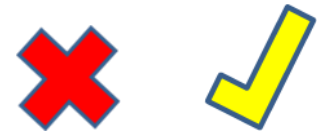


August In Review

...and then some



2020 AUGUST



SUN	MON	TUE	WED	THU	FRI	SAT
						1
2	3	4	5 SSAS Virtual Meeting	6	7	8
9	10	11	12	13  Hazen's	14  Notch Star	15  Party
16	17	18	19	20  Ellisville	21	22
23	24	25	26	27	28  	29
30	31					

SSAS Summer Star Party

- **When** – Thursday, August 13 to Sunday, August 16
 - **Where** – Hazen's Notch Campground, Lowell, VT
 - **What** – Camping and Dark Sky Observing
 - **Cost** - \$35 a night per group of four (camping only)
 - If you're interested in participating in this event, please contact the campground and make your reservations. Be sure to mention your club affiliation so that they know you're coming as part of the group.
 - **Website:** <http://hazens-notch-campground.com/wp/>
 - **Phone:** (802) 744-6612
- N.44° 49' 34.8204" (44.826339°)
W.72° 28' 59.5884" (72.483219°)

See You There!

Hazen's Notch Campg
Aug. 16th, 2020 5:29 am
Summer Sky Party

H
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#1

#2

#3

Crescent M

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J. S

Hercules Cluste



Summer Star Party S.S.A.S.
Hazen's Notch Campground
Aug. 13th - 15th, 2020

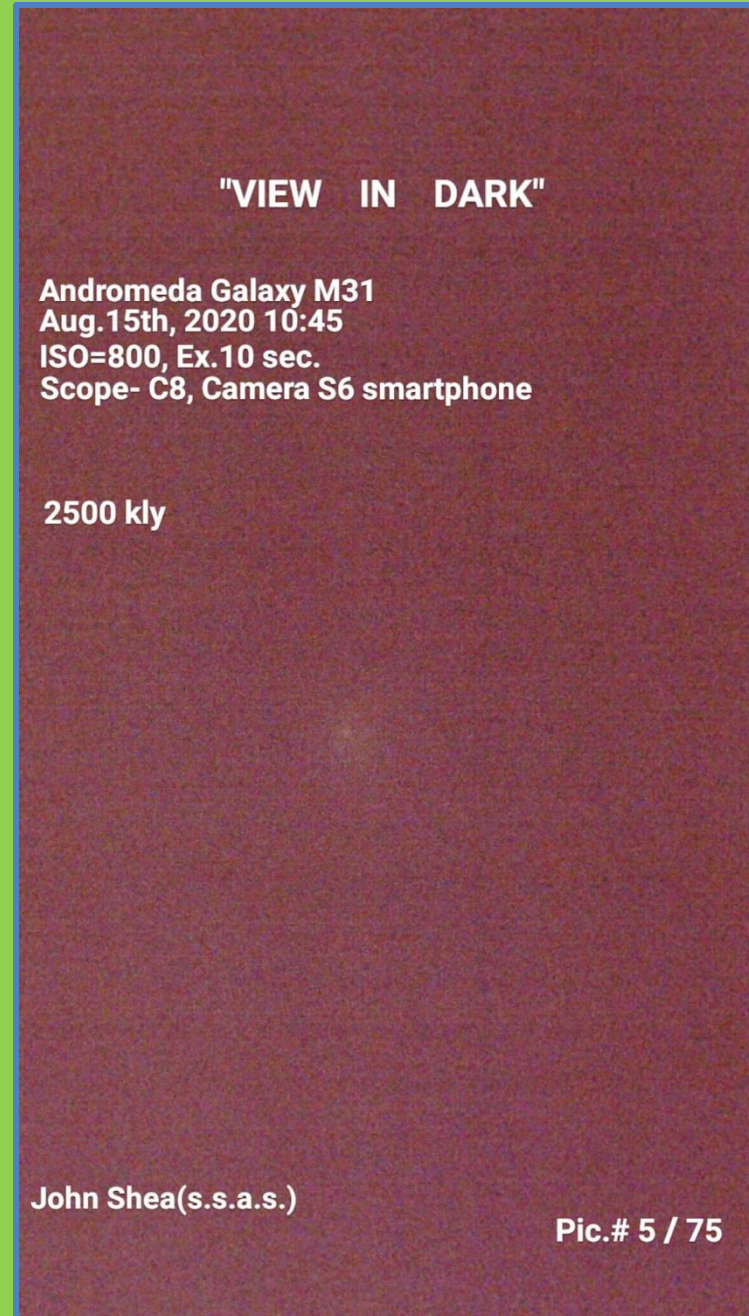
"Northward"

John Shea

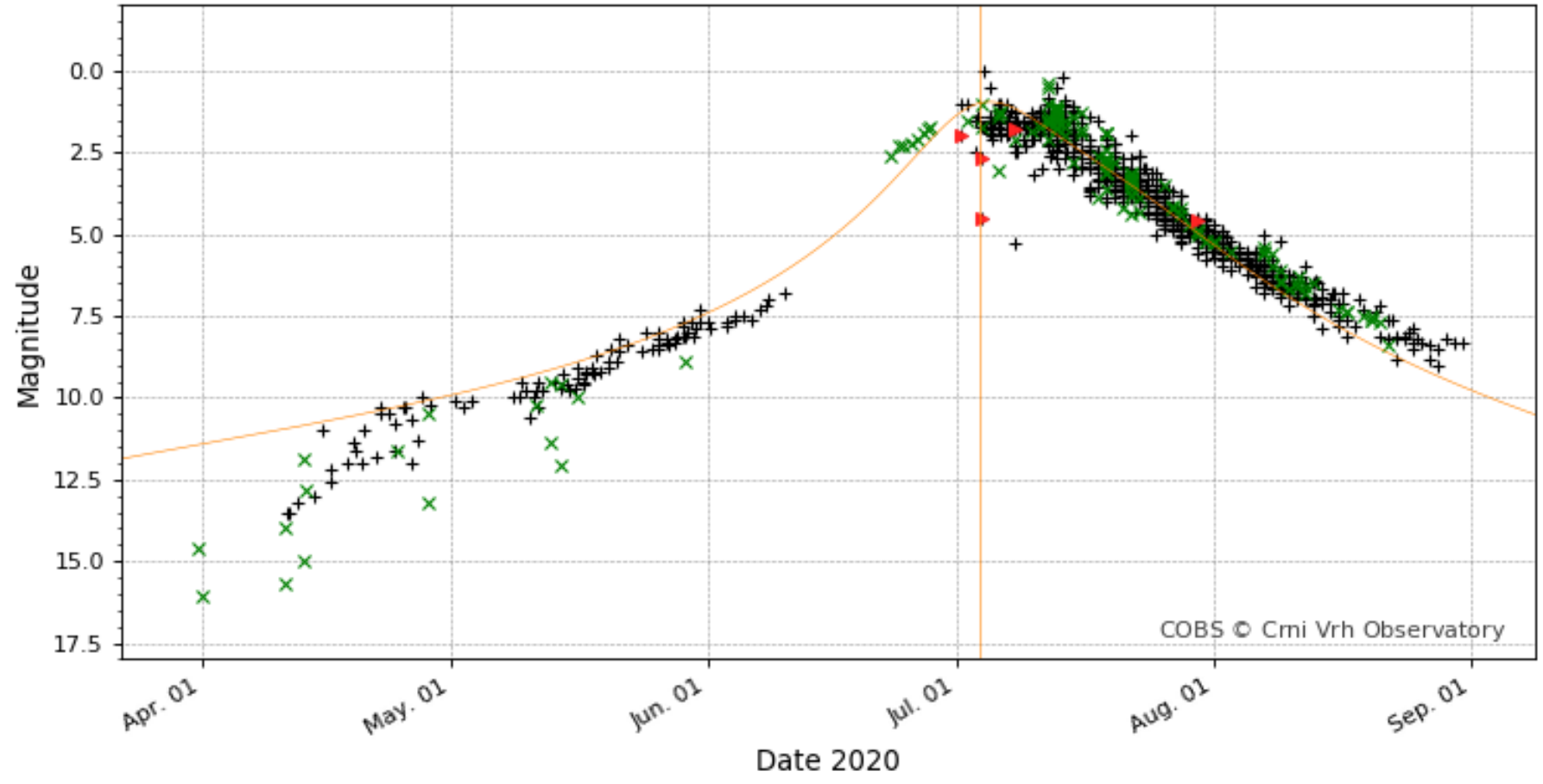
Pics from Hazen's Notch



‘Curves’ stretch in Gimp



Light curve of Comet C/2020 F3 (NEOWISE)



+ Visual observations ▶ Not visible — Date of Perihelion
x CCD observations — H0: 6.80; n: 4.61

South Shore Astronomical Society

Since 1958

Observing Objectives – August '20



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

Open Cluster – M20, Trifid Nebula, Observer's Challenge object for this month.

Globular Cluster – M71 in Sagitta. Loose concentration, relatively young.

Double Star – Xi Sco and Struve 1999 – a Scorpius double double!

Planetary Nebula – NGC 6818, the Little Gem nebula in Sagittarius.

Galaxies – NGC 6822, aka C57 – Barnard's Galaxy in Sagittarius.

Comet – C/2020 F3 NEOWISE – Still a solid binocular object in early August.

Mercury – Poorly placed throughout most of this month.

Venus – Hits greatest western elongation on the 13th, see it at 50% phase.

Mars – grows to 16.5" by mid-month, 18.8" by month's end.

Jupiter – Look for moon shadow transits and the Great Red Spot – prime time!

Saturn – Also prime time, can anything trump those rings???

By Day: The Sun – rising from its slumber of minima lately, see active regions.

Notable Dates: Full Moon – 8/3 Persids Peak – 8/12 New Moon – 8/18

***Nebulous Objects in Cygnus**



Clockwise: Hal S, Jim R, Carl B.



South Shore Astronomical Society

Since 1958

Observing Objectives – September '20



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

Open Cluster – NGC 7789, Caroline's Rose cluster in Cassiopeia.

Globular Cluster – M15 in Pegasus. 12 billion years old and houses PN Pease 1.

Double Star – Almach (Gamma Andromedae) Striking color contrast.

Planetary Nebula – NGC 7009, the Saturn nebula in Aquarius.

Galaxy – NGC 404, Mirach's Ghost in a dwarf lenticular galaxy in Andromeda.

Comets – No recommendations this month.

Mercury – Low-angle eastern elongation this month, tough to observe.

Venus – Continues its march towards the Sun, approaches Regulus end of month.

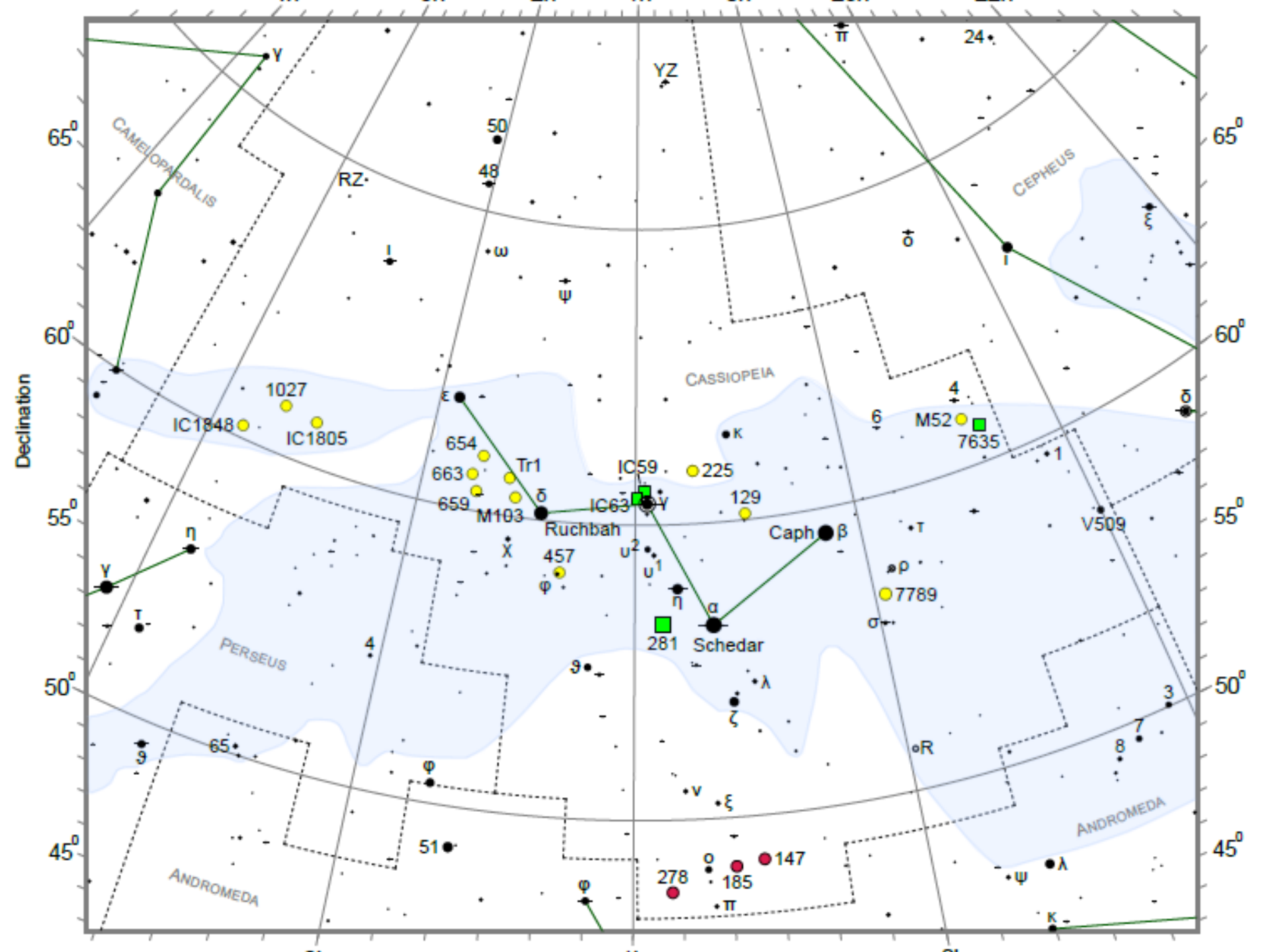
Mars – grows to 22.4" by month's end, culminates at nearly 55* above horizon.

Jupiter – Channel Galileo this month – draw the moons!

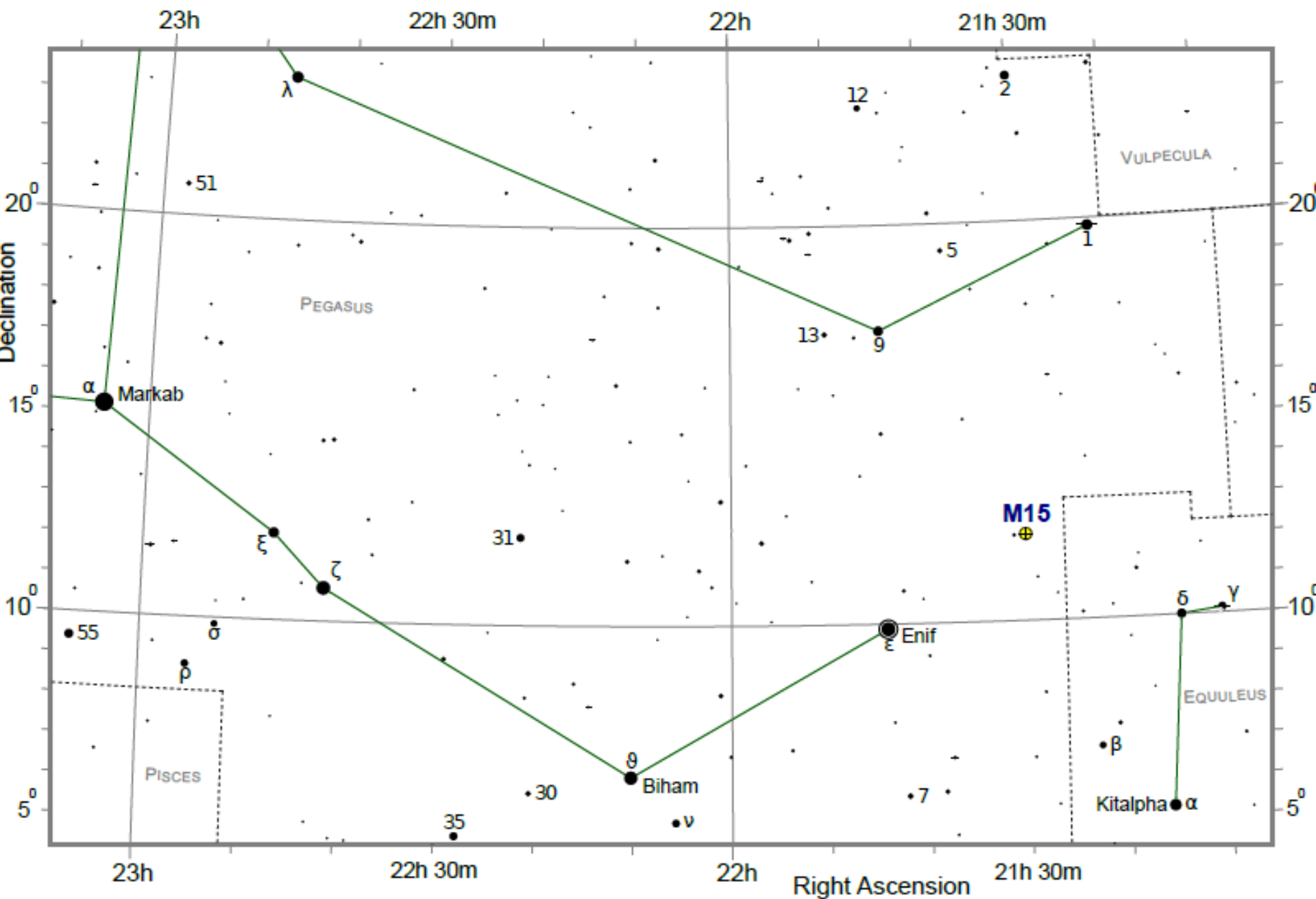
Saturn – Take the Saturnian Satellite Challenge – can you get 5?

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

Notable Dates: Full Moon – 9/2 New Moon – 9/17 Equinox – 9/22



Messier 15 - M15



Mercury

Type: **planet**
Magnitude: **0.90** (extincted to: **1.67**)
Absolute Magnitude: 32.46
RA/Dec (J2000.0): 14h01m31.98s/-15°19'06.6"
RA/Dec (on date): 14h02m40.77s/-15°25'11.7"
Hour angle/DE: 4h06m29.17s/-15°20'56.5" (apparent)
Az/Alt: +239°19'15.3"/+9°25'06.3" (apparent)
Ecliptic longitude/latitude (J2000.0): +213°35'35.3"/-2°46'15.6"
Ecliptic longitude/latitude (on date): +213°53'16.1"/-2°46'22.7"
Ecliptic obliquity (on date): +23°26'12"
Galactic longitude/latitude: -33°08'27.4"/+44°16'20.5"
Mean Sidereal Time: 18h9m26.6s
Apparent Sidereal Time: 18h9m25.6s
Distance: 1.003AU (150.004 Mio km)
Apparent diameter: +0°00'06.7"
Sidereal period: 87.97 days (0.241 a)
Sidereal day: 1407h30m33.8s
Mean solar day: 4222h27m52.5s
Phase Angle: +76°54'07"
Elongation: +25°48'42"
Phase: 0.61
Illuminated: 61.3%



Date and Time [X]

Date and Time **Julian Day**

2020 / 9 / 30 18 : 12 : 35

Venus

Type: planet
Magnitude: -4.09 (extincted to: -3.79)
Absolute Magnitude: -27.34
RA/Dec (J2000.0): 9h56m35.61s/+12°46'09.7"
RA/Dec (on date): 9h57m43.75s/+12°40'07.0"
Hour angle/DE: 19h32m18.58s/+12°41'28.3" (apparent)
Az/Alt: +95°52'59.4"/+25°32'39.6" (apparent)
Ecliptic longitude/latitude (J2000.0): +146°51'11.2"/+0°13'13.4"
Ecliptic longitude/latitude (on date): +147°08'52.2"/+0°13'18.9"
Ecliptic obliquity (on date): +23°26'12"
Galactic longitude/latitude: -136°34'55.1"/+46°44'04.5"
Mean Sidereal Time: 5h29m56.9s
Apparent Sidereal Time: 5h29m55.9s
Distance: 1.069AU (159.859 Mio km)
Apparent diameter: +0°00'15.6"
Sidereal period: 224.70 days (0.615 a)
Sidereal day: 5832h28m47.1s
Mean solar day: 2802h0m52.2s
Phase Angle: +64°41'50"
Elongation: +40°33'15"
Phase: 0.71
Illuminated: 71.4%

Notable date - October 3
Venus/Regulus Conjunction
Very close - .1*!!!

Daytime Sextantids

E

Date and Time [X]

Date and Time			Julian Day		
2020	/	9 / 30	5	:	35 : 10

Mars

Type: **planet**
Magnitude: **-2.47** (extincted to: **-2.31**)
Absolute Magnitude: 30.99
RA/Dec (J2000.0): 1h38m0.77s/+6°10'18.0"
RA/Dec (on date): 1h39m6.92s/+6°16'42.9"
Hour angle/DE: 23h55m35.84s/+6°17'26.1" (apparent)
Az/Alt: +178°07'30.6"/**+54°17'38.4"** (apparent)
Ecliptic longitude/latitude (J2000.0): +24°57'35.2"/-3°44'55.9"
Ecliptic longitude/latitude (on date): +25°15'16.8"/-3°44'50.3"
Ecliptic obliquity (on date): +23°26'12"
Galactic longitude/latitude: +143°19'36.7"/-54°50'42.9"
Mean Sidereal Time: 1h34m43.7s
Apparent Sidereal Time: 1h34m42.7s
Distance: 0.418AU (62.520 Mio km)
Apparent diameter: **+0°00'22.4"**
Sidereal period: 686.97 days (1.881 a)
Sidereal day: 24h37m22.7s
Mean solar day: 24h39m35.2s
Phase Angle: +12°47'32"
Elongation: +161°54'20"
Phase: 0.99
Illuminated: 98.8%



Date and Time [X]

Date and Time			Julian Day		
2020	/	9 / 30	1	:	40 : 0



Jupiter's Moons

This illustration shows the positions of Jupiter's four Galilean satellites — Io, Europa, Ganymede, and Callisto — in orbit about the planet for any date and time from January 1, 1900, to December 31 2100.



Please choose your view:

Direct View
(Erect-image system)

Inverted View
(Newtonian/Dobson)

Mirrored reversed View
(SCT/Mak/refractor+diagonal)

Date: Time: UT Time Zone offset from UT in hours

Reset to current date & time

Calculate using entered date and time

-1 Day

-1 Hour

-10 Min

+10 Min

+1 Hour

+1 Day

Basic data about Jupiter for telescopic observers:

Magnitude: Angular Size(arcsec): Distance (a.u.): System II longitude(°):

Table of Jovian Satellite Phenomena:

Sunday, September 6, 2020

03:58 UT, Callisto exits eclipse by Jupiter's shadow.
 05:56 UT, Io enters occultation behind Jupiter.
 09:22 UT, Io exits eclipse by Jupiter's shadow.
 13:44 UT, Europa enters occultation behind Jupiter.
 18:52 UT, Europa exits eclipse by Jupiter's shadow.

Very Convenient Jupiter Moon Shadow Transits

September Evenings, 9pm Local Time

8th – Io

11th – Europa

15th – Io

19th - Ganymede



Saturn's Moons

This diagram shows the positions of Saturn's brightest moons in their orbits about the planet for any entered date and time between January 1, 1900 to, December 31, 2100.

Date: Time: U
(mm/dd/yyyy)

Reset to current date and time

Calculate using entered date & time

-1 Day

-1 hour


+1 Hour


+1 Day


Time-zone offset from UT in hours

(from your web browser)

Telescope type: **Inverted View**

 **Direct View**
(Erect-image system)

 **Inverted View**
(Newtonian/Dobson)

 **Mirrored reversed View**
(SCT/Mak/refractor+diagonal)

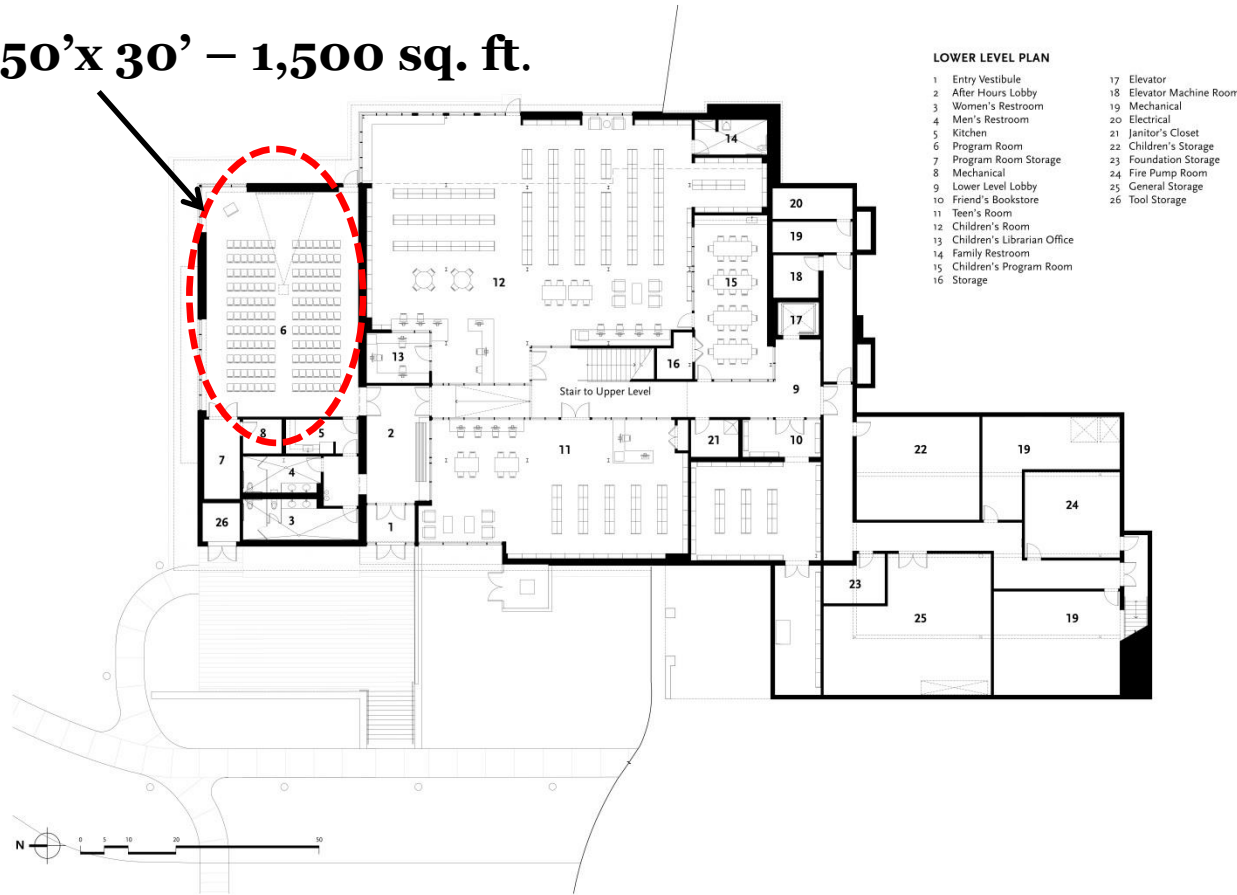




Club Business

- Virtual meetings to continue ...

50'x 30' – 1,500 sq. ft.



**Massachusetts
Phase 3
Reopening:**

**25ppl indoors,
8/1000 sq. ft.**

**Library
Community Rm.
Capacity:**

Pre-CoVid, 150

Phase 3 – 12

Clear Skies!

