ASTROCAMP

AUTUMN 2025

WELCOME TO ASTROCAMP

Thank you for booking and welcome to AstroCamp.

AstroCamp has gained a reputation as the friendliest and most helpful star party there is, and with common sense and respect for others firmly in mind we hope to still live up to that reputation and ensure everyone stays safe and at ease.

If you're feeling sociable, you are welcome to come and set up around 'The Common', near the reception and the AstroCamp HQ tent. This is also where you'll find the organisers if you have any questions while you're here. If you're new to astronomy or don't have your own telescope and want to look through a range of scopes and ask questions, 'The Common' is the place to come.

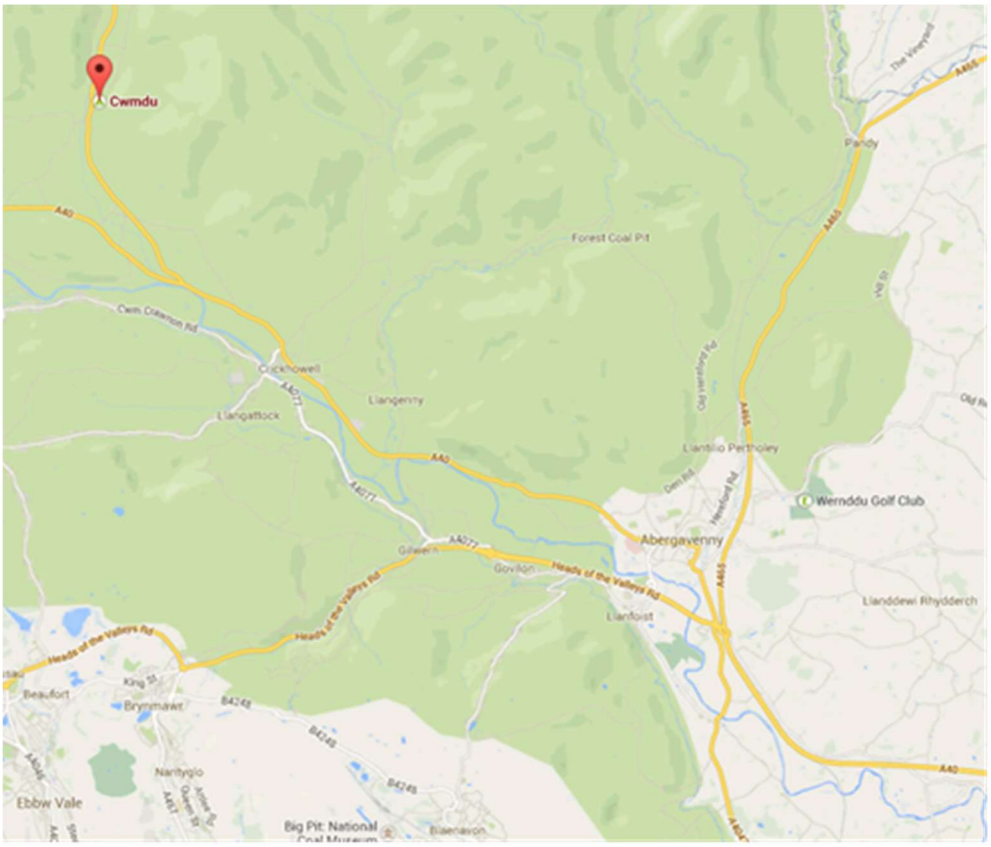
Of course, those that want to find a dark and quiet corner for some observing or imaging in blissful seclusion have everything they want in this weather protected valley under the dark skies of the Bannau Brycheiniog International Dark Sky Reserve.

In this pack, you'll find a guide to the scheduled events and talks that will be taking place this AstroCamp. All talks, events & workshops are included in your admission, so please feel free to come along to any or all that you'd like.

Beyond the campsite, the local pub (the Farmers Arms) provides good food and a warm welcome. Most AstroCamp regulars or the organisers will be happy to point you towards their favourite walk, local landmark, historic building, mountain to climb or village to visit.

Finally, we've once again asked the council to turn off the street lights in Cwmdu for the duration of camp to preserve the splendour of the night skies for us.

HOW TO GET TO ASTROCAMP



By Train: The nearest train station to Cwmdu is Abergavenny. Bus services run weekly to Cwmdu so booking a taxi from the train station is recommended. Taxis cost around £25 each way, but most operators seem to be happy to negotiate a fixed price if you guarantee that you will use them for the return journey.

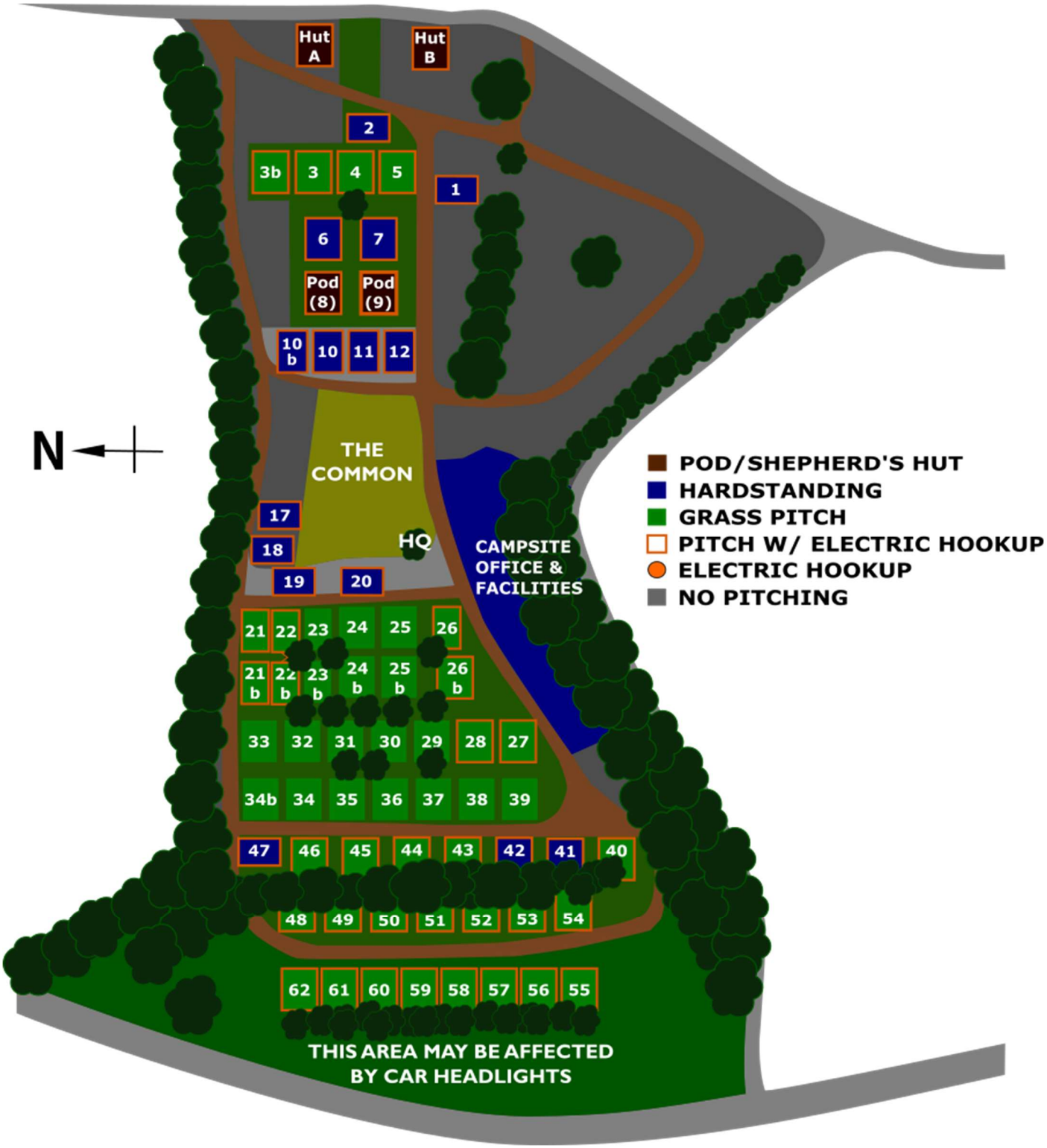
By Car: Cwmdu Caravan & Camp site is located four miles north of Crickhowell just off the A479. Turn right at the Farmers Arms public house in the small village of Cwmdu and follow the signs for 300m.

PLEASE NOTE: While SATNAV may bring you successfully to the area it may NOT deliver you to the campsite. Please follow the "camping" road signs from the Farmers Arms public house for the final 300m to the campsite.

Campsite Address: Cwmdu Campsite, Cwmdu, Crickhowell, Powys, NP8 1RU

CAMPSITE LAYOUT

Please pitch in your allocated area according to the map below. Please only park your car by your tent if it fits well within the dimensions of your chosen pitch. Otherwise please park your car in the empty bottom field after unpacking and pitching up. Your neighbour will thank you for it!



ASTROCAMP EVENT SCHEDULE

Saturday 20th

En-route to Cwmdu, take a listen to Awesome Astronomy's podcast. Just look for 'Awesome Astronomy' on your preferred podcast app or go to awesomeastronomy.com/getpodcast

13:00 Arrive at campsite, pitch up & set up.

15:00 **Meet & Greet; Limerick Competition – John & Jeni Millard**
Come to the gazebo on The Common to meet new friends, share stories & a drink or two.

Back by popular demand is Astrocamp's Limerick Competition - limber up linguists, it's never just astronomy at this camp! Pick up a form at the Meet & Greet and dazzle us with your rhyming skills. Theme announced at camp – prizes (announced Monday) for the funniest, cleverest, or even the most thought provoking.

21:00 **Live Sky Tour - Paul Hill**
Equipment: None (own telescope/binoculars optional)
Location: The Common, Bob the Dob

Sunday 21st

14:00 **Main Talk - Dr Lorenzo Mugnai**
Time: 1 hr
Equipment: Chair
Location: The Common, HQ gazebo

Dr Lorenzo Mugnai is an exoplanet expert from Cardiff University helping to build the Ariel space observatory, due for launch by the end of the decade. Ariel is designed for exoplanet characterisation, helping us understand some of the 6000 known worlds around other stars. In this talk, Lorenzo will take us through the journey of building a space telescope, every tiny factor that you must consider to make sure it can do the task at hand

15:30 **Awesome Astronomy Crew – Quiz**
Time: 1 hour
Equipment: Paper, pen, chair
Location: The Common, HQ gazebo

The legendary Astrocamp Quiz!

16:30 **Awesome Astronomy Crew – Astronomy Panel Bonanza**
Time: 1 hour
Equipment: Chair
Location: The Common, HQ gazebo

Do you have a burning question about astronomy or space exploration that you've always wanted answered, but never known who to ask? In this one-hour Live Podcast Special, we'll be answering all your spacey questions, even throwing in a debate or two!

21:00 **Live Sky Tour (Backup Night) - Paul Hill**
Equipment: None (own telescope/binoculars optional)
Location: The Common, Bob the Dob

Monday 22nd

13:00 **Afternoon Tea on the Common. Limerick Competition Winners Announced**
Time: 1 hour
Equipment: Chair
Location: The Common, HQ gazebo

Afternoon Tea on the Common (we are a terribly civilized bunch, don't you know). Bring your left-over

snacks, grab a brew, and share your favourite moments from Camp. We'll also regale you with the best limericks and give out prizes. Home-baking encouraged!

Tuesday 23rd

12:00 Leave campsite.

The Common (in the middle of the campsite) is the area we've created for socialising and observing together. There's always lots gathered here to share eyepiece views and learn new astronomy tricks from others.

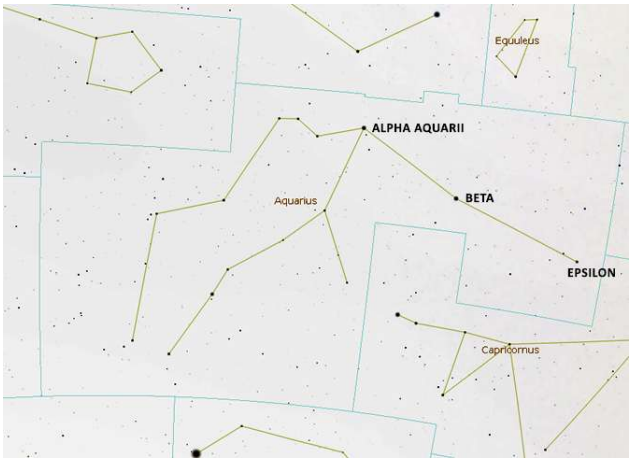
Join us in the AstroCamp family at The Common *but please do respect the proximity comfort of others*.

AUTUMN ASTROCAMP 2025 SKY TOUR

This September we are going to tour Aquarius, the water carrier, which will be sitting in one of the best parts of the sky during camp as you look south around 11pm. There you will find this constellation nestled below Pegasus and following Sagittarius, Capricornus and Aquila. If you look for Altair in Aquila and draw a line to Fum al Samakah or Beta Piscium then almost everything between them is Aquarius. This line passes between the two brightest stars, Alpha and Beta Aquarii, or Sadalmelik and Sadalsuud, with Beta actually being the marginally brighter of the two and it is here that the tour begins.

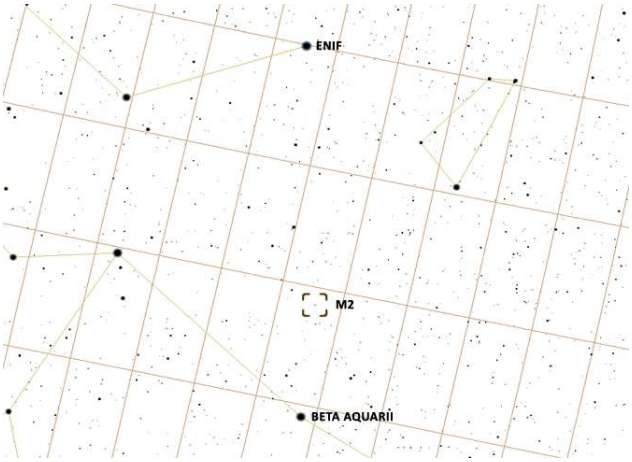
TARGET 1: BETA AQUARII - SADALSUUD

This is the brightest star in the constellation and is also one of the anchor stars for the study of stellar spectrum. 50 times wider than the sun and 2,300 times more luminous, you should see a warm yellow hue to this G type star. This is one of a group of three stars that appear to move perpendicular to the plane of the galaxy, the others being Alpha Aquarii and Eta Pegasi. When you swing your scope onto the star, after you have appreciated it's colour, look for its companions. There are two faint optical companions, both magnitude 11 and separated by 35 and 57 arcseconds. A tough challenge to start but if the sky or magnification doesn't work for you will have still looked at distinctive and unusual star.



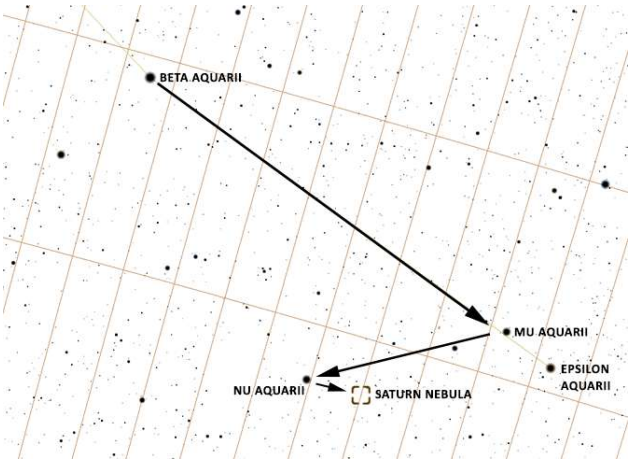
TARGET 2: GLOBULAR CLUSTER M2

The next stop is an easier find and should be a simple matter of moving one average finder scope diameter north from Sadalsuud. If we have one of those perfect Cwmdu nights then you should see a small fuzzy star in your finderscope. In the eyepiece you will find a globular cluster 175 lights years across, which is about 40,000 light years from us and is thought to be one of the largest globular clusters known. It is an interesting glob to look at, in larger scopes as it appears elongated on a northwest-southwest axis and appears to be surrounded by streamers. Rack up the magnification and on a good night you will see many spurs of stars and possibly even dark patches or lanes across the glob itself.



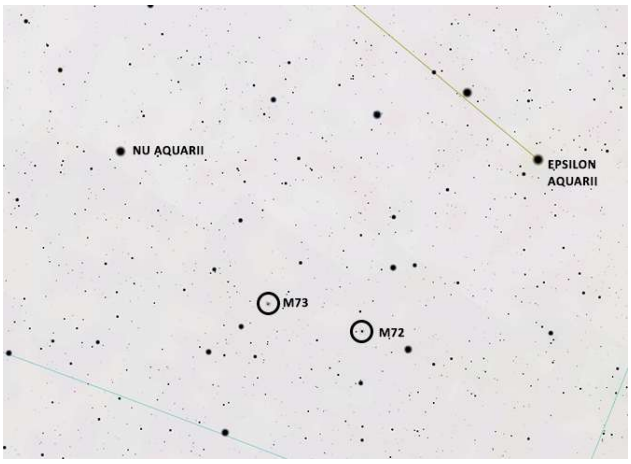
TARGET 3: PLANETARY NEBULA NGC7009 - 'SATURN NEBULA'

The next targets are a little harder to hop to but worth the patience and perseverance. Working back to Beta you need to look west and find the close pairing of Alpha and Beta Capricorni, which is pretty distinctive and about two clenched fists width, or 20 degrees away. If you look back towards Beta you should find another fainter paring, perpendicular in orientation and this is Epsilon and Mu Aquarii. Moving south and east about a finderscope's diameter you should find Nu Aquarii and from here you are just a degree away from the Saturn Nebula, a planetary nebula that is a William Herschel discovery but named by Lord Rosse who could discern the Saturn like shape of the nebula. It needs good magnification to see to the 'rings' but even without them NGC7009 is a beautiful blue-grey planetary and worth tracking down even in small scope.



TARGET 4: GLOBULAR CLUSTER M72 AND A MESSIER 'PHANTOM' M73

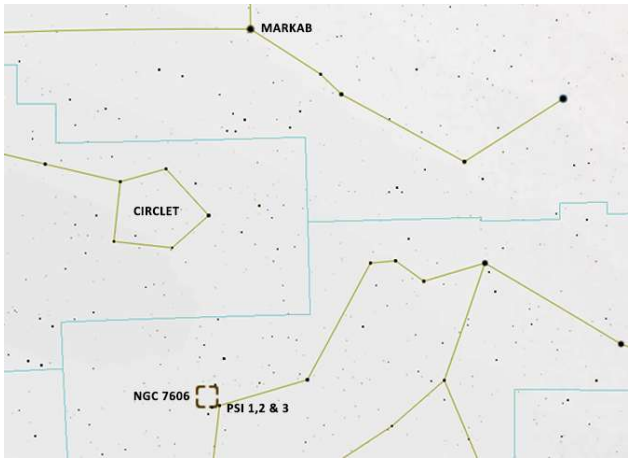
We are back to globulars to grab another messier and to take a quick look at a mistake. M72 is difficult for small scopes as unlike M2 it is a small cluster, only around 40 light years across and at least 50,00 light years away, compare this to M13 which is less than half the distance and more than twice the diameter. Move your scope slowly to the west and south of the Saturn Nebula, heading for Beta Capricorni. You should find the faint star that is actually a globular cluster after moving about 2 ½ degrees. M72 has no bright core and appears even under high magnification as an almost uniform disk of stars.



On your journey to M72 you will have passed M73, a subject of long debate in astronomy. This small grouping of four stars was reported as an open cluster with nebulosity by Messier, who must have been at the wine because nebulosity has never been seen since and starting with John Herschel there has been doubt over whether this was an open cluster or an asterism. The debate was settled in 2002 when spectral analysis showed the stars were at different distances and unrelated. But it stands in the Messier catalogue still as one of three 'mistakes', along with M40 and M24.

TARGET 5: GALAXY NGC7606

This is the brightest galaxy available in Aquarius, but you're going to have to slew that scope over the other side if the constellation. Find Markab at the bottom right of the great square of Pegasus and look down for the circlet in Pisces, an easy asterism of five stars. Below this in a line down from Markab that passes to the right of the circlet you will find the star Phi Aquarii and below this a close group of three stars Psi 1,2 and 3. If you place your finder scope on these three, then move east a little over half a degree you should locate the spiral galaxy NGC7606 at magnitude 11.5. It has a bright core and high magnitude in large scopes may tease out some structure. It sits around 90 million light years away, so while those around you are enjoying the spectacular M31, you can bask in the glory of finding a similar object 40 times further away, while the light in their scopes is early hominids, you are bathing in light from the Triassic.



Have a great camp and hunt me down if you want a few more star-hopping pointers.

STAR CAMP ETIQUETTE

LIGHTS

Please only use red light torches at night. If you use a laptop, please cover the screen with a sheet of red acetate. Toilet block lights will be switched off or covered in red acetate during the dark hours. Please do not use laser pointers if it is dark and cloud free as they'll interfere with astroimaging and can be dangerous. Also, cigarette lighters produce light as well as heat. Please screen your lighter flame from astronomers. Please be aware that lights inside tents and caravans are also visible to people outside of them - red lights or no lights please.

This is the one piece of etiquette that will make offenders very unpopular - dark adaption takes up to half an hour to achieve but only a second of normal light will take you back to square one.

EQUIPMENT

People will be happy to let you look through the eyepiece at their scopes but please do ask the owner before taking a look. Be aware that telescopes are carefully aligned and assembled and as little contact to see through them is best.

Be mindful of astroimagers. Astrophotography requires very steady and unobscured exposures, so please don't touch or walk in front of a scope being used for imaging. We will try and set aside an area for astroimagers for this very purpose. I'm told they're still a very friendly bunch despite their obsession with long exposures!

CARS

No car movements are allowed after dark, so please arrange to arrive before this time. Remember that opening car doors or the boot always turns an interior light on so disable them if you can or remove the fuse before sunset. Alternatively, cover them with opaque tape, including those in the boot. If a bright light is unavoidable call out: “LIGHTS IN 3 SECONDS” to give everyone time to turn the other way.

The best advice here is to remove everything you'll need from cars before nightfall and don't return to them.

CHILDREN

Children are welcome to the event, but please remember the field is dark, there are lots of very valuable bits of equipment and many people will have carefully aligned their telescopes. Also, tired astronomers are often glad of a lay in the following morning. Please keep your children and their volume under control.

NOISE

We want this to be an astronomy *party*, but please be considerate of others and refrain from any raucous behaviour, loud talking or music. Some people will want to catch up on some sleep for a few hours during the night and others will be sleeping during the day. Please be considerate of others trying to sleep when it is cloudy by not playing music late at night.

RUBBISH

The site is rich in wildlife and a very pleasant place to stay. We would like to keep it that way. Please keep your rubbish in a suitable container and dispose of it in the bins provided. Dark sites and loose trash do not mix well.

DOGS

Well behaved dogs are more than welcome to the event, but please remember the field is dark, there are lots of very valuable bits of equipment and many people will have carefully aligned their telescopes. Also, tired astronomers are often glad of a lay in the following morning. Please keep your dogs on a lead if they are anywhere near other people’s equipment and their volume under control. Please also be mindful of others who might have a fear of dogs.