

Winter Star Party 2015 Report

Sunday 15 January 2015

After a nausea-inducing 0445 departure from Salisbury to London Heathrow I flew with my 4" f5 refractor to Miami Florida for the Winter Star Party. The 10 hours flying time was put to good use by watching the movies I don't get to watch at home including 300, Fury and 28 Days Later.

After the typically warm welcome from US Homeland security I checked into the airport hotel and, after a functional bite to eat, crashed out with jet lag. I woke very early and popped outside to see a thin crescent moon poking through thin layers of drifting cloud. I just hoped the clouds would move on for the star party.

Monday 16 January 2015

After picking up my hire car I left Miami and down to Keys. To my surprise I negotiated my way out of Miami and to the freeway without getting lost! After a couple of hours of easy driving, I arrived at Scout Key, the home of the Winter Star Party.

Space on the beach, known as the berm, with its unobstructed all sky views is highly sought after. The downside is the lack of shelter from the winds which can be strong enough to limit the observing. My favoured spot, at the other end from the berm, is sheltered by trees and offers plenty of shade in the day. Here, I can observe while the berm is shut down and still enjoy the far southern objects from the shore line.

I booked a bed in a hut (called a chickee) to avoid the need to bring my camping gear. It's pretty basic and the thin walls offer no protection from the wind. Furthermore when it rains, the thatch roof leaks. Both issues came to the fore during the week!

Arrival in the Caribbean is always disorientating. I had left a drizzly grey UK and now the warm sun was shining over a flat blue sea while palm trees waved gently in the wind. I couldn't wait to get some observing again. Here, the site's latitude allows objects that simply don't rise from the UK to be high in the sky – including highlights like the Southern Cross, the brilliantly colourful jewel box cluster, stunningly detailed eta carina nebula and the huge globular cluster omega centauri. I find the first night is always disorientating as the stars are all in the wrong place! The plough is low down on the horizon while Sirius is high in the sky.

Most of the observations in the following pages are made with a 4" f5 refractor using a 19 panoptic at x26 or an 8mm ethos x62.



Welcome Sign at the Entrance



Chickee accommodation – my scope is in the corner

I was fortunate to be located next to a good fun group who, with 12 and 16 inch telescopes, provided considerable more fire power than my 4". I always thought I had a long journey but people spend days driving from the far reaches of the US and Canada to attend. I was still quite tired on the first night so fully intended to enjoy settling into the new environment rather than pushing my observing.



Observing Buddies – L-R Author, Bernie from Colorado and Jacques from Montreal

I started observing bright **Venus** at dusk and, to my surprise, a very distant **Mars**. Both showed a tiny disc with Venus showing a slight gibbous phase. As it got darker, the **zodiacal light** was obvious running from the horizon through Aries and up to the Pleiades.

Moving to the telescope, I started with a simply stunning view of **M42** through a 16" dobsonian and 13mm ethos. What a view! It certainly made me miss my 14" back home! Moving back to the 4", I moved over to Jupiter and the 4 moons; **M46 and M47** plus the adjacent **NC2423**, another Herschel 400 ticked off. Interestingly NGC2423 is much easier to pick out from the background Milky Way through the 4" than the 16".

I was also treated to a view of the **Spirograph Nebula** through the 16". It has a very bright central star and the outer shell doubles with averted vision. Very interesting.

Moving south with the 4", **M41** near Sirius and my old friends the lovely open clusters **NGC2477** and **2451** in Puppis were ticked off. It was now 2100 but 0200 in my circadian rhythm! I took some time out for a catnap, brew and chocolate brownie.

Batteries semi-recharged, I went up to the berm and met a local, Sergio and his wonderful 16" tracking dob and 6" Takahashi. Carl Zambuto had ground the mirror and, to my surprise, was observing with Sergio to see how his mirror was holding up. We were all being buffeted by the strong winds and the scopes weren't fairing much better. **Jupiter** looked stunning with the moons showing as small discs. The view would have been fantastic had the scope not been shaking violently! Switching to a low power eyepiece, Sergio kindly showed us the **Horse Head Nebula** (using an H-beta filter), the **Leo Triplet**, nearby **M105 group of galaxies**, edge on galaxy **NGC4565** and its strong dust lane and another new object **NGC2359** Thor's Helmet. Thor's Helmet, particularly

with an OIII filter was stunning. A circular patch of nebulosity with two long tendrils make it instantly obvious where it gets its moniker from. Definitely one to return to.

It was now 0100 and I was extremely tired. With a thin layer of cloud coming and going, I decided to crash out ready for a more sustained observing run tomorrow. Not a bad start: 3 planets, Zodiacal light, 3 new deep sky objects and a whole heap of old friends.

Tuesday 17 February 2015

The night was scrubbed due to an awesome son et lumiere show as a series of thunderstorms and strong winds swept in. Although very impressive to watch, this weather system affected the remainder of the star party. To cap it all, the chickee leaked in the rain and the wind howled through the thin walls!

Wednesday 18 February 2015

The grey clouds cleared late afternoon to reveal a clear blue sky but the extremely strong winds remained. The winds are driven from the cold north and I, assuming that Florida was always hot, realised that I have insufficient clothing. It really is like the UK with puddles everywhere, a driving wind and low temperatures! I scrounged a couple of warm tops from neighbours before driving into town to buy some more to keep me warm. It's certainly a change from last year when I was in t-shirt and shorts until the small hours.

The afternoon was fantastic. I attended both talks which were preceded by an all you can eat ice cream buffet. The only downside was, having had seconds of ice cream, I felt a bit sick in Don Parker's talk on 70 years of solar system observing! His talk was both humorous and fascinating. Alas, I was saddened to read that he passed away only a few days later. His passing is certainly Astronomy's loss.

As the skies were clear in the evening we set up despite the strong winds. I was in several layers of new and borrowed clothing but at least it wasn't raining. I also helped Bernie drain several litres of water from the bottom of the 16-inch's rocker box. The rain had clearly blown under the scope cover despite careful pegging out and tying down.

Venus and distant Mars were first up as the sky darkened.



Mars and Venus through Palm Trees

Once the stars were visible, I went to enjoy my new friend open cluster **NGC 2362** around Tau Canis Major. It looked very good in the 4" and was fully resolved in a nearby 12". While at the 12", **Jupiter** was shining brightly and the GRS was near the meridian. Alas it was still too windy to make a meaningful observation despite the very steady skies.

Back at the 4" I started with **M41** before plodding on with the Herschel 400. There was no sign of **NGC2204**, another Canis Major OC but sparse **NGC 2354** was found nearby Tau Canis Major. It was hard to make out from the background Milky Way stars but quite clear once I had dialled it in. I also stumbled on **h3945**, a very colourful double star with orange and electric white primaries of equal brightness. A classic!

NGC2360 OC Canis Major was a pretty little but dense open cluster set nearby to a rich part of the Milky Way with an adjacent bright star.

NGC2215 OC Monoceros. Very small but only time for a brief glance as a cloud bank swept in.

The wind was strong enough to prevent some of the big dobs from making the most of the skies as they were buffeted back and forth. I was allowed use of a nearby 14" while its owner took a break. After another look at **Jupiter** and the **Orion Nebula**, I found my old friend the **Flame Nebula NGC2204** in Orion. The familiar "tank tracks" of the parallel dark lanes were clearly visible. Unfortunately, I gave up with the 14" after 20 minutes or so. As soon as I took my hand off the scope, it would weather vane with the wind. The 4", with its lower torque and magnifications, was fairing much better so I reluctantly handed the larger scope back.

Open cluster **NGC2215** in Monoceros as a coarse group of 20-30 stars.

Nearby nebula complex **NGC 2185-2170** in Orion was something of a mystery. There is definitely something there especially around NGC2185 but I'm not certain what. The whole region is like looking at a dark nebula as there are hardly any stars. All the faint background Milky Way stars are gone. An area worthy of further investigation.

The strong winds were quite debilitating. I decided to put the scope to one side for some binocular observing. This was a rather pleasant session. I was sitting down using my lovely 15x50 Canon Image Stabilised binoculars, looking over the Caribbean to the far southern Milky Way, simply heaven.

IC2391 OC Vela is a coarse group of 10 stars, with 2 sets of double stars. This cluster is also visible to the naked eye as a small, bright fuzzy star.

NGC2477 and 2451 OC Puppis are always a joy in the 15x50 binos against a fabulously rich part of the Milky Way.

NGC2546 OC Puppis is a larger, brighter cluster against a very rich part of the Milky Way.

Following them across the sky was **eta Carina**, low down near the horizon. It was stunning in Jacques' 16" lightbridge, 13mm ethos and OIII filter with rich pockets of stars and striking dust lanes. Far more detailed, despite its lower elevation, than the Orion Nebula. Gosh you could spend hours studying this view!

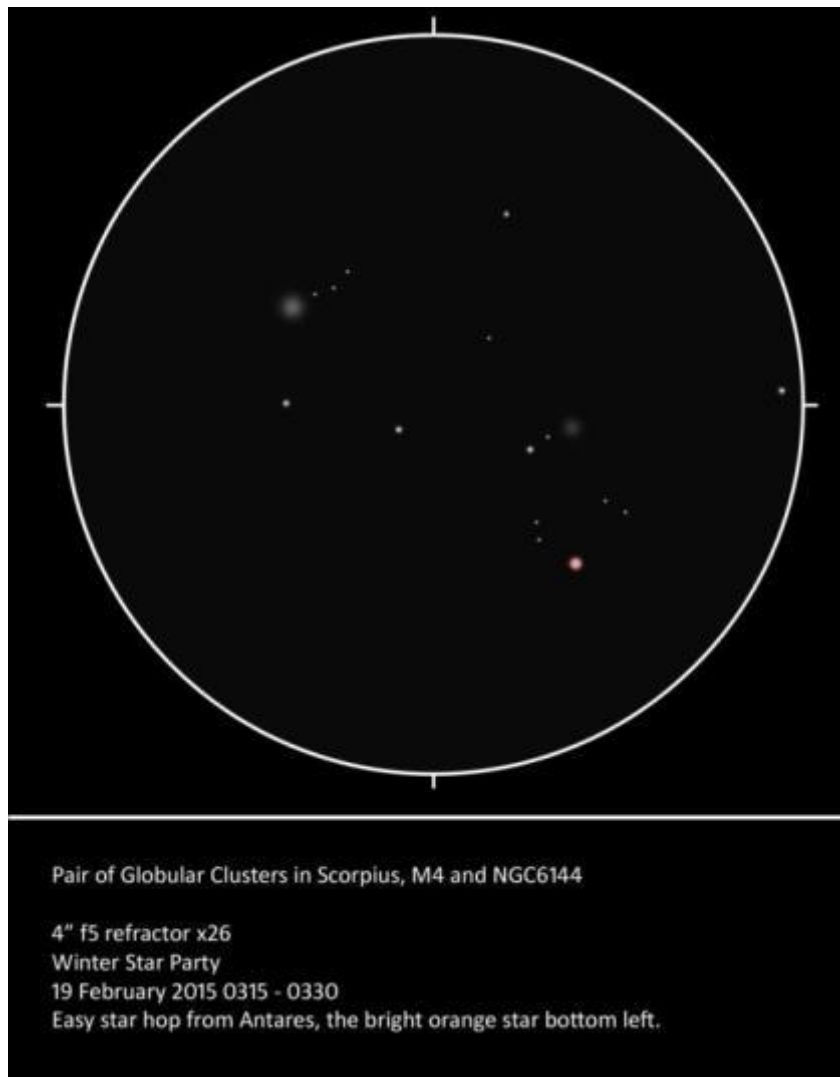
Eta carina is surrounded by several stunning open clusters. **NGC3293** is a strikingly dense, small but bright open cluster immediately to the north of eta Car. **NGC3114** is a beautiful, dense open cluster to the west. **NGC3532** is a coarser open cluster to the east.

Omega centauri had now risen and was wonderful in the binos and even more striking in the 16" LB especially with my 8mm ethos. Wow, stars fill the field of view!

Centaurus A is a striking galaxy. Round and relatively faint, certainly when compared to the embarrassment of riches above, it is split by a dark dust lane. Very clear where the galaxy gets its Hamburger or Pacman nickname from.

Jacques also found the Antenna Galaxies **NGC4038 and 4039** galaxies in Corvus and the wonderful Sombrero Galaxy **M104**. M104 is a thin edge on galaxy split wonderfully by a razor edged dust lane.

I grabbed a quick snooze on the deckchair in my sleeping bag to rest and warm up. With my faculties returned, I found **M4** and **NGC6144** two globs near Antares.



M4 and NGC6144 in Scorpius

M107 globular cluster in Ophiuchus was quite faint but granular

Box Nebula NGC 6309 in Ophiuchus was hard to identify with only 25x.

Finished with **M83**. I have seen this from the UK as a ghostly glow but here it hinted at spiral arms, definitely more than a uniform object. Needless to say it was stunning in the nearby 16" with strong spiral arms and bright central core.

It was very debilitating battling strong, cold winds so I decided to pack up at 0400. Scorpius and Sagittarius had risen but they will have to wait.

Thursday 19 February

SQM 21.69; 9 degC; Windy but at least it's not a howling gale. Still cold and I am wearing lots of new and borrowed clothes!

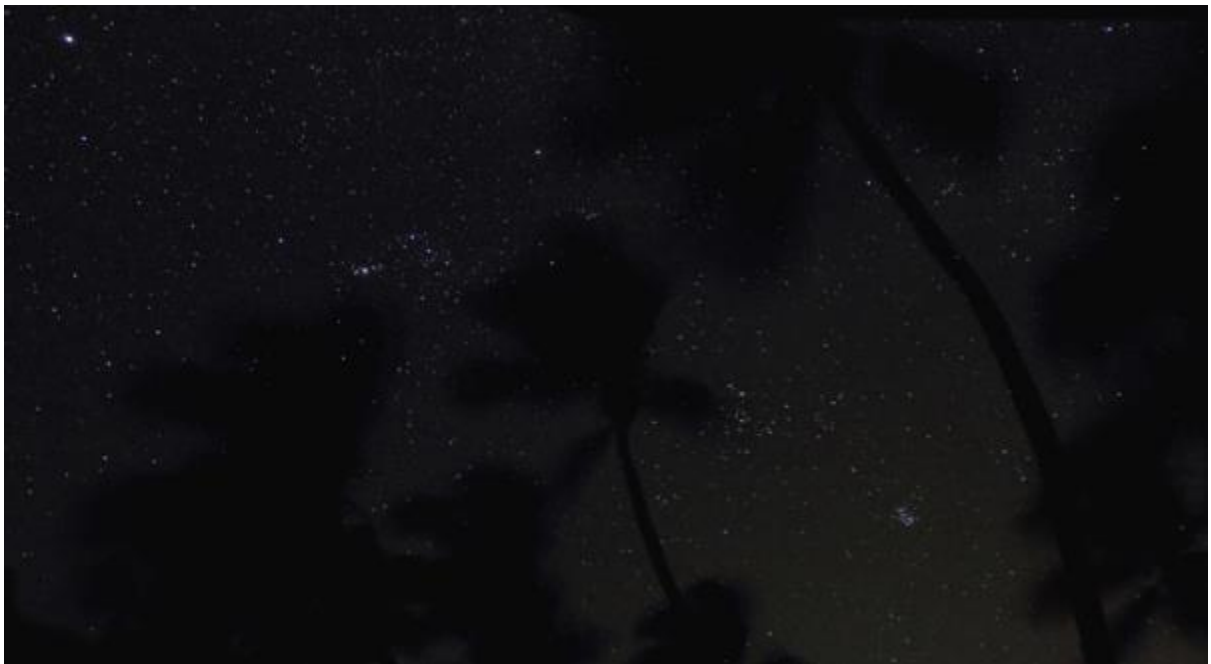


Cold Weather Clothing – note Venus and Mars above the Scope

As it was so clear I took a number of 18mm widefield Milky Way shots of the Orion region through the palm trees followed by one of the southern Milky Way with Canopus reflecting off the sea!



Southern Milky Way – Note Canopus Reflecting Off the Sea



Orion and Pleiades through Palm Trees

I found **Comet Lovejoy** by scanning the northern sky near the double cluster with binoculars. A faint tail spanning several degrees was visible through the 4" using a 19 panoptic at x26.

I decided to continue trudging my way through the Herschel 400. As Gemini was nice and high, I decided to tick off as many objects as I could in the one constellation. I whetted my appetite with the always-impressive **M35**. This large, bright triangular shaped cluster holds several hundred stars. One edge of the triangle is cut by a prominent bright arc.

Adjacent to M35 is **NGC2158**, a fainter small patch of granulated nebulosity set by a handful of stars. It is always interesting to put these two together in the eyepiece and highlight the different distances between them.

NGC2129 OC Gemini at x26 only two stars are visible but at x62 2 fainter stars come into view against a small, faint granular haze.

NGC2266 OC Gemini After, ahem, a small misidentification: one bright star at apex of triangular granular nebulosity. Looks good x62.

NGC2304 OC Gemini Adjacent to two 6 mag stars but hard to pull out from overall Milky Way field stars.

NGC2355 OC Gemini x62 one brighter star and handful of fainter stars set against granular nebulosity. Quite small and pretty at x26.

NGC2371 -2 PN Gemini. Nothing seen through 4" so put in a request for Bernie's 16" dob x228. Interesting planetary nebula. It is split into two lobes, one of which has a bright nucleus that can be mistaken for a central star. The central star is in fact between the two lobes although it is much fainter than the lobal nucleus. Worth finding with the 14" at home.

NGC2420 - yet another OC Gemini. Attractive open cluster set against rich Milky Way. 62x dense cluster of equally bright stars set against granular haze.

NGC2395 OC Gemini hard to make out from Milky Way. Suspected by dead reckoning in the finder but not sure.

Bernie had **M104** Sombrero G Corvus in the 16" x228 so I had to look. Simply awesome with strikingly dark, razor sharp dust lane.

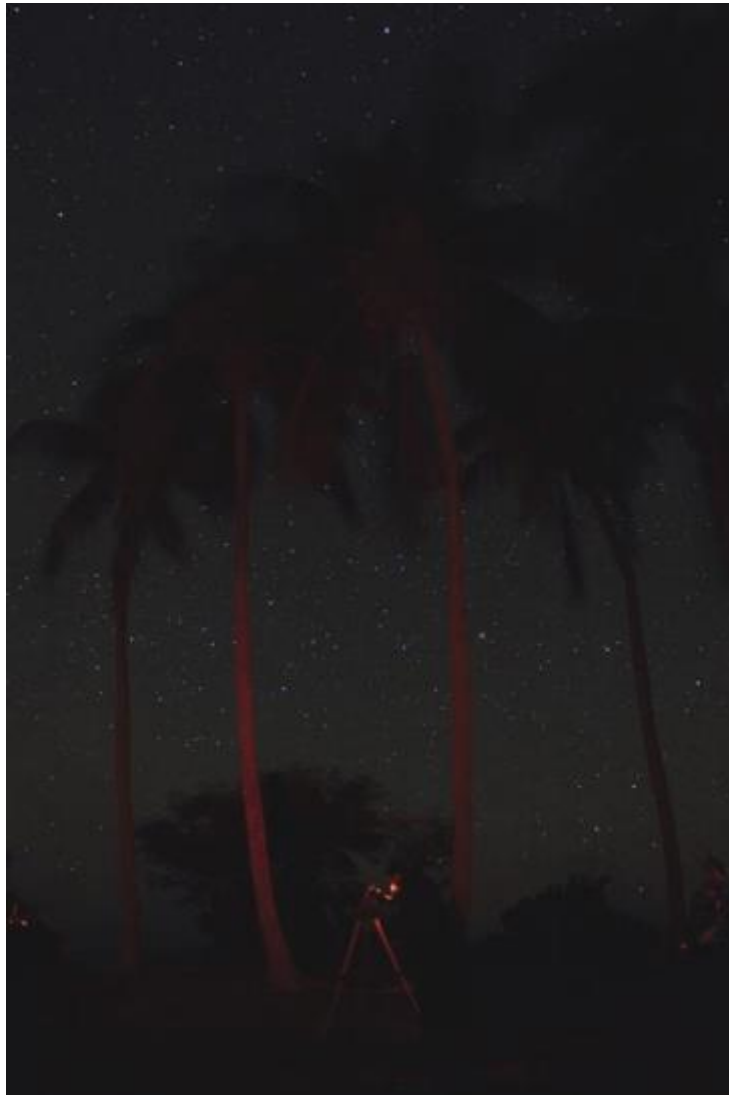
After a few hours of good observing it was time for a hot chocolate break with Bernie, Jacques and another nearby observer, Mark. When I got back I took a break from the eyepiece and grabbed my camera. The Southern Cross was now nice and high so I took a series of pictures through the palm trees, including a staged picture with the telescope.

The bins framed the beautiful combination of Eta Carina and the rich open clusters **NGC3532 and 3293**. I should have made a sketch as this was the last night I would see all three on this trip. At the other end of the optical spectrum, Eta Carina through Jacques' 16" & OIII filter was simply stunning.

Bernie had found M83 in his 16" again. It was stunning with the 8mm ethos with bright spiral arms and central arm. I would have made a sketch had I not been borrowing eyepiece time. The view was a change from the UK where M83 is a dull glow on the southern horizon.

Back at the 4" **NGC 4030** G Virgo is a small rugby ball that appears to have a couple of field stars superimposed. Worth following up later.

NGC4174 G Virgo - fail but obviously quite faint!



Observing Under Palm Trees

Scorpius had risen and **Saturn** was a glorious sight, especially in Bernie's 16" at x228. The false comet, **NGC6230** was fantastic in both the binos and the 4" at x16 with the 31mm Hyperion. All 5 open clusters were visible, fantastic!

Alas the wind had picked up again making the scopes shake and charts blow away. I decided to pack up at 0420 as the sky started to brighten.

Friday 20 February 2015

I attended the prize giving but, despite being surrounded by winners, my number was never picked. I consoled myself by visiting the trade stands. I had been watching Bernie use his laptop and Sky Tools to develop an observing list and then display finder charts and eyepiece views to aid star hopping and identification. This appears to offer a step change from the more traditional Pocket Sky Atlas and, remembering how hard it can be to separate open clusters from the Milky Way, I decided to get a \$5 red sheet and try my own approach with Sky Safari on my iPad. Needless to say, the weather remained a complete wash out all night due to cloud but caught the **Moon-Mars-Venus** conjunction at sunset.



Moon, Venus and Mars at Sunset

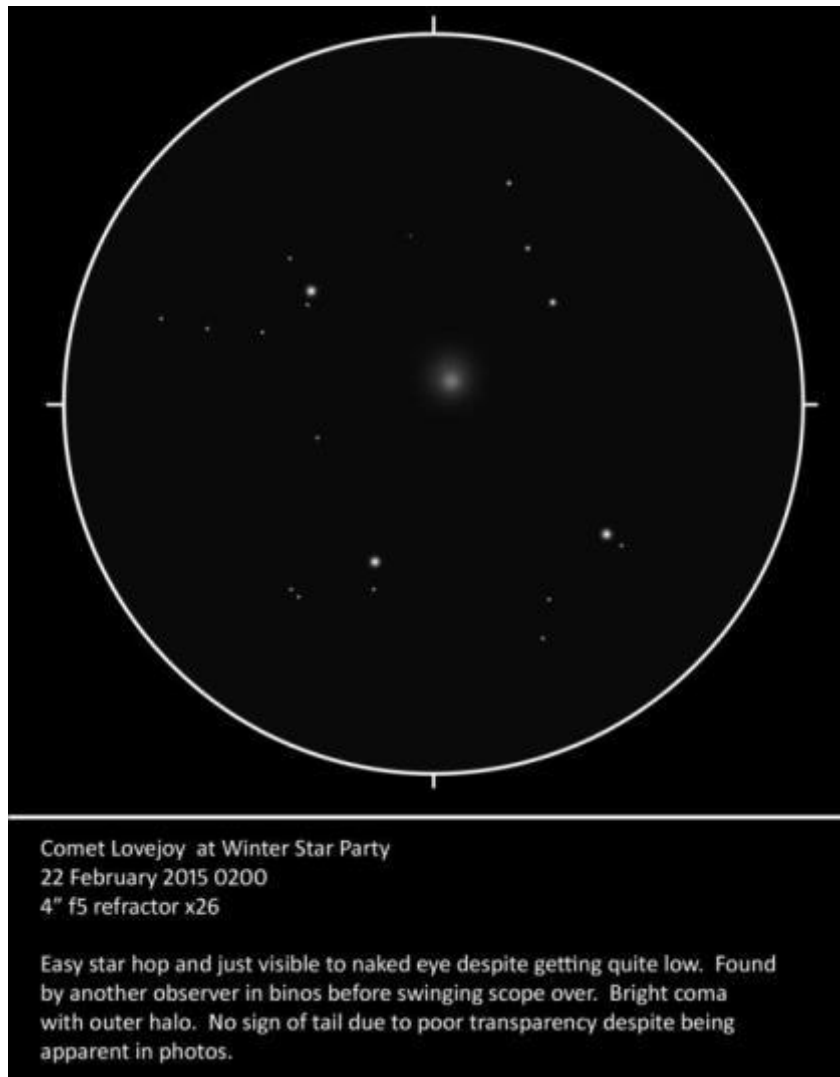
As the weather was so bad, we watched Breaking Bad on a laptop. The problem was it was series 4 - and I've yet to see series 1, 2 or 3!

Saturday 21 February

This was the field trial for the iPad - Sky Safari - red sheet combination. I am hoping that this will give me all the information at my finger tips and save hunting through my star atlas for finder views and close ups.

As it was the last night, we were all keen to observe but were bedevilled by drifting clouds that came and went all night. Many people had already packed up and left so at least we did more than most! We had to wait for a clear patch so made good progress with Breaking Bad and I slowly started to understand what was going on!

The clouds eventually cleared at 10-ish. **Comet Lovejoy** was an easy catch in a sucker hole near the Perseus - Cassiopeia border. The poor transparency limited view of the tail but the central condensation and coma were obvious at x26.



Comet Lovejoy as seen through 4"

My old friend **Tau Canis Major NGC 2362** is now an easy find. Bright star surrounded by a small rich open cluster x62.

Jacques found **NGC2364** PN Monoceros in his 16" with OIII x141. Small grey nebula with bright central star. Responds well to averted vision.

NGC2232 OC Monoceros x16 and x26. Relatively large, scattered OC that is made up of two groups of 20 or so bright stars, 8-10 mag open cluster. It was useful to use the iPad as it identified the full

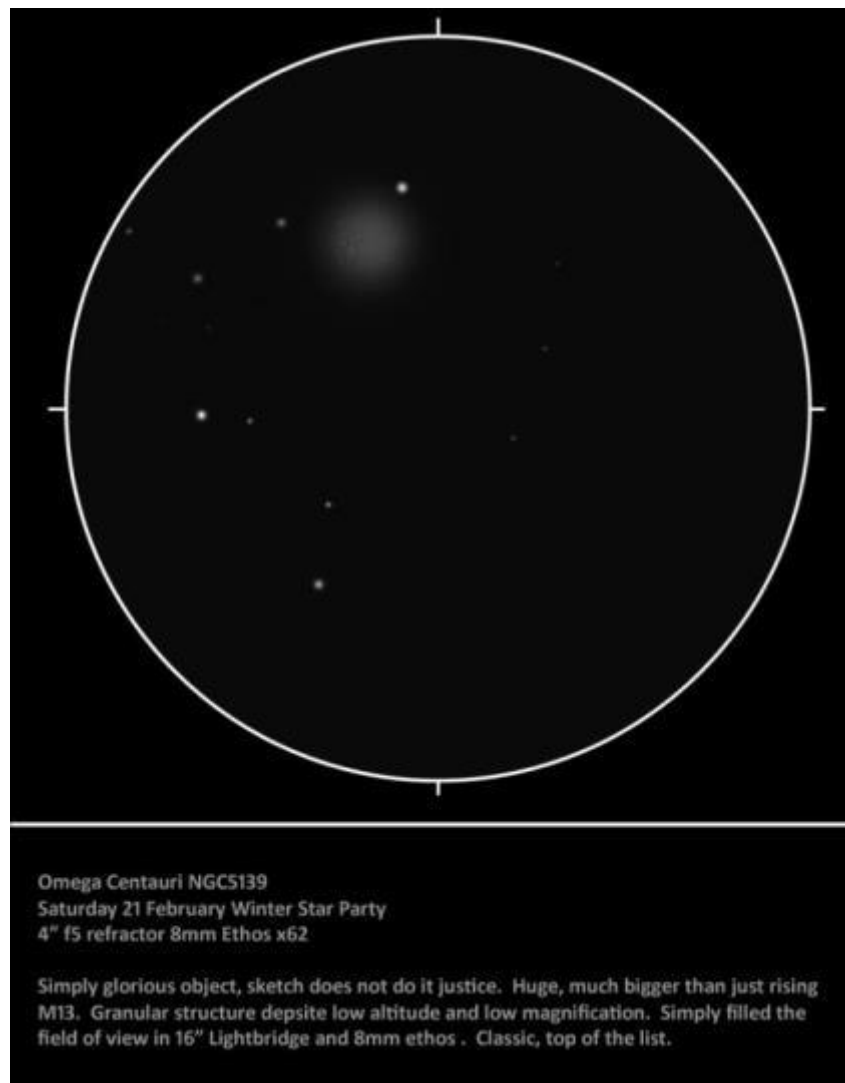
extent of the cluster as it blended into the Milky Way. This was not apparent from the Pocket Sky Atlas and without doubt aided a positive identification.

NGC2244 OC Monoceros - the centre of the Rosette Nebula. Rich open cluster whose principal stars take on a 3x2 matrix configuration. A UHC filter and x26 is wide enough to bring out hints of the nebulosity itself.

Tried to find **NGC 2251** but was stopped by cloud. Quickly looked at **M42/43** and the Auriga clusters **M36-38 & NGC1907** before the cloud completely closed in. Oh well back to Breaking Bad!

The clouds cleared at 0100 so back out to the shoreline to see if the southern highlights were visible. Eta Carina was hidden by cloud but the adjacent open cluster to the north was visible although poor.

Omega Centauri was shining brightly alongside the bow tie asterism. It simply is huge and blows away M13. Sketch made at x62.



Omega Centauri – Simply Huge!

Centaurus A was struggling to punch through the poor transparency.

Star hopped to **Markarian's chain** in Virgo but it was very uncomfortable to observe. The scope was vertical making the eyepiece too low to look through while standing. I couldn't be bothered to adjust the tripod legs to make the eyepiece low enough to sit at, especially as the view was compromised by the poor transparency. **M84, M86, NGC 4438, 4435 and 4338** were all visible as dim glows.

I decided to explore Corvus instead as, being lower, the eyepiece will then be higher. **NGC4027** a galaxy in Corvus is a tiny smudge at x26 and x62. It appears to have hint of stellar core but the transparency was worsening as the clouds continued to build from the south.

Cancer was the last cloud free part of the sky so it was a quick look at **M44, M67** and nearby **Jupiter** before sadly shutting down for good at 0230.



Writing up My Observing Notes before Heading Back to Miami

Conclusion

Gosh what a star party. I had a fantastic time, surrounded by a really pleasant group of observers. Looking back through my notes I collected over 80 entries in my log book (including a number of new objects) through a variety of telescopes. Clearly not a bad haul despite the inclement weather and lost nights. The southern latitude allows me to observe objects I simply cannot see from the UK. In addition to the deep sky highlights, I had a good solar system haul including Jupiter, Saturn, Comet Lovejoy, Venus, the crescent moon and the zodiacal light.

Another highlight of a star party is the social side: seeing different set ups, trying new bits of kit and learning new approaches (eg using the iPad and red film). All of which, I find, improve my own approach and observing experiences. I also find a star party allows me to truly immerse myself into astronomy without worrying about work and family commitments. Here, I can lie in each morning without worry!

The weather this year, however, was quite a disappointment. 2014 saw me wearing t-shirts and shorts into the small hours. This year it was jeans, fleeces and sweatshirts as incessant, cold wind ground down the spirit. It got to the point that many people left early making the place feel like a ghost town over the last couple of days.

The lesson is to be prepared for cold and wet conditions as well as tropical heat. As they say in the Army, there is no such thing as bad weather, just a poor choice of clothing! Next time I see eta carina and its surround star clusters, my suitcase will include warm layers as well as my t-shirts and shorts!



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