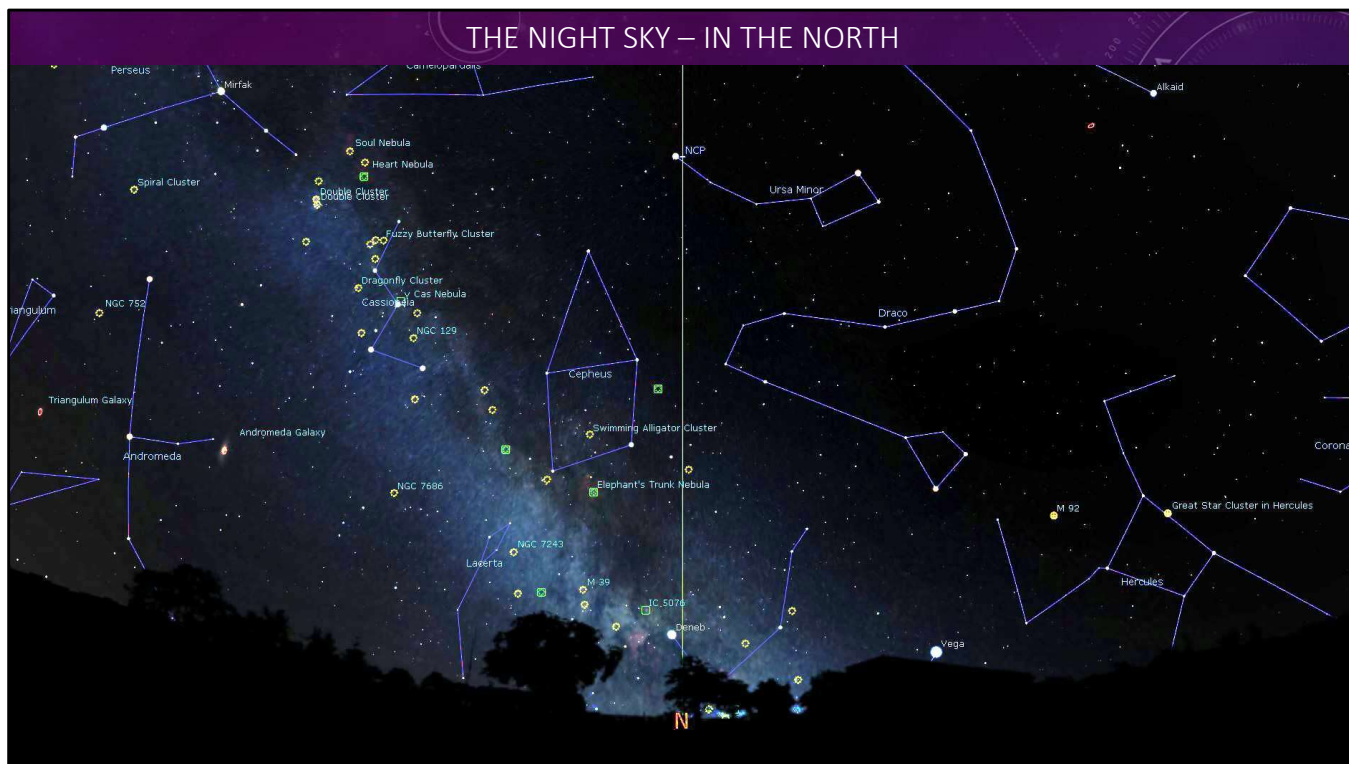


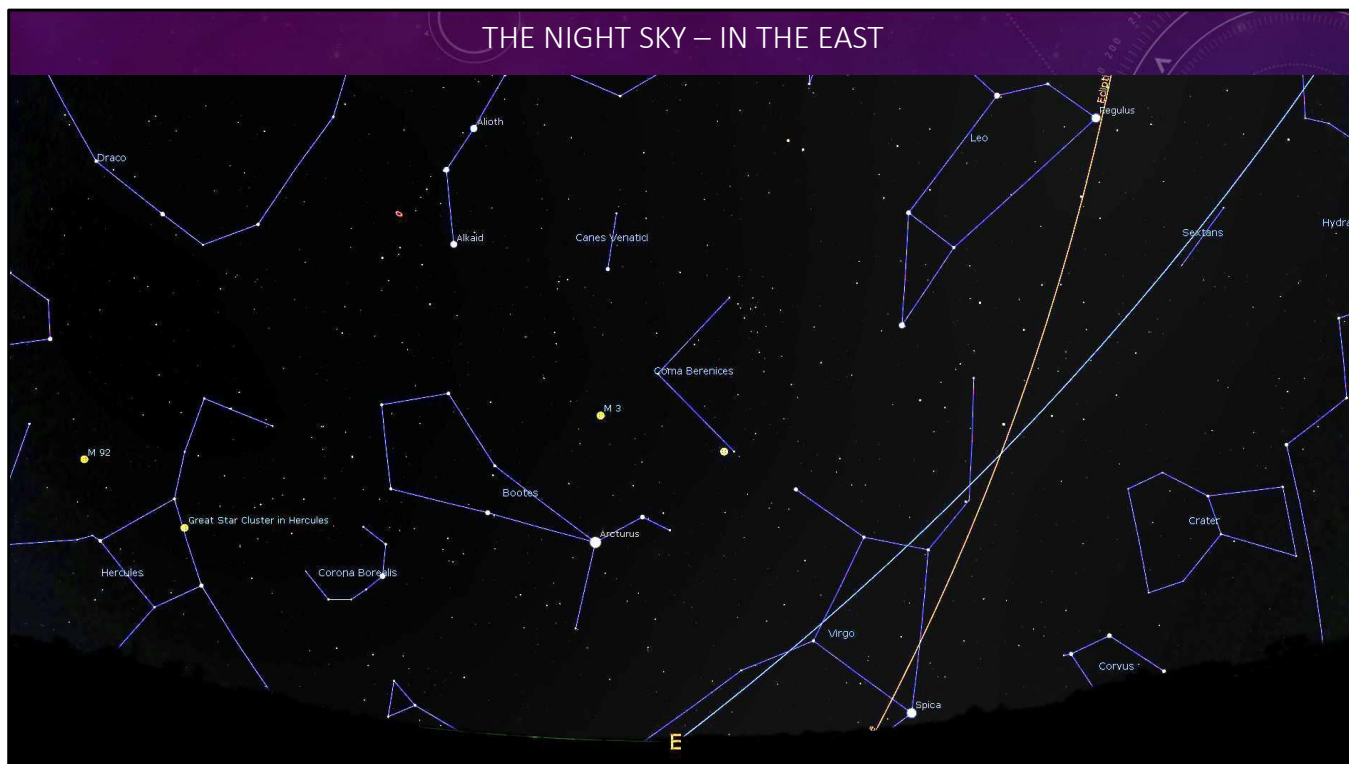
The background of the top section is a deep blue gradient with faint, stylized astronomical charts. These charts include concentric circles, dashed lines, and numerical scales (e.g., 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260) that suggest celestial coordinates or orbital paths. The overall aesthetic is scientific and celestial.

# RUGBY & DISTRICT ASTRONOMICAL SOCIETY

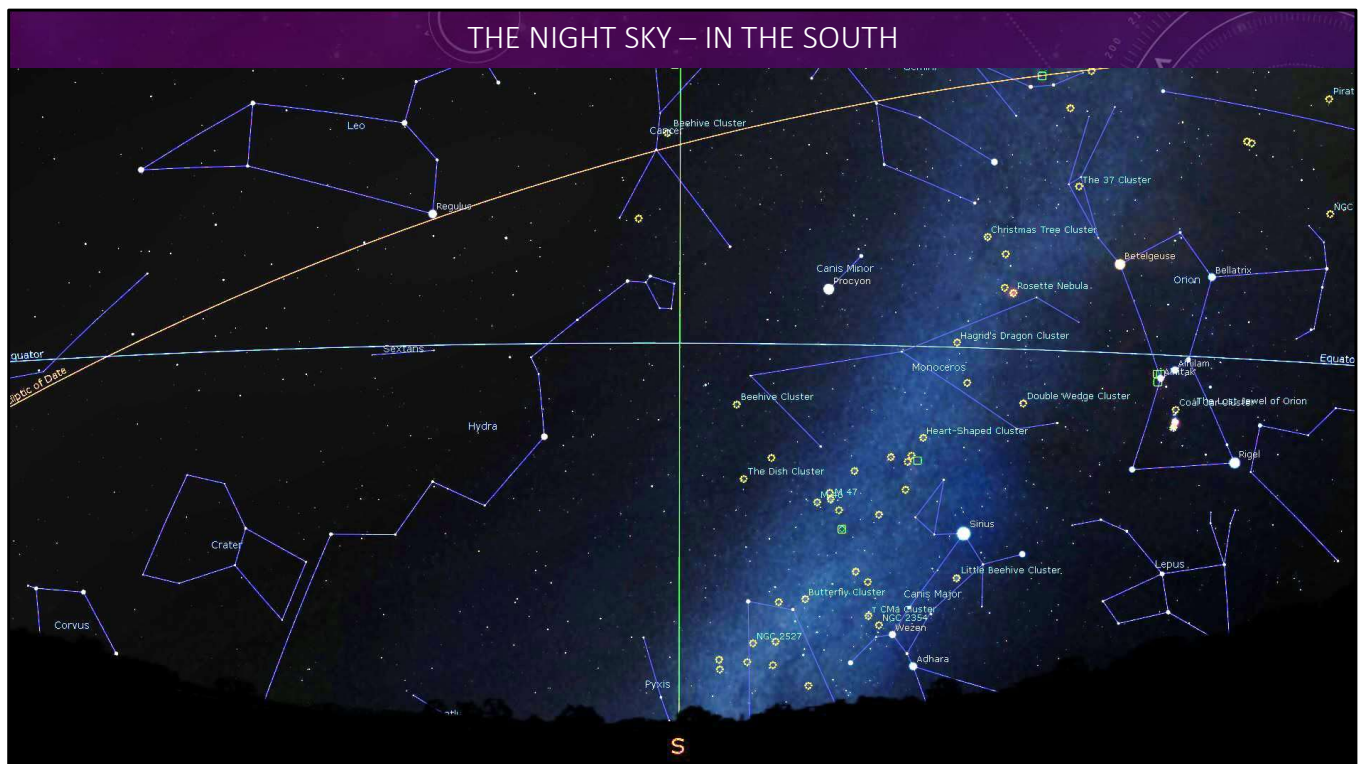
SKY NOTES, FEBRUARY 2020



In the north, the milky way meets the horizon, with Cepheus immediately above. Cassiopeia is to the west and Ursa Minor and Draco to the east.



In the east, Hercules has risen along with Boötes and Virgo. Coma Berenices is well risen (lots of galaxies here) and the globular cluster M3 is well placed for observation.



In the south Cancer is on the meridian with Leo to it's left and Gemini to it's right. Below Gemini is Monoceros and Canis Major

**THE NIGHT SKY – IN THE WEST**

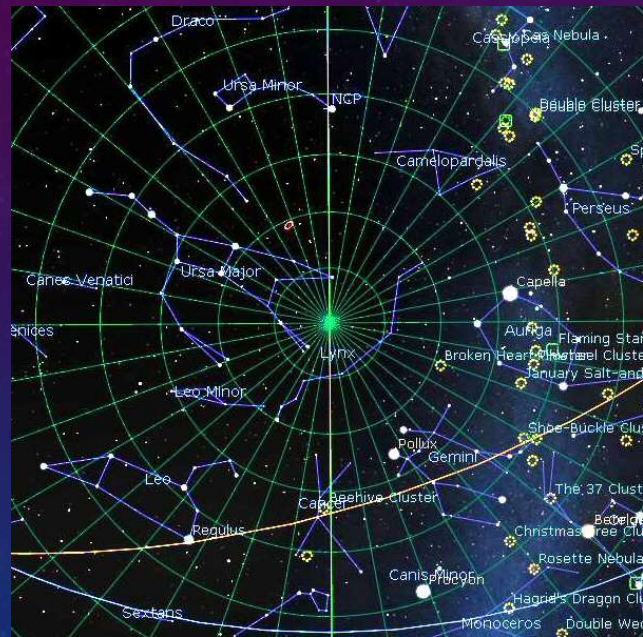
This star chart illustrates the night sky in the western hemisphere. Key features include:

- Constellations:** Orion, Perseus, Andromeda, Taurus, Auriga, and others are outlined with blue lines.
- Stars:** Labeled stars include Betelgeuse, Rigel, Bellatrix, Saiph, and the stars of the Pleiades (Seven Sisters).
- Deep-Sky Objects:** Numerous clusters and nebulae are marked, such as the Christmas Tree Cluster, the Flame Nebula, and the Andromeda Galaxy.
- Orientation:** A compass rose in the top right corner shows the cardinal directions, with 'W' (West) at the bottom.

In the west Orion is heading for setting along with Taurus although these constellations are still well placed. Auriga is high in the west as is Perseus. The milky way arcs above this horizon from south to north.



## THE NIGHT SKY – OVERHEAD



Overhead the zenith is surrounded by Ursa Major and Lynx,

# FEBRUARY'S EVENTS – SUNRISE & SUNSET

2020	Sunrise/Sunset		Astronomical Twilight		Nautical Twilight		Civil Twilight	
Feb	Sunrise	Sunset	Start	End	Start	End	Start	End
1	07:47	16:51	05:49	18:49	06:29	18:10	07:10	17:29
5	07:41	16:59	05:44	18:56	06:24	18:16	07:04	17:36
10	07:32	17:08	05:36	19:04	06:16	18:25	06:56	17:44
15	07:22	17:18	05:28	19:13	06:07	18:33	06:47	17:53
20	07:12	17:27	05:18	19:21	05:58	18:42	06:37	18:02
25	07:01	17:37	05:08	19:30	05:48	18:51	06:27	18:11
28	06:55	17:42	05:02	19:36	05:41	18:56	06:21	18:17

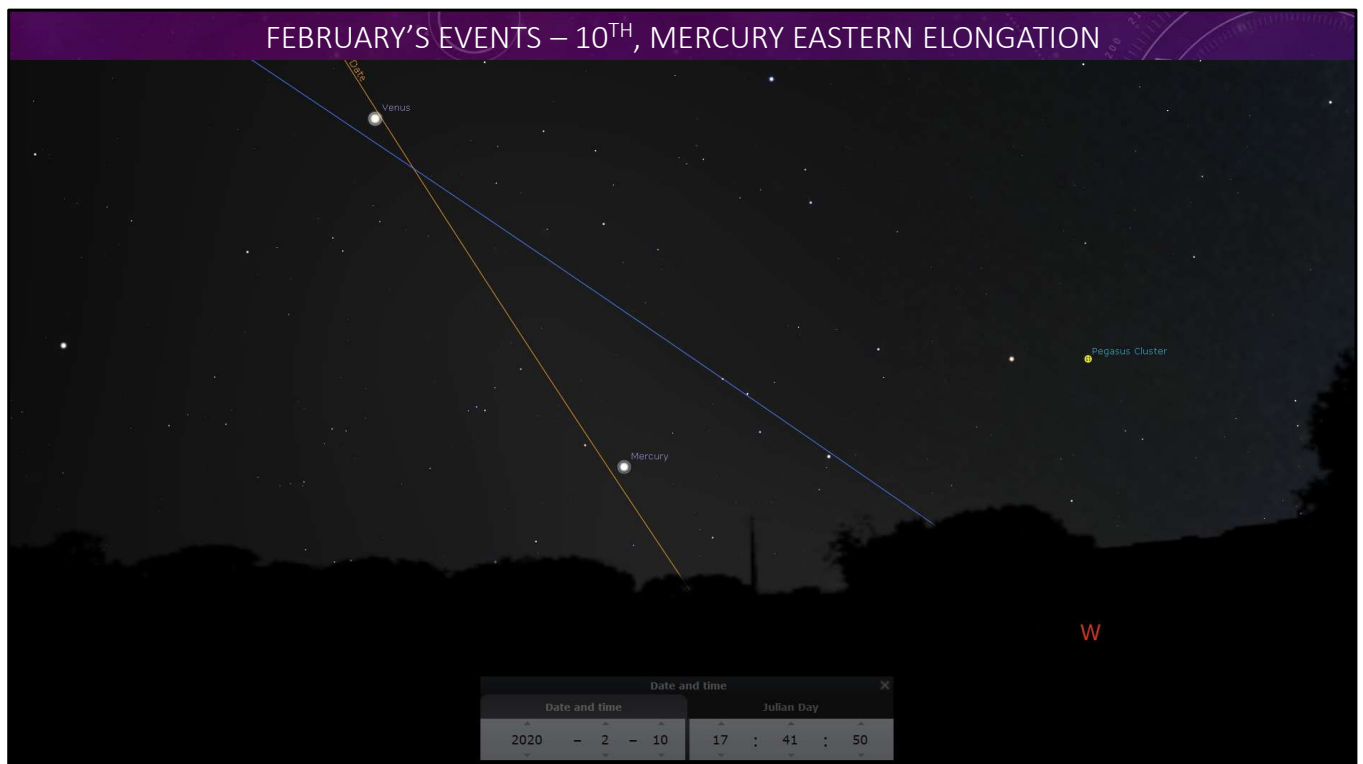
## FEBRUARY'S EVENTS – 1<sup>ST</sup>, OBSERVING AT BARBY



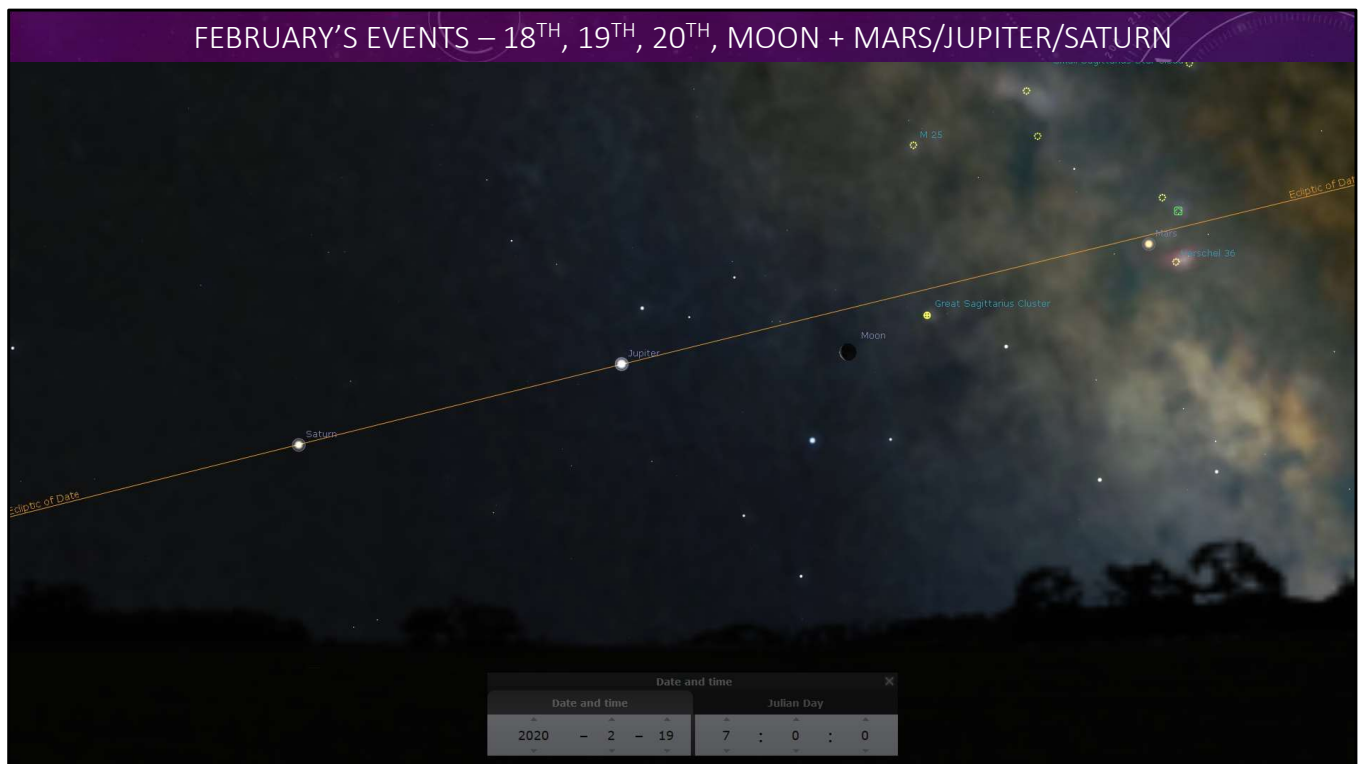
For observing at Barby on the 1<sup>st</sup>, the moon is nearly at first quarter so there are some nice craters to observe along the terminator.

1. W Bond is a nice well eroded walled plain with a very rugged floor and a rille system.
2. The Alpine Valley, with it's central rille.
3. Aristillus a super crater with very rugged steep inner walls.
4. Ptolemaeus, Alphosus and Arzachel, 3 great walled plains.





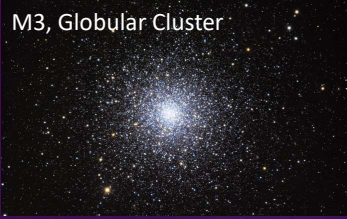
On the 10<sup>th</sup> Mercury is nicely placed above the western horizon, with Venus above.



And in the early morning hours on the 18<sup>th</sup>, 19<sup>th</sup> and 20<sup>th</sup>, the moon passes Mars, Jupiter and Saturn as it heads towards new moon.

## FEBRUARY'S EVENTS – 21<sup>ST</sup>/22<sup>ND</sup> OBSERVING AT BARBY

M3, Globular Cluster



M44, Beehive Cluster



M47, Open Cluster



Orion Nebula



The Pleiades



The Double Cluster



Some suggestions for observing at Barby.

M3 a globular cluster will require a telescope, but the Beehive in Cancer will only need binoculars. M47 is in Canis Major, a little below centre of the line from the beehive to Sirius. And the Pleiades of course. Perseus is in the West so a view of the double cluster is still available.



In the evening of the 27<sup>th</sup>, the moon passes Venus as it grows it's crescent phase.

## FEBRUARY'S EVENTS – COMET C/2017 T2 (PANSTARRS)

### ★ C/2017 T2 (PanSTARRS)



Now it is 9.6 mag (Jan. 5, Juan Jose Gonzalez). It brightens up to 8 mag in spring, and it is observable in good condition in the Northern Hemisphere. In the Southern Hemisphere, it is not observable until July.

Date(TT)	R.A. (2000)	Decl.	Delta	r	Elong.	m1	Best Time(A, h)
Jan. 11	2 56.43	56 28.1	1.541	2.210	120	9.2	19:35 (180, 68)
Jan. 18	2 39.55	57 2.8	1.565	2.151	113	9.1	18:51 (180, 68)



In February and through March this comet passes through Cassiopeia. It is about Magnitude 9 and brightening so should also be observable on our observing nights.



MEMBERS IMAGES – GEOFFREY JOHNSTONE COMET C/2017 T2 (PANSTARRS)



10 stacked images with my 200 mm LX200 and DSLR. The megastar shot shows the 12 mag star it was sitting on top of.

MEMBERS IMAGES – PETER LARKIN, M1, THE CRAB NEBULA



M1 The crab nebula  
20 subs 5 minute's  
20 darks 5 minute's  
20 flats 5 minutes  
20 bias  
Stacked In DSS  
Processed in photo shop light room  
Equipment eq6  
Altair astro 130 triplet  
Canon 600d astro modded

MEMBERS IMAGES – PETER LARKIN, M45, THE PLEIADES



M 45

20 subs 5 minute's

20 darks 5 minute's

20 flats 5 minutes

20 bias

Stacked In DSS

Processed in photo shop light room

Equipment eq6

Altair astro 130 triplet

Canon 600d astro modded



MEMBERS IMAGES – PETER LARKIN, IC1396, THE ELEPHANT'S TRUNK



IC 1396 The elephants trunk  
20 subs 5 minute's  
20 darks 5 minute's  
20 flats 5 minutes  
20 bias  
Stacked In DSS  
Processed in photo shop light room  
Equipment eq6  
Altair astro 130 triplet  
Canon 600d astro modded

MEMBERS IMAGES – PETER LARKIN, IC1396, THE ELEPHANT'S TRUNK



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MEMBERS IMAGES – ALAN HUGHES, CALIFORNIA NEBULA



NGC1499 in Perseus. Taken 3rd Dec, 48 x 1 min exp @ ISO800

MEMBERS IMAGES – ALAN HUGHES, NORTH AMERICA NEBULA



NGC7000 in Cygnus. Taken 9th Dec, 70 x 1 min exp @ ISO800

The End, Thankyou