

November In Review

...and then some



2020 NOVEMBER

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Virtual
Meeting**

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IMAGERS IMAGING AND IMAGING

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South Shore Astronomical Society

Since 1958

Observing Objectives – November '20



A sampling of some rewarding night-sky treats for this month:

Open Clusters – See the Caroline Herschel article.

Globular Cluster – NGC 288 in Sculptor.

Double Star – Sigma Cassiopeia, (5.0, 7.2, 3") a nice challenge.

Planetary Nebula – NGC 246 in Cetus, the Skull Nebula.

Galaxy – NGC 278 in Cassiopeia, the Observers Challenge object for November.

Comet – ATLAS (C2020 M3) is in Orion and brightening.

Mercury – Best morning apparition of the year, 19"W elongation on the 10th.

Venus – Keeps trekking towards the Sun, 88.5% and 11.7" by the 30th.

Mars – Loses almost a magnitude in brightness and shrinks to 14.6" by the 30th.

Jupiter – Still not seen the Great Red Spot? Click [here](#) to find out when you can.

Saturn – The King of the Rings continues to amaze, in the south at sunset.

By Day: The Sun – rising from its slumber of minima lately, definitely.

Notable Dates: New Moon – 11/15 Full Moon+ Eclipse* – 11/30

*Penumbral Eclipse – 4:42am on Monday, Nov. 30th.

<https://www.timeanddate.com/eclipse/in/usa/boston>

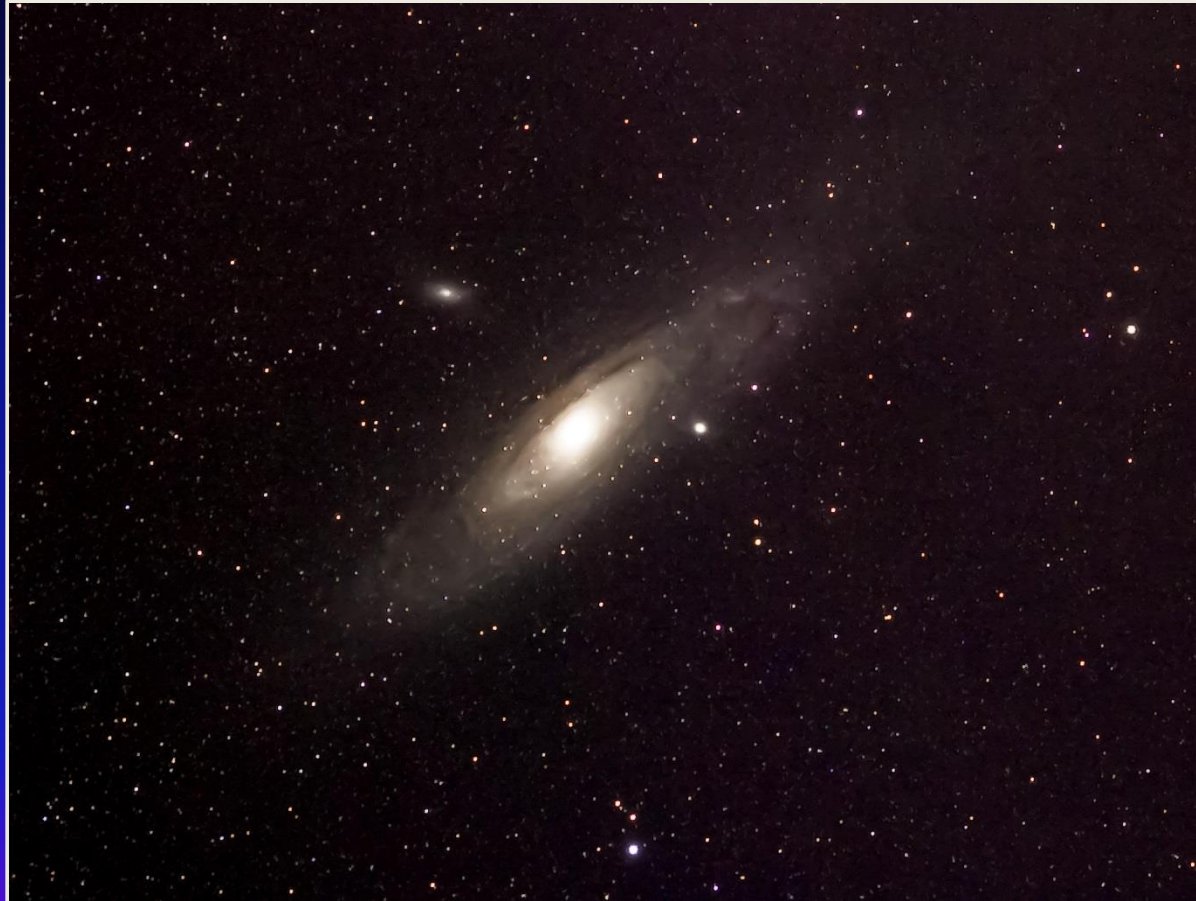
November 2020 Featured Astrophotos



NGC 7814

Oops...Hal Schaefer
Jim Rutledge

November 2020 Featured Astrophotos



M31, M32, M110

Matt Schricker

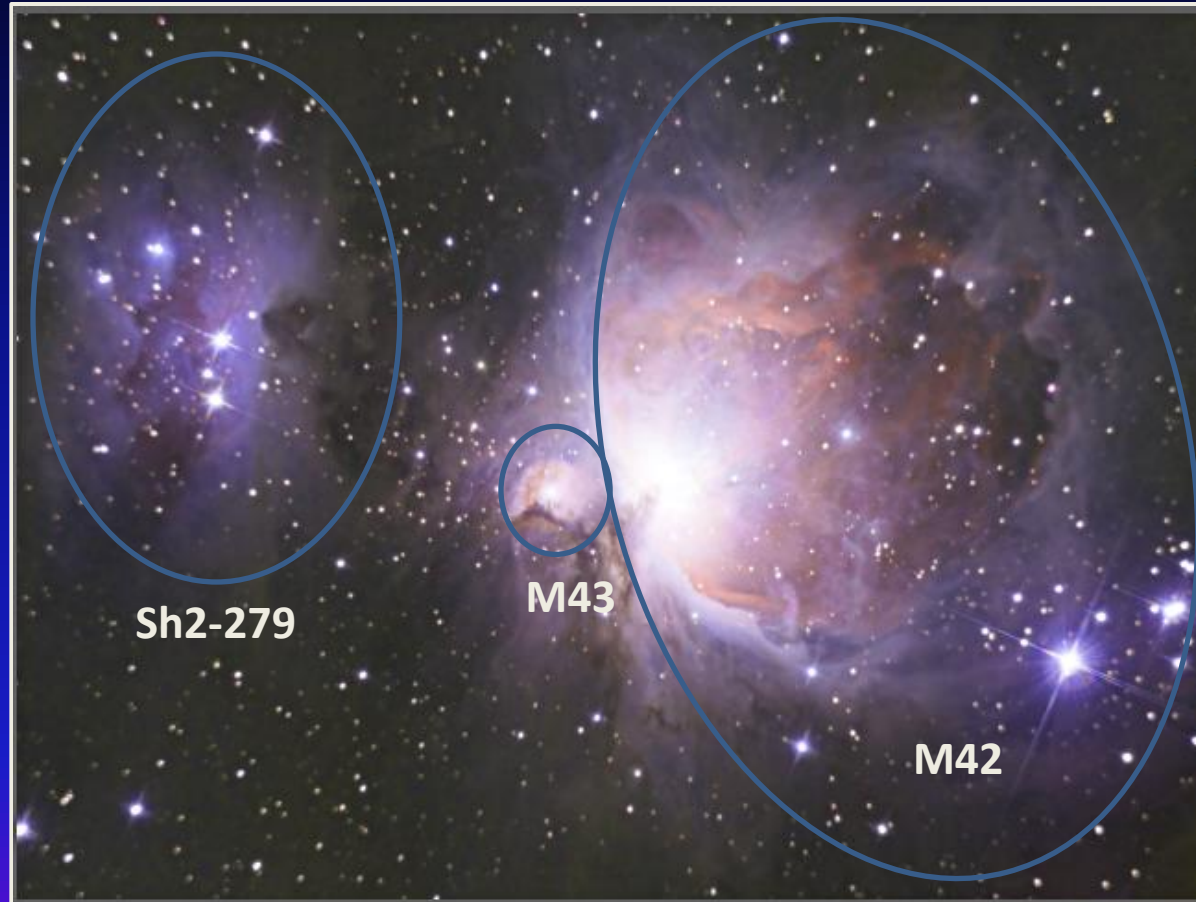
November 2020 Featured Astrophotos



M42, M43, Sh2-279

Carl Bellitti

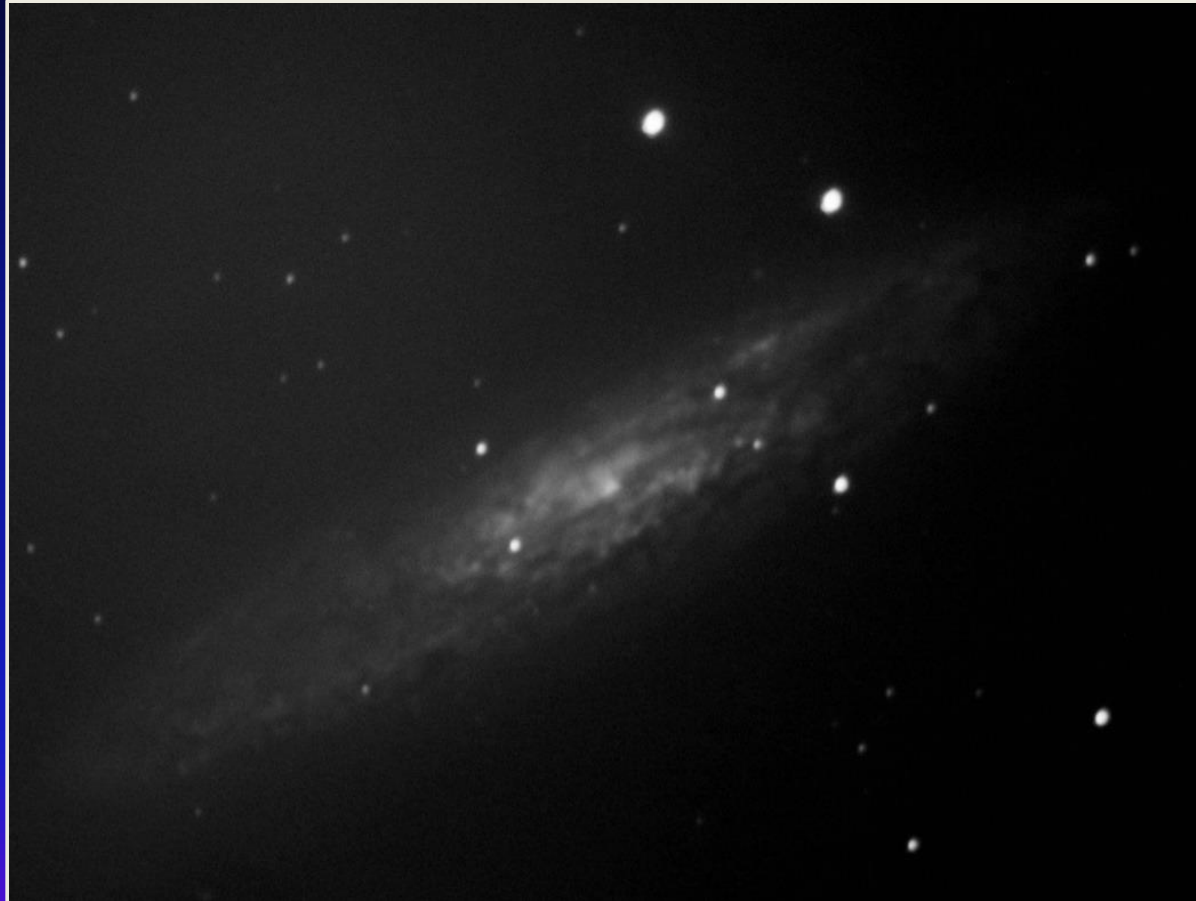
November 2020 Featured Astrophotos



M42, M43, Sh2-279

Carl Bellitti

November 2020 Featured Astrophotos



NGC 253, The Sculptor Galaxy

Hal Schaefer

November 2020 Featured Astrophotos

Sculptor galaxy
C 65 - NGC 253 - PGC 2789

Type: **active galaxy** (SAB(s)c)
Magnitude: **8.00** (extincted to: **8.34**)
Color Index (B-V): **0.04**
Surface brightness: **13.42** (extincted to: **13.76**)
RA/Dec (J2000.0): 0h47m33.14s/-25°17'19.7"
RA/Dec (on date): 0h48m35.73s/-25°10'23.0"
Hour angle/DE: 23h13m54.36s/-25°07'58.3" (apparent)
Az/Alt: +168°44'53.9"/+22°02'34.4" (apparent)
Ecliptic longitude/latitude (J2000.0): +0°03'45.2"/-27°46'34.6"
Ecliptic longitude/latitude (on date): +0°21'39.5"/-27°46'33.7"
Ecliptic obliquity (on date): +23°26'12"
Galactic longitude/latitude: +97°21'49.5"/-87°57'52.4"
Mean Sidereal Time: 0h2m29.5s
Apparent Sidereal Time: 0h2m28.4s
Size: +0°27'30" x +0°06'48"
Orientation angle: 51°
Distance: 3,500±0.200 Mpc
Redshift: 0.000864

Earth, +41°58'59", -70°54'08" FOV 50.8° 15.5 FPS 2020-11-15 20:03:48 UTC-05:00

NGC 253, The Sculptor Galaxy

November 2020 Featured Astrophotos



M1, The Crab Nebula

Eric Lawrence

November 2020 Featured Astrophotos



M1, The Crab Nebula Expansion 1973 - 2000

GIF Credit: Rochester Institute of Technology

November 2020 Featured Astrophotos



NGC 2419, The Intergalactic Wanderer

Jim Ahola

November 2020 Featured Astrophotos

Presenter's Choice



NGC 891

Jim Ahola

SSAS Quiz Night

Certificate of Achievement South Shore Astronomical Society

Got a Score Of

85/100

On

This Quiz on Astronomy is only for geniuses

ProProfs
Quiz Maker

Nov 25, 2020



Moon Observing Tools

App Store Preview

Open the Mac App Store to buy and download apps.



Moon Globe 4+

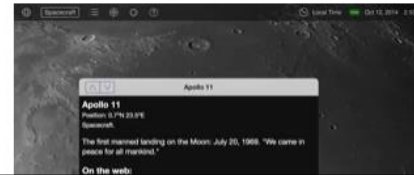
Midnight Martian

Designed for iPad

★★★★★ 4.6 • 331 Ratings

Free

Screenshots iPad iPhone



Apple



LunarMap HD

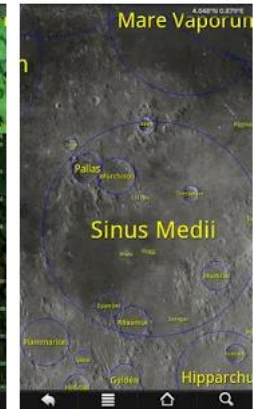
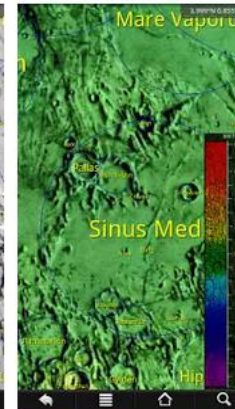
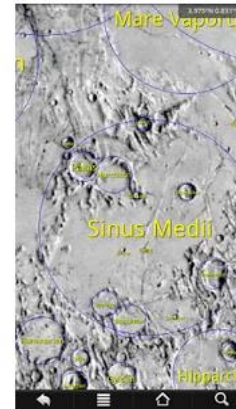
Omega Centauri Software Education

★★★★★ 195

Everyone

This app is compatible with your device.

Installed



Android

Image Processing Tools



DeepSkyStacker

- [Introduction](#)
- [Download](#)
- [Screenshots](#)
- [User's Manual](#)
- [DeepSkyStacker Live](#)
- [FAQ](#)
- [How to create better images](#)
- [Tutorials](#)
- [Technical details](#)
- [Wiki](#)
- [Support](#)
- [Groups.io](#)

DeepSkyStacker

What is DeepSkyStacker?
DeepSkyStacker is a **freeware** for astrophotographers that simplifies all the pre-processing steps:

- Registering
- Stacking
- Simple post-stacking processes to quickly view the final result.
- Saving the resulting image to a TIFF or FITS file (16 or 32 bit)


After a shooting night you give all your pictures (light frames, darks frames, offset/bias frames, next morning (or is it afternoon?) you can see the result and start post-processing.

If you can't wait, [DeepSkyStacker Live](#) is also available to watch the result of an ongoing image downloaded from the CCD or DSLR.



If you want to translate DeepSkyStacker in another language [click here](#).
[Resource Localizer](#) is used to keep DeepSkyStacker available and synchronized.

DeepSkyStacker: Main Features



HOT PRODUCT SKY & TELESCOPE 2004

[2008 RTMC Clyde Tombaugh Award for Creative Innovation in Astronomy](#)

[IP 6.50 Camera Control Control & Auto Focus Guide](#)

[IP 6.50 x64 & 6.0 x32 Image Processing](#)

[Image Processing Tutorials & Articles](#)

[Image Examples](#)

[ImagesPlus Demo](#)

[Free ImagesPlus 6.5 Download](#)



South Shore Astronomical Society

Since 1958

Observing Objectives – December '20



A sampling of some rewarding night-sky treats for this month:

Open Cluster – Caldwell 1, NGC 188 in Ursa Minor.

Globular Cluster – NGC 288 in Sculptor...going low for a glob!

Carbon Star – Z Piscium...see red in a good way.

Planetary Nebula – M76 in Cassiopeia, the Obs. Challenge object for December.

Galaxy – NGC 891 in Andromeda...I double dare you to visually observe this!

Comet – Got nuthin' for ya.

Mercury – Reaches superior conjunction on the 19th.

Venus – Shrinks to 10.7" and gets within 21* of the Sun by the 31st.

Mars – Dims to near 0 magnitude and shrinks to 10.4" by month's end.

Jupiter –

Saturn –

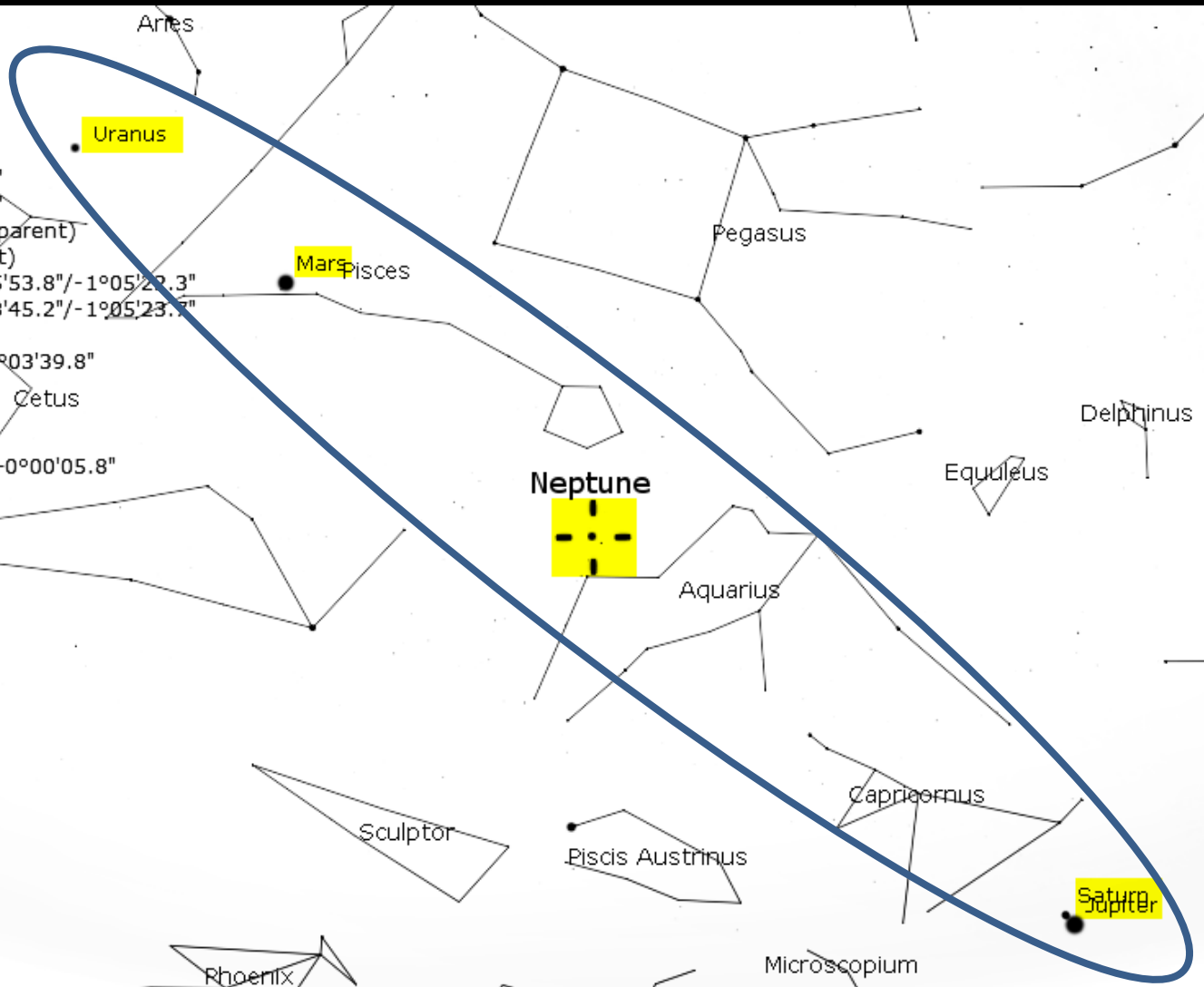
Witness the best Great Conjunction of Jupiter and Saturn since 1623, when on December 21st the two most beautiful gas giants in our Solar System will appear separated by just .1*!

By Day: The Sun – rising from its slumber of minima lately, without doubt now.

Notable Dates: New Moon – 12/14 Solstice – 12/21 Full Moon – 12/29

Neptune

Type: **planet**
 Magnitude: **7.89** (extincted to: **8.09**)
 Absolute Magnitude: 32.08
 RA/Dec (J2000.0): 23h17m18.99s/-5°46'24.8"
 RA/Dec (on date): 23h18m25.02s/-5°39'25.4"
 Hour angle/DE: 0h57m38.81s/-5°38'17.5" (apparent)
 Az/Alt: +199°02'18.4"/+40°35'53.1" (apparent)
 Ecliptic longitude/latitude (J2000.0): +347°55'53.8"/-1°05'22.3"
 Ecliptic longitude/latitude (on date): +348°13'45.2"/-1°05'23.7"
 Ecliptic obliquity (on date): +23°26'12"
 Galactic longitude/latitude: +72°20'39.8"/-59°03'39.8"
 Mean Sidereal Time: 0h16m6.0s
 Apparent Sidereal Time: 0h16m5.0s
 Distance: 29.966AU (4482.834 Mio km)
 Apparent diameter: +0°00'02.3", with rings: +0°00'05.8"
 Sidereal period: 60189.00 days (164.789 a)
 Sidereal day: 16h6m36.0s
 Mean solar day: 16h6m36.6s
 Phase Angle: +1°52'56"
 Elongation: +86°48'23"
 Phase: 1.00
 Illuminated: 100.0%



S

Date and Time x

Date and Time			Julian Day		
2020	/	12 / 12	18	:	31 : 13



Club Business



ANNUAL ELECTIONS

SECTION 1.

(A) The Officers of the society shall be a PRESIDENT, VICE PRESIDENT, SECRETARY and TREASURER.

These Officers shall be elected at the December regular meeting by a majority vote and shall serve for ONE (1) year.

There shall be no limitation of successive terms for any office.

(B) In addition to the officers named in part (A) of this section, there shall be three (3) DIRECTORS, who together with these officers shall constitute the BOARD OF DIRECTORS.

Directors shall be elected at the December regular meeting by a majority vote and shall serve for ONE (1) year.

There shall be no limitation of successive terms of DIRECTORS.



Club Business



Current Officer and Board Member Lineup

President –	Eric Lawrence	Nay	Directors:	
Vice Pres –	Jeff Smith	Yea	Patty Bogan	Yea
Secretary –	Judy Macioci	Yea	Louis Gentile	Any*
Treasurer –	Chuck McCarthy	Nay	Mike McCabe	Any



Club Business



Potential 2021 Officer and Board Member Lineup

President – Louis Gentile

Vice Pres – Jeff Smith

Secretary – Judy Macioci

Treasurer – Mike McCabe

Directors:

Patty Bogan

Don Greeley

Hal Schaefer



Club Business



A Proposal to Display Member Astrophotos at the Scituate Library





Club Business



Looking Ahead...

SSAS Spring Star Party

If the weather next May looks amenable...

- **When** – Thursday, May 13 to Sunday, May 16, 2021
- **Where** – Hazen's Notch Campground, Lowell, VT
- **What** – Camping and Dark-Sky Observing
- **Cost** - \$35 a night (camping only)



Club Business



Looking Ahead...

SSAS Constellation Study Series

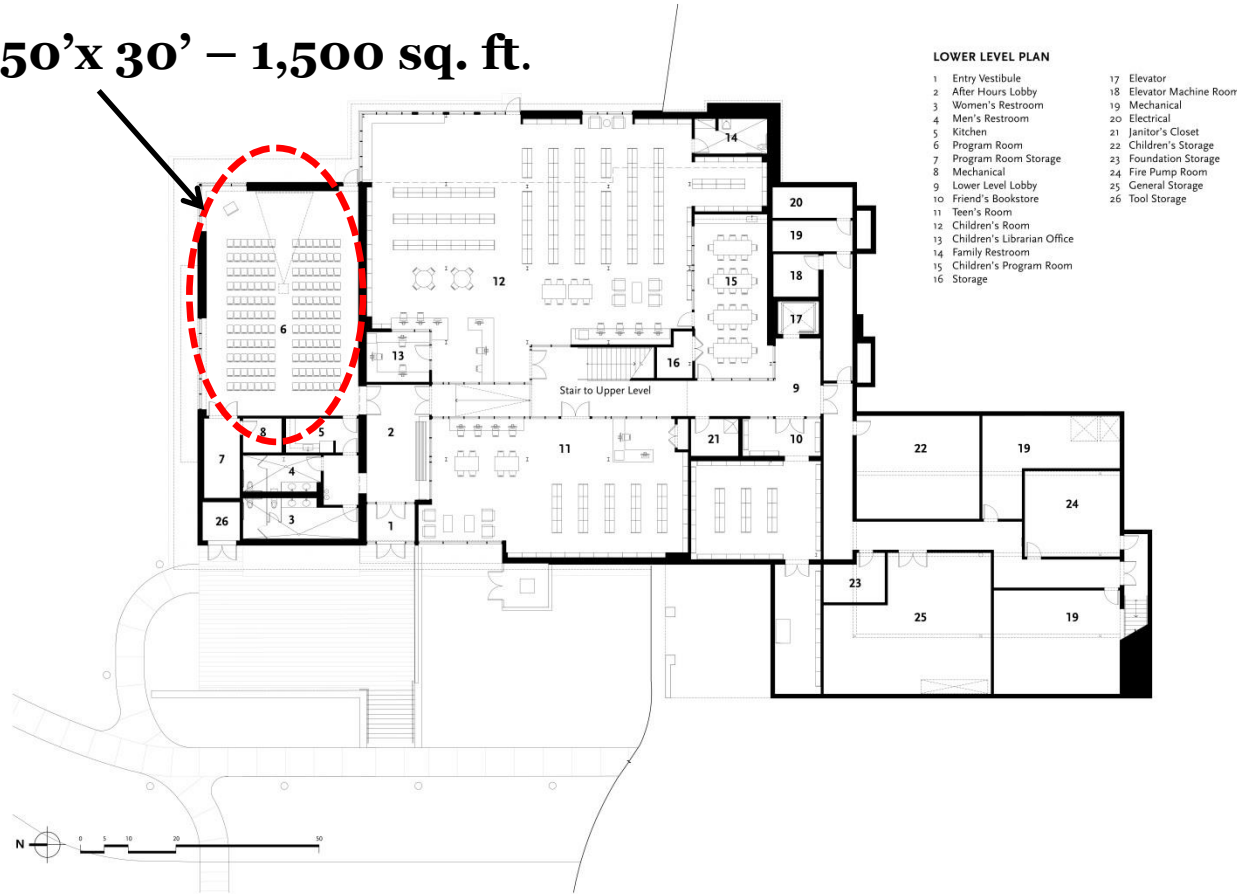
- **When** – One night per month around New Moon
- **Where** – Centennial Field, Norwell*
- **What** – Identify the visible constellations...
Review ancient mythology...
Explore with binoculars...
- **Provided** - Planispheres, dim red flashlights, reference materials, laser pointer...
- **You Bring** - A chair, favorite star atlas, binoculars...



Club Business

- Why we (sort of) love Zoom...

50'x 30' – 1,500 sq. ft.



Massachusetts
Phase 3, Stage 2
Reopening:

~~25pp doors,
8/10 sq. ft.~~

Library
Community Rm.
Capacity:

Pre-CoVid, 150

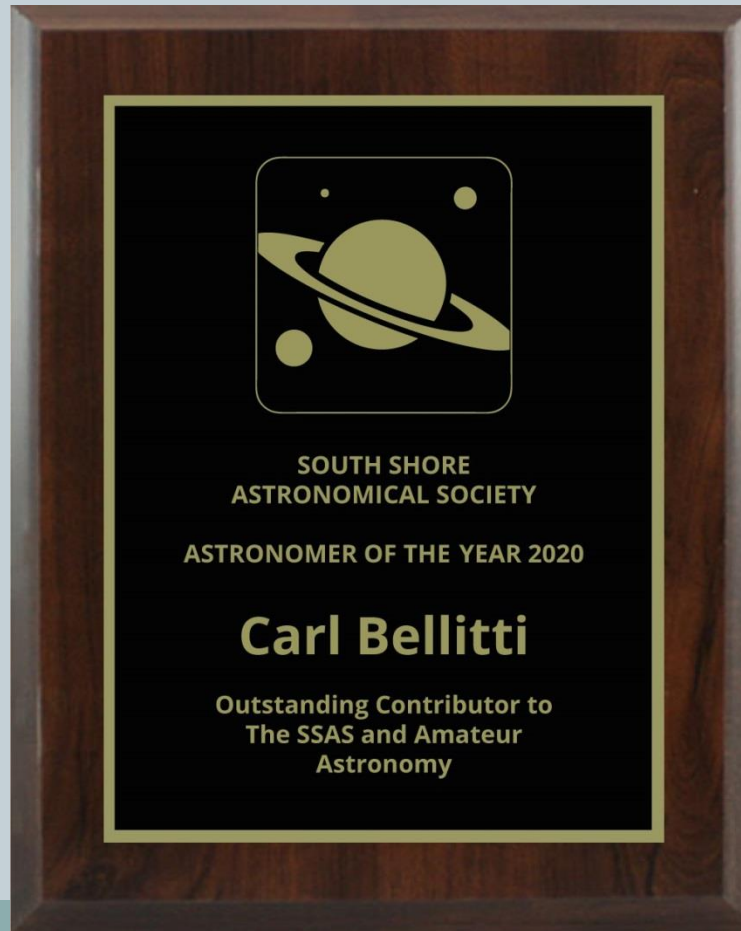
Current – **10**



Club Business



SSAS Astronomer of The Year 2020

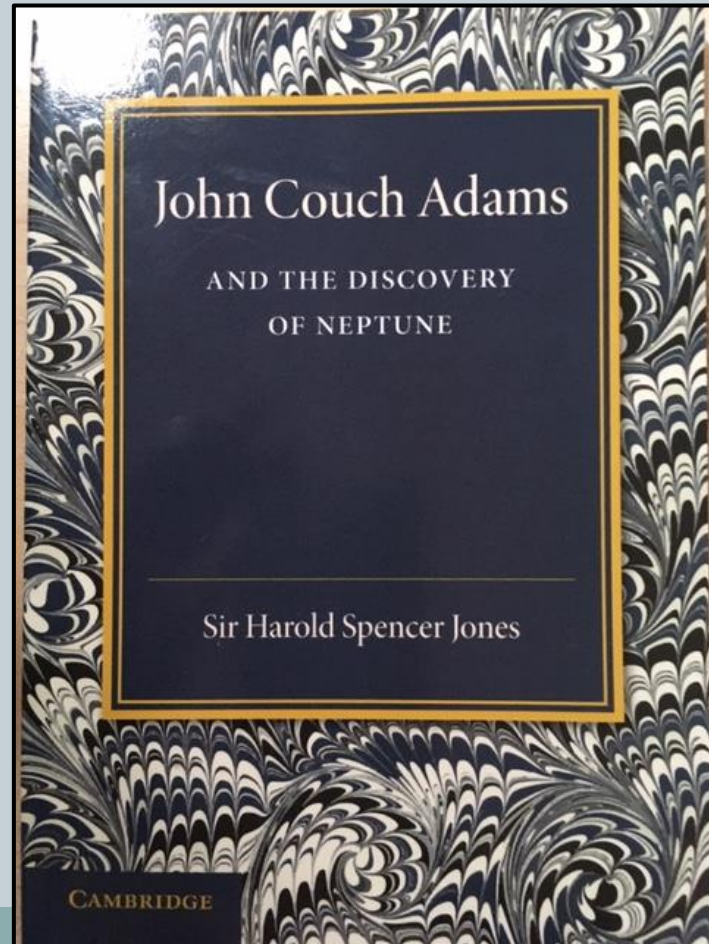




Club Business



December's Door Prize



Clear Skies!

