

(A Nonprofit California Public Benefit Corporation)

**Financial Statements** 

September 30, 2012 and 2011

(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, 2012 and 2011, 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, 2012 and 2011, 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.



March 1, 2013

**DBA W.M. KECK OBSERVATORY** (A Nonprofit California Public Benefit Corporation)

# Statements of Financial Position

September 30, 2012 and 2011

Assets	_	2012	2011
Current assets:			
Cash and cash equivalents	\$	15,187,703	12,814,838
Receivables:  Jet Propulsion Laboratory		222,475	274,588
National Aeronautics and Space Administration		169,822	204,811
National Science Foundation		132,168	280,700
Contributions		100,000	
Other		64,804	48,383
Prepaid expenses	_	44,540	28,066
Total current assets		15,921,512	13,651,386
Property and equipment, at cost less accumulated depreciation	_	58,364,270	91,806,294
Total assets	\$ _	74,285,782	105,457,680
<b>Liabilities and Net Assets</b>			
Current liabilities:			
Accounts payable and accrued expenses:			
University of California	\$	125,567	122,563
California Institute of Technology		282,875	610,125
Other Advances:		1,889,634	2,267,846
University of California:			
Observatory operations		10,721,008	9,386,237
W. M. Keck Foundation		1,483,401	
Gordon and Betty Moore Foundation		617,969	
Association of Universities for Research in Astronomy		64,619	710,984
Other	_	30,637	30,906
Total current liabilities	_	15,215,710	13,128,661
Net assets:			
Unrestricted		58,380,539	91,822,872
Unrestricted-board-designated		305,191	243,618
Temporarily restricted	_	384,342	262,529
Total net assets		59,070,072	92,329,019
Commitments	_		
Total liabilities and net assets	\$ _	74,285,782	105,457,680

See accompanying notes to financial statements

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# Statements of Activities

Years ended September 30, 2012 and 2011

	2012	2011
Changes in unrestricted net assets:		
Unrestricted operating support and revenues:		
Contributions:		
National Science Foundation \$	3,063,792	_
Director's Fund	81,651	75,745
Operating revenue:		
University of California: Observatory operations	11,715,451	11,972,464
National Aeronautics and Space Administration	4,429,106	4,289,544
Gordon and Betty Moore Foundation	1,382,031	
Association of Universities for Research in Astronomy	1,260,573	1,347,013
Jet Propulsion Laboratory	1,210,121	1,191,364
National Science Foundation	785,394	1,449,214
Yale University	483,300	_
W. M. Keck Foundation	16,599	
Other	10,165	2,799
Interest earned:		
Observatory operations	347,415	292,840
Observatory technology	45,585	_
Other income	223,137	193,239
Satisfaction of equipment acquisition restrictions	379,733	512,182
Total unrestricted revenues	25,434,053	21,326,404
Expenses:		
Program services:		
Observatory operations	17,283,583	16,115,783
Research	46,145	5,161
Administrative and general	2,718,880	2,413,273
Fund-raising	478,510	424,430
Total expenses	20,527,118	18,958,647
Change in unrestricted net assets, before impairment		
loss on instrumentation	4,906,935	2,367,757
Impairment loss on instrumentation	38,287,695	
Change in unrestricted net assets	(33,380,760)	2,367,757
Change in temporarily restricted net assets:		
Contributions	501,546	398,437
Interest earned	´—	1,398
Net assets released from restrictions	(379,733)	(512,182)
Change in temporarily restricted net assets	121,813	(112,347)
Change in net assets	(33,258,947)	2,255,410
Net assets at beginning of year	92,329,019	90,073,609
Net assets at end of year \$	59,070,072	92,329,019

See accompanying notes to financial statements.

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# Statements of Cash Flows

Years ended September 30, 2012 and 2011

	_	2012	2011
Cash flows from operating activities:			
Change in net assets	\$	(33,258,947)	2,255,410
Adjustments to reconcile change in net assets to net cash			
provided by operating activities:			
Depreciation		5,492,232	4,867,303
Net loss (gain) on disposal of property and equipment		46,319	(33,838)
Contribution of equipment		(3,063,792)	_
Impairment loss on instrumentation		38,287,695	_
Decrease (increase) in assets:			
Receivables, net		119,213	(386,710)
Prepaid expenses		(16,474)	22,974
Increase (decrease) in liabilities:		(500 450)	(1.77.10.5)
Accounts payable and accrued expenses		(702,458)	(157,425)
Advances	_	2,789,507	(149,723)
Net cash provided by operating activities	_	9,693,295	6,417,991
Cash flows from investing activities:			
Purchases of property and equipment		(7,345,030)	(7,159,313)
Proceeds on sale of property and equipment	_	24,600	33,838
Net cash used in investing activities	_	(7,320,430)	(7,125,475)
Net increase (decrease) in cash and cash equivalents		2,372,865	(707,484)
Cash and cash equivalents at beginning of year	_	12,814,838	13,522,322
Cash and cash equivalents at end of year	\$_	15,187,703	12,814,838

Supplemental disclosure of noncash transaction:

In fiscal year 2012, CARA recorded a contribution of equipment of \$3,063,792

See accompanying notes to financial statements.

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Notes to Financial Statements September 30, 2012 and 2011

### (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 10-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 (the Foundation). Caltech's maximum liability for Keck I and Keck II development costs was \$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 was \$6,300,000.

UC provided financial support to CARA for preoperating costs during the Observatory's development periods, acquisition of focal plane instrumentation, and observatory operations. UC provides 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. UC provides 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. For fiscal years 2012 and 2011, CARA received operating support for Keck I operations of \$7,885,920 and \$7,592,235, respectively. For fiscal years 2012 and 2011, CARA received operating support for Keck II operations of \$5,164,302 and \$4,965,674, respectively. For fiscal years 2012 and 2011, CARA recognized operating revenue for Keck I and Keck II operations from UC of \$11,715,451 and \$11,972,464, respectively.

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.

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Notes to Financial Statements September 30, 2012 and 2011

### (2) Summary of Significant Accounting Policies

#### (a) Financial Statement Presentation

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

CARA follows the requirements of Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) Section 958-205-45-2, *Not-for-Profit Entities – Presentation of Financial Statement – Other Presentation Matters*. Under FASB ASC Section 958-205-45-2, 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 or absence of donor-imposed stipulations. Accordingly, net assets of CARA and changes therein are classified and reported as follows:

**Unrestricted Net Assets** – net assets that are not subject to donor-imposed stipulations and 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 restrictions.

**Permanently Restricted Net Assets** – net assets subject to donor-imposed stipulations that resources must be maintained in perpetuity. As of September 30, 2012 and 2011, CARA had no permanently restricted net assets.

#### (b) Cash and 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. As of September 30, 2012 and 2011, CARA had cash and cash equivalents in an account with UC totaling \$14,827,417 and \$11,484,391, respectively.

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### (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 Observatory facility	10 – 20 years 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.

#### (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 telescopes 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, 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

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and the reported amounts of revenues and expenses during the reporting 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

Long-lived assets, such as property and equipment, 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 necessary.

As of September 30, 2012, the National Aeronautics and Space Administration (NASA) has ceased funding for CARA's development and operation of the Interferometer instrumentation. No alternative sources of funding has been identified to complete the project and fund annual operations of the Interferometer instrumentation. An impairment loss of \$38,287,695 has been recorded for the year ended September 30, 2012 in the accompanying statements of activities.

#### (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) Subsequent Events

CARA has evaluated subsequent events from the balance sheet date through March 1, 2013, the date at which the financial statements were available to be issued. There are no other matters to disclose.

### (3) NASA Funding Agreements

In 2008, NASA awarded CARA a five-year cooperative agreement for telescope viewing time, infrastructure renewal, and the development of an archived database. Revenues under the cooperative agreement were \$4,411,396 and \$4,289,544 in 2012 and 2011, 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. In 2009, JPL extended the subcontract for an additional \$2,114,000 through December 30, 2010. In 2011, JPL provided additional funding for the subcontract of \$990,000. In 2012,

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JPL extended the contract for an additional \$911,000 through December 31, 2012. During fiscal 2012 and 2011, \$1,243,964 and \$1,233,284, respectively, was received under the subcontract.

Revenues under the cost-reimbursement subcontract were \$1,191,852 and \$1,189,010 in 2012 and 2011, respectively. Amounts due to CARA under the cost-reimbursement subcontract of \$222,475 and \$274,588 as of September 30, 2012 and 2011, respectively, are included as receivables in the accompanying statements of financial position.

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

In 2004, CARA entered into a fixed price contract with AURA for adaptive optics development. CARA was awarded and advanced \$1,080,981 for the development of the next generation of optical wavefront sensor detectors.

In 2008, CARA entered into a fixed price contract with AURA for next-generation adaptive optics (NGAO) development. CARA was awarded \$2,047,360 for the preliminary design phase of the next generation of optical wavefront sensor detectors.

In 2010, CARA entered into a fixed price contract with AURA for Keck II instrumentation development. CARA was awarded \$1,228,416 to construct the Keck Cosmic Web Imager.

In 2011, CARA entered into a new fixed price contract with AURA for Keck II instrumentation development. CARA was awarded \$1,228,416 to continue constructing the Keck Cosmic Web Imager.

In 2012, CARA entered into a new fixed price contract with AURA for Keck II instrumentation development. CARA was awarded \$2,900,000 to continue constructing the Keck Cosmic Web Imager.

Revenues recognized under these contracts with AURA amounted to \$1,260,573 and \$1,347,013 in 2012 and 2011, respectively. As of September 30, 2012 and 2011, unspent receipts under the AURA contracts amounted to \$64,619 and \$710,984, respectively, and are included as advances in the accompanying statements of financial position.

# (6) National Science Foundation (NSF)

#### **Grant Awards**

In 2009, NSF awarded CARA a three-year \$1,355,500 grant to improve the Keck II laser launch facility of which \$136,303 and \$565,046, respectively, was recognized as revenue in 2012 and 2011.

In 2010, NSF awarded CARA a four-year \$1,716,000 grant to develop the Keck I laser guide star adaptive optics facility of which \$643,516 and \$884,168, respectively, was recognized as revenue in 2012 and 2011.

In 2012, NSF awarded CARA a two-year \$684,000 grant to develop and demonstrate Point Spread Function (PSF) determination for science observations of which \$5,575 was recognized as revenue in 2012.

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Revenues recognized under these grants with NSF amounted to \$785,394 and \$1,449,214 in 2012 and 2011, respectively.

#### Contribution

In August 2012, CARA received title to a 20-watt laser system for Keck I from NSF to further research in the field of astronomy. The laser was procured by the Gemini Observatory under an NSF grant and valued at \$3,063,792. At September 30, 2012, the contributed value is included in the property and equipment.

#### (7) Gordon and Betty Moore Foundation

In 2012, the Gordon and Betty Moore Foundation awarded CARA a \$2,000,000 four-year grant to acquire a laser for the Keck II telescope. CARA recorded \$1,382,031 of operating revenue and \$36,297 of interest earned for this grant. As of September 30, 2012, unspent receipts under the award amounted to \$617,969 and are included as advances in the accompanying statements of financial position.

#### (8) W.M. Keck Foundation

In 2012, the W. M. Keck Foundation awarded CARA a \$1,500,000 four-year grant to provide next generation laser capability for the LGS AO facility on the Keck II telescope. Revenues under the grant, including earned interest of \$9,288, were \$25,887 in 2012. As of September 30, 2012, unspent receipts under the award amounted to \$1,483,401 and are included as advances in the accompanying statements of financial position.

#### (9) Yale University

In 2012, Yale University entered into a five-year program agreement with CARA. The purpose of the program is to expand scientific collaboration between the institutions by involving additional scientific investigators from Yale University in the use of the Keck telescopes to address new scientific questions. Revenues under the agreement were \$483,300 in 2012.

### (10) Contributions Receivable

Contributions receivable represent unconditional promises to give by donors. In accordance with FASB ASC Section 958-605-25, *Not-for-Profit Entities – Recognition – Promises to Give*, 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 an interest rate commensurate with the associated risks in the years in which the promises were received. Contributions receivable due in one year or less was \$100,000 and \$0 at September 30, 2012 and 2011, respectively.

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### (11) Property and Equipment

A summary of property and equipment at September 30, 2012 and 2011 follows:

	_	2012	2011
Instrumentation:			
Property and equipment	\$	72,262,958	54,846,035
Construction in progress	_	3,476,086	55,860,774
		75,739,044	110,706,809
Adaptive optics:			
Property and equipment		19,756,807	11,244,207
Construction in progress		8,621,718	10,934,058
		28,378,525	22,178,265
Infrastructure:			
Property and equipment		3,129,206	2,737,303
Construction in progress	_	3,065,197	3,088,865
		6,194,403	5,826,168
Vehicles and equipment		4,428,678	4,217,161
Less accumulated depreciation		(56,376,380)	(51,122,109)
\$	§	58,364,270	91,806,294

Depreciation expense amounted to \$5,492,232 in 2012 and \$4,867,303 in 2011, respectively.

# (12) Income Taxes

CARA has received a determination from taxing authorities that it is an organization exempt from taxation under Section 501(c)(3) of the U.S. 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 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 financial statements taken as a whole.

In accordance with FASB Interpretation No. 48 (Interpretation 48), *Accounting for Uncertainty in Income Taxes* (included in FASB ASC Subtopic 740-10 – *Income Taxes* – *Overall*, CARA recognizes the effect of income tax positions only if those positions are more likely than not of being sustained. Recognized income tax positions are measured at the largest amount that is greater than 50% likely of being realized. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs. Prior to the adoption of Interpretation 48, CARA recognized the effect of income tax positions only if such positions were probable of being sustained.

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### (13) Related-Party Transactions

Caltech and UC provide various instrument and adaptive optics development services to CARA. During fiscal years 2012 and 2011, total expenditures for these services charged to CARA were \$1,433,065 and \$1,592,357, respectively, by Caltech, and \$603,019 and \$466,993, respectively, by UC.

### (14) Commitments

CARA entered into various contractual agreements for operations, laser guide star and adaptive optics systems, observatory construction and development of instrumentation and interferometry systems. A summary of commitments at September 30, 2012 follows:

Operations	\$ 1,241,336
Laser guide star and adaptive	
optics systems	1,239,939
Instrumentation	 172,591
Total	\$ 2,653,866

### (15) 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 2012 and 2011, CARA received contributions of \$81,651 and \$75,746, respectively, which were board-designated for the Director's Fund. At September 30, 2012 and 2011, \$305,191 and \$243,618, respectively, was available in the fund.

#### (16) Temporarily Restricted Net Assets

In December 2005, CARA received a restricted contribution pledge of \$4,899,875 for Keck I instrumentation development of MOSFIRE. In 2012 and 2011, \$0 and \$153,521, respectively, of temporarily restricted net assets were released from restriction in satisfaction of equipment acquisition restrictions.

CARA received various restricted contributions for instrument development and advancement activities totaling \$501,546 and \$398,437, respectively, in 2012 and 2011. In 2012 and 2011, \$379,733 and \$344,283, respectively, of temporarily restricted net assets were released from restriction in satisfaction of equipment acquisition and advancement activity restrictions. At September 30, 2012 and 2011, \$384,342 and \$262,529, respectively, was available for these activities.

### (17) 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 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

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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 \$806,618 and \$739,755 for fiscal years 2012 and 2011, respectively.