

2023 Stellafane Convention

Thursday, August 17 – Sunday, August 20, 2023

43° 16' 41" North Latitude, 72° 31' 10" West Longitude



*On the occasion of our hundredth year,
The Springfield Telescope Makers welcome you to the
The 87th Convention of Amateur Telescope Makers
on Breezy Hill in Springfield, Vermont*



“For it is true that astronomy, from a popular standpoint, is handicapped by the inability of the average workman to own an expensive astronomical telescope. It is also true that if an amateur starts out to build a telescope just for fun, he will find before his labors are over that he has become seriously interested in the wonderful mechanism of our universe. And finally there is understandably the stimulus of being able to unlock the mysteries of the heavens by a tool fashioned by one’s own hand.”

–Russell W. Porter, Founder of The Springfield Telescope Makers, March, 1923

SOME HISTORY OF STELLAFANE AND ITS OBSERVATORIES

1920—BEGINNINGS

In 1920, when a decent astronomical telescope was far beyond the average worker's means, Russell W. Porter offered to help some Springfield residents, mainly machine tool factory workers, to build their own. Together, they ground, polished, and figured mirrors, completed their telescopes, and began using them, soon becoming thoroughly captivated by amateur astronomy.

1923—THE CLUB IS FOUNDED

In December of 1923 the group formally established the Springfield Telescope Makers as a club with officers and membership standards, and began building a clubhouse on land owned by Porter atop Breezy Hill. By 1925 their activities had drawn the attention of magazine editors including Web Waldron at *Collier's* and Albert Ingalls at *Scientific American*. They visited the club, and soon published articles about telescope making. This generated interest across the country, and the hobby of amateur telescope making began to grow in the United States.

1923-1924—THE STELLAFANE CLUBHOUSE



Clubhouse interior, unknown date, with retractable staircase pulled down. Telescope at left was built by Everett Redfield.

The clubhouse was designed by Russell Porter and constructed by the members. The building was originally dubbed "Stellar Fane" ("Star Shrine"), which soon evolved to simply "Stellafane." The pink color may simply have been that of donated paint, but it has been hallowed by long tradition. Many fascinating memorabilia of the club's earlier days can be seen here. Although it's now a tight fit with today's larger membership roster, the Springfield Telescope Makers still hold some meetings at the Stellafane Clubhouse.



Cover illustration by Harold Brown showing STM members using the solar projection telescope at the Stellafane clubhouse.

Over the next few years Stellafane came to house three historic built-in telescopes, each of which brings the image indoors for viewing: a unique 12-inch Polar Cassegrain, which views the Southern half of the sky from a position in a work-room addition to the building; a solar projection telescope made famous by a cover illustration in *Scientific American*; and a transit telescope, needed for determinations of the exact time in an era before today's very accurate timekeeping.



Russell Porter seated in the clubhouse, at the eyepiece of the transit telescope.

1926—THE FIRST CONVENTION

On July 3, 1926, 29 people came to Breezy Hill, and the Stellafane Convention was established. It's been held every year since, except during and just after World War II, and in 2020 due to the pandemic. There was a period after the war when STM membership had dwindled to the point where members couldn't manage the Convention alone. The Amateur Telescope Makers of Boston stepped in and helped make sure that it revived and continued. In later years, the Convention grew rapidly; today nearly a thousand enthusiastic amateurs make the pilgrimage to Breezy Hill.



A group photo with most of the attendees at the first Stellafane Convention, in 1926. Russell Porter is seated at lower right; Albert Ingalls is seated just behind the young man at the front center.

1930—THE PORTER TURRET TELESCOPE

The Porter Turret Telescope was constructed in 1930 by the club. Porter had endured more than his share of winter cold on polar expeditions early in his career. Following Hartness's turret refractor design, he devised a way to build a reflecting telescope that also allowed the observer to remain indoors on the coldest winter nights. Extensively renovated in the 1970s and fitted with



The Porter Turret Telescope in the 1930s.



Jacking the heavy RA ring into position during the Porter Turret's construction. The telescope could only have been built in a place like Springfield, where the Jones & Lamson Machine Company, employer of Porter and others, afforded members the means to machine large parts.

new optics, the Porter Turret remains an excellent instrument.

1986— STELLAFANE EAST

Faced with the loss of access to a neighboring field that had been the Convention's camping area, the STM, with the support of members who mortgaged their homes, purchased a 33-acre farm across the road from the original Stellafane

site. This became known as Stellafane East. In 1998, STM member Harty Beardsley donated another adjacent 45 acres, ensuring that the Convention has room for growth.

1987-1995—THE MCGREGOR OBSERVATORY

In the late 1980s and the first half of the 1990s, the Springfield Telescope Makers undertook a huge project—the construction of a new roll-off-roof observatory and a 13" Schupmann telescope on a high point at the Northern end of Stellafane East. The telescope is truly a world-class



The McGregor Observatory with its roof retracted and the Schupmann telescope visible.

instrument, for a time the largest operating Schupmann in the world. It combines reflective and refractive elements to produce an unobstructed coma-free and color-free image, traits that make it an ideal planetary instrument. It is mounted on a massive computer-controlled alt-az mounting.



The Schupmann telescope and the Milky Way, photo: Dennis di Cicco

The observatory is a rugged, functional building that also houses space for a browsing library and many activities during Convention. It was designed by STM member John Martin and, under John's direction, built by STM members. Optical designer Scott Milligan and master optician Philip Rounseville spent countless hours of labor on the optical elements and the telescope itself, over the course of eight years.

The McGregor Observatory was dedicated by the Springfield Telescope Makers on July 15, 1995, to the memory of STM member Douglas McGregor, an avid amateur astronomer and telescope maker,

best known as Master of Ceremonies of the Stellafane Convention up to the time of his passing in 1988. The close knit club reacted to the sudden loss of McGregor by undertaking this ambitious observatory project in his name.

2003-2006—THE BREUNING OBSERVATORY



This domed observatory building, just down the hill from the McGregor observatory, was built by members under the direction of Dave Prowten, who did much of the work himself. It is named in memory of long-time STM member and accomplished telescope maker Carl Breuning. The 12-foot Ash Dome was donated to the club; it came from an unfinished house in Carlisle, MA that had been foreclosed and was going to be demolished. The observatory building was completed just before the 2005 Convention. It houses a unique and beautiful instrument: a 10-inch Richey-Chrétien telescope on a finely-machined Springfield mount, affording a stationary eyepiece accessible to a seated observer. Built by Dino Argentini in 1964, the telescope won first place optical and mechanical awards at the 1970 Convention, and was donated to the club in 1997.

2014-2018—THE ANDREW SIMONI OBSERVATORY



The beam from the objective lens enters the building via a tube through the wall, visible to the right of center on the building front.

The Andrew Simoni Observatory is dedicated to the memory of Andrew Simoni, long-time conventioneer and Stellafane benefactor. It's located near the Stellafane Clubhouse, and houses a 1930s spectrohelioscope. An invention of George Ellery Hale, the spectrohelioscope produces an image of the Sun in any desired visual wavelength. This instrument was rescued from a defunct observatory at

the University of Pennsylvania by Matt Considine and Dave Groski, and later donated to the club. The observatory consists of an external pier with a coelostat and a long-focus singlet objective, and a system of optics and mechanical elements inside the building that form a very narrow-band image of a portion of the Sun's disc. Members, especially Matt, Dave, and Jim Daley, have made many improvements and refinements that have elicited a level of performance from the old instrument far exceeding its original capabilities.



Russell Porter discussing the spectrohelioscope (the same one now at Stellafane) with Gustavus Cook, the original owner of the instrument.



The coelostat and objective lens (top left), with new motorized controls that replace the old mechanical links. Photo: Sal LaRicca

The building was designed by Ken Slater and constructed by Dave Prowten and many other members. Unique airflow features and infrared-reflective film lining in the walls keep the interior cool in the hot summer Sun. A solar panel charges batteries to provide all the power for interior lighting, a ventilation fan, and the operation of the instrument. The interior also houses a mini-museum of the history and operation of the spectrohelioscope.



The Stellafane clubhouse as it appeared about 1930. It hasn't changed much since.

Be Sure to Visit the Original Stellafane Site

Since so much of the Convention takes place at Stellafane East, it's all too easy to miss the fun of seeing the original Stellafane Clubhouse and the Porter Turret Telescope on Breezy Hill. Catch the Shuttle Bus near the Food Tent or at Pine Island (near the main camping area) or just take the short walk down the road opposite the entry "fruit stand" where you checked in. The original site, including the Clubhouse and the Porter Turret Telescope, was designated a National Historic Landmark in 1989. It remains the location for the Stellafane Convention's optical and mechanical competitions for amateur-built telescopes.

Schedule of Events & Presentations

100Y=SPECIAL CENTENNIAL EVENT **KIDS**=ACTIVITY FOR CHILDREN **TEENS**=ACTIVITY FOR TEENS **NTA**=FOR THOSE NEW TO ASTRONOMY OR STELLAFANE
INT=INTERMEDIATE **ADV**=ADVANCED **ATM**=AMATEUR TELESCOPE MAKING **COMP**=TELESCOPE COMPETITION
ALL=SUITABLE FOR EVERYONE **MCE**=MAJOR CONVENTION EVENT **OBS**=OBSERVING

FULL DESCRIPTIONS OF THESE EVENTS ARE ON FOLLOWING PAGES

THURSDAY, AUGUST 17, 2023

8:30am -	Hartness House Workshop: Eclectic Astronomy II	Hosted by Tom Spirock	Workshop (Separate Registration)	MCE
Noon-4pm	Large RV Permit Holders MUST arrive	Entry Gate	PLEASE DON'T ARRIVE BEFORE NOON!	
3-10pm	Early Entry Permit Holders MAY arrive	Entry Gate	PLEASE DON'T ARRIVE BEFORE 3!	
6-9pm	Hartness House Workshop Evening Session	Hartness House	Hosted by Tom Spirock Dinner (Separate Registration)	MCE
8:30pm-Midnight	Observing Olympics	Observing Fields	Coordinated by Eileen Myers Telescopes & Binoculars	OBS
9pm-Midnight	McGregor Observatory	Observing	Weather Permitting	OBS
9pm-Midnight	Porter Turret Telescope	Observing	Weather Permitting	OBS

FRIDAY, AUGUST 18, 2023

8am	REGISTRATION GATE OPENS	Entry Gate		
9am-4pm	Cook Spectroheliograph	Simoni Observatory	Solar Observing Weather Permitting	OBS
9am-6pm	Porter Turret Telescope	Open for Solar Observing	Weather Permitting	OBS
10am-4pm	McGregor Observatory	Open for Solar Observing	Weather Permitting	OBS
10am-4pm	Stellafane Founding Members Historical Poster Display	Tent near Clubhouse		100Y
10am-4pm	Hand Crafted Telescopes On Display	Clubhouse Grounds		100Y
10am-4pm	Stellafane History in Photos Video Display	Flanders Pavilion		100Y
10am-6pm	Shuttle Bus Operates	Stops at Pine Island, Food Tent, Pink Clubhouse		
10am-4pm	Astronomy Then and Now Poster Display	Tent near Clubhouse		100Y
10am-4pm	TELESCOPE MAKING DEMO	Tent by T-Shirt Sales	Organized by Mike Hayes & Read Predmore	ATM
10-10:30am	Intro & Grinding	Presented by Rick Hunter		ATM
10:30-11am	Hands-on Grinding	Presented by TBD	Hands-on Grinding session	ATM

11–11:30am	Making Dental Stone Tools	Presented by Julie Eslinger	ATM
11:30am–Noon	Making Pitch Laps	Presented by Phil Rounseville	ATM
1–1:45pm	Polishing & Figuring	Presented by Dick Parker Polishing & Figuring	ATM
2–4pm	Hands-on Grinding	Presented by TBD Hands-on Grinding session	ATM
2pm–4pm	Testing (Bring your own mirror)	With Dave Kelly & Doug Arion Testing (Bring your own mirror)	ATM
11am–Noon	Window to the Universe: The Story of a Historic Telescope	<i>Flanders Pavilion</i> Presented by Richard Sanderson	ALL
12:30–1:30pm	Solar System Walk	<i>Meet at M44 (Green Shed) behind Clubhouse</i> Led by Kaitlynn Goulette	NTA
1–4pm	Clubhouse Treasure Hunt for Children	<i>Clubhouse</i> Age 5–16 Pick up list from Telescope Registrar	KIDS, 100Y
1–2pm	Imaging the Great North American Eclipse (Talk)	<i>Flanders Pavilion</i> Presented by Al Takeda	INT
1–5pm	Teen Robotics Project	<i>Bunkhouse</i> Presented by Paul Fucile, Eimear Gallagher & Cadence Payne AGES 12–17	TEENS
2–6pm	Breuning Observatory (Domed Observatory)	<i>Open for solar observing</i> Weather Permitting	OBS
2–3pm	Astronomy Activities for Children: Planets	<i>McGregor Observatory</i> Presented by Kris Larsen, Ages 5–12; Limited to first 20	KIDS
2–3pm	Solar Observing Hour	<i>Observing Fields</i> Please set up your Solar Scope and Share	OBS
2–2:15pm	Dressing Up in Period Attire	<i>Clubhouse</i> Gather for Photo	100Y
2–3pm	The Story of Stellafane	<i>Flanders Pavilion</i> Presented by Phil Harrington	ALL, 100Y
3–4pm	Optical Coatings & Oilings for Astronomical Instruments	<i>Presented by Alan Ward</i> <i>Flanders Pavilion</i>	ADV
3–4pm	Imaging the Great North American Eclipse (Demo)	<i>Near Breuning Observatory</i> Presented by Al Takeda	INT
4–5pm	Exploring the Local Supercluster	<i>Presented by Clifton Ashcraft</i> <i>Flanders Pavilion</i>	ADV
4–6pm	Museum Open	<i>Hartness-Porter ATM Museum Open, Hartness House</i> Hosted by Matt Considine, Curator	ALL
4–5pm	Introduction to Stellafane	<i>McGregor Library</i> Presented by Kim & Dennis Cassia	ALL
5–8pm	Telescope Competition	<i>Clubhouse</i> Optical and Mechanical Registration	ATM
6–7:30pm	Friday Evening Videos	<i>Flanders Pavilion</i> Astronomy documentaries for the whole family	ALL
7:30pm	Friday Evening Informal Talks	<i>Flanders Pavilion</i> Bruce Beford, MC Short presentations by Convention Attendees	ALL, MCE
8pm–Midnight	McGregor Observatory	<i>Observing</i> Weather Permitting	OBS
8pm–Midnight	Porter Turret Telescope	<i>Observing</i> Weather Permitting	OBS
8:30pm–Midnight	Observing Olympics	<i>Observing Fields</i> Coordinated by Eileen Myers Telescopes & Binoculars	OBS
9pm–Midnight	Breuning Observatory (Domed Observatory)	<i>Observing</i> Weather Permitting	OBS
10pm	Registration Gate Closes	<i>Entry Gate</i>	
10pm	Telescope Competition Optical Judging Begins	<i>Fields around Clubhouse</i>	ATM

SATURDAY, AUGUST 19, 2023

7am	REGISTRATION GATE OPENS	<i>Entry Gate</i>	
7am–Noon	Swap Tables Open	<i>Swap Table Area North of Main Camping Area</i>	MCE
8am–6pm	Porter Turret Telescope	<i>Open, Solar Observing</i> Weather Permitting	OBS
8am–5pm	Cook Spectroheliocope	<i>Simoni Observatory</i> Solar observing Weather Permitting	OBS
8am–6pm	McGregor Observatory	<i>Open, Solar Observing</i> Weather Permitting	OBS
8am–9:30am	Telescope Competition: Registration	<i>Clubhouse</i> Mechanical (and Optical if needed) Registration	ATM
9am–5pm	Shuttle Bus Operates	<i>Stops at Pine Island, Food Tent, Pink Clubhouse</i>	
10am–4pm	Historic Telescopes On Display	<i>Clubhouse</i> Various Members	ALL, 100Y
10–11am	Introduction to Stellafane	<i>McGregor Library</i> Presented by Kim & Dennis Cassia	ALL
10–11am	Dynamic Eclipse Broadcast Initiative	<i>Flanders Pavilion</i> Presented by Richard Danley & Chris Mandrell	INT
10am–1pm	Telescope Competition: Mechanical	<i>Fields around Clubhouse</i> Mechanical Competition	ATM

SATURDAY, CONTINUED

10am-4pm	TELESCOPE MAKING DEMO <i>Tent by T-Shirt Sales</i> Organized by Mike Hayes & Read Predmore	ATM
10-10:30am	Intro & Grinding Presented by Rick Hunter	ATM
10:30-11am	Hands-on Grinding Presented by TBD Hands-on Grinding session	ATM
11-11:30am	Making Dental Stone Tools Presented by Junie Eslinger	ATM
11:30am-Noon	Making Pitch Laps <i>Presented by Phil Rounseville</i>	ATM
1-1:45pm	Polishing & Figuring Presented by Dick Parker Polishing & Figuring	ATM
2-4pm	Hands-on Grinding <i>Presented by TBD</i> Hands-on Grinding session	ATM
2-4pm	Dobsonian Basics Presented by Ken Slater	ATM
10am-4pm	Hand Crafted Telescopes On Display <i>Clubhouse Grounds</i>	ALL, 100Y
10am-4pm	Stellafane History in Photos Video Display <i>Flanders Pavilion</i>	ALL, 100Y
10am-4pm	Astronomy Then and Now Poster Display <i>Tent near Clubhouse</i>	ALL, 100Y
10am-4pm	Stellafane Founding Members Historical Poster Display <i>Tent near Clubhouse</i>	ALL, 100Y
11am-Noon	Clubhouse Treasure Hunt for Children <i>Clubhouse</i> Age 5-16 Pick up list from Telescope Registrar	KIDS, 100Y
11am-Noon	Pro/Am Collaboration: It can be Easy and Cheap or Complicated and Expensive, but Always Rewarding! <i>Flanders Pavilion</i> Presented by Peter Bealo	INT
11am-Noon	Astronomy Activities for Children: Light & Telescopes <i>McGregor Observatory</i> Presented by Kris Larsen, Ages 5-12 Limited to first 20	KIDS
11:30am-12:30pm	Telescope Field Walk <i>Meet at Front of Clubhouse</i> Led by David McGaw	NTA
12:30-1:30pm	Solar System Walk <i>Meet at M44 (Green Shed) behind Clubhouse</i> Led by Kaitlynn Goulette	NTA
1-2pm	Evolute Tester for Optical Surfaces <i>Flanders Pavilion</i> Presented by Terrell (Terry) Koken	ADV
2-3pm	Astronomy Activities for Children: Sun & Solar Eclipses <i>McGregor Observatory</i> Presented by Kris Larsen, Ages 5-12 Limited to first 20	KIDS
2-3pm	Breathing New Life into Your Vintage Refractor <i>Flanders Pavilion</i> Presented by Rich Nugent	INT
2-3pm	Solar Observing Hour <i>Observing Fields</i> Please set up your Solar Scope and Share	OBS
2-6pm	Breuning Observatory (Domed Observatory) <i>Open for solar observing</i>	OBS
2-4pm	Clubhouse Treasure Hunt for Children <i>Clubhouse</i> Age 5-16 Pick up list from Telescope Registrar	KIDS
3-4pm	The Life of Russell Porter <i>Flanders Pavilion</i> Presented by Mario Motta	ALL
4-5pm	Planetary Nebulae <i>Presented by Larry Mitchell</i> Flanders Pavilion	ADV
6:30pm	Saturday Evening Program & Keynote Talk <i>Amphitheater (Flanders Pavilion if rain)</i> <i>Includes Keynote, Shadowgram, Raffle & Awards</i>	ALL, MCE
8:30pm-Midnight	Observing Olympics <i>Observing Fields</i> Coordinated by Eileen Myers Telescopes & Binoculars	OBS
9pm-Midnight	McGregor Observatory <i>open for observing</i> Weather Permitting	OBS
9pm-Midnight	Breuning Observatory (Domed Observatory) <i>open for observing</i> Weather Permitting	OBS
9pm-Midnight	Porter Turret Telescope <i>Open for Observing</i> Weather Permitting	OBS
10pm	Telescope Competition optical judging <i>Fields around Clubhouse (Only if not held Friday)</i>	ATM

SUNDAY, AUGUST 20, 2023

8am-Noon	Convention Cleanup <i>Please clean up around your campsite</i> Please put trash in the dumpsters	ALL
9am-noon	Stellafane History in Photos Video Display <i>Flanders Pavilion</i>	ALL, 100Y
9am-Noon	Hartness-Porter ATM Museum Open <i>Hartness House</i> Hosted by Matt Considine, Curator	ALL
10:30am-11:30am	Observing Olympics <i>Hillside below McGregor</i> Coordinated by Eileen Myers Award Pins Only	OBS

Event and Presentation Details

EVENTS FOR EVERYONE

Window to the Universe: The Story of a Historic Public Telescope

Friday 11–12pm, Flanders Pavilion, Presented by Richard Sanderson.

The Springfield Science Museum in Massachusetts is home to a historic public telescope, built by members of the Springfield STARS Club during the Great Depression of the 1930s, a time of burgeoning interest in amateur telescope making in America. Sanderson will describe this 20-inch Schmidt-Cassegrain telescope and its intimate link to the 200-inch telescope Hale Telescope at Palomar Observatory in California. He will explain how a Stellafane first-place winner finally ushered the project across the finish line in 1972.

The Story of Stellafane

Friday 2–3pm, Flanders Pavilion, Presented by Phil Harrington

Who are the people who have made Stellafane the great event that it is today? In this talk, Phil Harrington will profile some of the key individuals responsible for turning an anonymous hilltop in Vermont into the world's mecca of amateur telescope making and amateur astronomy.

Friday Evening Videos

Friday 6–7:30 pm, Flanders Pavilion

Short astronomy documentaries for the whole family.

The Life of Russell Porter

Saturday 3–4pm, Flanders Pavilion, Presented by Mario Motta

Russell Porter was a unique individual with an amazing career ranging from arctic explorer, architect, artist, and engineer on the Mount Palomar 200-inch Hale telescope. Porter taught himself how to grind and polish telescope mirrors for personal use, and then organized a group to share his knowledge with others. This group eventually became the Springfield Telescope Makers, whose shared techniques democratized amateur astronomy for anyone willing to build their own telescope. Mario will tell the story of Russell Porter's life.

SPECIAL STM CENTENNIAL EVENTS

Dressing Up in Period Attire

Friday 2–2:15 pm, Stellafane Clubhouse, Gather for Photo

Want to dress like conventioners did in the 1920's? Feel free, but please gather at the Stellafane Clubhouse for a group photo at 2 o'clock on Friday.

Stellafane Clubhouse Treasure Hunt for Children

Friday 1pm–4pm, Saturday 11am–12pm, and Saturday 2pm–4pm, Stellafane Clubhouse
Ages 5–16 Pick up list from Telescope Registrar

Drop in at any scheduled time to pick up your Stellafane Clubhouse Treasure Hunt list from the Telescope Competition Registrar in the Clubhouse. Two lists will be available, one for ages 5–7 years old, and another for ages 8–16 years. Hunt in the Clubhouse for the items on the list at your own pace and return your completed Treasure Hunt list to the Telescope Competition Registrar for a small prize! Saturday Bonus—the Mechanical portion of the Telescope Competition will be occurring at the Clubhouse on Saturday at the same time! The judges will close the Clubhouse for deliberations during the Mechanical Competition, but it will most likely be open during the times scheduled for the Treasure Hunt.

Historic Telescopes On Display

Saturday 10am–4pm, Stellafane Clubhouse, led by various members

Historic telescopes from the Stellafane Clubhouse will be on display at various times in and around the clubhouse on Saturday. Check at the clubhouse for specific times for specific instruments. Expected to be on display: Clubhouse Solar Projection Scope, Clubhouse Polar Cassegrain, the Clubhouse Transit Telescope, and the historic Porter Garden Telescope.

Stellafane Founding Members Historical Poster Display

Friday and Saturday 10am–4pm, Tent near Stellafane Clubhouse

Learn about the 12 Founding Members with a set of detailed posters, one for each Founder.

Astronomy Then and Now Poster Display

Friday and Saturday 10am–4pm, tent near Stellafane Clubhouse

A set of posters about how astronomy has changed in a century.

Stellafane History in Photos Video Display

Friday and Saturday 10am–4pm, Sunday 9am–12pm, Flanders Pavilion

A video display of historic photos from our archives.

Hand Crafted Telescopes On Display

Friday and Saturday 10am–4pm, Stellafane Clubhouse Grounds, Hand Crafted Telescopes made by club members and past competition entrants. Please check in with the Telescope Competition Registrar if you are setting up your hand-crafted telescope at the Stellafane Clubhouse.

HARTNESS-PORTER ATM MUSEUM OPEN

Friday 4–6pm and Sunday 9am–Noon, Hartness House (19 Front Street, Springfield), hosted by Matt Considine, Curator

The Hartness-Porter Museum of Amateur Telescope Making is located in the underground rooms at the Hartness House Inn. Admission is free. Follow the signs in town to the Hartness House at 30 Orchard Street of VT-143 (Map). Many of the items on display are by or about Russell W. Porter, including the Springfield and Garden telescopes. His artwork traces his arctic exploration years to his work on the 200" Palomar telescope, culminating in his famous cutaway drawings. Other items of interest include early telescopes and mirror making parts.

FOR CHILDREN AND TEENS

Astronomy Activities for Children

Friday 2–3pm (Planets); Saturday 11am–noon (Light and Telescopes); Saturday 2–3pm (Sun and Solar Eclipses) Presented by Kris Larsen, at the McGregor Observatory Library. Ages 5–12; Each session limited to first 20.

There will be three 1-hour astronomy workshops for children; each session has a different activity. These astronomy workshops have been held at the Stellafane Convention since 1995. Led by Dr. Kristine Larsen, Professor of Astronomy at Central Connecticut State University and a member of the Springfield Telescope Makers, each of the three 1-hour workshops includes several activities geared for children ages 5–12. Younger children are welcome but will need help from a parent.

Due to space limitations, each workshop is limited to 15 children on a first-come basis. Late-comers may be turned away.

Friday 2pm: Planets – How much bigger is Jupiter than the rest of the planets? How far away is Neptune compared to Mars? Build models to take home, one of the planets by size and the other by distance from the Sun. Win prizes for playing Planet Bingo!

Saturday 11am: Light and Telescopes – How can I 'see' invisible light? What does a colored filter do? How can I make a rainbow? How does a telescope work? Experiment with light in this series of hands-on activities.

Saturday 2pm: Sun and Solar Eclipses – Get ready for the April 2024 solar total eclipse by learning how to safely observe it with your family. Make a model of a solar total eclipse to take home, and use magnets to learn about sunspots.

Teen Robotics Project

Friday 1–5pm, at the Bunkhouse, presented by Paul Fucile, Eimear Gallagher & Cadence Payne. Teens 12–17

In observance of the Springfield Telescope Makers founding 100 years ago, Stellafane Teen program participants will learn about the technological breakthroughs occurring in the early 1920s and how many of them have evolved into present use today. Some of these may be familiar and others might be a bit of a surprise. All participants will work in groups and be asked to join in with their ideas about what technological advances we might expect in the next 100 years. This will be a hands-on class where the group will work in teams to construct 1920s era inspired technology that will be demonstrated at the Convention. Attendance will be first-come first-served. If you are 100% sure your teen will attend Convention and will

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want to attend this event, then you'll need to get them on the list. Please email us directly at robots@stellafane.org. Special note: There will be a lot of specialized instruction so you will need to be on time! We will be working with tools, so closed toe shoes are required, no flip-flops or open sandals.

Stellafane Clubhouse Treasure Hunt for Children (see information under "Special STM Centennial Events")

AMATEUR TELESCOPE MAKING DEMOS

Mirror Making Demo: Grinding Tools, Rough Grinding, Fine Grinding, Pitch Laps, Polishing, and Figuring

Friday and Saturday 10am–4pm (see specific times & topics in schedule on previous pages), Tent north of the T-shirt sales area, organized by Mike Hayes and Read Predmore.

This is a HANDS-ON mirror making demonstration. Gain first-hand experience working on mirrors at every stage of grinding, polishing and testing. Experienced ATMs will help explain each step of the process and answer any questions you may have. The 24" mirror we have been working on for several years will be available for grinding- please sign the log book when you work on it.

Dobsonian Basics

Saturday 2pm – 4pm, Tent north of the T-shirt sales area. Ken Slater will take you through the basics of constructing the Stellafane Dobsonian, a simple and inexpensive astronomical telescope that performs well and can be made with common hand tools.

FOR THOSE NEW TO ASTRONOMY OR STELLAFANE

Introduction to Stellafane

Friday 4–5pm, McGregor Library; Saturday 10am–10:45am, McGregor Observatory Library, presented by Kim & Dennis Cassia

Are you familiar with these terms: "The Pink", "Tent Talks" or "The Turret"? If not, or if this is your first time attending the Stellafane Convention, or if you are returning and want to learn more about who the Springfield Telescope Makers are, as well as what is going on during the Convention, then this presentation is for you. Topics include, but are not limited to: A short history of Stellafane, a description of our site, including the buildings and landmarks, descriptions of the scheduled talks and activities, services available at Stellafane, local services off site, etc., in addition to answering any questions you may have about the Convention.

Telescope Field Walk

Saturday 11:30am–12:30pm, Meet at Front of Stellafane Clubhouse, Led by David McGaw

During the "Telescope Field Walk" an experienced amateur telescope maker will guide small groups through the fields around the Pink Clubhouse, where the telescopes that will be participating in the mechanical competition will be set up. They will describe the various types of optical designs and mounting configurations that will be on display, point out the subtle details that go into award winning telescopes, and be available to answer your questions.

Solar System Walk

12:30–1:30pm Friday and Saturday, Meet at M44 (Green Shed) behind Clubhouse, Led by Kaitlynn Goulette

To illustrate the vast size of outer space, the Springfield Telescope Makers have constructed a scale model of the solar system, based on the Sun being 12 inches in diameter. At that scale, the Earth would be approximately 1/10 of an inch in diameter and 107 feet from the Sun. Jupiter would be 1.2 inches in diameter and approximately 560 feet from the Sun.

The Solar System Walk begins behind the Pink Clubhouse and proceeds down the road going towards the Stellafane camping area. At the appropriate distance from the scale model of the Sun, there are stations with the appropriate planet, built to scale, and a short description of each planet. The Solar System walk can be taken on your own at any time during the Convention. However, a guided walk is available at the times mentioned above, when a docent will provide additional information about the Solar System Walk and each particular planet. The walk takes approximately three-quarters of an hour if you walk all the way to the planet Neptune, for a total distance of 3,232 feet or a little over half a mile.

INTERMEDIATE LEVEL TALKS

Imaging the Great North American Eclipse

Friday 1pm–2pm, Flanders Pavilion, Presented by Al Takeda

In 2017, six years ago, the United States witnessed a rare total solar eclipse. Next year, on April 8, 2024, another North American total solar eclipse will produce an awe inspiring, naked eye, visual spectacle. This time the narrow path will make landfall in Mexico, cross into the United States and exit in Canada. For those who want to image this event, one must plan and practice before the sunlight disappears and that magical moment arrives. In this presentation, Al Takeda will discuss how to safely image a total solar eclipse. Topics will include the type of camera to use, telescopes and camera lenses, proper solar filters, camera platforms and other sage advice from this eclipse chaser.

Imaging the Great North American Eclipse: Demo

Friday 3 pm–4 pm Near Breuning Observatory, Presented by Al Takeda, Demo. Mr. Takeda will demonstrate the techniques described just above.

Dynamic Eclipse Broadcast Initiative

Saturday 10–11am, Flanders Pavilion, Presented by Richard Danley & Chris Mandrell

The Dynamic Eclipse Broadcast Initiative (DEB-I) group is a nation-wide citizen science team that is developing and running projects for the 2023 annular and 2024 total solar eclipses. Goals are in the areas of science and broadcasting. Images will be collected for scientific studies. Previous solar eclipses produced accurate tracing of chromospheric surges from the Sun's poles. Working with NASA EDGE, WSIU NPR, PBS affiliates, and volunteer-led groups across North America, real-time images and movies will be broadcast during eclipses, both from inside the path of totality and from sites with partial eclipse coverage. Solar observation teams of citizen scientist will receive training and become part of the network. Richard Danley is an undergraduate from Southern Illinois University, and is passionate about solar studies. Chris Mandrell is a doctoral candidate in physics from Southern Illinois University. They are still recruiting teams for inside and outside the eclipse paths.

Pro/Am Collaboration: It Can Be Easy & Cheap or Complicated & Expensive, but Always Rewarding!

Saturday 11am–12pm, Flanders Pavilion, Presented by Peter Bealo

We have many ways to contribute to astronomical research. While some require significant investment in equipment and absorb quantities of time, others require virtually no time commitment and no equipment beyond your household computer and internet access. We will examine both extremes and options between them.

Breathing New Life into Your Vintage Refractor

Saturday 2pm–3pm, Flanders Pavilion, Presented by Rich Nugent

You've found a vintage refractor. It's covered in dust and spiders are living inside the tube... now what? Rich Nugent will take you through the steps to refurbish the telescope. His presentation will offer advice on cleaning the objective, on tuning up the focuser to work smoothly and handle modern 1.25-inch eyepieces, and on collimating the optics. Before you know it, that old scope will provide wonderful views for generations to come!

ADVANCED LEVEL TALKS

Optical Coatings & Oilings for Astronomical Instruments

Friday 3pm–4pm, Presented by Alan Ward, Flanders Pavilion

The optical surfaces of all modern quality astronomical instruments are either coated and/or oiled-spaced with extremely thin layers of metallic/dielectric or liquid materials to improve optical performance. This presentation will describe the mechanics of depositing these materials & the theory of thin-film interference, and give an overview of what every telescope user should know about the many available optical coatings/oilings for lens/mirrors and how to care for them.

Exploring the Local Supercluster

Friday 4pm–5pm, Presented by Clifton Ashcraft, Flanders Pavilion

This talk is based on Clif's ongoing campaign imaging the galaxies of the Virgo Supercluster. They range from the nearby galaxies in our local group clear out to the other side of the Virgo Cluster, galaxies over 100 million light years away. The imaging was done by live stacking with a C14 and a CMOS video camera, a technique that is easy to use and gives pleasing images without the hassle of long exposure guided images.

Evolute Tester for Optical Surfaces

Saturday 1–2pm, Presented by Terrell (Terry) Koken, Flanders Pavilion

An evolute is the locus, or collection, of centers of curvature of a curve. The Evolute Tester is a patented device that provides unprecedented precision in the testing and characterization of optical surfaces, concave, convex, flat, and other. It needs no auxiliary optical components to work. The current embodiment of it can test surfaces up to about fifty-two inches in diameter, to a precision determined by the diameter and f/ratio of the surface. While some mathematics is involved in the development and theory of the device, its use is computer controlled, and the mathematically faint of heart need experience no anxiety in this regard.

Planetary Nebulae

Saturday 4pm–5pm, Presented by Larry Mitchell, Flanders Pavilion

Planetary Nebulae – What they are, how they got there, where they are going, and new discoveries. Come and learn about the objects on this year's Telescope Observing Olympics list.

OBSERVING

Solar Observing Hour

Friday and Saturday, 2pm–3pm, Observing Fields. Please set up your Solar Scope and share. All attendees with solar filters or projection set-ups are encouraged to share the Sun with other attendees. The Simoni, Breuning, McGregor, and Porter Turret observatories will be set up for solar observing as well.

Observing Olympics

Thursday, Friday, & Saturday 8:30pm–midnight or later, Developed by Larry Mitchell (telescope list) and Phil Harrington (binocular list), coordinated by Eileen Myers. Pins awarded at the Observing Olympics table on the hillside below the McGregor. Scan the QR code at right for details and observing lists. **Sunday 10:30am–11:30am**, Hillside below McGregor, Coordinated by Eileen Myers. Last opportunity to receive an award pin.



Cook Spectroheliograph

Friday & Saturday, 9am–5pm, Simoni Observatory, Solar Observing (weather permitting). The circa 1930 Cook Spectroheliograph will be observing solar prominences and sunspots in hydrogen-alpha light. The Simoni Observatory is northwest of the Stellafane Clubhouse on Breezy Hill.

Porter Turret Telescope

The 1930 Porter Turret Telescope is located just north of the clubhouse on Breezy Hill. Observing, weather permitting:

Thursday 9pm–midnight

Friday 9am–6pm (Solar)

Friday 8pm–midnight

Saturday 8am–6pm (Solar)

Saturday 9pm–midnight

McGregor Observatory

The McGregor Observatory, home of the 13-inch Schupmann Refractor, is located on a hilltop in the northwest corner of Stellafane East. Observing, weather permitting:

Thursday 9pm–midnight

Friday 10am–4pm (Solar)

Friday 8pm–midnight

Saturday 8am–6pm (Solar)

Saturday 9pm–midnight

Breuning Observatory (Domed Observatory)

The domed Breuning Observatory is located just south of and downhill from the McGregor Observatory.

Friday 2pm–6pm (Solar)

Friday 9pm–midnight

Saturday 2pm–6pm (Solar)

Saturday 9pm–midnight

THE FAMOUS STELLAFANE RAFFLE

The raffle offers spectacular donated prizes to lucky winners. Your odds of winning are really good. The money raised goes to support next year's Convention and to make capital improvements to the Convention site. Tickets are available next to the T-shirt stand (across from the Food Tent) and from designated STM members roaming the site. We appreciate the generosity of our donors, and your support by purchasing raffle tickets. You must be present at the Saturday Keynote Program to win. Thank you all very much!

FRIDAY EVENING INFORMAL TALKS

Friday 7:30pm, Flanders Pavilion, Bruce Beford, MC. Short presentations by Convention Attendees. If you wish to contribute a short talk during this session, please register online (QR code at right). Talks are limited to 10 minutes and 20 slides. The time limit will be strictly enforced! A digital projector will be available for your use. Please bring your presentation on a USB stick.



SATURDAY SWAP TABLES

Saturday 7am–Noon. The Swap Tables are located at the northeast edge of the main camping/parking area. They are provided to give amateurs an opportunity to trade, buy or sell their surplus astronomical and telescope related items. **IMPORTANT: see Swap Table Policy in on page 10.**

SATURDAY KEYNOTE PROGRAM

Saturday 6:30 pm at the hillside Thayer Amphitheater (In case of inclement weather, the program will be held inside the Flanders Pavilion). Dr. Mario Motta, of the Springfield Telescope Makers, will be master of ceremonies.

- Greetings, announcements, children's raffle and raffle drawing
- Presentation of Telescope Competition Awards
- Stellafane Shadowgram: Dr. Kris Larsen: Stellafane Convention–The Real Magic Kingdom
- Stellafane Keynote Talk by Joe Rao: Adventures of an Eclipse Chaser

To witness a total eclipse of the Sun is a privilege that comes to few people. Many live and die without ever beholding one. Once seen, however, it is a phenomenon never to be forgotten. There is an panoply of phenomena that occurs when the Sun becomes completely covered by the Moon. The radiance of the pearly corona of the Sun can be seen at no other time. The darkness of twilight and sudden fall of temperature remain indelibly implanted in our memories for a lifetime. Over the last 50 years, Joe Rao has chased 13 eclipses around the globe, by land, sea and air. His talk, "The Adventures of an Eclipse Chaser", details the interesting, funny, and poignant occurrences he has experienced in his efforts to briefly bask in the shadow of the Moon.

For 21 years, Joe Rao was the Chief Meteorologist and Science Editor at News 12 Westchester (NY). He was nominated for 8 Emmy Awards, and in 2015 the Associated Press of New York awarded him top honors in the category "Best Weathercast". Since 1986 he has served as an associate and guest lecturer at the New York Hayden Planetarium. He is a Contributing Editor for *Sky & Telescope* magazine and writes a syndicated weekly column for the online news service Space.com. He also pens a monthly astronomy column for *Natural History* magazine, and provides annual astronomical data for *The Farmers' Almanac*.

SUNDAY CLEANUP

Sunday 8 am–Noon, please clean up around your campsite and parking area. All trash should be deposited in one of the large dumpsters by the Food Tent or Exit Lane. Please make sure there are no obstacles to grass mowing in the fields—any rocks, stakes, or other hazards should be returned to the woods or taken to the dumpsters. If you would like to take down rebar and string, we would appreciate that. Pile rebar and string on the side of the road, where it will be easy for us to find and pick up. Thanks!

Advice, Guidelines, and Policies

To ensure your enjoyment and safety at The Stellafane Convention, please read this section carefully.

Emergencies and First Aid

In case of emergency please contact Security (by the gate) or any STM member. If you have a family service radio, you may contact Convention staff via channel 7 (please avoid non-emergency use of this channel at Convention). **First aid kits are located in the Bunkhouse, the McGregor Observatory, and the Clubhouse.** We have trained medical staff on site.

Where to Set Up your Telescope

Most people set up their telescopes in the field to the south of the McGregor Observatory, although there are other areas within Stellafane East that are useable. You may not set up your telescope in a designated parking area, in the outdoor amphitheater area, or anyplace else it might be in the way of other activities. Use common sense, and please consult the site map as well as the signs posted throughout the Convention site for the designated parking locations.

If you register your homemade or antique telescope for the Competition, to compete or for "Display Only", you may drive up to the Clubhouse area in the daylight hours to drop it off and pick it up. However, there is no extended parking as space is extremely limited. Please move your car to a designated parking area at Stellafane East as soon as possible.

Lighting Policy

Stellafane does not allow open white lights on clear nights, except for one half hour after the Friday and Saturday evening talks end. Vehicular travel after this time is strongly discouraged and is done only at the risk of the operator. Red filter paper for flashlights is available at the Clubhouse and at the T-shirt stand. We thank you for your cooperation.

Laser Pointer Policy

Lasers pointers can be a helpful tools for astronomers, but can be dangerous if not properly used. Direct viewing of a laser-pointer beam, even briefly and at a distance of a kilometer or two, has the potential to cause temporary blindness – the same effect you get right after a flash photo is taken – or afterimages. These effects last anywhere from seconds to minutes. Glare, which is a reduction or loss of central vision, lasts only as long as exposure to the beam. All these effects could be disastrous if they struck a person operating machinery, driving a car, or flying a plane.

To help use your laser tools safely, the Springfield Telescope Makers, Inc. has adopted these recommendations as policy. These are based on the suggestions from the Laser Institute of America and published in May 2005 by *Sky and Telescope*.

- Laser pointers are designed to illuminate inanimate objects. Never shine a laser pointer toward any person, aircraft, or other vehicle.
- Never look directly into a beam of a laser pointer of any type.
- Do not allow children to use a laser pointer unsupervised. Laser pointers are not toys.
- If your telescope is equipped with a laser pointer that has a "constant on" setting, do not leave the instrument unattended with the laser switched on.
- Do not aim a laser pointer towards mirrors or other shiny surfaces. The reflected beam may inadvertently strike someone in the eye.
- Do not aim a laser pointer skyward if you hear or see an aircraft of any kind flying overhead.
- Laser pointers shall not be used in the Clubhouse observing fields.
- Additional laser use restrictions may be put into place by the Springfield Telescope Makers, Inc. as situations arise.
- The Convention staff, at its sole discretion, may terminate or prohibit use of lasers by any person on Springfield Telescope Makers, Inc. property.

Smoking Policy

Smoking of any substance, including vaping, is prohibited at all times in the Pavilion, Clubhouse, amphitheater, and observatories. Individuals may request that you not smoke within 6 feet of their personal telescope set up in any observing field.

Swap Table Policy

For the sake of historical continuity, to preserve the uniqueness of the Stellafane Convention and to encourage conventioners to build their own instruments, the Springfield Telescope Makers, Inc. does not allow commercial sales, of any kind, at the Stellafane Convention. All swap table sales must comply, in concept, with the above objective but are also specifically subject to the following criteria:

- Surplus astronomical, telescope and telescope making related items may be sold.
- Each person will be allowed 16 square feet of table or ground space.
- Items with the appearance of being specifically purchased or manufactured for sale at the Swap Tables may not be sold.
- All sales must take place within the designated Swap Table area only between 7am and Noon, the Saturday of the Stellafane Convention.

The Springfield Telescope Makers, Inc. may choose to grant a limited exception to the above policies to astronomy related organizations for their fundraising. Any request for an exemption must be made, in writing, at least one month prior to the Convention. If granted, the President of the Springfield Telescope Makers, Inc. will notify the requesting organization in writing.

Any member of the Springfield Telescope Makers, Inc. has the authority to determine whether a party is in compliance with the established regulations. Any person who is found to be in violation of the stated policies will be required to comply. Failing compliance, the offending party will be asked to leave the Convention and may be escorted from the premises by Convention Security.

The Springfield Telescope Makers, Inc. encourages those with questions regarding this policy to contact the Club via the Stellafane web page at www.stellafane.org. During the Convention, any questions regarding this policy, the appropriateness of items being displayed, or any information being disseminated, should be directed to a member of the Springfield Telescope Makers, Inc.

Generators

Use of generators is discouraged at Convention. Properly muffled RV generators and quiet portable generators of 1,000 watts or less may be used between the hours of 9am and 6pm in the camping areas only. Generators may never be used in the observing fields, after dark, or at other locations at Stellafane. The generator must not create a hazard. Any complaint of unsafe operation or excessive noise will immediately cause the generator to be banned from operation.

Cell Phone Service

Be advised that cell phone service is "spotty" in hilly southern Vermont. Good coverage is generally available near interstates and town centers, but gets less reliable as you move off into the countryside. At Stellafane, you might have to move about the site to get a connection, but most carriers do have a useable signal at least in some (higher) areas of our site. If you can see Mt. Ascutney to the north, you will likely have service.

Electrical Outlets

There are outlets in the McGregor Observatory and just inside the main entrance to the Flanders Pavilion that may be used for recharging batteries and portable devices. The Springfield Telescope Makers accept no responsibility for unattended property. **No extension cords may be used. Convention attendees may not use any other indoor or outdoor outlets anywhere on our campus for any purpose. This is an important safety precaution, and it will be strictly enforced.**

Food Service

The main Food Service Tent is located just to the south of the Bunkhouse. Note: This Food Service Tent is open all night if you need a snack and/or coffee during your observing session. Food service will be available for Thursday dinner and for Friday breakfast if you are using our Early Entry Permit option.

Shuttle Bus

The Shuttle Bus makes two stops in Stellafane East, one by the Food Tent and one by the main camping area ("Pine Island;" see Stellafane East Site Map). It makes one stop on Breezy Hill near the Clubhouse.

Family Service Radios

The Convention staff uses family service radio channel 7 to facilitate communications during the Convention. **Please avoid use of channel 7 when you are at the Convention site, except in emergencies.**

2 Meter Repeater: W1STM

There is a 2 meter Ham Radio repeater in continuous operation on site, call sign W1STM, operating at 147.15 MHz, +600kHz offset, no tone.

Campfires Not Allowed

Open campfires are not permitted. If you are camping and/or cooking on the Stellafane site, you must use approved cooking equipment such as a portable grill or camp stove. Do not cut any trees. Also, always be careful about disposal of cigarette butts.

Golf Carts and ATVs

No personal golf carts or ATVs will be allowed at Convention. Only golf carts and ATVs being used for official Convention purposes will be allowed.

Pet Policy

The Springfield Telescope Makers, Inc. welcomes you to bring your pets to the Stellafane Convention, provided the following rules are followed:

- **Pets must be confined, leashed or otherwise under the physical control of a person at all times. Leashes may not exceed 6 feet in length. Pets that are tethered at the campsite cannot be left unattended for more than 30 minutes. Pets may not be tied to trees, bushes, tables or shelter facilities, even when the owners are present. Individuals may request that you not allow your pet within 6 feet of their personal telescope or photographic equipment set up in an observing area.**
- **Pets must be well-behaved at all times. Pets must be confined in the owner's camping unit during quiet hours (11pm – 8am).**
- **Pet owners are required to pick up after their pets and properly dispose of all pet droppings in trash receptacles.**
- **Any pet that is noisy, dangerous, intimidating or destructive will not be allowed to remain at the Convention.**

Failure to comply with the above rules will result in you and your pet being asked to leave the Convention; you may be escorted from the premises by Convention security. The Springfield Telescope Makers, Inc. thanks you in advance for helping to make the Stellafane Convention more enjoyable for everyone. Enjoy the Convention!

Stellafane Endowment Fund

The Endowment Fund is intended to ensure that the birthplace of amateur telescope making is preserved for future generations by providing adequate funding to cover the basic costs of maintaining the Stellafane Clubhouse, the Porter Turret Telescope and the McGregor, Bruening, and Simoni Observatories, and other existing and future buildings and properties owned by the Springfield Telescope Makers, Inc. If you are interested in supporting the

endowment fund you may do so by mail or online with our Donation Form at stellafane.org/help/donate-form.html. Thanks!

Lost and Found

The lost and found is located at the T-shirt table across from the Food Tent.

Stellafane Website

We Want Your Photos and Videos!

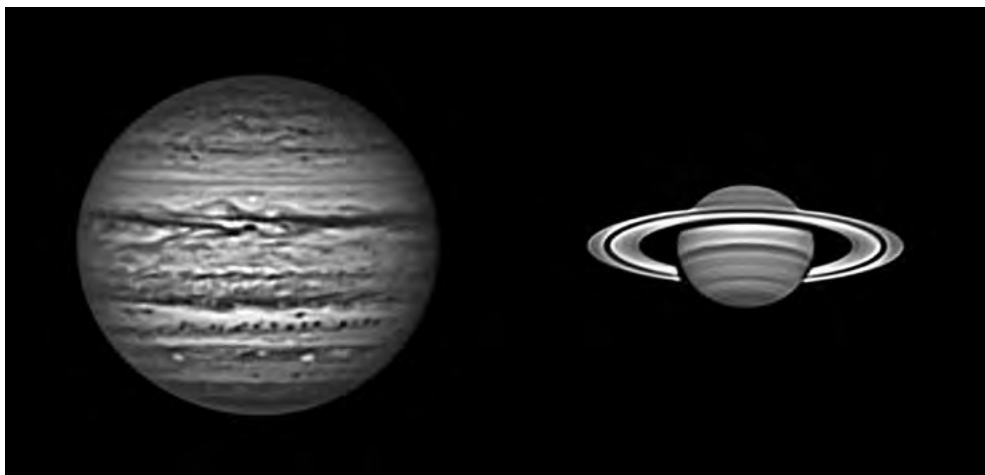
The Stellafane website (Stellafane.org) offers extensive how-to information and links on telescope making, and detailed Stellafane history. You'll also find accounts and photos from past Conventions there, and of course we will post many photos from this Convention in the weeks following the event, as well as the list of competition winners. **Your submissions are very welcome—please send your photos (or links to those you've uploaded to sharing sites) to webmaster@stellafane.org. Videos are welcomed as well, but please don't send them directly; use a sharing service like YouTube or Vimeo and send us a link.**



EMERGENCIES & FIRST AID

IN CASE OF EMERGENCY PLEASE CONTACT SECURITY BY THE GATE) OR ANY STM MEMBER. If you have a family service radio, you may contact Convention staff via channel 7 (please avoid non-emergency use of this channel at Convention).

First aid kits are located at the T-shirt stand, the McGregor Observatory, and the Stellafane Clubhouse.
We have trained medical staff on site.



Jupiter and Saturn, September 3 2022, shot in very good seeing by Thomas Spirock, using the 13-inch Stellafane Schupmann telescope at f/23.4, with a color CMOS camera (converted here of course to greyscale and "upsampled" with no other processing). Saturn photographed at 02:50 UT; Jupiter at 04:32 UT.

The Telescope Competition

The Heart and Soul of Stellafane

If you have built a telescope or a special gadget, or restored a historical instrument, we strongly encourage you to enter it in the competition!

Note: You can drive up to the Stellafane Clubhouse area during daylight hours Friday or Saturday to drop off and pick up your telescope, but there is no extended parking as space is extremely limited. Please move your car to a designated parking area at Stellafane East as soon as possible.

Telescopes may be entered in either competition or both competitions if you wish.

First Homemade Telescope Certificate

In order to further encourage and recognize telescope building, we are offering a certificate of recognition for first time telescope makers. You do not have to enter the competition if you do not want to, but you must bring your first homemade telescope to Breezy Hill and display it. Please register ahead of time online and check in at the Clubhouse. You will be awarded a certificate recognizing your efforts in building and displaying your first homemade telescope at Stellafane, and your name will be shown on the screen at the Saturday night program.

Master Class

In order to encourage first-time entrants to enter their scopes without feeling that they must be ready to compete with previous first-place winners and optical professionals who enter their amateur work, we have established a separate competition class for entrants with a track record of high achievement. Rules are available at the registration table.

Optical Competition

2023 OPTICAL JUDGING CHAIR: RICK HUNTER

Registration for the optical competition will take place on Friday from 5pm to 8pm in the Clubhouse. Keep in mind that if you have registered your instrument online, you must still check in at the Clubhouse Friday from 5pm to 8pm or your telescope will not be judged! Set up your scope on Breezy Hill before you check in and inform the judges of the location of your scope. If the position of your scope changes it is your responsibility to report its new location to the judges in the Clubhouse. Failure to do so will result in your scope not being judged!

All telescopes in the competition **must be fitted with an eyepiece with a focal length, in millimeters, approximately equal to the focal ratio of the instrument.** Your instrument must be properly collimated before judging begins at 10pm. Also, **be prepared to point your scope at the star Altair** when the judges arrive. Please note that the judges may inspect your telescope more than once. Therefore, you should remain on the field with your instrument until word that the judges are finished is announced via loudspeaker. Note that judging can last until 2 or 3am!

If the weather permits the completion of the judging on Friday night, the optical judging will be closed for the duration of the Convention and optical awards will be presented during the Saturday evening program. If the optical judging cannot be completed Friday night, it will be continued on Saturday night, weather permitting. Additional optical entries may be accepted on Saturday, at the discretion of the judges. To inquire about this possibility, please ask a judging representative in the Clubhouse from 5pm to 8pm on Friday or from 8am to 9:30am on Saturday.

In the event that the competition will have to be continued Saturday, some telescopes that were judged on Friday might need to be judged again. Please inquire with the judges if your scope will need to be available again on Saturday. If the optical judging cannot be completed by the end of Saturday night, a partial field of optical excellence awards may be given, at the discretion of the judges.

Please note that it is the intention of the Stellafane judging committee to have the optical competition completed Friday night, weather permitting. Therefore, to ensure that your instrument is judged you must be registered for the Friday night judging.

Clarification on "small" vs. "large" Newtonians: The small category includes any mirror of 12.5 inches optical diameter or less; the "large" category is for mirrors that are greater than 12.5 inches in diameter.

Mechanical Competition

2023 MECHANICAL JUDGING CHAIR: CHRIS HOUGHTON

Registration for the mechanical competition will be between 8am and 9:30am Saturday morning in the Clubhouse. Keep in mind that if you have registered your instrument online, you must still check in at the Clubhouse Saturday morning or your telescope will not be judged. The telescope judging for mechanical excellence will begin at 10am so please register your telescope as early as possible.

Only telescopes that are operative both mechanically and optically will be accepted in the mechanical competition. The judges will visit the telescopes in several small groups. You must attend your telescope until the end of the competition is announced via the loudspeaker. Be prepared to describe any special construction techniques and components to the judges. Awards for mechanical design, craftsmanship, special gadgets, restoration of historical instruments, and junior telescopes made by persons less than 16 years of age, will be awarded at the Saturday evening talks.

Mechanical design vs. craftsmanship: the mechanical award is for the design of the instrument, how unique it is compared with prior art, and its effectiveness in providing a useful instrument, while the craftsmanship award is for execution (how well the design was translated into a workable and functional instrument).

LAST YEAR'S COMPETITION WINNERS

OPTICAL

FIRST PLACE (SMALL NEWTONIAN)—Christian Rossi, Winchendon, MA, *FIRST SCOPE* 7.87-inch f/4.85 Newt Dob • **FIRST PLACE OPTICAL (COMPOUND TELESCOPE)**—Matthew Paul, Montague, NJ, 6-inch f/20 Dall-Kirkham GEM

MECHANICAL

FIRST PLACE MECHANICAL DESIGN—Sara Skloss, Milton, VT, *FIRST SCOPE* 10-inch f/6.5 Newt Dob full CNC/3D-printed • **SECOND PLACE MECHANICAL DESIGN**—Christian Rossi, Winchendon, MA, *FIRST SCOPE* 7.87-inch f/4.85 Newt Dob
THIRD PLACE MECHANICAL DESIGN—Michael Toups, Boxborough, MA, 6-inch f/8 refractor Inverted fork mount with Byers gear • **FIRST PLACE CRAFTSMANSHIP**—Christian Rossi, Winchendon, MA, *FIRST SCOPE* 7.87-inch f/4.85 Newt Dob
SECOND PLACE CRAFTSMANSHIP—Sara Skloss, Milton, VT, *FIRST SCOPE* 10-inch f/6.5 Newt Dob full CNC/3D-printed

MASTER CLASS

FIRST PLACE MECHANICAL DESIGN—Kevin Clay, Milford, CT, 5.1-inch f/5 Lightweight, compact scope for hiking • **SECOND PLACE MECHANICAL DESIGN**—Peter Wraight, Skillman, NJ, 3-inch f/9 Newt alt/az binoscope • **THIRD PLACE MECHANICAL DESIGN**—Peter Wraight, Skillman, NJ, 3.25-inch f/7.5 refractor alt/az binoscope
FIRST PLACE CRAFTSMANSHIP—Kevin Clay, Milford, CT, 5.1-inch f/5 lightweight, compact scope for hiking

JUNIOR

FIRST PLACE MECHANICAL—Sydney & AK Burke, 4½-inch f/6 Newt alt/az

ANTIQUE RESTORATION

ANTIQUE RESTORATION AWARD—Anthony Costanzo, Plaistow, NH, 1933 Fecker 4½-inch f/15 refractor antique restoration

SPECIAL AWARDS

INNOVATIVE COMPONENT: PARAMETRIC DESIGN SYSTEM—Sara Skloss, Milton, VT, 10-inch f/6.5 Newt Dob full CNC/3D-printed • **SPECIAL CATEGORY AWARD**—John Paladini, Mahopac, NY, Refractor on GEM with Spectroheliometer
INNOVATIVE COMPONENT AWARD: ULTRALIGHT COMPACT SYSTEM—Kevin Clay, Milford, CT, 5.1-inch f/5 Lightweight, compact scope for hiking