



**CALIFORNIA ASSOCIATION
FOR RESEARCH IN ASTRONOMY
DBA W. M. KECK OBSERVATORY**
(A Nonprofit California Public Benefit Corporation)

Financial Statements

September 30, 2008 and 2007

(With Independent Auditors' Report Thereon)



KPMG LLP
PO Box 4150
Honolulu, HI 96812-4150

Independent Auditors' Report

The Board of Directors
California Association for Research in Astronomy:

We have audited the accompanying statements of financial position of California Association for Research in Astronomy (CARA) as of September 30, 2008 and 2007, and the related statements of activities and cash flows for the years then ended. These financial statements are the responsibility of CARA's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of CARA's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of California Association for Research in Astronomy as of September 30, 2008 and 2007, and the changes in its net assets and its cash flows for the years then ended in conformity with U.S. generally accepted accounting principles.

KPMG LLP

February 5, 2009

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Statements of Financial Position
September 30, 2008 and 2007

Assets	2008	2007
Current assets:		
Cash and cash equivalents	\$ 13,057,437	14,132,893
Receivables, net:		
Jet Propulsion Laboratory (note 4)	55,216	483,012
National Science Foundation (note 6)	42,242	59,273
Center for Adaptive Optics	26,975	2,544
University of California	18,982	16,753
National Aeronautics and Space Administration (note 3)	15,353	19,470
Department of Homeland Security – FEMA (note 7)	12,823	349,148
Contributions receivable, net (note 8)	278,675	1,628,033
Other	20,033	61,764
Prepaid expenses	105,288	129,073
Total current assets	13,633,024	16,881,963
Property and equipment, at cost less accumulated depreciation (notes 9 and 12)	84,058,286	81,805,326
Total assets	\$ 97,691,310	98,687,289
Liabilities and Net Assets		
Current liabilities:		
Accounts payable and accrued expenses:		
University of California	\$ 341,054	457,415
California Institute of Technology	382,455	459,915
Other	1,997,441	2,038,534
Advances (note 2):		
University of California:		
Observatory operations	7,167,235	7,968,684
Observatory instrumentation	—	119,661
Association of Universities for Research in Astronomy (note 5)	1,296,969	860,194
Other	12,640	27,427
Total current liabilities	11,197,794	11,931,830
Net assets:		
Unrestricted:		
Undesignated	84,074,935	81,821,975
Board designated (note 13)	229,832	127,516
Temporarily restricted (note 14)	2,188,749	4,805,968
Total net assets	86,493,516	86,755,459
Commitments (notes 12 and 15)		
Total liabilities and net assets	\$ 97,691,310	98,687,289

See accompanying notes to financial statements.

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Statements of Activities

Years ended September 30, 2008 and 2007

	2008	2007
Changes in unrestricted net assets (notes 1 and 2):		
Unrestricted operating support and revenues:		
Contributions (note 13)	\$ 177,646	106,680
Operating revenue:		
University of California:		
Observatory operations	12,422,921	10,796,966
Observatory instrumentation	119,661	—
Other	—	81,866
National Aeronautics and Space Administration (note 3):		
Observatory operations	3,083,669	3,221,139
Observatory instrumentation	—	762,765
Jet Propulsion Laboratory (note 4)	2,147,950	2,988,510
Association of Universities for Research in Astronomy (note 5)	1,815,321	2,748,216
National Science Foundation (note 6)	633,526	366,870
Center for Adaptive Optics	124,888	37,411
Change Happens Foundation	100,212	203,992
Department of Homeland Security – FEMA (note 7)	(2,219)	420,902
Other	35,250	27,517
Interest income:		
Operations	394,869	444,097
Observatory instrumentation	—	8,661
Net assets released from restriction:		
Satisfaction of equipment acquisition restrictions (note 14)	2,763,492	976,554
Total unrestricted operating support and revenues	23,817,186	23,192,146
Expenditures (notes 11 and 15):		
Program services:		
Observatory operations, including loss from transfer to Caltech of \$2,958,960 in 2008 and \$0 in 2007 (note 9)	17,678,335	13,814,945
Research	230,405	286,523
Administrative and general	3,167,454	2,788,555
Fund-raising	385,716	441,292
Total expenditures	21,461,910	17,331,315
Change in unrestricted net assets	2,355,276	5,860,831
Change in temporarily restricted net assets (note 14):		
Contributions, net	31,435	201,066
Interest earned	114,838	159,780
Net assets released from restriction	(2,763,492)	(976,554)
Change in temporarily restricted net assets	(2,617,219)	(615,708)
Change in net assets	(261,943)	5,245,123
Net assets at beginning of year	86,755,459	81,510,336
Net assets at end of year	\$ 86,493,516	86,755,459

See accompanying notes to financial statements.

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Statements of Cash Flows

Years ended September 30, 2008 and 2007

	<u>2008</u>	<u>2007</u>
Cash flows from operating activities:		
Change in net assets	\$ (261,943)	5,245,123
Adjustments to reconcile change in net assets to net cash provided by operating activities:		
Depreciation	4,764,968	4,886,143
Net loss on disposal of property and equipment (note 9)	3,462,762	40,279
Decrease (increase) in assets:		
Receivables, net	2,149,698	1,806,009
Prepaid expenses	23,785	(1,913)
Increase (decrease) in liabilities:		
Accounts payable and accrued expenses	(234,914)	389,330
Advances	(499,122)	(1,037,449)
Net cash provided by operating activities	<u>9,405,234</u>	<u>11,327,522</u>
Cash flows from investing activities:		
Purchases of property and equipment	(10,539,890)	(10,723,667)
Proceeds on sale of property and equipment	59,200	43,095
Net cash used in investing activities	<u>(10,480,690)</u>	<u>(10,680,572)</u>
Net increase (decrease) in cash and cash equivalents	(1,075,456)	646,950
Cash and cash equivalents at beginning of year	<u>14,132,893</u>	<u>13,485,943</u>
Cash and cash equivalents at end of year	<u>\$ 13,057,437</u>	<u>14,132,893</u>

See accompanying notes to financial statements.

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(1) Description of Reporting Entity

California Association for Research in Astronomy (CARA) is a nonprofit corporation formed by the California Institute of Technology (Caltech) and the University of California (UC) in January 1985 to build and operate the W. M. Keck Observatory (Observatory) on the summit of Mauna Kea in Hawaii. Tax exempt under Section 501(c)(3) of the Internal Revenue Code, CARA is a nonprofit California public benefit corporation and, as such, is qualified as a nonprofit corporation in the state of Hawaii.

The principal purpose of CARA is to foster astronomical research and to provide technical direction for the development and operation of astronomical facilities on the island of Hawaii, principally on land owned by the state of Hawaii, leased to the University of Hawaii, and subleased to Caltech. The Observatory is owned by Caltech and is leased to CARA for \$1 per year. In consideration for subleasing the land to Caltech for \$1 per year through 2033, the University of Hawaii receives an opportunity to use the Observatory and related facilities and improvements. The astronomical facilities include two ten-meter telescopes (Keck I and Keck II), related instrumentation, adaptive optics technology, support facilities, and required infrastructure improvements.

The costs of development of the Observatory and the development of adaptive optics technology were borne by Caltech, the majority of which were funded by grants from the W. M. Keck Foundation (Foundation). Caltech's maximum liability for Keck I and Keck II development costs is \$75,222,000, measured in 1984 dollars, and \$78,600,000, measured in 1990 dollars, respectively. The Foundation's grant to Caltech for adaptive optics technology is \$6,300,000.

UC provided financial support to CARA for pre-operating costs during the Observatory's development periods, acquisition of focal plane instrumentation, and observatory operations. For fiscal years 2008 and 2007, UC provided continuing operating support for Keck I operations in the amount of \$3,500,000 per year, which continues through fiscal year 2017, and \$1,750,000 for the six-month period ending March 31, 2018, all measured in 1984 dollars. For fiscal years 2008 and 2007, UC provided support for Keck II operations in the amount of \$2,105,000 per year, which continues through fiscal year 2017, and \$1,052,500 for the six-month period ending March 31, 2018, all measured in 1990 dollars.

During 1993, Caltech and UC modified their original funding and governance agreement. Certain modifications provided for third-party participation by the National Aeronautics and Space Administration (NASA) in the funding of the costs of the Observatory. In a cooperative agreement between Caltech and NASA, NASA contributed \$44,005,000 to Caltech through fiscal year 2000 in return for collaboration in the project.

(2) Summary of Significant Accounting Policies

(a) Financial Statement Presentation

The accompanying financial statements have been prepared on the accrual basis of accounting in accordance with U.S. generally accepted accounting principles (GAAP).

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CARA follows the requirements of Financial Accounting Standards Board (FASB) Statement of Financial Accounting Standards (SFAS) No. 117, *Financial Statements of Not-for-Profit Organizations*. Under SFAS No. 117, CARA is required to report information regarding its financial position and activities according to three classes of net assets: unrestricted net assets, temporarily restricted net assets, and permanently restricted net assets, based upon the existence of any donor-imposed stipulations. Accordingly, net assets of CARA and changes therein are classified and reported as follows:

Unrestricted Net Assets – net assets not subject to donor-imposed stipulations that may be expended for any purpose in performing the objectives of CARA.

Temporarily Restricted Net Assets – net assets subject to donor-imposed stipulations that may or will be met either by actions and/or the passage of time. As the restrictions are satisfied, temporarily restricted net assets are reclassified and reported in the accompanying financial statements as net assets are released from restriction.

Permanently Restricted Net Assets – net assets subject to donor-imposed stipulations that resources must be maintained in perpetuity. As of September 30, 2008 and 2007, CARA had no permanently restricted net assets.

(b) Cash Equivalents

For purposes of the statements of cash flows, CARA considers all highly liquid instruments with original maturities of three months or less to be cash equivalents.

(c) Property and Equipment

Expenditures incurred by CARA for observatory instrumentation and facilities, operating equipment, and vehicles are capitalized at cost, and depreciated when placed in service. Depreciation is provided over the estimated useful lives of the respective assets using the straight-line method. The estimated useful lives are as follows:

Class of assets	Estimated useful lives
Observatory instrumentation	10 – 20 years
Observatory infrastructure	3 – 15 years
Vehicles and equipment	3 – 25 years

CARA reports contributions designated by donors to acquire long-lived assets as restricted support. Absent explicit donor stipulations about how long those long-lived assets must be maintained, CARA reports expirations of donor restrictions when the acquired long-lived assets are placed in service.

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(d) *Advances*

Operating and instrumentation funds received from UC are recorded as advances until expended for operating expenditures, observatory instrumentation, or vehicles and equipment. Funds received from the Association of Universities for Research in Astronomy (AURA) for the purpose of developing certain instruments for the Keck II telescope or adaptive optics development are recorded as advances until expended for their stated purpose.

(e) *Contributions*

Contributions are recorded in the period received. CARA reports gifts as restricted support if they are received with donor-imposed stipulations that limit the use of the donated assets. When a donor restriction expires, that is, when a stipulated time restriction ends or purpose restriction is accomplished, temporarily restricted net assets are reclassified to unrestricted net assets and reported in the statements of activities as net assets released from restrictions.

As described in note 1 to the financial statements, CARA leases the observatory and related facilities and improvements from Caltech for \$1 per year. As the use of the Observatory is so specific that there is no assignable value, it is impractical to determine a fair rental value to be reported as contribution revenue in the accompanying statements of activities.

(f) *Use of Estimates*

The preparation of the financial statements in accordance with GAAP requires management of CARA to make a number of estimates and assumptions relating to the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenditures during the period. Significant items subject to such estimates and assumptions include the carrying amount of property and equipment and valuation allowances for receivables. Actual results could differ from those estimates.

(g) *Long-Lived Assets*

In accordance with SFAS No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*, long-lived assets, such as property, plant, and equipment, and purchased intangible assets subject to amortization, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If circumstances require a long-lived asset be tested for possible impairment, CARA first compares undiscounted cash flows expected to be generated by an asset to the carrying value of the asset. If the carrying value of the long-lived asset is not recoverable on an undiscounted cash flow basis, an impairment is recognized to the extent that the carrying value exceeds its fair value. Fair value is determined through various valuation techniques, including discounted cash flow models, quoted market values, and third-party independent appraisals, as considered necessary.

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(h) *Sponsored Programs, Grants, and Contracts*

Governmental and private grants and contracts normally provide for the recovery of direct and indirect costs, subject to audit. CARA recognizes revenues associated with direct costs as incurred. Indirect costs recovered on federally sponsored programs are based on cost reimbursement rates negotiated with CARA's cognizant agency, the Office of Naval Research. Indirect costs recovered on all other grants and contracts are based on rates negotiated with the respective parties.

(i) *Reclassifications*

Certain reclassifications have been made to the 2007 financial statements to conform to the 2008 presentation. Such reclassifications had no effect on previously reported change in net assets.

(3) National Aeronautics and Space Administration (NASA) Funding Agreements

In 2008, NASA awarded CARA a new five-year cooperative agreement for telescope observing time and the development of an archived database. Revenues under the cooperative agreements were \$2,006,482.

In 2005, NASA awarded CARA a three-year cooperative agreement for telescope observing time and the development of an archived database. Revenues under the cooperative agreement were \$1,077,187 and \$3,221,139 in 2008 and 2007, respectively.

In 2004, NASA awarded CARA a three-year fixed price contract for instrumentation development. Revenues recognized under these contracts amounted to \$0 and \$762,765 in 2008 and 2007, respectively.

(4) Jet Propulsion Laboratory (JPL) Agreements

In 2005, CARA entered into a \$7,284,011 cost-reimbursement subcontract with JPL for the Keck interferometer project. In 2007, JPL renewed the contract for an additional \$5,142,000 through September 30, 2008. During 2008 and 2007, \$2,575,746 and \$3,097,116, respectively, was received under the subcontract. Revenues under the cost-reimbursement subcontract were \$2,147,950 and \$2,988,510 in 2008 and 2007, respectively. Amounts due to CARA under the cost-reimbursement subcontract of \$55,216 and \$483,012 as of September 30, 2008 and 2007, respectively, are included as receivables in the accompanying statements of financial position.

(5) Association of Universities for Research in Astronomy (AURA) Agreements

In 2004, CARA entered into a fixed price contract with AURA for adaptive optics development. CARA was awarded \$1,080,981 for the development of the next generation of optical wavefront sensor detectors, of which \$0 and \$113,611 was received in 2008 and 2007, respectively.

In 2005, CARA entered into a fixed price contract with AURA for Keck I instrumentation development. In 2005, CARA was awarded \$2,452,629 for the design of MOSFIRE, a Multi-Object Spectrograph for Infra-Red Exploration. In 2007, the fixed price contract was revised to provide additional funding of \$4,913,664 for the MOSFIRE project.

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Revenues recognized under these contracts with AURA amounted to \$1,815,321 and \$2,748,216 in 2008 and 2007, respectively. As of September 30, 2008 and 2007, unspent receipts under the AURA contracts amounted to \$1,296,969 and \$860,194, respectively, and are included as advances in the accompanying statements of financial position.

(6) National Science Foundation (NSF) Award

In 2004, NSF awarded CARA a three-year research grant that was subsequently extended for two additional years. As of September 30, 2008, the total award was \$539,968, of which \$136,364 and \$142,751, respectively, was received in 2008 and 2007.

In 2006, NSF awarded CARA a two-year \$1,958,000 grant to upgrade the Interferometer instrument of which \$539,193 and \$175,585, respectively, was received in 2008 and 2007.

(7) Department of Homeland Security – Federal Emergency Management Agency (FEMA)

During 2008, CARA had expenditures totaling \$418,683 to be reimbursed by FEMA related to repairs for telescope and headquarters damage sustained from the two Kilocho Bay earthquakes on October 15, 2006. As of September 30, 2008, \$405,860 has been received.

(8) Contributions Receivable

Contributions receivable represent unconditional promises to give by donors. In accordance with SFAS No. 116, *Accounting for Contributions Received and Contributions Made*, contributions receivable are recorded at their estimated fair value. Amounts due more than one year later are recorded at the present value of the estimated future cash flows, discounted at a risk-free rate ranging from 4.3% and 3.1% applicable to the year in which the promise was received. Contributions receivable expected to be received at September 30, 2008 and 2007 are as follows:

	2008	2007
Amounts due in:		
One year or less	\$ 281,458	1,374,363
Between one and five years	—	281,458
Gross contributions receivable	281,458	1,655,821
Less – discount to present value	(2,783)	(27,788)
Contributions receivable, net	\$ 278,675	1,628,033

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(9) Property and Equipment

A summary of property and equipment at September 30, 2008 and 2007 follows:

	2008	2007
Observatory instrumentation:		
Property and equipment:		
Keck I	\$ 15,836,926	15,954,423
Keck II	34,895,975	34,778,478
Adaptive Optics	9,083,608	9,909,205
Construction in progress:		
Keck II	50,347,207	41,691,514
	110,163,716	102,333,620
Observatory infrastructure:		
Property and equipment	700,557	4,066,596
Construction in progress	5,830,859	4,138,777
Vehicles and equipment	3,616,780	3,807,876
	120,311,912	114,346,869
Less accumulated depreciation	(36,253,626)	(32,541,543)
	\$ 84,058,286	81,805,326

Depreciation expense amounted to \$4,764,968 and \$4,886,143 in 2008 and 2007, respectively.

As described in note 1 to the financial statements, CARA leases the observatory and related facilities and improvements from Caltech for \$1 per year. In 2008, CARA recorded a \$2,958,960 loss from the transfer to Caltech of capital asset improvements to Observatory facilities that were expended by CARA and recorded on CARA's financial statements. The losses are included in observatory operations expenditures in the accompanying statements of activities.

(10) Income Taxes

CARA is an organization exempt from taxation under Section 501(c)(3) of the Internal Revenue Code and Section 23701d of the California Revenue and Taxation Code and is generally not subject to federal or state income taxes. However, CARA is subject to income taxes on any net income that is derived from a trade or business, regularly carried on, and not in furtherance of the purposes for which it was granted exemption. No income tax provision has been recorded as the net income, if any, from any unrelated trade or business, in the opinion of management, is not material to the basic financial statements taken as a whole.

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(11) Related-Party Transactions

Caltech and UC provide various instrument and adaptive optics development services to CARA. During fiscal years 2008 and 2007, total expenditures for these services charged to CARA were \$1,919,182 and \$1,214,073, respectively, by Caltech, and \$2,054,183 and \$2,038,817, respectively, by UC.

(12) Commitments

CARA entered into various contractual agreements for observatory construction and development of instrumentation, laser guide star and adaptive optics systems, operations, and interferometry systems. A summary of commitments at September 30, 2008 is as follows:

Interferometry	\$	1,614,475
Instrumentation		1,467,276
Laser Guide Star and Adaptive Optics Systems		1,199,524
Operations		<u>936,827</u>
Total	\$	<u><u>5,218,102</u></u>

(13) Board-Designated Net Assets

In 2006, CARA established a board-designated Director's Fund separate from its unrestricted, undesignated net assets for receipt of all unrestricted contributions and their subsequent expenditures. In 2008 and 2007, CARA received contributions of \$102,316 and \$106,680, respectively, which were board designated for the Director's Fund. At September 30, 2008 and 2007, \$229,832 and \$127,516, respectively, was available in the fund.

(14) Temporarily Restricted Net Assets

In 2004, the W. M. Keck Foundation made a contribution of \$2,000,000 to CARA for the purpose of upgrading and optimizing the existing adaptive optics system. In 2008 and 2007, \$248,046 and \$305,926, respectively, of temporarily restricted net assets were released from restriction in satisfaction of equipment acquisition restrictions. At September 30, 2008 and 2007, \$20,365 and \$263,690, respectively, was available for the purpose of upgrading and optimizing the existing adaptive optics system.

In December 2005, CARA received a restricted contribution pledge of \$4,899,875 for Keck I instrumentation development of MOSFIRE. In 2008 and 2007, \$2,412,066 and \$625,378, respectively, of temporarily restricted net assets were released from restriction in satisfaction of equipment acquisition restrictions. At September 30, 2008 and 2007, after discounting the pledge and receipt of interest earned and pledge payments, \$2,162,300 and \$4,439,244, respectively, was available for instrument development.

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In 2006, CARA established a Rising Stars fund to accept contributions in support of the Observatory's sponsored education programs. At September 30, 2008 and 2007, \$6,084 and \$3,034, respectively, was available in this program.

In 2008 and 2007, CARA received various restricted contributions for instrument development and advancement activities totaling \$3,380 and \$45,250, respectively. In 2008 and 2007, \$103,380 and \$45,250, respectively, of temporarily restricted net assets was released from restriction in satisfaction of equipment acquisition and advancement activity restrictions.

(15) Deferred Compensation 403(b) Plan

CARA has a defined contribution retirement plan (the Plan), which was established under Section 403(b) of the U.S. Internal Revenue Code. All eligible employees can participate in the Plan. An eligible employee is defined as an employee regularly scheduled to work at least 20 hours per week subject to the appropriate waiting period as defined in the Plan. CARA is required to make contributions to the Plan at various percentages of base salary depending on the participant's age and grade. Contributions to the Plan amounted to \$788,610 and \$784,556 for fiscal years 2008 and 2007, respectively.