

Form **990**

**Return of Organization Exempt From Income Tax**  
Under section 501(c), 527, or 4947(a)(1) of the Internal Revenue Code (except private foundations)

OMB No. 1545-0047

**2016**

Open to Public Inspection

Department of the Treasury  
Internal Revenue Service

▶ Do not enter social security numbers on this form as it may be made public.  
▶ Information about Form 990 and its instructions is at [www.irs.gov/form990](http://www.irs.gov/form990).

**A For the 2016 calendar year, or tax year beginning and ending**

<b>B</b> Check if applicable: <input type="checkbox"/> Address change <input type="checkbox"/> Name change <input type="checkbox"/> Initial return <input type="checkbox"/> Final return/terminated <input type="checkbox"/> Amended return <input type="checkbox"/> Application pending	<b>C</b> Name of organization <b>LOWELL OBSERVATORY</b>		<b>D</b> Employer identification number <b>86-0098918</b>
	Doing business as		<b>E</b> Telephone number <b>928-774-3358</b>
	Number and street (or P.O. box if mail is not delivered to street address)	Room/suite	
	1400 W MARS HILL ROAD City or town, state or province, country, and ZIP or foreign postal code <b>FLAGSTAFF, AZ 86001-4470</b>		<b>G</b> Gross receipts \$ <b>12,449,671.</b>
<b>F</b> Name and address of principal officer: <b>JEFF HALL</b> <b>SAME AS C ABOVE</b>		<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 If "No," attach a list. (see instructions) <b>H(c)</b> Group exemption number ▶	
<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>J</b> Website: ▶ <b>WWW.LOWELL.EDU</b>			
<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: <b>1946</b> <b>M</b> State of legal domicile: <b>AZ</b>

**Part I Summary**

<b>Activities &amp; Governance</b>	<b>1</b> Briefly describe the organization's mission or most significant activities: <b>LOWELL'S MISSION IS TO PURSUE THE STUDY OF ASTRONOMY, ESPECIALLY THE STUDY OF THE SOLAR SYSTEM AND</b>		
	<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>	<b>1</b>
	<b>4</b> Number of independent voting members of the governing body (Part VI, line 1b)	<b>4</b>	<b>0</b>
	<b>5</b> Total number of individuals employed in calendar year 2016 (Part V, line 2a)	<b>5</b>	<b>142</b>
	<b>6</b> Total number of volunteers (estimate if necessary)	<b>6</b>	<b>50</b>
	<b>7a</b> Total unrelated business revenue from Part VIII, column (C), line 12	<b>7a</b>	<b>0.</b>
<b>b</b> Net unrelated business taxable income from Form 990-T, line 34	<b>7b</b>	<b>0.</b>	
<b>Revenue</b>	<b>8</b> Contributions and grants (Part VIII, line 1h)	<b>Prior Year</b> 3,697,510.	<b>Current Year</b> 7,675,056.
	<b>9</b> Program service revenue (Part VIII, line 2g)	3,106,288.	2,852,310.
	<b>10</b> Investment income (Part VIII, column (A), lines 3, 4, and 7d)	444,998.	262,905.
	<b>11</b> Other revenue (Part VIII, column (A), lines 5, 6d, 8c, 9c, 10c, and 11e)	330,260.	265,764.
	<b>12</b> Total revenue - add lines 8 through 11 (must equal Part VIII, column (A), line 12)	7,579,056.	11,056,035.
<b>Expenses</b>	<b>13</b> Grants and similar amounts paid (Part IX, column (A), lines 1-3)	2,458,233.	1,434,000.
	<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)	5,976,391.	6,404,136.
	<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) ▶ <b>875,944.</b>		
	<b>17</b> Other expenses (Part IX, column (A), lines 11a-11d, 11f-24e)	4,722,952.	5,119,757.
<b>18</b> Total expenses. Add lines 13-17 (must equal Part IX, column (A), line 25)	13,157,576.	12,957,893.	
<b>19</b> Revenue less expenses. Subtract line 18 from line 12	-5,578,520.	-1,901,858.	
<b>Net Assets or Fund Balances</b>	<b>20</b> Total assets (Part X, line 16)	<b>Beginning of Current Year</b> 48,545,604.	<b>End of Year</b> 48,684,255.
	<b>21</b> Total liabilities (Part X, line 26)	29,682,765.	31,061,229.
	<b>22</b> Net assets or fund balances. Subtract line 21 from line 20	18,862,839.	17,623,026.

**Part II Signature Block**

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		Date		
	▶ <b>ANNE LABRUZZO, DEPUTY DIRECTOR OF ADMIN.</b> Type or print name and title				
<b>Paid Preparer Use Only</b>	Print/Type preparer's name	Preparer's signature	Date	Check <input type="checkbox"/> if self-employed	PTIN
	<b>KAREN K. MCCLOSKEY, CPA</b>	<i>Karen K. McCloskey</i>	08/01/2017	<input type="checkbox"/>	<b>P00099644</b>
	Firm's name ▶ <b>BEACHFLEISCHMAN PC</b>	Firm's EIN ▶ <b>86-0683059</b>			
Firm's address ▶ <b>1985 EAST RIVER ROAD, SUITE 201</b> <b>TUCSON, AZ 85718</b>			Phone no. <b>520-321-4600</b>		

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 [X]

1 Briefly describe the organization's mission:
LOWELL'S MISSION IS TO PURSUE THE STUDY OF ASTRONOMY, ESPECIALLY THE STUDY OF THE SOLAR SYSTEM AND ITS EVOLUTION; CONDUCT PURE RESEARCH IN ASTRONOMICAL PHENOMENA; PROVIDE QUALITY PUBLIC EDUCATION AND OUTREACH PROGRAMS TO BRING THE RESULTS OF ASTRONOMICAL RESEARCH TO THE PUBLIC.

2 Did the organization undertake any significant program services during the year which were not listed on the prior Form 990 or 990-EZ? [ ] Yes [X] No
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? [ ] Yes [X] No
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 \$ 9,224,198. including grants of \$ 1,434,000. ) (Revenue \$ 2,269,424. )
WE CONDUCT RESEARCH IN ALL AREAS OF ASTRONOMY, INCLUDING STUDIES OF THE SUN, SOLAR SYSTEM, STARS, AND GALAXIES. IN 2016, OUR ASTRONOMERS PUBLISHED ON AVERAGE ONE PAPER PER WEEK IN LEADING SCIENTIFIC JOURNALS, AND THEY REGULARLY PARTICIPATE IN MAJOR ASTRONOMICAL MISSIONS (INCLUDING THE NEW HORIZONS MISSION TO PLUTO AND THE KUIPER BELT), USE MAJOR TELESCOPES AROUND THE WORLD AND IN SPACE (INCLUDING HUBBLE SPACE TELESCOPE), AND ARE INVITED TO PARTICIPATE IN FACILITIES AND SCIENCE REVIEWS. LOWELL ASTRONOMERS ARE ALSO VERY SUCCESSFUL AT OBTAINING GRANTS IN SUPPORT OF THEIR RESEARCH FROM EXTERNAL SOURCES SUCH AS NASA AND THE NATIONAL SCIENCE FOUNDATION. IN 2015, WE BROUGHT LOWELL'S 4.3-METER DISCOVERY CHANNEL TELESCOPE (DCT) INTO FULL OPERATIONS, AND IN 2016 WE DELIVERED 286 SCIENCE NIGHTS TO ASTRONOMERS ON OUR OWN STAFF

4b (Code: ) (Expenses \$ 1,432,076. including grants of \$ ) (Revenue \$ 865,309. )
OUR EDUCATIONAL PROGRAMS TEACH VISITORS ABOUT GENERAL CONCEPTS IN PHYSICS AND ASTRONOMY AND ABOUT PAST AND PRESENT RESEARCH PROJECTS AT LOWELL. MORE THAN 98,000 VISITORS OF ALL AGES AND BACKGROUNDS PARTICIPATED IN THESE PROGRAMS IN 2016. LOWELL OBSERVATORY CAMPS FOR KIDS (LOCKS) PROGRAMS WERE OFFERED ONSITE FOR CHILDREN AGES 3-15. STUDENTS ENROLLED IN THE LOCKS CAMPS LEARNED ABOUT TOPICS IN ASTRONOMY AND PHYSICS THROUGH HANDS-ON EXERCISES AND EXPLORATIONS. THESE ONSITE PROGRAMS SERVED MORE THAN 200 CHILDREN AND A NUMBER OF LOCAL TEACHERS OVER THE COURSE OF THE YEAR. LOWELL ASTRONOMERS AND EDUCATORS INVOLVED IN THE OBSERVATORY'S NAVAJO-HOPI PROGRAM MADE NUMEROUS VISITS TO SCHOOLS ON NAVAJO AND HOPI LANDS TO TEACH LESSONS AND HOST STAR PARTIES.

4c (Code: ) (Expenses \$ including grants of \$ ) (Revenue \$ )

4d Other program services (Describe in Schedule O.)
(Expenses \$ including grants of \$ ) (Revenue \$ )

4e Total program service expenses 10,656,274.

**Part IV Checklist of Required Schedules**

	Yes	No
<b>1</b> Is the organization described in section 501(c)(3) or 4947(a)(1) (other than a private foundation)? <i>If "Yes," complete Schedule A</i> .....	X	
<b>2</b> Is the organization required to complete <i>Schedule B, Schedule of Contributors</i> ? .....	X	
<b>3</b> Did the organization engage in direct or indirect political campaign activities on behalf of or in opposition to candidates for public office? <i>If "Yes," complete Schedule C, Part I</i> .....		X
<b>4 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? <i>If "Yes," complete Schedule C, Part II</i> .....		X
<b>5</b> 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? <i>If "Yes," complete Schedule C, Part III</i> .....		X
<b>6</b> 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? <i>If "Yes," complete Schedule D, Part I</i> .....		X
<b>7</b> Did the organization receive or hold a conservation easement, including easements to preserve open space, the environment, historic land areas, or historic structures? <i>If "Yes," complete Schedule D, Part II</i> .....		X
<b>8</b> Did the organization maintain collections of works of art, historical treasures, or other similar assets? <i>If "Yes," complete Schedule D, Part III</i> .....	X	
<b>9</b> 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? <i>If "Yes," complete Schedule D, Part IV</i> .....		X
<b>10</b> Did the organization, directly or through a related organization, hold assets in temporarily restricted endowments, permanent endowments, or quasi-endowments? <i>If "Yes," complete Schedule D, Part V</i> .....	X	
<b>11</b> 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.		
<b>a</b> Did the organization report an amount for land, buildings, and equipment in Part X, line 10? <i>If "Yes," complete Schedule D, Part VI</i> .....	X	
<b>b</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? <i>If "Yes," complete Schedule D, Part VII</i> .....		X
<b>c</b> 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? <i>If "Yes," complete Schedule D, Part VIII</i> .....		X
<b>d</b> 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? <i>If "Yes," complete Schedule D, Part IX</i> .....		X
<b>e</b> Did the organization report an amount for other liabilities in Part X, line 25? <i>If "Yes," complete Schedule D, Part X</i> .....	X	
<b>f</b> 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)? <i>If "Yes," complete Schedule D, Part X</i> .....	X	
<b>12a</b> Did the organization obtain separate, independent audited financial statements for the tax year? <i>If "Yes," complete Schedule D, Parts XI and XII</i> .....		X
<b>b</b> Was the organization included in consolidated, independent audited financial statements for the tax year? <i>If "Yes," and if the organization answered "No" to line 12a, then completing Schedule D, Parts XI and XII is optional</i> .....	X	
<b>13</b> Is the organization a school described in section 170(b)(1)(A)(ii)? <i>If "Yes," complete Schedule E</i> .....		X
<b>14a</b> Did the organization maintain an office, employees, or agents outside of the United States? .....		X
<b>b</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? <i>If "Yes," complete Schedule F, Parts I and IV</i> .....		X
<b>15</b> 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? <i>If "Yes," complete Schedule F, Parts II and IV</i> .....		X
<b>16</b> 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? <i>If "Yes," complete Schedule F, Parts III and IV</i> .....		X
<b>17</b> 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? <i>If "Yes," complete Schedule G, Part I</i> .....		X
<b>18</b> Did the organization report more than \$15,000 total of fundraising event gross income and contributions on Part VIII, lines 1c and 8a? <i>If "Yes," complete Schedule G, Part II</i> .....	X	
<b>19</b> Did the organization report more than \$15,000 of gross income from gaming activities on Part VIII, line 9a? <i>If "Yes," complete Schedule G, Part III</i> .....		X

**Part IV Checklist of Required Schedules** (continued)

	Yes	No
<b>20a</b> Did the organization operate one or more hospital facilities? <i>If "Yes," complete Schedule H</i> .....		X
<b>b</b> If "Yes" to line 20a, did the organization attach a copy of its audited financial statements to this return? .....		
<b>21</b> Did the organization report more than \$5,000 of grants or other assistance to any domestic organization or domestic government on Part IX, column (A), line 1? <i>If "Yes," complete Schedule I, Parts I and II</i> .....	X	
<b>22</b> Did the organization report more than \$5,000 of grants or other assistance to or for domestic individuals on Part IX, column (A), line 2? <i>If "Yes," complete Schedule I, Parts I and III</i> .....		X
<b>23</b> 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> .....	X	
<b>24a</b> 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> .....		X
<b>b</b> Did the organization invest any proceeds of tax-exempt bonds beyond a temporary period exception? .....		
<b>c</b> Did the organization maintain an escrow account other than a refunding escrow at any time during the year to defease any tax-exempt bonds? .....		
<b>d</b> Did the organization act as an "on behalf of" issuer for bonds outstanding at any time during the year? .....		
<b>25a Section 501(c)(3), 501(c)(4), and 501(c)(29) 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> .....		X
<b>b</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> .....		X
<b>26</b> 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 "Yes," complete Schedule L, Part II</i> .....		X
<b>27</b> 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> .....		X
<b>28</b> 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):		
<b>a</b> A current or former officer, director, trustee, or key employee? <i>If "Yes," complete Schedule L, Part IV</i> .....		X
<b>b</b> A family member of a current or former officer, director, trustee, or key employee? <i>If "Yes," complete Schedule L, Part IV</i> .....		X
<b>c</b> 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> .....		X
<b>29</b> Did the organization receive more than \$25,000 in non-cash contributions? <i>If "Yes," complete Schedule M</i> .....	X	
<b>30</b> Did the organization receive contributions of art, historical treasures, or other similar assets, or qualified conservation contributions? <i>If "Yes," complete Schedule M</i> .....		X
<b>31</b> Did the organization liquidate, terminate, or dissolve and cease operations? <i>If "Yes," complete Schedule N, Part I</i> .....		X
<b>32</b> 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> .....		X
<b>33</b> 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> .....		X
<b>34</b> 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> .....	X	
<b>35a</b> Did the organization have a controlled entity within the meaning of section 512(b)(13)? .....	X	
<b>b</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> .....		X
<b>36 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> .....		X
<b>37</b> 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> .....		X
<b>38</b> Did the organization complete Schedule O and provide explanations in Schedule O for Part VI, lines 11b and 19? .....	X	

**Note.** All Form 990 filers are required to complete Schedule O .....

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

Input box for Schedule O check

Main table with columns for question number, description, and Yes/No checkboxes. Includes rows 1a-14b with various tax-related questions.

Part VI Governance, Management, and Disclosure For each "Yes" response to lines 2 through 7b below, and for a "No" response to line 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 [X]

Section A. Governing Body and Management

Table with 3 columns: Question, Yes, No. Rows include: 1a Enter the number of voting members of the governing body at the end of the tax year; 1b Enter the number of voting members included in line 1a, above, who are independent; 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?; 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?; 4 Did the organization make any significant changes to its governing documents since the prior Form 990 was filed?; 5 Did the organization become aware during the year of a significant diversion of the organization's assets?; 6 Did the organization have members or stockholders?; 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?; 7b Are any governance decisions of the organization reserved to (or subject to approval by) members, stockholders, or persons other than the governing body?; 8 Did the organization contemporaneously document the meetings held or written actions undertaken during the year by the following: a The governing body? b Each committee with authority to act on behalf of the governing body?; 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.

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

Table with 3 columns: Question, Yes, No. Rows include: 10a Did the organization have local chapters, branches, or affiliates?; 10b 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?; 11a Has the organization provided a complete copy of this Form 990 to all members of its governing body before filing the form?; 11b 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; 12b Were officers, directors, or trustees, and key employees required to disclose annually interests that could give rise to conflicts?; 12c Did the organization regularly and consistently monitor and enforce compliance with the policy? If "Yes," describe in Schedule O how this was done; 13 Did the organization have a written whistleblower policy?; 14 Did the organization have a written document retention and destruction policy?; 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?; 15a The organization's CEO, Executive Director, or top management official; 15b Other officers or key employees of the organization; 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?; 16b 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?

Section C. Disclosure

- 17 List the states with which a copy of this Form 990 is required to be filed AZ
18 Section 6104 requires an organization to make its Forms 1023 (or 1024 if applicable), 990, and 990-T (Section 501(c)(3)s only) available for public inspection. Indicate how you made these available. Check all that apply. [X] Own website [ ] Another's website [X] Upon request [ ] 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, address, and telephone number of the person who possesses the organization's books and records: ANNE LABRUZZO - 928-233-3239 1400 W MARS HILL ROAD, FLAGSTAFF, AZ 86001-4470

**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, and 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) Name and Title	(B) Average hours per week (list any hours for related organizations below line)	(C) Position (do not check more than one box, unless person is both an officer and a director/trustee)						(D) Reportable compensation from the organization (W-2/1099-MISC)	(E) Reportable compensation from related organizations (W-2/1099-MISC)	(F) 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) PUTNAM, W. LOWELL TRUSTEE - SOLE	30.00 4.00	X		X				20,349.	0.	9,336.
(2) HALL, JEFFREY DIRECTOR	40.00			X				150,416.	0.	15,724.
(3) LABRUZZO, ANNE DEPUTY DIR. ADMINISTRATION	40.00			X				91,012.	0.	12,651.
(4) ACTOR, ANN DEPUTY DIRECTOR OF DEVELOPMENT	40.00					X		146,241.	0.	14,805.
(5) SCHLEICHER, DAVID ASTRONOMER	40.00					X		142,146.	0.	14,990.
(6) MASSEY, PHILIP ASTRONOMER	40.00					X		144,157.	0.	15,028.
(7) HUNTER, DEIDRE ASTRONOMER	40.00					X		136,749.	0.	14,157.
(8) DUNHAM, EDWARD INSTRUMENT MANAGER	40.00					X		147,540.	0.	14,845.

**Part VII Section A. Officers, Directors, Trustees, Key Employees, and Highest Compensated Employees** (continued)

(A) Name and title	(B) Average hours per week (list any hours for related organizations below line)	(C) Position (do not check more than one box, unless person is both an officer and a director/trustee)						(D) Reportable compensation from the organization (W-2/1099-MISC)	(E) Reportable compensation from related organizations (W-2/1099-MISC)	(F) Estimated amount of other compensation from the organization and related organizations
		Individual trustee or director	Institutional trustee	Officer	Key employee	Highest compensated employee	Former			
<b>1b Sub-total</b>							978,610.	0.	111,536.	
<b>c Total from continuation sheets to Part VII, Section A</b>							0.	0.	0.	
<b>d Total (add lines 1b and 1c)</b>							978,610.	0.	111,536.	

**2** Total number of individuals (including but not limited to those listed above) who received more than \$100,000 of reportable compensation from the organization **13**

	Yes	No
<b>3</b> 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>		X
<b>4</b> 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>	X	
<b>5</b> 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>		X

**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) Name and business address	(B) Description of services	(C) Compensation
IDEUM, INC., 2469 CORRALES ROAD BLDG C, CORRALES, NM 87048	EXHIBIT MANUFACTURER	182,567.
UNIVERSITY OF MARYLAND, RM 4101, CHESAPEAKE BLDGE, COLLEGE PARK, MD	TECHNOLOGY SERVICES	129,081.
MASSACHUSETTS INSTITUTE OF TECHNOLOGY, 600 TECHNOLOGY SQUARE, NE49-4161, CAMBRIDGE, ,	TECHNOLOGY SERVICES	108,541.
TWILIGHT JANITORIAL SERVICE, INC., 506 NORTH GRANT STREET, SUITE D, FLAGSTAFF, AZ	CLEANING SERVICES	105,997.

**2** Total number of independent contractors (including but not limited to those listed above) who received more than \$100,000 of compensation from the organization **4**



**Part VIII Statement of Revenue**

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

			(A) Total revenue	(B) Related or exempt function revenue	(C) Unrelated business revenue	(D) Revenue excluded from tax under sections 512 - 514	
<b>Contributions, Gifts, Grants and Other Similar Amounts</b>	<b>1 a</b> Federated campaigns .....	<b>1a</b>					
	<b>b</b> Membership dues .....	<b>1b</b>	769,413.				
	<b>c</b> Fundraising events .....	<b>1c</b>	31,685.				
	<b>d</b> Related organizations .....	<b>1d</b>	809,006.				
	<b>e</b> Government grants (contributions) .....	<b>1e</b>	2,192,097.				
	<b>f</b> All other contributions, gifts, grants, and similar amounts not included above .....	<b>1f</b>	3,872,855.				
	<b>g</b> Noncash contributions included in lines 1a-1f: \$ .....		154,280.				
	<b>h Total.</b> Add lines 1a-1f .....		7,675,056.				
	<b>Program Service Revenue</b>	<b>2 a</b> TELESCOPE ACCESS FEES .....	<b>Business Code</b> 541700	1,508,029.	1,508,029.		
<b>b</b> EDUCATIONAL PROGRAMS .....		611600	865,309.	865,309.			
<b>c</b> RESEARCH - GOVERNMENT CONTRACTS .....		541700	478,972.	478,972.			
<b>d</b> .....							
<b>e</b> .....							
<b>f</b> All other program service revenue .....							
<b>g Total.</b> Add lines 2a-2f .....			2,852,310.				
<b>Other Revenue</b>	<b>3</b> Investment income (including dividends, interest, and other similar amounts) .....		37,614.			37,614.	
	<b>4</b> Income from investment of tax-exempt bond proceeds .....						
	<b>5</b> Royalties .....						
	<b>6 a</b> Gross rents .....	(i) Real					
		(ii) Personal					
		<b>b</b> Less: rental expenses .....					
		<b>c</b> Rental income or (loss) .....					
	<b>d</b> Net rental income or (loss) .....						
	<b>7 a</b> Gross amount from sales of assets other than inventory .....	(i) Securities					
		(ii) Other					
		<b>b</b> Less: cost or other basis and sales expenses .....					
		<b>c</b> Gain or (loss) .....					
	<b>d</b> Net gain or (loss) .....			225,291.		225,291.	
	<b>8 a</b> Gross income from fundraising events (not including \$ 31,685. of contributions reported on line 1c). See Part IV, line 18 .....	<b>a</b>	41,370.				
		<b>b</b> Less: direct expenses .....	<b>b</b>	58,029.			
<b>c</b> Net income or (loss) from fundraising events .....			-16,659.			-16,659.	
<b>9 a</b> Gross income from gaming activities. See Part IV, line 19 .....	<b>a</b>						
	<b>b</b> Less: direct expenses .....	<b>b</b>					
	<b>c</b> Net income or (loss) from gaming activities .....						
<b>10 a</b> Gross sales of inventory, less returns and allowances .....	<b>a</b>	421,394.					
	<b>b</b> Less: cost of goods sold .....	<b>b</b>	229,825.				
	<b>c</b> Net income or (loss) from sales of inventory .....		191,569.	191,569.			
<b>Miscellaneous Revenue</b>		<b>Business Code</b>					
<b>11 a</b> MISCELLANEOUS INCOME .....	900099	90,854.	90,854.				
<b>b</b> .....							
<b>c</b> .....							
<b>d</b> All other revenue .....							
<b>e Total.</b> Add lines 11a-11d .....		90,854.					
<b>12 Total revenue.</b> See instructions. .....		11,056,035.	3,134,733.	0.	246,246.		

**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) Total expenses	(B) Program service expenses	(C) Management and general expenses	(D) Fundraising expenses
1 Grants and other assistance to domestic organizations and domestic governments. See Part IV, line 21	1,434,000.	1,434,000.		
2 Grants and other assistance to domestic individuals. See Part IV, line 22				
3 Grants and other assistance to foreign organizations, foreign governments, and foreign individuals. See Part IV, lines 15 and 16				
4 Benefits paid to or for members				
5 Compensation of current officers, directors, trustees, and key employees	1,090,146.	629,611.	257,954.	202,581.
6 Compensation not included above, to disqualified persons (as defined under section 4958(f)(1)) and persons described in section 4958(c)(3)(B)				
7 Other salaries and wages	4,291,499.	3,583,462.	442,750.	265,287.
8 Pension plan accruals and contributions (include section 401(k) and 403(b) employer contributions)	134,316.	117,759.	12,479.	4,078.
9 Other employee benefits	456,051.	352,147.	69,616.	34,288.
10 Payroll taxes	432,124.	330,486.	65,586.	36,052.
11 Fees for services (non-employees):				
a Management				
b Legal	19,533.	4,185.	15,348.	
c Accounting	71,255.		71,255.	
d Lobbying				
e Professional fundraising services. See Part IV, line 17				
f Investment management fees	3,861.		3,861.	
g Other. (If line 11g amount exceeds 10% of line 25, column (A) amount, list line 11g expenses on Sch. O.)	341,109.	174,423.	114,882.	51,804.
12 Advertising and promotion	112,344.	687.	111,032.	625.
13 Office expenses	383,825.	247,984.	56,734.	79,107.
14 Information technology	127,467.	104,138.	15,348.	7,981.
15 Royalties				
16 Occupancy	511,595.	434,785.	47,344.	29,466.
17 Travel	265,818.	196,871.	27,062.	41,885.
18 Payments of travel or entertainment expenses for any federal, state, or local public officials				
19 Conferences, conventions, and meetings	41,672.	10,685.	16,062.	14,925.
20 Interest	615,441.	615,441.		
21 Payments to affiliates				
22 Depreciation, depletion, and amortization	1,937,485.	1,866,505.	47,320.	23,660.
23 Insurance	263,360.	249,441.	10,222.	3,697.
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 REPAIRS AND MAINTENANCE	158,610.	151,937.	3,906.	2,767.
b TRAINING AND DEVELOPMEN	106,540.	29,483.	22,902.	54,155.
c DUES AND SUBSCRIPTIONS	53,527.	42,091.	8,256.	3,180.
d TELESCOPE SUPPLIES	40,126.	40,126.		
e All other expenses	66,189.	40,027.	5,756.	20,406.
25 Total functional expenses. Add lines 1 through 24e	12,957,893.	10,656,274.	1,425,675.	875,944.
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  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
<b>Assets</b>	<b>1</b> Cash - non-interest-bearing .....	98,308.	<b>1</b>	1,363,415.
	<b>2</b> Savings and temporary cash investments .....	887,715.	<b>2</b>	770,901.
	<b>3</b> Pledges and grants receivable, net .....	1,115,030.	<b>3</b>	1,847,437.
	<b>4</b> Accounts receivable, net .....	35,368.	<b>4</b>	28,462.
	<b>5</b> Loans and other receivables from current and former officers, directors, trustees, key employees, and highest compensated employees. Complete Part II of Schedule L .....		<b>5</b>	
	<b>6</b> 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 instr). Complete Part II of Sch L .....		<b>6</b>	
	<b>7</b> Notes and loans receivable, net .....		<b>7</b>	
	<b>8</b> Inventories for sale or use .....	66,019.	<b>8</b>	102,153.
	<b>9</b> Prepaid expenses and deferred charges .....	150,221.	<b>9</b>	73,486.
	<b>10a</b> Land, buildings, and equipment: cost or other basis. Complete Part VI of Schedule D .....	<b>10a</b> 62,293,939.		
	<b>b</b> Less: accumulated depreciation .....	<b>10b</b> 19,051,759.		
	<b>11</b> Investments - publicly traded securities .....	44,035,840.	<b>10c</b>	43,242,180.
	<b>12</b> Investments - other securities. See Part IV, line 11 .....	1,645,941.	<b>11</b>	840,454.
	<b>13</b> Investments - program-related. See Part IV, line 11 .....		<b>12</b>	
	<b>14</b> Intangible assets .....		<b>13</b>	
	<b>15</b> Other assets. See Part IV, line 11 .....	511,162.	<b>14</b>	
<b>16</b> <b>Total assets.</b> Add lines 1 through 15 (must equal line 34) .....	48,545,604.	<b>15</b>	415,767.	
		<b>16</b>	48,684,255.	
<b>Liabilities</b>	<b>17</b> Accounts payable and accrued expenses .....	598,596.	<b>17</b>	606,537.
	<b>18</b> Grants payable .....		<b>18</b>	
	<b>19</b> Deferred revenue .....	8,169,773.	<b>19</b>	9,479,265.
	<b>20</b> Tax-exempt bond liabilities .....		<b>20</b>	
	<b>21</b> Escrow or custodial account liability. Complete Part IV of Schedule D .....		<b>21</b>	
	<b>22</b> 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 .....		<b>22</b>	
	<b>23</b> Secured mortgages and notes payable to unrelated third parties .....	20,424,190.	<b>23</b>	20,675,427.
	<b>24</b> Unsecured notes and loans payable to unrelated third parties .....		<b>24</b>	
	<b>25</b> 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 .....	490,206.	<b>25</b>	300,000.
	<b>26</b> <b>Total liabilities.</b> Add lines 17 through 25 .....	29,682,765.	<b>26</b>	31,061,229.
<b>Net Assets or Fund Balances</b>	<b>Organizations that follow SFAS 117 (ASC 958), check here</b> <input checked="" type="checkbox"/> <b>and complete lines 27 through 29, and lines 33 and 34.</b>			
	<b>27</b> Unrestricted net assets .....	17,789,666.	<b>27</b>	15,096,692.
	<b>28</b> Temporarily restricted net assets .....	1,073,173.	<b>28</b>	2,526,334.
	<b>29</b> Permanently restricted net assets .....		<b>29</b>	
	<b>Organizations that do not follow SFAS 117 (ASC 958), check here</b> <input type="checkbox"/> <b>and complete lines 30 through 34.</b>			
	<b>30</b> Capital stock or trust principal, or current funds .....		<b>30</b>	
	<b>31</b> Paid-in or capital surplus, or land, building, or equipment fund .....		<b>31</b>	
	<b>32</b> Retained earnings, endowment, accumulated income, or other funds .....		<b>32</b>	
	<b>33</b> Total net assets or fund balances .....	18,862,839.	<b>33</b>	17,623,026.
	<b>34</b> Total liabilities and net assets/fund balances .....	48,545,604.	<b>34</b>	48,684,255.

**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	11,056,035.
2	Total expenses (must equal Part IX, column (A), line 25)	2	12,957,893.
3	Revenue less expenses. Subtract line 2 from line 1	3	-1,901,858.
4	Net assets or fund balances at beginning of year (must equal Part X, line 33, column (A))	4	18,862,839.
5	Net unrealized gains (losses) on investments	5	20,573.
6	Donated services and use of facilities	6	
7	Investment expenses	7	
8	Prior period adjustments	8	641,472.
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	17,623,026.

**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 _____ 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? _____ 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: <input type="checkbox"/> Separate basis <input type="checkbox"/> Consolidated basis <input type="checkbox"/> Both consolidated and separate basis		X
2b	Were the organization's financial statements audited by an independent accountant? _____ 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: <input type="checkbox"/> Separate basis <input checked="" type="checkbox"/> Consolidated basis <input type="checkbox"/> Both consolidated and separate basis	X	
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? _____ If the organization changed either its oversight process or selection process during the tax year, explain in Schedule O.	X	
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? _____	X	
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 _____	X	

Form 990 (2016)



**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) 2012	(b) 2013	(c) 2014	(d) 2015	(e) 2016	(f) Total
<b>1</b> Gifts, grants, contributions, and membership fees received. (Do not include any "unusual grants.") .....	6,186,895.	6,079,770.	5,764,553.	3,697,510.	7,675,056.	29,403,784.
<b>2</b> Tax revenues levied for the organization's benefit and either paid to or expended on its behalf .....						
<b>3</b> The value of services or facilities furnished by a governmental unit to the organization without charge ...	114,000.	116,000.	117,000.	118,000.	119,000.	584,000.
<b>4 Total.</b> Add lines 1 through 3 .....	6,300,895.	6,195,770.	5,881,553.	3,815,510.	7,794,056.	29,987,784.
<b>5</b> 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) .....						1,644,388.
<b>6 Public support.</b> Subtract line 5 from line 4.						28,343,396.

**Section B. Total Support**

Calendar year (or fiscal year beginning in) ▶	(a) 2012	(b) 2013	(c) 2014	(d) 2015	(e) 2016	(f) Total
<b>7</b> Amounts from line 4 .....	6,300,895.	6,195,770.	5,881,553.	3,815,510.	7,794,056.	29,987,784.
<b>8</b> Gross income from interest, dividends, payments received on securities loans, rents, royalties and income from similar sources ...	113,960.	145,384.	192,885.	110,959.	37,614.	600,802.
<b>9</b> Net income from unrelated business activities, whether or not the business is regularly carried on ...				39,509.	41,370.	80,879.
<b>10</b> Other income. Do not include gain or loss from the sale of capital assets (Explain in Part VI.) .....	479,572.	664,534.	1,371,252.			2,515,358.
<b>11 Total support.</b> Add lines 7 through 10						33,184,823.
<b>12</b> Gross receipts from related activities, etc. (see instructions) .....					12	7,077,870.
<b>13 First five years.</b> If the Form 990 is for the organization's first, second, third, fourth, or fifth tax year as a section 501(c)(3) organization, check this box and <b>stop here</b> .....						<input type="checkbox"/>

**Section C. Computation of Public Support Percentage**

<b>14</b> Public support percentage for 2016 (line 6, column (f) divided by line 11, column (f)) .....	<b>14</b>	85.41 %
<b>15</b> Public support percentage from 2015 Schedule A, Part II, line 14 .....	<b>15</b>	82.45 %
<b>16a 33 1/3% support test - 2016.</b> If the organization did not check the box on line 13, and line 14 is 33 1/3% or more, check this box and <b>stop here.</b> The organization qualifies as a publicly supported organization .....		<input checked="" type="checkbox"/>
<b>b 33 1/3% support test - 2015.</b> 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 <b>stop here.</b> The organization qualifies as a publicly supported organization .....		<input type="checkbox"/>
<b>17a 10% -facts-and-circumstances test - 2016.</b> 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 <b>stop here.</b> Explain in Part VI how the organization meets the "facts-and-circumstances" test. The organization qualifies as a publicly supported organization .....		<input type="checkbox"/>
<b>b 10% -facts-and-circumstances test - 2015.</b> 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 <b>stop here.</b> Explain in Part VI how the organization meets the "facts-and-circumstances" test. The organization qualifies as a publicly supported organization .....		<input type="checkbox"/>
<b>18 Private foundation.</b> If the organization did not check a box on line 13, 16a, 16b, 17a, or 17b, check this box and see instructions .....		<input type="checkbox"/>

**Part III Support Schedule for Organizations Described in Section 509(a)(2)**

(Complete only if you checked the box on line 10 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) 2012	(b) 2013	(c) 2014	(d) 2015	(e) 2016	(f) Total
<b>1</b> Gifts, grants, contributions, and membership fees received. (Do not include any "unusual grants.") .....						
<b>2</b> 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 .....						
<b>3</b> Gross receipts from activities that are not an unrelated trade or business under section 513 .....						
<b>4</b> Tax revenues levied for the organization's benefit and either paid to or expended on its behalf .....						
<b>5</b> The value of services or facilities furnished by a governmental unit to the organization without charge .....						
<b>6 Total.</b> Add lines 1 through 5 .....						
<b>7a</b> Amounts included on lines 1, 2, and 3 received from disqualified persons .....						
<b>b</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 .....						
<b>c</b> Add lines 7a and 7b .....						
<b>8 Public support.</b> (Subtract line 7c from line 6.)						

**Section B. Total Support**

Calendar year (or fiscal year beginning in) ►	(a) 2012	(b) 2013	(c) 2014	(d) 2015	(e) 2016	(f) Total
<b>9</b> Amounts from line 6 .....						
<b>10a</b> Gross income from interest, dividends, payments received on securities loans, rents, royalties and income from similar sources .....						
<b>b</b> Unrelated business taxable income (less section 511 taxes) from businesses acquired after June 30, 1975 .....						
<b>c</b> Add lines 10a and 10b .....						
<b>11</b> Net income from unrelated business activities not included in line 10b, whether or not the business is regularly carried on .....						
<b>12</b> Other income. Do not include gain or loss from the sale of capital assets (Explain in Part VI.) .....						
<b>13 Total support.</b> (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 section 501(c)(3) organization, check this box and **stop here**

**Section C. Computation of Public Support Percentage**

<b>15</b> Public support percentage for 2016 (line 8, column (f) divided by line 13, column (f)) .....	<b>15</b>	%
<b>16</b> Public support percentage from 2015 Schedule A, Part III, line 15 .....	<b>16</b>	%

**Section D. Computation of Investment Income Percentage**

<b>17</b> Investment income percentage for 2016 (line 10c, column (f) divided by line 13, column (f)) .....	<b>17</b>	%
<b>18</b> Investment income percentage from 2015 Schedule A, Part III, line 17 .....	<b>18</b>	%

**19a 33 1/3% support tests - 2016.** 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 - 2015.** 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 Supporting Organizations**

(Complete only if you checked a box in line 12 on Part I. If you checked 12a of Part I, complete Sections A and B. If you checked 12b of Part I, complete Sections A and C. If you checked 12c of Part I, complete Sections A, D, and E. If you checked 12d of Part I, complete Sections A and D, and complete Part V.)

**Section A. All Supporting Organizations**

	Yes	No
<b>1</b> Are all of the organization's supported organizations listed by name in the organization's governing documents? <i>If "No," describe in Part VI how the supported organizations are designated. If designated by class or purpose, describe the designation. If historic and continuing relationship, explain.</i>		
<b>2</b> Did the organization have any supported organization that does not have an IRS determination of status under section 509(a)(1) or (2)? <i>If "Yes," explain in Part VI how the organization determined that the supported organization was described in section 509(a)(1) or (2).</i>		
<b>3a</b> Did the organization have a supported organization described in section 501(c)(4), (5), or (6)? <i>If "Yes," answer (b) and (c) below.</i>		
<b>b</b> Did the organization confirm that each supported organization qualified under section 501(c)(4), (5), or (6) and satisfied the public support tests under section 509(a)(2)? <i>If "Yes," describe in Part VI when and how the organization made the determination.</i>		
<b>c</b> Did the organization ensure that all support to such organizations was used exclusively for section 170(c)(2)(B) purposes? <i>If "Yes," explain in Part VI what controls the organization put in place to ensure such use.</i>		
<b>4a</b> Was any supported organization not organized in the United States ("foreign supported organization")? <i>If "Yes," and if you checked 12a or 12b in Part I, answer (b) and (c) below.</i>		
<b>b</b> Did the organization have ultimate control and discretion in deciding whether to make grants to the foreign supported organization? <i>If "Yes," describe in Part VI how the organization had such control and discretion despite being controlled or supervised by or in connection with its supported organizations.</i>		
<b>c</b> Did the organization support any foreign supported organization that does not have an IRS determination under sections 501(c)(3) and 509(a)(1) or (2)? <i>If "Yes," explain in Part VI what controls the organization used to ensure that all support to the foreign supported organization was used exclusively for section 170(c)(2)(B) purposes.</i>		
<b>5a</b> Did the organization add, substitute, or remove any supported organizations during the tax year? <i>If "Yes," answer (b) and (c) below (if applicable). Also, provide detail in Part VI, including (i) the names and EIN numbers of the supported organizations added, substituted, or removed; (ii) the reasons for each such action; (iii) the authority under the organization's organizing document authorizing such action; and (iv) how the action was accomplished (such as by amendment to the organizing document).</i>		
<b>b Type I or Type II only.</b> Was any added or substituted supported organization part of a class already designated in the organization's organizing document?		
<b>c Substitutions only.</b> Was the substitution the result of an event beyond the organization's control?		
<b>6</b> Did the organization provide support (whether in the form of grants or the provision of services or facilities) to anyone other than (i) its supported organizations, (ii) individuals that are part of the charitable class benefited by one or more of its supported organizations, or (iii) other supporting organizations that also support or benefit one or more of the filing organization's supported organizations? <i>If "Yes," provide detail in Part VI.</i>		
<b>7</b> Did the organization provide a grant, loan, compensation, or other similar payment to a substantial contributor (defined in section 4958(c)(3)(C)), a family member of a substantial contributor, or a 35% controlled entity with regard to a substantial contributor? <i>If "Yes," complete Part I of Schedule L (Form 990 or 990-EZ).</i>		
<b>8</b> Did the organization make a loan to a disqualified person (as defined in section 4958) not described in line 7? <i>If "Yes," complete Part I of Schedule L (Form 990 or 990-EZ).</i>		
<b>9a</b> Was the organization controlled directly or indirectly at any time during the tax year by one or more disqualified persons as defined in section 4946 (other than foundation managers and organizations described in section 509(a)(1) or (2))? <i>If "Yes," provide detail in Part VI.</i>		
<b>b</b> Did one or more disqualified persons (as defined in line 9a) hold a controlling interest in any entity in which the supporting organization had an interest? <i>If "Yes," provide detail in Part VI.</i>		
<b>c</b> Did a disqualified person (as defined in line 9a) have an ownership interest in, or derive any personal benefit from, assets in which the supporting organization also had an interest? <i>If "Yes," provide detail in Part VI.</i>		
<b>10a</b> Was the organization subject to the excess business holdings rules of section 4943 because of section 4943(f) (regarding certain Type II supporting organizations, and all Type III non-functionally integrated supporting organizations)? <i>If "Yes," answer 10b below.</i>		
<b>b</b> Did the organization have any excess business holdings in the tax year? <i>(Use Schedule C, Form 4720, to determine whether the organization had excess business holdings.)</i>		



**Part IV Supporting Organizations** (continued)

	Yes	No
<b>11</b> Has the organization accepted a gift or contribution from any of the following persons?		
<b>a</b> A person who directly or indirectly controls, either alone or together with persons described in (b) and (c) below, the governing body of a supported organization?		
<b>b</b> A family member of a person described in (a) above?		
<b>c</b> A 35% controlled entity of a person described in (a) or (b) above? If "Yes" to a, b, or c, provide detail in <b>Part VI</b> .		

**Section B. Type I Supporting Organizations**

	Yes	No
<b>1</b> Did the directors, trustees, or membership of one or more supported organizations have the power to regularly appoint or elect at least a majority of the organization's directors or trustees at all times during the tax year? If "No," describe in <b>Part VI</b> how the supported organization(s) effectively operated, supervised, or controlled the organization's activities. If the organization had more than one supported organization, describe how the powers to appoint and/or remove directors or trustees were allocated among the supported organizations and what conditions or restrictions, if any, applied to such powers during the tax year.		
<b>2</b> Did the organization operate for the benefit of any supported organization other than the supported organization(s) that operated, supervised, or controlled the supporting organization? If "Yes," explain in <b>Part VI</b> how providing such benefit carried out the purposes of the supported organization(s) that operated, supervised, or controlled the supporting organization.		

**Section C. Type II Supporting Organizations**

	Yes	No
<b>1</b> Were a majority of the organization's directors or trustees during the tax year also a majority of the directors or trustees of each of the organization's supported organization(s)? If "No," describe in <b>Part VI</b> how control or management of the supporting organization was vested in the same persons that controlled or managed the supported organization(s).		

**Section D. All Type III Supporting Organizations**

	Yes	No
<b>1</b> Did the organization provide to each of its supported organizations, by the last day of the fifth month of the organization's tax year, (i) a written notice describing the type and amount of support provided during the prior tax year, (ii) a copy of the Form 990 that was most recently filed as of the date of notification, and (iii) copies of the organization's governing documents in effect on the date of notification, to the extent not previously provided?		
<b>2</b> Were any of the organization's officers, directors, or trustees either (i) appointed or elected by the supported organization(s) or (ii) serving on the governing body of a supported organization? If "No," explain in <b>Part VI</b> how the organization maintained a close and continuous working relationship with the supported organization(s).		
<b>3</b> By reason of the relationship described in (2), did the organization's supported organizations have a significant voice in the organization's investment policies and in directing the use of the organization's income or assets at all times during the tax year? If "Yes," describe in <b>Part VI</b> the role the organization's supported organizations played in this regard.		

**Section E. Type III Functionally Integrated Supporting Organizations**

<b>1</b> Check the box next to the method that the organization used to satisfy the Integral Part Test during the year (see instructions).			
<b>a</b> <input type="checkbox"/> The organization satisfied the Activities Test. Complete <b>line 2</b> below.			
<b>b</b> <input type="checkbox"/> The organization is the parent of each of its supported organizations. Complete <b>line 3</b> below.			
<b>c</b> <input type="checkbox"/> The organization supported a governmental entity. Describe in <b>Part VI</b> how you supported a government entity (see instructions).			
<b>2</b> Activities Test. Answer (a) and (b) below.		Yes	No
<b>a</b> Did substantially all of the organization's activities during the tax year directly further the exempt purposes of the supported organization(s) to which the organization was responsive? If "Yes," then in <b>Part VI</b> identify those supported organizations and explain how these activities directly furthered their exempt purposes, how the organization was responsive to those supported organizations, and how the organization determined that these activities constituted substantially all of its activities.			
<b>b</b> Did the activities described in (a) constitute activities that, but for the organization's involvement, one or more of the organization's supported organization(s) would have been engaged in? If "Yes," explain in <b>Part VI</b> the reasons for the organization's position that its supported organization(s) would have engaged in these activities but for the organization's involvement.			
<b>3</b> Parent of Supported Organizations. Answer (a) and (b) below.			
<b>a</b> Did the organization have the power to regularly appoint or elect a majority of the officers, directors, or trustees of each of the supported organizations? Provide details in <b>Part VI</b> .			
<b>b</b> Did the organization exercise a substantial degree of direction over the policies, programs, and activities of each of its supported organizations? If "Yes," describe in <b>Part VI</b> the role played by the organization in this regard.			

**Part V Type III Non-Functionally Integrated 509(a)(3) Supporting Organizations**

1  Check here if the organization satisfied the Integral Part Test as a qualifying trust on Nov. 20, 1970 (explain in Part VI.) **See instructions.** All other Type III non-functionally integrated supporting organizations must complete Sections A through E.

<b>Section A - Adjusted Net Income</b>		(A) Prior Year	(B) Current Year (optional)
1	Net short-term capital gain	1	
2	Recoveries of prior-year distributions	2	
3	Other gross income (see instructions)	3	
4	Add lines 1 through 3	4	
5	Depreciation and depletion	5	
6	Portion of operating expenses paid or incurred for production or collection of gross income or for management, conservation, or maintenance of property held for production of income (see instructions)	6	
7	Other expenses (see instructions)	7	
8	<b>Adjusted Net Income</b> (subtract lines 5, 6, and 7 from line 4)	8	

<b>Section B - Minimum Asset Amount</b>		(A) Prior Year	(B) Current Year (optional)
1	Aggregate fair market value of all non-exempt-use assets (see instructions for short tax year or assets held for part of year):		
a	Average monthly value of securities	1a	
b	Average monthly cash balances	1b	
c	Fair market value of other non-exempt-use assets	1c	
d	<b>Total</b> (add lines 1a, 1b, and 1c)	1d	
e	<b>Discount</b> claimed for blockage or other factors (explain in detail in <b>Part VI</b> ):		
2	Acquisition indebtedness applicable to non-exempt-use assets	2	
3	Subtract line 2 from line 1d	3	
4	Cash deemed held for exempt use. Enter 1-1/2% of line 3 (for greater amount, see instructions)	4	
5	Net value of non-exempt-use assets (subtract line 4 from line 3)	5	
6	Multiply line 5 by .035	6	
7	Recoveries of prior-year distributions	7	
8	<b>Minimum Asset Amount</b> (add line 7 to line 6)	8	

<b>Section C - Distributable Amount</b>			Current Year
1	Adjusted net income for prior year (from Section A, line 8, Column A)	1	
2	Enter 85% of line 1	2	
3	Minimum asset amount for prior year (from Section B, line 8, Column A)	3	
4	Enter greater of line 2 or line 3	4	
5	Income tax imposed in prior year	5	
6	<b>Distributable Amount.</b> Subtract line 5 from line 4, unless subject to emergency temporary reduction (see instructions)	6	
7	<input type="checkbox"/> Check here if the current year is the organization's first as a non-functionally integrated Type III supporting organization (see instructions).		

**Part V** Type III Non-Functionally Integrated 509(a)(3) Supporting Organizations (continued)

Section D - Distributions	Current Year
<b>1</b> Amounts paid to supported organizations to accomplish exempt purposes	
<b>2</b> Amounts paid to perform activity that directly furthers exempt purposes of supported organizations, in excess of income from activity	
<b>3</b> Administrative expenses paid to accomplish exempt purposes of supported organizations	
<b>4</b> Amounts paid to acquire exempt-use assets	
<b>5</b> Qualified set-aside amounts (prior IRS approval required)	
<b>6</b> Other distributions (describe in <b>Part VI</b> ). See instructions	
<b>7 Total annual distributions.</b> Add lines 1 through 6	
<b>8</b> Distributions to attentive supported organizations to which the organization is responsive (provide details in <b>Part VI</b> ). See instructions	
<b>9</b> Distributable amount for 2016 from Section C, line 6	
<b>10</b> Line 8 amount divided by Line 9 amount	

Section E - Distribution Allocations (see instructions)	(i) Excess Distributions	(ii) Underdistributions Pre-2016	(iii) Distributable Amount for 2016
<b>1</b> Distributable amount for 2016 from Section C, line 6			
<b>2</b> Underdistributions, if any, for years prior to 2016 (reasonable cause required- explain in Part VI). See instructions			
<b>3</b> Excess distributions carryover, if any, to 2016:			
<b>a</b>			
<b>b</b>			
<b>c</b> From 2013			
<b>d</b> From 2014			
<b>e</b> From 2015			
<b>f Total</b> of lines 3a through e			
<b>g</b> Applied to underdistributions of prior years			
<b>h</b> Applied to 2016 distributable amount			
<b>i</b> Carryover from 2011 not applied (see instructions)			
<b>j</b> Remainder. Subtract lines 3g, 3h, and 3i from 3f.			
<b>4</b> Distributions for 2016 from Section D, line 7: \$			
<b>a</b> Applied to underdistributions of prior years			
<b>b</b> Applied to 2016 distributable amount			
<b>c</b> Remainder. Subtract lines 4a and 4b from 4			
<b>5</b> Remaining underdistributions for years prior to 2016, if any. Subtract lines 3g and 4a from line 2. For result greater than zero, explain in Part VI. See instructions			
<b>6</b> Remaining underdistributions for 2016. Subtract lines 3h and 4b from line 1. For result greater than zero, explain in Part VI. See instructions			
<b>7 Excess distributions carryover to 2017.</b> Add lines 3j and 4c			
<b>8</b> Breakdown of line 7:			
<b>a</b>			
<b>b</b> Excess from 2013			
<b>c</b> Excess from 2014			
<b>d</b> Excess from 2015			
<b>e</b> Excess from 2016			

Schedule A (Form 990 or 990-EZ) 2016



**Schedule B**

(Form 990, 990-EZ, or 990-PF)

Department of the Treasury  
Internal Revenue Service

**Schedule of Contributors**

▶ Attach to Form 990, Form 990-EZ, or Form 990-PF.  
▶ Information about Schedule B (Form 990, 990-EZ, or 990-PF) and its instructions is at [www.irs.gov/form990](http://www.irs.gov/form990).

OMB No. 1545-0047

**2016**

Name of the organization

LOWELL OBSERVATORY

Employer identification number

86-0098918

Organization type (check one):

Filers of:

Section:

Form 990 or 990-EZ

501(c)( 3 ) (enter number) organization

4947(a)(1) nonexempt charitable trust **not** treated as a private foundation

527 political organization

Form 990-PF

501(c)(3) exempt private foundation

4947(a)(1) nonexempt charitable trust treated as a private foundation

501(c)(3) taxable private foundation

Check if your organization is covered by the **General Rule** or a **Special Rule**.

**Note:** Only a section 501(c)(7), (8), or (10) organization can check boxes for both the General Rule and a Special Rule. See instructions.

**General Rule**

For an organization filing Form 990, 990-EZ, or 990-PF that received, during the year, contributions totaling \$5,000 or more (in money or property) from any one contributor. Complete Parts I and II. See instructions for determining a contributor's total contributions.

**Special Rules**

For an organization described in section 501(c)(3) filing Form 990 or 990-EZ that met the 33 1/3% support test of the regulations under sections 509(a)(1) and 170(b)(1)(A)(vi), that checked Schedule A (Form 990 or 990-EZ), Part II, line 13, 16a, or 16b, and that received from any one contributor, during the year, total contributions of the greater of (1) \$5,000 or (2) 2% of the amount on (i) Form 990, Part VIII, line 1h, or (ii) Form 990-EZ, line 1. Complete Parts I and II.

For an organization described in section 501(c)(7), (8), or (10) filing Form 990 or 990-EZ that received from any one contributor, during the year, total contributions of more than \$1,000 *exclusively* for religious, charitable, scientific, literary, or educational purposes, or for the prevention of cruelty to children or animals. Complete Parts I, II, and III.

For an organization described in section 501(c)(7), (8), or (10) filing Form 990 or 990-EZ that received from any one contributor, during the year, contributions *exclusively* for religious, charitable, etc., purposes, but no such contributions totaled more than \$1,000. If this box is checked, enter here the total contributions that were received during the year for an *exclusively* religious, charitable, etc., purpose. Don't complete any of the parts unless the **General Rule** applies to this organization because it received *nonexclusively* religious, charitable, etc., contributions totaling \$5,000 or more during the year ..... ▶ \$ \_\_\_\_\_

**Caution:** An organization that isn't covered by the General Rule and/or the Special Rules doesn't file Schedule B (Form 990, 990-EZ, or 990-PF), but it **must** answer "No" on Part IV, line 2, of its Form 990; or check the box on line H of its Form 990-EZ or on its Form 990-PF, Part I, line 2, to certify that it doesn't meet the filing requirements of Schedule B (Form 990, 990-EZ, or 990-PF).

LHA For Paperwork Reduction Act Notice, see the Instructions for Form 990, 990-EZ, or 990-PF. Schedule B (Form 990, 990-EZ, or 990-PF) (2016)

Name of organization <b>LOWELL OBSERVATORY</b>	Employer identification number <b>86-0098918</b>
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**Part I Contributors** (See instructions). Use duplicate copies of Part I if additional space is needed.

(a) No.	(b) Name, address, and ZIP + 4	(c) Total contributions	(d) Type of contribution
1	 <hr/> <hr/> <hr/>	\$ <u>1,304,788.</u>	Person <input checked="" type="checkbox"/> Payroll <input type="checkbox"/> Noncash <input type="checkbox"/> (Complete Part II for noncash contributions.)
2	 <hr/> <hr/> <hr/>	\$ <u>322,009.</u>	Person <input checked="" type="checkbox"/> Payroll <input type="checkbox"/> Noncash <input type="checkbox"/> (Complete Part II for noncash contributions.)
3	 <hr/> <hr/> <hr/>	\$ <u>179,661.</u>	Person <input checked="" type="checkbox"/> Payroll <input type="checkbox"/> Noncash <input type="checkbox"/> (Complete Part II for noncash contributions.)
4	 <hr/> <hr/> <hr/>	\$ <u>1,528,634.</u>	Person <input checked="" type="checkbox"/> Payroll <input type="checkbox"/> Noncash <input type="checkbox"/> (Complete Part II for noncash contributions.)
5	 <hr/> <hr/> <hr/>	\$ <u>206,250.</u>	Person <input checked="" type="checkbox"/> Payroll <input type="checkbox"/> Noncash <input type="checkbox"/> (Complete Part II for noncash contributions.)
6	 <hr/> <hr/> <hr/>	\$ <u>1,401,242.</u>	Person <input checked="" type="checkbox"/> Payroll <input type="checkbox"/> Noncash <input type="checkbox"/> (Complete Part II for noncash contributions.)

Name of organization  <b>LOWELL OBSERVATORY</b>	Employer identification number  <b>86-0098918</b>
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**Part I Contributors** (See instructions). Use duplicate copies of Part I if additional space is needed.

(a) No.	(b) Name, address, and ZIP + 4	(c) Total contributions	(d) Type of contribution
7	<hr/> <hr/> <hr/> <hr/>	\$ 700,000.	Person <input checked="" type="checkbox"/> Payroll <input type="checkbox"/> Noncash <input type="checkbox"/> (Complete Part II for noncash contributions.)
	<hr/> <hr/> <hr/> <hr/>	\$ _____	Person <input type="checkbox"/> Payroll <input type="checkbox"/> Noncash <input type="checkbox"/> (Complete Part II for noncash contributions.)
	<hr/> <hr/> <hr/> <hr/>	\$ _____	Person <input type="checkbox"/> Payroll <input type="checkbox"/> Noncash <input type="checkbox"/> (Complete Part II for noncash contributions.)
	<hr/> <hr/> <hr/> <hr/>	\$ _____	Person <input type="checkbox"/> Payroll <input type="checkbox"/> Noncash <input type="checkbox"/> (Complete Part II for noncash contributions.)
	<hr/> <hr/> <hr/> <hr/>	\$ _____	Person <input type="checkbox"/> Payroll <input type="checkbox"/> Noncash <input type="checkbox"/> (Complete Part II for noncash contributions.)
	<hr/> <hr/> <hr/> <hr/>	\$ _____	Person <input type="checkbox"/> Payroll <input type="checkbox"/> Noncash <input type="checkbox"/> (Complete Part II for noncash contributions.)
	<hr/> <hr/> <hr/> <hr/>	\$ _____	Person <input type="checkbox"/> Payroll <input type="checkbox"/> Noncash <input type="checkbox"/> (Complete Part II for noncash contributions.)

Name of organization  <b>LOWELL OBSERVATORY</b>	Employer identification number  <b>86-0098918</b>
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**Part II Noncash Property** (See instructions). Use duplicate copies of Part II if additional space is needed.

(a) No. from Part I	(b) Description of noncash property given	(c) FMV (or estimate) (See instructions)	(d) Date received
		\$ _____	
		\$ _____	
		\$ _____	
		\$ _____	
		\$ _____	
		\$ _____	
		\$ _____	
		\$ _____	



Name of organization <b>LOWELL OBSERVATORY</b>	Employer identification number <b>86-0098918</b>
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**Part III** Exclusively religious, charitable, etc., contributions to organizations described in section 501(c)(7), (8), or (10) that total more than \$1,000 for the year from any one contributor. Complete columns (a) through (e) and the following line entry. For organizations completing Part III, enter the total of exclusively religious, charitable, etc., contributions of \$1,000 or less for the year. (Enter this info. once.) ▶ \$ \_\_\_\_\_  
Use duplicate copies of Part III if additional space is needed.

(a) No. from Part I	(b) Purpose of gift	(c) Use of gift	(d) Description of how gift is held
<b>(e) Transfer of gift</b>			
Transferee's name, address, and ZIP + 4		Relationship of transferor to transferee	
<b>(e) Transfer of gift</b>			
Transferee's name, address, and ZIP + 4		Relationship of transferor to transferee	
<b>(e) Transfer of gift</b>			
Transferee's name, address, and ZIP + 4		Relationship of transferor to transferee	
<b>(e) Transfer of gift</b>			
Transferee's name, address, and ZIP + 4		Relationship of transferor to transferee	
<b>(e) Transfer of gift</b>			
Transferee's name, address, and ZIP + 4		Relationship of transferor to transferee	

**SCHEDULE D**  
**(Form 990)**

Department of the Treasury  
Internal Revenue Service

**Supplemental Financial Statements**

▶ **Complete if the organization answered "Yes" on Form 990, Part IV, line 6, 7, 8, 9, 10, 11a, 11b, 11c, 11d, 11e, 11f, 12a, or 12b.**  
▶ **Attach to Form 990.**

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

OMB No. 1545-0047

**2016**

**Open to Public Inspection**

**Name of the organization** LOWELL OBSERVATORY **Employer identification number** 86-0098918

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

	(a) Donor advised funds	(b) Funds and other accounts
1 Total number at end of year .....		
2 Aggregate value of contributions to (during year) .....		
3 Aggregate value of 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? .....		<input type="checkbox"/> Yes <input type="checkbox"/> No
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? .....		<input type="checkbox"/> Yes <input type="checkbox"/> No

**Part II Conservation Easements.** Complete if the organization answered "Yes" on 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 a 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 Tax Year
a Total number of conservation easements .....	2a
b Total acreage restricted by conservation easements .....	2b
c Number of conservation easements on a certified historic structure included in (a) .....	2c
d Number of conservation easements included in (c) acquired after 8/17/06, and not on a historic structure listed in the National Register .....	2d

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? .....

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

7 Amount of expenses incurred in monitoring, inspecting, handling of violations, 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)? .....

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" on 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) Revenue included on 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 Revenue included on Form 990, Part VIII, line 1 .....

b Assets included in Form 990, Part X .....

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

Schedule D (Form 990) 2016

**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" on 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:

	Amount
c Beginning balance	1c
d Additions during the year	1d
e Distributions during the year	1e
f Ending balance	1f

2a Did the organization include an amount on Form 990, Part X, line 21, for escrow or custodial account liability?  Yes  No

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

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

	(a) Current year	(b) Prior year	(c) Two years back	(d) Three years back	(e) Four years back
1a Beginning of year balance	37,221,789.	35,590,304.	34,950,148.	31,195,406.	28,777,721.
b Contributions	1,254,991.	2,282,857.	0.	172,843.	0.
c Net investment earnings, gains, and losses	2,174,579.	-377,198.	1,623,968.	4,459,620.	4,178,287.
d Grants or scholarships	809,006.	168,834.	700,000.	700,000.	700,000.
e Other expenditures for facilities and programs	94,516.	0.	0.	0.	958,322.
f Administrative expenses	127,434.	105,340.	283,812.	177,721.	102,280.
g End of year balance	39,620,403.	37,221,789.	35,590,304.	34,950,148.	31,195,406.

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

- a Board designated or quasi-endowment  .00 %
- b Permanent endowment  100.00 %
- c Temporarily restricted endowment  .00 %

The percentages on 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
- (ii) related organizations

	Yes	No
3a(i)		X
3a(ii)	X	
3b	X	

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

4 Describe in Part XIII the intended uses of the organization's endowment funds.

**Part VI Land, Buildings, and Equipment.**

Complete if the organization answered "Yes" on 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		670,434.		670,434.
b Buildings		22,203,612.	7,122,755.	15,080,857.
c Leasehold improvements				
d Equipment		38,177,838.	11,300,709.	26,877,129.
e Other		1,242,055.	628,295.	613,760.
<b>Total.</b> Add lines 1a through 1e. (Column (d) must equal Form 990, Part X, column (B), line 10c.)				43,242,180.

**Part VII Investments - Other Securities.**

Complete if the organization answered "Yes" on Form 990, Part IV, line 11b. See Form 990, Part X, line 12.

(a) Description of security or category (including name of security)	(b) Book value	(c) Method of valuation: Cost or end-of-year market value
(1) Financial derivatives .....		
(2) Closely-held equity interests .....		
(3) Other .....		
(A)		
(B)		
(C)		
(D)		
(E)		
(F)		
(G)		
(H)		
<b>Total.</b> (Col. (b) must equal Form 990, Part X, col. (B) line 12.) ▶		

**Part VIII Investments - Program Related.**

Complete if the organization answered "Yes" on Form 990, Part IV, line 11c. See Form 990, Part X, line 13.

(a) Description of investment	(b) Book value	(c) Method of valuation: Cost or end-of-year market value
(1)		
(2)		
(3)		
(4)		
(5)		
(6)		
(7)		
(8)		
(9)		
<b>Total.</b> (Col. (b) must equal Form 990, Part X, col. (B) line 13.) ▶		

**Part IX Other Assets.**

Complete if the organization answered "Yes" on Form 990, Part IV, line 11d. See Form 990, Part X, line 15.

(a) Description	(b) Book value
(1)	
(2)	
(3)	
(4)	
(5)	
(6)	
(7)	
(8)	
(9)	
<b>Total.</b> (Column (b) must equal Form 990, Part X, col. (B) line 15.) ▶	

**Part X Other Liabilities.**

Complete if the organization answered "Yes" on Form 990, Part IV, line 11e or 11f. See Form 990, Part X, line 25.

1. (a) Description of liability	(b) Book value
(1) Federal income taxes	
(2) DUE TO PERCIVAL LOWELL TRUST UW	300,000.
(3)	
(4)	
(5)	
(6)	
(7)	
(8)	
(9)	
<b>Total.</b> (Column (b) must equal Form 990, Part X, col. (B) line 25.) ▶	300,000.

2. Liability for uncertain tax positions. In Part XIII, provide the text of the footnote to the organization's financial statements that reports the organization's liability for uncertain tax positions under FIN 48 (ASC 740). Check here if the text of the footnote has been provided in Part XIII

Part XI Reconciliation of Revenue per Audited Financial Statements With Revenue per Return.

Complete if the organization answered "Yes" on Form 990, Part IV, line 12a.

Table with 5 main rows and sub-rows (a-e) for adjustments. Columns include line numbers and a shaded area for calculations.

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

Complete if the organization answered "Yes" on Form 990, Part IV, line 12a.

Table with 5 main rows and sub-rows (a-e) for adjustments. Columns include line numbers and a shaded area for calculations.

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.

PART V, LINE 4:

THE ENDOWMENT FUNDS ARE USED FOR SUPPORT OF LOWELL OBSERVATORY AND FOR REINVESTMENT.

PART X, LINE 2:

THE FOLLOWING DISCLOSURE IS RELATED TO THE COMBINED FINANCIAL STATEMENTS OF THE LOWELL OBSERVATORY, TRUST U/W OF PERCIVAL LOWELL, AND THE LOWELL OBSERVATORY FOUNDATION:

THE OBSERVATORY AND THE FOUNDATION ARE EXEMPT FROM INCOME TAXES UNDER BOTH IRC SECTION 501(C)(3) AND ARIZONA INCOME TAX LAWS. THE OBSERVATORY IS CLASSIFIED AS OTHER THAN A PRIVATE FOUNDATION UNDER IRC SEC 509(A)(1).

**Part XIII** Supplemental Information (continued)

THE FOUNDATION IS CLASSIFIED AS OTHER THAN A PRIVATE FOUNDATION UNDER IRC SEC 509(A)(3) AS A SUPPORTING ORGANIZATION OF THE OBSERVATORY. THE TRUST IS A NON-EXEMPT CHARITABLE TRUST AS DESCRIBED IN IRC SEC 4947(A)(1). THE TRUST QUALIFIES AS AN IRC SEC 509(A)(3) SUPPORTING ORGANIZATION OF THE OBSERVATORY AND IS ENTITLED TO A CHARITABLE INCOME TAX DEDUCTION UNDER IRC SEC 642(C) BECAUSE ALL OF THE GROSS INCOME IS SET ASIDE PERMANENTLY FOR CHARITABLE AND SCIENTIFIC PURPOSES. ACCORDINGLY, NO PROVISION FOR FEDERAL AND STATE INCOME TAXES IS MADE. INCOME FROM CERTAIN ACTIVITIES NOT DIRECTLY RELATED TO THE ORGANIZATION'S TAX-EXEMPT PURPOSE, HOWEVER, MAY BE SUBJECT TO TAXATION AS UNRELATED BUSINESS TAXABLE INCOME (UBTI).

GAAP REQUIRES MANAGEMENT TO PERFORM AN EVALUATION OF ALL TAX POSITIONS TAKEN OR EXPECTED TO BE TAKEN IN THE COURSE OF PREPARING THE ORGANIZATION'S TAX RETURNS TO DETERMINE WHETHER THE TAX POSITIONS MEET A "MORE LIKELY THAN NOT" STANDARD OF BEING SUSTAINED UNDER EXAMINATION BY THE APPLICABLE TAXING AUTHORITIES. THIS EVALUATION IS REQUIRED TO BE PERFORMED FOR ALL OPEN TAX YEARS, AS DEFINED BY THE VARIOUS STATUTES OF LIMITATIONS, FOR FEDERAL AND STATE PURPOSES.

THE ORGANIZATION IS ONLY SUBJECT TO INCOME TAXES ON UBTI AS APPLICABLE. THE ORGANIZATION IS REQUIRED TO FILE INFORMATIONAL RETURNS FOR FEDERAL AND STATE PURPOSES AND, IF IT HAS UBTI, FEDERAL AND STATE INCOME TAX RETURNS. MANAGEMENT HAS PERFORMED ITS EVALUATION OF TAX POSITIONS TAKEN ON ALL OPEN TAX RETURNS AND HAS DETERMINED THAT THERE WERE NO POSITIONS TAKEN THAT DO NOT MEET THE "MORE LIKELY THAN NOT" STANDARD.

FROM TIME TO TIME, THE ORGANIZATION MAY BE SUBJECT TO PENALTIES AND INTEREST ASSESSED BY VARIOUS TAXING AUTHORITIES, WHICH ARE CLASSIFIED AS

**Part XIII** Supplemental Information (continued)

GENERAL AND ADMINISTRATIVE EXPENSES IF THEY OCCUR. NO SUCH ACTIVITY  
OCCURRED IN 2016 OR 2015.

Multiple horizontal lines for supplemental information.

**SCHEDULE G**  
**(Form 990 or 990-EZ)**

Department of the Treasury  
Internal Revenue Service

**Supplemental Information Regarding Fundraising or Gaming Activities**  
Complete if the organization answered "Yes" on Form 990, Part IV, line 17, 18, or 19, or if the organization entered more than \$15,000 on Form 990-EZ, line 6a.  
▶ Attach to Form 990 or Form 990-EZ.

OMB No. 1545-0047

**2016**

Open to Public Inspection

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

Name of the organization **LOWELL OBSERVATORY** Employer identification number **86-0098918**

**Part I Fundraising Activities.** Complete if the organization answered "Yes" on Form 990, Part IV, line 17. Form 990-EZ filers are not required to complete this part.

- 1** Indicate whether the organization raised funds through any of the following activities. Check all that apply.
- |                                                                    |                                                                         |
|--------------------------------------------------------------------|-------------------------------------------------------------------------|
| <b>a</b> <input type="checkbox"/> Mail solicitations               | <b>e</b> <input type="checkbox"/> Solicitation of non-government grants |
| <b>b</b> <input type="checkbox"/> Internet and email solicitations | <b>f</b> <input type="checkbox"/> Solicitation of government grants     |
| <b>c</b> <input type="checkbox"/> Phone solicitations              | <b>g</b> <input type="checkbox"/> Special fundraising events            |
| <b>d</b> <input type="checkbox"/> In-person solicitations          |                                                                         |
- 2 a** Did the organization have a written or oral agreement with any individual (including officers, directors, trustees, or key employees listed in Form 990, Part VII) or entity in connection with professional fundraising services?  Yes  No
- b** If "Yes," list the 10 highest paid individuals or entities (fundraisers) pursuant to agreements under which the fundraiser is to be compensated at least \$5,000 by the organization.

(i) Name and address of individual or entity (fundraiser)	(ii) Activity	(iii) Did fundraiser have custody or control of contributions?		(iv) Gross receipts from activity	(v) Amount paid to (or retained by) fundraiser listed in col. (i)	(vi) Amount paid to (or retained by) organization
		Yes	No			
<b>Total</b> .....						

- 3** List all states in which the organization is registered or licensed to solicit contributions or has been notified it is exempt from registration or licensing.



**Part II Fundraising Events.** Complete if the organization answered "Yes" on Form 990, Part IV, line 18, or reported more than \$15,000 of fundraising event contributions and gross income on Form 990-EZ, lines 1 and 6b. List events with gross receipts greater than \$5,000.

		(a) Event #1	(b) Event #2	(c) Other events	(d) Total events (add col. (a) through col. (c))
		<b>ANNUAL GALA</b> (event type)	(event type)	<b>NONE</b> (total number)	
Revenue	<b>1</b> Gross receipts .....	73,055.			73,055.
	<b>2</b> Less: Contributions .....	31,685.			31,685.
	<b>3</b> Gross income (line 1 minus line 2) .....	41,370.			41,370.
Direct Expenses	<b>4</b> Cash prizes .....				
	<b>5</b> Noncash prizes .....				
	<b>6</b> Rent/facility costs .....	21,948.			21,948.
	<b>7</b> Food and beverages .....				
	<b>8</b> Entertainment .....				
	<b>9</b> Other direct expenses .....	36,081.			36,081.
	<b>10</b> Direct expense summary. Add lines 4 through 9 in column (d) .....				58,029.
<b>11</b> Net income summary. Subtract line 10 from line 3, column (d) .....				-16,659.	

**Part III Gaming.** Complete if the organization answered "Yes" on Form 990, Part IV, line 19, or reported more than \$15,000 on Form 990-EZ, line 6a.

		(a) Bingo	(b) Pull tabs/instant bingo/progressive bingo	(c) Other gaming	(d) Total gaming (add col. (a) through col. (c))
Revenue	<b>1</b> Gross revenue .....				
Direct Expenses	<b>2</b> Cash prizes .....				
	<b>3</b> Noncash prizes .....				
	<b>4</b> Rent/facility costs .....				
	<b>5</b> Other direct expenses .....				
	<b>6</b> Volunteer labor .....	<input type="checkbox"/> Yes _____ % <input type="checkbox"/> No	<input type="checkbox"/> Yes _____ % <input type="checkbox"/> No	<input type="checkbox"/> Yes _____ % <input type="checkbox"/> No	
	<b>7</b> Direct expense summary. Add lines 2 through 5 in column (d) .....				
	<b>8</b> Net gaming income summary. Subtract line 7 from line 1, column (d) .....				

**9** Enter the state(s) in which the organization conducts gaming activities: \_\_\_\_\_  
**a** Is the organization licensed to conduct gaming activities in each of these states?  Yes  No  
**b** If "No," explain: \_\_\_\_\_

**10a** Were any of the organization's gaming licenses revoked, suspended, or terminated during the tax year?  Yes  No  
**b** If "Yes," explain: \_\_\_\_\_





**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" on 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  
**2016**

Open to Public  
Inspection

Name of the organization

**LOWELL OBSERVATORY**

Employer identification number  
**86-0098918**

**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 Domestic Organizations and Domestic Governments.** Complete if the organization answered "Yes" on 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.

<b>1 (a)</b> Name and address of organization or government	<b>(b)</b> EIN	<b>(c)</b> IRC section (if applicable)	<b>(d)</b> Amount of cash grant	<b>(e)</b> Amount of non-cash assistance	<b>(f)</b> Method of valuation (book, FMV, appraisal, other)	<b>(g)</b> Description of non-cash assistance	<b>(h)</b> Purpose of grant or assistance
LOWELL OBSERVATORY FOUNDATION 1400 W. MARS HILL RD FLAGSTAFF, AZ 86001	47-2052113		1,026,491.	0.			THE FUNDS WERE TRANSFERRED TO THE LOWELL OBSERVATORY FOUNDATION IN ORDER FOR THE FOUNDATION
MASSACHUSETTS INSTITUTE OF TECHNOLOGY - 77 MASSACHUSETTS AVE - CAMBRIDGE, MA 02139	04-2103594		129,953.	0.			NASA GRANT - SUBAWARD COLLABORATION RESEARCH
NORTHERN ARIZONA UNIVERSITY PO BOX 4070 FLAGSTAFF, AZ 86011	74-2579628		60,514.	0.			NASA GRANT - SUBAWARD COLLABORATION RESEARCH
PLANETARY SCIENCE INSTITUTE 1700 E FORT LOWELL - SUTIE 106 TUCSON, AZ 85719	33-0175263		24,083.	0.			NASA GRANT - SUBAWARD COLLABORATION RESEARCH
UNIVERSITY OF ARIZONA 1303 E UNIVERSITY BLVD, BOX 3 TUCSON, AZ 85719	74-2652689		9,827.	0.			NASA GRANT - SUBAWARD COLLABORATION RESEARCH
UNIVERSITY OF HAWAII 2440 CAMPUS RD, BOX 368 HONOLULU, HI 96822	99-6000354		28,087.	0.			NASA GRANT - SUBAWARD COLLABORATION RESEARCH

- 2** Enter total number of section 501(c)(3) and government organizations listed in the line 1 table ..... **7**.
- 3** Enter total number of other organizations listed in the line 1 table ..... **7**.

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

Schedule I (Form 990) (2016)

SEE PART IV FOR COLUMN (H) DESCRIPTIONS

**Part II** Continuation of Grants and Other Assistance to Governments and Organizations in the United States (Schedule I (Form 990), Part II.)

(a) Name and address of organization or government	(b) EIN	(c) IRC 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
UNIVERSITY OF MARYLAND ROOM 4101, CHESAPEAKE BLDG COLLEGE PARK, MS 20742	52-6002033		111,739.	0.			NASA GRANT - SUBAWARD COLLABORATION RESEARCH

**Part III**

**Grants and Other Assistance to Domestic Individuals.** Complete if the organization answered "Yes" on 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 noncash assistance

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

**PART I, LINE 2:**

ALL GRANT RECIPIENTS ARE MAJOR UNIVERSITIES, WITH SOPHISTICATED SYSTEMS FOR ADMINISTERING GRANTS. OBSERVATORY GRANTS TO THE UNIVERSITIES ARE PAID ON A COST REIMBURSEMENT BASIS. THE OBSERVATORY PRINCIPAL INVESTIGATOR UNDER EACH AWARD CLOSELY COORDINATES RESEARCH EFFORTS WITH THE UNIVERSITY RECEIVING THE SUB AWARD AND REVIEWS EACH INVOICE SUBMITTED BY THE UNIVERSITY PRIOR TO PAYMENT.

**PART II, LINE 1, COLUMN (H):**

**Part IV** Supplemental Information

NAME OF ORGANIZATION OR GOVERNMENT: LOWELL OBSERVATORY FOUNDATION

(H) PURPOSE OF GRANT OR ASSISTANCE: THE FUNDS WERE TRANSFERRED TO THE LOWELL OBSERVATORY FOUNDATION IN ORDER FOR THE FOUNDATION TO HOLD AND MANAGE THE ASSETS FOR THE EXCLUSIVE BENEFIT OF THE OBSERVATORY.

Multiple horizontal lines for supplemental information.

**SCHEDULE J  
(Form 990)**

**Compensation Information**

OMB No. 1545-0047

**2016**

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

▶ Complete if the organization answered "Yes" on Form 990, Part IV, line 23.

▶ Attach to Form 990.

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

Open to Public Inspection

Department of the Treasury  
Internal Revenue Service

Name of the organization

LOWELL OBSERVATORY

Employer identification number

86-0098918

**Part I Questions Regarding Compensation**

**1a** Check the appropriate box(es) if the organization provided any of the following to or for a person listed on Form 990, Part VII, Section A, line 1a. Complete Part III to provide any relevant information regarding these items.

- |                                                                    |                                                                                     |
|--------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <input type="checkbox"/> First-class or charter travel             | <input checked="" type="checkbox"/> Housing allowance or residence for personal use |
| <input type="checkbox"/> Travel for companions                     | <input type="checkbox"/> Payments for business use of personal residence            |
| <input type="checkbox"/> Tax indemnification and gross-up payments | <input type="checkbox"/> Health or social club dues or initiation fees              |
| <input type="checkbox"/> Discretionary spending account            | <input type="checkbox"/> Personal services (such as, maid, chauffeur, chef)         |

**b** If any of the boxes on 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 .....

**2** Did the organization require substantiation prior to reimbursing or allowing expenses incurred by all directors, trustees, and officers, including the CEO/Executive Director, regarding the items checked on line 1a? .....

**3** 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.

- |                                                              |                                                                                     |
|--------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <input type="checkbox"/> Compensation committee              | <input type="checkbox"/> Written employment contract                                |
| <input type="checkbox"/> Independent compensation consultant | <input type="checkbox"/> Compensation survey or study                               |
| <input type="checkbox"/> Form 990 of other organizations     | <input checked="" type="checkbox"/> Approval by the board or compensation committee |

**4** During the year, did any person listed on Form 990, Part VII, Section A, line 1a, with respect to the filing organization or a related organization:

- a** Receive a severance payment or change-of-control payment? .....
- b** Participate in, or receive payment from, a supplemental nonqualified retirement plan? .....
- c** Participate in, or receive payment from, an equity-based compensation arrangement? .....
- If "Yes" to any of lines 4a-c, list the persons and provide the applicable amounts for each item in Part III.

**Only section 501(c)(3), 501(c)(4), and 501(c)(29) organizations must complete lines 5-9.**

**5** For persons listed on Form 990, Part VII, Section A, line 1a, did the organization pay or accrue any compensation contingent on the revenues of:

- a** The organization? .....
- b** Any related organization? .....
- If "Yes" on line 5a or 5b, describe in Part III.

**6** For persons listed on Form 990, Part VII, Section A, line 1a, did the organization pay or accrue any compensation contingent on the net earnings of:

- a** The organization? .....
- b** Any related organization? .....
- If "Yes" on line 6a or 6b, describe in Part III.

**7** For persons listed on Form 990, Part VII, Section A, line 1a, did the organization provide any nonfixed payments not described on lines 5 and 6? If "Yes," describe in Part III .....

**8** Were any amounts reported on 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 .....

**9** If "Yes" on line 8, did the organization also follow the rebuttable presumption procedure described in Regulations section 53.4958-6(c)? .....

	Yes	No
1b	X	
2	X	
4a		X
4b		X
4c		X
5a		X
5b		X
6a		X
6b		X
7		X
8		X
9		

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

Schedule J (Form 990) 2016



**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 on 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 aren't 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 in column (B) reported as deferred on prior Form 990
	(i) Base compensation	(ii) Bonus & incentive compensation	(iii) Other reportable compensation				
(1) HALL, JEFFREY DIRECTOR	144,416.	0.	6,000.	7,900.	7,824.	166,140.	0.
(2) ACTOR, ANN DEPUTY DIRECTOR OF DEVELOPMENT	142,241.	0.	4,000.	7,038.	7,767.	161,046.	0.
(3) SCHLEICHER, DAVID ASTRONOMER	142,146.	0.	0.	7,243.	7,747.	157,136.	0.
(4) MASSEY, PHILIP ASTRONOMER	144,157.	0.	0.	7,243.	7,785.	159,185.	0.
(5) HUNTER, DEIDRE ASTRONOMER	136,749.	0.	0.	7,140.	7,017.	150,906.	0.
(6) DUNHAM, EDWARD INSTRUMENT MANAGER	147,540.	0.	0.	7,243.	7,602.	162,385.	0.
	0.	0.	0.	0.	0.	0.	0.

**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.

**PART I, LINE 1A:**

J. HALL, DIRECTOR AND A. ACTOR, DEPUTY DIRECTOR OF DEVELOPMENT STAYED IN HOUSES OWNED BY LOWELL OBSERVATORY. THEIR STAYS WERE TREATED AS HOUSING ALLOWANCES AND WERE INCLUDED AS A TAXABLE BENEFIT TO EACH.

**SCHEDULE M  
(Form 990)**

**Noncash Contributions**

OMB No. 1545-0047

**2016**

Open To Public Inspection

Department of the Treasury  
Internal Revenue Service

- ▶ Complete if the organizations answered "Yes" on Form 990, Part IV, lines 29 or 30.
- ▶ Attach to Form 990.
- ▶ Information about Schedule M (Form 990) and its instructions is at [www.irs.gov/form990](http://www.irs.gov/form990).

Name of the organization **LOWELL OBSERVATORY** Employer identification number **86-0098918**

**Part I Types of Property**

	(a) Check if applicable	(b) Number of contributions or items contributed	(c) Noncash contribution amounts reported on Form 990, Part VIII, line 1g	(d) Method of determining noncash contribution amounts
1 Art - Works of art				
2 Art - Historical treasures				
3 Art - Fractional interests				
4 Books and publications	X		779.	DONOR VALUED
5 Clothing and household goods				
6 Cars and other vehicles	X	1	11,000.	SALES PRICE
7 Boats and planes				
8 Intellectual property				
9 Securities - Publicly traded	X	8	112,189.	TRANSACTION VALUE
10 Securities - Closely held stock				
11 Securities - Partnership, LLC, or trust interests				
12 Securities - Miscellaneous				
13 Qualified conservation contribution - Historic structures				
14 Qualified conservation contribution - Other				
15 Real estate - Residential				
16 Real estate - Commercial				
17 Real estate - Other				
18 Collectibles				
19 Food inventory				
20 Drugs and medical supplies				
21 Taxidermy				
22 Historical artifacts				
23 Scientific specimens				
24 Archeological artifacts				
25 Other ▶ ( TELESCOPE )	X	4	29,930.	DONOR VALUED
26 Other ▶ ( SILENT AUCTION )	X	41	16,070.	SALES PRICE
27 Other ▶ ( BEVERAGES )	X	1	383.	DONOR VALUED
28 Other ▶ ( )				

29 Number of Forms 8283 received by the organization during the tax year for contributions for which the organization completed Form 8283, Part IV, Donee Acknowledgement **29** **1**

	Yes	No
30a During the year, did the organization receive by contribution any property reported in Part I, lines 1 through 28, that it must hold for at least three years from the date of the initial contribution, and which isn't required to be used for exempt purposes for the entire holding period?		X
b If "Yes," describe the arrangement in Part II.		
31 Does the organization have a gift acceptance policy that requires the review of any nonstandard contributions?		X
32a Does the organization hire or use third parties or related organizations to solicit, process, or sell noncash contributions?	X	
b If "Yes," describe in Part II.		
33 If the organization didn't report an amount in column (c) for a type of property for which column (a) is checked, describe in Part II.		

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

Schedule M (Form 990) (2016)

**Part II** **Supplemental Information.** Provide the information required by Part I, lines 30b, 32b, and 33, and whether the organization is reporting in Part I, column (b), the number of contributions, the number of items received, or a combination of both. Also complete this part for any additional information.

SCHEDULE M, PART I, COLUMN (B):

THERE WERE 8 DONATIONS OF STOCK TO THE OBSERVATORY. EACH DONATION HAD VARYING AMOUNTS AND VALUES OF STOCK.

41 SEPARATE ITEMS WERE DONATED IN ORDER TO BE AUCTIONED AT THE YEARLY GALA. THE SALES PRICE OF THE ITEMS AT AUCTION IS REPORTED ON SCHEDULE M.

THERE WERE 4 DONATIONS OF TELESCOPE EQUIPMENT. EACH HAD VARYING AMOUNTS OF VALUE.

SCHEDULE M, LINE 32B:

PUBLICLY TRADED SECURITIES ARE DEPOSITED INTO AN INVESTMENT ACCOUNT OWNED BY THE OBSERVATORY. THE SECURITIES ARE SOLD BY A BROKER SHORTLY AFTER.

**SCHEDULE O**  
**(Form 990 or 990-EZ)**

Department of the Treasury  
Internal Revenue Service

**Supplemental Information to Form 990 or 990-EZ**

Complete to provide information for responses to specific questions on  
Form 990 or 990-EZ or to provide any additional information.

▶ Attach to Form 990 or 990-EZ.

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

OMB No. 1545-0047

**2016**

Open to Public  
Inspection

Name of the organization

LOWELL OBSERVATORY

Employer identification number

86-0098918

FORM 990, PART I, LINE 1, DESCRIPTION OF ORGANIZATION MISSION:

ITS EVOLUTION; CONDUCT PURE RESEARCH IN ASTRONOMICAL PHENOMENA; PROVIDE  
QUALITY PUBLIC EDUCATION AND OUTREACH PROGRAMS TO BRING THE RESULTS OF  
ASTRONOMICAL RESEARCH TO THE PUBLIC.

FORM 990, PART III, LINE 4A, PROGRAM SERVICE ACCOMPLISHMENTS:

AND FROM OUR PARTNERS'. WE ALSO BROUGHT A WORLD-LEADING INFRARED  
INSTRUMENT TO DCT, AND SOLIDIFIED PLANS TO BRING 2 ADDITIONAL  
WORLD-CLASS OPTICAL AND IR INSTRUMENTS FROM OUR PARTNERS TO DCT IN  
2017, THEREBY EXPANDING DCT'S CAPABILITIES FOR MANY YEARS AHEAD.  
FURTHERMORE, IN 2016, LOWELL RE-ALUMINIZED THE DCT'S 4.3-METER PRIMARY  
MIRROR TO ENSURE HIGHLY EFFICIENT LIGHT COLLECTION FOR AN ADDITIONAL  
3-5 YEARS.

FORM 990, PART VI, SECTION B, LINE 11B:

THE FORM 990 DRAFT IS FIRST REVIEWED BY THE DEPUTY DIRECTORY FOR  
ADMINISTRATION (DDA) FOR ACCURACY. ONCE IT HAS BEEN DEEMED ACCURATE BY THE  
DDA IT IS FORWARDED TO THE SOLE TRUSTEE, DIRECTOR AND AUDIT COMMITTEE FOR  
THEIR REVIEW AND COMMENTS. AFTER ANY QUESTIONS AND COMMENTS HAVE BEEN  
ADDRESSED IT IS APPROVED AND A FINAL COPY WILL BE SIGNED AND FILED BY THE  
DDA.

FORM 990, PART VI, SECTION B, LINE 12C:

THE ORGANIZATION CONDUCTS WEEKLY REVIEWS OF PAYABLES INCLUDING POTENTIAL  
CONFLICTS OF INTEREST AND FOLLOW-UP OCCURS TO ENFORCE COMPLIANCE WITH THE  
COMPANY POLICY.

LHA For Paperwork Reduction Act Notice, see the Instructions for Form 990 or 990-EZ.

Schedule O (Form 990 or 990-EZ) (2016)

632211 08-25-16

Name of the organization LOWELL OBSERVATORY	Employer identification number 86-0098918
------------------------------------------------	----------------------------------------------

FORM 990, PART VI, SECTION B, LINE 15A:

COMPENSATION OF THE DIRECTOR FOR LOWELL OBSERVATORY IS DETERMINED BY THE SOLE TRUSTEE OF THE CORPORATION AFTER REVIEW OF INFORMATION PROVIDED BY THE HUMAN RESOURCE ADMINISTRATOR AND MEMBERS OF THE ADVISORY BOARD WHO ARE OR HAVE BEEN MEMBERS OF THE SCIENTIFIC BUSINESS COMMUNITY. THE HUMAN RESOURCE ADMINISTRATOR REVIEWS THE TOTAL COMPENSATION OF THE DIRECTOR IN ACCORDANCE WITH REGULATIONS/GUIDELINES ESTABLISHED BY THE IRS AND INDUSTRY BEST PRACTICES. DATA REGARDING SALARIES OF OTHER DIRECTORS (CEOS) AT ORGANIZATIONS OF SIMILAR SIZE, INCLUDING BOTH NON-PROFIT AND FOR-PROFIT COMPANIES IS ALSO REVIEWED. THE SOLE TRUSTEE, WITH ADVICE FROM THE ADVISORY BOARD, ALSO ESTABLISHES GOALS AND OBJECTIVES FOR THE DIRECTOR AND EVALUATES THE PERFORMANCE OF THE DIRECTOR BASED ON THE PRIOR YEAR'S GOALS AND OBJECTIVES.

FORM 990, PART VI, SECTION C, LINE 19:

WHEN REQUESTED, DOCUMENTS REGARDING THE OBSERVATORY ARE PROVIDED BY THE BUSINESS OFFICE. THE 990 AND AUDITED FINANCIAL STATEMENTS ARE AVAILABLE ON THE LOWELL OBSERVATORY WEBSITE. THE 990 IS ALSO AVAILABLE ON GUIDESTAR AND CHARITY NAVIGATOR. A SUMMARY OF THE CONSOLIDATED FINANCIAL STATEMENTS IS PUBLISHED ANNUALLY IN AN ANNUAL REPORT AND EMAILED TO DONORS.

**SCHEDULE R  
(Form 990)**

Department of the Treasury  
Internal Revenue Service

**Related Organizations and Unrelated Partnerships**

▶ Complete if the organization answered "Yes" on Form 990, Part IV, line 33, 34, 35b, 36, or 37.  
▶ Attach to Form 990.

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

OMB No. 1545-0047

**2016**

Open to Public  
Inspection

Name of the organization

LOWELL OBSERVATORY

Employer identification number  
**86-0098918**

**Part I Identification of Disregarded Entities.** Complete if the organization answered "Yes" on Form 990, Part IV, line 33.

(a) Name, address, and EIN (if applicable) of disregarded entity	(b) Primary activity	(c) Legal domicile (state or foreign country)	(d) Total income	(e) End-of-year assets	(f) Direct controlling entity

**Part II Identification of Related Tax-Exempt Organizations.** Complete if the organization answered "Yes" on Form 990, Part IV, line 34 because it had one or more related tax-exempt organizations during the tax year.

(a) Name, address, and EIN of related organization	(b) Primary activity	(c) Legal domicile (state or foreign country)	(d) Exempt Code section	(e) Public charity status (if section 501(c)(3))	(f) Direct controlling entity	(g) Section 512(b)(13) controlled entity?	
						Yes	No
PERCIVAL LOWELL TRUST UW - 04-2007327 1400 W MARS HILL ROAD FLAGSTAFF, AZ 86001	TRUST F/B/O LOWELL OBSERVATORY	ARIZONA	4947(A)(1)	LINE 12B, II	LOWELL OBSERVATORY		X
LOWELL OBSERVATORY FOUNDATION - 47-2052113 1400 W MARS HILL ROAD FLAGSTAFF, AZ 86001	FOUNDATION F/B/O LOWELL OBSERVATORY	ARIZONA	501(C)(3)	LINE 12A, I	N/A		X

**Part III Identification of Related Organizations Taxable as a Partnership.** Complete if the organization answered "Yes" on Form 990, Part IV, line 34 because it had one or more related organizations treated as a partnership during the tax year.

(a) Name, address, and EIN of related organization	(b) Primary activity	(c) Legal domicile (state or foreign country)	(d) Direct controlling entity	(e) Predominant income (related, unrelated, excluded from tax under sections 512-514)	(f) Share of total income	(g) Share of end-of-year assets	(h) Disproportionate allocations?		(i) Code V-UBI amount in box 20 of Schedule K-1 (Form 1065)	(j) General or managing partner?	(k) Percentage ownership
							Yes	No			

**Part IV Identification of Related Organizations Taxable as a Corporation or Trust.** Complete if the organization answered "Yes" on Form 990, Part IV, line 34 because it had one or more related organizations treated as a corporation or trust during the tax year.

(a) Name, address, and EIN of related organization	(b) Primary activity	(c) Legal domicile (state or foreign country)	(d) Direct controlling entity	(e) Type of entity (C corp, S corp, or trust)	(f) Share of total income	(g) Share of end-of-year assets	(h) Percentage ownership	(i) Section 512(b)(13) controlled entity?	
								Yes	No



**Part V Transactions With Related Organizations.** Complete if the organization answered "Yes" on Form 990, Part IV, line 34, 35b, or 36.

**Note:** Complete line 1 if any entity is listed in Parts II, III, or IV of this schedule.

**1** During the tax year, did the organization engage in any of the following transactions with one or more related organizations listed in Parts II-IV?

	Yes	No
<b>a</b> Receipt of (i) interest, (ii) annuities, (iii) royalties, or (iv) rent from a controlled entity	X	X
<b>b</b> Gift, grant, or capital contribution to related organization(s)	X	
<b>c</b> Gift, grant, or capital contribution from related organization(s)	X	
<b>d</b> Loans or loan guarantees to or for related organization(s)	X	
<b>e</b> Loans or loan guarantees by related organization(s)	X	
<b>f</b> Dividends from related organization(s)		X
<b>g</b> Sale of assets to related organization(s)		X
<b>h</b> Purchase of assets from related organization(s)		X
<b>i</b> Exchange of assets with related organization(s)		X
<b>j</b> Lease of facilities, equipment, or other assets to related organization(s)		X
<b>k</b> Lease of facilities, equipment, or other assets from related organization(s)		X
<b>l</b> Performance of services or membership or fundraising solicitations for related organization(s)	X	
<b>m</b> Performance of services or membership or fundraising solicitations by related organization(s)		X
<b>n</b> Sharing of facilities, equipment, mailing lists, or other assets with related organization(s)	X	
<b>o</b> Sharing of paid employees with related organization(s)	X	
<b>p</b> Reimbursement paid to related organization(s) for expenses		X
<b>q</b> Reimbursement paid by related organization(s) for expenses	X	
<b>r</b> Other transfer of cash or property to related organization(s)		X
<b>s</b> Other transfer of cash or property from related organization(s)		X

**2** If the answer to any of the above is "Yes," see the instructions for information on who must complete this line, including covered relationships and transaction thresholds.

	(a) Name of related organization	(b) Transaction type (a-s)	(c) Amount involved	(d) Method of determining amount involved
<b>(1)</b>	PERCIVAL LOWELL TRUST UW	D	2,323	END OF YEAR BALANCE
<b>(2)</b>	PERCIVAL LOWELL TRUST UW	E	300,000	END OF YEAR BALANCE
<b>(3)</b>	PERCIVAL LOWELL TRUST UW	C	700,000	CASH VALUE
<b>(4)</b>				
<b>(5)</b>				
<b>(6)</b>				



