A night sky with a meteor streaking across it. The sky is dark blue with several stars visible. The meteor is a bright white line that starts in the lower left and moves towards the upper right. The bottom of the image shows a sunset or sunrise with orange and yellow light.

# What's Up?

November 1-30, 2020

made with the RASC Observer's Handbook and SkySafari®

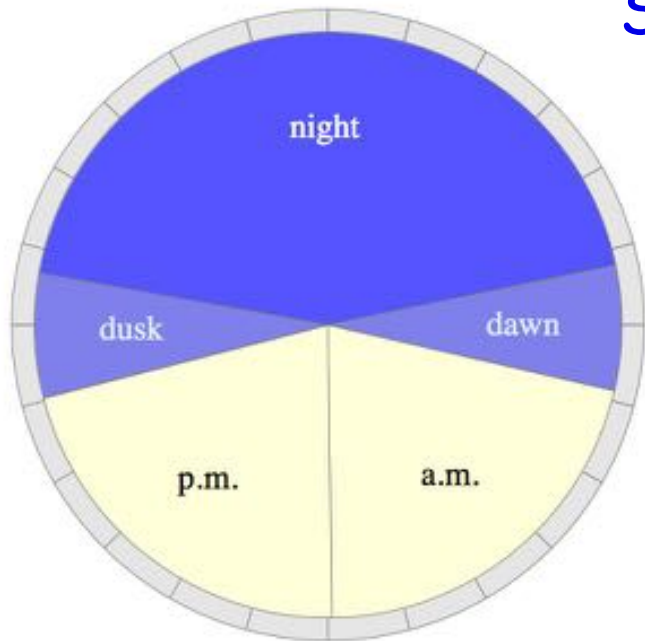
*photo: Dave Chapman*

# The Sun This Month

[Today's Solar Activity](#)

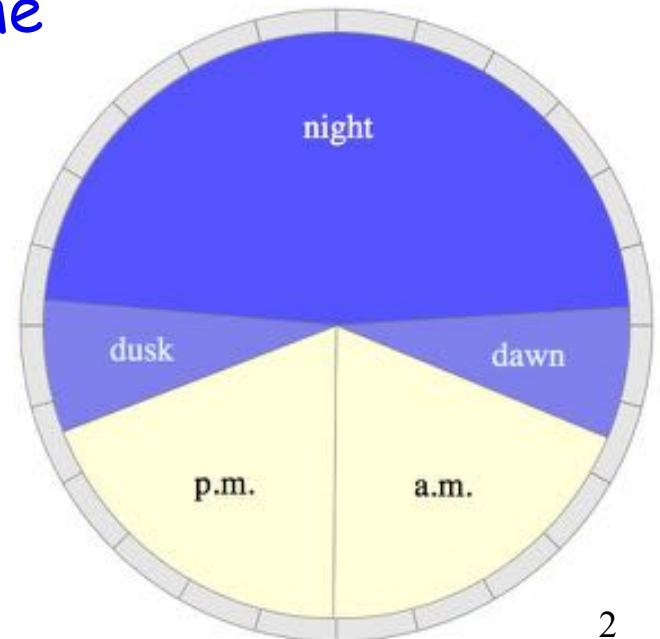
Date	Sunset	Dusk End	Darkness	Dawn Start	Sunrise	“Noon”	Sunlight	Max Altitude
Nov 1	5:02 p.m.	6:41 p.m.	10.5 h	5:13 a.m.	6:52 a.m.	11:57 a.m.	10.2 h	31°
Nov 30	4:35 p.m.	6:19 p.m.	11.4 h	5:46 a.m.	7:30 a.m.	12:03 p.m.	9.1 h	24°

Halifax Nov 01



Standard Time  
in effect

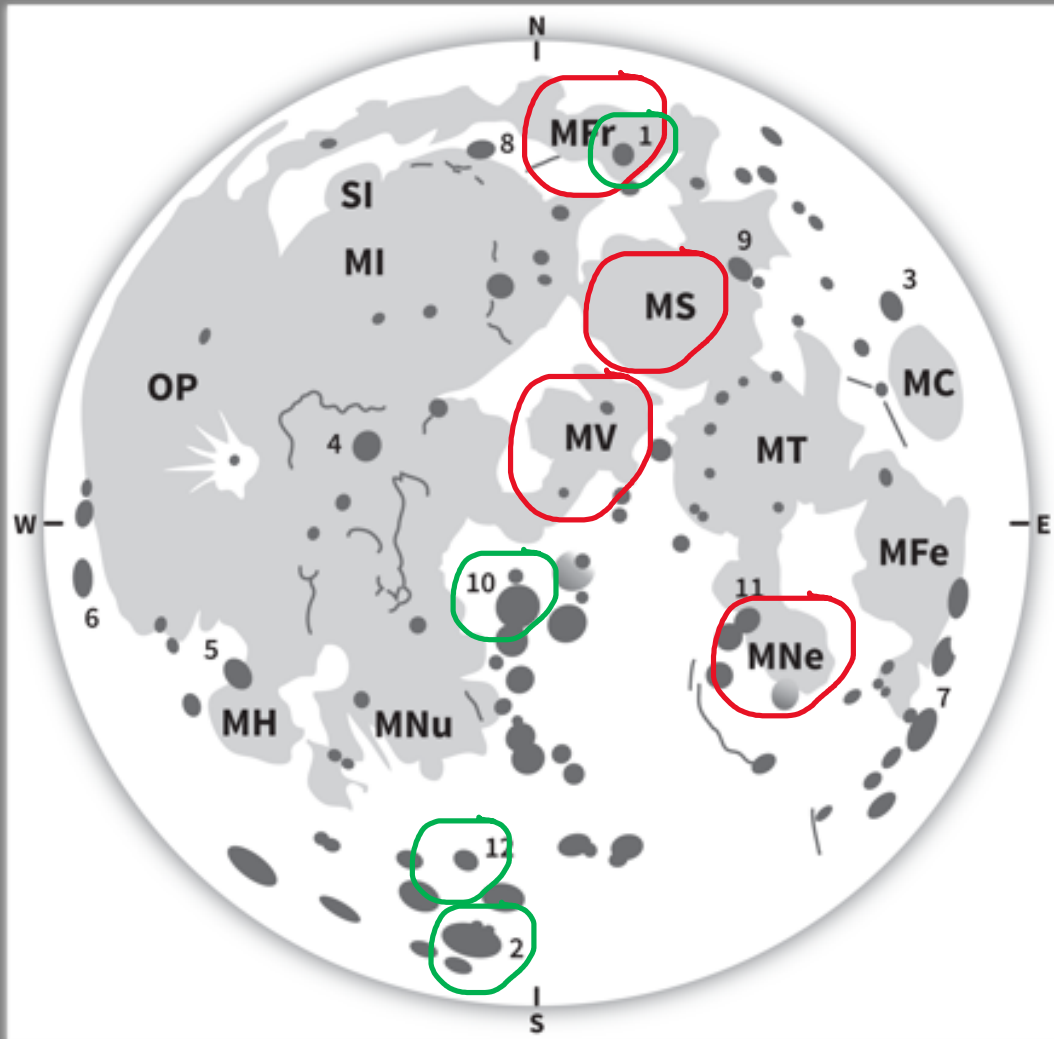
Halifax Nov 30



# The Moon This Month

Date	Phase	English	Mi'kmaq
Nov 8	<i>Last Quarter</i>	Animal Fattening	<a href="#"><u>Wikewiku's</u></a>
Nov 13	Moon, Venus, and Mercury (morning)		
Nov 14	Moon at perigee (8 a.m.)		
Nov 15	<i>New Moon</i> (Large Tides)	Rivers Freezing Over	<a href="#"><u>Keptekewiku's</u></a>
Nov 18/19	Moon, Jupiter, and Saturn (evening)		
Nov 21/22	<i>First Quarter</i>		
Nov 25	Moon and Mars (evening)		
Nov 27	Moon and Uranus (evening)		
Nov 30	<i>Full Moon</i>	Rivers Freezing Over	

# The Moon in *Explore the Universe*



FQ: Nov 21-22

## MARE

MFr: Mare Frigoris

MNe: Mare Nectaris

MS: Mare Serenitatis

MV: Mare Vaporum

## CRATERS

1. Aristoteles

2. Clavius

10. Ptolomaeus

12. Tycho

challenge

# The Planets This Month

Mercury-in morning sky (mag -0.6)

- Greatest Elongation West ( $19^\circ$ ) November 10
- low in the east at dawn
- trio with Moon and Venus Nov 13 (morning)

Venus - low & brilliant in the east morning sky (mag -3.9)  
- trio with Moon and Mercury Nov 13 (morning)

Mars - on its way out, but still worth observing  
- mag. -1.8 (dimmer than Jupiter)  
- shrinking disk size 20.1" down to 14.6"  
- see you in 2035!

Jupiter & Saturn

- southwestern evening sky—very low in twilight
- close to Moon Nov 18 & 19
- heading towards close conjunction on December 21

Neptune- in evening sky (mag. 7.9, disk 2.3")

Uranus - in bino field with Moon on November 27 (mag. 5.7, disk 3.7")





Moon, Jupiter, & Saturn  
Nov 18-19, evening



Moon & Uranus  
Nov 27, dawn

*SkySafari still lists Pluto as a planet, so when I ask it to label the planets, it gets labelled along with them. Pluto is far too dim to be easily observed with a typical backyard telescope!*





# Leonid Meteor Shower

nights of Nov 17/18

observed rates ~10 meteors/h

swift meteors with lasting trains

dusk end 6:25 p.m.

moonset 6:52 p.m.

radiant above horizon 11:00 p.m.

peak at 19:00 p.m. AST

dawn start 5:32 a.m.

*You will need to stay up LATE to see significant numbers of meteors.*

parent comet: 55P/Tempel-Tuttle



# Explore the Universe:

## Autumn Constellations

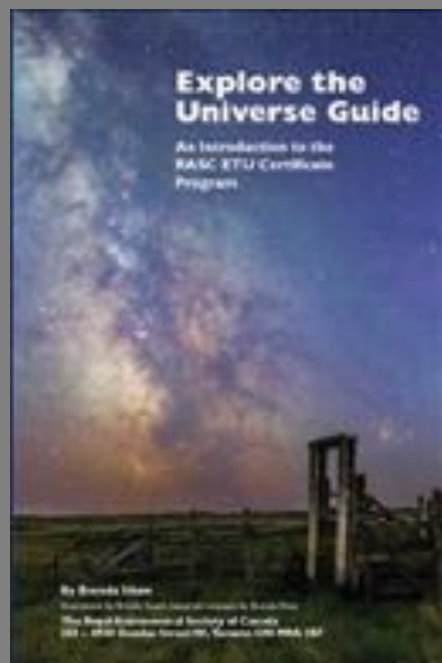
Pegasus

Andromeda

Cassiopeia

Perseus

Aries







# Explore the Universe:

## Autumn Stars

*Ranking:*

#35 Mirfak (N)

Hamal (N)

Alpheratz (N)

Algol

Schedar (N)

Markab

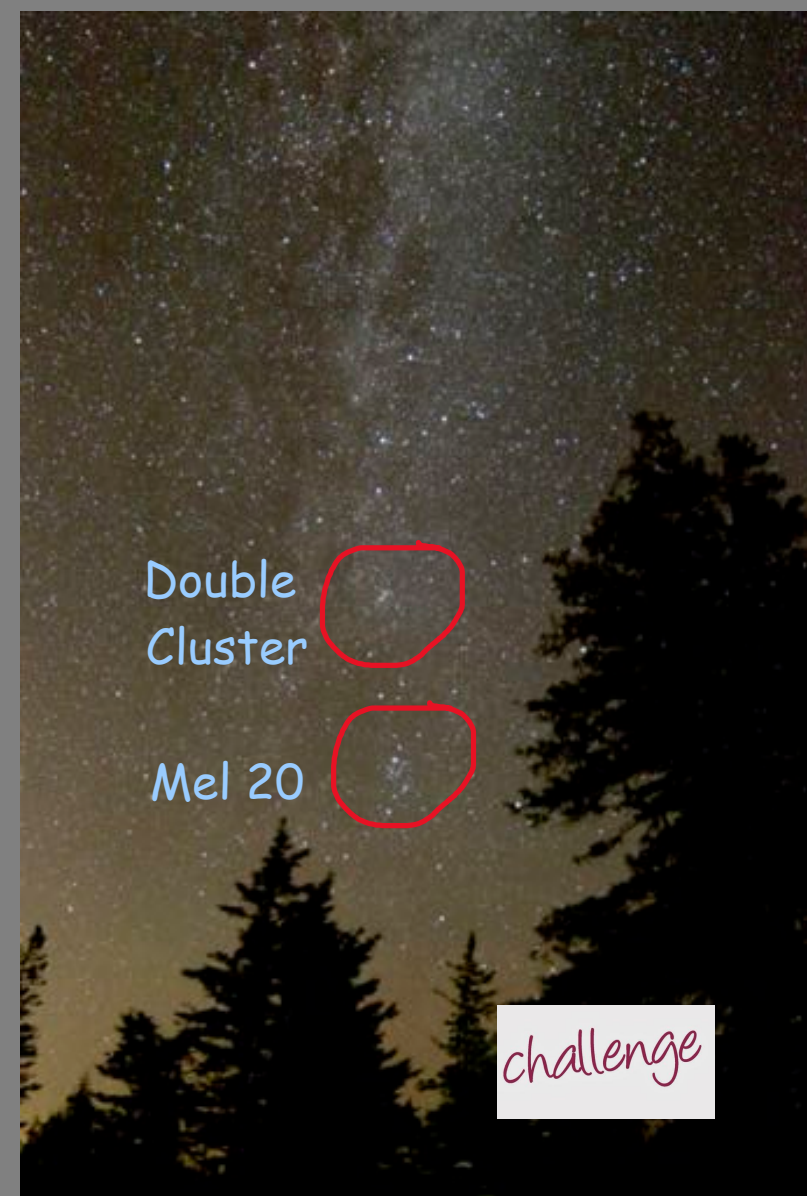
Sheratan

N = Navigation

all good for Syn Scan alignment



# Explore the Universe: Autumn Deep-Sky Objects



*challenge*



# Explore the Universe: Autumn & Winter Double Stars

16 Cygni (6.0, 6.2, 40")

Delta Cephei (4.2, 6.1, 41")

Theta1 Tauri (3.4, 3.9, 348")



# Questions?



photo: Dave Chapman  
(Winter Hexagon and Triangle)