



# WYOMING STARGAZING

# 2021 ANNUAL REPORT

## CONNECTING *you* TO THE *Cosmos*

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# THE WYOMING STARGAZING IMPACT IN 2021

6,487

ADULTS

6,188

CHILDREN

503

PRIVATE PROGRAMS

106

PUBLIC PROGRAMS

## MILESTONES OF 2021

3,000th

PROGRAM OFFERED

65,000th

PROGRAM ATTENDEE

## WYOMING STARGAZING BOARD & STAFF

Founder & Executive Director  
Samuel Singer, Ph.D

Operations Director  
Maggie Lindner

Program Coordinator  
Emily Frank

President  
Ian Edwards, M.S.

Vice-President  
Mike Adler, Ph.D.

Secretary  
Elizabeth Moseley

Treasurer  
Kathleen Glover

### Board Members

Brad Mead • Peta Roubin • David Moxam • Jim Rooks • JR Dalby

### Partners

Community Foundation of Jackson Hole • Wyoming NASA Space Grant Consortium  
Wonder Institute • Free Roaming Photography • 1% for the Tetons • JH Chamber of Commerce  
Teton Conservation District • JH Travel & Tourism Board • Snake River Brewing  
Jackson Hole Mountain Resort • Teton Village Association • International Dark Sky Association  
PrintPlace • JH Traveler Magazine • Jackson Hole Book Trader • SilverStar Communications

# Executive Director's STATEMENT

It's hard to believe that Wyoming Stargazing is headed into our 9th year in 2022. The last two years have been challenging, but we are emerging as a much stronger organization compared to when COVID-19 first began. There was great excitement in creating new online programs, making new connections, and finally getting back to our flagship free public stargazing programs this winter.

In the past year we broke all of our previous records in numbers of programs offered and in programming revenue. We also took the best of what we learned from 2020 and created The Cosmos Show, a live streaming astronomy outreach program that we think has huge potential. In addition, we launched a new initiative to create a Scholarship and Mentorship program for Wyoming students. Lastly, but certainly not least, we are in the home stretch of seeing the Snow King Observatory and Planetarium become a reality.

A deposit has been placed for the 1-meter telescope and construction of the facilities are scheduled for the summer of 2022.

We'd like to thank everyone who helped us make the last couple of years a huge success despite the challenges we faced. We wouldn't be here without your support and we're looking forward to seeing you out on a stargazing program!



Samuel Singer, PhD  
Founder & Executive Director

# Public Programming

Wyoming Stargazing wants to further our mission of educating and inspiring everyone by increasing Justice, Equity, Diversity, and Inclusion (JEDI) in Science, Technology, Engineering, and Math (STEM) fields. So, we're creating a scholarship and mentorship program for opportunity youth to attend a university or community college to help them successfully earn a degree in a STEM field. Our goal is to provide wrap-around mentorship support beginning in middle school and to provide four \$5,000 annual scholarships to deserving local graduating seniors for up to four years of college.

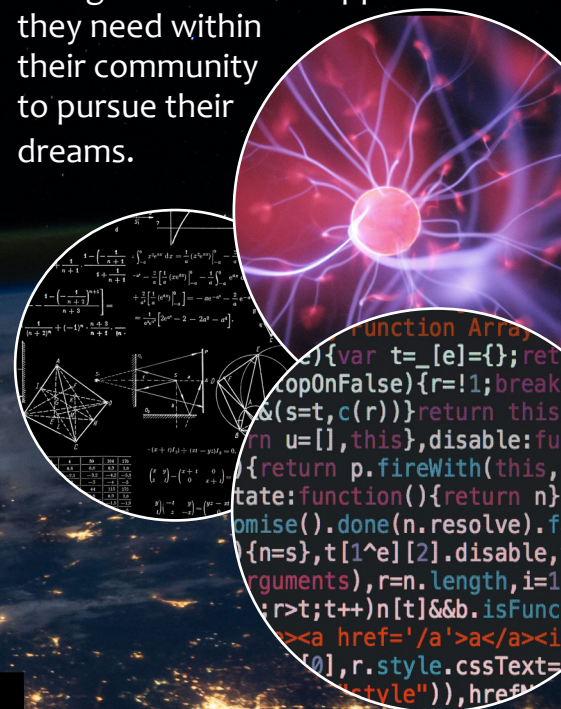
In the mentorship program students will gain valuable personal and professional skills to help them succeed in college and throughout the rest of their lives. This program will also support students through their

transitions from middle school to high school to college and then to a professional career, which can be exceptionally daunting. Mentorship content will include, but will not be limited to: scientific reasoning, emotional intelligence, astronomy and physics basics, client communication, writing skills, financial planning, mindfulness, networking and negotiation, computer literacy, math, professional resilience, creative storytelling, and much more.

The mentorship program will take place online during the school year and will be a hybrid of online learning and in-person learning during the summers. Grant recipients will also receive seasonal employment opportunities at Wyoming Stargazing that dovetail with the mentorship program.

## JEDI in STEM SCHOLARSHIP & MENTORSHIP PROGRAM

Wyoming Stargazing has a staff and Board of Directors with strong youth mentorship and leadership experience, scientific training, astronomical knowledge, and business acumen. Along with a local steering committee, admin support from the Fund for Public Education, and other incredible community partnerships we have an amazing opportunity to do so much more to support local students than we ever have before. Our hope is that students who might have otherwise lacked access to STEM opportunities in college will find the support they need within their community to pursue their dreams.



<sup>1</sup>"STEAM Jobs See Uneven Progress In Increasing Gender, Racial And Ethnic Diversity". Pew Research Center Science & Society, 2021, <https://www.pewresearch.org/science/2021/04/01/STEAM-jobs-see-uneven-progress-in-increasing-gender-racial-and-ethnic-diversity/>.

<sup>2</sup>Cech, E. A., and T. J. Waidzunus. "SySTEAMic Inequalities For LGBTQIA+QIA+Q Professionals In STEAM". Science Advances, Vol 7, no. 3, 2021. American Association For The Advancement Of Science (AAAS), <https://doi.org/10.1126/sciadv.abe0933>.

Unsplash Photo Credits:  
Markus Spiske  
Hal Gatewood  
Dan Cristian  
NASA

# Public Programming

## Snow King Observatory

### OUR VISION: *A UNIQUE OBSERVATORY AND PLANETARIUM IN JACKSON HOLE*

**W**yoming Stargazing is getting close to bringing our vision to fruition. Wyoming Stargazing has a shared vision with Snow King Mountain Resort to establish an observatory and planetarium on the summit of the mountain. The Observatory and Planetarium, designed by Jakub Galczynski and FarmerPayne Architects, are part of a larger Snow King Phase 2 Master Plan. The Town of Jackson approved the plan and the United States Forest Service (USFS) issued their Final Record of Decision approving the development.

Photo Credits:  
Jakub Galczynski  
Farmer Payne Architects

# Public Programming

## Snow King Observatory

### CONSTRUCTION & FACILITY UPDATES

Construction of the Observatory and Planetarium is planned to begin on the summit of Snow King Mountain in the summer of 2022. The Observatory will have a 24' AstroHaven dome and a 1.0-meter PlaneWave telescope. This will be one of the largest state-of-the-art telescopes in the world dedicated primarily to public outreach. The planetarium will have an 8-meter dome with roughly 30 seats and a state of the art digital

projection system from one of the leaders in planetarium design. There will also be a theater/classroom space and a gallery with interactive exhibits. Wyoming Stargazing hopes to use this facility to reach our goal of impacting 1 million students through in-person and virtual programming by the year 2030.



Photo Credits:  
Jakub Galczynski with Farmer Payne Architects  
Mike Adler with Earth Sky Imaging

# Public Programming



THE PLACE TO BE IF YOU'RE  
CURIOUS ABOUT THE **UNIVERSE**

Hosted by Dr. Sam the Founder and Executive Director of Wyoming Stargazing along with four other stellar Co-Stars, this live streaming program captures the best of all our virtual programming all under one roof. Attendees can pick the brains of astrophysicists, get some advice from a space doctor, learn what astronomers have to say about life, and find out what's happening up above their head all in one place!



Every week we discuss an important event in the history of astrophysics that occurred within a couple weeks of the same date of the Show. We also have a Guest Spot in each show during which we learn about the current research interests of an astrophysicist as well as the story of their path in becoming who they are today. Join us live every other Tuesday at 6pm MT on YouTube, Twitch, and Facebook.

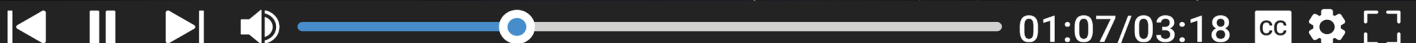
## THE COSMOS CREW



LIVE SHOW IS ABOUT TO START



ASK A QUESTION LIVE!  
1-929-205-6099 | MEETING ID: 861-5442-1981



# Public Programming

## Stargazing at Stilson

After a two year hiatus Stargazing at Stilson is back! Wyoming Stargazing is pleased to be offering weekly, free, year-round, public stargazing events on clear Thursdays beginning approx. one hour after sunset at the Stilson Lot (Village Road Transit Center) when the temperature is above zero degrees Fahrenheit! There is a \$10/person recommended donation.

We set up in the north west corner of the lot behind the bus hut where there are no lights. Our astronomy educators will use one of our large aperture telescopes to show you planets, stars, planetary nebulae, galaxies, and more!

We will also have several iPads with the StarWalk application installed on them so you can explore the heavens while others are looking through the telescopes. Throughout the night our astronomy educators will tell you everything you want to know about the objects you are viewing. We can also answer all your other burning questions about the Cosmos. There is no need to reserve your spot in advance.

You can come and go as you please. We look forward to seeing you under the stars! Please dress warmly.



**FREE PUBLIC STARGAZING**

- \* THURSDAY NIGHTS EVERY WEEK
- \* STILSON PARKING LOT (VILLAGE ROAD TRANSIT CENTER)
- \* \$10/PERSON SUGGESTED DONATION

HERE IN THE NORTH WEST CORNER OF THE LOT BEHIND THE BUS HUT (WHERE THERE ARE NO LIGHTS)

LET OUR ASTRONOMY EDUCATORS TAKE YOU ON A JOURNEY THROUGH STARS, PLANETS, PLANETARY NEBULAE, GALAXIES, AND MORE!

\* BUNDLE UP AND MEET US AT THE STILSON PARKING LOT AT 7PM MT ON THURSDAYS

\* FOR FULL DETAILS, PLEASE VISIT: [WYOMINGSTARGAZING.ORG/CALENDAR/FREE-PUBLIC-STARGAZING/](http://WYOMINGSTARGAZING.ORG/CALENDAR/FREE-PUBLIC-STARGAZING/)

\* BAD WEATHER? NO PROBLEM! JOIN US AT THE WYOMING STARGAZING OFFICE INSTEAD FOR A SCI-FI MOVIE SCREENING - WE'LL BRING THE POPCORN!

 **WYOMING STARGAZING**



# Public Programming

## Save Our Night Skies

Light pollution in Jackson has become a problem for the health and safety of people and wildlife, not to mention the wasted money and energy associated with unnecessary artificial light. Light pollution also impedes our ability to enjoy dark night skies. Many other cities around the globe are seeing tremendous benefits from their efforts to restore their dark night skies. We can Save Our Night Skies too!

Over the last five years, with generous support from the Community Foundation of Jackson Hole, the Teton Conservation District, 1% for the Tetons, the JH Travel and Tourism Board, Free Roaming Photography, the Teton Photography Group, the Jackson Hole Conservation Alliance, Ohio Northern University, and many private donors we've been trying to help the Town of Jackson and Grand Teton National Park achieve Dark Sky Certification from the International Dark Sky Association.

In support of the growing movement to save our night skies from the effects of light pollution, Wyoming Stargazing created an annual event in 2021. During the Perseid

Meteor Shower, we asked Jackson Hole Residents to turn off unnecessary lights to demonstrate just how beautiful our night sky can be. On the night of the event (August 11th, 2021), we had over 100 attendees at the

Center for the Arts. We'd like to extend a huge thank you to all staff and volunteers who helped make the event a success. We look forward to *Lights Out Jackson Hole 2022*.



Comparison Night



Event Night

# Public Programming

## Outreach Programs



Since the very beginning of Wyoming Stargazing, working directly with pre-k through high school students has been a priority. Through the use of our planetarium and solar telescopes, through in-class and outdoor integrated arts and science lessons, and through staring up at the night sky in wonder, we've done our best to educate and inspire the youth of Jackson Hole and surrounding communities.

For the past three years, Wyoming Stargazing Staff have taught a high school level astronomy course at the JH Community School. It's been a thrill for us to engage students in learning about astronomy in the same way that we were introduced to the field so many years ago. Students have had the opportunity to craft their own astronomical research

proposals, to debate controversial topics in astronomy, and to work on building a telescope, among many other self-directed learning activities.

We've also been offering physics and astronomy programs in collaboration with Girl's Activity Participating (GAP), City Kids, Teton County Parks and Recreation, The Teton County School District, and many other local partners. We're excited to continue those partnerships and to build new ones as we explore ways to make our programs more accessible to everyone both here in Jackson and across the country through virtual programming.



Photo Credit:  
NASA

# Private Programming

## Top 5 Reasons to Stargaze with Us

Our Private Stargazing Tours for locals and visitors are our flagship programs. The proceeds from those programs allow us to offer inexpensive programming to public schools, to offer free public programs throughout our community, and to Save Our Night Skies.

We offer year-round Private Stargazing Tours at your convenience. Let us come to your private residence or bring you to a dark sky location within Grand Teton National Park.

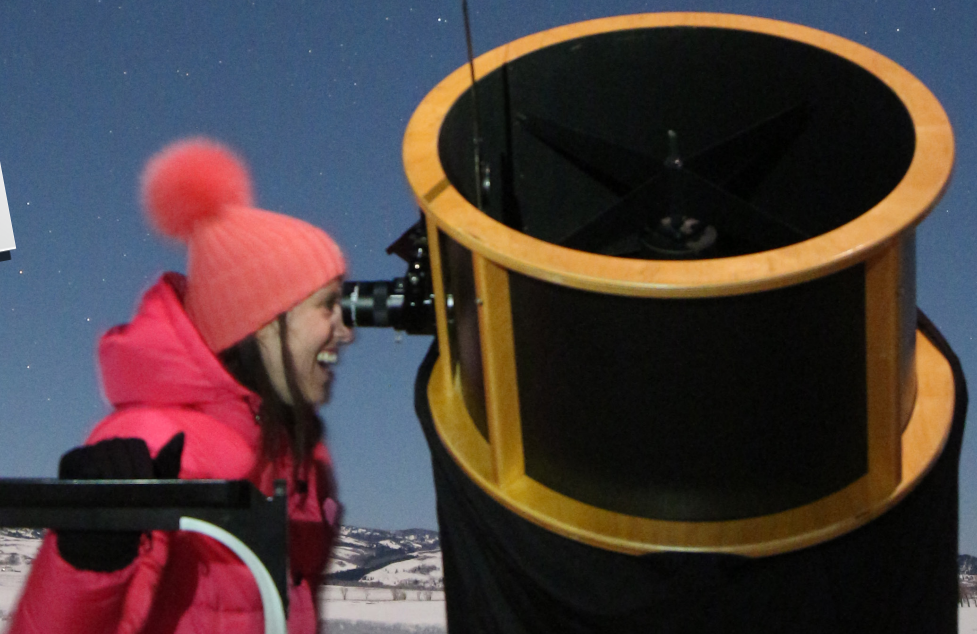
**1** The high elevation in Jackson Hole (6,500ft on the valley floor where we stargaze) means that you're looking through much less atmosphere than at sea level. That makes the night sky that much clearer!

**2** We'll have a big telescope in use during our stargazing programs. That means we can collect a ton of light from distant objects, allowing you to be able to see galaxies millions of light years away!

**3** The low humidity and predictable weather in Jackson Hole, especially in the summer, means that we have lots of clear night skies. We rarely have to cancel a stargazing program in the summer because of bad weather.

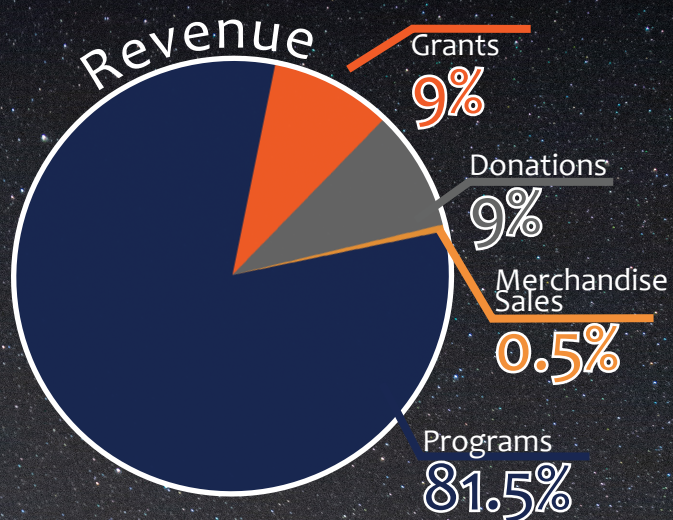
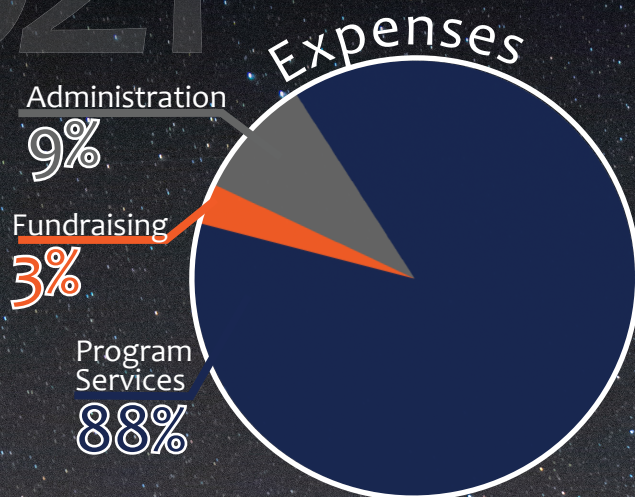
**4** Wyoming Stargazing employs knowledgeable and enthusiastic astronomy educators for our Stargazing Leaders. That means they not only have a huge amount of knowledge of the night sky, but are also very good at explaining the complicated details about what you are looking at.

**5** Jackson Hole, the valley where the town of Jackson resides, is mostly protected, undeveloped public land. That means there is relatively little light pollution, allowing you to see thousands of stars on moonless nights, the arms of the Milky Way Galaxy and so much more.

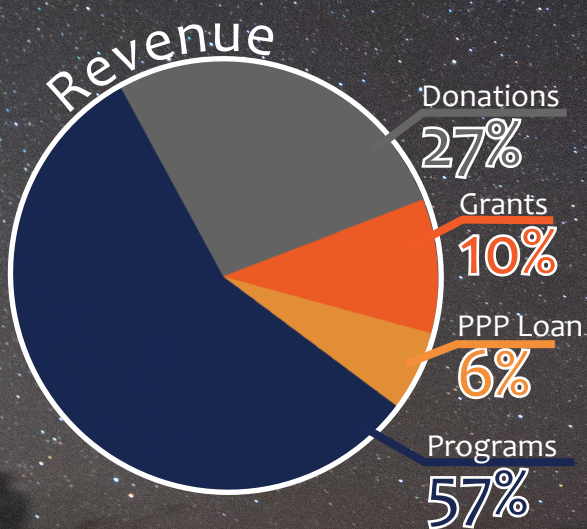
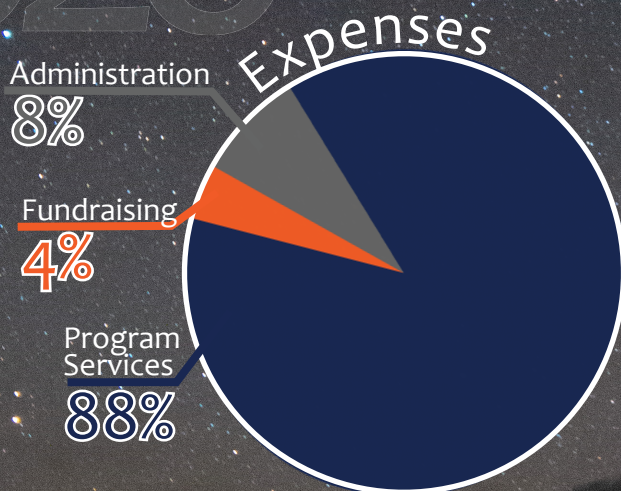


# Finances

## 2021



## 2020



# Finances

## Statement of Activity

### REVENUE

Cash Donations	\$39,292.71
Grants	\$39,824.56
Merchandise Sales	\$1,226.42
Special Event Tickets	\$160
Telescope Rental Income	\$600
Programming	\$347,804.51
<b>Total Revenue</b>	<b>\$428,908.20</b>
<b>Gross Profit</b>	<b>\$428,908.20</b>

### EXPENDITURES

Advertising	\$18,531.55
Attendance Fees	\$500
Bank Charges	\$202.17
Commissions Paid	\$13,935.75
Dues & Subscriptions	\$15,755.10
Food	\$415.71
Insurance	\$21,195.70
Interest Expense	\$2,031.43
Legal & Professional Fees	\$5,924.04
Licenses and Titles	\$2,198.55
Merchandise	\$1,442.24
Merchant Processing Fees	\$5,377.27
Payroll Expenditures	\$149,435.23
Program Supplies	\$14,668.90
Rent	\$21,223.93
Repair & Maintenance	\$1,640.99
Shipping and Delivery Expense	\$1,576.56
Staff Development	\$50
Subcontractors	\$45,021.25
Stargazing Leader Compensation	\$61,475.50
Transportation	\$16,948.99
Utilities	\$167.36
<b>Total Expenditures</b>	<b>\$399,718.22</b>
<b>Net Operating Revenue</b>	<b>\$29,189.98</b>
Interest Earned	\$535.93
Total Other Revenue	\$535.93
<b>Net Other Revenue</b>	<b>\$535.93</b>
<b>Net Revenue</b>	<b>\$29,725.91</b>

## Statement of Financial Position (as of December 31, 2021)

### CURRENT ASSETS

#### Bank Accounts

Meridian Trust Checking	\$16,984.22
Meridian Trust Money Market	\$171,742.74
Meridian Trust Savings	\$13,548.61
Scholarship Fund	\$980.86

**Total Bank Accounts** **\$203,256.43**

Accounts Receivable	\$-367.38
Other Current Assets	\$-3,628.86

**Total Current Assets** **\$199,260.19**

Accumulated Depreciation \$-122,480.00

In-Kind Donated Assets **\$50,250.00**

Purchased Telescopes, Trailer, **\$105,168.12**

Cameras, and Accessories

Vehicles \$108,561.90

**Total Fixed Assets** **\$141,500.02**

**Total Assets** **\$340,760.21**

### LIABILITIES

Accounts Payable \$5,130.82

Payroll Tax Liability \$5,274.26

Program Deposits \$1,250

SBA-PPP Loan Payable **\$15,907**

Vehicle Loans \$-2,836.07

2017 Ford Transit \$16,481.16

2017 Chevrolet Suburban \$28,450.67

2018 Ford Transit \$31,922.88

**Total Vehicle Loans** **\$74,018.64**

WY Sales Tax Payable \$73.59

**Total Liabilities** **\$101,654.31**

Retained Earnings **\$209,379.99**

Net Revenue **\$29,725.91**

**Total Equity** **\$239,105.90**

**Total Liabilities and Equity** **\$340,760.21**

# Contributions Report

**W**e are always grateful to those of you who support Wyoming Stargazing financially with cash donations and gifts of astronomical equipment. We would not be able to insure and educate so many people without your genius contributions.

In the last eight years Wyoming Stargazing has raised \$611,500 combined from donations (\$386,500) and grants (\$225,000). Our smallest donation has been less than \$1 and our largest single donation has been \$10,000. Grants have ranged in size from \$100 to over \$20,000. Our first major fundraising event in 2017 around the celebration of the total solar eclipse raised approximately \$50,000. Nearly one quarter of all these contributions each year have come through Old Bill's Fun Run which is facilitated by the Community Foundation of Jackson Hole.

These contributions have been used in three different ways. First, they were used to purchase equipment for our stargazing programs, solar astronomy programs, and our planetarium programs. We have been able to acquire several telescopes with 11" to 25" mirrors that we use to show people incredible details on the Moon, the rings of Saturn, cloud bands on Jupiter, the phases of Venus,

star clusters, nebulae, galaxies, and more. These telescopes are a central part of meeting our mission of inspiring and educating through Wyoming's extraordinary skies and the Universe beyond. We use much smaller solar telescopes to provide opportunities to show people sunspots, solar flares, and other amazing solar features. We have also purchased three specialized digital cameras that can project real time images of the Sun and nighttime objects through the telescopes onto flat screen monitors enabling people with physical disabilities to view those objects with ease.

Wyoming Stargazing also owns a digital planetarium system that was acquired through generous donations, grants, and proceeds from private stargazing programs. That system is currently awaiting its revival post-covid. That facility which can be set up inside an auditorium or outside within the Dark Sky Pavilion (also acquired through grants and donations) provides incredible digital images of the Universe and full-length films designed for planetarium domes.



# Contributions Report

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The second way these contributions were spent was to substantially subsidize the cost of our programming for schools and other nonprofit organizations. Wyoming Stargazing has offered stargazing programs, solar astronomy programs, indoor astronomy presentations, and planetarium programs to Teton County Schools, local private schools, to Driggs Elementary School, and to several other local nonprofit organizations. We have done so independently and in collaboration with other organizations including pARTners, after school programs run by Teton County Parks and Recreation, CREST, and GAP. Over the last eight years we have offered more than 200 school programs (in-person and virtual combined) across grade levels ranging from pre-k to high school, totalling over 8,000 student contacts.

The third way contributions have been spent was to support the operation of our year-round, free, public, astronomy programs, including programming related to our Save Our Night Skies Campaign.

Over the past eight years Wyoming Stargazing has offered 600 of these free programs (in-person and virtual combined) to the Jackson Hole Community and to a few other communities in Wyoming, totalling over 20,000 attendees. While monetary contributions were necessary to purchase supplies, compensate stargazing leaders, and cover the costs of transportation, the in-kind donations we received from our partners and the hundreds of hours of volunteer labor also made these programs possible. Wyoming Stargazing has been continuously humbled by the generosity and support of the Jackson Hole Community. We are deeply appreciative of all the assistance we have received. We are committed to continuing to offer inspiring and educational astronomy programs for everyone.





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Wyoming Stargazing is an educational 501(c)3 nonprofit organization based in Jackson, Wyoming, and is an authorized permittee of the National Park Service