

Moffat, Scotland

IDA Dark Sky Community

Annual Report



Photo looking across local fishing pond by Ian Haddow

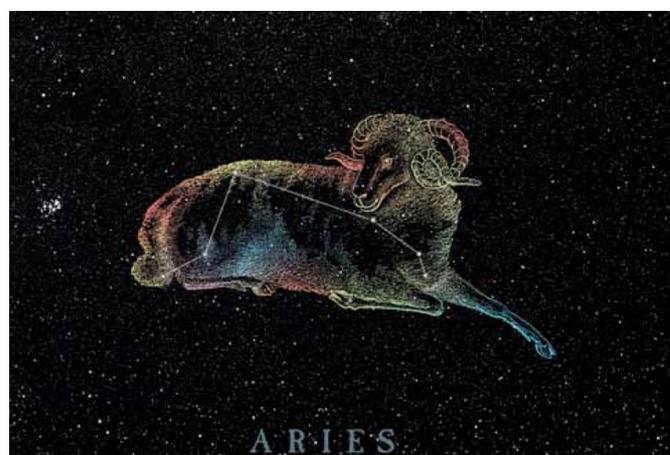
The town of Moffat, in Scotland, is located close to the M74 just 40 miles north of Carlisle and 70 miles south of Glasgow.

Since the town mascot features the Ram, dark sky status was granted by the International Dark Sky Association on 21<sup>st</sup> March 2016 to coincide with the rising of the first Zodiacal symbol, namely the ram in the sky, Aries.

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# 1 Astronomy Events

Following the announcement of dark sky status top priority was given to uniting local residents with an interest in astronomy. As a direct result of the award an astronomy club was founded in June 2016 and club membership stands at 14. Additionally, as part of their business plan to promote dark sky status they set up a club web site and this can be found at <https://moffatdarksky4.wixsite.com/moffatastronomy>

The first club open meeting was held in October with Mike Alexander from the Galloway Astronomy Group explained how to do simple photography and set up a telescope at the Green Frog Cafe.



The second open meeting, in February 2017, was held in the main assembly hall of Moffat Academy where, over a 3 hour Sunday afternoon period, the hire of a portable planetarium from Scotland's Dark Sky Observatory in Dalmellington, attracted more than 150 locals to view the wonders of the universe.



## 2 Lighting

### 2.1 Public Lighting

Dumfries and Galloway Council have now replaced all the non-compliant sodium lighting on the roundabout section of the A701 between Moffat and Beattock, at the M74 junction and the Highways Agency have promised to complete their section of the motorway slip roads at the same junction within the next 6 months.

### 2.2 Commerce / Residential Lighting

#### Introducing a new Dark Sky Compliant - Moffat Lighting Showcase

This feature will be repeated in the Moffat Astronomy Club web site as an example for others to follow.

##### Old Well Road, Moffat

Complete refurbishment / rebuild of old property completed towards end of 2015

External lighting goes beyond dark sky "community" compliance and is an example to show dark sky "parks" or "reserves" where the lumen cap is more severe than that of a "community"



##### Black Bull Inn, Moffat

A total refurbishment of the hotel provided the opportunity to remove all the external floodlights, sign lighting and lamp posts shown in the illustration right.

Downward lighting from the building eaves, as illustrations below, show how light can still make an impact without being obtrusive on the surroundings.





### 3 Sky Quality

Due to the loan of the Moffat sky quality meter to the Orkney Island of North Ronaldsay no readings have been made this winter and a new meter will be ordered in time for next winter.

However, the quality of the following photo which was taken by Ian Haddow from his back garden shows the clarity of the sky over Moffat.



The possibility of a fixed meter will be explored in conjunction with the maths & physics teacher at Moffat Academy as an ongoing science tutorial.

## 4 Funding

Early in the Moffat Astronomy Group's life a 6inch club telescope was part funded by finance from the Community Charity Shop and individual members. A mounting plinth was installed in the Green Frog car park and various evening viewings were undertaken during the winter months.

Early this year the contractors installing wind powered generators provided a cash back facility to the community of Moffat for the inconvenience of construction traffic on the town roads. The Moffat Astronomy Group, with the approval of the Community Council, applied for a proportion of this grant funding and their application for both medium and large grants have been successful.

### *Their application for grant aid states:-*

**Astronomy and astrophotography have become hugely popular in recent years, as witness the growth in telescope sales and the formation of astronomy clubs. We believe being part of the Dark Sky Community offers Moffat a great opportunity to establish itself as an "astronomy town" by making it more accessible for observing, for residents and visitors, as well as offering a range of other facilities and astronomy events such as talks, demonstrations and exhibitions.**

**We have reached an agreement with Moffat Golf club, which occupies an elevated position above the town, to use a suitable area of their grounds to site a permanent, prefabricated astronomical observatory.**

**We wish to purchase a 14 inch Schmidt Cassegrain computer controlled telescope, powerful enough to explore the night sky in detail. It can also be used for astrophotography, and we believe this will attract paying visitors to the town over the autumn and winter seasons. This is best housed in a prefabricated observatory for easy access and viewing. We also wish to erect a number of viewing platforms and facilities proximate to the town for personal telescopes, binocular and unaided eye viewing of the night sky. These will be signposted, and a suitable piece of artwork at the main entrance to the town will all contribute to a sense of place for Moffat Dark Sky. One of these sites will have full accessibility for disabled users.**

**NB We have also applied for a Medium Grant. The essential difference between this application and the Medium Grant is essentially the size of the telescope. The 9.25 inch 'scope in the Medium Grant Application being the smallest size that is compatible with astrophotography and, we believe, charging visitors for observing. The Medium Grant would also not allow us to realise the wider dark sky initiatives described in this application.**

### *How does this fit in with the Moffat Community Plan*

**The Moffat Community Action Plan emphasises the importance of tourism to Moffat where 36% of the local workforce are employed. The award for dark sky community will in itself increase the profile of the town and encourage visitors, but that, in itself, will not be enough. Although the wonders of the night sky can be enjoyed in many ways without professional astronomical equipment, it cannot be fully explored without that help.**

**In general terms the project will help realise the following Moffat game Changers;**

**Local people leading**

**South West Scotland outdoor capital, accessible to all**

**Sport and Play**

**A great place to do business and education at the heart of the community.**

### *Who will manage and carry out the work required.*

**The Moffat Astronomy Club on behalf of the Dark Sky Community. The Club has a number of enthusiastic and experienced members in astronomy with backgrounds in business, finance and senior management. Jim Paterson, the dark sky specialist, is an adviser to the club.**

## How will you monitor and evaluate the project's success.

We will evaluate the project in a number of ways:

- the number of users and astrophotography output
- the attributable increase in the number of visitors to the town in the close season
- the number of school pupils who use the observatory and the number who join our junior section
- feedback from residents and visitors on how useful and helpful they found the dark sky sites for viewing by binoculars, small telescope or the unaided eye.
- feedback from visitors on their experience and value for money of their observatory and viewing visits.

## 5 Media Relations

www.dng24.co.uk Annandale Herald & Moffat News 13

# Star gazers club together

STARRY eyed Moffatonians are celebrating their town receiving 'Dark Sky' status by launching an astronomy club.

This week marked the official launch of the town's new status with over 60 locals attending a Star Party at the Green Frog on Monday night.

The meeting was opened by chairman of Moffat District Community Council Bob Opray, who welcomed all in attendance, before introducing Jim Paterson.

Jim, a local Moffat resident and Dark Sky lighting consultant, worked for three years to achieve the accolade for the town.

Bob said: "This town owes a debt of gratitude to Jim for what he has achieved."

Other guest speakers at the meeting included Duncan Wise, IDA of Northumberland Dark Sky Park who spoke at length of the benefits the dark sky status has made to local business in his area.

David Warrington, resident astronomer at Dalmellington Observatory, gave a display of the wonders of the night sky which are now available to people in Moffat, in his talk.

At the meeting locals were asked to express their interest in joining a dedicated star gazing club and over 20 signed up on the spot.

Anyone who is interested in joining can email [ev5atk@gmail.com](mailto:ev5atk@gmail.com) for more information and a the first meeting will be arranged soon.

## Community buy Moffat landmark

Gallow Hill to be 'enhanced for future generations'

A Moffat landmark is poised to come under community control, thanks to a £171,622 grant from the Scottish Land Fund.

The award, one of the first to be made from newly re-launched Fund, means that ownership of 33.4 hectares of woodland area at Gallow Hill, which overlooks the town, will transfer to Moffat Community Woodlands from Annandale Estates.

The community group now intends to begin the process of returning the hill to the way it looked when Moffat was a renowned spa town.

Plans include working with The Forestry Commission to replant the land with



Gallow Hill

broadleaf woodland and allow a broader range of wildlife to flourish; make more of the views across Annandale and to the Devil's Beef Tub; and make it a more attractive place for locals and visitors to enjoy.

Tom Mulholland, chairman of Moffat Community Woodlands, said: "This grant

will enable us to improve recreational opportunities for the people of Moffat, and visitors to the town.

"Ownership of Gallow Hill gives the community the opportunity to enhance the natural environment of the hill for future generations, including the town's recently awarded Dark Sky status."



## DARK SKIES AWARD

Congratulations to ILP Fellow and lighting consultant Jim Paterson, who has been awarded the prestigious Joy Griffiths Award from the British Astronomical Association's Commission for Dark Skies.

Jim, whose work to secure 'Dark Sky Community' status for his home town of Moffat in Scotland was highlighted by *Lighting Journal* in April, received the award to recognise his 'outstanding and meritorious work on behalf of darker skies'.

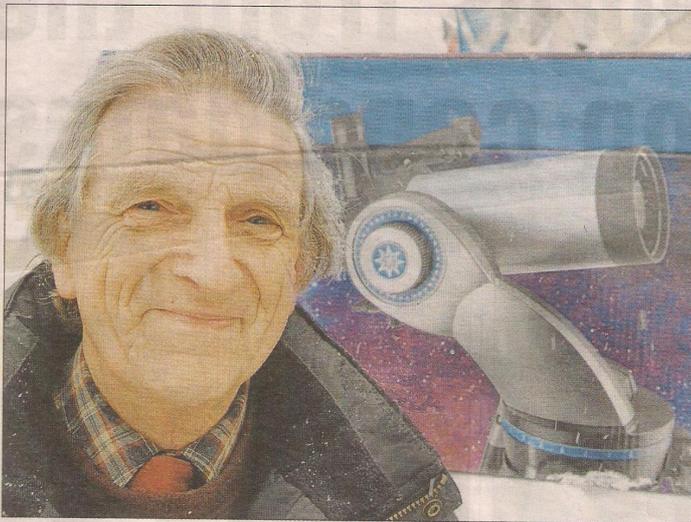
He began his lighting career at Lanarkshire Council and then Glasgow Corporation but for many years he worked in the West Midlands as a local authority engineer and later as partner with Peter Wright in LCADS, the consultancy they set up in 1993.

Soon after settling in Moffat, Jim was asked to investigate options for an International Dark-Skies Association Dark Skies Park application for the nearby Galloway Forest. His work led to the creation of the gold award Galloway Forest Dark Sky Park in 2009, the first such location in the UK.

That success led to further work on behalf of a number of UK organisations, including Exmoor National Park Dark Sky Reserve and Sark Dark Sky Community in 2011, Brecon Beacons National Park and the combined Northumberland National Park and Kielder Water and Forest Park, in 2013.

This, in turn, was followed by an award for Snowdonia National Park in 2015 and then Moffat's itself this year.

# Moffat astronomers get ready for a supermoon



NATURAL PHENOMENON . . . dark skies expert Jim Paterson is getting ready for next week's supermoon

**A NEW astronomy group has been established in Moffat . . . just in time to view a spectacular supermoon.**

The November full moon is set to shine over the world on Monday and NASA experts say it will be the closest the moon has been to Earth since January 1948.

And keen star-spotters in Moffat are poised to see the phenomenon in all its glory and have been busy getting equipment ready for the task.

The moon will be about 30,000 miles closer than normal and ideal for viewing some of its craters with binoculars or telescopes.

Jim Paterson, from the group and also the founder of the town's dark skies movement, said: "The moon will not be this close again until November 25 2034, by which time NASA may have successfully carried out a manned orbit of Mars, which is never less than 34 million miles from Earth."

Meanwhile, as a direct result of the Moffat Dark Sky Community Award from the International Dark Sky Association earlier this year, the new Astronomy Group will hold various events in support of astronomical observing.

The first set of meetings have been focused on setting up and have seen visits from Mike Alexander, of the Galloway Astronomy Centre in Whithorn.

He discussed astro photography and showed members how to use standard SLR cameras to capture views of the Milky Way on clear nights.

Mr Alexander also made adjustments to optical systems in the astronomical telescopes of three group members and demonstrated how to assemble equatorially mounted telescopes in readiness to view the stars and the supermoon.

Meanwhile Mr Paterson explained that the receipt of a Dark Sky Award is not the end of the story, but the start of a community partnership to promote the area for eco and astro-tourism; the protection of human health and nocturnal habitats; dark sky and neighbourhood friendly lighting.

The group will meet again on Monday to view the supermoon and christen their new telescope.



STAR MAN . . . Mike Alexander with some of the telescopes



**The moon will not be this close again until November 25 2034**

Jim Paterson

In addition Power Point Presentations on the ongoing process of obtaining dark sky status for Moffat and other dark Sky Places were conducted by James Paterson for :-

ILP Midland Region in Derby in May 2016

Orkney Science Festival in Kirkwall and North Ronaldsay - September 2016

Hamilton Rotary Club in November 2016

Moffat French Twinning Group in April 2017.