald Hall, Director
Institute for Astronomy
University of Hawaii**

**Stephen Yamashiro, Mayor
Hilo, Hawaii**

**Russell Oda, President
Oda/McCarty Architects**

**Gary Mizuno, President
Hilo Construction**

**Dr. Thomas Phillips, Director
Caltech Submillimeter Observatory
California Institute of Technology**

**William Gimbel, Chairman
Reliance Steel and Aluminum Company**

Traditional Hawaiian Blessing

Kalena Silva

Christian Blessing

Rev. Billie Keawekane

Cutting of Piko

Georgina Gimbel

Final Remarks

Dr. Thomas Everhart

Reception



A happy Tom Phillips addresses the dedication gathering.



Bill Wong of Pasadena enjoying the tropical flower arrangement honoring the new facility.

Arrangement by Shelly Hanaoka of Hanaoka Farms



Architect Russell Oda and wife Aki of Hilo

Mike Mc Callan of Pasadena

Visitors from Caltech:
Thomas Anderson
Bob Fort
Mike McCallan





Some of the folks involved with the project enjoying a meal at the home of architect Russ Oda, center.

l. to rt.: Elliot Merk, Jerry Watanabe, Richard Brand, Oda, Sandy Watanabe, Walter Steiger, Mike McCallan



In a traditional Hawaiian dedication ritual Friday for the Georgina and William Gimbel Building at Hilo's University Research Park, Kalena Silva, left, assists as Georgina Gimbel cuts the "piko" (umbilical cord), bringing the building to life. Above, guests of honor William and Georgina Gimbel, center, tour the new building escorted by California Institute of Technology President Thomas Everhart and Thomas Phillips, director of Caltech Submillimeter Observatory.

—T-H photo by William Ing

Astronomy takes off at park

□ A new support facility for Caltech observatory dedicated

By Frankle Stapleton
Tribune-Herald

It wasn't "the big bang" but Friday's dedication at University Research Park of a support facility for the Caltech Submillimeter Observatory is expected to be the beginning of something big.

"This is the first step in the biggest aggrega-

tion of astronomical facilities any place," Mayor Stephen Yamashiro told representatives of the astronomical and university communities gathered at the University of Hawaii-Hilo's research park off Komohana Street for the opening of the \$1.25 million Georgina and William Gimbel Building.

The Gimbels of San Marino, Calif., who are members of The Associates of Caltech, donated the funds to construct the building which pro-

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ASTRONOMY: Support facility dedicated

From Page 1

vides laboratory and office space as well as operations facilities in support of the astronomers and technicians working at California Institute of Technology's submillimeter telescope atop Mauna Kea. The CSO has been in operation since 1989 with funds from the National Science Foundation.

"The job of this building is to enhance the study of the formation of stars and distant galaxies," said Thomas Phillips, director of the Caltech Submillimeter Observatory. "Those laboratories will help build our equipment and build our detectors," he said, adding the new facility will make "life so much better" for the scientists and technicians who often work in harsh conditions atop the

13,796-ft. summit.

Director of the University of Hawaii Institute For Astronomy Donald Hall remarked that things had been quiet at the University Research Park since the opening of the Joint Astronomy Centre there several years ago.

"But this building signifies things are taking off," Hall said, noting two other expected astronomical projects, Gemini and the Smithsonian Submillimeter Array. "This is the beginning of one of the real world centers of astronomy."

Hall said things are "in place" for the extension of the road from the University Research Park to the UHH campus, the completion of which he said

would be an "important step in tying together the separate elements" of academics and research.

Prior to the blessings of the building in Hawaiian and English, UHH Chancellor Kenneth Perrin welcomed Caltech to the extended family of the university. He said the construction at the University Research Park of the state's Institute For Astronomy would be a \$7.5 million "bridge" integrating the park "into the fabric of the University of Hawaii at Hilo."

The Gimbels' children and their families were part of the audience gathered under bright yellow and white awnings for protection from Friday afternoon's blustery, often rainy skies. William Gimbel, who is

chairman of publicly-traded Los Angeles company, Reliance Steel and Aluminum, said he brought his entire family to Hilo for the dedication so they could "see their inheritance."

Kalena Silva, chairman of the UHH Department of Hawaiian Studies, offered a chant and conducted traditional Hawaiian rituals seeking blessings for the facility and the works that will be conducted there. Georgina Gimbel then wielded an adze, cutting a green garland "piko" signifying the "birth" of the new building that bears her name.

The building, designed by Oda/McCarty Architects and built by Hilo Construction, was completed eight months after groundbreaking.

From the dedication brochure:

The Caltech Submillimeter Observatory (CSO) on Mauna Kea, Hawaii, was constructed with funds from the National Science Foundation (NSF) and from the Kresge Foundation, and has been in full operation since 1989. It consists of a 10.4m diameter telescope designed by Dr. Robert Leighton and is fitted with detection equipment consisting of superconducting tunnel junction devices and bolometers for wavelengths in the 1 mm to 300 micron range. The observatory is used for studies of the very early stages of star-formation in the interstellar medium of our galaxy and for determination of the abundances of the many molecular and atomic species that make up the gas from which stars are formed. Studies of such gas are carried out in nearby and distant galaxies, with searches for extremely distant galaxies which may be in a state of formation. Astronomers also study effects on the cosmic background radiation due to clusters of galaxies, to measure the Hubble constant and local perturbations to a steady expansion of the Universe.

The CSO is operated by the California Institute of Technology with funding from the NSF. The Universities of Hawaii and Texas are partners, and the telescope is also made available for use by the astronomy community in general.

For the first several years of operation the CSO has not had a dedicated support building at sea-level in Hawaii. However, with the assistance of a generous gift from Mr. and Mrs. William Gimbel, the Caltech administration has authorized the construction of a new building in the University Research Park in Hilo. The land is leased from the University of Hawaii. This building will provide office space, laboratory space, and operations facilities for the staff of the observatory who work on the Big Island and for visiting astronomers from Caltech and elsewhere. The new laboratory space will be used for construction of detection equipment for the observatory, involving state-of-the-art superconducting device technology, acousto-optic devices, and also very high speed digital data processing technology. There will be facilities for computer programming in telescope and instrument control and in data reduction. The building will be able to support about a dozen permanent staff and up to about 10 visitors.

In recognition of the support from Mr. and Mrs. Gimbel, the Institute is pleased to name this facility the GEORGINA AND WILLIAM GIMBEL BUILDING. Mr. and Mrs. Gimbel, who live in San Marino, California, have also been residents of the Mauna Kea Fairways on the Big Island of Hawaii for 18 years. Mr. Gimbel is chairman of Reliance Steel and Aluminum Company, a Los Angeles-based company that processes and distributes steel, aluminum, and stainless steel products and is publicly traded on the New York Stock Exchange. Affiliated with the Institute since 1981, the Gimbels and their son and three daughters are all members of The Associates of Caltech.

CALTECH BASE FACILITY



NO.	DESCRIPTION	Quantity	Unit	Estimated Price	Actual Price
1	Excavation	100,000	cu yd	10,000,000	10,000,000
2	Foundation	10,000	sq ft	1,000,000	1,000,000
3	Structural Steel	10,000	lb	1,000,000	1,000,000
4	Concrete	10,000	cu yd	1,000,000	1,000,000
5	Masonry	10,000	sq ft	1,000,000	1,000,000
6	Roofing	10,000	sq ft	1,000,000	1,000,000
7	Interior Finishes	10,000	sq ft	1,000,000	1,000,000
8	MEP	10,000	sq ft	1,000,000	1,000,000
9	Site Work	10,000	sq ft	1,000,000	1,000,000
10	Site Work	10,000	sq ft	1,000,000	1,000,000
11	Site Work	10,000	sq ft	1,000,000	1,000,000
12	Site Work	10,000	sq ft	1,000,000	1,000,000
13	Site Work	10,000	sq ft	1,000,000	1,000,000
14	Site Work	10,000	sq ft	1,000,000	1,000,000
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37	Site Work	10,000	sq ft	1,000,000	1,000,000
38	Site Work	10,000	sq ft	1,000,000	1,000,000
39	Site Work	10,000	sq ft	1,000,000	1,000,000
40	Site Work	10,000	sq ft	1,000,000	1,000,000
41	Site Work	10,000	sq ft	1,000,000	1,000,000
42	Site Work	10,000	sq ft	1,000,000	1,000,000
43	Site Work	10,000	sq ft	1,000,000	1,000,000
44	Site Work	10,000	sq ft	1,000,000	1,000,000
45	Site Work	10,000	sq ft	1,000,000	1,000,000
46	Site Work	10,000	sq ft	1,000,000	1,000,000
47	Site Work	10,000	sq ft	1,000,000	1,000,000
48	Site Work	10,000	sq ft	1,000,000	1,000,000
49	Site Work	10,000	sq ft	1,000,000	1,000,000
50	Site Work	10,000	sq ft	1,000,000	1,000,000

These memoirs compiled by Walter Steiger, 2008