

UNIVERSE



AUG 2025

Vol 74 #08

In This Issue



Page 2	Index, Society Information
Page 3	Team Space
Page 4	August Observer by Geoff Smith
Page 7	Comets in August by Greg Bryant
Page 8	Wiruna Wanderings by Alessandro Spina
Page 12	Around the Universe—Brett White’s Asteroid
Page 13	Telescope Parts for Sale
Page 14	Comino’s Comment
Page 15	Crux Quiz—The Questions by Markus Stone
Page 16	Sky Events in August by Kendra Melson
Page 17	AGM Notice and Agenda
Page 18	Meetings & Dates, Wiruna Happenings
Page 19	Member News by Lesa Moore, Outreach Events
Page 20	Macquarie Observing Night Report by Matt McKenzie
Page 21	Committee Communiqué by Greg Priestley
Page 22	IC 2177 Seagull Nebula and M50 by Joe Cauchi

General Contact Details

ASNSW

PO Box 870, Epping NSW 1710

Email: secretary@asnsw.com

Web: <https://www.asnsw.com>

Universe: eds@asnsw.com

Copyright

All original material in this journal which is in any way credited to an author has copyright vested in that author. Original material which is not credited by a by-line, acknowledgement, or copyright notice is vested in the Astronomical Society of NSW. Copyright of any non-original material remains with the original copyright owners, whether acknowledged or not.

Distribution

Universe is distributed to ASNSW members and it is kept on the ASNSW web site for member access only. Copies are sent to other astronomical societies, with the constraint that access is restricted to their members. Digital copies are also lodged with the State Library of NSW via National EDeposit (NED). No copies should be circulated in addition to these without written permission of the ASNSW.

Disclaimers

This publication is for general information purposes only. The views and opinions expressed herein are attributed to the author and are not necessarily those of the ASNSW. The ASNSW has taken reasonable measures to verify that the material contained herein is correct, but cannot guarantee its accuracy or completeness. Readers are advised not to rely solely on this information and should seek independent advice before making any decision. Any notice of goods, services or events that are not offered directly by the ASNSW are presented as a service to members. The ASNSW does not warrant their quality or suitability for any purpose.

The ASNSW reserves the right to make changes to its distribution and policies at any time as deemed necessary.

MEMBERSHIP CATEGORY	PDF UNIVERSE*	POSTED UNIVERSE
Joining Fee		\$20-00 All memberships
Full	\$52-00	\$95-00
Student	\$26-00	\$69-00
Associate (related to a full member)	\$26-00	\$69-00
Overseas members	As above	N/A

*PDF Universe price applies for: “Emailed Universe”, “Download Universe” and “No Universe” members.

If you joined in Oct-Dec of one year, the first year’s subscription extends to the end of the following year.

Life Members: Edward (Ted) Lumley*, Cyril Brown*, Shirley Rae*, O. Bruce Slee*, Eric Patston*, Ronald J. McNiven*, Bill Proudfoot*, Ken Beames*, Ken Wallace, Adrian Saw, Max Gardner AM*, Joe Cauchi, Don Whiteman, Les Sara, Harold Berman*, Janet Saw*, Eugene O’Connor*, Chris Ross, Scott Mellish*, Lesa Moore, Mick McCullagh, John Flavin, Richard Jaworski, Paul Hatchman.

*Indicates member is deceased.

Team Space

Your Committee

President: Trevor Oates

Vice President **Wiruna**: Joe Cauchi for bookings & enquiries m: 0428 363 878 e: vp_wiruna@asnsw.com

Vice President Crago: Mark Notary

Treasurer: Lesa Moore

Secretary: Greg Neilson

Committee member: Donna Burton

Committee member: Matt McKenzie

Committee member: Greg Priestley

Committee member: Chris Ross

Committee member: Don Whiteman

Contact your committee at committee@asnsw.com

Your Editorial Team

Kendra Melson: Editor correspondence and submissions, layout of Universe, conversion to PDF, distribution to the "attachment" mailing list.

Trish Wilkins: Universe content supervisor, proof reading and corrections.

Lesla Moore: Distribution to ASNSW members via online database.

Anthony Maxwell: Upload to the State Library's National Electronic Database (NED).

Greg McCall: Compile contents list and upload to ASNSW Document Repository.

Donna Burton: Print and post to hard-copy recipients.

Please send all correspondence to eds@asnsw.com (seen by Kendra, Trish and Lesla).

September 2025 submissions required by 21 August.

UNIVERSE Correspondence and Contributions -

eds@asnsw.com

Front Cover by Chi Chan: M83 Southern Pinwheel Galaxy was captured from Chi Chan's backyard in year 2023 over a few nights. It is a bright face-on, grand design spiral galaxy located about 12-15 million light-years away in the Hydra constellation. It has well-defined and prominent spiral arms that extend clearly from its core, and a weak central bar. M83 also has a nickname Thousand-Ruby Galaxy because it has many star-forming regions glowing in pinkish Ha emissions along its dark, spiraling dust lanes. JWST recent observations also revealed evidence of a supermassive central black hole. Equipment: Celestron Edge HD 9.25 with 0.7x reducer, QHY268M and Custom Scientific LRGB and 3nm Ha filters. Processing: PixInsight 1.9.3 build 1646.

Rear Cover by Joe Cauchi: IC 2177 Seagull Nebula and M50. IC 2177 is a relatively bright and large emission nebula found between the constellations of Canis Major and Monoceros at a distance of about 3600 light years. M 50 (top left corner) is a fairly bright and large open star cluster in the constellation of Monoceros at a closer distance of 2900 light years. A two-panel mosaic. F.O.V. 147 x 260 min of arc. Telescope. Williams Optics Red Cat 71 Camera. S Big ST4000 XCM OSC CCD. Exposure and Date. (2) 45 x 300 sec. March, April 2023. Location (Wiruna) Ilford N.S.W.

August Observer

By Geoff Smith

Planets in August

Mercury reaches inferior conjunction on the 1st and then joins **Venus** and **Jupiter** in the eastern morning sky. This is a poor apparition for Mercury. It reaches its greatest elongation of 28° west of the Sun on the 19th at just 6° above the horizon at civil dawn. Venus continues to dazzle in the predawn sky in Gemini before moving into Cancer. Look for a spectacular sight on the 12th to 13th when Venus and Jupiter will be just 1° apart. After its solar conjunction in June, **Jupiter** in Gemini joins Venus in the morning sky. **Mars** in Virgo sets around 9pm midmonth. **Saturn**—rising around 8:30 midmonth—and **Neptune** remain within 1° apart in early August but then slowly separate to 1.7° by the end of the month.

Moon Cycles

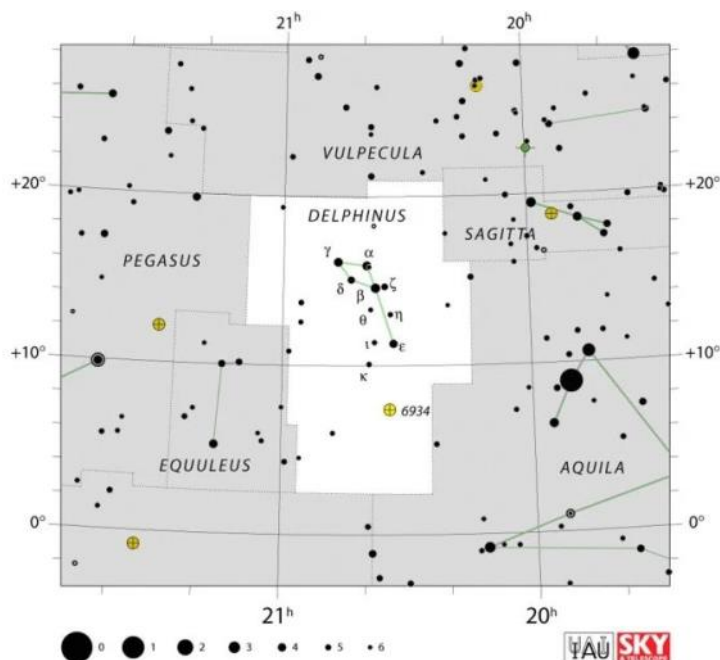
First Quarter	Full Moon	Third Quarter	New Moon	First Quarter
1 Aug 10:41 pm	9 Aug 5:55 pm	16 Aug 3:12 am	23 Aug 4:06 pm	31 Aug 4:25pm

Meteor Showers

The **iota Aquariids** are a comparatively weak meteor shower, with ill-defined activity limits during July and August. The most prominent maximum falls on August 6, when the ZHR may reach 10. Iota Aquarids tend to be faint and fairly swift. The meteor stream, like many others that lie close to the ecliptic, is split into at least two components. At maximum, the Southern Iota Aquarids have a radiant at RA 22 h 10 m, Dec -15°, while the Northern Iota Aquarids emanate from RA 22 h 04 m, Dec -06°.

The Sky in August

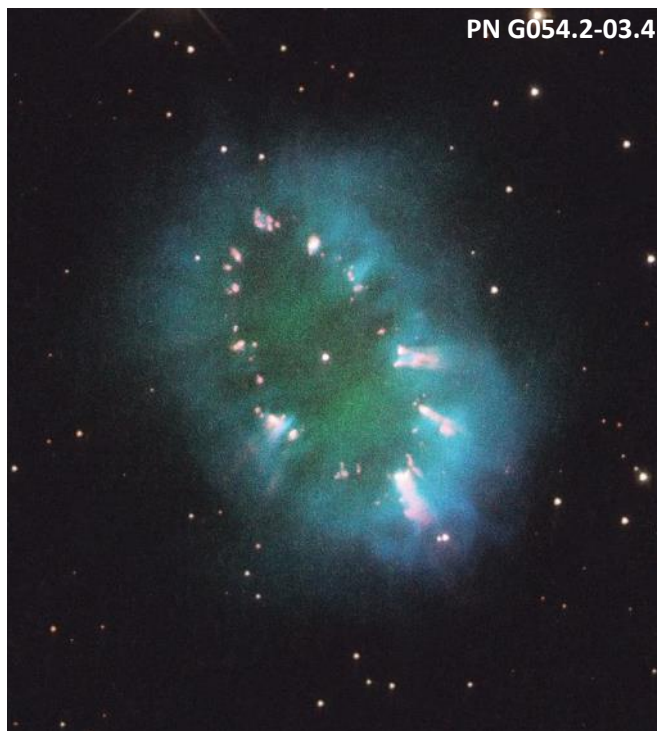
At around 9pm we see Sagittarius transiting high in the southern sky. Still looking south, we see Capricornus approaching transit followed by Aquarius rising in the eastern sky. If we switch our gaze to the northern sky, we can see Sagitta approaching transit followed by Delphinus and Equuleus in the north-eastern sky. Earlier in the evening there is an opportunity to see M13 in Hercules, the northern hemisphere's most spectacular globular cluster.



Looking Faintly North—Sagitta, Delphinus and Equuleus

Following last month's observation suggestions in the southern sky, we shall now explore some faint northern constellations.

Sagitta is a dim but quite distinctive constellation sandwiched between Vulpecula and Aquila. It was included among the 48 constellations listed by the 2nd-century astronomer Ptolemy. Although it dates to antiquity, Sagitta has no star brighter than third magnitude and has the third-smallest area of any constellation. There is probably some justification for its inclusion in the constellation list. After all, we have an archer (Sagittarius) and where there is an archer there must be an arrow. Besides, it does look like an arrow. For such a small constellation it has a wealth of interesting objects. **M71** is a very loose globular at a distance of about 13,000 light-years from Earth. There are many planetary nebulae, two of the most notable ones being **NGC 6886** and the **Necklace Nebula (PN G054.2-03.4)**. Here is a photograph of the Necklace Nebula from the Hubble Space Telescope. For more information about the Necklace Nebula see https://www.nasa.gov/mission_pages/hubble/science/necklace-nebula.html.



Delphinus is a small constellation in the northern sky. It lies to the east of Sagitta and is close to the celestial equator. Its name is the Latin version of the Greek word for dolphin (δελφίς). It is one of the 48 constellations listed by Ptolemy. Delphinus' five brightest stars form a distinctive asterism symbolizing a dolphin with four stars representing the body and one the tail. Despite its faintness it does make a good impression of a dolphin. The stars α and β Delphini are known as **Sualocin** and **Rotanev** respectively. They honour the astronomer Nicolaus Venator by spelling his name backwards. He was an assistant to the famed astronomer Giuseppe Piazzi, the discoverer of Ceres in 1801. There are a few reasonable objects in Delphinus:

There are two modest globular clusters, **NGC 6934** and **NGC 7006**, two planetary nebulae **NGC 6891** and **NGC 6905**, the Blue Flash nebula and the unusual galaxy **NGC 6956**. There is also a nice little group of galaxies in a 10' x 10' field centred on **NGC 6928**.

Equuleus is a faint constellation located just north of the celestial equator. Its name is Latin for *little horse* and was one of the 48 constellations listed by Ptolemy. I suppose if we have a big lion (Leo) and a little lion (Leo Minor) as well as a big dog (Canis Major) and a little dog (Canis Minor), we may as well have a big horse (Pegasus) and a little

horse (Equuleus). But why didn't they just call it Pegasus Minor? Equuleus is the second smallest of the modern constellations (after Crux), spanning only 72 square degrees. It is also very faint, having no stars brighter than the fourth magnitude.

Patrick Moore commented that Equuleus is totally unremarkable and that there is nothing of interest for amateur observers. However, as I have pointed out in previous articles, you only have to point your telescope in the right direction and expose your camera long enough to turn up something interesting. **UGC 11680** is just such an object. It is just large enough (2.1'x 0.7') to provide a reasonable image. It is a tidally distorted S-shaped spiral galaxy with what appears to be a compact elliptical companion. The globular cluster **M15** is just outside the border of Equuleus, so I am giving Equuleus honorary possession of it. **ε Equulei** is also a fine multiple star. The primary pair (AB) is now a very close pair at 0.1" and so is completely unobservable in amateur equipment. There is a wider companion (C) at 10.6" and PA 67° (2023) and the AB-C system makes up a bright yellow (AB) and silvery-blue (C) showcase pair. The magnitudes are 5.3 and 7.0 respectively. There is also a 13th magnitude star at PA 293° and separation 69". Common proper motion suggests that it could be part of the system with an orbital distance of 4300AU and a period of at least 125,000 years, making up a quadruple system.

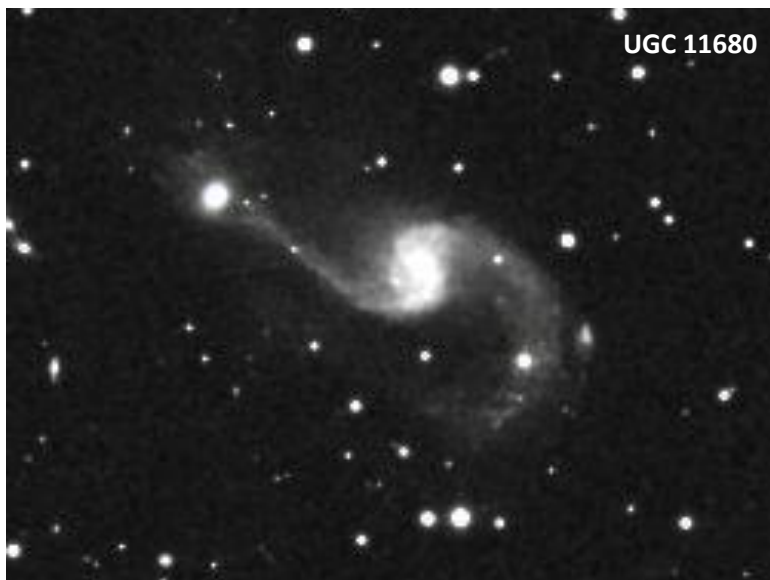


Table of Deep Sky Objects for August

In the table below all times are AEST, transit times are for 15 August at Wiruna, the Society's premier dark sky site (longitude 149° 46' 49" E). MA denotes the altitude of the object at transit time. Coordinates are for Epoch 2000.

Object	Type	Const	RA	Dec	Mag	Size	Transit	MA (°)	Notes
SH 2-80	PN?	Sge	19h 11m 31s	16° 51' 38"		2'	21:34	40	Nebula around Wolf-Rayet star
PN A66 59	PN	Sge	19h 18m 40s	19° 34' 33"		1.4'	21:41	37	
SH 2-82	BN	Sge	19h 30m 15s	18° 17' 30"		9'	21:53	39	Little Cocoon Nebula
PN G054-03.4	PN	Sge	19h 44m 00s	17° 09' 01"		21"	22:07	39	Necklace Nebula
M 71	GC	Sge	19h 53m 46s	18° 46' 45"	6.1	7.2'	22:16	38	
NGC 6879	PN	Sge	20h 10m 27s	16° 55' 21"	12.5	5"	22:33	40	
NGC 6886	PN	Sge	20h 12m 43s	19° 59' 23"	11.4	5"	22:35	37	
NGC 6891	PN	Del	20h 15m 09s	12° 42' 16"	10.5	19"	22:37	44	
IC 4997	PN	Sge	20h 20m 09s	16° 43' 54"	10.5	2.9"	22:42	40	
NGC 6905	PN	Del	20h 22m 23s	20° 06' 16"	11.1	31"	22:45	37	Blue Flash Nebula
NGC 6928	Gxy	Del	20h 32m 50s	09° 55' 35"	12.2	2.1'	22:55	47	
NGC 6934	GC	Del	20h 34m 11s	07° 24' 16"	8.9	5.9'	22:56	50	
NGC 6956	Gxy	Del	20h 43m 54s	12° 30' 43"	12.3	1.4'	23:06	44	
PN A66 72	PN	Del	20h 50m 02s	13° 33' 30"		2.1'	23:12	43	
MCG +01-53-009	Gxy	Equ	21h 00m 05s	09° 34' 59"	12.5	1.6'	23:22	47	
NGC 7006	GC	Del	21h 01m 29s	16° 11' 16"	10.5	1.1'	23:24	41	
NGC 7015	Gxy	Equ	21h 05m 37s	11° 24' 51"	12.5	46"	23:28	46	
UGC 11680	Gxy	Equ	21h 07m 44s	03° 52' 31"			23:30	53	Photo opportunity
M 15	GC	Peg	21h 29m 58s	12° 10' 01"	6.2	12'	23:52	45	Near Equuleus border

August Comets

By Greg Bryant

Comet C/2025 K1 (ATLAS): In last month's column, I wrote that there was a chance that we might catch this recently discovered comet in September's evening sky ahead of a possible demise (because of its intrinsic faintness) as it approaches perihelion in October. Since then, it's brightened at a slightly better rate than expected, and so could reach 12th magnitude during the course of August.

As the comet comes to within 0.6 au of Earth this month, it's moving southeast rapidly, passing through the constellations of Vulpecula, Hercules, Ophiuchus, Serpens and Libra. The New Moon weekend of 23 August sees comet ATLAS a few degrees east of 4th magnitude Epsilon Serpentis. By the end of August, the comet will be setting mid-evening.

Comet C/2025 K1 (ATLAS)

Date	R.A.	Dec.	Delta (au)	R (au)	Elong. (°)	Mag.
2 Aug	19 ^h 36.9 ^m	+23° 13'	0.662	1.557	135	13.2
9 Aug	18 ^h 21.7 ^m	+18° 55'	0.589	1.435	125	12.6
16 Aug	17 ^h 04.3 ^m	+11° 32'	0.586	1.308	107	12.2
23 Aug	16 ^h 00.5 ^m	+3° 37'	0.648	1.178	88	12.0
30 Aug	15 ^h 13.6 ^m	-2° 48'	0.751	1.042	71	11.8
6 Sep	14 ^h 39.0 ^m	-7° 29'	0.875	0.902	57	11.5

August Observer (previous page)

References:

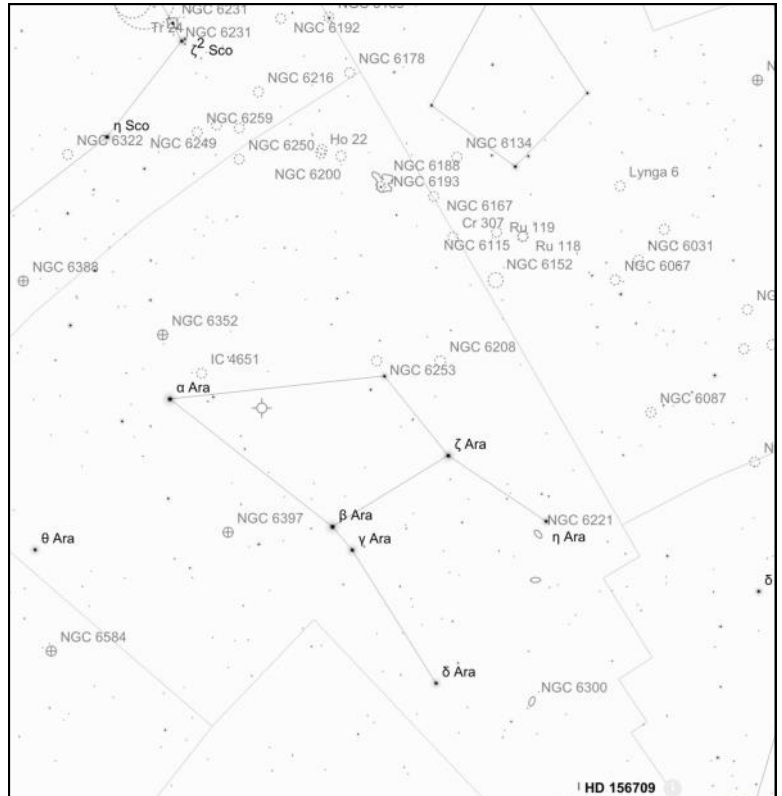
1. *Astronomy 2025* by Wallace, Dawes and Northfield
2. *Double Stars for small telescopes* by Sissy Haas
3. *Annals of the Deep Sky* by Jeff Kanipe and Dennis Webb
4. The constellation charts are from <http://www.iau.org/public/themes/constellations/> and were produced by the IAU in collaboration with *Sky & Telescope* magazine. Their use here is permitted under the creative commons licence <http://creativecommons.org/licenses/by/3.0/>
5. *Hartung's Astronomical Objects for Southern Telescopes* by David Malin and David Frew
6. *Photograph of Necklace Nebula and NGC 6956 by HST, UGC 11680 from the STScI Digitized Sky Survey*



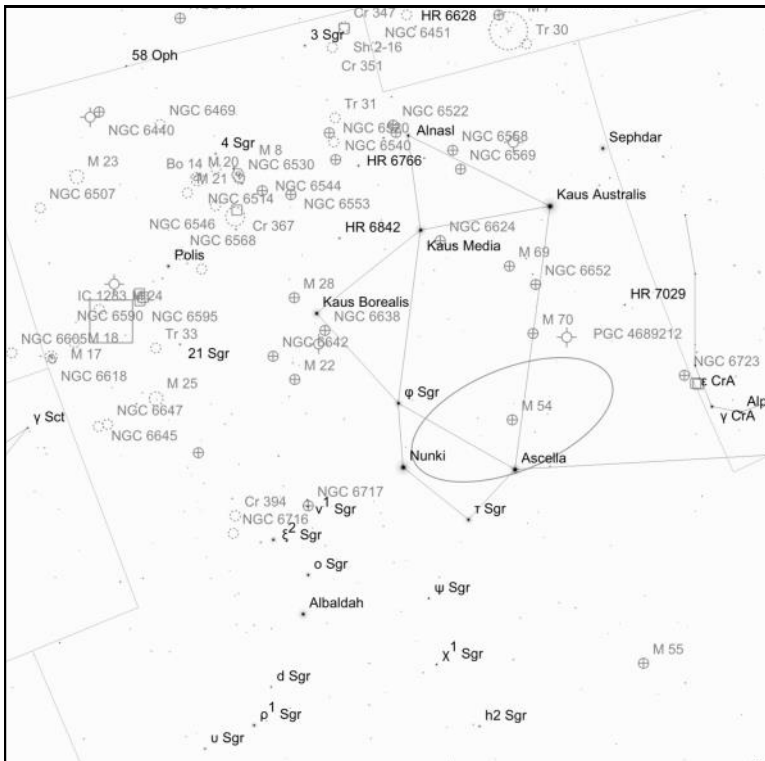
June 2025 - By Alessandro Spina

We arrived on site early Friday afternoon, to blue skies from horizon to horizon. It was shaping up to be a fantastic weekend. The site was a hive of activity, with the expected clear conditions drawing out more members than the previous month.

With my LX200's RA drive still sulking, it was another night of star hopping ahead. I started the night in the constellation of Ara, "The Altar". A relatively bright constellation, it is easy to identify sitting beneath the tail of Scorpius. To the naked eye, you can trace out the constellation as a rough trapezium of 3rd and 4th magnitude stars, using α -Arae, ϵ -Arae, η -Arae and δ -Arae. At the base of that trapezium sits the bright pair, β -Arae and γ -Arae, only 0.8° apart. Aiming the Telrad just below this pair, I was able to pick out the glow of **NGC 6397** easily in my 9x50 finder scope. At 5.6 magnitude and 25.7 arc-min across, this globular cluster is easily resolved into a sea of stars. The dense core gives way to a smattering of outliers trailing out in loops and arcs, giving it the appearance of a dense open cluster. A beautiful view that filled up the field of view in the 26mm eyepiece, and a perfect way to start the night.



If you then point the telescope at α -Arae, approximately 2° away sits the 6.9th magnitude open cluster **IC 4651**. In the viewfinder I could pick it out as a hazy patch of stars. In the eyepiece, the cluster presents as a loose, sparsely populated group almost blending in with the surrounding field of stars I could eye out two circular patterns of stars sitting in the centre of the cluster which give it some structure. Keeping α -Arae and IC 4651 on the edge of the field of view of the viewfinder, should nicely centre the globular cluster **NGC 6352**. At 8.1 magnitude, this globular has a relatively low surface brightness and is tricky to resolve. At 169x and averted vision, I could begin to resolve some of the brighter stars in the halo giving it a grainy appearance. Following the outline of Ara, I used ϵ -Arae to pick out **NGC 6253**. This 10.2 magnitude cluster was hard to pick out in the viewfinder. However, placing ϵ -Arae the edge of the field of view in the 26mm eyepiece should position this small cluster at the edge of the opposite side of the field. In the eyepiece it presents as a faint knot of 10-20 stars, concentrated in a rough V-shape formation. Next stop was a pair of galaxies, **NGC 6215** and **NGC 6221**. Easy to find due to their proximity (25' south-east) to the K-type star η -Arae, which appears as a bright orange-yellow star in the same field of view. I could catch the faint glow of NGC6215 as a circular patch of light 2'x1.6', with an even brightness and no distinctive core or detail apparent. Images reveal it to be a face on spiral (SA(s)c). If you nudge NGC6215 to the top of the field, you can just squeeze NGC 6221 into the same field of view. It appears rounder and larger than its companion, with a slightly brighter core. Images also show it to be a barred spiral (SB(s)bc), with a long sweeping spiral arm arcing around the core. These two galaxies have been found to be interacting and are linked by a neutral hydrogen (HI) bridge, which is thought to be triggering starburst activity in the galaxies. This bridge, a stream of gas connecting the two galaxies, suggests a past interaction or ongoing tidal forces acting on these galaxies. The last stop in Ara was **NGC 6362**. To find this globular, draw an imaginary line through γ -Trianguli Australis and α -Trianguli Australis (Triangulum Australe is readily distinguishable as an equilateral triangle of bright stars next to Hadar and Rigil Kentaurus), and another perpendicular line through α -Arae and δ -Arae. Point the telescope at the intersection of these two perpendicular lines and you should pick out the fuzzy patch of NGC 6362 in the viewfinder. At 8.1 magnitude it is much fainter than NGC 6397. It displays an even brightness without



distinctively brighter core. I could resolve only the brighter stars, appearing otherwise dim with a grainy appearance. A bright star marks the field to the top left.

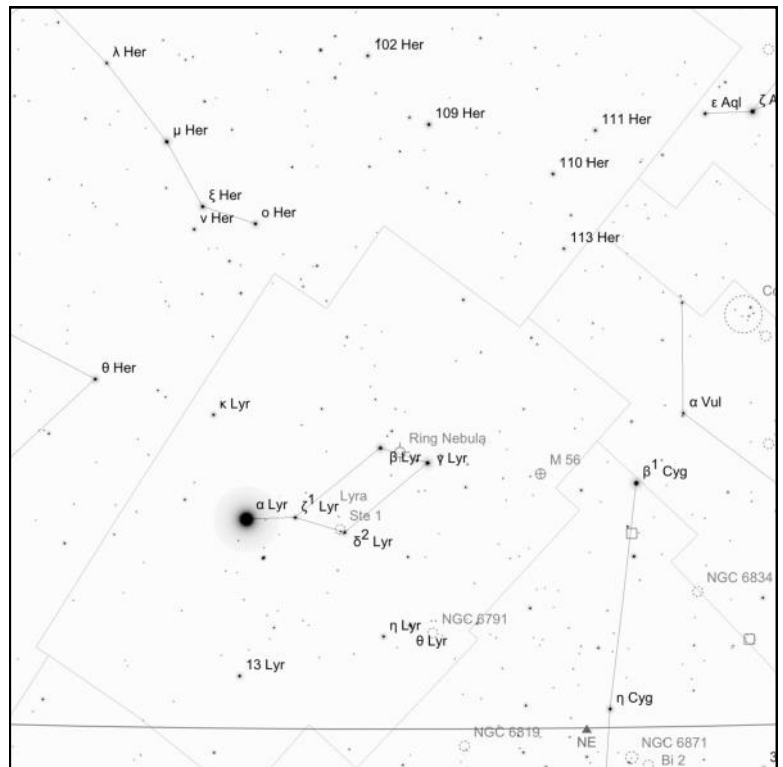
Next step was Sagittarius which was well placed in the eastern sky. Above the handle of the “frypan” sits a bright patch of nebulosity that is visible to the naked eye. This marks M8, the Lagoon Nebula. This makes for a convenient starting point for the abundant globular clusters that dot this area of sky. This region was featured in the inaugural photos from the Vera Rubin Telescope released on the same weekend.

Sitting ~1° south-east of M20 is the globular cluster, **NGC 6544**. The globular is easy to spot in the viewfinder. It’s small (8.9 arc-min), but relatively bright core (8.2 magnitude) appears mottled with some brighter stars resolved. It has an irregular shape, not like the symmetrical circular halos of other clusters. Averted vision helps to add some richness to the halo of stars. From there I hopped to **NGC 6553**, ~1° away. Even though it is of a similar

magnitude and only slightly smaller in size, it appears as a faint halo rising to slightly brighter core, with no stars resolved.

With Sagittarius creeping higher in the sky, I swung south to find the constellation of Pavo. To pick out Pavo I start with Crux and Triangulum Australe. Drawing a line from Hadar, through β -Triangulum Australe, will point you towards α -Pavonis. From α -Pavonis, form a triangle with δ -Pavonis and λ -Pavonis. Move the Telrad so that λ -Pavonis sits just outside the outer ring (~4°), that should position **NGC 6752** in the finder as a bright cloud of stars. At 5.4 magnitude and over 20 arc-min across, NGC 6752 is bright and well resolved in the eyepiece. It is the fourth-brightest globular cluster in the sky (behind Omega Centauri, 47 Tuc and M22). What really distinguishes this globular are the chains of bright stars that streak out from centre forming a starfish pattern. This globular cluster has a lovely structure and shape to it, making it one of my favourites of the night. Around this time, in between looking through the eyepiece, I managed to catch several meteors, including one brighter fireball that seem to leave a trail for a few seconds straight through the heart of Scorpius.

By about 1.30am I noticed a thin layer of ice had begun to form on the ground, as the Milky Way arched high across the sky. The dew heater seemed to be coping with the lack of moisture in the air. Lyra was sitting low to the North, so I swung down to try my luck on the planetary nebula, **M57**. It is straightforward to locate, as the planetary sits nicely in between bright stars, β -Lyrae and γ -Lyrae. As soon as I had pointed the telescope, it was immediately evident as a bright ghostly-grey donut shaped disk floating in the field view. Its elongated body, rising to a slightly brighter outer ring. No central star was immediately obvious to me. From there I hopped over to **M56**, a globular in Lyra. Drawing an imaginary line through β -Lyrae and γ -Lyrae, towards β -Cygni, will point you in the right direction towards M56. Although, this 8.2 magnitude cluster was a bit of a struggle to pick up in the finderscope. In the eyepiece the small core had a smattering of brighter stars resolved. Interestingly, this globular has retrograde orbit within the Milky Way. It is thought to be an ancient cluster, possibly formed in a dwarf galaxy that was later absorbed by the Milky Way. Not long after, with the frost starting to set in to my toes and fingers, I decided to call it a night and head to the tent to defrost for the night.



Around the Universe

WGSBN Bulletin has honoured recently-deceased member, Brett White, by having an asteroid named after him, as outlined on page 18 in the IAU bulletin which reads:

(26613) Brettwhite = 2000 GL2 Discovery: 2000-04-03 / J. Broughton / Reedy Creek / 428

Brett White (1964–2025) was a keen Australian amateur astronomer and telescope maker. He built large Dobsonian telescopes from scratch, including the mirrors, and searched galaxies visually for supernovae. Observing from Linden Observatory in the Blue Mountains west of Sydney, he discovered SN 1998dq and SN 2000do, both coincidentally in NGC 6754.

Find the entry on p18 of Volume 5, #17 here: <https://www.wgsbn-iau.org/files/Bulletins/index.html>

or take the direct link to the issue: https://www.wgsbn-iau.org/files/Bulletins/V005/WGSBNBull_V005_017.pdf

Below: Brett White with a large Dobsonian telescope that he built from scratch.
Photo Credit: Frances Miceli c. 2000.



WGSBN Bulletin

Telescope Parts For Sale



Telescope Pier 200mm square tube
2M in length and 8mm thick

All enquiries to Steve Jasek

0400 530 405

rockytop@optusnet.com.au

Dobsonian Primary 8" F6 Dobsonian
Secondary 50mm



Meade Deep Sky Imager With Auto
Star Suite - Color CCD Camera



Meade Autostar II Hand Controller



Meade Ultra Wide Angle Series 5000 5 Element
30mm 18mm and 6.7mm With Metal Carry Case

Meade 8x50mm Sighting Scope



Meade Series 5000 60 Degree 5 Element 26mm



Meade Microfocuser



Meade 1.25 - 2.0 Diagonal Prism Mirror



SkyFi Wireless Telescope Controller



Comino's Comment



5% OFF



Use code ASNSW on check out for 5% off online orders or call / visit Bintel and let us know you are an ASNSW member

Excludes
Televue, Esprit and Swarovski products

Crux Quiz

The Questions:

1. Who first used Cepheid Variables to hypothesise about the existence of a universe beyond the Milky Way?
2. Did 'trapped' Astronauts Butch Wilmore and Suni Williams set a record for the longest single stay in space during their recent ordeal?
3. Who originally coined the term 'Big Bang' in a BBC interview?
4. Who first hypothesised that complex elements could be generated in dying stars?
5. What prompted Chinese king Zhong Kang to behead his royal Astronomers approximately 4,200 years ago?
6. Do microwaves have a longer or shorter wavelength than visible light?
7. Who was the first American in Space?
8. Which of the following tools could be used to accurately determine the users position on the Earth's Surface?
1) Astrolabe, 2) Orrery 3) Sextant
9. Did Stephen Hawking's work show that black holes could get smaller, or that they couldn't?
10. Before the International Astronomical Union standardised them in 1930, which of the following had never been actual constellations? Bufo (the Toad), Robur Carolinum (Charles's Oak), Limax (the Slug), Globus Aerostaticus (the Hot Air Balloon), Patella (the Limpet) , Machina Electrica (the Electricity Generator), Hirudo (the Leech), The Crossed Swords of the Electorate of Saxony, Felis (the Cat) and Calceamentum Aureum (the Golden Sandal of Zeus).

With thanks to Markus Stone, Astronomical Society of Victoria

Questions, comments and corrections can be directed to astroquiz@markusstone.com.

August Sky Events

By Kendra Melson

Date GMT	Time GMT	Date Sydney	Time Sydney	Event
1	0	1	10:00am 10:00	Mercury at Inferior Conjunction
1	12:41	1	10:41pm 22:41	FIRST QUARTER MOON
1	20:37	2	6:37am 6:37	Moon at Apogee: 404164 km
4	1:40	1	11:40am 11:40	Antares 0.6°N of Moon
9	7:55	9	5:55pm 17:55	FULL MOON
11	14:53	12	00:53am 0:53	Moon at Ascending Node
12	0:00	12	10:00am 10:00	Venus 0.9°S of Jupiter
12	15:05	13	1:05am 1:05	Saturn 4.0°S of Moon
12	20:00	13	6:00am 6:00	Perseid Meteor Shower
14	18:01	15	4:01am 4:01	Moon at Perigee: 369287 km
16	5:12	16	3:12pm 15:12	LAST QUARTER MOON
16	16:09	17	2:09am 2:09	Pleiades 0.9°S of Moon
19	10:00	19	8:00pm 20:00	Mercury at Greatest Elong: 18.6°W
19	21:05	20	7:05am 7:05	Jupiter 4.8°S of Moon
20	12:07	20	10:07pm 22:07	Pollux 2.4°N of Moon
21	16:14	22	2:14am 2:14	Mercury 3.7°S of Moon
23	6:06	23	4:06pm 16:06	NEW MOON
24	15:41	25	1:41am 1:41	Moon at Descending Node
26	16:41	27	2:41am 2:41	Mars 2.8°N of Moon
27	12:00	27	10:00pm 22:00	Mercury at Perihelion
27	13:57	27	11:57pm 23:57	Spica 1.1°N of Moon
29	15:34	30	1:34am 1:34	Moon at Apogee: 404552 km
31	6:25	31	4:25pm 16:25	FIRST QUARTER MOON
31	9:55	31	7:55pm 19:55	Antares 0.7°N of Moon

Adapted from Astropixels.com - 2025 Sky Event Almanac page
<http://astropixels.com/almanac/almanac21/almanac2025gmt.html>

Notice of Annual General Meeting

ASTRONOMICAL SOCIETY OF NSW Inc



ANNUAL GENERAL MEETING

7:30pm, Friday 8 August 2025

Venue: Epping Creative Centre, 26 Stanley Road, Epping.
and online (Zoom) at

<https://zoom.us/j/96515069971?pwd=YTJMWIBPbDdOR09XUnNVYnFTdDN4UT09>

Meeting ID: 965 1506 9971

Passcode: 817449

Dial-in: (02) 8015 6011

AGENDA

1. Record attendance, absentee votes and apologies; confirm quorum.
2. Confirm the minutes of the previous General Meeting, which was the Special Meeting held on 14 March 2025.
3. Receive the President's report.
4. Receive the Vice-President's report – Wiruna.
5. Receive the Treasurer's report.
6. Present society awards.
7. Elect the Management Committee.
8. Draw door prize.

At the close of the meeting, there will be light refreshments for members on site. Remote members are welcome to provide their own refreshments.

At 5pm 11 July 2025 the time limit for Committee nomination expired. There were only one nomination for each position so at the AGM the following positions will be elected unopposed.

President	Trevor Oates
VP Wiruna	Greg Priestley
VP Crago	Mark Notary
Treasurer	Lesla Moore
Secretary	Greg Neilson
Ordinary Committee members (5 positions)	1. Donna Burton 2. Greg McCall 3. Matt McKenzie 4. Chris Ross 5. Don Whiteman

Meetings & Dates

ASNSW Events

Recordings from Ordinary Meetings link: <https://www.asnsw.com/ordinary>

Astroimaging ZOOM Meetings: 6 Aug, 10 Sep, 8 Oct, 5 Nov, 3 Dec

Ordinary Meetings—Epping: 29 Aug, 10 Oct, 14 Nov

Committee Meetings: 13 Aug, 17 Sep, 15 Oct, 12 Nov

Wiruna Weekends: 22-23 Aug, 19-20 Sep, 17-18 Oct, 21-22 Nov, 19-20 Dec

For Wiruna bookings and enquiries contact Joe Cauchi on m. 0428 363 878 or e. vp_wiruna@asnsw.com

Mudgee Caravan Hire has opened on the corner of Sofala Road and Castlereagh Highway, just 8 kms from Wiruna. Joe Cauchi (Wiruna Vice President) has spoken to the owner and he offers small, medium and large caravans at \$50 / \$75 / \$100 per night respectively. He can tow a caravan to and from Wiruna on request giving you the convenience of staying onsite in a private caravan, without needing to own a caravan or managing the logistics.

If this appeals to you, please contact Warren Cramond m: 0417029047 e: hot_spud2006@yahoo.com.au for more information. Note this is an independent business and the ASNSW will not be involved in your commercial arrangement with this business. The normal Wiruna camping fees would remain payable to the ASNSW. As this is a new business and no one has utilised them so far, we're keen for any feedback from anyone who utilises this service.

Annual General Meeting: 8 Aug (full details p17)

Wiruna Happenings—Joe Cauchi 50 Year Membership Anniversary

Last month marked the 50th year membership anniversary for Joe Cauchi and we, the entire membership of the Astronomical Society of NSW, extend our kind best wishes and appreciation for Joe's extensive contributions to the Society.

Since joining the ASNSW in 1975, he took on the role of Archivist in 1984 and became Vice-President Wiruna in 1989. He has served in the latter position for 35 years continuously and retires at this year's AGM (details p16).

In 2000, Joe was awarded the Society's highest honour, Life Membership, in recognition of his selfless time and efforts to enrich the Society and benefit members. In 2014, he received the President's award in recognition of his ongoing valuable contributions to the ASNSW.

With respect to Wiruna, Joe has attended just about every scheduled observing weekend and has handled all sorts of maintenance and management issues, from showing new members around to fixing toilets, from touching up paintwork to advising and assisting in observatory construction.

Joe has also recently negotiated the caravan accommodation option for members, taking the hassle out of staying at Wiruna when the rooms are all booked at Barry Gerdes Lodge. Joe's silent role also involves keeping the peace with the neighbours so that ASNSW members may focus on the stars in the night sky.

The time has flown by and we look forward to viewing the night sky together with Joe at Wiruna far into the future. To commemorate his long membership and long service, the back cover of this issue features one of Joe's many spectacular astroimages (details p3). Thank you Joe!

ASNSW Member News

By Lesa Moore

Since last issue, four new members have joined the ASNSW. The society welcomes: Craig Bennett, Alistair Aboss, Guinevere Stanley, Kyran David.

These members, listed to the right, celebrate the following significant anniversaries this month (5, 10, 15, 20+ yrs):

Congratulations to these members!

Memberships

Current membership stands at 403 members, including 387 paid-up members, 5 honorary members and 11 life members.

Gerard	Keyzer	26
Jim	Lissikatos	24
Rodney	Watters	24
Alex	Carrodus	15
John	Celler	15
Betty Pui Shan	Lau	15
Andrew	Naoum	15
Graeme	O'Reilly	15
John	Alexander	5
Ross	Johnson	5



Saturday 9 August 10am-2pm – Rhodes Science Fair

Contact president@asnsw.com for further information.

Thursday 14 August – Eastwood Public School Astronomy Night

Contact secretary@asnsw.com for further information.



MACQUARIE
University
SYDNEY · AUSTRALIA

Macquarie University Astronomy Open Night

The date for this year's Astronomy Open Night will be **Saturday 27th September**. Please spread the word to any fellow astronomers whom you think might be interested in participating. Full details on their website here:

<https://event.mq.edu.au/astronomy-open-night/>

Visitors MUST purchase tickets in advance. There are NO ticket sales at the door.

Volunteers, on the other hand, get **free entry**. The ASNSW will be represented in two areas - numerous volunteers will be bringing telescopes to the Telescope Park, and we will have a table in the Exhibitor's Hall.

Telescopes

For those interested in being a part of the telescope park component of the night (as a telescope operator or assistant), please complete the [Expression of interest](#) form **NOW** if you haven't already done so. The Telescope Volunteer registration deadline is **COB Wednesday 20 August 2025**.

ASNSW Information Table

If you come to the open night, please pop in to the information table and say hello. Thanks to those who have already volunteered to assist (Matt, Anthony and Trevor).



Macquarie Observing Night Report

By Matthew McKenzie

A Sparkling Night at Macquarie University Observatory

What a night! After many previous attempts, the sky finally cleared for our Astronomical Society of New South Wales (ASNSW) observing night at Macquarie University Observatory. Boy, was it worth the wait!



The stars were absolutely brilliant against the cool, crisp night air. It was fantastic to see so many ASNSW members, of all ages, gathered at the observatory, buzzing with anticipation for a wonderful night of stargazing. The turnout was truly impressive, from our seasoned observers to the youngest budding astronomers.

Everyone, including the children, had an amazing time peering through the magical eyepieces. We journeyed across the cosmos, catching breathtaking views of the Ghost of Jupiter nebula, the spectacular Omega Centauri, and the dazzling Jewel Box Cluster, just to name a few celestial wonders.

But the fun didn't stop there! Everyone also gathered inside the observatory to learn how they control telescopes, including the powerful ones located far away in Coonabarabran, NSW. It was fascinating to see the technology that allows us to explore the universe from a distance.

And for an extra treat, both kids and adults alike loved seeing live stacking of incredible deep-sky objects. The Trifid Nebula and Omega Centauri looked spectacular as their images slowly built up before our eyes. The Running Chicken Nebula even had everyone trying to make out its shape – a truly fun challenge!

It was a truly memorable evening, filled with shared awe and discovery. Here's to many more clear skies and exciting explorations!

Don't miss our next ASNSW observing night at Macquarie University Observatory on Tuesday, 22 July 2025, at 7 PM. Come and explore the universe with fellow astronomy enthusiasts! We can't wait to see you there.

Committee Communiqué - 18 June 2025

1. New member applications approved. A warm welcome to:

Eddie Morris
Craig Bennett
Andrew Hennell
Mal Larden

2. Solar panel, solar controller, 240v AC inverter and white strip lights have been installed in the storage shed, mated to the previous Crago observatory batteries. Red strip lighting still to be installed. Leaf debris has been cleared from the storage shed roofing, but the gutter need to be cleaned out as the current gutter guards are largely ineffective.
3. Discussions regarding need to have a system for tracking of maintenance activities for Wiruna.
4. Long term development of Wiruna: Chris Ross and Greg Priestley has met with the building and bush fire consultants to try and progress activity. The meetings confirmed RFS requirement of a refuge building that can shelter all attendees to Wiruna in the event of a bush fire. Uncertainty as to whether the existing hall can be upgraded to this capability as RFS / building code requirement is for passive protection rather than active protection such as a deluge system. If a bespoke refuge is required, upgrades to existing hall is still likely due to anticipated proximity to the new buildings. Clearing additional bushland as a protection zone is likely to complicate other issues around bio-diversity requirements. Accessibility issues may also become significant.
5. EV charging has always been prohibited at Wiruna due to the excessive power consumption which is well beyond the electrical system capacity installed. Communications to members and updating of policies and website regarding this. Modification of low voltage cut off of the inverter, and upcoming installation of battery monitoring system to try and protect the existing battery infrastructure from excessive usage. Signage to be ordered.
6. Discussions regarding the increasing usage of camp fridges at Wiruna and the impact on the electrical system. These require orders of magnitude less power than EV's. A review of modern camp fridge specifications informed a policy that these will be permitted if they draw less than 100W peak and 50W average and can only be used for the duration of the members stay, then removed.
7. Planning for the upcoming AGM on 8 August.
8. Trevor Oates and Greg Priestley met with North Sydney Astronomical Society to explore collaboration opportunities and have in principle agreement for exploring a joint observing night for ASNSW members at the NSAS Belrose facility, an invite to NSAS members to a Wiruna weekend and investigation into joint online meetings.
9. Discussions relating to upcoming speakers at meetings. The online survey relating to preferred meeting night results: First choice: Friday 34% (24 votes), Wednesday 28% (20 votes); Second choice: Wednesday 32% (26 votes), Thursday 22% (18 votes)
10. Planning relating upcoming outreach events at Rhode Science Fair, Eastwood Public School and Macquarie University Open Night.
11. Update on Macquarie University observing nights that have required rescheduling due to weather.

