

The background of the entire page is a dark, deep blue to purple gradient, representing a night sky. In the lower half, there is a silhouette of a dinosaur, likely a Spinosaurus, standing on a dark horizon. The sky is dotted with faint stars, and a thin, bright white streak, possibly a meteor or satellite, is visible in the upper right quadrant. The overall mood is mysterious and ancient.

# The Jump-Up Dark-Sky Sanctuary

Australian Age of Dinosaurs  
Museum of Natural History

**Annual Report 2024**



COVER PHOTO GRANT SALMOND  
PHOTO DENNIS MELLICAN

**Site information**

<b>Designation type</b>	International Dark-Sky Sanctuary
<b>Designation date</b>	27 April 2019
<b>Site name</b>	The Jump-Up Dark-Sky Sanctuary
<b>Site size</b>	14 square kilometres
<b>Site contact (primary)</b>	Grant Salmond grant.salmond@aaod.com.au
<b>Site contact (secondary)</b>	Naomi Miles naomi.miles@aaod.com.au

**The Jump-Up statistics (1 Jan to 31 Dec)**

	2019/2020	2020/2021	2021/2022	2023	2024
<b>Permanent Jump-Up population</b>	1	1	1	2	2
<b>Visitors to The Jump-Up</b>	25,458	60,713	53,198	46,539	42,567
<b>Total average or typical zenith night-sky brightness (MPSAS)</b>	21.63	21.67	21.63	21.63	21.67

	2019/2020	2020/2021	2021/2022	2023	2024
<b>Online visitors to the Museum's Dark-Sky page</b>	1,755	3,546	3,689	3,879	4,015
<b>Average time on the Dark-Sky page (minutes)</b>	2:20	2:18	2:13	2:15	2:15

## Measurements

Comparative sky-quality distribution across The Jump-Up using averaged data (monthly averages have been adjusted by -0.1, to account for the glass cover).

Table 1 Dinosaur Canyon (SQM 1.0)

	Period	20 to 22.5 MPSAS monthly average	Average temp (°C)
2024	Jan	21.73	24.4
	Feb	21.74	23.2
	Mar	21.68	23.3
	Apr	21.53	18.7
	May	21.52	16.5
	Jun	21.56	11.8
	Jul	21.68	11.0
	Aug	21.67	16.3
	Sep	21.69	18.4
	Oct	21.67	22.7
	Nov	21.72	23.9
	Dec	21.79	25.5
	<b>Average</b>	21.67	19.6

Table 2 The Jump-Up base (SQM 2.0)

	Period	20 to 22.5 MPSAS monthly average	Average temp (°C)
2024	Jan	21.74	25.2
	Feb	21.76	24.0
	Mar	21.75	23.5
	Apr	21.58	19.4
	May	21.58	17.1
	Jun	21.65	12.8
	Jul	21.74	11.9
	Aug	21.74	15.4
	Sep	21.70	18.8
	Oct	21.69	23.7
	Nov	21.72	24.7
	Dec	21.78	26.7
	<b>Average</b>	21.70	20.3

Table 3 The Jump-Up western side (SQM 3.0)

	Period	20 to 22.5 MPSAS monthly average	Average temp (°C)
2024	Jan	21.69	27.0
	Feb	21.72	25.9
	Mar	21.67	26.1
	Apr	21.49	21.8
	May	21.49	19.4
	Jun	21.53	15.2
	Jul	21.66	14.3
	Aug	21.63	19.6
	Sep	21.65	21.6
	Oct	21.66	26.0
	Nov	21.65	26.9
	Dec	21.72	28.6
	<b>Average</b>	21.63	22.7

**Introduction**

The Jump-Up Dark-Sky Sanctuary attained International Dark-Sky Sanctuary status on 27 April 2019 and currently stands as one of only two such sanctuaries in Australia, the other being Arkaroola International Dark-Sky Sanctuary in South Australia. Other International Dark-Sky Places in Australia include Warrumbungle National Park and Palm Beach Headland in New South Wales, as well as Carrickalinga and River Murray Dark-Sky Reserve in South Australia.

Situated 24km south-east of Winton in Central West Queensland, the Australian Age of Dinosaurs Museum of Natural History (the Museum) is a prominent science-based not-for-profit museum and a major tourist attraction located within The Jump-Up Dark-Sky Sanctuary. Throughout the reporting period the Museum has actively promoted dark-sky conservation and education. This commitment is evident through the Museum’s adherence to its Lighting Management Plan, guided tours of the Gondwana Stars Observatory, the employment of an Education & Astronomy Manager, as well as community engagement and media publicity.

As reflected in the Museum’s night-sky data, the sky above The Jump-Up remains pristine and unaffected by light pollution. This report briefly summarises the activities undertaken by the Museum from January to December 2024 under the following sections: measuring the night sky; lighting compliance; outreach, education and media; promotions and media relations; future threats; and additional information.

**Measuring the night sky**

**Summarise the night-sky quality across the sampling period.**

The Museum has six permanent sky-quality meters at three sites on The Jump-Up. SQM 1.0 and its back-up 1.1 are located at Dinosaur Canyon, SQM 2.0 and its back-up 2.1 are located at the base of The Jump-Up at the Star Gallery and SQM 3.0 and its back-up 3.1 are located in the western corner of The Jump-Up (refer to *Map 1*). An additional SQM 4.0 is installed in a central location in Winton. Night-sky brightness readings are taken continuously and collected quarterly. Reviews of these readings are undertaken every 12 months by the Museum Management Team to ensure the readings remain on par with International Dark-Sky Association (IDA) regulations.

The Jump-Up Dark-Sky Sanctuary has maintained exceptional stargazing conditions from 2022 to 2024, with only minor fluctuations in sky quality and temperature. Sky-quality readings ranged from 21.59 to 21.73 MPSAS in 2022, slightly decreasing to 21.58 to 21.70 MPSAS in 2023 and stabilising at 21.63 to 21.70 MPSAS in 2024. The Gondwana Stars Observatory near Dinosaur Canyon has experienced a gradual improvement in sky quality over the past three years, becoming progressively darker (2022: 21.59 MPSAS; 2023: 21.62 MPSAS; 2024: 21.67 MPSAS).



Table 4 Summary of sky-quality distribution across The Jump-Up (based on Tables 1, 2 and 3)

Period	Dinosaur Canyon (SQM 1.0)		The Jump-Up base (SQM 2.0)		The Jump-Up western side (SQM 3.0)	
	20 to 22.5 MPSAS monthly average	Average temp (°C)	20 to 22.5 MPSAS monthly average	Average temp (°C)	20 to 22.5 MPSAS monthly average	Average temp (°C)
Jan to Dec 2024	21.67	19.6	21.70	20.3	21.63	22.7

The hottest location on The Jump-Up remains the western side with temperatures just over 22°C on average over the past three years, with 2024 range spanning from 14.3°C to 28.6°C. Despite these slight fluctuations, the Sanctuary’s sky quality has consistently remained above the 21.5 MPSAS threshold, making it an excellent location for dark-sky tourism and astronomical observations. For a visual representation of each month throughout the reporting period, please refer to *Graphs 1 to 48*.

**Describe any changes detected in night-sky quality from receiving your certification to the present.**

Since receiving International Dark-Sky Sanctuary certification The Jump-Up has consistently maintained exceptional night-sky quality, as evidenced by data from *Tables 5 to 7*. The monthly average MPSAS has ranged from a low of 19.64 at SQM 2.0 to a high of 21.06 at SQM 1.0. A significant percentage of readings consistently exceeded 21.75 MPSAS, underscoring the Sanctuary’s outstanding sky darkness. The mean zenith brightness has averaged 21.67 MPSAS, with a range from 20.00 to 22.50 MPSAS. The overall nighttime mean, based on measurements from 9pm to 4am across all four meters, stands at 20.35 MPSAS. Monthly variability has been minimal, with December recording the highest average of 21.06 MPSAS and May the lowest at 20.07 MPSAS. This data confirms that The Jump-Up continues to provide a pristine dark-sky experience, with minimal seasonal variation, which is crucial both for dark-sky tourism and scientific research.

Table 5 Dinosaur Canyon SQM 1.0 (-22.481956, 143.171739)

Period	MPSAS 9pm to 4am monthly average	Standard deviation monthly average	Total monthly no. readings ≥21.5 MPSAS	9pm to 4am monthly no. readings ≥21.5 MPSAS	9pm to 4am monthly % readings ≥21.5 MPSAS	9pm to 4am monthly no. readings ≥21.75 MPSAS	9pm to 4am monthly % readings ≥21.75 MPSAS
Jan	20.46	1.55	815	684	51	640	48
Feb	20.57	1.18	824	637	53	606	50
Mar	20.19	0.94	908	652	49	603	45
Apr	20.12	0.98	848	640	50	532	41
May	20.07	1.32	909	593	44	459	34
Jun	20.12	0.90	1,035	635	49	361	28
Jul	20.19	0.36	1,143	704	53	483	36
Aug	20.47	0.82	1,003	734	55	606	45
Sep	20.53	0.70	1,007	760	59	690	53
Oct	20.64	0.96	1,030	800	60	746	56
Nov	19.82	1.93	854	695	54	618	48
Dec	21.06	0.82	943	814	61	741	56

Table 6 The Jump-Up base SQM 2.0 (-22.463273, 143.193474)

Period	MPSAS 9pm to 4am monthly average	Standard deviation monthly average	Total monthly no. readings $\geq 21.5$ MPSAS	9pm to 4am monthly no. readings $\geq 21.5$ MPSAS	9pm to 4am monthly % readings $\geq 21.5$ MPSAS	9pm to 4am monthly no. readings $\geq 21.75$ MPSAS	9pm to 4am monthly % readings $\geq 21.75$ MPSAS	
2024	Jan	20.40	1.68	825	689	52	659	49
	Feb	20.39	1.45	817	636	53	617	51
	Mar	20.17	0.93	921	658	49	634	48
	Apr	20.08	0.90	875	647	50	547	42
	May	20.09	1.15	990	640	48	481	36
	Jun	20.15	0.91	1,088	696	54	554	43
	Jul	20.21	1.36	1,211	773	58	622	47
	Aug	20.38	0.81	1,149	781	59	620	47
	Sep	20.41	0.75	1,026	757	59	668	52
	Oct	20.60	1.00	1,024	800	60	740	56
	Nov	19.64	2.10	845	692	54	610	47
	Dec	20.92	1.05	940	812	61	768	58

Table 7 The Jump-Up western side SQM 3.0 (-22.483736, 143.148186)

Period	MPSAS 9pm to 4am monthly average	Standard deviation monthly average	Total monthly no. readings $\geq 21.5$ MPSAS	9pm to 4am monthly no. readings $\geq 21.5$ MPSAS	9pm to 4am monthly % readings $\geq 21.5$ MPSAS	9pm to 4am monthly no. readings $\geq 21.75$ MPSAS	9pm to 4am monthly % readings $\geq 21.75$ MPSAS	
2024	Jan	20.44	1.44	801	677	51	623	47
	Feb	20.46	1.22	814	629	52	594	49
	Mar	20.17	0.87	903	650	49	572	43
	Apr	20.09	0.84	799	628	49	488	38
	May	20.01	1.27	888	677	43	422	32
	Jun	20.05	0.88	1,018	628	49	284	22
	Jul	20.15	1.27	1,131	696	52	436	33
	Aug	20.38	0.79	986	721	54	564	42
	Sep	20.46	0.71	977	753	58	641	50
	Oct	20.58	0.99	1,006	790	59	703	53
	Nov	19.90	1.86	827	682	53	563	44
	Dec	20.94	0.75	924	804	60	651	49

## Lighting compliance

### What actions have you taken to meet the requirements of your Lighting Management Plan during this reporting period?

All lighting on The Jump-Up Dark-Sky Sanctuary fully adheres to the Museum's Lighting Management Plan and complies with IDA regulations, as outlined in *Table 8*. No specific actions were required during this reporting period as the existing Lighting Management Plan (LMP) has been met and maintained. All lighting remains compliant with dark-sky standards, ensuring minimal impact on night-sky quality.

<b>Year of certification</b>	2019
<b>Compliance % in original application</b>	90%
<b>Current compliance %</b>	100%
<b>Anticipated % for next reporting period</b>	100%

### Were any new lighting projects completed this year? If so, please describe.

No new lighting projects were completed over the reporting period.

## Outreach, education and media

### Summarise all outreach efforts from the past reporting period.

During the reporting period the Museum hosted 128 Deep-Time Astronomy events, attracting 2,160 visitors. These tours include educational content on light pollution, demonstrating how shadows are cast by starlight alone, explaining the effects of lighting temperatures on skyglow and discussing the impact of light on wildlife. Visitors also have the opportunity to view faint nebulae, zodiacal light and galaxies, offering a firsthand experience of celestial phenomena that are only visible in a dark sky.

In June the Museum published its latest booklet, *The Wonderful World of Deep-Time Astronomy*. Researched and written by Education & Astronomy Manager Grant Salmond and beautifully illustrated by Jennifer Horn, this educational resource is designed for junior palaeontologists and astronomers. It explores the world of deep-time astronomy, highlighting celestial objects and constellations that connect us to the Southern Hemisphere's night sky.

The Museum launched an astronomy outreach collaboration with the International Dark Sky Park at Dinosaur National Monument in Utah and the Cosmos Centre in Charleville. Through various social-media initiatives, we have shared educational content and actively promoted the International Dark-Sky mission.

Astronomy played a key role in the Museum's dinosaur digs in May and August with Education & Astronomy Manager Grant Salmond leading lectures and telescope viewing sessions at Belmont Station. Additionally, the fourth Dark Sky Serenade opera event by Opera Queensland was held at Dinosaur Canyon, drawing a record-breaking audience of 500 guests who experienced opera under the stars.

Further outreach efforts included the development of comprehensive staff-training videos, contributions to the Australasian Dark-Sky Alliance newsletter and regular articles in the Museum's member newsletter. Topics covered included light pollution, night-sky observation, Comet 2023 A3 and the aurora australis. The Museum also maintained a strong social media presence, sharing videos and images from the Sanctuary.

A summary of the Museum's events is available in *Table 9*, while *Table 10* provides a detailed breakdown of each event and its educational impact.

Table 9 Summary of events held at The Jump-Up Dark-Sky Sanctuary

<b>Outreach summary</b>	
<b>Total number of events</b>	134
<b>Number of unique efforts* offered</b>	2
<b>Total number of attendees for all events</b>	2,733
<i>Note: "unique efforts" offered represent the number of different programs at your site.</i>	

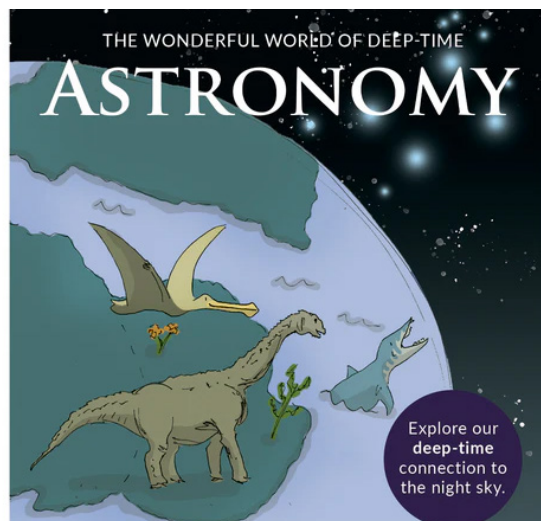


Table 10 Detailed list of events held at The Jump-Up Dark-Sky Sanctuary

Date	Description	Number of attendees	Describe how you engaged with and educated your audience
Jan to Dec 2024	<p><b>1. Guided tours of the Gondwana Stars Observatory</b>                      Observatory tours run for one hour, are self-drive from Winton and are capped at 25 visitors per tour.</p>	2,160	<p>All Deep-Time Astronomy tours are crafted to be immersive and interactive sessions facilitated by visitors specially trained Museum Tour Guides. This approach allows visitors to pursue intriguing lines of inquiry based on the seasonal night sky.</p>
8 Apr 2024	<p><b>2. Winton's Night Trek – Chasing the Dark</b>                      In April Winton's first Night Trek – Chasing the Dark took place, bringing together local volunteer citizen scientists, Museum staff and Winton Shire Council representatives to collect sky-brightness data and assess light pollution in the area.</p>	33	<p>Using sky-quality meters, we collected readings of the darkness of our skies and we're thrilled to announce that Winton is now officially on the <a href="http://globeatnight.org">globeatnight.org</a> map. We collected readings at nine locations along Oondooroo Street, with the darkest spot being the St Patrick's School Oval.</p>
16 May 2024	<p><b>3. Dark Sky Serenade, Opera Queensland</b>                      The Dark Sky Serenade, part of Opera Queensland's Festival of Outback Opera, was held for the fourth consecutive year at The Jump-Up Dark-Sky Sanctuary in Winton. Despite the town's modest population of around 850, the event attracted an impressive audience of 500. The program featured a diverse selection of music, ranging from classical masterpieces by Mozart and Donizetti to contemporary hits by Lady Gaga and Jimmy Barnes.</p>	500	<p>The annual Dark Sky Serenade event promoted the night skies, crystal-clear air and music in regional Queensland and is marketed heavily through Opera Queensland. All lighting installations were temporary and minimal for the safe performance of night-time tasks. Guests were introduced to the values of the International Dark-Sky Sanctuary before performances commenced.</p>
May and Aug 2024	<p><b>4. Dig astronomy lectures</b>                      Astronomy lectures by Education &amp; Astronomy Manager Grant Salmond for Dig-A-Dino participants in the field were accompanied by telescope viewing opportunities.</p>	40	<p>The lectures' intimate and informal group settings allowed for a personalised learning experience, fostering a deeper understanding of the significance of preserving the night sky. Additionally, telescope viewing opportunities were integrated into the lectures, offering hands-on experiences and further enhancing the educational impact on participants.</p>





Citizen scientists participating in Winton's first Night Trek – Chasing the Dark, collecting data on the sky brightness in Winton.

### **How did you promote the IDA and its mission during your outreach programs/events?**

The Museum promoted DarkSky International and its mission through the following outreach strategies.

- During tours of the Gondwana Stars Observatory and day tours of the *March of the Titanosaurs* exhibition an explanation of what an International Dark-Sky Sanctuary is and the importance of protecting the dark sky is provided to visitors. Excerpt from *6.5 AAOD Tour Procedures*: “In the next ten years one of every 15 points of light in the night sky will be a moving artificial satellite. We invite you to take a moment to imagine what future night skies will look like. We are custodians of the night and it will be our legacy. Thank you for coming to the Gondwana Stars Observatory tonight and helping us continue to preserve this International Dark-Sky Sanctuary.”
- All tours of the Gondwana Stars Observatory include a booking confirmation with the following information: “The Jump-Up Dark-Sky Sanctuary was designated an International Dark-Sky Sanctuary in April 2019. Sanctuaries are the most remote (and often darkest) places in the world with the most fragile states of conservation. To learn more about how you can protect the night sky, visit <https://www.darksky.org/>”.
- The publication of *The Wonderful World of Deep-Time Astronomy*, researched and written by Education & Astronomy Manager Grant Salmond and beautifully illustrated by Jennifer Horn.
- The Museum website includes the International Dark-Sky Association logo on its footer.

### **Is there any programming ongoing or planned blending of the arts and/or culture with dark skies?**

The blending of arts and culture with dark skies is an ongoing initiative. On Thursday 16 May The Jump-Up Dark-Sky Sanctuary hosted Dark Sky Serenade as part of Opera Queensland's Festival of Outback Opera. This unique event showcased a diverse program, spanning from classical to contemporary music, featuring works by Mozart, Donizetti, Lady Gaga, and Jimmy Barnes. Conductor Chris van Tuinen added a touch of humor with engaging introductions to each piece, while the resilience of live performance shone through – even during a moment when soprano Rachelle Durkin gracefully recovered from a forgotten lyric in Andrew Ford's *Our Mother's Heart*. Composer and singer Kate Miller-Heidke delivered a powerful performance, ranging from Handel's *Rejoice Greatly* to her own composition, *My Sky* from *The Rabbits*. The evening was set in motion by a moving *Welcome to Country* by Nina Korbé, a proud Koa Akauky Ayaslnji, *Wakka Wakka* woman, grounding the event in deep cultural significance. The program also included stirring renditions of Verdi's *Sul fil d'un soffio etesio* and *Solenne in quest'ora*, performed by tenor Rosario La Spina and baritone Shaun Brown, captivating the audience under the pristine night sky.



The Dark Sky Serenade on The Jump-Up Dark-Sky Sanctuary at the festival of Outback Opera presented by Opera Queensland.

**What have you noticed about your visitors' experiences? For example, is attendance/visitation of dark-sky programs consistent, growing, or dropping off? Have visitors provided any feedback on their experiences at your site?**

Visitation to the Gondwana Stars Observatory is growing rapidly, rising from a few hundred visitors in 2022 to 1,700 in 2023 and 2,160 in 2024, with further growth expected over the next year. While overall visitation across Outback Queensland has declined, dark-sky tourism and interest in the Sanctuary continue to increase. Visitor feedback has been overwhelmingly positive, with many highlighting the unique content and immersive tour experience that deepens their interest in astronomy. Guests are often struck by the area's exceptional darkness, frequently comparing it to their home night skies and expressing surprise at the impact of light pollution on their view of the stars.

**Promotions and media relations**

**Has your Place participated in any IDA-led initiatives such as International Dark-Sky Week, the Under One Sky conference, or other relevant promotions during this reporting period?**

In March the Museum participated in Advocate Action: Session One for International Dark Sky Week. In April we joined the celebration of International Dark Sky Week by sharing Facebook posts focused on light pollution and the importance of preserving the night sky. Throughout the year the astronomy team consistently supported the Australasian Dark Sky Alliance by promoting their social media to raise awareness about light pollution.

**How has your Place been promoted?**

The Jump-Up Dark-Sky Sanctuary has continued to receive outstanding regional and national coverage following its designation as an International Dark-Sky Sanctuary. This has included features across radio, TV, podcasts, online platforms and print media. The Museum has maintained a strong social-media presence, consistently highlighting the benefits of dark skies and promoting ways to prevent light pollution.

**Describe any permanent or temporary exhibits that have been created this reporting period (these may include trails, informative waysides, interpretation signs, gift shop items, etc).**

In June the Museum published *The Wonderful World of Deep-Time Astronomy*, researched and written by Education & Astronomy Manager Grant Salmond and beautifully illustrated by Jennifer Horn. Aimed at junior palaeontologists and astronomers, the booklet delves into the captivating world of deep-time astronomy, uncovering celestial objects and constellations that link us to the Southern Hemisphere's night sky, while also promoting the preservation of dark skies.

**Briefly describe how educational materials are being dispersed/provided at your Place.**

The Museum regularly features information about The Jump-Up Dark-Sky Sanctuary in its social-media posts and Museum member newsletters. The Museum Shop offers educational materials on the southern sky, constellations and light pollution, allowing visitors to take home insights into the region's dark-sky environment.



In December the Museum partnered with Winton Shire Council to host a stall at the Christmas market, gathering petitions to support Winton's bid to become a Dark-Sky Community.

**Briefly describe any efforts undertaken to reach new audiences. If this was not part of your efforts last year, describe what you plan to do to engage new visitors in the 2024 reporting period:**

- The Museum has partnered with Winton Shire Council to help them become Queensland's first International Dark-Sky Community. This collaboration includes establishing a sky monitoring program, developing a lighting-management policy, and advocating for dark-sky preservation.
- To support local engagement the Museum offers 50% off Observatory tours for locals, Prep-A-Dino participants, work-experience students and interns, as well as free tours for current Museum staff members.
- In addition, the Museum has developed comprehensive staff-training videos, available on its training portal. These videos cover the Deep-Time Astronomy tour, the significance of being an International Dark-Sky Sanctuary and the measures taken to preserve this designation.
- The Museum also regularly shares articles and content on light pollution and night-sky observations through its member newsletter and social-media channels, reaching a broad international audience.

**Are there any ongoing conservation and/or research programs at the site? If so, who runs them, and what are the goals?**

The Museum's Dinosaurs to Dunnarts program, ongoing since 2009, engages visitors as citizen scientists, enabling them to contribute valuable data to iNaturalist for long-term conservation efforts. To date the program has identified 833 species through 3,429 observations and 6,458 identifications. Its primary objective is the continuous conservation of the site through active monitoring.

**Partnerships**

**Have you worked with any external partners to promote the dark-sky movement within and outside of your Place's boundaries? If so, identify these partners and explain the result of this collaboration.**

The Museum is collaborating with Winton Shire Council to conduct a comprehensive lighting audit and catalogue the lighting in the township. In addition, the astronomy team has completed a sky-brightness survey of the town.

The Museum has also sponsored the "Valuing Darkness – Solving Light Pollution" symposium organised by the Australasian Dark Sky Alliance. This initiative will culminate in the Museum co-hosting a workshop on dark-sky place-making in March 2025.

## Future

### Provide a brief description of how you will continue to manage “threats” over the next year.

In the Museum’s International Dark-Sky Sanctuary application, the identified threat to certification was private development. However, given The Jump-Up’s remote location, it faces few risks to its dark-sky status. Its isolation from the nearest urban centre means that light pollution is minimal, and public lighting is controlled by the Museum, adhering to QPR, QEPA, AS 4282 and IDA regulations. The majority of private land titles in Winton Shire consist of large pastoral blocks, making development rights and subdivision challenging. While pastoral homesteads are located well away from The Jump-Up Dark-Sky Sanctuary, property owners wishing to install lighting infrastructure within 10km of The Jump-Up will be encouraged to follow IDA regulations. Additionally, a revised Lighting Management Plan will be submitted to the IDA.

### Briefly describe future plans (in 2025 and beyond) to engage with existing and new partners and how you will expand the dark-sky movement.

In 2025 and beyond the Museum aims to increase the frequency of Deep-Time Astronomy tours, targeting a minimum of 2,500 visitors per annum to the Gondwana Stars Observatory. The strategy includes hosting regular tours and partnering with third-party agencies to create exclusive night-tour packages, such as catered twilight tours. Additionally, the cloudy-night tour has been adapted to offer an inclement-weather alternative, focusing on the seasonal night sky of The Jump-Up in the theatre for Gondwana Stars Observatory tours.

Over the next year the Museum will continue supporting Winton Shire Council’s bid to become Queensland’s first International Dark-Sky Community, establishing the region as a vital hub for dark-sky tourism in Outback Queensland. The data from the SQM 4.0 meter in Winton, alongside readings from the western side of The Jump-Up (SQM 3.0), will be used to monitor light-pollution trends and assess relative sky quality, as outlined in *Tables 25 to 48*. Looking ahead, the Museum aims to establish a Dark-Sky Chapter for Outback Queensland, providing expertise and assistance to local communities seeking to preserve their dark skies and achieve dark-sky certification.

## Additional information

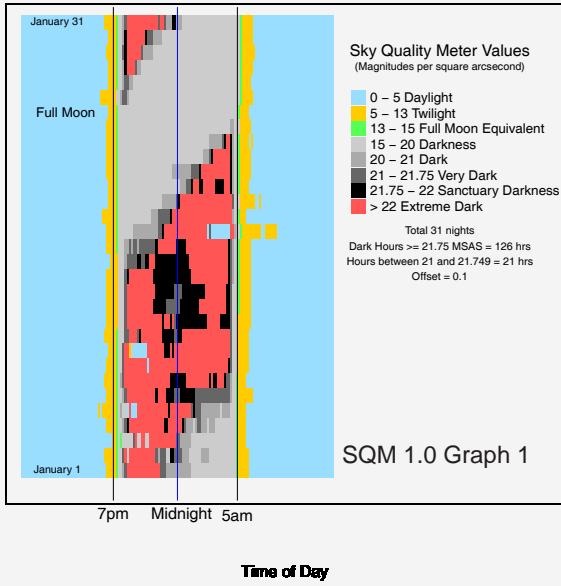
### What do you consider the greatest single benefit of the IDA certification to your location?

The most significant benefit of The Jump-Up’s IDA certification is the assurance it gives visitors, validating the authenticity of their dark-sky experience. Dark-sky tourism, an emerging and sustainable environmental trend, focuses on experiencing light-pollution-free skies, providing unique and memorable encounters. This niche sector is especially crucial for remote regions like Winton, enabling the area to leverage its pristine dark skies to create economically sustainable tourism experiences. These often involve overnight stays, boosting local tourism and inspiring other towns and attractions in the region to embrace dark-sky preservation and follow suit.

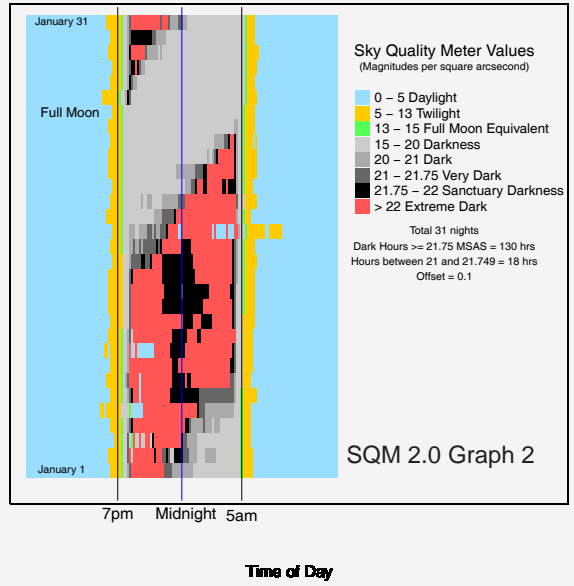


Monthly sky-darkness graphs comparing SQM 1.0 at Dinosaur Canyon with SQM 2.0 at the base of The Jump-Up.

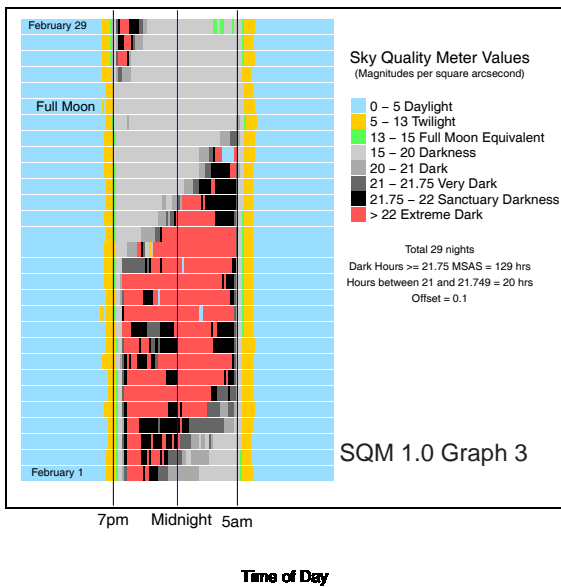
Sky Darkness Plot January 1 to January 31, 2024  
Dinosaur Canyon SQM 1.0



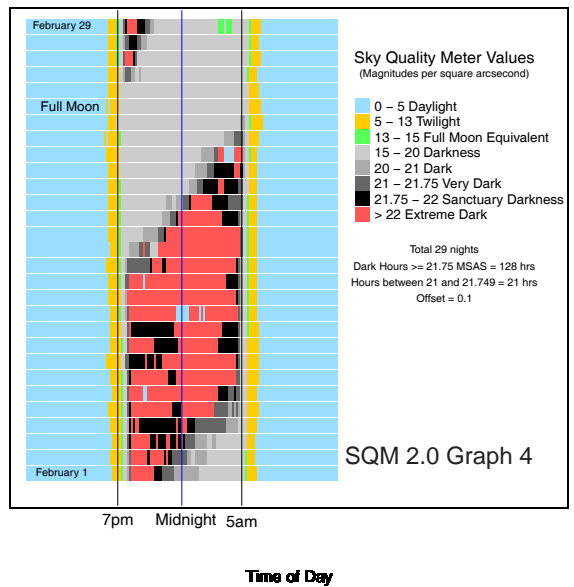
Sky Darkness Plot January 1 to January 31, 2024  
Base SQM 2.0



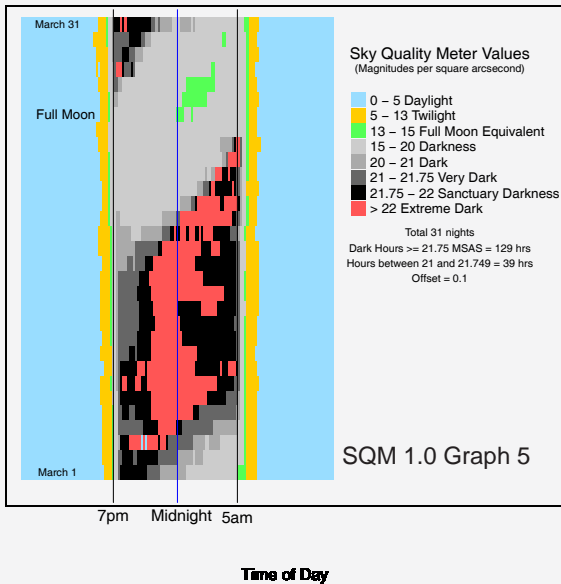
Sky Darkness Plot February 1 to February 29, 2024  
Dinosaur Canyon SQM 1.0



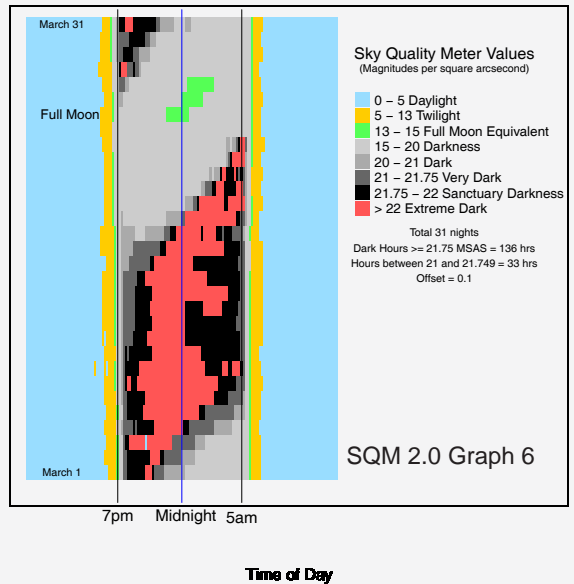
Sky Darkness Plot February 1 to February 29, 2024  
Base SQM 2.0



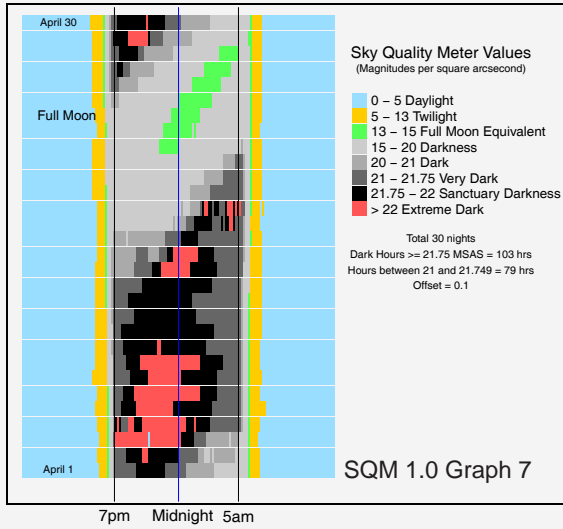
Sky Darkness Plot March 1 to March 31, 2024  
Dinosaur Canyon SQM 1.0



Sky Darkness Plot March 1 to March 31, 2024  
Base SQM 2.0



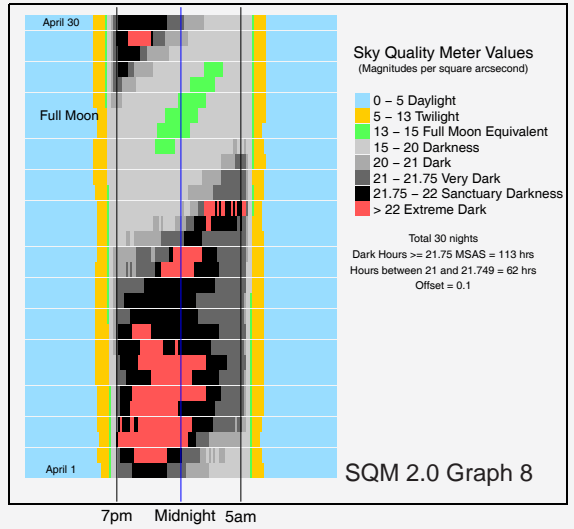
**Sky Darkness Plot April 1 to April 30, 2024**  
**Dinosaur Canyon SQM 1.0**



SQM 1.0 Graph 7

Time of Day

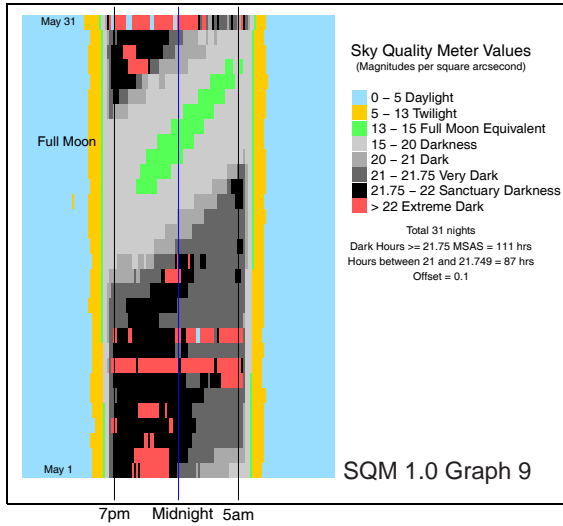
**Sky Darkness Plot April 1 to April 30, 2024**  
**Base SQM 2.0**



SQM 2.0 Graph 8

Time of Day

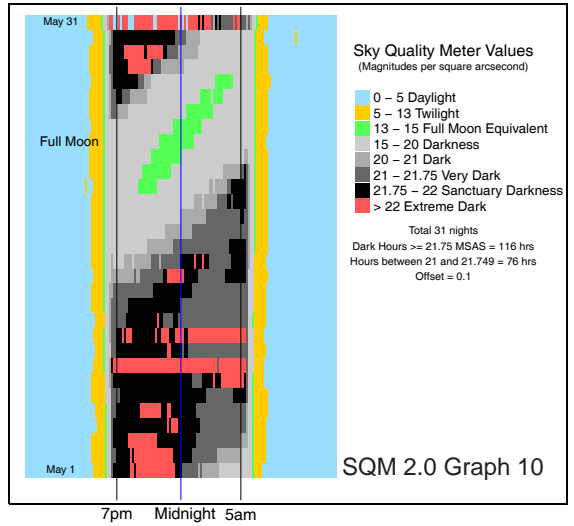
**Sky Darkness Plot May 1 to May 31, 2024**  
**Dinosaur Canyon SQM 1.0**



SQM 1.0 Graph 9

Time of Day

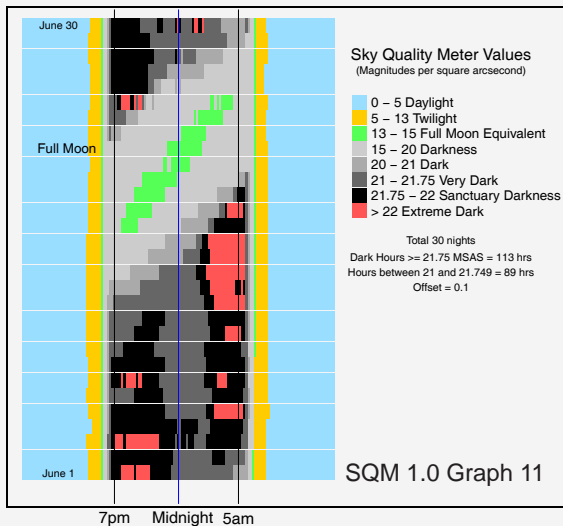
**Sky Darkness Plot May 1 to May 31, 2024**  
**Base SQM 2.0**



SQM 2.0 Graph 10

Time of Day

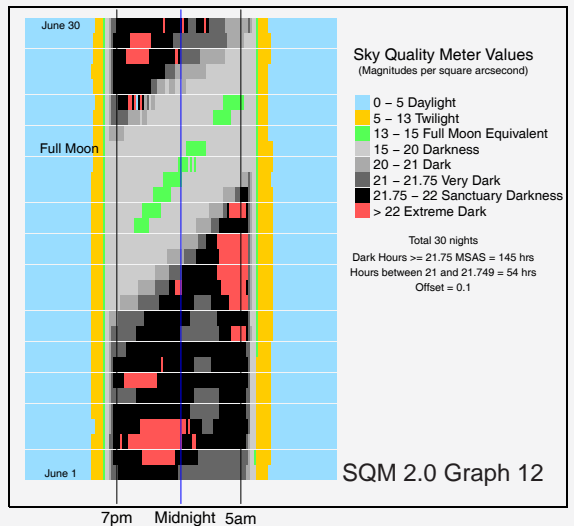
**Sky Darkness Plot June 1 to June 30, 2024**  
**Dinosaur Canyon SQM 1.0**



SQM 1.0 Graph 11

Time of Day

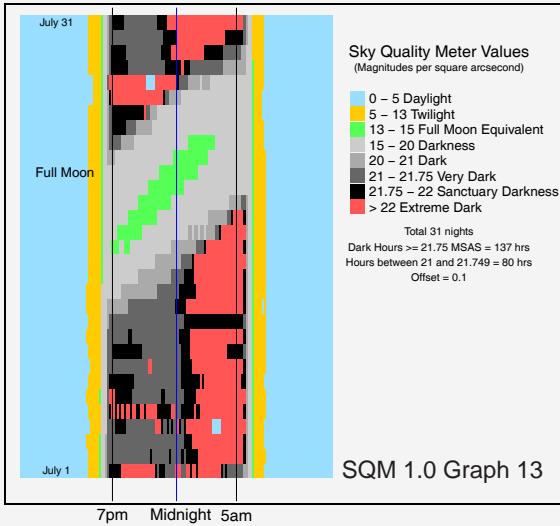
**Sky Darkness Plot June 1 to June 30, 2024**  
**Base SQM 2.0**



SQM 2.0 Graph 12

Time of Day

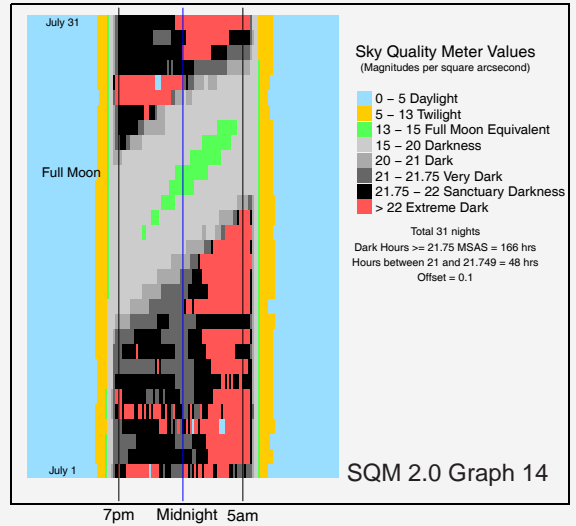
**Sky Darkness Plot July 1 to July 31, 2024**  
**Dinosaur Canyon SQM 1.0**



SQM 1.0 Graph 13

Time of Day

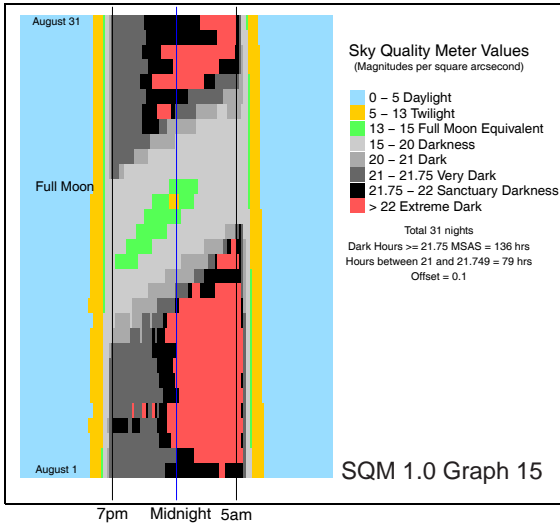
**Sky Darkness Plot July 1 to July 31, 2024**  
**Base SQM 2.0**



SQM 2.0 Graph 14

Time of Day

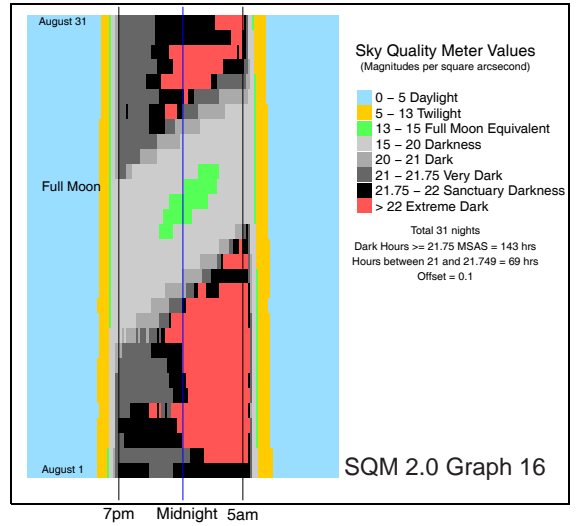
**Sky Darkness Plot August 1 to August 31, 2024**  
**Dinosaur Canyon SQM 1.0**



SQM 1.0 Graph 15

Time of Day

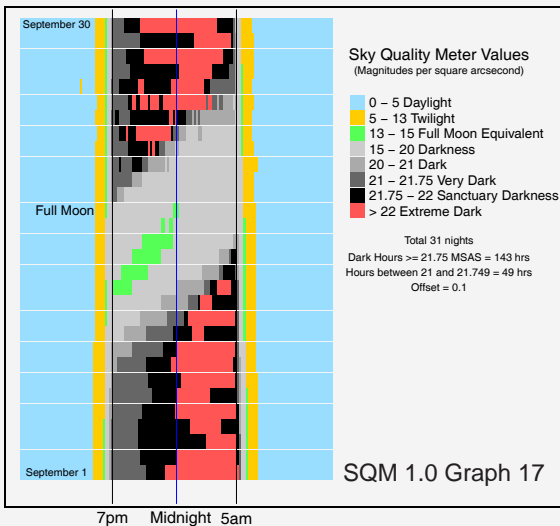
**Sky Darkness Plot August 1 to August 31, 2024**  
**Base SQM 2.0**



SQM 2.0 Graph 16

Time of Day

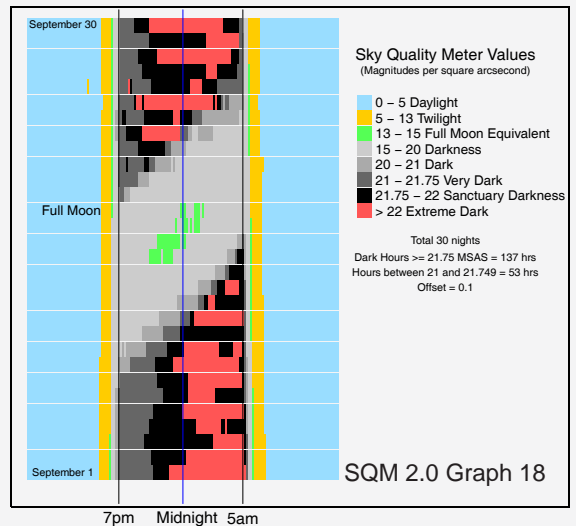
**Sky Darkness Plot September 1 to September 30, 2024**  
**Dinosaur Canyon SQM 1.0**



SQM 1.0 Graph 17

Time of Day

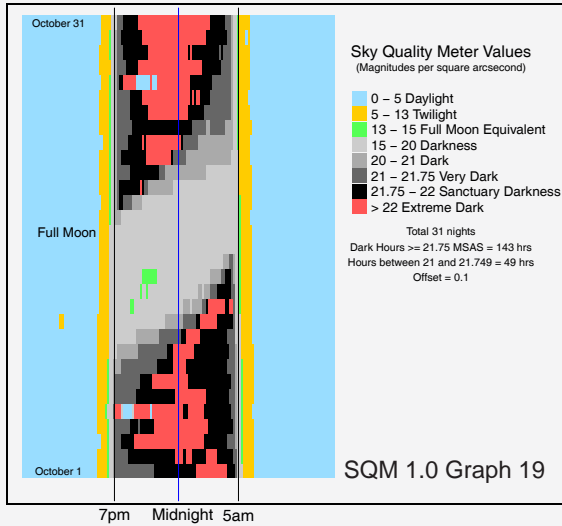
**Sky Darkness Plot September 1 to September 30, 2024**  
**Base SQM 2.0**



SQM 2.0 Graph 18

Time of Day

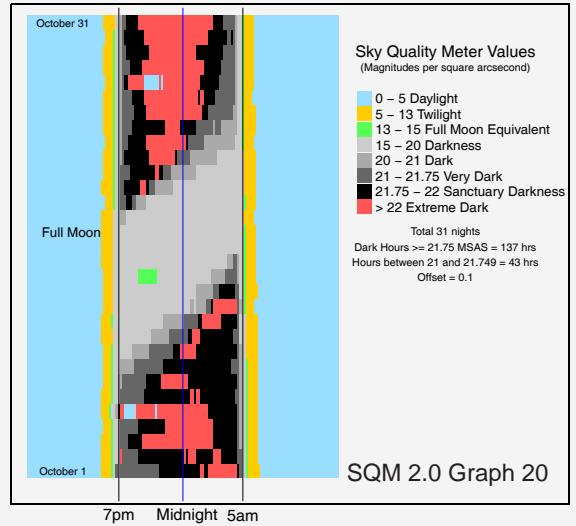
**Sky Darkness Plot October 1 to October 31, 2024**  
**Dinosaur Canyon SQM 1.0**



SQM 1.0 Graph 19

Time of Day

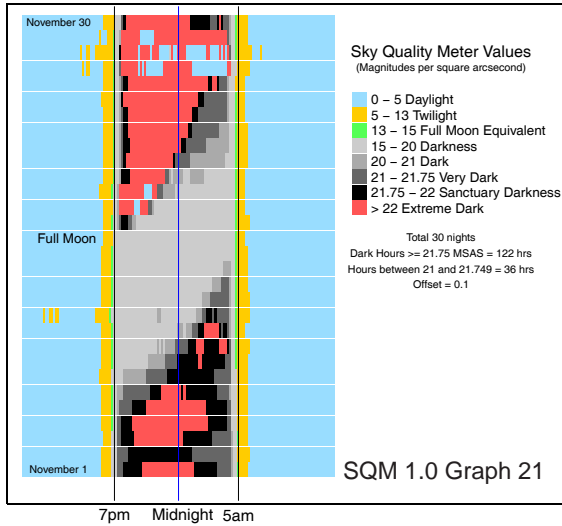
**Sky Darkness Plot October 1 to October 31, 2024**  
**Base SQM 2.0**



SQM 2.0 Graph 20

Time of Day

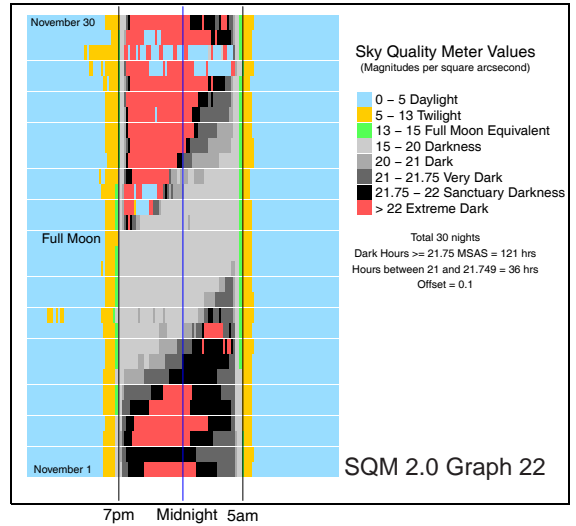
**Sky Darkness Plot November 1 to November 30, 2024**  
**Dinosaur Canyon SQM 1.0**



SQM 1.0 Graph 21

Time of Day

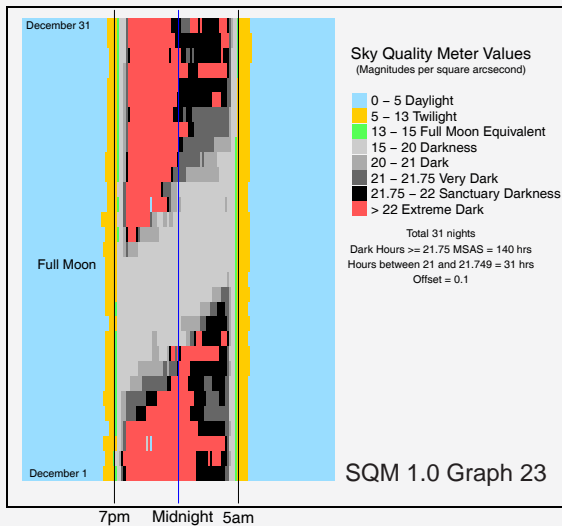
**Sky Darkness Plot November 1 to November 30, 2024**  
**Base SQM 2.0**



SQM 2.0 Graph 22

Time of Day

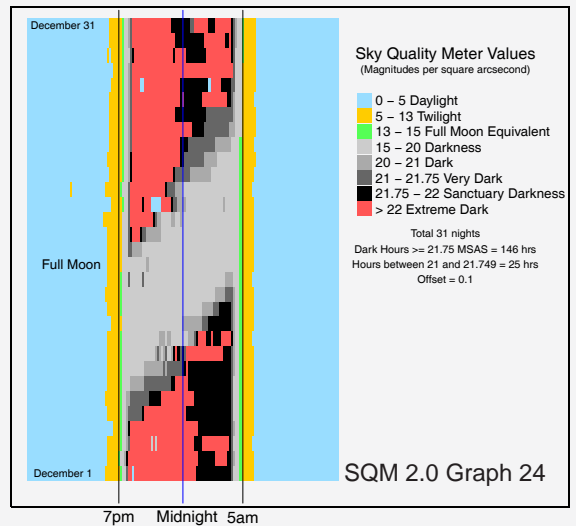
**Sky Darkness Plot December 1 to December 31, 2024**  
**Dinosaur Canyon SQM 1.0**



SQM 1.0 Graph 23

Time of Day

**Sky Darkness Plot December 1 to December 31, 2024**  
**Base SQM 2.0**



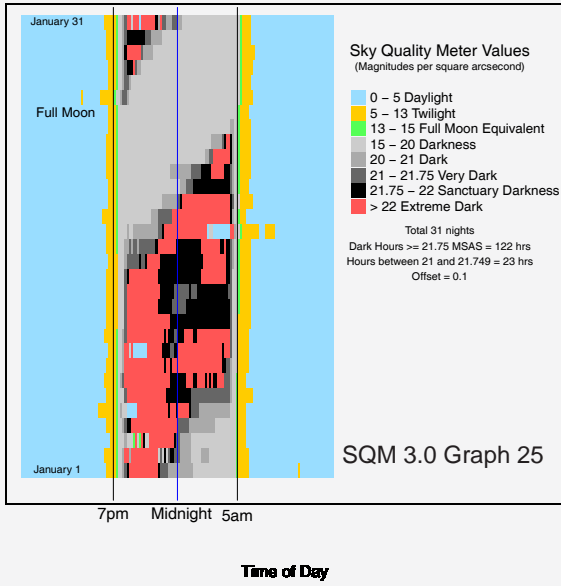
SQM 2.0 Graph 24

Time of Day

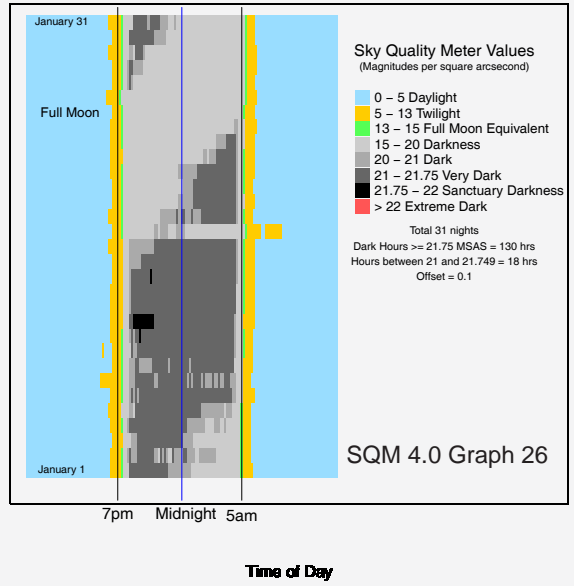


Monthly sky-darkness graphs comparing SQM 3.0 on the western side of The Jump-Up with SQM 4.0 at Oondooroo Street in Winton.

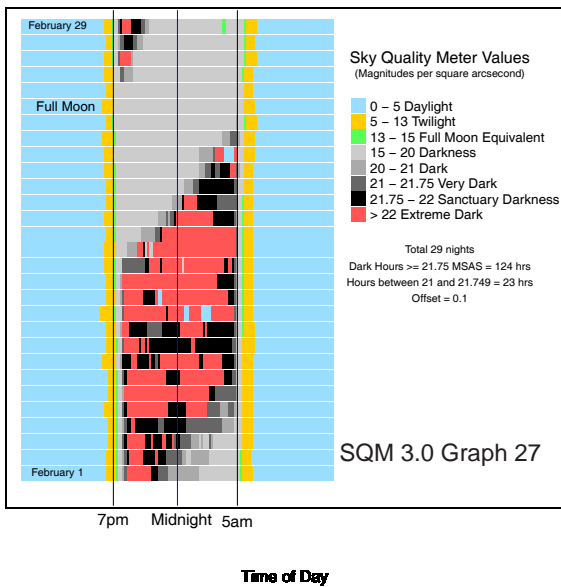
Sky Darkness Plot January 1 to January 31, 2024  
Western Side SQM 3.0



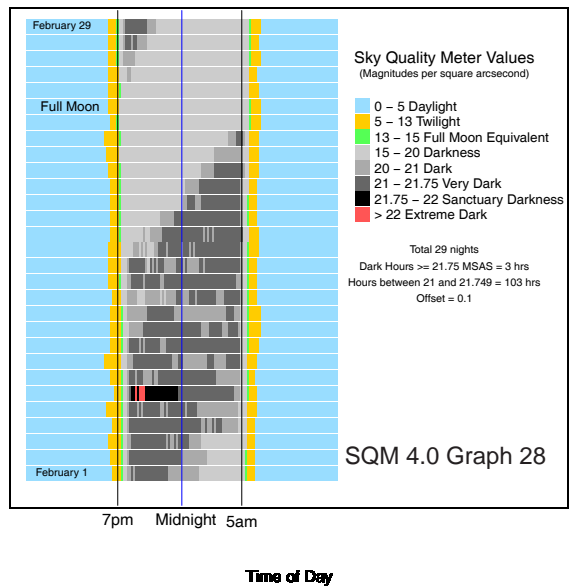
Sky Darkness Plot January 1 to January 31, 2024  
Oondooroo St SQM 4.0



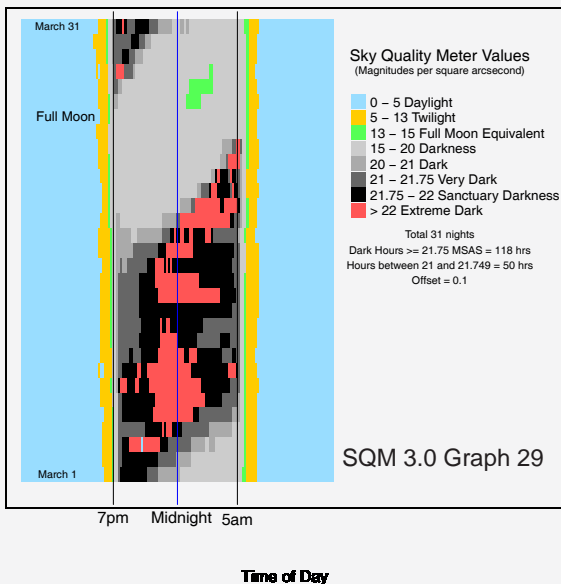
Sky Darkness Plot February 1 to February 29, 2024  
Western Side SQM 3.0



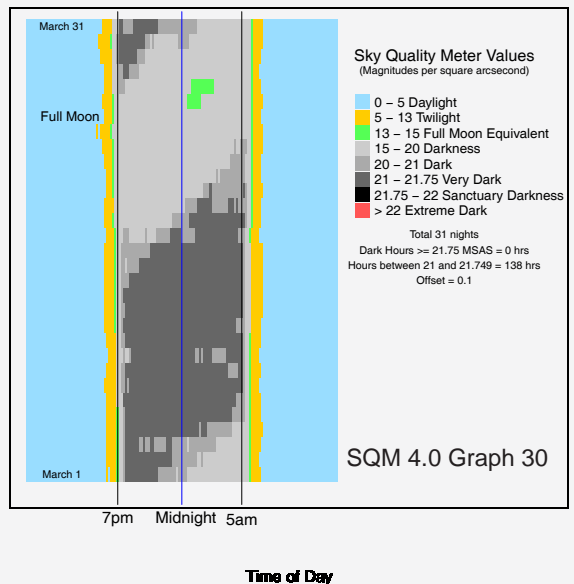
Sky Darkness Plot February 1 to February 29, 2024  
Oondooroo St SQM 4.0



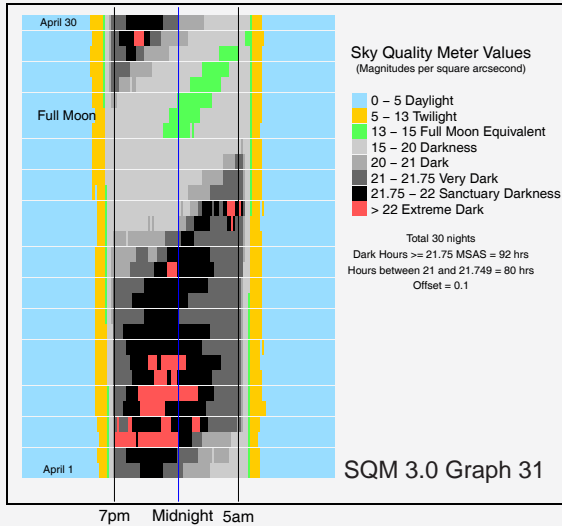
Sky Darkness Plot March 1 to March 31, 2024  
Western Side SQM 3.0



Sky Darkness Plot March 1 to March 31, 2024  
Oondooroo St SQM 4.0



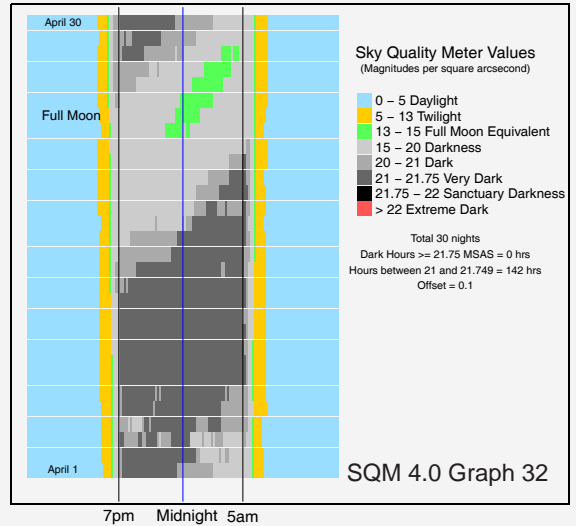
**Sky Darkness Plot April 1 to April 30, 2024**  
**Western Side SQM 3.0**



SQM 3.0 Graph 31

Time of Day

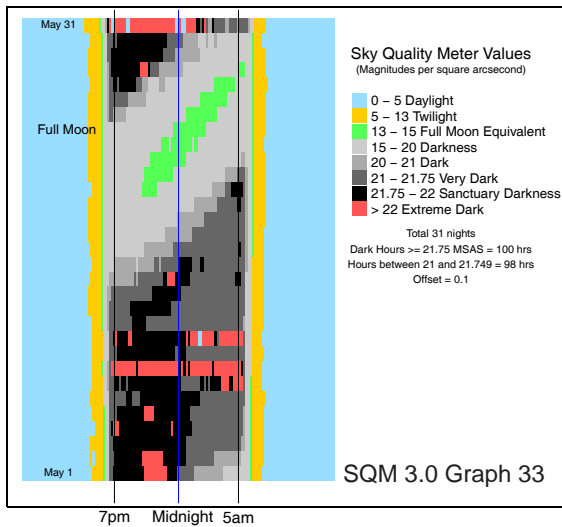
**Sky Darkness Plot April 1 to April 30, 2024**  
**Oondooroo St SQM 4.0**



SQM 4.0 Graph 32

Time of Day

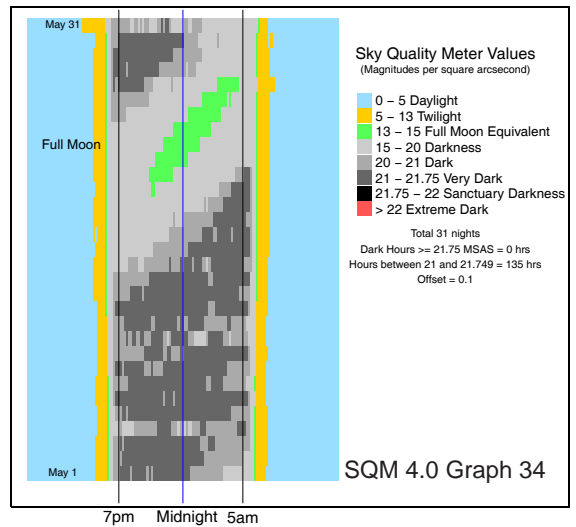
**Sky Darkness Plot May 1 to May 31, 2024**  
**Western Side SQM 3.0**



SQM 3.0 Graph 33

Time of Day

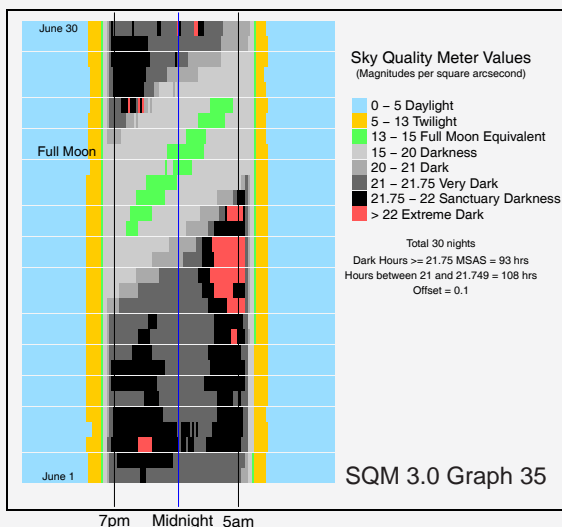
**Sky Darkness Plot May 1 to May 31, 2024**  
**Oondooroo St SQM 4.0**



SQM 4.0 Graph 34

Time of Day

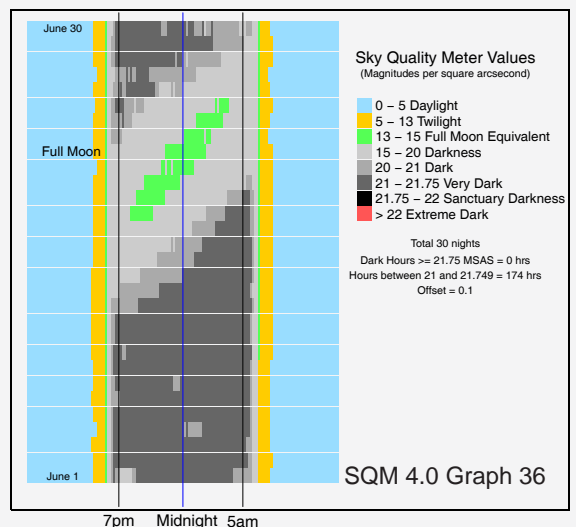
**Sky Darkness Plot June 1 to June 30, 2024**  
**Western Side SQM 3.0**



SQM 3.0 Graph 35

Time of Day

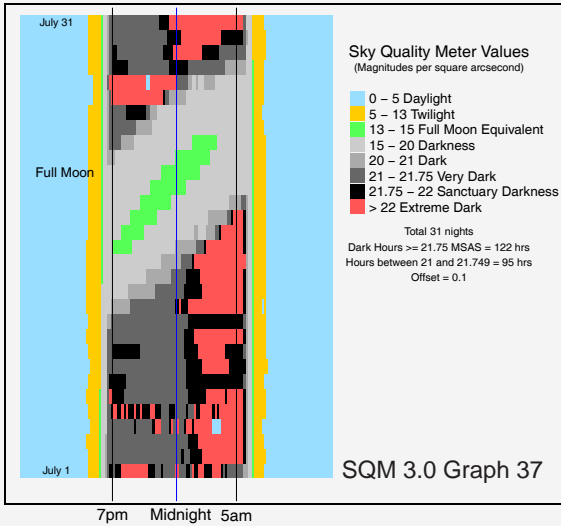
**Sky Darkness Plot June 1 to June 30, 2024**  
**Oondooroo St SQM 4.0**



SQM 4.0 Graph 36

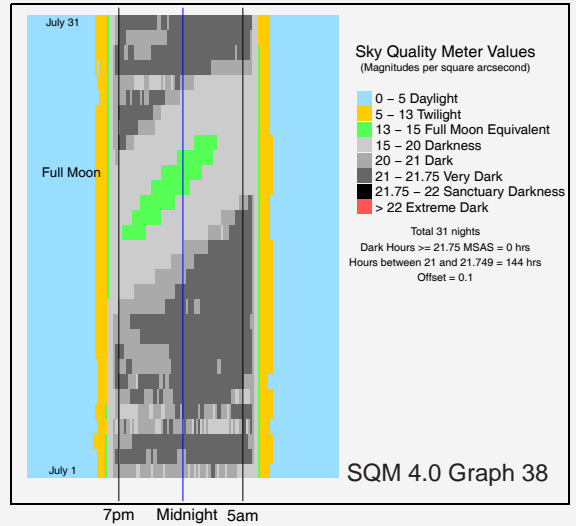
Time of Day

**Sky Darkness Plot July 1 to July 31, 2024**  
Western Side SQM 3.0



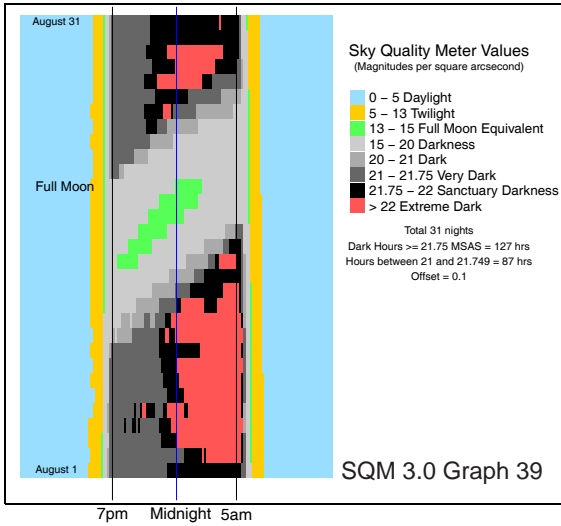
Time of Day

**Sky Darkness Plot July 1 to July 31, 2024**  
Oondooroo St SQM 4.0



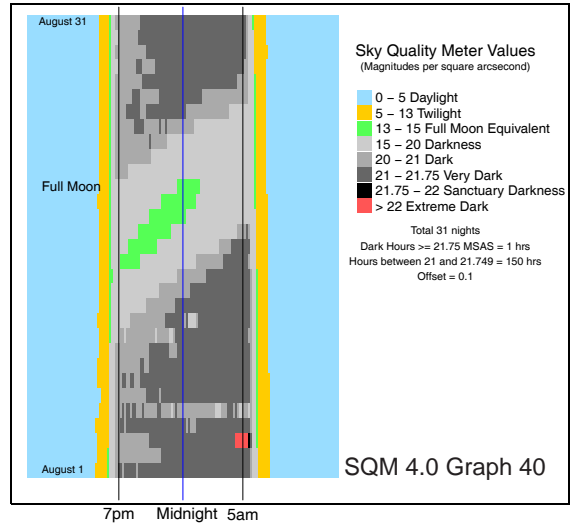
Time of Day

**Sky Darkness Plot August 1 to August 31, 2024**  
Western Side SQM 3.0



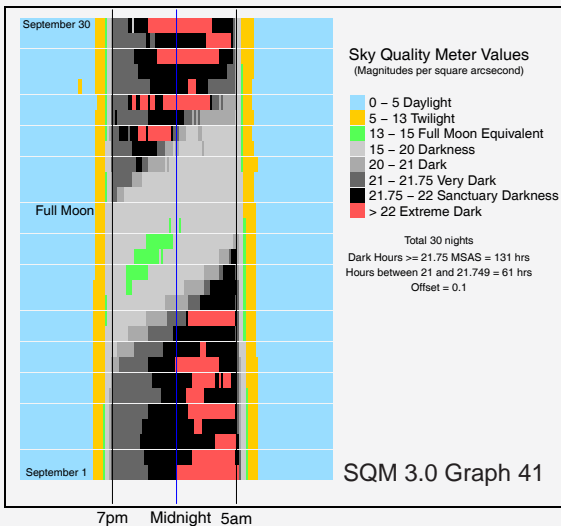
Time of Day

**Sky Darkness Plot August 1 to August 31, 2024**  
Oondooroo St SQM 4.0



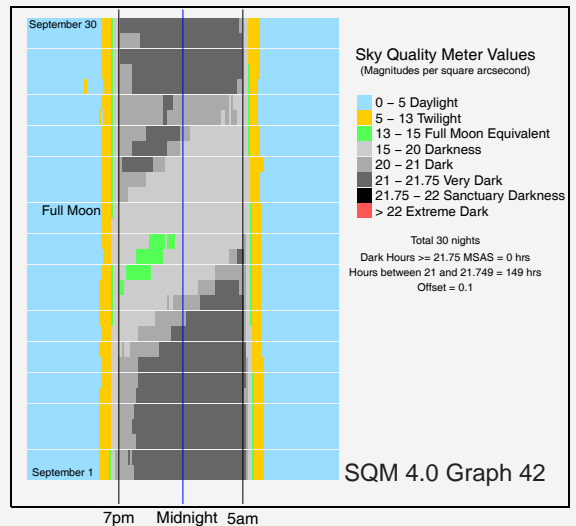
Time of Day

**Sky Darkness Plot September 1 to September 30, 2024**  
Western Side SQM 3.0



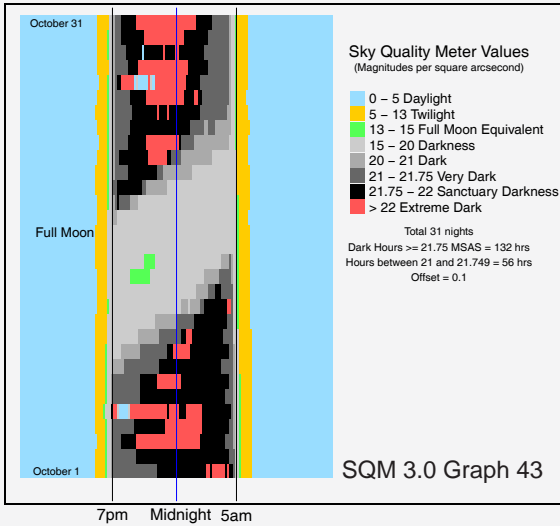
Time of Day

**Sky Darkness Plot September 1 to September 30, 2024**  
Oondooroo St SQM 4.0



Time of Day

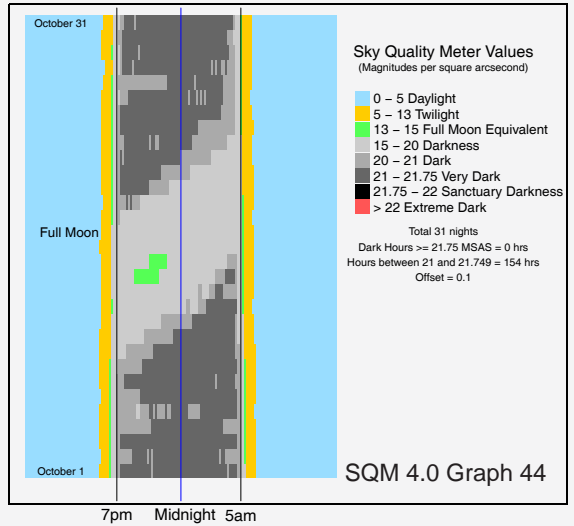
**Sky Darkness Plot October 1 to October 31, 2024**  
Western Side SQM 3.0



SQM 3.0 Graph 43

Time of Day

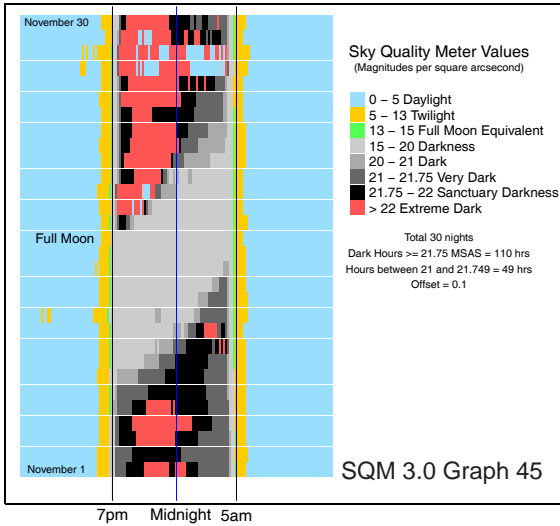
**Sky Darkness Plot October 1 to October 31, 2024**  
Oondooroo St SQM 4.0



SQM 4.0 Graph 44

Time of Day

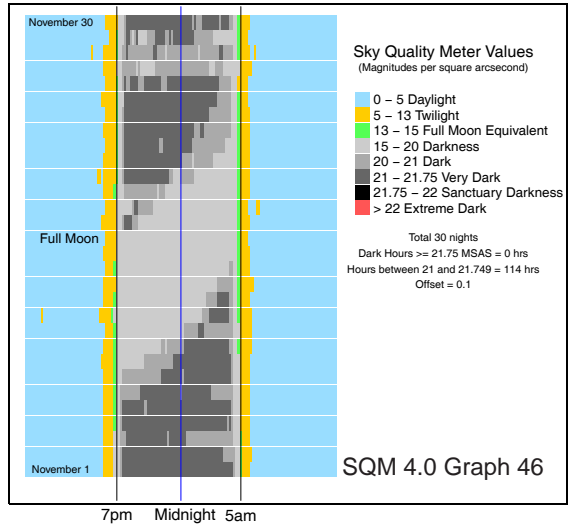
**Sky Darkness Plot November 1 to November 30, 2024**  
Western Side SQM 3.0



SQM 3.0 Graph 45

Time of Day

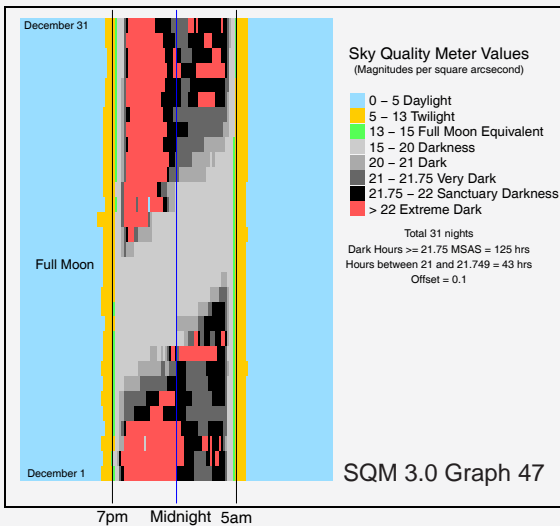
**Sky Darkness Plot November 1 to November 30, 2024**  
Oondooroo St SQM 4.0



SQM 4.0 Graph 46

Time of Day

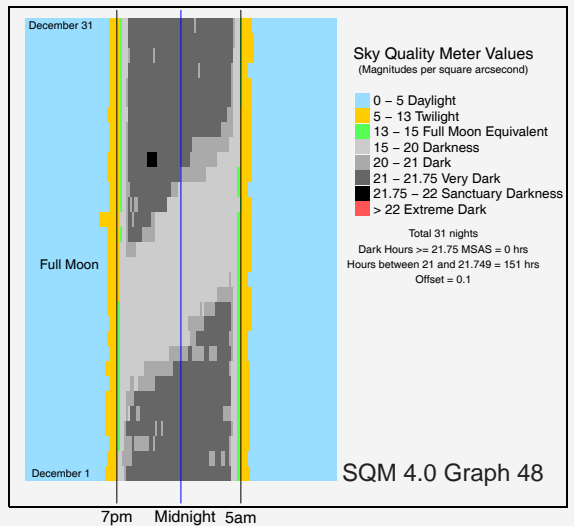
**Sky Darkness Plot December 1 to December 31, 2024**  
Western Side SQM 3.0



SQM 3.0 Graph 47

Time of Day

**Sky Darkness Plot December 1 to December 31, 2024**  
Oondooroo St SQM 4.0



SQM 4.0 Graph 48

Time of Day