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|                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| <div> <div>Form <b>990</b></div> <div>  </div> <div>                     Department of the Treasury<br/>                     Internal Revenue Service                 </div> </div> | <div> <div>Return of Organization Exempt From Income Tax</div> <div>Under section 501(c), 527, or 4947(a)(1) of the Internal Revenue Code (except private foundations)</div> <div> <div>▶ Do not enter Social Security numbers on this form as it may be made public. By law, the IRS generally cannot redact the information on the form.</div> <div>▶ Information about Form 990 and its instructions is at <a href="http://www.irs.gov/form990">www.irs.gov/form990</a></div> </div> </div> | <div> <div>OMB No 1545-0047</div> <div>2013</div> <div>Open to Public Inspection</div> </div> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                              |  |                                                                                                                      |  |                                     |  |                                                                                                                                                  |                                                           |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------|--|-------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|--|--|
| <b>A For the 2013 calendar year, or tax year beginning 10-01-2013 , 2013, and ending 09-30-2014</b>                                                                                                                                                                                          |  |                                                                                                                      |  |                                     |  |                                                                                                                                                  |                                                           |  |  |
| <b>B</b> Check if applicable<br><input type="checkbox"/> Address change<br><input type="checkbox"/> Name change<br><input type="checkbox"/> Initial return<br><input type="checkbox"/> Terminated<br><input type="checkbox"/> Amended return<br><input type="checkbox"/> Application pending |  | <b>C</b> Name of organization<br>CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY                                    |  |                                     |  |                                                                                                                                                  | <b>D</b> Employer identification number<br><br>95-3972799 |  |  |
|                                                                                                                                                                                                                                                                                              |  | Doing Business As<br>W M Keck Observatory                                                                            |  |                                     |  |                                                                                                                                                  |                                                           |  |  |
|                                                                                                                                                                                                                                                                                              |  | Number and street (or P O box if mail is not delivered to street address)<br>65-1120 Mamalahoa Hwy                   |  |                                     |  | Room/suite                                                                                                                                       | <b>E</b> Telephone number<br><br>(808) 885-7887           |  |  |
|                                                                                                                                                                                                                                                                                              |  | City or town, state or province, country, and ZIP or foreign postal code<br>Kamuela, HI 96743                        |  |                                     |  |                                                                                                                                                  |                                                           |  |  |
|                                                                                                                                                                                                                                                                                              |  |                                                                                                                      |  |                                     |  |                                                                                                                                                  | <b>G</b> Gross receipts \$ 22,552,513                     |  |  |
|                                                                                                                                                                                                                                                                                              |  | <b>F</b> Name and address of principal officer<br>W M Keck Observatory<br>65-1120 Mamalahoa Hwy<br>Kamuela, HI 96743 |  |                                     |  | <b>H(a)</b> Is this a group return for subordinates? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                         |                                                           |  |  |
|                                                                                                                                                                                                                                                                                              |  |                                                                                                                      |  |                                     |  | <b>H(b)</b> Are all subordinates included? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>If "No," attach a list (see instructions) |                                                           |  |  |
| <b>I</b> Tax-exempt status <input checked="" type="checkbox"/> 501(c)(3) <input type="checkbox"/> 501(c) ( ) ◀(Insert no ) <input type="checkbox"/> 4947(a)(1) or <input type="checkbox"/> 527                                                                                               |  |                                                                                                                      |  |                                     |  | <b>H(c)</b> Group exemption number ▶                                                                                                             |                                                           |  |  |
| <b>J</b> Website: ▶ www.keckobservatory.org                                                                                                                                                                                                                                                  |  |                                                                                                                      |  |                                     |  |                                                                                                                                                  |                                                           |  |  |
| <b>K</b> Form of organization <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Trust <input type="checkbox"/> Association <input type="checkbox"/> Other ▶                                                                                                           |  | <b>L</b> Year of formation 1985                                                                                      |  | <b>M</b> State of legal domicile CA |  |                                                                                                                                                  |                                                           |  |  |

| Part I                                                                         |                                                                                                                                                                                                                                                                                                                                                                       | Summary                   |              |
|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------|
| Activities & Governance                                                        | <b>1</b> Briefly describe the organization's mission or most significant activities<br>To advance the frontiers of astronomy and share our discoveries with the world CARA was formed by The Regents of the University of California and California Institute of Technology to operate two 10-meter optical/infrared telescopes on Mauna Kea on the island of Hawai'i |                           |              |
|                                                                                |                                                                                                                                                                                                                                                                                                                                                                       |                           |              |
|                                                                                |                                                                                                                                                                                                                                                                                                                                                                       |                           |              |
|                                                                                |                                                                                                                                                                                                                                                                                                                                                                       |                           |              |
|                                                                                | <b>2</b> Check this box <input type="checkbox"/> if the organization discontinued its operations or disposed of more than 25% of its net assets                                                                                                                                                                                                                       |                           |              |
|                                                                                | <b>3</b> Number of voting members of the governing body (Part VI, line 1a)                                                                                                                                                                                                                                                                                            | <b>3</b>                  | 6            |
|                                                                                | <b>4</b> Number of independent voting members of the governing body (Part VI, line 1b)                                                                                                                                                                                                                                                                                | <b>4</b>                  | 6            |
|                                                                                | <b>5</b> Total number of individuals employed in calendar year 2013 (Part V, line 2a)                                                                                                                                                                                                                                                                                 | <b>5</b>                  | 145          |
| <b>6</b> Total number of volunteers (estimate if necessary)                    | <b>6</b>                                                                                                                                                                                                                                                                                                                                                              | 20                        |              |
| <b>7a</b> Total unrelated business revenue from Part VIII, column (C), line 12 | <b>7a</b>                                                                                                                                                                                                                                                                                                                                                             | 0                         |              |
| <b>b</b> Net unrelated business taxable income from Form 990-T, line 34        | <b>7b</b>                                                                                                                                                                                                                                                                                                                                                             | 0                         |              |
| Revenue                                                                        | <b>8</b> Contributions and grants (Part VIII, line 1h)                                                                                                                                                                                                                                                                                                                | Prior Year                | Current Year |
|                                                                                | <b>9</b> Program service revenue (Part VIII, line 2g)                                                                                                                                                                                                                                                                                                                 | 17,752,864                | 18,310,437   |
|                                                                                | <b>10</b> Investment income (Part VIII, column (A), lines 3, 4, and 7d)                                                                                                                                                                                                                                                                                               | 4,476,009                 | 3,861,182    |
|                                                                                | <b>11</b> Other revenue (Part VIII, column (A), lines 5, 6d, 8c, 9c, 10c, and 11e)                                                                                                                                                                                                                                                                                    | 291,189                   | 364,237      |
|                                                                                | <b>12</b> Total revenue—add lines 8 through 11 (must equal Part VIII, column (A), line 12)                                                                                                                                                                                                                                                                            | -158,878                  | 3,425        |
|                                                                                |                                                                                                                                                                                                                                                                                                                                                                       | 22,361,184                | 22,539,281   |
| Expenses                                                                       | <b>13</b> Grants and similar amounts paid (Part IX, column (A), lines 1–3)                                                                                                                                                                                                                                                                                            | 2,428,470                 | 2,605,248    |
|                                                                                | <b>14</b> Benefits paid to or for members (Part IX, column (A), line 4)                                                                                                                                                                                                                                                                                               | 0                         | 0            |
|                                                                                | <b>15</b> Salaries, other compensation, employee benefits (Part IX, column (A), lines 5–10)                                                                                                                                                                                                                                                                           | 12,339,194                | 12,693,704   |
|                                                                                | <b>16a</b> Professional fundraising fees (Part IX, column (A), line 11e)                                                                                                                                                                                                                                                                                              | 0                         | 0            |
|                                                                                | <b>b</b> Total fundraising expenses (Part IX, column (D), line 25) <input checked="" type="checkbox"/> 494,155                                                                                                                                                                                                                                                        |                           |              |
|                                                                                | <b>17</b> Other expenses (Part IX, column (A), lines 11a–11d, 11f–24e)                                                                                                                                                                                                                                                                                                | 8,137,177                 | 8,620,781    |
|                                                                                | <b>18</b> Total expenses Add lines 13–17 (must equal Part IX, column (A), line 25)                                                                                                                                                                                                                                                                                    | 22,904,841                | 23,919,733   |
|                                                                                | <b>19</b> Revenue less expenses Subtract line 18 from line 12                                                                                                                                                                                                                                                                                                         | -543,657                  | -1,380,452   |
| Net Assets or Fund Balances                                                    |                                                                                                                                                                                                                                                                                                                                                                       | Beginning of Current Year | End of Year  |
|                                                                                | <b>20</b> Total assets (Part X, line 16)                                                                                                                                                                                                                                                                                                                              | 72,734,062                | 69,949,463   |
|                                                                                | <b>21</b> Total liabilities (Part X, line 26)                                                                                                                                                                                                                                                                                                                         | 16,880,317                | 15,018,860   |
|                                                                                | <b>22</b> Net assets or fund balances Subtract line 21 from line 20                                                                                                                                                                                                                                                                                                   | 55,853,745                | 54,930,603   |

|                |                        |
|----------------|------------------------|
| <b>Part II</b> | <b>Signature Block</b> |
|----------------|------------------------|

Under penalties of perjury, I declare that I have examined this return, including accompanying schedules and statements, and to the best of my knowledge and belief, it is true, correct, and complete. Declaration of preparer (other than officer) is based on all information of which preparer has any knowledge.

|                               |                                                 |          |                      |            |      |
|-------------------------------|-------------------------------------------------|----------|----------------------|------------|------|
| <b>Sign Here</b>              | Signature of officer                            |          |                      | 2015-08-14 |      |
|                               | Nathan Brostrom CARA CFO                        |          |                      | Date       |      |
| Type or print name and title  |                                                 |          |                      |            |      |
| <b>Paid Preparer Use Only</b> | Prnt/Type preparer's name                       |          | Preparer's signature |            | Date |
|                               | Check <input type="checkbox"/> if self-employed |          | PTIN                 |            |      |
|                               | Firm's name                                     |          | Firm's EIN           |            |      |
| Firm's address                |                                                 | Phone no |                      |            |      |

May the IRS discuss this return with the preparer shown above? (see instructions) . . . . . ☐ Yes ☐ No

Part III

Statement of Program Service Accomplishments

Check if Schedule O contains a response or note to any line in this Part III

1

Briefly describe the organization's mission

To advance the frontiers of astronomy and share our discoveries with the world The two 10-meter telescopes of the Keck Observatory are the world's largest optical and infrared telescopes They have revolutionized our understanding of the cosmos, impacting every area of astronomy and astrophysics

2

Did the organization undertake any significant program services during the year which were not listed on the prior Form 990 or 990-EZ?

YesNo

If "Yes," describe these new services on Schedule O

3

Did the organization cease conducting, or make significant changes in how it conducts, any program services?

YesNo

If "Yes," describe these changes on Schedule O

4

Describe the organization's program service accomplishments for each of its three largest program services, as measured by expenses Section 501(c)(3) and 501(c)(4) organizations are required to report the amount of grants and allocations to others, the total expenses, and revenue, if any, for each program service reported

4a

(Code ) (Expenses \$ 20,025,832 including grants of \$ 2,428,470 ) (Revenue \$ 3,782,186 )

Higher Education The twin telescopes are dedicated to astronomical research 365 days/nights per year and feature a suite of advanced instrumentation including Time on the Keck telescopes is one of the most sought-after resources in astronomical and planetary science research Observing time on the Keck telescopes is divided each year among its founding partner institutions California Institute of Technology and the University of California, as well as NASA, and the University of Hawai'i The broader observing community has access to the telescopes through partnerships with the National Science Foundation and NASA CARA's activities include entering into grants and contracts to carry out astronomical research and instrumentation development Keck has pushed the frontiers of discovery, searching for new inhabitable worlds, probing the mysteries of the Milky Way, measuring distant galaxies and revealing other cosmic phenomenon so that we may further understand the nature of the Universe and our place in its vast expanse

4b

(Code ) (Expenses \$ 123,439 including grants of \$ 0 ) (Revenue \$ 33,500 )

Public Information Each year, Keck Observatory sponsors dozens of educational programs, public lectures and podcasts for Hawai'i Island families, educators, and students to foster a greater appreciation of science and its many contributions to society On a global level, the Observatory has a support base of over 800 Friends of Keck and a subscribed fan base of nearly 20,000 astronomy professionals and enthusiasts, and welcomes visitors to its headquarters facility in Kamuela and to its summit facility for a first-hand view of the Keck telescopes on Mauna Kea

4c

(Code ) (Expenses \$ 45,496 including grants of \$ 0 ) (Revenue \$ 45,496 )

Research Keck Observatory's activities include submitting grant proposals to carry out specific research projects

4d

Other program services (Describe in Schedule O )

(Expenses \$ 0 including grants of \$ 0 ) (Revenue \$ 0 )

4e

Total program service expenses

20,194,767

Part IV Checklist of Required Schedules

|                                                                                                                                                                                                                                                                                                                                                                                                    | Yes     | No |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----|
| 1 Is the organization described in section 501(c)(3) or 4947(a)(1) (other than a private foundation)? If "Yes," complete Schedule A                                                                                                                                                                               | 1 Yes   |    |
| 2 Is the organization required to complete Schedule B, Schedule of Contributors (see instructions)?                                                                                                                                                                                                             | 2 Yes   |    |
| 3 Did the organization engage in direct or indirect political campaign activities on behalf of or in opposition to candidates for public office? If "Yes," complete Schedule C, Part I                                                                                                                                                                                                             | 3       | No |
| 4 <b>Section 501(c)(3) organizations.</b> Did the organization engage in lobbying activities, or have a section 501(h) election in effect during the tax year? If "Yes," complete Schedule C, Part II                                                                                                                                                                                              | 4       | No |
| 5 Is the organization a section 501(c)(4), 501(c)(5), or 501(c)(6) organization that receives membership dues, assessments, or similar amounts as defined in Revenue Procedure 98-19? If "Yes," complete Schedule C, Part III                                                                                                                                                                      | 5       | No |
| 6 Did the organization maintain any donor advised funds or any similar funds or accounts for which donors have the right to provide advice on the distribution or investment of amounts in such funds or accounts? If "Yes," complete Schedule D, Part I                                                                                                                                           | 6       | No |
| 7 Did the organization receive or hold a conservation easement, including easements to preserve open space, the environment, historic land areas, or historic structures? If "Yes," complete Schedule D, Part II                                                                                                                                                                                   | 7       | No |
| 8 Did the organization maintain collections of works of art, historical treasures, or other similar assets? If "Yes," complete Schedule D, Part III                                                                                                                                                                                                                                                | 8       | No |
| 9 Did the organization report an amount in Part X, line 21 for escrow or custodial account liability, serve as a custodian for amounts not listed in Part X, or provide credit counseling, debt management, credit repair, or debt negotiation services? If "Yes," complete Schedule D, Part IV                                                                                                    | 9       | No |
| 10 Did the organization, directly or through a related organization, hold assets in temporarily restricted endowments, permanent endowments, or quasi-endowments? If "Yes," complete Schedule D, Part V                                                                                                                                                                                            | 10      | No |
| 11 If the organization's answer to any of the following questions is "Yes," then complete Schedule D, Parts VI, VII, VIII, IX, or X as applicable                                                                                                                                                                                                                                                  |         |    |
| a Did the organization report an amount for land, buildings, and equipment in Part X, line 10? If "Yes," complete Schedule D, Part VI.                                                                                                                                                                            | 11a Yes |    |
| b Did the organization report an amount for investments—other securities in Part X, line 12 that is 5% or more of its total assets reported in Part X, line 16? If "Yes," complete Schedule D, Part VII.                                                                                                         | 11b Yes |    |
| c Did the organization report an amount for investments—program related in Part X, line 13 that is 5% or more of its total assets reported in Part X, line 16? If "Yes," complete Schedule D, Part VIII                                                                                                                                                                                            | 11c     | No |
| d Did the organization report an amount for other assets in Part X, line 15 that is 5% or more of its total assets reported in Part X, line 16? If "Yes," complete Schedule D, Part IX                                                                                                                                                                                                             | 11d     | No |
| e Did the organization report an amount for other liabilities in Part X, line 25? If "Yes," complete Schedule D, Part X                                                                                                                                                                                                                                                                            | 11e     | No |
| f Did the organization's separate or consolidated financial statements for the tax year include a footnote that addresses the organization's liability for uncertain tax positions under FIN 48 (ASC 740)? If "Yes," complete Schedule D, Part X.                                                               | 11f Yes |    |
| 12a Did the organization obtain separate, independent audited financial statements for the tax year? If "Yes," complete Schedule D, Parts XI and XII.                                                                                                                                                           | 12a Yes |    |
| b Was the organization included in consolidated, independent audited financial statements for the tax year? If "Yes," and if the organization answered "No" to line 12a, then completing Schedule D, Parts XI and XII is optional.                                                                            | 12b     | No |
| 13 Is the organization a school described in section 170(b)(1)(A)(ii)? If "Yes," complete Schedule E                                                                                                                                                                                                                                                                                               | 13      | No |
| 14a Did the organization maintain an office, employees, or agents outside of the United States?                                                                                                                                                                                                                                                                                                    | 14a     | No |
| b Did the organization have aggregate revenues or expenses of more than \$10,000 from grantmaking, fundraising, business, investment, and program service activities outside the United States, or aggregate foreign investments valued at \$100,000 or more? If "Yes," complete Schedule F, Parts I and IV.  | 14b Yes |    |
| 15 Did the organization report on Part IX, column (A), line 3, more than \$5,000 of grants or other assistance to or for any foreign organization? If "Yes," complete Schedule F, Parts II and IV.                                                                                                              | 15 Yes  |    |
| 16 Did the organization report on Part IX, column (A), line 3, more than \$5,000 of aggregate grants or other assistance to or for foreign individuals? If "Yes," complete Schedule F, Parts III and IV                                                                                                                                                                                            | 16      | No |
| 17 Did the organization report a total of more than \$15,000 of expenses for professional fundraising services on Part IX, column (A), lines 6 and 11e? If "Yes," complete Schedule G, Part I (see instructions)                                                                                                                                                                                   | 17      | No |
| 18 Did the organization report more than \$15,000 total of fundraising event gross income and contributions on Part VIII, lines 1c and 8a? If "Yes," complete Schedule G, Part II                                                                                                                                                                                                                  | 18      | No |
| 19 Did the organization report more than \$15,000 of gross income from gaming activities on Part VIII, line 9a? If "Yes," complete Schedule G, Part III                                                                                                                                                                                                                                            | 19      | No |
| 20a Did the organization operate one or more hospital facilities? If "Yes," complete Schedule H                                                                                                                                                                                                                                                                                                    | 20a     | No |
| b If "Yes" to line 20a, did the organization attach a copy of its audited financial statements to this return?                                                                                                                                                                                                                                                                                     | 20b     |    |

Part IV

Checklist of Required Schedules (continued)

|     |                                                                                                                                                                                                                                                                                                                            |     |     |    |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|----|
| 21  | Did the organization report more than \$5,000 of grants or other assistance to any domestic organization or government on Part IX, column (A), line 1? <i>If "Yes," complete Schedule I, Parts I and II</i> . . . . .                                                                                                      | 21  | Yes |    |
| 22  | Did the organization report more than \$5,000 of grants or other assistance to individuals in the United States on Part IX, column (A), line 2? <i>If "Yes," complete Schedule I, Parts I and III</i> . . . . .                                                                                                            | 22  |     | No |
| 23  | Did the organization answer "Yes" to Part VII, Section A, line 3, 4, or 5 about compensation of the organization's current and former officers, directors, trustees, key employees, and highest compensated employees? <i>If "Yes," complete Schedule J</i> . . . . .                                                      | 23  | Yes |    |
| 24a | Did the organization have a tax-exempt bond issue with an outstanding principal amount of more than \$100,000 as of the last day of the year, that was issued after December 31, 2002? <i>If "Yes," answer lines 24b through 24d and complete Schedule K. If "No," go to line 25a</i> . . . . .                            | 24a |     | No |
| b   | Did the organization invest any proceeds of tax-exempt bonds beyond a temporary period exception? . . . .                                                                                                                                                                                                                  | 24b |     |    |
| c   | Did the organization maintain an escrow account other than a refunding escrow at any time during the year to defease any tax-exempt bonds? . . . . .                                                                                                                                                                       | 24c |     |    |
| d   | Did the organization act as an "on behalf of" issuer for bonds outstanding at any time during the year? . . . .                                                                                                                                                                                                            | 24d |     |    |
| 25a | <b>Section 501(c)(3) and 501(c)(4) organizations.</b> Did the organization engage in an excess benefit transaction with a disqualified person during the year? <i>If "Yes," complete Schedule L, Part I</i> . . . . .                                                                                                      | 25a |     | No |
| b   | Is the organization aware that it engaged in an excess benefit transaction with a disqualified person in a prior year, and that the transaction has not been reported on any of the organization's prior Forms 990 or 990-EZ? <i>If "Yes," complete Schedule L, Part I</i> . . . . .                                       | 25b |     | No |
| 26  | Did the organization report any amount on Part X, line 5, 6, or 22 for receivables from or payables to any current or former officers, directors, trustees, key employees, highest compensated employees, or disqualified persons? <i>If so, complete Schedule L, Part II</i> . . . . .                                    | 26  |     | No |
| 27  | Did the organization provide a grant or other assistance to an officer, director, trustee, key employee, substantial contributor or employee thereof, a grant selection committee member, or to a 35% controlled entity or family member of any of these persons? <i>If "Yes," complete Schedule L, Part III</i> . . . . . | 27  |     | No |
| 28  | Was the organization a party to a business transaction with one of the following parties (see Schedule L, Part IV instructions for applicable filing thresholds, conditions, and exceptions)                                                                                                                               |     |     |    |
| a   | A current or former officer, director, trustee, or key employee? <i>If "Yes," complete Schedule L, Part IV</i> . . . . .                                                                                                                                                                                                   | 28a |     | No |
| b   | A family member of a current or former officer, director, trustee, or key employee? <i>If "Yes," complete Schedule L, Part IV</i> . . . . .                                                                                                                                                                                | 28b |     | No |
| c   | An entity of which a current or former officer, director, trustee, or key employee (or a family member thereof) was an officer, director, trustee, or direct or indirect owner? <i>If "Yes," complete Schedule L, Part IV</i> . . . .                                                                                      | 28c |     | No |
| 29  | Did the organization receive more than \$25,000 in non-cash contributions? <i>If "Yes," complete Schedule M</i> . . .                                                                                                                                                                                                      | 29  |     | No |
| 30  | Did the organization receive contributions of art, historical treasures, or other similar assets, or qualified conservation contributions? <i>If "Yes," complete Schedule M</i> . . . . .                                                                                                                                  | 30  |     | No |
| 31  | Did the organization liquidate, terminate, or dissolve and cease operations? <i>If "Yes," complete Schedule N, Part I</i> . . . . .                                                                                                                                                                                        | 31  |     | No |
| 32  | Did the organization sell, exchange, dispose of, or transfer more than 25% of its net assets? <i>If "Yes," complete Schedule N, Part II</i> . . . . .                                                                                                                                                                      | 32  |     | No |
| 33  | Did the organization own 100% of an entity disregarded as separate from the organization under Regulations sections 301.7701-2 and 301.7701-3? <i>If "Yes," complete Schedule R, Part I</i> . . . . .                                                                                                                      | 33  |     | No |
| 34  | Was the organization related to any tax-exempt or taxable entity? <i>If "Yes," complete Schedule R, Part II, III, or IV, and Part V, line 1</i> . . . . .                                                                                                                                                                  | 34  |     | No |
| 35a | Did the organization have a controlled entity within the meaning of section 512(b)(13)?                                                                                                                                                                                                                                    | 35a |     | No |
| b   | If "Yes" to line 35a, did the organization receive any payment from or engage in any transaction with a controlled entity within the meaning of section 512(b)(13)? <i>If "Yes," complete Schedule R, Part V, line 2</i> . . . .                                                                                           | 35b |     |    |
| 36  | <b>Section 501(c)(3) organizations.</b> Did the organization make any transfers to an exempt non-charitable related organization? <i>If "Yes," complete Schedule R, Part V, line 2</i> . . . . .                                                                                                                           | 36  |     | No |
| 37  | Did the organization conduct more than 5% of its activities through an entity that is not a related organization and that is treated as a partnership for federal income tax purposes? <i>If "Yes," complete Schedule R, Part VI</i>                                                                                       | 37  |     | No |
| 38  | Did the organization complete Schedule O and provide explanations in Schedule O for Part VI, lines 11b and 19? <b>Note.</b> All Form 990 filers are required to complete Schedule O . . . . .                                                                                                                              | 38  | Yes |    |

Part V

Statements Regarding Other IRS Filings and Tax Compliance

Check if Schedule O contains a response or note to any line in this Part V

☐

|                                                                                                                                                                                                                                                                         |                                                                                                                                                                                |     |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|
|                                                                                                                                                                                                                                                                         |                                                                                                                                                                                | Yes | No |
| 1a                                                                                                                                                                                                                                                                      | Enter the number reported in Box 3 of Form 1096. Enter -0- if not applicable.                                                                                                  | 43  |    |
| 1b                                                                                                                                                                                                                                                                      | Enter the number of Forms W-2G included in line 1a. Enter -0- if not applicable.                                                                                               | 0   |    |
| 1c Did the organization comply with backup withholding rules for reportable payments to vendors and reportable gaming (gambling) winnings to prize winners?                                                                                                             |                                                                                                                                                                                | Yes |    |
| 2a                                                                                                                                                                                                                                                                      | Enter the number of employees reported on Form W-3, Transmittal of Wage and Tax Statements, filed for the calendar year ending with or within the year covered by this return. | 145 |    |
| 2b If at least one is reported on line 2a, did the organization file all required federal employment tax returns?<br><b>Note.</b> If the sum of lines 1a and 2a is greater than 250, you may be required to e-file (see instructions).                                  |                                                                                                                                                                                | Yes |    |
| 3a Did the organization have unrelated business gross income of \$1,000 or more during the year?                                                                                                                                                                        |                                                                                                                                                                                |     | No |
| 3b If "Yes," has it filed a Form 990-T for this year? If "No" to line 3b, provide an explanation in Schedule O.                                                                                                                                                         |                                                                                                                                                                                |     |    |
| 4a At any time during the calendar year, did the organization have an interest in, or a signature or other authority over, a financial account in a foreign country (such as a bank account, securities account, or other financial account)?                           |                                                                                                                                                                                |     | No |
| 4b If "Yes," enter the name of the foreign country:<br>See instructions for filing requirements for Form TD F 90-22.1, Report of Foreign Bank and Financial Accounts.                                                                                                   |                                                                                                                                                                                |     |    |
| 5a Was the organization a party to a prohibited tax shelter transaction at any time during the tax year?                                                                                                                                                                |                                                                                                                                                                                |     | No |
| 5b Did any taxable party notify the organization that it was or is a party to a prohibited tax shelter transaction?                                                                                                                                                     |                                                                                                                                                                                |     | No |
| 5c If "Yes," to line 5a or 5b, did the organization file Form 8886-T?                                                                                                                                                                                                   |                                                                                                                                                                                |     |    |
| 6a Does the organization have annual gross receipts that are normally greater than \$100,000, and did the organization solicit any contributions that were not tax deductible as charitable contributions?                                                              |                                                                                                                                                                                |     | No |
| 6b If "Yes," did the organization include with every solicitation an express statement that such contributions or gifts were not tax deductible?                                                                                                                        |                                                                                                                                                                                |     |    |
| 7 Organizations that may receive deductible contributions under section 170(c).                                                                                                                                                                                         |                                                                                                                                                                                |     |    |
| 7a Did the organization receive a payment in excess of \$75 made partly as a contribution and partly for goods and services provided to the payor?                                                                                                                      |                                                                                                                                                                                |     | No |
| 7b If "Yes," did the organization notify the donor of the value of the goods or services provided?                                                                                                                                                                      |                                                                                                                                                                                |     |    |
| 7c Did the organization sell, exchange, or otherwise dispose of tangible personal property for which it was required to file Form 8282?                                                                                                                                 |                                                                                                                                                                                |     | No |
| 7d If "Yes," indicate the number of Forms 8282 filed during the year.                                                                                                                                                                                                   |                                                                                                                                                                                |     |    |
| 7e Did the organization receive any funds, directly or indirectly, to pay premiums on a personal benefit contract?                                                                                                                                                      |                                                                                                                                                                                |     | No |
| 7f Did the organization, during the year, pay premiums, directly or indirectly, on a personal benefit contract?                                                                                                                                                         |                                                                                                                                                                                |     | No |
| 7g If the organization received a contribution of qualified intellectual property, did the organization file Form 8899 as required?                                                                                                                                     |                                                                                                                                                                                |     | No |
| 7h If the organization received a contribution of cars, boats, airplanes, or other vehicles, did the organization file a Form 1098-C?                                                                                                                                   |                                                                                                                                                                                |     | No |
| 8 Sponsoring organizations maintaining donor advised funds and section 509(a)(3) supporting organizations. Did the supporting organization, or a donor advised fund maintained by a sponsoring organization, have excess business holdings at any time during the year? |                                                                                                                                                                                |     |    |
| 9 Sponsoring organizations maintaining donor advised funds.                                                                                                                                                                                                             |                                                                                                                                                                                |     |    |
| 9a Did the organization make any taxable distributions under section 4966?                                                                                                                                                                                              |                                                                                                                                                                                |     |    |
| 9b Did the organization make a distribution to a donor, donor advisor, or related person?                                                                                                                                                                               |                                                                                                                                                                                |     |    |
| 10 Section 501(c)(7) organizations. Enter                                                                                                                                                                                                                               |                                                                                                                                                                                |     |    |
| 10a Initiation fees and capital contributions included on Part VIII, line 12.                                                                                                                                                                                           |                                                                                                                                                                                |     |    |
| 10b Gross receipts, included on Form 990, Part VIII, line 12, for public use of club facilities.                                                                                                                                                                        |                                                                                                                                                                                |     |    |
| 11 Section 501(c)(12) organizations. Enter                                                                                                                                                                                                                              |                                                                                                                                                                                |     |    |
| 11a Gross income from members or shareholders.                                                                                                                                                                                                                          |                                                                                                                                                                                |     |    |
| 11b Gross income from other sources (Do not net amounts due or paid to other sources against amounts due or received from them).                                                                                                                                        |                                                                                                                                                                                |     |    |
| 12a Section 4947(a)(1) non-exempt charitable trusts. Is the organization filing Form 990 in lieu of Form 1041?                                                                                                                                                          |                                                                                                                                                                                |     |    |
| 12b If "Yes," enter the amount of tax-exempt interest received or accrued during the year.                                                                                                                                                                              |                                                                                                                                                                                |     |    |
| 13 Section 501(c)(29) qualified nonprofit health insurance issuers.                                                                                                                                                                                                     |                                                                                                                                                                                |     |    |
| 13a Is the organization licensed to issue qualified health plans in more than one state?<br><b>Note.</b> See the instructions for additional information the organization must report on Schedule O.                                                                    |                                                                                                                                                                                |     |    |
| 13b Enter the amount of reserves the organization is required to maintain by the states in which the organization is licensed to issue qualified health plans.                                                                                                          |                                                                                                                                                                                |     |    |
| 13c Enter the amount of reserves on hand.                                                                                                                                                                                                                               |                                                                                                                                                                                |     |    |
| 14a Did the organization receive any payments for indoor tanning services during the tax year?                                                                                                                                                                          |                                                                                                                                                                                |     | No |
| 14b If "Yes," has it filed a Form 720 to report these payments? If "No," provide an explanation in Schedule O.                                                                                                                                                          |                                                                                                                                                                                |     |    |

Part VI

Governance, Management, and Disclosure

For each "Yes" response to lines 2 through 7b below, and for a "No" response to lines 8a, 8b, or 10b below, describe the circumstances, processes, or changes in Schedule O. See instructions.

Check if Schedule O contains a response or note to any line in this Part VI

Section A. Governing Body and Management

|    |                                                                                                                                                                                                                               |     |     |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|
|    |                                                                                                                                                                                                                               | Yes | No  |
| 1a | Enter the number of voting members of the governing body at the end of the tax year . . . . .                                                                                                                                 | 6   |     |
|    | If there are material differences in voting rights among members of the governing body, or if the governing body delegated broad authority to an executive committee or similar committee, explain in Schedule O              |     |     |
| b  | Enter the number of voting members included in line 1a, above, who are independent . . . . .                                                                                                                                  | 6   |     |
| 2  | Did any officer, director, trustee, or key employee have a family relationship or a business relationship with any other officer, director, trustee, or key employee? . . . . .                                               | 2   | Yes |
| 3  | Did the organization delegate control over management duties customarily performed by or under the direct supervision of officers, directors or trustees, or key employees to a management company or other person? . . . . . | 3   | No  |
| 4  | Did the organization make any significant changes to its governing documents since the prior Form 990 was filed? . . . . .                                                                                                    | 4   | No  |
| 5  | Did the organization become aware during the year of a significant diversion of the organization's assets? . . . . .                                                                                                          | 5   | No  |
| 6  | Did the organization have members or stockholders? . . . . .                                                                                                                                                                  | 6   | No  |
| 7a | Did the organization have members, stockholders, or other persons who had the power to elect or appoint one or more members of the governing body? . . . . .                                                                  | 7a  | Yes |
| b  | Are any governance decisions of the organization reserved to (or subject to approval by) members, stockholders, or persons other than the governing body? . . . . .                                                           | 7b  | No  |
| 8  | Did the organization contemporaneously document the meetings held or written actions undertaken during the year by the following                                                                                              |     |     |
| a  | The governing body? . . . . .                                                                                                                                                                                                 | 8a  | Yes |
| b  | Each committee with authority to act on behalf of the governing body? . . . . .                                                                                                                                               | 8b  | Yes |
| 9  | Is there any officer, director, trustee, or key employee listed in Part VII, Section A, who cannot be reached at the organization's mailing address? If "Yes," provide the names and addresses in Schedule O . . . . .        | 9   | No  |

Section B. Policies (This Section B requests information about policies not required by the Internal Revenue Code.)

|     |                                                                                                                                                                                                                                                                                                        |     |     |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|
|     |                                                                                                                                                                                                                                                                                                        | Yes | No  |
| 10a | Did the organization have local chapters, branches, or affiliates? . . . . .                                                                                                                                                                                                                           | 10a | No  |
| b   | If "Yes," did the organization have written policies and procedures governing the activities of such chapters, affiliates, and branches to ensure their operations are consistent with the organization's exempt purposes? . . . . .                                                                   | 10b |     |
| 11a | Has the organization provided a complete copy of this Form 990 to all members of its governing body before filing the form? . . . . .                                                                                                                                                                  | 11a | Yes |
| b   | Describe in Schedule O the process, if any, used by the organization to review this Form 990 . . . . .                                                                                                                                                                                                 |     |     |
| 12a | Did the organization have a written conflict of interest policy? If "No," go to line 13 . . . . .                                                                                                                                                                                                      | 12a | Yes |
| b   | Were officers, directors, or trustees, and key employees required to disclose annually interests that could give rise to conflicts? . . . . .                                                                                                                                                          | 12b | Yes |
| c   | Did the organization regularly and consistently monitor and enforce compliance with the policy? If "Yes," describe in Schedule O how this was done . . . . .                                                                                                                                           | 12c | Yes |
| 13  | Did the organization have a written whistleblower policy? . . . . .                                                                                                                                                                                                                                    | 13  | No  |
| 14  | Did the organization have a written document retention and destruction policy? . . . . .                                                                                                                                                                                                               | 14  | No  |
| 15  | Did the process for determining compensation of the following persons include a review and approval by independent persons, comparability data, and contemporaneous substantiation of the deliberation and decision?                                                                                   |     |     |
| a   | The organization's CEO, Executive Director, or top management official . . . . .                                                                                                                                                                                                                       | 15a | Yes |
| b   | Other officers or key employees of the organization . . . . .                                                                                                                                                                                                                                          | 15b | Yes |
|     | If "Yes" to line 15a or 15b, describe the process in Schedule O (see instructions)                                                                                                                                                                                                                     |     |     |
| 16a | Did the organization invest in, contribute assets to, or participate in a joint venture or similar arrangement with a taxable entity during the year? . . . . .                                                                                                                                        | 16a | No  |
| b   | If "Yes," did the organization follow a written policy or procedure requiring the organization to evaluate its participation in joint venture arrangements under applicable federal tax law, and take steps to safeguard the organization's exempt status with respect to such arrangements? . . . . . | 16b |     |

Section C. Disclosure

|    |                                                                                                                                                                                                                                                                                                                                                                                                                |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 17 | List the States with which a copy of this Form 990 is required to be filed CA , HI                                                                                                                                                                                                                                                                                                                             |
| 18 | Section 6104 requires an organization to make its Form 1023 (or 1024 if applicable), 990, and 990-T (501(c)(3)s only) available for public inspection. Indicate how you made these available. Check all that apply.<br><input type="checkbox"/> Own website <input type="checkbox"/> Another's website <input checked="" type="checkbox"/> Upon request <input type="checkbox"/> Other (explain in Schedule O) |
| 19 | Describe in Schedule O whether (and if so, how) the organization made its governing documents, conflict of interest policy, and financial statements available to the public during the tax year                                                                                                                                                                                                               |
| 20 | State the name, physical address, and telephone number of the person who possesses the books and records of the organization<br>California Association for Research in Astronomy 65-1120 Mamalahoa Hwy<br>Kamuela, HI 96743 (808) 885-7887                                                                                                                                                                     |

Part VII

Compensation of Officers, Directors, Trustees, Key Employees, Highest Compensated Employees, and Independent Contractors

Check if Schedule O contains a response or note to any line in this Part VII

Section A. Officers, Directors, Trustees, Key Employees, and Highest Compensated Employees

- 1a Complete this table for all persons required to be listed Report compensation for the calendar year ending with or within the organization's tax year
- List all of the organization's **current** officers, directors, trustees (whether individuals or organizations), regardless of amount of compensation Enter -0- in columns (D), (E), and (F) if no compensation was paid

List all of the organization's **current** key employees, if any See instructions for definition of "key employee "

List the organization's five **current** highest compensated employees (other than an officer, director, trustee or key employee) who received reportable compensation (Box 5 of Form W-2 and/or Box 7 of Form 1099-MISC) of more than \$100,000 from the organization and any related organizations

List all of the organization's **former** officers, key employees, or highest compensated employees who received more than \$100,000 of reportable compensation from the organization and any related organizations

List all of the organization's **former directors or trustees** that received, in the capacity as a former director or trustee of the organization, more than \$10,000 of reportable compensation from the organization and any related organizations

List persons in the following order individual trustees or directors, institutional trustees, officers, key employees, highest compensated employees, and former such persons

Check this box if neither the organization nor any related organization compensated any current officer, director, or trustee

| (A)<br>Name and Title                                            | (B)<br>Average hours per week (list any hours for related organizations below dotted line) | (C)<br>Position (do not check more than one box, unless person is both an officer and a director/trustee) |                       |         |              |                              |        | (D)<br>Reportable compensation from the organization (W- 2/1099-MISC) | (E)<br>Reportable compensation from related organizations (W- 2/1099-MISC) | (F)<br>Estimated amount of other compensation from the organization and related organizations |
|------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-----------------------|---------|--------------|------------------------------|--------|-----------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
|                                                                  |                                                                                            | Individual trustee or director                                                                            | Institutional Trustee | Officer | Key employee | Highest compensated employee | Former |                                                                       |                                                                            |                                                                                               |
| (1) Dr Ed Stolper<br>Chairman                                    | 2<br>0                                                                                     | X                                                                                                         |                       | X       |              |                              |        | 0                                                                     | 0                                                                          | 0                                                                                             |
| (2) Dr George Blumenthal<br>Vice-Chairman                        | 2<br>0                                                                                     | X                                                                                                         |                       | X       |              |                              |        | 0                                                                     | 0                                                                          | 0                                                                                             |
| (3) Dr B Thomas Soifer<br>Board Member                           | 2<br>0                                                                                     | X                                                                                                         |                       |         |              |                              |        | 0                                                                     | 0                                                                          | 0                                                                                             |
| (4) Dr Aimee Dorr<br>Board Member                                | 2<br>0                                                                                     | X                                                                                                         |                       |         |              |                              |        | 0                                                                     | 0                                                                          | 0                                                                                             |
| (5) Dr Shnnivas Kulkarni<br>Board Member                         | 2<br>0                                                                                     | X                                                                                                         |                       |         |              |                              |        | 0                                                                     | 0                                                                          | 0                                                                                             |
| (6) Dr Claire Max<br>Board Member                                | 2<br>0                                                                                     | X                                                                                                         |                       |         |              |                              |        | 0                                                                     | 0                                                                          | 0                                                                                             |
| (7) Mr Nathan Brostrom<br>Chief Financial Officer                | 1<br>0                                                                                     |                                                                                                           |                       | X       |              |                              |        | 0                                                                     | 0                                                                          | 0                                                                                             |
| (8) Ms Elaine Stamman<br>Secretary                               | 2<br>0                                                                                     |                                                                                                           |                       | X       |              |                              |        | 5,554                                                                 | 0                                                                          | 443                                                                                           |
| (9) Dr Taft Armandroff<br>Former Observatory Director            | 50<br>0                                                                                    |                                                                                                           |                       | X       |              |                              | X      | 253,120                                                               | 0                                                                          | 47,425                                                                                        |
| (10) Mr Hilton Lewis<br>Observatory Director                     | 50<br>0                                                                                    |                                                                                                           |                       | X       |              |                              |        | 229,153                                                               | 0                                                                          | 56,154                                                                                        |
| (11) Mr Richard Matsuda<br>Operations and Infrastructure Manager | 50<br>0                                                                                    |                                                                                                           |                       |         | X            |                              |        | 185,727                                                               | 0                                                                          | 42,803                                                                                        |
| (12) Dr Peter Wizinowich<br>Optics Engineering Manager           | 50<br>0                                                                                    |                                                                                                           |                       |         | X            |                              |        | 182,029                                                               | 0                                                                          | 47,325                                                                                        |
| (13) Ms Marganta Scheffel<br>Observatory CFO                     | 50<br>0                                                                                    |                                                                                                           |                       |         | X            |                              |        | 160,922                                                               | 0                                                                          | 37,615                                                                                        |
| (14) Mr Sean Adkins<br>Instrument Program Manager                | 50<br>0                                                                                    |                                                                                                           |                       |         | X            |                              |        | 141,079                                                               | 0                                                                          | 31,977                                                                                        |
| (15) Mr Kevin McCann<br>Software Engineering Manager             | 50<br>0                                                                                    |                                                                                                           |                       |         |              | X                            |        | 167,603                                                               | 0                                                                          | 49,534                                                                                        |
| (16) Mr Kyle Kinoshita<br>Technical Services Manager             | 50<br>0                                                                                    |                                                                                                           |                       |         |              | X                            | X      | 158,904                                                               | 0                                                                          | 31,111                                                                                        |
| (17) Mr Dennis McBride<br>Principal Engineer                     | 50<br>0                                                                                    |                                                                                                           |                       |         |              | X                            |        | 156,416                                                               | 0                                                                          | 28,333                                                                                        |

## Part VII

|           |                                                                        |          |           |   |         |
|-----------|------------------------------------------------------------------------|----------|-----------|---|---------|
| <b>1b</b> | <b>Sub-Total . . . . .</b>                                             | <b>▼</b> |           |   |         |
| <b>c</b>  | <b>Total from continuation sheets to Part VII, Section A . . . . .</b> | <b>▼</b> |           |   |         |
| <b>d</b>  | <b>Total (add lines 1b and 1c) . . . . .</b>                           | <b>▼</b> | 1,935,307 | 0 | 437,752 |

**2** Total number of individuals (including but not limited to those listed in Item 1) who received more than \$100,000 of reportable compensation from the organization. 38

|   |                                                                                                                                                                                                                                               | Yes   | No |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----|
| 3 | Did the organization list any <b>former</b> officer, director or trustee, key employee, or highest compensated employee on line 1a? <i>If "Yes," complete Schedule J for such individual</i> . . . . .                                        | 3 Yes |    |
| 4 | For any individual listed on line 1a, is the sum of reportable compensation and other compensation from the organization and related organizations greater than \$150,000? <i>If "Yes," complete Schedule J for such individual</i> . . . . . | 4 Yes |    |
| 5 | Did any person listed on line 1a receive or accrue compensation from any unrelated organization or individual for services rendered to the organization? <i>If "Yes," complete Schedule J for such person</i> . . . . .                       | 5     | No |

## Section B. Independent Contractors

**1** Complete this table for your five highest compensated independent contractors that received more than \$100,000 of compensation from the organization. Report compensation for the calendar year ending with or within the organization's tax year.

| (A)<br>Name and business address                                                                                                                                             | (B)<br>Description of services                 | (C)<br>Compensation |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|---------------------|
| REC SOLAR COMMERCIAL CORPORATION 775 FIERO LANE STE 200 SAN LUIS OBISPO CA 93401                                                                                             | Photo Voltaic System Install                   | 556,500             |
| MAUNA KEA OBSERVATORY SUPPORT 177 Makaala Street Hilo HI 96720                                                                                                               | MAUNA KEA SUMMIT FACILITY AND ROAD MAINTENANCE | 412,078             |
| TELEDYNE SCIENTIFIC and IMAGING LLC 1049 CAMINO DOS RIOS THOUSAND OAKS CA 91360                                                                                              | INSTRUMENT FABRICATION                         | 337,931             |
| WINLIGHT OPTICS 135 rue Benjamin Franklin ZAC St Martin Pertuis FR 84120                                                                                                     | KCWI Collimator Mirror fabrication             | 245,380             |
| WILLIAM R IRACE, 355 W MESQUITE BLVD MESQUITE NV 89027                                                                                                                       | Project Management Consulting                  | 119,717             |
| <b>2</b> Total number of independent contractors (including but not limited to those listed above) who received more than \$100,000 of compensation from the organization ▶6 |                                                |                     |

Part VIII

Statement of Revenue

Check if Schedule O contains a response or note to any line in this Part VIII

|                                                           |                                           |                                                                                                                                        |               | (A)           | (B)                                         | (C)                              | (D)                                                          |
|-----------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|---------------------------------------------|----------------------------------|--------------------------------------------------------------|
|                                                           |                                           |                                                                                                                                        |               | Total revenue | Related or<br>exempt<br>function<br>revenue | Unrelated<br>business<br>revenue | Revenue<br>excluded from<br>tax under<br>sections<br>512-514 |
| Contributions, Gifts, Grants<br>and Other Similar Amounts | 1a                                        | Federated campaigns . . . . .                                                                                                          | 1a            | 0             | 18,310,437                                  |                                  |                                                              |
|                                                           | b                                         | Membership dues . . . . .                                                                                                              | 1b            | 0             |                                             |                                  |                                                              |
|                                                           | c                                         | Fundraising events . . . . .                                                                                                           | 1c            | 0             |                                             |                                  |                                                              |
|                                                           | d                                         | Related organizations . . . . .                                                                                                        | 1d            | 0             |                                             |                                  |                                                              |
|                                                           | e                                         | Government grants (contributions)                                                                                                      | 1e            | 1,714,784     |                                             |                                  |                                                              |
|                                                           | f                                         | All other contributions, gifts, grants, and<br>similar amounts not included above                                                      | 1f            | 16,595,653    |                                             |                                  |                                                              |
|                                                           | g                                         | Noncash contributions included in lines<br>1a-1f \$                                                                                    |               | 12,618        |                                             |                                  |                                                              |
|                                                           | h                                         | Total. Add lines 1a-1f . . . . .                                                                                                       |               |               |                                             |                                  |                                                              |
| Program Service Revenue                                   |                                           |                                                                                                                                        | Business Code |               |                                             |                                  |                                                              |
|                                                           | 2a                                        | NASA COOPERATIVE AGREEMENT                                                                                                             | 541712        | 3,673,886     | 3,673,886                                   | 0                                | 0                                                            |
|                                                           | b                                         | VISITING SCIENTIST QUARTERS                                                                                                            | 541712        | 108,300       | 108,300                                     | 0                                | 0                                                            |
|                                                           | c                                         | MISC FEDERAL RESEARCH GRANTS                                                                                                           | 541712        | 45,496        | 45,496                                      | 0                                | 0                                                            |
|                                                           | d                                         | KECK LOGO MERCHANDISE                                                                                                                  | 900099        | 29,200        | 0                                           | 0                                | 29,200                                                       |
|                                                           | e                                         | SUMMIT TOURS FEES OFFSET                                                                                                               | 900099        | 4,300         | 0                                           | 0                                | 4,300                                                        |
|                                                           | f                                         | All other program service revenue                                                                                                      |               | 0             | 0                                           | 0                                | 0                                                            |
|                                                           | g                                         | Total. Add lines 2a-2f . . . . .                                                                                                       |               |               | 3,861,182                                   |                                  |                                                              |
| Other Revenue                                             | 3                                         | Investment income (including dividends, interest,<br>and other similar amounts) . . . . .                                              |               | 338,851       | 0                                           | 0                                | 338,851                                                      |
|                                                           | 4                                         | Income from investment of tax-exempt bond proceeds . . . . .                                                                           |               | 0             | 0                                           | 0                                | 0                                                            |
|                                                           | 5                                         | Royalties . . . . .                                                                                                                    |               | 0             | 0                                           | 0                                | 0                                                            |
|                                                           | 6a                                        | (i) Real                                                                                                                               |               |               |                                             |                                  |                                                              |
|                                                           |                                           | (ii) Personal                                                                                                                          |               |               |                                             |                                  |                                                              |
|                                                           |                                           |                                                                                                                                        |               |               |                                             |                                  |                                                              |
|                                                           |                                           |                                                                                                                                        |               |               |                                             |                                  |                                                              |
|                                                           | b                                         | Less rental expenses                                                                                                                   |               |               |                                             |                                  |                                                              |
|                                                           | c                                         | Rental income or (loss)                                                                                                                |               | 0             | 0                                           |                                  |                                                              |
|                                                           | d                                         | Net rental income or (loss) . . . . .                                                                                                  |               |               |                                             |                                  |                                                              |
|                                                           | 7a                                        | (i) Securities                                                                                                                         |               |               |                                             |                                  |                                                              |
|                                                           |                                           | (ii) Other                                                                                                                             |               |               |                                             |                                  |                                                              |
|                                                           |                                           |                                                                                                                                        |               |               |                                             |                                  |                                                              |
|                                                           |                                           |                                                                                                                                        |               |               |                                             |                                  |                                                              |
|                                                           | b                                         | Less cost or other basis and sales expenses                                                                                            |               | 12,618        | 26,000                                      |                                  |                                                              |
|                                                           | c                                         | Gain or (loss)                                                                                                                         |               | 13,232        | 0                                           |                                  |                                                              |
|                                                           | d                                         | Net gain or (loss) . . . . .                                                                                                           |               | -614          | 26,000                                      |                                  |                                                              |
|                                                           | 8a                                        | Gross income from fundraising events (not including<br>\$ 0<br>of contributions reported on line 1c)<br>See Part IV, line 18 . . . . . |               | 25,386        | 0                                           | 0                                | 25,386                                                       |
|                                                           | a                                         |                                                                                                                                        |               |               |                                             |                                  |                                                              |
|                                                           | b                                         | Less direct expenses . . . . .                                                                                                         |               |               |                                             |                                  |                                                              |
|                                                           | c                                         | Net income or (loss) from fundraising events . . . . .                                                                                 |               |               |                                             |                                  |                                                              |
|                                                           | 9a                                        | Gross income from gaming activities<br>See Part IV, line 19 . . . . .                                                                  |               |               |                                             |                                  |                                                              |
|                                                           | a                                         |                                                                                                                                        |               |               |                                             |                                  |                                                              |
|                                                           | b                                         | Less direct expenses . . . . .                                                                                                         |               |               |                                             |                                  |                                                              |
|                                                           | c                                         | Net income or (loss) from gaming activities . . . . .                                                                                  |               |               |                                             |                                  |                                                              |
|                                                           | 10a                                       | Gross sales of inventory, less<br>returns and allowances . . . . .                                                                     |               |               |                                             |                                  |                                                              |
|                                                           | a                                         |                                                                                                                                        |               |               |                                             |                                  |                                                              |
|                                                           | b                                         | Less cost of goods sold . . . . .                                                                                                      |               |               |                                             |                                  |                                                              |
|                                                           | c                                         | Net income or (loss) from sales of inventory . . . . .                                                                                 |               |               |                                             |                                  |                                                              |
|                                                           | Miscellaneous Revenue                     |                                                                                                                                        | Business Code |               |                                             |                                  |                                                              |
|                                                           | 11a                                       | EMPLOYEE EQUIPMENT SALES                                                                                                               | 900099        | 3,051         | 0                                           | 0                                | 3,051                                                        |
|                                                           | b                                         | IMAGE FEE                                                                                                                              | 900099        | 374           | 0                                           | 0                                | 374                                                          |
|                                                           | c                                         |                                                                                                                                        |               |               |                                             |                                  |                                                              |
| d                                                         | All other revenue . . . . .               |                                                                                                                                        | 0             | 0             | 0                                           | 0                                |                                                              |
| e                                                         | Total. Add lines 11a-11d . . . . .        |                                                                                                                                        |               | 3,425         |                                             |                                  |                                                              |
| 12                                                        | Total revenue. See Instructions . . . . . |                                                                                                                                        |               | 22,539,281    | 3,827,682                                   | 0                                | 401,162                                                      |

Part IX Statement of Functional Expenses

Section 501(c)(3) and 501(c)(4) organizations must complete all columns All other organizations must complete column (A)

Check if Schedule O contains a response or note to any line in this Part IX

| Do not include amounts reported on lines 6b, 7b, 8b, 9b, and 10b of Part VIII. |                                                                                                                                                                                                                                       | (A)<br>Total expenses | (B)<br>Program service expenses | (C)<br>Management and general expenses | (D)<br>Fundraising expenses |
|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------------|----------------------------------------|-----------------------------|
| 1                                                                              | Grants and other assistance to governments and organizations in the United States See Part IV, line 21                                                                                                                                | 2,589,353             | 2,589,353                       |                                        |                             |
| 2                                                                              | Grants and other assistance to individuals in the United States See Part IV, line 22                                                                                                                                                  | 0                     | 0                               |                                        |                             |
| 3                                                                              | Grants and other assistance to governments, organizations, and individuals outside the United States See Part IV, lines 15 and 16                                                                                                     | 15,895                | 15,895                          |                                        |                             |
| 4                                                                              | Benefits paid to or for members                                                                                                                                                                                                       | 0                     | 0                               |                                        |                             |
| 5                                                                              | Compensation of current officers, directors, trustees, and key employees                                                                                                                                                              | 1,500,435             | 551,492                         | 881,111                                | 67,832                      |
| 6                                                                              | Compensation not included above, to disqualified persons (as defined under section 4958(f)(1)) and persons described in section 4958(c)(3)(B)                                                                                         | 0                     | 0                               | 0                                      | 0                           |
| 7                                                                              | Other salaries and wages                                                                                                                                                                                                              | 8,524,221             | 6,733,016                       | 1,572,787                              | 218,418                     |
| 8                                                                              | Pension plan accruals and contributions (include section 401(k) and 403(b) employer contributions)                                                                                                                                    | 786,172               | 638,665                         | 131,672                                | 15,835                      |
| 9                                                                              | Other employee benefits                                                                                                                                                                                                               | 1,195,576             | 708,537                         | 444,895                                | 42,144                      |
| 10                                                                             | Payroll taxes                                                                                                                                                                                                                         | 687,300               | 553,634                         | 119,833                                | 13,833                      |
| 11                                                                             | Fees for services (non-employees)                                                                                                                                                                                                     |                       |                                 |                                        |                             |
| a                                                                              | Management                                                                                                                                                                                                                            | 0                     | 0                               | 0                                      | 0                           |
| b                                                                              | Legal                                                                                                                                                                                                                                 | 11,278                | 0                               | 11,278                                 | 0                           |
| c                                                                              | Accounting                                                                                                                                                                                                                            | 114,063               | 0                               | 114,063                                | 0                           |
| d                                                                              | Lobbying                                                                                                                                                                                                                              | 0                     | 0                               | 0                                      | 0                           |
| e                                                                              | Professional fundraising services See Part IV, line 17                                                                                                                                                                                | 0                     |                                 |                                        | 0                           |
| f                                                                              | Investment management fees                                                                                                                                                                                                            | 0                     | 0                               | 0                                      | 0                           |
| g                                                                              | Other (If line 11g amount exceeds 10% of line 25, column (A) amount, list line 11g expenses on Schedule O)                                                                                                                            | 893,454               | 626,849                         | 222,495                                | 44,110                      |
| 12                                                                             | Advertising and promotion                                                                                                                                                                                                             | 0                     | 0                               | 0                                      | 0                           |
| 13                                                                             | Office expenses                                                                                                                                                                                                                       | 174,384               | 36,003                          | 116,263                                | 22,118                      |
| 14                                                                             | Information technology                                                                                                                                                                                                                | 415,707               | 75,842                          | 332,147                                | 7,718                       |
| 15                                                                             | Royalties                                                                                                                                                                                                                             | 0                     | 0                               | 0                                      | 0                           |
| 16                                                                             | Occupancy                                                                                                                                                                                                                             | 1,538,848             | 1,271,650                       | 267,198                                | 0                           |
| 17                                                                             | Travel                                                                                                                                                                                                                                | 417,567               | 190,873                         | 206,063                                | 20,631                      |
| 18                                                                             | Payments of travel or entertainment expenses for any federal, state, or local public officials                                                                                                                                        | 0                     | 0                               | 0                                      | 0                           |
| 19                                                                             | Conferences, conventions, and meetings                                                                                                                                                                                                | 216,348               | 7,148                           | 174,815                                | 34,385                      |
| 20                                                                             | Interest                                                                                                                                                                                                                              | 0                     | 0                               | 0                                      | 0                           |
| 21                                                                             | Payments to affiliates                                                                                                                                                                                                                | 0                     | 0                               | 0                                      | 0                           |
| 22                                                                             | Depreciation, depletion, and amortization                                                                                                                                                                                             | 6,177,720             | 6,064,853                       | 112,867                                | 0                           |
| 23                                                                             | Insurance                                                                                                                                                                                                                             | 42,216                | 768                             | 41,448                                 | 0                           |
| 24                                                                             | Other expenses Itemize expenses not covered above (List miscellaneous expenses in line 24e If line 24e amount exceeds 10% of line 25, column (A) amount, list line 24e expenses on Schedule O)                                        |                       |                                 |                                        |                             |
| a                                                                              | EQUIPMENT AND TOOLS                                                                                                                                                                                                                   | 964,159               | 923,578                         | 37,231                                 | 3,350                       |
| b                                                                              | EQUIPMENT RENTAL AND MAINTENANCE                                                                                                                                                                                                      | 535,040               | 473,027                         | 58,232                                 | 3,781                       |
| c                                                                              | CAPITAL SUBAWARDS                                                                                                                                                                                                                     | -2,621,965            | -2,621,965                      | 0                                      | 0                           |
| d                                                                              | INDIRECT COST RECOVERY                                                                                                                                                                                                                | -258,038              | 1,355,549                       | -1,613,587                             | 0                           |
| e                                                                              | All other expenses                                                                                                                                                                                                                    |                       |                                 |                                        |                             |
| 25                                                                             | Total functional expenses. Add lines 1 through 24e                                                                                                                                                                                    | 23,919,733            | 20,194,767                      | 3,230,811                              | 494,155                     |
| 26                                                                             | Joint costs. Complete this line only if the organization reported in column (B) joint costs from a combined educational campaign and fundraising solicitation Check here <input type="checkbox"/> if following SOP 98-2 (ASC 958-720) |                       |                                 |                                        |                             |

Part X

Balance Sheet

Check if Schedule O contains a response or note to any line in this Part X ☒

|                             |                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                        |                | (A)               |     | (B)         |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------|-----|-------------|
|                             |                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                        |                | Beginning of year |     | End of year |
| Assets                      | 1                                                                                                                                                          | Cash—non-interest-bearing . . . . .                                                                                                                                                                                                                                                                                                    |                | 2,571             | 1   | 3,091       |
|                             | 2                                                                                                                                                          | Savings and temporary cash investments . . . . .                                                                                                                                                                                                                                                                                       |                | 17,103,838        | 2   | 9,171,863   |
|                             | 3                                                                                                                                                          | Pledges and grants receivable, net . . . . .                                                                                                                                                                                                                                                                                           |                | 39,082            | 3   | 92,727      |
|                             | 4                                                                                                                                                          | Accounts receivable, net . . . . .                                                                                                                                                                                                                                                                                                     |                | 630,216           | 4   | 347,420     |
|                             | 5                                                                                                                                                          | Loans and other receivables from current and former officers, directors, trustees, key employees, and highest compensated employees Complete Part II of Schedule L . . . . .                                                                                                                                                           |                | 0                 | 5   | 0           |
|                             | 6                                                                                                                                                          | Loans and other receivables from other disqualified persons (as defined under section 4958(f)(1)), persons described in section 4958(c)(3)(B), and contributing employers and sponsoring organizations of section 501(c)(9) voluntary employees' beneficiary organizations (see instructions) Complete Part II of Schedule L . . . . . |                | 0                 | 6   | 0           |
|                             | 7                                                                                                                                                          | Notes and loans receivable, net . . . . .                                                                                                                                                                                                                                                                                              |                | 0                 | 7   | 0           |
|                             | 8                                                                                                                                                          | Inventories for sale or use . . . . .                                                                                                                                                                                                                                                                                                  |                | 0                 | 8   | 0           |
|                             | 9                                                                                                                                                          | Prepaid expenses and deferred charges . . . . .                                                                                                                                                                                                                                                                                        |                | 51,105            | 9   | 148,313     |
|                             | 10a                                                                                                                                                        | Land, buildings, and equipment cost or other basis Complete Part VI of Schedule D . . . . .                                                                                                                                                                                                                                            | 10a122,986,170 |                   |     |             |
|                             | b                                                                                                                                                          | Less accumulated depreciation . . . . .                                                                                                                                                                                                                                                                                                | 10b68,657,337  | 54,844,813        | 10c | 54,328,833  |
|                             | 11                                                                                                                                                         | Investments—publicly traded securities . . . . .                                                                                                                                                                                                                                                                                       |                | 62,437            | 11  | 0           |
|                             | 12                                                                                                                                                         | Investments—other securities See Part IV, line 11 . . . . .                                                                                                                                                                                                                                                                            |                | 0                 | 12  | 5,857,216   |
|                             | 13                                                                                                                                                         | Investments—program-related See Part IV, line 11 . . . . .                                                                                                                                                                                                                                                                             |                | 0                 | 13  | 0           |
|                             | 14                                                                                                                                                         | Intangible assets . . . . .                                                                                                                                                                                                                                                                                                            |                | 0                 | 14  | 0           |
|                             | 15                                                                                                                                                         | Other assets See Part IV, line 11 . . . . .                                                                                                                                                                                                                                                                                            |                | 0                 | 15  | 0           |
|                             | 16                                                                                                                                                         | <b>Total assets.</b> Add lines 1 through 15 (must equal line 34) . . . . .                                                                                                                                                                                                                                                             |                | 72,734,062        | 16  | 69,949,463  |
| Liabilities                 | 17                                                                                                                                                         | Accounts payable and accrued expenses . . . . .                                                                                                                                                                                                                                                                                        |                | 2,396,013         | 17  | 2,068,552   |
|                             | 18                                                                                                                                                         | Grants payable . . . . .                                                                                                                                                                                                                                                                                                               |                | 635,237           | 18  | 451,982     |
|                             | 19                                                                                                                                                         | Deferred revenue . . . . .                                                                                                                                                                                                                                                                                                             |                | 13,849,067        | 19  | 12,498,326  |
|                             | 20                                                                                                                                                         | Tax-exempt bond liabilities . . . . .                                                                                                                                                                                                                                                                                                  |                | 0                 | 20  | 0           |
|                             | 21                                                                                                                                                         | Escrow or custodial account liability Complete Part IV of Schedule D . . . . .                                                                                                                                                                                                                                                         |                | 0                 | 21  | 0           |
|                             | 22                                                                                                                                                         | Loans and other payables to current and former officers, directors, trustees, key employees, highest compensated employees, and disqualified persons Complete Part II of Schedule L . . . . .                                                                                                                                          |                | 0                 | 22  | 0           |
|                             | 23                                                                                                                                                         | Secured mortgages and notes payable to unrelated third parties . . . . .                                                                                                                                                                                                                                                               |                | 0                 | 23  | 0           |
|                             | 24                                                                                                                                                         | Unsecured notes and loans payable to unrelated third parties . . . . .                                                                                                                                                                                                                                                                 |                | 0                 | 24  | 0           |
|                             | 25                                                                                                                                                         | Other liabilities (including federal income tax, payables to related third parties, and other liabilities not included on lines 17-24) Complete Part X of Schedule D . . . . .                                                                                                                                                         |                | 0                 | 25  | 0           |
|                             | 26                                                                                                                                                         | <b>Total liabilities.</b> Add lines 17 through 25 . . . . .                                                                                                                                                                                                                                                                            |                | 16,880,317        | 26  | 15,018,860  |
| Net Assets or Fund Balances | <b>Organizations that follow SFAS 117 (ASC 958), check here <input checked="" type="checkbox"/> and complete lines 27 through 29, and lines 33 and 34.</b> |                                                                                                                                                                                                                                                                                                                                        |                |                   |     |             |
|                             | 27                                                                                                                                                         | Unrestricted net assets . . . . .                                                                                                                                                                                                                                                                                                      |                | 55,201,759        | 27  | 54,495,349  |
|                             | 28                                                                                                                                                         | Temporarily restricted net assets . . . . .                                                                                                                                                                                                                                                                                            |                | 651,986           | 28  | 435,254     |
|                             | 29                                                                                                                                                         | Permanently restricted net assets . . . . .                                                                                                                                                                                                                                                                                            |                | 0                 | 29  | 0           |
|                             | <b>Organizations that do not follow SFAS 117 (ASC 958), check here <input type="checkbox"/> and complete lines 30 through 34.</b>                          |                                                                                                                                                                                                                                                                                                                                        |                |                   |     |             |
|                             | 30                                                                                                                                                         | Capital stock or trust principal, or current funds . . . . .                                                                                                                                                                                                                                                                           |                |                   | 30  |             |
|                             | 31                                                                                                                                                         | Paid-in or capital surplus, or land, building or equipment fund . . . . .                                                                                                                                                                                                                                                              |                |                   | 31  |             |
|                             | 32                                                                                                                                                         | Retained earnings, endowment, accumulated income, or other funds . . . . .                                                                                                                                                                                                                                                             |                |                   | 32  |             |
|                             | 33                                                                                                                                                         | <b>Total net assets or fund balances</b> . . . . .                                                                                                                                                                                                                                                                                     |                | 55,853,745        | 33  | 54,930,603  |
|                             | 34                                                                                                                                                         | <b>Total liabilities and net assets/fund balances</b> . . . . .                                                                                                                                                                                                                                                                        |                | 72,734,062        | 34  | 69,949,463  |

Part XI Reconciliation of Net Assets

Check if Schedule O contains a response or note to any line in this Part XI

|    |                                                                                                               |    |            |
|----|---------------------------------------------------------------------------------------------------------------|----|------------|
| 1  | Total revenue (must equal Part VIII, column (A), line 12)                                                     | 1  | 22,539,281 |
| 2  | Total expenses (must equal Part IX, column (A), line 25)                                                      | 2  | 23,919,733 |
| 3  | Revenue less expenses Subtract line 2 from line 1                                                             | 3  | -1,380,452 |
| 4  | Net assets or fund balances at beginning of year (must equal Part X, line 33, column (A))                     | 4  | 55,853,745 |
| 5  | Net unrealized gains (losses) on investments                                                                  | 5  | 444,867    |
| 6  | Donated services and use of facilities                                                                        | 6  | 12,443     |
| 7  | Investment expenses                                                                                           | 7  | 0          |
| 8  | Prior period adjustments                                                                                      | 8  | 0          |
| 9  | Other changes in net assets or fund balances (explain in Schedule O)                                          | 9  | 0          |
| 10 | Net assets or fund balances at end of year Combine lines 3 through 9 (must equal Part X, line 33, column (B)) | 10 | 54,930,603 |

Part XII Financial Statements and Reporting

Check if Schedule O contains a response or note to any line in this Part XII

|    |                                                                                                                                                                                                                                                                                                                                                                                                                          | Yes | No |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|
| 1  | Accounting method used to prepare the Form 990 <input type="checkbox"/> Cash <input checked="" type="checkbox"/> Accrual <input type="checkbox"/> Other<br>If the organization changed its method of accounting from a prior year or checked "Other," explain in Schedule O                                                                                                                                              |     |    |
| 2a | Were the organization's financial statements compiled or reviewed by an independent accountant?<br>If "Yes," check a box below to indicate whether the financial statements for the year were compiled or reviewed on a separate basis, consolidated basis, or both<br><input type="checkbox"/> Separate basis <input type="checkbox"/> Consolidated basis <input type="checkbox"/> Both consolidated and separate basis |     | No |
| 2b | Were the organization's financial statements audited by an independent accountant?<br>If "Yes," check a box below to indicate whether the financial statements for the year were audited on a separate basis, consolidated basis, or both<br><input checked="" type="checkbox"/> Separate basis <input type="checkbox"/> Consolidated basis <input type="checkbox"/> Both consolidated and separate basis                | Yes |    |
| 2c | If "Yes," to line 2a or 2b, does the organization have a committee that assumes responsibility for oversight of the audit, review, or compilation of its financial statements and selection of an independent accountant?<br>If the organization changed either its oversight process or selection process during the tax year, explain in Schedule O                                                                    | Yes |    |
| 3a | As a result of a federal award, was the organization required to undergo an audit or audits as set forth in the Single Audit Act and OMB Circular A-133?                                                                                                                                                                                                                                                                 | Yes |    |
| 3b | If "Yes," did the organization undergo the required audit or audits? If the organization did not undergo the required audit or audits, explain why in Schedule O and describe any steps taken to undergo such audits                                                                                                                                                                                                     | Yes |    |

SCHEDULE A

(Form 990 or 990EZ)

Department of the  
Treasury  
Internal Revenue Service

Public Charity Status and Public Support

Complete if the organization is a section 501(c)(3) organization or a section 4947(a)(1) nonexempt charitable trust.

▶ **Attach to Form 990 or Form 990-EZ.** ▶ **See separate instructions.**  
▶ **Information about Schedule A (Form 990 or 990-EZ) and its instructions is at *www.irs.gov/form990*.**

OMB No 1545-0047

2013

Open to Public Inspection

|                                                                                     |                                                     |
|-------------------------------------------------------------------------------------|-----------------------------------------------------|
| <b>Name of the organization</b><br>CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY | <b>Employer identification number</b><br>95-3972799 |
|-------------------------------------------------------------------------------------|-----------------------------------------------------|

Part I

Reason for Public Charity Status (All organizations must complete this part.) See instructions.

The organization is not a private foundation because it is (For lines 1 through 11, check only one box )

|    |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | <input type="checkbox"/>            | A church, convention of churches, or association of churches described in <b>section 170(b)(1)(A)(i).</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 2  | <input type="checkbox"/>            | A school described in <b>section 170(b)(1)(A)(ii).</b> (Attach Schedule E )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 3  | <input type="checkbox"/>            | A hospital or a cooperative hospital service organization described in <b>section 170(b)(1)(A)(iii).</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 4  | <input type="checkbox"/>            | A medical research organization operated in conjunction with a hospital described in <b>section 170(b)(1)(A)(iii).</b> Enter the hospital's name, city, and state _____                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 5  | <input type="checkbox"/>            | An organization operated for the benefit of a college or university owned or operated by a governmental unit described in <b>section 170(b)(1)(A)(iv).</b> (Complete Part II )                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 6  | <input type="checkbox"/>            | A federal, state, or local government or governmental unit described in <b>section 170(b)(1)(A)(v).</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 7  | <input checked="" type="checkbox"/> | An organization that normally receives a substantial part of its support from a governmental unit or from the general public described in <b>section 170(b)(1)(A)(vi).</b> (Complete Part II )                                                                                                                                                                                                                                                                                                                                                                                                             |
| 8  | <input type="checkbox"/>            | A community trust described in <b>section 170(b)(1)(A)(vi)</b> (Complete Part II )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 9  | <input type="checkbox"/>            | An organization that normally receives (1) more than 33 1/3% of its support from contributions, membership fees, and gross receipts from activities related to its exempt functions—subject to certain exceptions, and (2) no more than 33 1/3% of its support from gross investment income and unrelated business taxable income (less section 511 tax) from businesses acquired by the organization after June 30, 1975 See <b>section 509(a)(2).</b> (Complete Part III )                                                                                                                               |
| 10 | <input type="checkbox"/>            | An organization organized and operated exclusively to test for public safety See <b>section 509(a)(4).</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 11 | <input type="checkbox"/>            | An organization organized and operated exclusively for the benefit of, to perform the functions of, or to carry out the purposes of one or more publicly supported organizations described in section 509(a)(1) or section 509(a)(2) See <b>section 509(a)(3).</b> Check the box that describes the type of supporting organization and complete lines 11e through 11h<br><b>a</b> <input type="checkbox"/> Type I <b>b</b> <input type="checkbox"/> Type II <b>c</b> <input type="checkbox"/> Type III - Functionally integrated <b>d</b> <input type="checkbox"/> Type III - Non-functionally integrated |
| e  | <input type="checkbox"/>            | By checking this box, I certify that the organization is not controlled directly or indirectly by one or more disqualified persons other than foundation managers and other than one or more publicly supported organizations described in section 509(a)(1) or section 509(a)(2)                                                                                                                                                                                                                                                                                                                          |
| f  | <input type="checkbox"/>            | If the organization received a written determination from the IRS that it is a Type I, Type II, or Type III supporting organization, check this box                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| g  | <input type="checkbox"/>            | Since August 17, 2006, has the organization accepted any gift or contribution from any of the following persons?<br><b>(i)</b> A person who directly or indirectly controls, either alone or together with persons described in (ii) and (iii) below, the governing body of the supported organization?<br><b>(ii)</b> A family member of a person described in (i) above?<br><b>(iii)</b> A 35% controlled entity of a person described in (i) or (ii) above?                                                                                                                                             |
| h  | <input type="checkbox"/>            | Provide the following information about the supported organization(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

|          | Yes | No |
|----------|-----|----|
| 11g(i)   |     |    |
| 11g(ii)  |     |    |
| 11g(iii) |     |    |

| (i) Name of supported organization | (ii) EIN | (iii) Type of organization (described on lines 1- 9 above or IRC section (see instructions)) | (iv) Is the organization in col (i) listed in your governing document? |    | (v) Did you notify the organization in col (i) of your support? |    | (vi) Is the organization in col (i) organized in the U S ? |    | (vii) Amount of monetary support |
|------------------------------------|----------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----|-----------------------------------------------------------------|----|------------------------------------------------------------|----|----------------------------------|
|                                    |          |                                                                                              | Yes                                                                    | No | Yes                                                             | No | Yes                                                        | No |                                  |
|                                    |          |                                                                                              |                                                                        |    |                                                                 |    |                                                            |    |                                  |
|                                    |          |                                                                                              |                                                                        |    |                                                                 |    |                                                            |    |                                  |
| Total                              |          |                                                                                              |                                                                        |    |                                                                 |    |                                                            |    |                                  |

Part II

Support Schedule for Organizations Described in Sections 170(b)(1)(A)(iv) and 170(b)(1)(A)(vi)  
(Complete only if you checked the box on line 5, 7, or 8 of Part I or if the organization failed to qualify under Part III. If the organization fails to qualify under the tests listed below, please complete Part III.)

| Section A. Public Support                                                                                                                                                                             |            |            |            |            |            |            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|------------|------------|------------|------------|
| Calendar year (or fiscal year beginning in) ▶                                                                                                                                                         | (a) 2009   | (b) 2010   | (c) 2011   | (d) 2012   | (e) 2013   | (f) Total  |
| 1 Gifts, grants, contributions, and membership fees received (Do not include any "unusual grants.")                                                                                                   | 14,112,296 | 15,632,382 | 16,102,256 | 15,381,241 | 16,595,653 | 77,823,828 |
| 2 Tax revenues levied for the organization's benefit and either paid to or expended on its behalf                                                                                                     | 0          | 0          | 0          | 0          |            | 0          |
| 3 The value of services or facilities furnished by a governmental unit to the organization without charge                                                                                             | 0          | 0          | 0          | 0          |            | 0          |
| 4 Total. Add lines 1 through 3                                                                                                                                                                        | 14,112,296 | 15,632,382 | 16,102,256 | 15,381,241 | 16,595,653 | 77,823,828 |
| 5 The portion of total contributions by each person (other than a governmental unit or publicly supported organization) included on line 1 that exceeds 2% of the amount shown on line 11, column (f) |            |            |            |            |            | 2,000,000  |
| 6 Public support. Subtract line 5 from line 4                                                                                                                                                         |            |            |            |            |            | 75,823,828 |

| Section B. Total Support                                                                                                                                                           |            |            |            |            |            |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|------------|------------|------------|------------|
| Calendar year (or fiscal year beginning in) ▶                                                                                                                                      | (a) 2009   | (b) 2010   | (c) 2011   | (d) 2012   | (e) 2013   | (f) Total  |
| 7 Amounts from line 4                                                                                                                                                              | 14,112,296 | 15,632,382 | 16,102,256 | 15,381,241 | 16,595,653 | 77,823,828 |
| 8 Gross income from interest, dividends, payments received on securities loans, rents, royalties and income from similar sources                                                   | 317,600    | 294,238    | 393,000    | 251,861    | 338,851    | 1,595,550  |
| 9 Net income from unrelated business activities, whether or not the business is regularly carried on                                                                               | 0          | 0          | 0          | -158,878   |            | -158,878   |
| 10 Other income Do not include gain or loss from the sale of capital assets (Explain in Part IV )                                                                                  | 148,928    | 193,239    | 223,137    | 186,732    | 145,226    | 897,262    |
| 11 Total support (Add lines 7 through 10)                                                                                                                                          |            |            |            |            |            | 80,157,762 |
| 12 Gross receipts from related activities, etc (see instructions)                                                                                                                  |            |            |            |            | 12         | 3,861,182  |
| 13 First five years. If the Form 990 is for the organization's first, second, third, fourth, or fifth tax year as a 501(c)(3) organization, check this box and stop here . . . . . |            |            |            |            |            | ▶          |

| Section C. Computation of Public Support Percentage                                                                                                                                                                                                                                                                                                                                         |    |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----------|
| 14 Public support percentage for 2013 (line 6, column (f) divided by line 11, column (f))                                                                                                                                                                                                                                                                                                   | 14 | 94 593 % |
| 15 Public support percentage for 2012 Schedule A, Part II, line 14                                                                                                                                                                                                                                                                                                                          | 15 | 97 031 % |
| 16a 33 1/3% support test—2013. If the organization did not check the box on line 13, and line 14 is 33 1/3% or more, check this box and stop here. The organization qualifies as a publicly supported organization                                                                                                                                                                          | ▶  |          |
| b 33 1/3% support test—2012. If the organization did not check a box on line 13 or 16a, and line 15 is 33 1/3% or more, check this box and stop here. The organization qualifies as a publicly supported organization                                                                                                                                                                       | ▶  |          |
| 17a 10%-facts-and-circumstances test—2013. If the organization did not check a box on line 13, 16a, or 16b, and line 14 is 10% or more, and if the organization meets the "facts-and-circumstances" test, check this box and stop here. Explain in Part IV how the organization meets the "facts-and-circumstances" test The organization qualifies as a publicly supported organization    | ▶  |          |
| b 10%-facts-and-circumstances test—2012. If the organization did not check a box on line 13, 16a, 16b, or 17a, and line 15 is 10% or more, and if the organization meets the "facts-and-circumstances" test, check this box and stop here. Explain in Part IV how the organization meets the "facts-and-circumstances" test The organization qualifies as a publicly supported organization | ▶  |          |
| 18 Private foundation. If the organization did not check a box on line 13, 16a, 16b, 17a, or 17b, check this box and see instructions                                                                                                                                                                                                                                                       | ▶  |          |

Part IIISupport Schedule for Organizations Described in Section 509(a)(2)  
(Complete only if you checked the box on line 9 of Part I or if the organization failed to qualify under Part II. If the organization fails to qualify under the tests listed below, please complete Part II.)

| Section A. Public Support                                                                                                                                                  |          |          |          |          |          |           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|----------|----------|-----------|
| Calendar year (or fiscal year beginning in) ▶                                                                                                                              | (a) 2009 | (b) 2010 | (c) 2011 | (d) 2012 | (e) 2013 | (f) Total |
| 1 Gifts, grants, contributions, and membership fees received (Do not include any "unusual grants.")                                                                        |          |          |          |          |          |           |
| 2 Gross receipts from admissions, merchandise sold or services performed, or facilities furnished in any activity that is related to the organization's tax-exempt purpose |          |          |          |          |          |           |
| 3 Gross receipts from activities that are not an unrelated trade or business under section 513                                                                             |          |          |          |          |          |           |
| 4 Tax revenues levied for the organization's benefit and either paid to or expended on its behalf                                                                          |          |          |          |          |          |           |
| 5 The value of services or facilities furnished by a governmental unit to the organization without charge                                                                  |          |          |          |          |          |           |
| 6 Total. Add lines 1 through 5                                                                                                                                             |          |          |          |          |          |           |
| 7a Amounts included on lines 1, 2, and 3 received from disqualified persons                                                                                                |          |          |          |          |          |           |
| b Amounts included on lines 2 and 3 received from other than disqualified persons that exceed the greater of \$5,000 or 1% of the amount on line 13 for the year           |          |          |          |          |          |           |
| c Add lines 7a and 7b                                                                                                                                                      |          |          |          |          |          |           |
| 8 Public support (Subtract line 7c from line 6 )                                                                                                                           |          |          |          |          |          |           |

| Section B. Total Support                                                                                                                                                   |          |          |          |          |          |           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|----------|----------|-----------|
| Calendar year (or fiscal year beginning in) ▶                                                                                                                              | (a) 2009 | (b) 2010 | (c) 2011 | (d) 2012 | (e) 2013 | (f) Total |
| 9 Amounts from line 6                                                                                                                                                      |          |          |          |          |          |           |
| 10a Gross income from interest, dividends, payments received on securities loans, rents, royalties and income from similar sources                                         |          |          |          |          |          |           |
| b Unrelated business taxable income (less section 511 taxes) from businesses acquired after June 30, 1975                                                                  |          |          |          |          |          |           |
| c Add lines 10a and 10b                                                                                                                                                    |          |          |          |          |          |           |
| 11 Net income from unrelated business activities not included in line 10b, whether or not the business is regularly carried on                                             |          |          |          |          |          |           |
| 12 Other income. Do not include gain or loss from the sale of capital assets (Explain in Part IV.)                                                                         |          |          |          |          |          |           |
| 13 Total support. (Add lines 9, 10c, 11, and 12.)                                                                                                                          |          |          |          |          |          |           |
| 14 First five years. If the Form 990 is for the organization's first, second, third, fourth, or fifth tax year as a 501(c)(3) organization, check this box and stop here ▶ |          |          |          |          |          |           |

| Section C. Computation of Public Support Percentage                                       |    |  |
|-------------------------------------------------------------------------------------------|----|--|
| 15 Public support percentage for 2013 (line 8, column (f) divided by line 13, column (f)) | 15 |  |
| 16 Public support percentage from 2012 Schedule A, Part III, line 15                      | 16 |  |

| Section D. Computation of Investment Income Percentage                                                                                                                                                                                                               |    |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|--|
| 17 Investment income percentage for 2013 (line 10c, column (f) divided by line 13, column (f))                                                                                                                                                                       | 17 |  |
| 18 Investment income percentage from 2012 Schedule A, Part III, line 17                                                                                                                                                                                              | 18 |  |
| 19a 33 1/3% support tests—2013. If the organization did not check the box on line 14, and line 15 is more than 33 1/3%, and line 17 is not more than 33 1/3%, check this box and stop here. The organization qualifies as a publicly supported organization ▶        |    |  |
| b 33 1/3% support tests—2012. If the organization did not check a box on line 14 or line 19a, and line 16 is more than 33 1/3% and line 18 is not more than 33 1/3%, check this box and stop here. The organization qualifies as a publicly supported organization ▶ |    |  |
| 20 Private foundation. If the organization did not check a box on line 14, 19a, or 19b, check this box and see instructions ▶                                                                                                                                        |    |  |

Part IV

**Supplemental Information.** Provide the explanations required by Part II, line 10; Part II, line 17a or 17b; and Part III, line 12. Also complete this part for any additional information. (See instructions).

| Facts And Circumstances Test |                                                                                                                                                                                                                       |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                              |                                                                                                                                                                                                                       |
| Return Reference             | Explanation                                                                                                                                                                                                           |
| Schedule A, Part II, Line 9  | (d) 2012 Includes the net proceeds, without contributions, from the 20th Anniversary fund raising event festivities                                                                                                   |
| Schedule A, Part II, Line 10 | Observing Scientists' fees to offset their lodging costs while observing, Keck logo sales, summit science tours fee offsets, and image fees All activities to advance scientific astronomical discovery and knowledge |

SCHEDULE D  
(Form 990)

Department of the Treasury  
Internal Revenue Service

Supplemental Financial Statements

▶ **Complete if the organization answered "Yes," to Form 990, Part IV, line 6, 7, 8, 9, 10, 11a, 11b, 11c, 11d, 11e, 11f, 12a, or 12b**  
▶ **Attach to Form 990.** ▶ **See separate instructions.** ▶ **Information about Schedule D (Form 990) and its instructions is at [www.irs.gov/form990](http://www.irs.gov/form990).**

OMB No 1545-0047

2013

Open to Public Inspection

**Name of the organization**  
CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY

**Employer identification number**  
95-3972799

**Part I**

**Organizations Maintaining Donor Advised Funds or Other Similar Funds or Accounts.** Complete if the organization answered "Yes" to Form 990, Part IV, line 6.

|   | (a) Donor advised funds                                                                                                                                                                                                                                                                                                                 | (b) Funds and other accounts |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| 1 | Total number at end of year                                                                                                                                                                                                                                                                                                             |                              |
| 2 | Aggregate contributions to (during year)                                                                                                                                                                                                                                                                                                |                              |
| 3 | Aggregate grants from (during year)                                                                                                                                                                                                                                                                                                     |                              |
| 4 | Aggregate value at end of year                                                                                                                                                                                                                                                                                                          |                              |
| 5 | Did the organization inform all donors and donor advisors in writing that the assets held in donor advised funds are the organization's property, subject to the organization's exclusive legal control? <div><input type="checkbox"/> Yes <input type="checkbox"/> No</div>                                                            |                              |
| 6 | Did the organization inform all grantees, donors, and donor advisors in writing that grant funds can be used only for charitable purposes and not for the benefit of the donor or donor advisor, or for any other purpose conferring impermissible private benefit? <div><input type="checkbox"/> Yes <input type="checkbox"/> No</div> |                              |

**Part II**

**Conservation Easements.** Complete if the organization answered "Yes" to Form 990, Part IV, line 7.

1

Purpose(s) of conservation easements held by the organization (check all that apply)

☐ Preservation of land for public use (e g , recreation or education) ☐ Preservation of an historically important land area  
☐ Protection of natural habitat ☐ Preservation of a certified historic structure  
☐ Preservation of open space

2

Complete lines 2a through 2d if the organization held a qualified conservation contribution in the form of a conservation easement on the last day of the tax year

|   | Held at the End of the Year                                                                                                              |
|---|------------------------------------------------------------------------------------------------------------------------------------------|
| a | Total number of conservation easements                                                                                                   |
| b | Total acreage restricted by conservation easements                                                                                       |
| c | Number of conservation easements on a certified historic structure included in (a)                                                       |
| d | Number of conservation easements included in (c) acquired after 8/17/06, and not on a historic structure listed in the National Register |

3

Number of conservation easements modified, transferred, released, extinguished, or terminated by the organization during the tax year ▶ \_\_\_\_\_

4

Number of states where property subject to conservation easement is located ▶ \_\_\_\_\_

5

Does the organization have a written policy regarding the periodic monitoring, inspection, handling of violations, and enforcement of the conservation easements it holds?

☐ Yes ☐ No

6

Staff and volunteer hours devoted to monitoring, inspecting, and enforcing conservation easements during the year ▶ \_\_\_\_\_

7

Amount of expenses incurred in monitoring, inspecting, and enforcing conservation easements during the year ▶ \$ \_\_\_\_\_

8

Does each conservation easement reported on line 2(d) above satisfy the requirements of section 170(h)(4)(B)(i) and section 170(h)(4)(B)(ii)?

☐ Yes ☐ No

9

In Part XIII, describe how the organization reports conservation easements in its revenue and expense statement, and balance sheet, and include, if applicable, the text of the footnote to the organization's financial statements that describes the organization's accounting for conservation easements

**Part III**

**Organizations Maintaining Collections of Art, Historical Treasures, or Other Similar Assets.** Complete if the organization answered "Yes" to Form 990, Part IV, line 8.

1a

If the organization elected, as permitted under SFAS 116 (ASC 958), not to report in its revenue statement and balance sheet works of art, historical treasures, or other similar assets held for public exhibition, education, or research in furtherance of public service, provide, in Part XIII, the text of the footnote to its financial statements that describes these items

b

If the organization elected, as permitted under SFAS 116 (ASC 958), to report in its revenue statement and balance sheet works of art, historical treasures, or other similar assets held for public exhibition, education, or research in furtherance of public service, provide the following amounts relating to these items

(i) Revenues included in Form 990, Part VIII, line 1

▶ \$ \_\_\_\_\_

(ii) Assets included in Form 990, Part X

▶ \$ \_\_\_\_\_

2

If the organization received or held works of art, historical treasures, or other similar assets for financial gain, provide the following amounts required to be reported under SFAS 116 (ASC 958) relating to these items

a

Revenues included in Form 990, Part VIII, line 1

▶ \$ \_\_\_\_\_

b

Assets included in Form 990, Part X

▶ \$ \_\_\_\_\_

For Paperwork Reduction Act Notice, see the Instructions for Form 990.

Cat No 52283D

Schedule D (Form 990) 2013

**Part III Organizations Maintaining Collections of Art, Historical Treasures, or Other Similar Assets** *(continued)*

- 3

Using the organization's acquisition, accession, and other records, check any of the following that are a significant use of its collection items (check all that apply)
- a

☐ Public exhibition

b

☐ Scholarly research

c

☐ Preservation for future generations

d

☐ Loan or exchange programs

e

☐ Other
- 4

Provide a description of the organization's collections and explain how they further the organization's exempt purpose in Part XIII
- 5

During the year, did the organization solicit or receive donations of art, historical treasures or other similar assets to be sold to raise funds rather than to be maintained as part of the organization's collection?

☐ Yes

☐ No

**Part IV Escrow and Custodial Arrangements.** Complete if the organization answered "Yes" to Form 990, Part IV, line 9, or reported an amount on Form 990, Part X, line 21.

- 1a

Is the organization an agent, trustee, custodian or other intermediary for contributions or other assets not included on Form 990, Part X?

☐ Yes

☐ No
- b

If "Yes," explain the arrangement in Part XIII and complete the following table
- c

Beginning balance

d

Additions during the year

e

Distributions during the year

f

Ending balance

|    | Amount |
|----|--------|
| 1c |        |
| 1d |        |
| 1e |        |
| 1f |        |
- 2a

Did the organization include an amount on Form 990, Part X, line 21?

☐ Yes

☐ No
- b

If "Yes," explain the arrangement in Part XIII Check here if the explanation has been provided in Part XIII

☐

**Part V Endowment Funds.** Complete if the organization answered "Yes" to Form 990, Part IV, line 10.

|                                                            | (a)Current year | (b)Prior year | b (c)Two years back | (d)Three years back | (e)Four years back |
|------------------------------------------------------------|-----------------|---------------|---------------------|---------------------|--------------------|
| 1a Beginning of year balance . . . . .                     |                 |               |                     |                     |                    |
| b Contributions . . . . .                                  |                 |               |                     |                     |                    |
| c Net investment earnings, gains, and losses               |                 |               |                     |                     |                    |
| d Grants or scholarships . . . . .                         |                 |               |                     |                     |                    |
| e Other expenditures for facilities and programs . . . . . |                 |               |                     |                     |                    |
| f Administrative expenses . . . . .                        |                 |               |                     |                     |                    |
| g End of year balance . . . . .                            |                 |               |                     |                     |                    |

- 2

Provide the estimated percentage of the current year end balance (line 1g, column (a)) held as
- a

Board designated or quasi-endowment
- b

Permanent endowment
- c

Temporarily restricted endowment

The percentages in lines 2a, 2b, and 2c should equal 100%
- 3a

Are there endowment funds not in the possession of the organization that are held and administered for the organization by
- (i) unrelated organizations . . . . .

3a(i)

Yes

No

(ii) related organizations . . . . .

3a(ii)

Yes

No

b

If "Yes" to 3a(ii), are the related organizations listed as required on Schedule R?

3b

Yes

No

**Part VI Land, Buildings, and Equipment.** Complete if the organization answered 'Yes' to Form 990, Part IV, line 11a. See Form 990, Part X, line 10.

| Description of property                                                                          | (a) Cost or other basis (investment) | (b)Cost or other basis (other) | (c) Accumulated depreciation | (d) Book value |
|--------------------------------------------------------------------------------------------------|--------------------------------------|--------------------------------|------------------------------|----------------|
| 1a Land . . . . .                                                                                | 0                                    | 0                              |                              | 0              |
| b Buildings . . . . .                                                                            | 0                                    | 0                              | 0                            | 0              |
| c Leasehold improvements . . . . .                                                               | 0                                    | 0                              | 0                            | 0              |
| d Equipment . . . . .                                                                            | 0                                    | 122,986,170                    | 68,657,337                   | 54,328,833     |
| e Other . . . . .                                                                                | 0                                    | 0                              | 0                            | 0              |
| Total. Add lines 1a through 1e (Column (d) must equal Form 990, Part X, column (B), line 10(c).) |                                      |                                |                              | 54,328,833     |

Schedule D (Form 990) 2013



Part XI

Reconciliation of Revenue per Audited Financial Statements With Revenue per Return

Complete if the organization answered 'Yes' to Form 990, Part IV, line 12a.

|   |                                                                                          |    |            |
|---|------------------------------------------------------------------------------------------|----|------------|
| 1 | Total revenue, gains, and other support per audited financial statements . . . . .       | 1  | 23,187,938 |
| 2 | Amounts included on line 1 but not on Form 990, Part VIII, line 12                       |    |            |
| a | Net unrealized gains on investments . . . . .                                            | 2a | 444,867    |
| b | Donated services and use of facilities . . . . .                                         | 2b | 12,443     |
| c | Recoveries of prior year grants . . . . .                                                | 2c | 0          |
| d | Other (Describe in Part XIII ) . . . . .                                                 | 2d | 433,352    |
| e | Add lines 2a through 2d . . . . .                                                        | 2e | 890,662    |
| 3 | Subtract line 2e from line 1 . . . . .                                                   | 3  | 22,297,276 |
| 4 | Amounts included on Form 990, Part VIII, line 12, but not on line 1                      |    |            |
| a | Investment expenses not included on Form 990, Part VIII, line 7b . . . . .               | 4a | 0          |
| b | Other (Describe in Part XIII ) . . . . .                                                 | 4b | 242,005    |
| c | Add lines 4a and 4b . . . . .                                                            | 4c | 242,005    |
| 5 | Total revenue Add lines 3 and 4c. (This must equal Form 990, Part I, line 12 ) . . . . . | 5  | 22,539,281 |

Part XII

Reconciliation of Expenses per Audited Financial Statements With Expenses per Return.

Complete if the organization answered 'Yes' to Form 990, Part IV, line 12a.

|   |                                                                                           |    |            |
|---|-------------------------------------------------------------------------------------------|----|------------|
| 1 | Total expenses and losses per audited financial statements . . . . .                      | 1  | 23,894,348 |
| 2 | Amounts included on line 1 but not on Form 990, Part IX, line 25                          |    |            |
| a | Donated services and use of facilities . . . . .                                          | 2a | 0          |
| b | Prior year adjustments . . . . .                                                          | 2b | 0          |
| c | Other losses . . . . .                                                                    | 2c | 0          |
| d | Other (Describe in Part XIII ) . . . . .                                                  | 2d | 0          |
| e | Add lines 2a through 2d . . . . .                                                         | 2e | 0          |
| 3 | Subtract line 2e from line 1 . . . . .                                                    | 3  | 23,894,348 |
| 4 | Amounts included on Form 990, Part IX, line 25, but not on line 1:                        |    |            |
| a | Investment expenses not included on Form 990, Part VIII, line 7b . . . . .                | 4a | 25,385     |
| b | Other (Describe in Part XIII ) . . . . .                                                  | 4b | 0          |
| c | Add lines 4a and 4b . . . . .                                                             | 4c | 25,385     |
| 5 | Total expenses Add lines 3 and 4c. (This must equal Form 990, Part I, line 18 ) . . . . . | 5  | 23,919,733 |

Part XIII

Supplemental Information

Provide the descriptions required for Part II, lines 3, 5, and 9, Part III, lines 1a and 4, Part IV, lines 1b and 2b, Part V, line 4, Part X, line 2, Part XI, lines 2d and 4b, and Part XII, lines 2d and 4b. Also complete this part to provide any additional information.

| Return Reference             | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Schedule D, Part VI, Line 1a | The land in Waimea is owned by California Institute of Technology and is not listed as a CARA financial asset                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Schedule D, Part VI, Line 1b | The headquarters building in Waimea and the observatories on Mauna Kea are owned by California Institute of Technology and are not listed as CARA financial assets                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Schedule D, Part VI, Line 1d | The telescopes on Mauna Kea are owned by California Institute of Technology and are not listed as CARA financial assets. CARA owns all focal-plane instruments, lasers and adaptive optics plus various other equipment not affixed to the facilities, and computers & vehicles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Schedule D, Part VII, Line 3 | The University of California General Endowment Pool is a unitized fund whereby CARA participates in investment returns and income on an equivalent pro-rated basis with all participants in the pool                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Schedule D, Part X, Line 2   | CARA has received a determination from taxing authorities that it is an organization exempt from taxation under Section 501c3 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, 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 fifty percent 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. |
| Schedule D, Part XI, Line 2d | Satisfaction of temporary equipment restrictions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Schedule D, Part XI, Line 4b | Temporarily restricted contributions shifted from the audit report to the revenue section and the net proceeds from the fleet vehicle sales and the loss on the sale of donated stock which are reported in the audit report in the expense sections                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

[illegible]

SCHEDULE F  
(Form 990)

Department of the Treasury  
Internal Revenue Service

Statement of Activities Outside the United States

► Complete if the organization answered "Yes" to Form 990,  
Part IV, line 14b, 15, or 16.  
► Attach to Form 990. ► See separate instructions.  
► Information about Schedule F (Form 990) and its instructions is at [www.irs.gov/form990](http://www.irs.gov/form990).

OMB No 1545-0047

2013

Open to Public Inspection

Name of the organization  
CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY

Employer identification number  
95-3972799

Part I

General Information on Activities Outside the United States. Complete if the organization answered "Yes" to Form 990, Part IV, line 14b.

1

For grantmakers. Does the organization maintain records to substantiate the amount of its grants and other assistance, the grantees' eligibility for the grants or assistance, and the selection criteria used to award the grants or assistance? . . . . .

☒ Yes

☐ No

2

For grantmakers. Describe in Part V the organization's procedures for monitoring the use of its grants and other assistance outside the United States.

3

Activites per Region (The following Part I, line 3 table can be duplicated if additional space is needed )

| (a) Region                                                                   | (b) Number of offices in the region | (c) Number of employees, agents, and independent contractors in region | (d) Activities conducted in region (by type) (e g , fundraising, program services, investments, grants to recipients located in the region) | (e) If activity listed in (d) is a program service, describe specific type of service(s) in region                                                                                                                                                                                                         | (f) Total expenditures for and investments in region |
|------------------------------------------------------------------------------|-------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| ( 1 ) Europe (including Iceland and Greenland)                               | 0                                   | 0                                                                      | Speaking at Seminars or Conferences                                                                                                         | Scientific Detector Workshop 2013                                                                                                                                                                                                                                                                          | 3,783                                                |
| ( 2 ) Europe (including Iceland and Greenland)                               | 0                                   | 0                                                                      | Program Services                                                                                                                            | Collaborative scientific meetings with the European Southern Observatory                                                                                                                                                                                                                                   | 9,860                                                |
| ( 3 ) Europe (including Iceland and Greenland)                               | 0                                   | 0                                                                      | Program Services                                                                                                                            | TOPTICA LASER DEVELOPMENT - Contracted with this firm to fabricate and develop telescope instrumentation Includes travel and supplies procured Purchases of scientific equipment and services from CSEM SA for MOSFIRE instrument development and maintenance and WINLIGHT for KCWI instrument development | 334,072                                              |
| ( 4 ) North America (including Canada and Mexico, but not the United States) | 0                                   | 0                                                                      | Speaking at Seminars or Conferences                                                                                                         | Various conferences and meetings during the year Special Libraries Association Annual Conference, MPB Communications- Training on Laser Hardware, SPIE Conference                                                                                                                                          | 54,928                                               |
| ( 5 ) South Asia                                                             | 0                                   | 0                                                                      | Program Services                                                                                                                            | Scientific collaboration meetings with Australia National University                                                                                                                                                                                                                                       | 4,883                                                |
| 3a Sub-total                                                                 |                                     |                                                                        |                                                                                                                                             |                                                                                                                                                                                                                                                                                                            |                                                      |
| b Total from continuation sheets to Part I                                   |                                     |                                                                        |                                                                                                                                             |                                                                                                                                                                                                                                                                                                            |                                                      |
| c Totals (add lines 3a and 3b)                                               | 0                                   | 0                                                                      |                                                                                                                                             |                                                                                                                                                                                                                                                                                                            | 407,526                                              |

Part II

Grants and Other Assistance to Organizations or Entities Outside the United States. Complete if the organization answered "Yes" to Form 990, Part IV, line 15, for any recipient who received more than \$5,000. Part II can be duplicated if additional space is needed.

| 1     | (a) Name of organization | (b) IRS code section and EIN (if applicable) | (c) Region                               | (d) Purpose of grant                                                                                                                  | (e) Amount of cash grant | (f) Manner of cash disbursement | (g) Amount of non-cash assistance | (h) Description of non-cash assistance | (i) Method of valuation (book, FMV, appraisal, other) |
|-------|--------------------------|----------------------------------------------|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------------|-----------------------------------|----------------------------------------|-------------------------------------------------------|
| ( 1 ) |                          |                                              | Europe (including Iceland and Greenland) | Sub-award for scientific development under the National Science Foundation Prime Award AST 1207631 for the PSF Reconstruction project | 15,895                   | WIRE TRANSFER                   | 0                                 |                                        |                                                       |
| ( 2 ) |                          |                                              |                                          |                                                                                                                                       |                          |                                 |                                   |                                        |                                                       |
| ( 3 ) |                          |                                              |                                          |                                                                                                                                       |                          |                                 |                                   |                                        |                                                       |
| ( 4 ) |                          |                                              |                                          |                                                                                                                                       |                          |                                 |                                   |                                        |                                                       |

2

Enter total number of recipient organizations listed above that are recognized as charities by the foreign country, recognized as tax-exempt by the IRS, or for which the grantee or counsel has provided a section 501(c)(3) equivalency letter . . . . .

0

3

Enter total number of other organizations or entities . . . . .

1

Part III

Grants and Other Assistance to Individuals Outside the United States. Complete if the organization answered "Yes" to Form 990, Part IV, line 16.  
Part III can be duplicated if additional space is needed.

| (a) Type of grant or assistance | (b) Region | (c) Number of recipients | (d) Amount of cash grant | (e) Manner of cash disbursement | (f) Amount of non-cash assistance | (g) Description of non-cash assistance | (h) Method of valuation (book, FMV, appraisal, other) |
|---------------------------------|------------|--------------------------|--------------------------|---------------------------------|-----------------------------------|----------------------------------------|-------------------------------------------------------|
| ( 1 )                           |            |                          |                          |                                 |                                   |                                        |                                                       |
| ( 2 )                           |            |                          |                          |                                 |                                   |                                        |                                                       |
| ( 3 )                           |            |                          |                          |                                 |                                   |                                        |                                                       |
| ( 4 )                           |            |                          |                          |                                 |                                   |                                        |                                                       |
| ( 5 )                           |            |                          |                          |                                 |                                   |                                        |                                                       |
| ( 6 )                           |            |                          |                          |                                 |                                   |                                        |                                                       |
| ( 7 )                           |            |                          |                          |                                 |                                   |                                        |                                                       |
| ( 8 )                           |            |                          |                          |                                 |                                   |                                        |                                                       |
| ( 9 )                           |            |                          |                          |                                 |                                   |                                        |                                                       |
| ( 10 )                          |            |                          |                          |                                 |                                   |                                        |                                                       |
| ( 11 )                          |            |                          |                          |                                 |                                   |                                        |                                                       |
| ( 12 )                          |            |                          |                          |                                 |                                   |                                        |                                                       |
| ( 13 )                          |            |                          |                          |                                 |                                   |                                        |                                                       |
| ( 14 )                          |            |                          |                          |                                 |                                   |                                        |                                                       |
| ( 15 )                          |            |                          |                          |                                 |                                   |                                        |                                                       |
| ( 16 )                          |            |                          |                          |                                 |                                   |                                        |                                                       |
| ( 17 )                          |            |                          |                          |                                 |                                   |                                        |                                                       |
| ( 18 )                          |            |                          |                          |                                 |                                   |                                        |                                                       |

**Part IV Foreign Forms**

- 1

Was the organization a U S transferor of property to a foreign corporation during the tax year? *If "Yes," the organization may be required to file Form 926, Return by a U.S. Transferor of Property to a Foreign Corporation (see Instructions for Form 926)*

☐

Yes

☒

No
- 2

Did the organization have an interest in a foreign trust during the tax year? *If "Yes," the organization may be required to file Form 3520, Annual Return to Report Transactions with Foreign Trusts and Receipt of Certain Foreign Gifts, and/or Form 3520-A, Annual Information Return of Foreign Trust With a U.S. Owner (see Instructions for Forms 3520 and 3520-A)*

☐

Yes

☒

No
- 3

Did the organization have an ownership interest in a foreign corporation during the tax year? *If "Yes," the organization may be required to file Form 5471, Information Return of U.S. Persons with Respect to Certain Foreign Corporations. (see Instructions for Form 5471)*

☐

Yes

☒

No
- 4

Was the organization a direct or indirect shareholder of a passive foreign investment company or a qualified electing fund during the tax year? *If "Yes," the organization may be required to file Form 8621, Information Return by a Shareholder of a Passive Foreign Investment Company or Qualified Electing Fund. (see Instructions for Form 8621)*

☐

Yes

☒

No
- 5

Did the organization have an ownership interest in a foreign partnership during the tax year? *If "Yes," the organization may be required to file Form 8865, Return of U.S. Persons with Respect to Certain Foreign Partnerships. (see Instructions for Form 8865)*

☐

Yes

☒

No
- 6

Did the organization have any operations in or related to any boycotting countries during the tax year? *If "Yes," the organization may be required to file Form 5713, International Boycott Report (see Instructions for Form 5713).*

☐

Yes

☒

No

Part V

Supplemental Information

Provide the information required by Part I, line 2 (monitoring of funds); Part I, line 3, column (f) (accounting method; amounts of investments vs. expenditures per region); Part II, line 1 (accounting method); Part III (accounting method); and Part III, column (c) (estimated number of recipients), as applicable. Also complete this part to provide any additional information (see instructions).

990 Schedule F, Supplemental Information

| Return Reference           | Explanation                                                                                                                                                                                                                                                                       |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Schedule F, Part I, Line 2 | W M Keck Observatory monitors grantees' performance based on achievement of grant purposes according to federal, state and private foundation conditions and compliance in addition to WMKO internal procedures including the best practices under A-133 sub-recipient monitoring |

Schedule I  
(Form 990)

Department of the Treasury  
Internal Revenue Service

Grants and Other Assistance to Organizations,  
Governments and Individuals in the United States

Complete if the organization answered "Yes," to Form 990, Part IV, line 21 or 22.  
▶ Attach to Form 990

▶ Information about Schedule I (Form 990) and its instructions is at [www.irs.gov/form990](http://www.irs.gov/form990).

OMB No 1545-0047

2013

Open to Public  
Inspection

Name of the organization  
CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY

Employer identification number  
95-3972799

Part I

General Information on Grants and Assistance

- 1

Does the organization maintain records to substantiate the amount of the grants or assistance, the grantees' eligibility for the grants or assistance, and the selection criteria used to award the grants or assistance? . . . . .

☒ Yes ☐ No
- 2

Describe in Part IV the organization's procedures for monitoring the use of grant funds in the United States

Part II

Grants and Other Assistance to Governments and Organizations in the United States. Complete if the organization answered "Yes" to Form 990, Part IV, line 21, for any recipient that received more than \$5,000. Part II can be duplicated if additional space is needed.

| (a) Name and address of organization or government                                           | (b) EIN    | (c) IRC Code section if applicable | (d) Amount of cash grant | (e) Amount of non-cash assistance | (f) Method of valuation (book, FMV, appraisal, other) | (g) Description of non-cash assistance | (h) Purpose of grant or assistance                                                                                                                                            |
|----------------------------------------------------------------------------------------------|------------|------------------------------------|--------------------------|-----------------------------------|-------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (1) CALIFORNIA INSTITUTE OF TECHNOLOGY<br>1200 E CALIFORNIA BLVD<br>PASADENA, CA 946075200   | 95-1643307 | 501(c)(3)                          | 2,137,126                | 0                                 | CASH                                                  |                                        | Sub-award under the federally funded AURA TSIP sub-award N09426C-A for the development of the astronomical instrument the Keck Cosmic Web Imager                              |
| (2) CALIFORNIA INSTITUTE OF TECHNOLOGY<br>1200 E CALIFORNIA BLVD<br>PASADENA, CA 946075200   | 95-1643307 | 501(c)(3)                          | 93,051                   | 0                                 | CASH                                                  |                                        | Sub-award under the federally funded NSF AST-1007058 prime award for the design and development of astronomical technology for the Adaptive Optics Tip Tilt Sensor for Keck I |
| (3) UNIVERSITY OF CALIFORNIA LOS ANGELES<br>10920 WILSHIRE BLVD<br>LOS ANGELES, CA 900246503 | 95-6006143 | 501(c)(3)                          | 29,399                   | 0                                 | CASH                                                  |                                        | Sub-award under the federally funded NSF AST-1311102 prime award for the upgrade of the OSIRIS Detector                                                                       |
| (4) UNIVERSITY OF CALIFORNIA LOS ANGELES<br>10920 WILSHIRE BLVD<br>LOS ANGELES, CA 900246503 | 95-6006143 | 501(c)(3)                          | 37,997                   | 0                                 | CASH                                                  |                                        | Sub-award under the federally funded AURA TSIP sub-award N09426C-A for the development of the astronomical instrument the Keck Cosmic Web Imager                              |
| (5) UNIVERSITY OF CALIFORNIA SANTA CRUZ<br>1156 HIGH STREET<br>SANTA CRUZ, CA 95064          | 94-1539563 | 501(c)(3)                          | 308,496                  | 0                                 | CASH                                                  |                                        | Sub-award under the federally funded AURA TSIP sub-award N09426C-A for the development of the astronomical instrument the Keck Cosmic Web Imager                              |
|                                                                                              |            |                                    |                          |                                   |                                                       |                                        |                                                                                                                                                                               |
|                                                                                              |            |                                    |                          |                                   |                                                       |                                        |                                                                                                                                                                               |
|                                                                                              |            |                                    |                          |                                   |                                                       |                                        |                                                                                                                                                                               |

2

Enter total number of section 501(c)(3) and government organizations listed in the line 1 table . . . . .

5

3

Enter total number of other organizations listed in the line 1 table . . . . .

0

**Part III**

**Grants and Other Assistance to Individuals in the United States.** Complete if the organization answered "Yes" to Form 990, Part IV, line 22.  
Part III can be duplicated if additional space is needed.

| (a)Type of grant or assistance | (b)Number of recipients | (c)Amount of cash grant | (d)Amount of non-cash assistance | (e)Method of valuation (book, FMV, appraisal, other) | (f)Description of non-cash assistance |
|--------------------------------|-------------------------|-------------------------|----------------------------------|------------------------------------------------------|---------------------------------------|
|                                |                         |                         |                                  |                                                      |                                       |
|                                |                         |                         |                                  |                                                      |                                       |
|                                |                         |                         |                                  |                                                      |                                       |
|                                |                         |                         |                                  |                                                      |                                       |
|                                |                         |                         |                                  |                                                      |                                       |
|                                |                         |                         |                                  |                                                      |                                       |
|                                |                         |                         |                                  |                                                      |                                       |

**Part IV**

**Supplemental Information.** Provide the information required in Part I, line 2, Part III, column (b), and any other additional information.

| Return Reference           | Explanation                                                                                                                                                                                                                                              |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Schedule I, Part I, Line 2 | W M Keck Observatory monitors grantees' performance based on achievement of grant purposes according to federal, state and private foundation conditions and compliance in addition to WMKO internal procedures including A-133 sub-recipient monitoring |

Schedule J  
(Form 990)

Department of the Treasury  
Internal Revenue Service

Compensation Information

For certain Officers, Directors, Trustees, Key Employees, and Highest Compensated Employees

▶ Complete if the organization answered "Yes" to Form 990, Part IV, line 23.  
▶ Attach to Form 990. ▶ See separate instructions.

▶ Information about Schedule J (Form 990) and its instructions is at [www.irs.gov/form990](http://www.irs.gov/form990).

OMB No 1545-0047

2013

Open to Public Inspection

Name of the organization  
CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY

Employer identification number  
95-3972799

Part I

Questions Regarding Compensation

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Yes | No  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|
| <div><div>1a</div><div>Check the appropriate box(es) if the organization provided any of the following to or for a person listed in Form 990, Part VII, Section A, line 1a Complete Part III to provide any relevant information regarding these items</div><div><div><div><input type="checkbox"/> First-class or charter travel</div><div><input type="checkbox"/> Travel for companions</div><div><input type="checkbox"/> Tax idemnification and gross-up payments</div><div><input type="checkbox"/> Discretionary spending account</div></div><div><div><input type="checkbox"/> Housing allowance or residence for personal use</div><div><input type="checkbox"/> Payments for business use of personal residence</div><div><input type="checkbox"/> Health or social club dues or initiation fees</div><div><input type="checkbox"/> Personal services (e g , maid, chauffeur, chef)</div></div></div></div> |     |     |
| <div><div>b</div><div>If any of the boxes in line 1a are checked, did the organization follow a written policy regarding payment or reimbursement or provision of all of the expenses described above? If "No," complete Part III to explain</div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1b  |     |
| <div><div>2</div><div>Did the organization require substantiation prior to reimbursing or allowing expenses incurred by all directors, trustees, officers, including the CEO/Executive Director, regarding the items checked in line 1a?</div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2   |     |
| <div><div>3</div><div>Indicate which, if any, of the following the filing organization used to establish the compensation of the organization's CEO/Executive Director Check all that apply Do not check any boxes for methods used by a related organization to establish compensation of the CEO/Executive Director, but explain in Part III</div><div><div><div><input checked="" type="checkbox"/> Compensation committee</div><div><input type="checkbox"/> Independent compensation consultant</div><div><input checked="" type="checkbox"/> Form 990 of other organizations</div></div><div><div><input type="checkbox"/> Written employment contract</div><div><input checked="" type="checkbox"/> Compensation survey or study</div><div><input type="checkbox"/> Approval by the board or compensation committee</div></div></div></div>                                                                    |     |     |
| <div><div>4</div><div>During the year, did any person listed in Form 990, Part VII, Section A, line 1a with respect to the filing organization or a related organization</div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |     |     |
| <div><div>a</div><div>Receive a severance payment or change-of-control payment?</div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 4a  | No  |
| <div><div>b</div><div>Participate in, or receive payment from, a supplemental nonqualified retirement plan?</div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 4b  | No  |
| <div><div>c</div><div>Participate in, or receive payment from, an equity-based compensation arrangement?</div></div> <div>If "Yes" to any of lines 4a-c, list the persons and provide the applicable amounts for each item in Part III</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 4c  | No  |
| <div><div></div><div>Only 501(c)(3) and 501(c)(4) organizations only must complete lines 5-9.</div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |     |     |
| <div><div>5</div><div>For persons listed in Form 990, Part VII, Section A, line 1a, did the organization pay or accrue any compensation contingent on the revenues of</div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |     |     |
| <div><div>a</div><div>The organization?</div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 5a  | No  |
| <div><div>b</div><div>Any related organization?</div></div> <div>If "Yes," to line 5a or 5b, describe in Part III</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 5b  | No  |
| <div><div>6</div><div>For persons listed in Form 990, Part VII, Section A, line 1a, did the organization pay or accrue any compensation contingent on the net earnings of</div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |     |     |
| <div><div>a</div><div>The organization?</div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 6a  | No  |
| <div><div>b</div><div>Any related organization?</div></div> <div>If "Yes," to line 6a or 6b, describe in Part III</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6b  | No  |
| <div><div>7</div><div>For persons listed in Form 990, Part VII, Section A, line 1a, did the organization provide any non-fixed payments not described in lines 5 and 6? If "Yes," describe in Part III</div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 7   | Yes |
| <div><div>8</div><div>Were any amounts reported in Form 990, Part VII, paid or accrued pursuant to a contract that was subject to the initial contract exception described in Regulations section 53.4958-4(a)(3)? If "Yes," describe in Part III</div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 8   | No  |
| <div><div>9</div><div>If "Yes" to line 8, did the organization also follow the rebuttable presumption procedure described in Regulations section 53.4958-6(c)?</div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 9   |     |

**Part II** **Officers, Directors, Trustees, Key Employees, and Highest Compensated Employees.** Use duplicate copies if additional space is needed.

For each individual whose compensation must be reported in Schedule J, report compensation from the organization on row (i) and from related organizations, described in the instructions, on row (ii) Do not list any individuals that are not listed on Form 990, Part VII

**Note.** The sum of columns (B)(i)-(iii) for each listed individual must equal the total amount of Form 990, Part VII, Section A, line 1a, applicable column (D) and (E) amounts for that individual

| (A) Name and Title        |  | (B) Breakdown of W-2 and/or 1099-MISC compensation |                                     |                                     | (C) Retirement and other deferred compensation | (D) Nontaxable benefits | (E) Total of columns (B)(i)-(D) | (F) Compensation reported as deferred in prior Form 990 |
|---------------------------|--|----------------------------------------------------|-------------------------------------|-------------------------------------|------------------------------------------------|-------------------------|---------------------------------|---------------------------------------------------------|
|                           |  | (i) Base compensation                              | (ii) Bonus & incentive compensation | (iii) Other reportable compensation |                                                |                         |                                 |                                                         |
| See Additional Data Table |  |                                                    |                                     |                                     |                                                |                         |                                 |                                                         |

**Part III**   **Supplemental Information**

Provide the information, explanation, or descriptions required for Part I, lines 1a, 1b, 3, 4a, 4b, 4c, 5a, 5b, 6a, 6b, 7, and 8, and for Part II. Also complete this part for any additional information.

| Return Reference           | Explanation                                                                                                                                                                                                                                             |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Schedule J, Part I, Line 3 | PROCESS FOR DETERMINING COMPENSATION FOR THE DIRECTOR AND DEPUTY DIRECTOR   Annually the CARA Board Executive Committee reviews and approves the two directors' compensation using market compensation studies which may include other Form 990 returns |
| Schedule J, Part I, Line 7 | NON-FIXED PAYMENTS PROVIDED - CARA has an Observatory-wide bonus program for which all CARA employees are eligible to be nominated by other CARA employees for achievements based on non-revenue criteria                                               |
| Schedule J, Part II        | Section B(III)- OTHER REPORTABLE COMPENSATION   Includes employer paid dependent tuition                                                                                                                                                                |

## Additional Data

**Software ID:** 13000241  
**Software Version:** v1.00  
**EIN:** 95-3972799  
**Name:** CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY

### Form 990, Schedule J, Part II - Officers, Directors, Trustees, Key Employees, and Highest Compensated Employees

| (A) Name                                                       |             | (B) Breakdown of W-2 and/or 1099-MISC compensation |                                     |                          | (C) Deferred compensation | (D) Nontaxable benefits | (E) Total of columns (B)(i)-(D) | (F) Compensation reported in prior Form 990 or Form 990-EZ |
|----------------------------------------------------------------|-------------|----------------------------------------------------|-------------------------------------|--------------------------|---------------------------|-------------------------|---------------------------------|------------------------------------------------------------|
|                                                                |             | (i) Base Compensation                              | (ii) Bonus & incentive compensation | (iii) Other compensation |                           |                         |                                 |                                                            |
| Mr Hilton Lewis<br>Observatory Director                        | (i)<br>(ii) | 229,153<br>0                                       | 0<br>0                              | 0<br>0                   | 32,081<br>0               | 24,072<br>0             | 285,306<br>0                    | 0<br>0                                                     |
| Dr Taft Armandroff<br>Former Observatory<br>Director           | (i)<br>(ii) | 253,120<br>0                                       | 0<br>0                              | 0<br>0                   | 25,773<br>0               | 21,652<br>0             | 300,545<br>0                    | 0<br>0                                                     |
| Mr Richard Matsuda<br>Operations and<br>Infrastructure Manager | (i)<br>(ii) | 172,793<br>0                                       | 500<br>0                            | 12,434<br>0              | 15,917<br>0               | 26,886<br>0             | 228,530<br>0                    | 0<br>0                                                     |
| Mr Sean Adkins<br>Instrument Program<br>Manager                | (i)<br>(ii) | 140,679<br>0                                       | 400<br>0                            | 0<br>0                   | 11,254<br>0               | 20,723<br>0             | 173,056<br>0                    | 0<br>0                                                     |
| Dr Peter Wizinowich<br>Optics Engineering<br>Manager           | (i)<br>(ii) | 180,529<br>0                                       | 1,500<br>0                          | 0<br>0                   | 25,274<br>0               | 22,051<br>0             | 229,354<br>0                    | 0<br>0                                                     |
| Mr Kevin McCann<br>Software Engineering<br>Manager             | (i)<br>(ii) | 167,603<br>0                                       | 0<br>0                              | 0<br>0                   | 23,464<br>0               | 26,070<br>0             | 217,137<br>0                    | 0<br>0                                                     |
| Ms Margarita Scheffel<br>Observatory CFO                       | (i)<br>(ii) | 159,422<br>0                                       | 1,500<br>0                          | 0<br>0                   | 22,515<br>0               | 15,100<br>0             | 198,537<br>0                    | 0<br>0                                                     |
| Mr Kyle Kinoshita<br>Technical Services<br>Manager             | (i)<br>(ii) | 145,917<br>0                                       | 500<br>0                            | 12,487<br>0              | 11,333<br>0               | 19,778<br>0             | 190,015<br>0                    | 0<br>0                                                     |
| Mr Jason Chin Senior<br>Optics Engineer                        | (i)<br>(ii) | 140,566<br>0                                       | 0<br>0                              | 12,487<br>0              | 11,245<br>0               | 20,625<br>0             | 184,923<br>0                    | 0<br>0                                                     |
| Mr Dennis McBride<br>Principal Engineer                        | (i)<br>(ii) | 156,416<br>0                                       | 0<br>0                              | 0<br>0                   | 11,902<br>0               | 16,431<br>0             | 184,749<br>0                    | 0<br>0                                                     |
| Mr Kevin Tsubota<br>Senior Software<br>Engineer                | (i)<br>(ii) | 141,747<br>0                                       | 0<br>0                              | 0<br>0                   | 11,162<br>0               | 22,001<br>0             | 174,910<br>0                    | 0<br>0                                                     |

|                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                     |                 |  |                     |                                              |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--|---------------------|----------------------------------------------|
| efile GRAPHIC print - DO NOT PROCESS                                                             |                                                                                                                                                                                                                                                                                                                                                                     | As Filed Data - |  | DLN: 93493225024995 |                                              |
| SCHEDULE O<br>(Form 990 or 990-EZ)<br><br>Department of the Treasury<br>Internal Revenue Service | Supplemental Information to Form 990 or 990-EZ<br><br>Complete to provide information for responses to specific questions on Form 990 or to provide any additional information.<br>▶ Attach to Form 990 or 990-EZ.<br>▶ Information about Schedule O (Form 990 or 990-EZ) and its instructions is at <a href="http://www.irs.gov/form990">www.irs.gov/form990</a> . |                 |  |                     | OMB No 1545-0047                             |
|                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                     |                 |  |                     | 2013<br>Open to Public Inspection            |
|                                                                                                  | Name of the organization<br>CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY                                                                                                                                                                                                                                                                                        |                 |  |                     | Employer identification number<br>95-3972799 |

990 Schedule O, Supplemental Information

| Return Reference                       | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Form 990, Part I, Line 19              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Form 990, Part VI, Section A, Line 2   | BOARD MEMBERS George Blumenthal, Elaine Stammen, Nathan Brostrom and Aimee Dorr had a business relationship through the University of California Edward Stolper (a Caltech Officer), Shrinivas Kulkarni and Thomas Soifer had a business relationship through California Institute of Technology California Institute of Technology and University of California provide various instrument and adaptive optics development services to CARA During tax year 2013, total expenditures for these services charged to CARA were \$2,273,089 by Caltech, and \$384,084 by UC                                                                                                                                |
| Form 990, Part VI, Section A, Line 7a  | BOARD MEMBER DESIGNATION Per the 1992 Amended and Restated agreement between the University of California and California Institute of Technology, the Presidents at both institutions each designate three board members to serve on the CARA board                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Form 990, Part VI, Section B, Line 11b | DISTRIBUTION OF THE 990 TO THE BOARD Management prepares the Form 990 A draft Form 990 is provided to the Audit Committee for review and comment After any required changes are made and prior to filing, management distributes a final copy to the Board indicating who prepared and reviewed the Form 990, and who will sign and file the Form by the due date                                                                                                                                                                                                                                                                                                                                        |
| Form 990, Part VI, Section B, Line 12c | CONFLICT OF INTEREST DISCLOSURE Annually each board member is required to disclose and sign a board governance document indicating any business, personal or family relationships with other board members, staff or major vendors involving themselves and/or their family members The signed disclosures are then reviewed by the Audit Committee and the Audit Committee Chair notifies the Board of any conflicts sufficient to warrant the attention of the Board Key employees and the five highest compensated employees are required to disclose and sign an annual information request indicating any family or business relationships that may impact organizational management and governance |
| Form 990, Part VI, Section B, Line 13  | WHISTLEBLOWER POLICY Hawaii state labor laws require posting of the State's Whistleblower Protection Law notice which outlines a standard whistleblower process CARA complied with the workplace labor posting laws during tax year 2013                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Form 990, Part VI, Section B, Line 14  | RECORDS RETENTION Financial records follow both the IRS retention guidelines and the requirements of the federal government for federal awards issued under OMB Circular A-110                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Form 990, Part VI, Section B, Line 15  | PROCESS FOR DETERMINING COMPENSATION FOR THE DIRECTOR AND DEPUTY DIRECTOR Annually the CARA Board Executive Committee reviews and approves the two directors' compensation using market compensation studies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Form 990, Part VI, Section C, Line 19  | AVAILABLE TO THE PUBLIC Governance documents and conflict of interest policies are made available upon request Financial statements in the form of an annual audit are published on the CARA website at <a href="http://www.keckobservatory.org">www.keckobservatory.org</a>                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Form 990, Part VII, Section A, Line 1d | REPORTABLE COMPENSATION FROM THE ORGANIZATION Includes employer paid dependent tuition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Form 990, Part VIII, Line 1g           | NON-CASH CONTRIBUTIONS Donated securities of \$12,618 and in-kind gifts of \$0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Form 990, Part VIII, Line 2f           | ALL OTHER PROGRAM SERVICE REVENUE - Includes miscellaneous revenues observatory summit tour fees to offset labor and transportation costs for VIPs, and image fees All activities undertaken to advance scientific astronomical discovery                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Form 990, Part VIII, Line 7a           | SALES OF ASSETS Sales of donated securities and retired fleet vehicles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Form 990, Part IX, Line 24a - 24d      | CAPITALIZED GRANT EXPENSES A significant portion of CARA's sub-awards granted to other organizations is for capitalized projects or equipment not deemed expenses The \$2,621,965 reduction to the functional expense program total is to offset the capital project amounts listed in line 1 for purposes of properly completing Part IV, line 21, grants and other assistance to governments and organizations                                                                                                                                                                                                                                                                                         |
| Form 990, Part X, Line 9               | PREPAID EXPENSES AND DEFERRED CHARGES - End of year balances now include the publicly traded securities CARA maintains with TIAA-CREF that are held to fund the 457(b) deferred compensation obligation Last year these amounts were shown under Investments                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Form 990, Part X, Line 11              | INVESTMENTS Beginning of year balances include the publicly traded securities CARA maintains with TIAA-CREF that are held to fund the 457(b) deferred compensation obligation End of year balances no longer include these amounts They are now shown under Prepaid Expenses and Deferred Charges                                                                                                                                                                                                                                                                                                                                                                                                        |
| Form 990, Part X, Line 12              | INVESTMENTS OTHER SECURITIES - End of year balances include new investments held in University of California's General Endowment Pool which is a unitized fund whereby CARA participates in investment returns and income on an equivalent pro-rated basis with all participants in the pool                                                                                                                                                                                                                                                                                                                                                                                                             |
| Form 990, Part X, Line 19              | DEFERRED REVENUE Consists of advances from the Regents of the University of California and the Association of Universities for Research in Astronomy for operations and instrument fabrication respectively, and, grant advances from the Gordon and Betty Moore Foundation and the W M Keck Foundation for K2 Laser development                                                                                                                                                                                                                                                                                                                                                                         |
| Form 990, Part XI, Line 3              | NET ASSET CHANGE-Total revenue less expenses for CARA represents primarily the net change in its capitalized fixed assets during the tax year adjusted by any capital asset write-offs rather than net income                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Form 990, Part XI, Line 5              | NET UNREALIZED GAINS (LOSSES) ON INVESTMENTS-Includes both the unrealized gains from the 457(b) publicly traded investments held by TIAA-CREF and the unrealized gains from the investments held by the University of California General Endowment Pool as of 9-30-14                                                                                                                                                                                                                                                                                                                                                                                                                                    |

990 Schedule O, Supplemental Information

| Return Reference          | Explanation                                                                                                     |
|---------------------------|-----------------------------------------------------------------------------------------------------------------|
| Form 990, Part XI, Line 6 | DONATED SERVICES AND USE OF FACILITIES-CARA received in-kind professional services for its K2 laser development |

**TY 2013 Reasonable Cause Explanation**

**Name:** CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY

**EIN:** 95-3972799

**Software ID:** 13000241

**Software Version:** v1.00

**Explanation:** IRS extensions granted on 2-15-15 and 5-15-15 through 8-15-15.