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Form 990

Return of Organization Exempt From Income Tax

OMB No. 1545-0047

2019

Open to Public Inspection

Under section 501(c), 527, or 4947(a)(1) of the Internal Revenue Code (except private foundations)

Do not enter social security numbers on this form as it may be made public.

Go to www.irs.gov/Form990 for instructions and the latest information.

A For the 2019 calendar year, or tax year beginning 01-01-2019 , and ending 12-31-2019

B Check if applicable:
☐ Address change
☐ Name change
☐ Initial return
☐ Final return/terminated
☐ Amended return
☐ Application pending

C Name of organization
LOWELL OBSERVATORY

Doing business as

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
FLAGSTAFF, AZ 860014470

D Employer identification number

86-0098918

E Telephone number

(928) 774-3358

G Gross receipts \$ 29,990,303

F Name and address of principal officer:
JEFF HALL
1400 W MARS HILL ROAD
FLAGSTAFF, AZ 860014470

H(a) Is this a group return for subordinates?
☐ Yes ☒ No
H(b) Are all subordinates included?
☐ Yes ☐ No
If "No," attach a list. (see instructions)
H(c) Group exemption number ▶

I Tax-exempt status: ☒ 501(c)(3) ☐ 501(c) () ◀ (insert no.) ☐ 4947(a)(1) or ☐ 527

J Website: ▶ WWW.LOWELL.EDU

K Form of organization: ☒ Corporation ☐ Trust ☐ Association ☐ Other ▶

L Year of formation: 1946

M State of legal domicile: AZ

Part I Summary

Activities & Governance

1 Briefly describe the organization's mission or most significant activities:
LOWELL'S MISSION IS TO PURSUE THE STUDY OF ASTRONOMY

2 Check this box ☐ if the organization discontinued its operations or disposed of more than 25% of its net assets.

3 Number of voting members of the governing body (Part VI, line 1a) 3 1

4 Number of independent voting members of the governing body (Part VI, line 1b) 4 0

5 Total number of individuals employed in calendar year 2019 (Part V, line 2a) 5 183

6 Total number of volunteers (estimate if necessary) 6 94

7a Total unrelated business revenue from Part VIII, column (C), line 12 7a 0

b Net unrelated business taxable income from Form 990-T, line 39 7b 0

Revenue

8 Contributions and grants (Part VIII, line 1h) 11,300,815 22,432,053

9 Program service revenue (Part VIII, line 2g) 4,994,781 4,273,398

10 Investment income (Part VIII, column (A), lines 3, 4, and 7d) 143,345 2,074,969

11 Other revenue (Part VIII, column (A), lines 5, 6d, 8c, 9c, 10c, and 11e) 358,358 441,100

12 Total revenue—add lines 8 through 11 (must equal Part VIII, column (A), line 12) 16,797,299 29,221,520

Expenses

13 Grants and similar amounts paid (Part IX, column (A), lines 1–3) 744,082 819,057

14 Benefits paid to or for members (Part IX, column (A), line 4) 0 0

15 Salaries, other compensation, employee benefits (Part IX, column (A), lines 5–10) 7,190,579 7,869,184

16a Professional fundraising fees (Part IX, column (A), line 11e) 0 0

b Total fundraising expenses (Part IX, column (D), line 25) ▶1,199,361

17 Other expenses (Part IX, column (A), lines 11a–11d, 11f–24e) 4,894,757 5,658,676

18 Total expenses. Add lines 13–17 (must equal Part IX, column (A), line 25) 12,829,418 14,346,917

19 Revenue less expenses. Subtract line 18 from line 12 3,967,881 14,874,603

Net Assets or Fund Balances

20 Total assets (Part X, line 16) 48,062,648 65,145,325

21 Total liabilities (Part X, line 26) 16,568,732 20,739,131

22 Net assets or fund balances. Subtract line 21 from line 20 31,493,916 44,406,194

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.

Sign Here

Signature of officer
ANNE LABRUZZO DEPUTY DIRECTOR OF ADMIN.
Type or print name and title

2020-06-24
Date

Paid Preparer Use Only

Print/Type preparer's name
Firm's name ▶ BEACHFLEISCHMAN PC
Firm's address ▶ 1985 E RIVER ROAD SUITE 201
TUCSON, AZ 85718

Preparer's signature
Date 2020-06-24
Check ☐ if self-employed
PTIN P00633511
Firm's EIN ▶ 86-0683059
Phone no. (520) 321-4600

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

For Paperwork Reduction Act Notice, see the separate instructions.

Cat. No. 11282Y

Form 990 (2019)

Part III Statement of Program Service AccomplishmentsCheck if Schedule O contains a response or note to any line in this Part III ☒**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 ☒ 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 ☒ 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 \$	9,193,463	including grants of \$	819,057) (Revenue \$	3,208,190)
	See Additional Data				

4b	(Code:) (Expenses \$	2,366,707	including grants of \$	) (Revenue \$	1,506,308)
	See Additional Data				

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

(Expenses \$	including grants of \$	) (Revenue \$	)
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4e	Total program service expenses ▶	11,560,170
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Part IV Checklist of Required Schedules

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

Part IV Checklist of Required Schedules (continued)

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

Part V Statements Regarding Other IRS Filings and Tax ComplianceCheck if Schedule O contains a response or note to any line in this Part V ☐

		Yes	No
1a	Enter the number reported in Box 3 of Form 1096. Enter -0- if not applicable	1a	51
b	Enter the number of Forms W-2G included in line 1a. Enter -0- if not applicable	1b	0
c	Did the organization comply with backup withholding rules for reportable payments to vendors and reportable gaming (gambling) winnings to prize winners?	1c	Yes

Part V **Statements Regarding Other IRS Filings and Tax Compliance** (continued)

2a Enter the number of employees reported on Form W-3, Transmittal of Wage and Tax Statements, filed for the calendar year ending with or within the year covered by this return	2a 183			
b If at least one is reported on line 2a, did the organization file all required federal employment tax returns? Note. If the sum of lines 1a and 2a is greater than 250, you may be required to e-file (see instructions)	2b	Yes		
3a Did the organization have unrelated business gross income of \$1,000 or more during the year?	3a		No	
b If "Yes," has it filed a Form 990-T for this year? If "No" to line 3b, provide an explanation in Schedule O	3b			
4a At any time during the calendar year, did the organization have an interest in, or a signature or other authority over, a financial account in a foreign country (such as a bank account, securities account, or other financial account)?	4a		No	
b If "Yes," enter the name of the foreign country: ▶ _____ See instructions for filing requirements for FinCEN Form 114, Report of Foreign Bank and Financial Accounts (FBAR).				
5a Was the organization a party to a prohibited tax shelter transaction at any time during the tax year?	5a		No	
b Did any taxable party notify the organization that it was or is a party to a prohibited tax shelter transaction?	5b		No	
c If "Yes," to line 5a or 5b, did the organization file Form 8886-T?	5c			
6a Does the organization have annual gross receipts that are normally greater than \$100,000, and did the organization solicit any contributions that were not tax deductible as charitable contributions?	6a		No	
b If "Yes," did the organization include with every solicitation an express statement that such contributions or gifts were not tax deductible?	6b			
7 Organizations that may receive deductible contributions under section 170(c).				
a Did the organization receive a payment in excess of \$75 made partly as a contribution and partly for goods and services provided to the payor?	7a	Yes		
b If "Yes," did the organization notify the donor of the value of the goods or services provided?	7b	Yes		
c Did the organization sell, exchange, or otherwise dispose of tangible personal property for which it was required to file Form 8282?	7c		No	
d If "Yes," indicate the number of Forms 8282 filed during the year	7d			
e Did the organization receive any funds, directly or indirectly, to pay premiums on a personal benefit contract?	7e		No	
f Did the organization, during the year, pay premiums, directly or indirectly, on a personal benefit contract?	7f		No	
g If the organization received a contribution of qualified intellectual property, did the organization file Form 8899 as required?	7g			
h If the organization received a contribution of cars, boats, airplanes, or other vehicles, did the organization file a Form 1098-C?	7h			
8 Sponsoring organizations maintaining donor advised funds. Did a donor advised fund maintained by the sponsoring organization have excess business holdings at any time during the year?	8			
9 Sponsoring organizations maintaining donor advised funds.				
a Did the sponsoring organization make any taxable distributions under section 4966?	9a			
b Did the sponsoring organization make a distribution to a donor, donor advisor, or related person?	9b			
10 Section 501(c)(7) organizations. Enter:				
a Initiation fees and capital contributions included on Part VIII, line 12	10a			
b Gross receipts, included on Form 990, Part VIII, line 12, for public use of club facilities	10b			
11 Section 501(c)(12) organizations. Enter:				
a Gross income from members or shareholders	11a			
b Gross income from other sources (Do not net amounts due or paid to other sources against amounts due or received from them.)	11b			
12a Section 4947(a)(1) non-exempt charitable trusts. Is the organization filing Form 990 in lieu of Form 1041?	12a			
b If "Yes," enter the amount of tax-exempt interest received or accrued during the year.	12b			
13 Section 501(c)(29) qualified nonprofit health insurance issuers.				
a Is the organization licensed to issue qualified health plans in more than one state? Note. See the instructions for additional information the organization must report on Schedule O.	13a			
b Enter the amount of reserves the organization is required to maintain by the states in which the organization is licensed to issue qualified health plans	13b			
c Enter the amount of reserves on hand	13c			
14a Did the organization receive any payments for indoor tanning services during the tax year?	14a		No	
b If "Yes," has it filed a Form 720 to report these payments? If "No," provide an explanation in Schedule O	14b			
15 Is the organization subject to the section 4960 tax on payment(s) of more than \$1,000,000 in remuneration or excess parachute payment(s) during the year? If "Yes," see instructions and file Form 4720, Schedule N.	15		No	
16 Is the organization an educational institution subject to the section 4968 excise tax on net investment income? If "Yes," complete Form 4720, Schedule O.	16		No	

Part VI

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

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

Section A. Governing Body and Management

		Yes	No
1a Enter the number of voting members of the governing body at the end of the tax year	1a 1		
If there are material differences in voting rights among members of the governing body, or if the governing body delegated broad authority to an executive committee or similar committee, explain in Schedule O.			
b Enter the number of voting members included in line 1a, above, who are independent	1b 0		
2 Did any officer, director, trustee, or key employee have a family relationship or a business relationship with any other officer, director, trustee, or key employee?	2		No
3 Did the organization delegate control over management duties customarily performed by or under the direct supervision of officers, directors or trustees, or key employees to a management company or other person?	3		No
4 Did the organization make any significant changes to its governing documents since the prior Form 990 was filed?	4		No
5 Did the organization become aware during the year of a significant diversion of the organization's assets?	5		No
6 Did the organization have members or stockholders?	6		No
7a Did the organization have members, stockholders, or other persons who had the power to elect or appoint one or more members of the governing body?	7a		No
b Are any governance decisions of the organization reserved to (or subject to approval by) members, stockholders, or persons other than the governing body?	7b		No
8 Did the organization contemporaneously document the meetings held or written actions undertaken during the year by the following:			
a The governing body?	8a	Yes	
b Each committee with authority to act on behalf of the governing body?	8b	Yes	
9 Is there any officer, director, trustee, or key employee listed in Part VII, Section A, who cannot be reached at the organization's mailing address? If "Yes," provide the names and addresses in Schedule O	9		No

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

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

Section C. Disclosure

17 List the states with which a copy of this Form 990 is required to be filed▶

18 Section 6104 requires an organization to make its Form 1023 (or 1024-A if applicable), 990, and 990-T (501(c)(3)s only) available for public inspection. Indicate how you made these available. Check all that apply.

☒ Own website ☐ Another's website ☒ 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 1400 W MARS HILL ROAD FLAGSTAFF, AZ 860014470 (928) 233-3239

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 ☐

a Complete this table for all persons required to be listed. Report compensation for the calendar year ending with or within the organization's tax year.

- List all of the organization's **current** officers, directors, trustees (whether individuals or organizations), regardless of amount of compensation. Enter -0- in columns (D), (E), and (F) if no compensation was paid.
- List all of the organization's **current** key employees, if any. See instructions for definition of "key employee."
- List the organization's five **current** highest compensated employees (other than an officer, director, trustee or key employee) who received reportable compensation (Box 5 of Form W-2 and/or Box 7 of Form 1099-MISC) of more than \$100,000 from the organization and any related organizations.
- List all of the organization's **former** officers, key employees, or highest compensated employees who received more than \$100,000 of reportable compensation from the organization and any related organizations.
- List all of the organization's **former directors or trustees** that received, in the capacity as a former director or trustee of the organization, more than \$10,000 of reportable compensation from the organization and any related organizations.

See instructions for the order in which to list the persons above.

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

[illegible]

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 dotted 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			
1b Sub-Total										
c Total from continuation sheets to Part VII, Section A										
d Total (add lines 1b and 1c)								1,077,462	0	119,298

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 ► 18

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

Section B. Independent Contractors

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

(A) Name and business address	(B) Description of services	(C) Compensation
BUILDING & ENGINEERING CONTRACTORS SOUTH PO BOX 30458 FLAGSTAFF, AZ 86003	CONSTRUCTION	3,260,523
JOHNSON WALZER ASSOCIATES LLC 17 N SAN FRANCISCO STREET STE 3A FLAGSTAFF, AZ 86001	CONSTRUCTION	243,925
TWILIGHT JANITORIAL SERVICE INC 506 N GRANT STREET STE D FLAGSTAFF, AZ 86004	JANITORIAL SERVICES	120,059

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 ► 3

Form 990 (2019)		Page 9				
Part VIII		Statement of Revenue				
Check if Schedule O contains a response or note to any line in this Part VIII ☐						
		(A)	(B)	(C)	(D)	
		Total revenue	Related or exempt function revenue	Unrelated business revenue	Revenue excluded from tax under sections 512 - 514	
Contributions, Gifts, Grants and Other Similar Amounts	1a Federated campaigns . .	1a				
	b Membership dues . .	1b	339,265			
	c Fundraising events . .	1c				
	d Related organizations	1d	1,010,255			
	e Government grants (contributions)	1e	2,567,102			
	f All other contributions, gifts, grants, and similar amounts not included above	1f	18,515,431			
	g Noncash contributions included in lines 1a - 1f:\$	1g	2,430,629			
	h Total. Add lines 1a-1f ▶	22,432,053				
Program Service Revenue	Business Code					
	2a TELESCOPE ACCESS FEES	541700	2,376,660	2,376,660		
	b EDUCATIONAL PROGRAMS	611600	1,187,696	1,187,696		
	c RESEARCH - GOVERNMENT CONTRACTS	541700	709,042	709,042		
	d					
	e					
	f All other program service revenue.					
	g Total. Add lines 2a-2f. ▶	4,273,398				
Other Revenue	3 Investment income (including dividends, interest, and other similar amounts) ▶		9,825		9,825	
	4 Income from investment of tax-exempt bond proceeds ▶					
	5 Royalties ▶					
	6a Gross rents	(i) Real	(ii) Personal			
		6a				
		b Less: rental expenses	6b			
		c Rental income or (loss)	6c			
	d Net rental income or (loss) ▶					
	7a Gross amount from sales of assets other than inventory	(i) Securities	(ii) Other			
		7a	2,449,779	56,500		
		b Less: cost or other basis and sales expenses	7b	441,135	0	
		c Gain or (loss)	7c	2,008,644	56,500	
	d Net gain or (loss) ▶		2,065,144		2,065,144	
	8a Gross income from fundraising events (not including \$ of contributions reported on line 1c). See Part IV, line 18	8a				
		b Less: direct expenses	8b			
	c Net income or (loss) from fundraising events . . ▶					
	9a Gross income from gaming activities. See Part IV, line 19	9a				
		b Less: direct expenses	9b			
	c Net income or (loss) from gaming activities . . ▶					
	10aGross sales of inventory, less returns and allowances . .	10a	646,260			
b Less: cost of goods sold . .		10b	327,648			
c Net income or (loss) from sales of inventory . . ▶		318,612	318,612			
Miscellaneous Revenue		Business Code				
11aMISCELLANEOUS INCOME		900099	122,488	122,488		
b						
c						
d All other revenue						
e Total. Add lines 11a-11d ▶		122,488				
12 Total revenue. See instructions ▶		29,221,520	4,714,498	0	2,074,969	

Form 990 (2019)

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	819,057	819,057		
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	369,265	62,628	268,561	38,076
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	6,190,369	4,908,282	658,058	624,029
8 Pension plan accruals and contributions (include section 401 (k) and 403(b) employer contributions)	272,423	214,941	31,505	25,977
9 Other employee benefits	573,718	450,898	67,186	55,634
10 Payroll taxes	463,409	349,740	69,424	44,245
11 Fees for services (non-employees):				
a Management				
b Legal	20,581	5,340	15,241	
c Accounting	48,760		48,760	
d Lobbying				
e Professional fundraising services. See Part IV, line 17				
f Investment management fees	970		970	
g Other (If line 11g amount exceeds 10% of line 25, column (A) amount, list line 11g expenses on Schedule O.)	174,847	72,383	67,640	34,824
12 Advertising and promotion	220,397	155,027		65,370
13 Office expenses	493,084	372,486	55,226	65,372
14 Information technology	158,418	52,706	50,903	54,809
15 Royalties				
16 Occupancy	605,850	575,353	19,102	11,395
17 Travel	342,001	239,974	51,625	50,402
18 Payments of travel or entertainment expenses for any federal, state, or local public officials				
19 Conferences, conventions, and meetings	115,150	24,731	35,606	54,813
20 Interest	68,089	68,089		
21 Payments to affiliates				
22 Depreciation, depletion, and amortization	1,953,727	1,898,164	35,411	20,152
23 Insurance	327,971	323,518	3,278	1,175
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 INTERCOMPANY REIMBURSEMENT	633,676	633,676		
b REPAIRS AND MAINTENANCE	157,223	149,691	6,130	1,402
c TRAINING AND DEVELOPMEN	115,606	49,471	63,333	2,802
d DUES AND SUBSCRIPTIONS	82,253	57,862	23,225	1,166
e All other expenses	140,073	76,153	16,202	47,718
25 Total functional expenses. Add lines 1 through 24e	14,346,917	11,560,170	1,587,386	1,199,361
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 SheetCheck if Schedule O contains a response or note to any line in this Part IX ☐

				(A) Beginning of year		(B) End of year	
Assets	1	Cash—non-interest-bearing		210,694	1	133,267	
	2	Savings and temporary cash investments		234,343	2	1,929,990	
	3	Pledges and grants receivable, net		2,060,984	3	13,030,741	
	4	Accounts receivable, net		6,986	4	8,383	
	5	Loans and other payables to any current or former officer, director, trustee, key employee, creator or founder, substantial contributor, or 35% controlled entity or family member of any of these persons			5		
	6	Loans and other receivables from other disqualified persons (as defined under section 4958(f)(1)), and persons described in section 4958(c)(3)(B)			6		
	7	Notes and loans receivable, net			7		
	8	Inventories for sale or use		83,530	8	92,423	
	9	Prepaid expenses and deferred charges		153,267	9	103,221	
	10a	Land, buildings, and equipment: cost or other basis. Complete Part VI of Schedule D	10a	72,622,760			
	b	Less: accumulated depreciation	10b	24,266,154	44,877,993	10c	48,356,606
	11	Investments—publicly traded securities		8,865	11	1,005,946	
	12	Investments—other securities. See Part IV, line 11			12		
	13	Investments—program-related. See Part IV, line 11			13		
	14	Intangible assets			14	60,736	
	15	Other assets. See Part IV, line 11		425,986	15	424,012	
16	Total assets. Add lines 1 through 15 (must equal line 34)		48,062,648	16	65,145,325		
Liabilities	17	Accounts payable and accrued expenses		488,667	17	428,132	
	18	Grants payable			18		
	19	Deferred revenue		7,847,278	19	7,514,979	
	20	Tax-exempt bond liabilities			20		
	21	Escrow or custodial account liability. Complete Part IV of Schedule D			21		
	22	Loans and other payables to any current or former officer, director, trustee, key employee, creator or founder, substantial contributor, or 35% controlled entity or family member of any of these persons			22		
	23	Secured mortgages and notes payable to unrelated third parties		7,482,787	23	2,595,000	
	24	Unsecured notes and loans payable to unrelated third parties			24		
	25	Other liabilities (including federal income tax, payables to related third parties, and other liabilities not included on lines 17 - 24). Complete Part X of Schedule D		750,000	25	10,201,020	
	26	Total liabilities. Add lines 17 through 25		16,568,732	26	20,739,131	
Net Assets or Fund Balances	Organizations that follow FASB ASC 958, check here ☒ and complete lines 27, 28, 32, and 33.						
	27	Net assets without donor restrictions		27,968,589	27	28,859,141	
	28	Net assets with donor restrictions		3,525,327	28	15,547,053	
	Organizations that do not follow FASB ASC 958, check here ☐ and complete lines 29 through 33.						
	29	Capital stock or trust principal, or current funds			29		
	30	Paid-in or capital surplus, or land, building or equipment fund			30		
	31	Retained earnings, endowment, accumulated income, or other funds			31		
	32	Total net assets or fund balances		31,493,916	32	44,406,194	
33	Total liabilities and net assets/fund balances		48,062,648	33	65,145,325		

Part XI Reconciliation of Net AssetsCheck 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	29,221,520
2	Total expenses (must equal Part IX, column (A), line 25)	2	14,346,917
3	Revenue less expenses. Subtract line 2 from line 1	3	14,874,603
4	Net assets or fund balances at beginning of year (must equal Part X, line 33, column (A))	4	31,493,916
5	Net unrealized gains (losses) on investments	5	-1,962,325
6	Donated services and use of facilities	6	
7	Investment expenses	7	
8	Prior period adjustments	8	
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	44,406,194

Part XII Financial Statements and ReportingCheck 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: ☐ Cash ☒ Accrual ☐ 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: ☐ Separate basis ☐ Consolidated basis ☐ Both consolidated and separate basis		No
b 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: ☐ Separate basis ☒ Consolidated basis ☐ Both consolidated and separate basis	Yes	
c 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.	Yes	
3a As a result of a federal award, was the organization required to undergo an audit or audits as set forth in the Single Audit Act and OMB Circular A-133?	Yes	
b If "Yes," did the organization undergo the required audit or audits? If the organization did not undergo the required audit or audits, explain why in Schedule O and describe any steps taken to undergo such audits.	Yes	

Additional Data

Software ID:
Software Version:
EIN: 86-0098918
Name: LOWELL OBSERVATORY

Form 990 (2019)

Form 990, Part III, Line 4a:

CONTINUING A 125-YEAR-LONG LEGACY OF ASTRONOMICAL DISCOVERY, LOWELL OBSERVATORY ASTRONOMERS CONDUCTED FOREFRONT RESEARCH IN ALL AREAS OF ASTRONOMY, INCLUDING STUDIES OF THE SUN, SOLAR SYSTEM, STARS, EXOPLANETS, GALAXIES, AND COSMOLOGY. IN 2019, LOWELL ASTRONOMERS PUBLISHED MORE THAN 72 PAPERS IN LEADING SCIENTIFIC JOURNALS, PARTICIPATED REGULARLY IN MAJOR SCIENTIFIC MISSIONS, USED MAJOR TELESCOPES AROUND THE WORLD AND IN SPACE, AND WERE ACTIVE IN PUBLIC OUTREACH. LOWELL ASTRONOMERS CONTINUE TO BE VERY SUCCESSFUL AT OBTAINING GRANTS IN SUPPORT OF THEIR RESEARCH FROM NASA, THE NATIONAL SCIENCE FOUNDATION, AND OTHER AGENCIES. THE 4.3-METER LOWELL DISCOVERY TELESCOPE (LDT) DELIVERED 300 SCIENCE NIGHTS IN 2019 TO ASTRONOMERS FROM OUR OWN STAFF AND FROM OUR PARTNER INSTITUTIONS (CURRENT PARTNERS ARE BOSTON UNIVERSITY, NORTHERN ARIZONA UNIVERSITY, UNIVERSITY OF MARYLAND, UNIVERSITY OF TOLEDO, AND YALE UNIVERSITY). LDT'S GROWING SUITE OF STATE-OF-THE-ART INSTRUMENTS, SUCH AS THE WORLD-LEADING INFRARED SPECTROGRAPH IGRINS AND THE NEW HIGH-PRECISION SPECTROGRAPH EXPRES, ENABLED CUTTING-EDGE RESEARCH ACROSS MULTIPLE FIELDS, INCLUDING THE SEARCH FOR EXOPLANETS. IN PARTNERSHIP WITH THE US NAVAL OBSERVATORY AND THE NAVAL RESEARCH LABORATORY, LOWELL HAS BEGUN A MULTI-MILLION DOLLAR UPGRADE OF THE NAVAL PRECISION OPTICAL INTERFEROMETER (NPOI) THAT WILL ADD THREE ONE-METER TELESCOPES TO THE EXISTING ARRAY, GREATLY INCREASING THE NUMBER OF OBJECTS OBSERVABLE FROM THAT SITE. LOWELL OBSERVATORY ALSO CONTINUED TO OPERATE OTHER SMALLER TELESCOPES AT ITS ANDERSON MESA SITE, INCLUDING THE HIGHLY SCIENTIFICALLY PRODUCTIVE 42 AND 31" TELESCOPES. ACCESS TO LOCAL TELESCOPES EQUIPPED WITH WORLD-CLASS INSTRUMENTS HAS ENABLED SCIENCE THAT COULD NOT BE DONE ELSEWHERE. IN ADDITION, THE OBSERVATORY IS UNDERTAKING A DRAMATIC EXPANSION OF ITS MAIN CAMPUS ON MARS HILL, INCLUDING NEW EDUCATION AND OUTREACH FACILITIES, ALONG WITH A NEW TECHNICAL SERVICES BUILDING THAT WILL GREATLY INCREASE THE SCIENTIFIC CAPABILITIES OF ITS SUITE OF TELESCOPES.

Form 990, Part III, Line 4b:

THE YEAR 2019 MARKED THE 125TH ANNIVERSARY OF LOWELL OBSERVATORY, WHOSE PUBLIC EDUCATION PROGRAMS WELCOMED MORE THAN 100,000 GUESTS FROM AROUND THE WORLD. GUESTS ENJOYED HISTORICAL TOURS OF THE CAMPUS AND SOLAR VIEWING DURING THE DAY AND WERE AWED BY ASTRONOMY-THEMED PRESENTATIONS AND TELESCOPE VIEWING DURING THE EVENING. THE GIOVALE OPEN DECK OBSERVATORY, A NEW STATE-OF-THE-ART PUBLIC OBSERVING PLAZA EQUIPPED WITH SIX ADVANCED TELESCOPES, OPENED TO THE PUBLIC ON SATURDAY, OCTOBER 6, 2019. SOME 1,800 VISITORS PARTICIPATED IN THE FESTIVITIES THAT DAY, SETTING THE RECORD FOR ONE-DAY ATTENDANCE. THE OBSERVATORY ALSO HOSTED SEVERAL HIGH-PROFILE EVENTS RELATED TO THE 50TH ANNIVERSARY OF THE APOLLO MOON LANDING AS PART OF FLAGSTAFF'S LUNAR LEGACY CAMPAIGN, WHICH GARNERED MULTIPLE AWARDS. LOWELL OBSERVATORY CAMPS FOR KIDS (LOCKS) PROGRAMS WERE OFFERED TO CHILDREN THROUGHOUT THE YEAR AT BOTH ON- AND OFF-SITE LOCATIONS. THESE PROGRAMS, FEATURING HANDS-ON ASTRONOMY AND PHYSICS EXERCISES AND EXPLORATIONS, ARE DESIGNED TO ILLUMINATE THE INTERCONNECTIONS BETWEEN STEM SUBJECT AREAS AND FOSTER THE ABILITY TO THINK CRITICALLY. ON-SITE, ATTENDANCE REACHED RECORD LEVELS FOR BOTH ELEMENTARY AND MIDDLE SCHOOL CAMPS. OFF-SITE, A RECORD NUMBER OF CHILDREN PARTICIPATED IN LOCKS PROGRAMS AT THE FLAGSTAFF FAMILY FOOD CENTER, AND ADDITIONAL CLASSROOMS IN CAVE CREEK, ARIZONA, ADOPTED THE LOCKS - PRESCHOOL CURRICULUM. LOWELL ASTRONOMERS AND EDUCATORS VISITED SEVERAL NATIVE AMERICAN CLASSES THROUGHOUT THE SCHOOL YEAR TO LEAD ASTRONOMY LESSONS AND HOST STAR PARTIES AS PART OF THE OBSERVATORY'S LONG-RUNNING NATIVE AMERICAN ASTRONOMY OUTREACH PROGRAM.

SCHEDULE A
(Form 990 or 990-EZ)

Department of the Treasury
Internal Revenue Service

Public Charity Status and Public Support

Complete if the organization is a section 501(c)(3) organization or a section 4947(a)(1) nonexempt charitable trust.
▶ Attach to Form 990 or Form 990-EZ.
▶ Go to www.irs.gov/Form990 for instructions and the latest information.

OMB No. 1545-0047

2019

Open to Public Inspection

Name of the organization
LOWELL OBSERVATORY

Employer identification number
86-0098918

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

The organization is not a private foundation because it is: (For lines 1 through 12, check only one box.)

- 1☐ A church, convention of churches, or association of churches described in **section 170(b)(1)(A)(i).**
- 2☐ A school described in **section 170(b)(1)(A)(ii).** (Attach Schedule E (Form 990 or 990-EZ).)
- 3☐ A hospital or a cooperative hospital service organization described in **section 170(b)(1)(A)(iii).**
- 4☐ A medical research organization operated in conjunction with a hospital described in **section 170(b)(1)(A)(iii).** Enter the hospital's name, city, and state:
- 5☐ An organization operated for the benefit of a college or university owned or operated by a governmental unit described in **section 170(b)(1)(A)(iv).** (Complete Part II.)
- 6☐ A federal, state, or local government or governmental unit described in **section 170(b)(1)(A)(v).**
- 7☒ An organization that normally receives a substantial part of its support from a governmental unit or from the general public described in **section 170(b)(1)(A)(vi).** (Complete Part II.)
- 8☐ A community trust described in **section 170(b)(1)(A)(vi).** (Complete Part II.)
- 9☐ An agricultural research organization described in **170(b)(1)(A)(ix)** operated in conjunction with a land-grant college or university or a non-land grant college of agriculture. See instructions. Enter the name, city, and state of the college or university:
- 10☐ An organization that normally receives: (1) more than 33 1/3% of its support from contributions, membership fees, and gross receipts from activities related to its exempt functions—subject to certain exceptions, and (2) no more than 33 1/3% of its support from gross investment income and unrelated business taxable income (less section 511 tax) from businesses acquired by the organization after June 30, 1975. See **section 509(a)(2).** (Complete Part III.)
- 11☐ An organization organized and operated exclusively to test for public safety. See **section 509(a)(4).**
- 12☐ An organization organized and operated exclusively for the benefit of, to perform the functions of, or to carry out the purposes of one or more publicly supported organizations described in **section 509(a)(1)** or **section 509(a)(2).** See **section 509(a)(3).** Check the box in lines 12a through 12d that describes the type of supporting organization and complete lines 12e, 12f, and 12g.
- a☐ **Type I.** A supporting organization operated, supervised, or controlled by its supported organization(s), typically by giving the supported organization(s) the power to regularly appoint or elect a majority of the directors or trustees of the supporting organization. **You must complete Part IV, Sections A and B.**
- b☐ **Type II.** A supporting organization supervised or controlled in connection with its supported organization(s), by having control or management of the supporting organization vested in the same persons that control or manage the supported organization(s). **You must complete Part IV, Sections A and C.**
- c☐ **Type III functionally integrated.** A supporting organization operated in connection with, and functionally integrated with, its supported organization(s) (see instructions). **You must complete Part IV, Sections A, D, and E.**
- d☐ **Type III non-functionally integrated.** A supporting organization operated in connection with its supported organization(s) that is not functionally integrated. The organization generally must satisfy a distribution requirement and an attentiveness requirement (see instructions). **You must complete Part IV, Sections A and D, and Part V.**
- e☐ Check this box if the organization received a written determination from the IRS that it is a Type I, Type II, Type III functionally integrated, or Type III non-functionally integrated supporting organization.
- f Enter the number of supported organizations
- g Provide the following information about the supported organization(s).

(i) Name of supported organization	(ii) EIN	(iii) Type of organization (described on lines 1- 10 above (see instructions))	(iv) Is the organization listed in your governing document?		(v) Amount of monetary support (see instructions)	(vi) Amount of other support (see instructions)
			Yes	No		
Total						

Part II Support Schedule for Organizations Described in Sections 170(b)(1)(A)(iv) and 170(b)(1)(A)(vi)

(Complete only if you checked the box on line 5, 7, or 8 of Part I or if the organization failed to qualify under Part III. If the organization failed to qualify under the tests listed below, please complete Part III.)

Section A. Public Support

Calendar year (or fiscal year beginning in) ►		(a) 2015	(b) 2016	(c) 2017	(d) 2018	(e) 2019	(f) Total
1	Gifts, grants, contributions, and membership fees received. (Do not include any "unusual grant.") . . .	3,697,510	7,675,056	17,637,617	11,300,816	22,432,053	62,743,052
2	Tax revenues levied for the organization's benefit and either paid to or expended on its behalf						
3	The value of services or facilities furnished by a governmental unit to the organization without charge..	118,000	119,000	120,000	121,000	122,000	600,000
4	Total. Add lines 1 through 3	3,815,510	7,794,056	17,757,617	11,421,816	22,554,053	63,343,052
5	The portion of total contributions by each person (other than a governmental unit or publicly supported organization) included on line 1 that exceeds 2% of the amount shown on line 11, column (f)						15,992,027
6	Public support. Subtract line 5 from line 4.						47,351,025

Section B. Total Support

Calendar year (or fiscal year beginning in) ►		(a) 2015	(b) 2016	(c) 2017	(d) 2018	(e) 2019	(f) Total
7	Amounts from line 4.	3,815,510	7,794,056	17,757,617	11,421,816	22,554,053	63,343,052
8	Gross income from interest, dividends, payments received on securities loans, rents, royalties and income from similar sources.	110,959	37,614	3,661	2,268	9,825	164,327
9	Net income from unrelated business activities, whether or not the business is regularly carried on.	39,509	41,370				80,879
10	Other income. Do not include gain or loss from the sale of capital assets (Explain in Part VI.).						
11	Total support. Add lines 7 through 10						63,588,258
12	Gross receipts from related activities, etc. (see instructions)					12	22,903,517

13 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

14	Public support percentage for 2019 (line 6, column (f) divided by line 11, column (f))	14	74.470 %
15	Public support percentage for 2018 Schedule A, Part II, line 14	15	91.940 %

16a 33 1/3% support test—2019. If the organization did not check the box on line 13, and line 14 is 33 1/3% or more, check this box and **stop here.** The organization qualifies as a publicly supported organization ► ☒

b 33 1/3% support test—2018. If the organization did not check a box on line 13 or 16a, and line 15 is 33 1/3% or more, check this box and **stop here.** The organization qualifies as a publicly supported organization ► ☐

17a 10%-facts-and-circumstances test—2019. If the organization did not check a box on line 13, 16a, or 16b, and line 14 is 10% or more, and if the organization meets the "facts-and-circumstances" test, check this box and **stop here.** Explain in Part VI how the organization meets the "facts-and-circumstances" test. The organization qualifies as a publicly supported organization ► ☐

b 10%-facts-and-circumstances test—2018. If the organization did not check a box on line 13, 16a, 16b, or 17a, and line 15 is 10% or more, and if the organization meets the "facts-and-circumstances" test, check this box and **stop here.** Explain in Part VI how the organization meets the "facts-and-circumstances" test. The organization qualifies as a publicly supported organization ► ☐

18 Private foundation. If the organization did not check a box on line 13, 16a, 16b, 17a, or 17b, check this box and see instructions ► ☐

Part 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) 2015	(b) 2016	(c) 2017	(d) 2018	(e) 2019	(f) Total
1 Gifts, grants, contributions, and membership fees received. (Do not include any "unusual grants.") .						
2 Gross receipts from admissions, merchandise sold or services performed, or facilities furnished in any activity that is related to the organization's tax-exempt purpose						
3 Gross receipts from activities that are not an unrelated trade or business under section 513						
4 Tax revenues levied for the organization's benefit and either paid to or expended on its behalf. . .						
5 The value of services or facilities furnished by a governmental unit to the organization without charge						
6 Total. Add lines 1 through 5						
7a Amounts included on lines 1, 2, and 3 received from disqualified persons						
b Amounts included on lines 2 and 3 received from other than disqualified persons that exceed the greater of \$5,000 or 1% of the amount on line 13 for the year.						
c Add lines 7a and 7b. .						
8 Public support. (Subtract line 7c from line 6.)						

Section B. Total Support

Calendar year (or fiscal year beginning in) ►	(a) 2015	(b) 2016	(c) 2017	(d) 2018	(e) 2019	(f) Total
9 Amounts from line 6. . .						
10a Gross income from interest, dividends, payments received on securities loans, rents, royalties and income from similar sources. .						
b Unrelated business taxable income (less section 511 taxes) from businesses acquired after June 30, 1975.						
c Add lines 10a and 10b.						
11 Net income from unrelated business activities not included in line 10b, whether or not the business is regularly carried on.						
12 Other income. Do not include gain or loss from the sale of capital assets (Explain in Part VI.) . .						
13 Total support. (Add lines 9, 10c, 11, and 12.) . .						
14 First five years. If the Form 990 is for the organization's first, second, third, fourth, or fifth tax year as a section 501(c)(3) organization, check this box and stop here. ☐						

Section C. Computation of Public Support Percentage

15 Public support percentage for 2019 (line 8, column (f) divided by line 13, column (f))	15	
16 Public support percentage from 2018 Schedule A, Part III, line 15	16	

Section D. Computation of Investment Income Percentage

17 Investment income percentage for 2019 (line 10c, column (f) divided by line 13, column (f))	17	
18 Investment income percentage from 2018 Schedule A, Part III, line 17	18	
19a 33 1/3% support tests—2019. 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—2018. 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 on line 12 of 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
1 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>		
1		
2 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>		
2		
3a 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>		
3a		
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>		
3b		
c 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>		
3c		
4a 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>		
4a		
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>		
4b		
c 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>		
4c		
5a 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>		
5a		
b Type I or Type II only. Was any added or substituted supported organization part of a class already designated in the organization's organizing document?		
5b		
c Substitutions only. Was the substitution the result of an event beyond the organization's control?		
5c		
6 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>		
6		
7 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>		
7		
8 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>		
8		
9a 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>		
9a		
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>		
9b		
c 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>		
9c		
10a 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 line 10b below.</i>		
10a		
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>		
10b		

Part IV

Supporting Organizations (continued)

	Yes	No
11 Has the organization accepted a gift or contribution from any of the following persons?		
a 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 A family member of a person described in (a) above?		
c A 35% controlled entity of a person described in (a) or (b) above? <i>If "Yes" to a, b, or c, provide detail in Part VI.</i>		

Section B. Type I Supporting Organizations

	Yes	No
1 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? <i>If "No," describe in Part VI 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.</i>		
2 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? <i>If "Yes," explain in Part VI how providing such benefit carried out the purposes of the supported organization(s) that operated, supervised or controlled the supporting organization.</i>		

Section C. Type II Supporting Organizations

	Yes	No
1 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)? <i>If "No," describe in Part VI how control or management of the supporting organization was vested in the same persons that controlled or managed the supported organization(s).</i>		

Section D. All Type III Supporting Organizations

	Yes	No
1 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?		
2 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? <i>If "No," explain in Part VI how the organization maintained a close and continuous working relationship with the supported organization(s).</i>		
3 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? <i>If "Yes," describe in Part VI the role the organization's supported organizations played in this regard.</i>		

Section E. Type III Functionally-Integrated Supporting Organizations

1 Check the box next to the method that the organization used to satisfy the Integral Part Test during the year (see instructions):		
a ☐ The organization satisfied the Activities Test. Complete line 2 below.		
b ☐ The organization is the parent of each of its supported organizations. Complete line 3 below.		
c ☐ The organization supported a governmental entity. Describe in Part VI how you supported a government entity (see instructions)		
2 Activities Test. Answer (a) and (b) below.		
a 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? <i>If "Yes," then in Part VI 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.</i>		
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? <i>If "Yes," explain in Part VI the reasons for the organization's position that its supported organization(s) would have engaged in these activities but for the organization's involvement.</i>		
3 Parent of Supported Organizations. Answer (a) and (b) below.		
a 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? <i>Provide details in Part VI.</i>		
b Did the organization exercise a substantial degree of direction over the policies, programs and activities of each of its supported organizations? <i>If "Yes," describe in Part VI the role played by the organization in this regard.</i>		

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.	
Section A - Adjusted Net Income		(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	Adjusted Net Income (subtract lines 5, 6 and 7 from line 4)	8	
Section B - Minimum Asset Amount		(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):	1	
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	Total (add lines 1a, 1b, and 1c)	1d	
e	Discount claimed for blockage or other factors (explain in detail in Part VI):		
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	Minimum Asset Amount (add line 7 to line 6)	8	
Section C - Distributable Amount			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	Distributable Amount. Subtract line 5 from line 4, unless subject to emergency temporary reduction (see instructions)	6	
7	☐ 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
1 Amounts paid to supported organizations to accomplish exempt purposes	
2 Amounts paid to perform activity that directly furthers exempt purposes of supported organizations, in excess of income from activity	
3 Administrative expenses paid to accomplish exempt purposes of supported organizations	
4 Amounts paid to acquire exempt-use assets	
5 Qualified set-aside amounts (prior IRS approval required)	
6 Other distributions (describe in Part VI). See instructions	
7 Total annual distributions. Add lines 1 through 6.	
8 Distributions to attentive supported organizations to which the organization is responsive (provide details in Part VI). See instructions	
9 Distributable amount for 2019 from Section C, line 6	
10 Line 8 amount divided by Line 9 amount	

Section E - Distribution Allocations (see instructions)	(i) Excess Distributions	(ii) Underdistributions Pre-2019	(iii) Distributable Amount for 2019
1 Distributable amount for 2019 from Section C, line 6			
2 Underdistributions, if any, for years prior to 2019 (reasonable cause required-- explain in Part VI). See instructions.			
3 Excess distributions carryover, if any, to 2019:			
a From 2014.			
b From 2015.			
c From 2016.			
d From 2017.			
e From 2018.			
f Total of lines 3a through e			
g Applied to underdistributions of prior years			
h Applied to 2019 distributable amount			
i Carryover from 2014 not applied (see instructions)			
j Remainder. Subtract lines 3g, 3h, and 3i from 3f.			
4 Distributions for 2019 from Section D, line 7:			
\$			
a Applied to underdistributions of prior years			
b Applied to 2019 distributable amount			
c Remainder. Subtract lines 4a and 4b from 4.			
5 Remaining underdistributions for years prior to 2019, if any. Subtract lines 3g and 4a from line 2. If the amount is greater than zero, explain in Part VI. See instructions.			
6 Remaining underdistributions for 2019. Subtract lines 3h and 4b from line 1. If the amount is greater than zero, explain in Part VI. See instructions.			
7 Excess distributions carryover to 2020. Add lines 3j and 4c.			
8 Breakdown of line 7:			
a Excess from 2015.			
b Excess from 2016.			
c Excess from 2017.			
d Excess from 2018.			
e Excess from 2019.			

Additional Data

Software ID:
Software Version:
EIN: 86-0098918
Name: LOWELL OBSERVATORY

Part VI **Supplemental Information.** Provide the explanations required by Part II, line 10; Part II, line 17a or 17b; Part III, line 12; Part IV, Section A, lines 1, 2, 3b, 3c, 4b, 4c, 5a, 6, 9a, 9b, 9c, 11a, 11b, and 11c; Part IV, Section B, lines 1 and 2; Part IV, Section C, line 1; Part IV, Section D, lines 2 and 3; Part IV, Section E, lines 1c, 2a, 2b, 3a and 3b; Part V, line 1; Part V, Section B, line 1e; Part V Section D, lines 5, 6, and 8; and Part V, Section E, lines 2, 5, and 6. Also complete this part for any additional information. (See instructions).

Facts And Circumstances Test

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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.
► Go to www.irs.gov/Form990 for instructions and the latest information.

OMB No. 1545-0047

2019

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?

☐ Yes ☐ 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?

☐ Yes ☐ 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 an historically important land area
☐ Protection of natural habitat ☐ Preservation of a certified historic structure
☐ Preservation of open space

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

	Held at the End of the Year
a Total number of conservation easements	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 7/25/06, 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?

☐ Yes ☐ No

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)?

☐ Yes ☐ No

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

Part III

Organizations Maintaining Collections of Art, Historical Treasures, or Other Similar Assets.
Complete if the organization answered "Yes" 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 ► \$ 400,000

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 ► \$

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

Cat. No. 52283D Schedule D (Form 990) 2019

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:

c

Beginning balance

d

Additions during the year

e

Distributions during the year

f

Ending balance

	Amount
1c	
1d	
1e	
1f	

2a

Did the organization include an amount on Form 990, Part X, line 21, 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 in 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	26,558,269	33,571,683	39,620,403	37,221,789	35,590,304
b Contributions	709,421	467,872	1,476,056	1,254,991	2,282,857
c Net investment earnings, gains, and losses	4,013,194	-1,781,866	4,372,359	2,174,579	-377,198
d Grants or scholarships	163,237	5,566,105	11,732,526	809,006	168,834
e Other expenditures for facilities and programs				94,516	
f Administrative expenses	120,308	133,315	164,609	127,434	105,340
g End of year balance	30,997,339	26,558,269	33,571,683	39,620,403	37,221,789

2

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

a

Board designated or quasi-endowment ▶ 0 %

b

Permanent endowment ▶ 19.070 %

c

Temporarily restricted endowment ▶ 80.930 %

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

b

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

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

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		1,253,088		1,253,088
b Buildings		23,572,685	5,868,711	17,703,974
c Leasehold improvements		4,143,823	3,035,503	1,108,320
d Equipment		38,680,621	14,456,829	24,223,792
e Other		4,972,543	905,111	4,067,432
Total. Add lines 1a through 1e. (Column (d) must equal Form 990, Part X, column (B), line 10(c).) . . . ▶				48,356,606

Schedule D (Form 990) 2019

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)		
Total. (Column (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)		
Total. (Column (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)	
Total. (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	
(3)	
(4)	
(5)	
(6)	
(7)	
(8)	
(9)	
Total. (Column (b) must equal Form 990, Part X, col.(B) line 25.) ▶	10,201,020

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.

1	Total revenue, gains, and other support per audited financial statements		1	
2	Amounts included on line 1 but not on Form 990, Part VIII, line 12:			
a	Net unrealized gains (losses) on investments	2a		
b	Donated services and use of facilities	2b		
c	Recoveries of prior year grants	2c		
d	Other (Describe in Part XIII.)	2d		
e	Add lines 2a through 2d		2e	
3	Subtract line 2e from line 1		3	
4	Amounts included on Form 990, Part VIII, line 12, but not on line 1 :			
a	Investment expenses not included on Form 990, Part VIII, line 7b	4a		
b	Other (Describe in Part XIII.)	4b		
c	Add lines 4a and 4b		4c	
5	Total revenue. Add lines 3 and 4c . (This must equal Form 990, Part I, line 12.)		5	

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.

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

Part XIII Supplemental Information

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

Return Reference	Explanation
See Additional Data Table	

Part XIII Supplemental Information *(continued)*

Return Reference	Explanation

Additional Data

Software ID:
Software Version:
EIN: 86-0098918
Name: LOWELL OBSERVATORY

Supplemental Information

Return Reference	Explanation
PART V, LINE 4:	THE ENDOWMENT FUNDS ARE USED FOR SUPPORT OF LOWELL OBSERVATORY AND FOR REINVESTMENT.

Supplemental Information

Return Reference	Explanation
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, THE FOUNDATION, AND THE TRUST ARE EXEMPT FROM INCOME TAXES UNDER BOTH INTERNAL REVENUE CODE (IRC) SECTION 501(C)(3) AND ARIZONA INCOME TAX LAWS. THE OBSERVATORY IS CLASSIFIED AS OTHER THAN A PRIVATE FOUNDATION UNDER IRC SECTION 509(A)(1). THE FOUNDATION AND THE TRUST ARE EACH CLASSIFIED AS OTHER THAN A PRIVATE FOUNDATION UNDER IRC SECTION 509(A)(3) AS A SUPPORTING ORGANIZATION OF THE OBSERVATORY. 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). FROM TIME TO TIME, THE ORGANIZATION MAY BE SUBJECT TO PENALTIES AND INTEREST ASSESSED BY VARIOUS TAXING AUTHORITIES, WHICH ARE CLASSIFIED AS GENERAL AND ADMINISTRATIVE EXPENSES IF THEY OCCUR.

Note: To capture the full content of this document, please select landscape mode (11" x 8.5") when printing.

Schedule I
(Form 990)

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.

▶ Go to www.irs.gov/Form990 for the latest information.

OMB No. 1545-0047

2019

Open to Public
Inspection

Department of the
Treasury
Internal Revenue Service
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.

(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 noncash assistance	(h) Purpose of grant or assistance
(1) See Additional Data							
(2)							
(3)							
(4)							
(5)							
(6)							
(7)							
(8)							
(9)							
(10)							
(11)							
(12)							

2 Enter total number of section 501(c)(3) and government organizations listed in the line 1 table ▶ 9

3 Enter total number of other organizations listed in the line 1 table ▶ 0

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 noncash assistance	(e) Method of valuation (book, FMV, appraisal, other)	(f) Description of noncash assistance
(1)					
(2)					
(3)					
(4)					
(5)					
(6)					
(7)					

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

Return Reference	Explanation
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.

Additional Data

Software ID:
Software Version:
EIN: 86-0098918
Name: LOWELL OBSERVATORY

Form 990,Schedule I, Part II, Grants and Other Assistance to Domestic Organizations and Domestic Governments.

(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
LOWELL OBSERVATORY FOUNDATION 1400 W MARS HILL ROAD FLAGSTAFF, AZ 86001	47-2052113	501(C)(3)	12,374				TO FUND AN ENDOWMENT
LOWELL OBSERVATORY FOUNDATION 1400 W MARS HILL ROAD FLAGSTAFF, AZ 86001	47-2052113	501(C)(3)	41,020				SUPPORT FOR OPERATIONS

Form 990, Schedule I, Part II, Grants and Other Assistance to Domestic Organizations and Domestic Governments.							
(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
PERCIVAL LOWELL TRUST 1400 W MARS HILL ROAD FLAGSTAFF, AZ 86001	04-2007327	501(C)(3)	10,714				SUPPORT FOR OPERATIONS
MASSACHUSETTS INSTITUTE OF TECHNOLOGY 77 MASSACHUSETTS AVENUE CAMBRIDGE, MA 02139	04-2103594	501(C)(3)	38,911				NASA GRANT - SUBAWARD COLLABORATION RESEARCH

Form 990, Schedule I, Part II, Grants and Other Assistance to Domestic Organizations and Domestic Governments.							
(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
NORTHERN ARIZONA UNIVERSITY PO BOX 4070 FLAGSTAFF, AZ 86011	74-2579628	STATE OF ARIZONA	338,482				NASA GRANT - SUBAWARD COLLABORATION RESEARCH
NORTHERN ARIZONA UNIVERSITY PO BOX 4070 FLAGSTAFF, AZ 86011	74-2579628	STATE OF ARIZONA	78,732				NSF GRANT - SUBAWARD COLLABORATION RESEARCH

Form 990, Schedule I, Part II, Grants and Other Assistance to Domestic Organizations and Domestic Governments.							
(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
NORTHERN ARIZONA UNIVERSITY PO BOX 4070 FLAGSTAFF, AZ 86011	74-2579628	STATE OF ARIZONA	32,235				DONOR FUNDS FOR PREDOCTORAL STUDENT SALARY
PLANETARY SCIENCE INSTITUTE 1700 E FORT LOWELL SUITE 106 TUCSON, AZ 85719	33-0175263	501(C)(3)	131,447				NASA GRANT - SUBAWARD COLLABORATION RESEARCH

Form 990, Schedule I, Part II, Grants and Other Assistance to Domestic Organizations and Domestic Governments.							
(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
PURDUE UNIVERSITY 155 S GRANT STREET WEST LAFAYETTE, IN 47907	35-6002041	501(C)(3)	9,980				NASA GRANT - SUBAWARD COLLABORATION RESEARCH
UNIVERSITY OF MARYLAND - BALTIMORE COUNTY 1000 HILLTOP CIRCLE BALTIMORE, MD 21250	52-6002033	STATE OF MARYLAND	43,431				NASA GRANT - SUBAWARD COLLABORATION RESEARCH

Form 990, Schedule I, Part II, Grants and Other Assistance to Domestic Organizations and Domestic Governments.							
(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 1104 ATLANTIC BLDG COLLEGE PARK, MD 20742	52-6002033	STATE OF MARYLAND	59,308				NASA GRANT - SUBAWARD COLLABORATION RESEARCH
UNIVERSITY OF PITTSBURGH 123 UNIVERSITY PLACE B21 PITTSBURGH, PA 15213	25-0965591	501(C)(3)	22,423				NASA GRANT - SUBAWARD COLLABORATION RESEARCH

Schedule J (Form 990)	Compensation Information	OMB No. 1545-0047
		2019
		Open to Public Inspection
Department of the Treasury Internal Revenue Service	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. ▶ Go to www.irs.gov/Form990 for instructions and the latest information.	
Name of the organization LOWELL OBSERVATORY		Employer identification number 86-0098918

Part I Questions Regarding Compensation		Yes	No
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.			
☐ First-class or charter travel	☒ Housing allowance or residence for personal use		
☐ Travel for companions	☐ Payments for business use of personal residence		
☐ Tax idemnification and gross-up payments	☐ Health or social club dues or initiation fees		
☐ Discretionary spending account	☐ Personal services (e.g., 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		1b Yes	
2 Did the organization require substantiation prior to reimbursing or allowing expenses incurred by all directors, trustees, officers, including the CEO/Executive Director, regarding the items checked on Line 1a?		2 Yes	
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.			
☐ Compensation committee	☐ Written employment contract		
☐ Independent compensation consultant	☒ Compensation survey or study		
☐ Form 990 of other organizations	☒ 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?		4a	No
b Participate in, or receive payment from, a supplemental nonqualified retirement plan?		4b	No
c Participate in, or receive payment from, an equity-based compensation arrangement?		4c	No
If "Yes" to any of lines 4a-c, list the persons and provide the applicable amounts for each item in Part III.			
Only 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?		5a	No
b Any related organization?		5b	No
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?		6a	No
b Any related organization?		6b	No
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 in lines 5 and 6? If "Yes," describe in Part III.		7	No
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.		8	No
9 If "Yes" on line 8, did the organization also follow the rebuttable presumption procedure described in Regulations section 53.4958-6(c)?		9	

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.

Schedule J (Form 990) 2019

Part III **Supplemental Information**

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

Return Reference	Explanation
PART I, LINE 1A	J. HALL, DIRECTOR STAYED IN A HOUSE OWNED BY LOWELL OBSERVATORY. THE STAY WAS TREATED AS A HOUSING ALLOWANCE AND WAS INCLUDED AS A TAXABLE BENEFIT.

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SCHEDULE M
(Form 990)

Noncash Contributions

OMB No. 1545-0047
2019
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.

►Go to www.irs.gov/Form990 for the latest information.

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				
5 Clothing and household goods				
6 Cars and other vehicles				
7 Boats and planes				
8 Intellectual property				
9 Securities—Publicly traded	X	18	2,397,246	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	X	1	1,395	FAIR MARKET VALUE
19 Food inventory				
20 Drugs and medical supplies				
21 Taxidermy				
22 Historical artifacts				
23 Scientific specimens				
24 Archeological artifacts				
25 Other ► (FURNITURE, SUPPLIES, AND EQUIPMENT)	X	9	26,863	FAIR MARKET VALUE
26 Other ► (LIFE INSURANCE POLICY)	X	1	3,100	FAIR MARKET VALUE
27 Other ► (TELESCOPES)	X	2	2,025	FAIR MARKET VALUE
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			
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?	30a	Yes	No	No
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?	31	Yes		
32a Does the organization hire or use third parties or related organizations to solicit, process, or sell noncash contributions?	32a	Yes		
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.				

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

Cat. No. 51227J

Schedule M (Form 990) (2019)

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.

Return Reference	Explanation
PART I, COLUMN (B):	THE AMOUNT IN COLUMN B REPRESENTS THE NUMBER OF INSTANCES THAT A DONATION OCCURRED.
PART I, 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

Name of the organization
LOWELL OBSERVATORY**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.

▶ Go to www.irs.gov/Form990 for the latest information.

OMB No. 1545-0047

2019**Open to Public
Inspection****Employer identification number**

86-0098918

990 Schedule O, Supplemental Information

Return Reference	Explanation
FORM 990, PART VI, SECTION B, LINE 11B	THE FORM 990 DRAFT WILL BE FIRST REVIEWED BY THE DEPUTY DIRECTOR FOR ADMINISTRATION (DDA) FOR ACCURACY. ONCE IT HAS BEEN DEEMED ACCURATE BY THE DDA IT WILL BE FORWARDED TO THE SOLE TRUSTEE, DIRECTOR AND AUDIT COMMITTEE FOR THEIR REVIEW AND COMMENTS. AFTER ANY QUESTIONS AND COMMENTS HAVE BEEN ADDRESSED IT WILL BE APPROVED AND A FINAL COPY WILL BE SIGNED AND FILED BY THE DDA.

990 Schedule O, Supplemental Information

Return Reference	Explanation
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.

990 Schedule O, Supplemental Information

Return Reference	Explanation
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.

990 Schedule O, Supplemental Information

Return Reference	Explanation
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.

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.
▶ Go to www.irs.gov/Form990 for instructions and the latest information.

OMB No. 1545-0047

2019

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
(1)PERCIVAL LOWELL TRUST UW 1400 W MARS HILL ROAD FLAGSTAFF, AZ 86001 04-2007327	TRUST F/B/O LOWELL OBSERVATORY	AZ	501(C)(3)	LINE 12B, II	LOWELL OBSERVATORY	Yes	
(2)LOWELL OBSERVATORY FOUNDATION 1400 W MARS HILL ROAD FLAGSTAFF, AZ 86001 47-2052113	FOUNDATION F/B/O LOWELL OBSERVATORY	AZ	501(C)(3)	LINE 12B, II N/A			No

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

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
(1) PERCIVAL LOWELL TRUST UW	E	10,200,000	END OF YEAR BALANCE
(2) PERCIVAL LOWELL TRUST UW	P	633,676	CASH VALUE
(3) LOWELL OBSERVATORY FOUNDATION	B	52,374	CASH VALUE
(4) LOWELL OBSERVATORY FOUNDATION	C	1,009,235	CASH VALUE

Provide the following information for each entity taxed as a partnership through which the organization conducted more than five percent of its activities (measured by total assets or gross revenue) that was not a related organization. See instructions regarding exclusion for certain investment partnerships.

[illegible]

Part VII **Supplemental Information**

Provide additional information for responses to questions on Schedule R. (see instructions).

Return Reference	Explanation