# What can you see from the Isle of Man's dark sky locations?

# The Northern sky

Looking North towards Scotland and Ireland, spectacular views of the Northern sky can be seen from Smeale, Niarbyl, Ramsey, Peel and the Northern parts of the Island. The well known asterism of the Plough can be seen astride the horizon in autumn, and as the winter progresses it rises on its "tail" and sits overhead in spring. The Plough always serves as a pointer to Polaris the Pole star which gives us due North. As the Plough rises, the constellation of Cassiopeia travels in the opposite direction, both constellations rotating about the Pole star Polaris.

### The Plough

The Plough, also known as the Big Dipper, is a collection of seven stars that has been recognised as a distinct grouping in many cultures for thousands of years. The stars that make up the Plough are the seven brightest stars of the Ursa Major constellation.

In the days before we had compasses to navigate, people consulted the night sky and used the stars to work out which way pointed north was. Find the Plough and use the two stars at the end, (Merak & Dubhe) at edge of the plough's bowl (these are known as the pointer stars), to trace a line to the faint Pole star (also known as Polaris). If you stand facing this star you will be facing north. The height of the star above the horizon gives us the latitude; this is how the Vikings found the Isle of Man over 1,000 years ago.

### Polaris, the Pole Star

Polaris is the brightest star in the Ursa Minor constellation. It is very close to the northern celestial pole which is why it is often referred to as the Pole Star.

### Cassiopeia

The Cassiopeia constellation is easily recognisable in the night sky thanks to its distinctive 'W' shape formed by five bright stars. Cassiopeia can be seen most clearly in early November. Cassiopeia is easily found by using the Pointers in the Plough and going the same distance again, past Polaris.

# The Spring sky

Following on from the magnificent winter stars is the distinctive spring constellation of Leo, one of the few constellations that looks like what is meant to represent. Leo is seen high in the South through March to May and is noticeable by one of the brightest spring stars, Regulus, the royal star. The Spring Sky also shows the Constellation of Boötes, and its bright star Arcturus at its best.

#### Leo

Leo is a constellation of the zodiac and its name is Latin for 'lion'. It is made up of many bright shining stars and the sickle-shaped asterism of stars is often portrayed as the back of the lion's head.

### Regulus

Regulus is the brightest star in the Leo constellation and is also one of the brightest stars in the night sky. Regulus is a multiple star system composed of four stars organised into two pairs and lies approximately 77 light years from Earth.

### **Arcturus**

Arcturus is the brightest star in the Boötes constellation and the northern celestial hemisphere and the fourth brightest star in the Manx night sky. An easy way to locate Arcturus is to follow the arc of the handle of the Plough. To the naked eye Arcturus is an orangey yellow colour.

### Spica

Following Leo into the spring sky is the zodiacal constellation of Virgo with its bright star Spica. Spica is said to represent a sheaf of wheat in the hand of the Virgin, Spica can be found following the handle of the Plough, down to the star Arcturus, and then a similar distance away is Spica.



# The Summer sky

The long summer nights of June, July and August tend to minimise the opportunity for stargazing from our Islands latitude, but there are still some spectacular sights to see. In particular about an hour or more after sunset in locations such as Nairbyl, the Sound or Fort Island

### The Summer Triangle

The Summer Triangle is another asterism, a pattern of stars, involving the three stars Altair, the 12th brightest star in the night sky, Deneb, the 19th brightest star in the night sky, and Vega, the 2nd brightest star in the northern celestial hemisphere. During the summer months the Summer Triangle can be found virtually overhead at mid-northern latitudes but can also be seen in spring during the early morning and in autumn during the evening until November.

### Cygnus

Cygnus is one of the most recognisable Constellations in the northern hemisphere and features a prominent asterism known as the Northern Cross. It's name comes from the Greek word for swan.

# The Autumn sky

Whilst fainter than the other seasons, the autumn constellations are best seen in the Manx Southern sky in September through to November. The distinctive asterism of the Square of Pegasus, is clearly seen high in the Southern skies from most Manx locations, but its best from locations with a good southern horizon view such as Port Soderick, The Sound and Fort Island.

### **Pegasus**

The Pegasus constellation is named after the winged horse Pegasus in Greek mythology. It is seen as a faint but distinctive rectancle, rather than a square high above the Manx Southern Horizon in the autumn.

## Andromeda Galaxy (M31)

The Andromeda Galaxy, also known as M31 is difficult to spot with the naked eye, but well worth trying trying to see. This tiny smudge of light, between the constellations Cassiopeia and Pegasus is one of the most spectacular sights in Manx Skies, At 2.2 billion light years away, it is regarded as a near neighbour to our own Milky Way galaxy.

# The Winter sky

Port Soderick, Axnfell, Fort Island and Tholt-y-Will are the best sites to marvel at the spectacular winter stars. From December through to February, a total of nine first magnitude stars (brightest stars) can be seen very easily. The winter sky also shows the Milky Way in all its glory, stretching from the left hand side of Orion, through Gemini and Cassiopeia to the north western horizon.

### The Winter Hexagon

The Winter Hexagon is another asterism (not a constellation) that is seen magnificently from the Isle of Man. It dominates the southern horizon and is made up of six very bright stars; Sirius at the bottom, Capella overhead, Procyon and Castor on the left, and Aldebaran and Rigel on the right. The whole hexagon shape is then finished off with Betelgeuse in the lower middle.

### Orion

Finding the three bright stars sloping down from right to left that make up Orion's Belt is the best way to locate the Orion constellation. Known as the Hunter, Orion is one of the most recognisable constellations in the night sky and is visible throughout the world. Orion has a very bright star Betelgeuse at the top left and Rigel bottom right.

#### Taurus The Bull

To the right of Orion is a distinctive "V" shape of stars that represent Taurus the Bull, the brightest star of Taurus is Aldebaran, which also shows a reddish hue. Aldebaran is easily found by following Orion's belt up to the right. Just up from Aldebaran is the beautiful cluster of stars known as the Pleiades or seven sisters, quite spectacular when viewed through binoculars.

#### Gemini

It's name in Latin means 'twins', and it is always associated with the twins Castor and Pollux from Greek mythology. In January and February look overhead at night to observe Gemini and towards the West after sunset in April and May.

### **Betelgeuse**

Betelgeuse is the eighth brightest star in the night sky and the second brightest star in the constellation of Orion. Situated in the upper left corner, it is one of the largest and most luminous stars with a distinctive red colour.

### Rigel

The brightest star in Orion is the star Rigel, at the bottom right hand corner. The sixth brightest star in our Manx Night sky, it shines bluey-white compared to the red Betelgeuse.

### **Sirius**

Sirius is the brightest star in the night sky. Sirius is also known as the Dog Star due to its prominence in the constellation of Canis Major (The Big Dog). Easily found by following Orion's Belt down to the left.

### Capella

Capella is the sixth brightest star in the night sky and the third brightest star in the northern celestial hemisphere. Although Capella appears to be a single star to the naked eye, it is actually a star system consisting of four stars, two of which are 10 times bigger than the sun.

#### Also visible in Manx Skies...

### The Milky Way

Most parts of the British Isles rarely get to see the splendours of the Milky Way, but on the Isle of Man we get to see it from most parts of the Island. So spectacular is our view of the Milky Way, it has been given a Manx name based on a tale from when an ancient Manx Viking King, King Orry, arrived on the Island, he was asked from where he had come. He pointed out the Milky Way, and from then it has been known in Manx Gaelic as 'The Great Way of Orry' or 'Raad Moaar re Gorree'. The Milky Way is best seen in autumn through to spring when it can be seen quite spectacularly right across Manx skies.

### The Planets

Often mistaken for bright stars, the planets Venus, Mars, Jupiter and Saturn, can easily be seen when above the horizon from Manx skies. More mystifying difficult to see is the planet Mercury, but the a clear Manx dawn or dusk horizon it may be seen at certain times of the year. Viewing from Smeale, Niarbyl and The Sound may give a glimpse of this elusive planet in the dusk sky. Whilst dawn appearances will be best seen from Fort Island, Port Soderick or Axnfell.

#### Also look out for...

## The Aurora Borealis or Northern Lights

Seen from anywhere with a clear Northern Horizon such as the Smeale, and Niarbyl or on Western coast, the elusive Aurora can often be seen as a faint greenish glow on or near the horizon. Look out for it, especially around the time of the spring and autumnal equinoxes, in March and September.