



Dark Sky At Night, Tourists Delight, describes what facilities are available for stargazers in the South of Scotland, and provides a basic and non-technical background about what to see in the night sky during the year. It is available from most local bookshops, or from www.dryfe.co.uk

Unfortunately, it can not describe the sky tonight, because the planets, Moon and other phenomena are constantly moving. This PDF overcomes that difficulty providing a calendar of events for the year ahead.

The Dark Sky is at its best when both the Sun and Moon are below the horizon. The following tables are based on an observer in Moffat. For observers in Stranraer the events will take place 6 minutes earlier, and for observers in Berwick on Tweed the events will be 6 minutes later.

The South of Scotland offers one of the best places to see the night sky. The winter nights are long, but the days are not too short, so plenty of time to see the beautiful countryside and other attractions as well.

Have a ride around the area during the day and pick out an interesting building or feature in the landscape. Then return at night and use this as the foreground for a picture of the Moon, stars or planets. The following pages list when two or more celestial objects are close together, which may make your photograph more interesting.

How bright is a celestial object?

Astronomers measure this on a scale of magnitude. The faintest star that can only just be seen with the unaided eye is called magnitude 6. A magnitude 5 star is 2.5 times as bright as a magnitude 6 and therefore faint but visible to the naked eye.

Magnitude 4 is 2.5 times as bright as magnitude 5 and so on until magnitude 1 is reached. Then it continues on the same scale with magnitude +0, -0, -1 and so on.

Astronomy is a science and needs to be very precise. The experts measure stars to one-hundredth of a magnitude, but for you and me all we need to know is magnitude 7 can not be seen and that magnitude 4 is fainter than magnitude 3. Anything brighter than Magnitude 1 can be seen with the Full Moon in the sky and anything with a negative magnitude is very bright.

Patterns of Stars

A constellation is a group of stars that resemble something. Its nothing like a perfect representation, but sufficient to prompt hunter gatherers to tell stories as they sat around their camp fires at night. In 1928 the International Astronomical Union defined the area of sky taken up by each constellation.

However, there are star patterns that do not conform to the official constellations. The Plough, for example, is an interesting shape of stars, but it is not an official constellation, but a small part of the constellation of the Great Bear (astronomers call it by the Latin name of Ursa Major). A star pattern that is not an official constellation is called as an 'asterism'. Anybody can define an asterism, so the difference between a constellation and an asterism is only technical.

The traditional way to learn the shapes of constellations is by star maps and atlases, but today a better way is to download a planetarium app to your mobile device. Point your mobile device to the sky, and the app will show you the name of the constellation you are looking at, and also the names of planets, which move from night to night and are not always shown in a star atlas.