

Once again we are planning an ESSA/ASSA star gazing evening which is due to take place in Magaliesburg on 28 September. Previously such events have drawn quite a crowd and been a lot of fun. The destination is not too far from Jo'burg or Pretoria, the skies are reasonably dark and it is feasible to drive home if you need an early night. Please read the whole email if you plan to come, so to avoid surprises.

The plan for the evening

The first part of the evening will be a "bring and braai". Bring your own food and drink; we will provide the fires. A nominal contribution of R30 per person for ESSA/ASSA members and family (R50 for non-members) is required to cover some basic consumables and set up costs. This will be collected at the entrance. **People bringing telescopes for the benefit of all will be granted free entrance.**

Diehards are welcome to pitch a tent at a bargain price of R20 for the night – in addition to the previously mentioned entrance fee. Sleeping in a dormitory is also an option at R60 per person. Beginners, don't worry: there will be a variety of telescopes available later on for viewing the night skies and informative people alongside them to explain what it is you are looking at. We will also provide fires for people to sit around to escape the cold. There are a variety of routes for people wanting to mountain bike on Sunday morning, so camping and mountain biking is definitely an option too.

Directions and starting time (Solar telescope)

The destination is about a 2 hour drive from Jo'burg or Pretoria and it is advisable to arrive at about 15h00 to avoid having to setup or disturb people in the dark. People arriving at this time will have the opportunity to look through a solar telescope.

RSVP by 21 September

Please email me (Simon) at donallys2@yahoo.fr to let me know whether you are coming, how many people you will bring with you and if you are bringing a telescope. I need this information to know how many people we are expecting.

I will send out directions, details and further instructions for the evening closer to the time, to the people who have responded. At this stage I need numbers and email addresses of people planning to come.

ADVICE TO TAKE SERIOUSLY

September nights should be clear. This is good for viewing, but allows heat to radiate straight out to space. Without vigorous activity, you will soon become cold, so be sure to bring warm clothes. Beanies, gloves and blankets are good to have - it is far better to stay warm than, to get hypothermia and try miserably to regain body heat. Put on several thin layers rather than one thick one, as this traps insulating layers of air better. Bring snacks and drinks to keep the body going, but please avoid greasy, salty, sticky items as these are very bad for the equipment. Have binoculars? Bring them too! To preserve night vision, only red lights please, and keep them pointed down – not into people's eyes.

Astronomical details: What should you be able to see?

The Solar System

Shortly after the sun sets at about 18h00, it should be possible to spot elusive Mercury, almost directly below very bright Venus and thus easier to find. About halfway between and a few degrees to the right will be Saturn, not too faint but still a bit of a challenge in the twilight. This grouping is worth checking out before it gets too low; the show will be over around 19h30. To the East, Uranus will be rising and should be visible by about 22h00, as will Neptune - both challengingly faint. From 19h00, one can try hunting for faint asteroid Juno, which will be even more challenging. Around 2am, Jupiter will become accessible, rising ahead of the crescent Moon. Catch Mars from 4am. At 5am, those with the right equipment and a view of the horizon may be able to find asteroid Vesta rising in the twilight.

Deep Sky

The Southern Cross will get to its lowest point at about 21h00. Nearby, see the excellent Omega Centauri globular cluster, and compare it to the equally spectacular but more loosely arranged 47 Tuc. These two vie for the prestige of "best Globular". Meanwhile the Milky Way will span the sky from roughly N to S at sunset, gradually dropping to the West. It contains many beautiful star clusters and nebulae, including the Lagoon / Triffid / Eagle nebulae and the Butterfly & Wild Duck clusters. Be sure to check out the rich area in Scorpius, the heart of our home galaxy. Outside the plane of our galaxy lie the Saturn planetary nebula, the nearby open cluster M73 and globular clusters M2 & M30. Around midnight, try a biggish scope on the faint distant galaxies in Sculptor and Fornax. The Large and Small Magellanic clouds will be best situated around 2am. Visible to the naked eye, they contain features e.g. the Tarantula Nebula observable in binoculars (but better in telescopes). The Hyades cluster in Taurus precedes Orion with its bright Great Nebula, followed in the East by Sirius, the brightest star. Between 22h00 and 02h00, the great Andromeda Galaxy in the far north should be well positioned: faint to the naked eye, decent binoculars will give a good view. This, almost a twin of the Milky Way, is the nearest spiral galaxy to ours. In time to come, it will merge with the Milky Way. By 2am, the fabulous Eta Carina nebula and the rich Milky Way vista in the vicinity should be well positioned for observing; you can try finding the Rosette Nebula trailing behind Orion. Nearby is the Cone Nebula on which the beautiful Christmas Tree open cluster is superimposed.

Weather

Whilst there are no certainties, historically we can expect pleasantly mild temperatures (11-22C), low probability of precipitation and hopefully little to no cloud cover.

We hope to see you there
Simon Donally / Chris Stewart