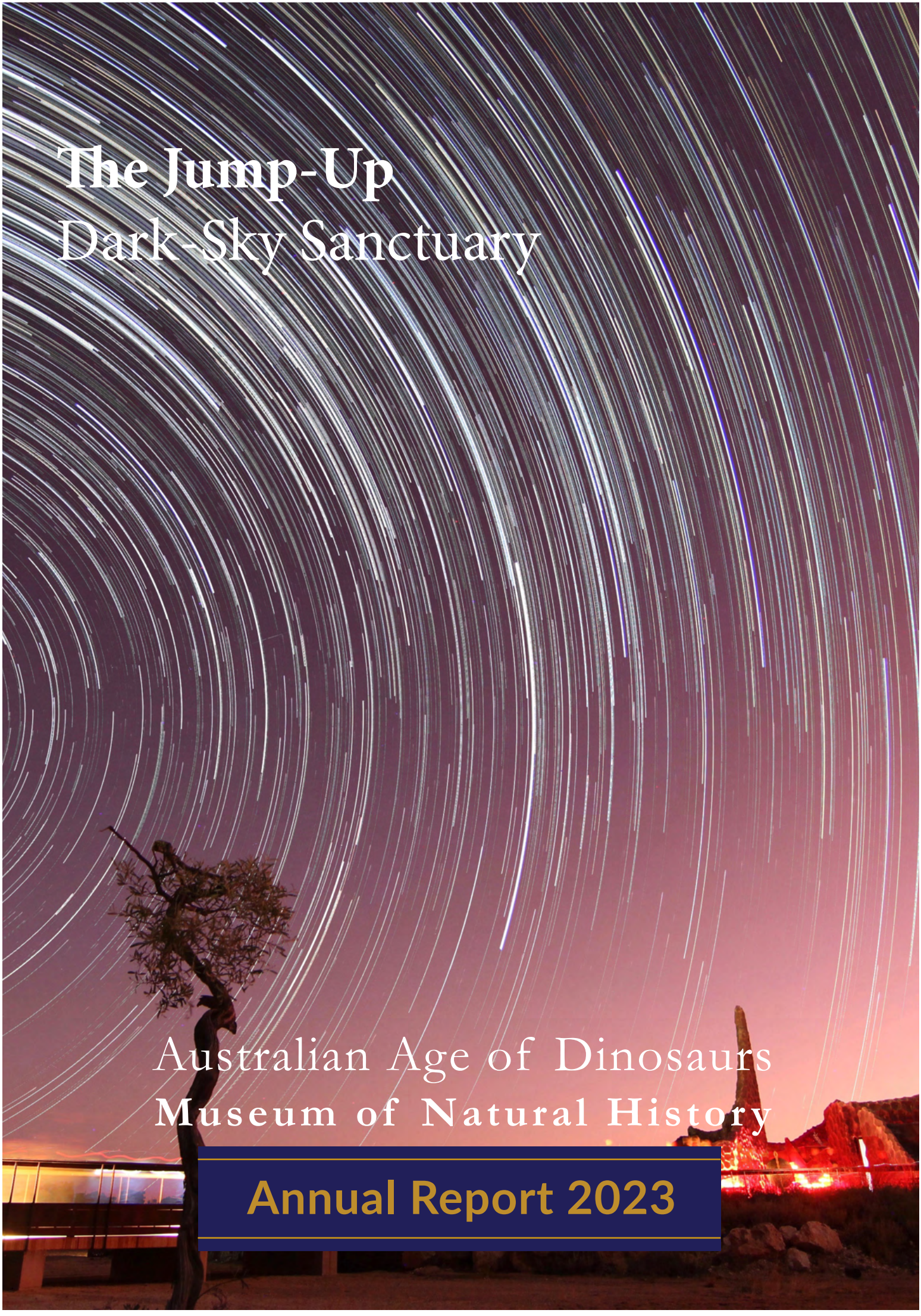


The Jump-Up
Dark-Sky Sanctuary

Australian Age of Dinosaurs
Museum of Natural History

Annual Report 2023

Site information

Designation type	International Dark-Sky Sanctuary
Designation date	27 April 2019
Site name	The Jump-Up Dark-Sky Sanctuary
Site size	1,400 hectares
Site contact (primary)	Grant Salmond grant.salmond@aaod.com.au
Site contact (secondary)	Naomi Miles naomi.miles@aaod.com.au

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

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

	2019/2020	2020/2021	2021/2022	2023
Online visitors to the Museum's Dark-Sky page	1,755	3,546	3,689	3,879
Average time on the Dark-Sky page (minutes)	2:20	2:18	2:13	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)
2023	Jan	21.68	23.0
	Feb	21.62	21.5
	Mar	21.62	21.7
	Apr	21.52	18.9
	May	21.45	13.2
	Jun	21.59	15.0
	Jul	21.66	12.0
	Aug	21.66	14.5
	Sep	21.64	18.1
	Oct	21.65	20.4
	Nov	21.71	23.1
	Dec	21.67	24.8
	Average	21.62	18.8

Table 2 The Jump-Up base (SQM 2.0)

	Period	20 to 22.5 MPSAS monthly average	Average temp (°C)
2023	Jan	21.72	23.8
	Feb	21.69	22.0
	Mar	21.64	22.2
	Apr	21.64	19.4
	May	21.52	14.3
	Jun	21.92	15.5
	Jul	21.74	12.9
	Aug	21.70	14.1
	Sep	21.65	17.5
	Oct	21.67	21.1
	Nov	21.80	23.8
	Dec	21.70	25.6
	Average	21.69	19.4

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

	Period	20 to 22.5 MPSAS monthly average	Average temp (°C)
2023	Jan	21.66	25.7
	Feb	21.60	24.6
	Mar	21.59	24.8
	Apr	21.49	22.2
	May	21.42	16.3
	Jun	21.55	18.2
	Jul	21.60	15.2
	Aug	21.59	18.1
	Sep	21.57	21.4
	Oct	21.59	23.8
	Nov	21.66	26.0
	Dec	21.66	28.0
	Average	21.58	22.0

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. Additional International Dark-Sky places designated in Australia include Warrumbungle National Park in New South Wales 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.

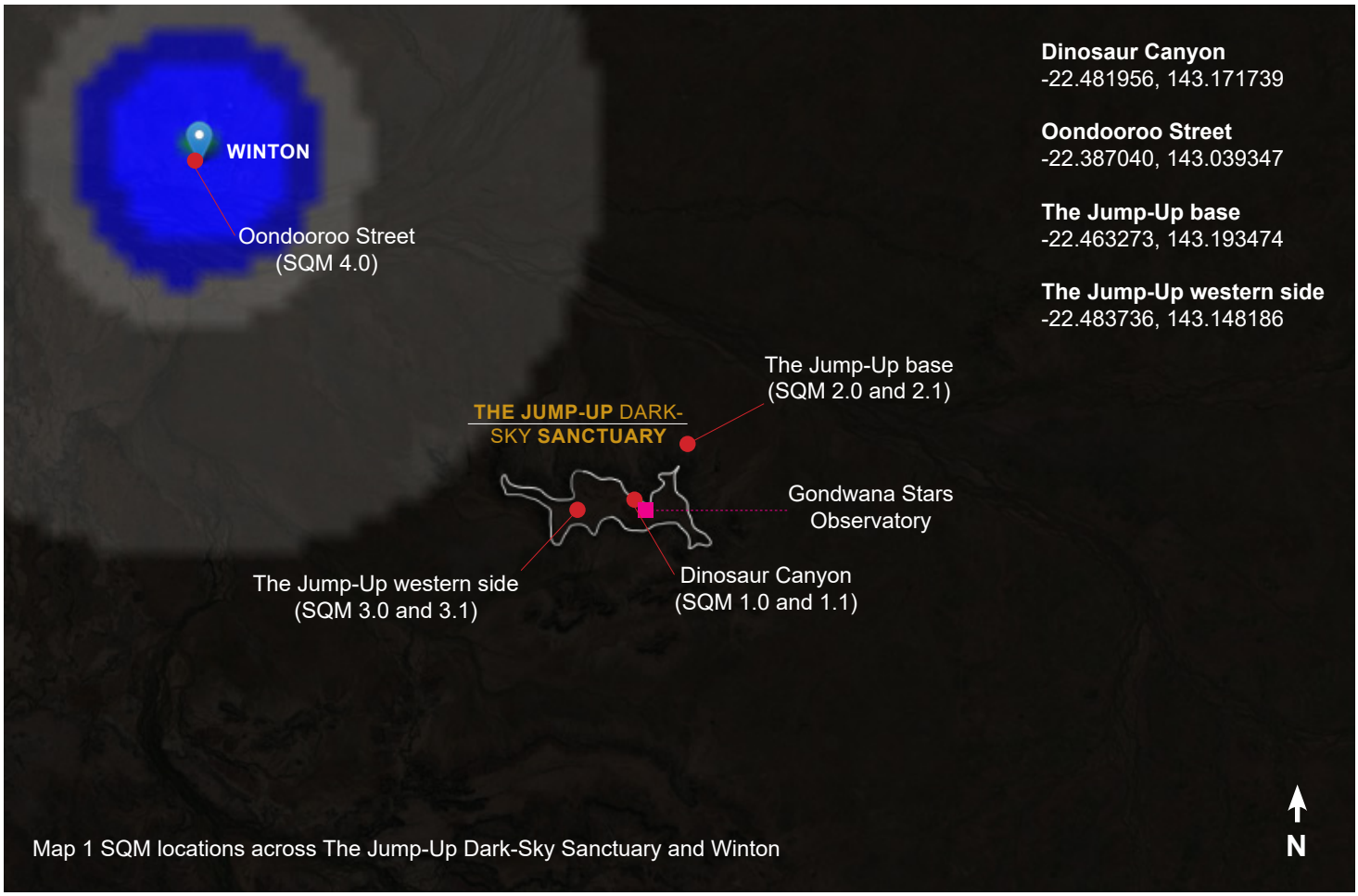
As reflected in the Museum's night-sky data, the sky above The Jump-Up remains pristine and unaffected by light pollution. This report briefly summarises the activities undertaken by the Museum from January to December 2023 under the following sections: measuring the night sky; lighting compliance; outreach, 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*). During the reporting period an additional SQM 4.0 was installed in a central location in Winton. Night-sky brightness readings are taken continuously and collected quarterly. Reviews of these readings are undertaken every twelve months by the Museum Management Team to ensure the readings remain on par with International Dark-Sky Association (IDA) regulations.

In 2022 the sky-quality distribution indicated an average reading of 21.59 to 21.73 MPSAS and a temperature range of 20.1°C to 22.3°C. In 2023 the sky-quality distribution showed a slight decrease with an average reading range of from 21.58 to 21.70 MPSAS and a broader temperature spectrum of 18.8°C to 22.0°C. Notably, the Gondwana Stars Observatory, located near SQM 1.0 at Dinosaur Canyon, experienced the most significant temperature change (2022: 20.0°C to 2023: 18.8°C) but showed less change in sky quality (2022: 21.59 MPSAS to 2023: 21.62 MPSAS).



Map 1 SQM locations across The Jump-Up Dark-Sky Sanctuary and Winton

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

	Dinosaur Canyon (SQM 1.0)		The Jump-Up base (SQM 2.0)		The Jump-Up western side (SQM 3.0)	
Period	**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 2023	21.62	18.8	21.70	19.4	21.58	22.0

The hottest location within The Jump-Dark-Sky Sanctuary continues to be The Jump-Up western side (SQM 3.0), maintaining an average temperature of 22.2°C over the past two years. Overall, only a slight decrease in the average sky-quality readings from 2022 to 2023 were observed. The Jump-Up Night-Sky Brightness at the zenith, measuring 21.63 MPSAS, remains stable and consistently complies with the 21.5 MPSAS threshold for International Dark-Sky Sanctuaries. For a visual representation of each month over the reporting period, please refer to *Graphs 1 to 32*.

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

The exceptional sky quality on The Jump-Up is best demonstrated in the data available in *Tables 5* to *7*. These tables demonstrate the monthly average MPSAS, standard deviation, monthly number of readings greater than 21.5 MPSAS from 9pm to 4am and the total number of records over the entire month exceeding 21.5 and 21.75 MPSAS, and include all the phases of the Moon. The lowest monthly average reading was recorded at 19.88 MPSAS at SQM 3.0, while the highest monthly average reading was recorded at 20.96 MPSAS at SQM 1.0. The significant percentage of monthly readings across all sky-quality meters surpassing 21.75 MPSAS indicates an exceptionally dark night sky.

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
2023	**Jan**	20.67	0.96	825	690	52	588	44
	Feb	20.56	0.81	806	626	52	571	47
	Mar	20.48	0.76	938	698	52	629	47
	Apr	20.31	0.82	808	624	48	465	36
	May	20.04	0.86	893	547	41	265	20
	Jun	20.02	0.96	1,044	620	48	374	29
	Jul	20.12	0.91	1,064	664	50	466	35
	Aug	20.07	0.94	966	642	48	512	38
	Sep	20.41	0.71	905	719	56	648	50
	Oct	20.55	0.80	945	724	54	679	51
	Nov	20.75	0.69	895	730	57	659	51
	Dec	20.96	0.66	855	729	55	605	45

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 ≥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
2023	Jan	20.55	1.04	829	962	52	614	46
	Feb	20.42	1.03	812	627	52	593	49
	Mar	20.44	0.83	951	699	52	647	49
	Apr	20.23	0.85	937	668	52	540	42
	May	19.96	0.88	1,016	644	48	281	21
	Jun	20.48	0.88	1,171	736	57	712	55
	Jul	20.15	1.00	1,110	700	53	527	40
	Aug	20.04	0.92	1,060	716	54	549	41
	Sep	20.32	0.76	950	725	56	669	52
	Oct	20.54	0.80	945	725	54	683	51
	Nov	20.71	0.81	900	731	57	673	52
	Dec	20.95	0.67	862	735	55	674	51

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 ≥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
2023	Jan	20.59	0.83	805	675	51	549	41
	Feb	20.47	0.90	798	621	52	536	45
	Mar	20.37	0.76	886	686	51	574	43
	Apr	20.10	0.86	811	628	49	396	31
	May	19.88	0.92	855	556	42	154	12
	Jun	20.00	0.89	1,027	628	49	292	23
	Jul	20.06	0.90	916	540	41	425	32
	Aug	19.95	0.91	852	596	45	478	36
	Sep	20.30	0.71	864	706	55	569	44
	Oct	20.53	0.73	913	715	54	612	46
	Nov	20.68	0.72	884	726	56	641	50
	Dec	20.88	0.84	840	723	54	573	43

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*. This commitment extends to both the Gondwana Stars Observatory and the *March of the Titanosaurs* exhibition. Moreover, each of the 12 rooms at the Maloney Lodge Precinct is equipped with a guest compendium featuring the Museum's Lighting Management Plan and details about the lighting curfew.

Table 8 Summary of lighting compliance	
Year of certification	2019
Compliance % in original application	90%
Current compliance %	100%
Anticipated % for next reporting period	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 105 Deep-Time Astronomy events to 1,700 visitors in its first full year of operation, despite weather-related cancellations affecting tours. To address potential cloudy nights, preparations for an alternative tour in the Gondwana Stars Observatory theatre are underway. Intensive staff training has been conducted throughout the year, resulting in additional qualified Tour Guides capable of leading tours at the Observatory.

In April the Museum celebrated the total solar eclipse with a viewing party featuring telescope sessions and a live link to the Ningaloo Total Eclipse in Western Australia. Despite only experiencing a partial solar eclipse, regular social-media updates kept audiences informed throughout the event, sharing insights from Grant Salmond and Honorary Technicians Kim and Vicki, who travelled over 3,000km to witness the totality. Additionally, the Museum hosted its first visitor from another designated International Dark-Sky Place, Matthias Schmitt from Cedar Breaks National Monument in Utah. Matthias shared valuable insights into Northern Hemisphere astronomy and the promotion of the International Dark-Sky mission.

During the Museum's dinosaur digs in May and September astronomy lectures led by Education & Astronomy Manager Grant Salmond provided participants with telescope viewing opportunities at Elderslie Station and Belmont Station. Onsite, the third Dark Sky Serenade Opera event by Opera Queensland occurred at Dinosaur Canyon, with a record-breaking attendance of 380 guests enjoying the opera under the night sky.

Other outreach efforts included creating comprehensive staff-training videos, contributing to the Australasian Dark-Sky Alliance newsletter and providing regular articles in the Museum member newsletter on topics like light pollution and night-sky observations. Additionally, the Museum maintained consistent social-media posts featuring videos and photos from the site. A summary of the Museum's events has been included in *Table 9* while *Table 10* describes each of the events and how audiences were engaged and educated.

Table 9 Summary of events held at The Jump-Up Dark-Sky Sanctuary	
Outreach summary	
Total number of events	120
Number of unique efforts* offered	6
Total number of attendees for all events	2,280

Note: "unique efforts" offered represent the number of different programs at your site.

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
Feb to Dec 2023	**1. Guided tours of the Gondwana Stars Observatory** Tours of the Observatory include transfers to and from Winton and are capped at 25 visitors per tour.	1,700	All Deep-Time Astronomy tours are crafted to be immersive and interactive sessions facilitated by specially trained Museum Tour Guides and visitors. This approach allows visitors to pursue intriguing lines of inquiry based on the seasonal night sky.
Feb to Dec 2023	**2. Staff training** Staff were trained to interpret the seasonal southern night sky, recognise light pollution, identify constellations and operate telescopes. Based on this training, Tour Guides are able to deliver nightly tours to visitors regularly, connecting the events on Earth with those above.	30	Tour Guides were trained in the Deep-Time Astronomy tour and taught about the night sky through interactive workshops, planispheres and procedures.
6 Apr 2023	**3. Cedar Breaks National Monument** The Museum hosted an informal barbecue catch-up with Matthias Schmitt from Cedar Breaks National Monument in Utah, fostering knowledge sharing and networking.	30	This interaction provided an opportunity for staff to gain insights into best practices, experiences and initiatives related to dark-sky conservation and astronomy from a counterpart at Cedar Breaks. This exchange contributed to professional development and a broader understanding of effective strategies in promoting astrotourism.
20 Apr 2023	**4. Solar eclipse on The Jump-Up Dark-Sky Sanctuary** The Museum hosted an onsite viewing party for visitors to experience the partial eclipse through a telescope, providing regular social media updates to those witnessing the total solar eclipse on the ground.	100	The event involved telescopes, explaining the phenomenon and offering insights into the science behind solar eclipses. This once-in-a-life-time experience likely left a lasting impression and contributed to public understanding of astronomical phenomena.
19 May 2023	**5. Dark Sky Serenade, Opera Queensland** An opera event featured soprano Emma Matthews, mezzo-soprano Milijana Nikolic, bass Jud Arthur, tenor Carlos Barcenas and baritone Jose Carbo, supported by the Queensland Symphony Orchestra and University of Queensland Pulse Chamber Orchestra. Special guests included Her Excellency the Honourable Dr Jeannette Young AC PSM, Governor of Queensland, and Professor Graeme Nimmo.	380	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.
May and Sep 2023	**6. Dig astronomy lectures** Astronomy lectures by Education & Astronomy Manager Grant Salmond for Dig-A-Dino participants in the field were accompanied by telescope viewing opportunities.	40	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.

Matthias Schmitt (second row, seated, fifth from the right) Cedar Breaks National Monument in Utah meeting staff and guests during an onsite barbecue.

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

The Museum promoted the International Dark-Sky Association 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 Museum website includes the International Dark-Sky Association logo on its footer.

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

On Friday 19 May The Jump-Up Dark-Sky Sanctuary became a spectacle of light and sound during Opera Queensland’s Festival of Outback Opera. The event, the Dark Sky Serenade, has been hosted at the Museum for three years to ever-growing popularity. Each year Opera Queensland has expanded the festival and it has now become a major event on the opera calendar. Over 380 audience members attended the event, including special Festival of Outback Opera guests Her Excellency the Honourable Dr Jeannette Young AC PSM, Governor of Queensland, and Assistant Minister for Tourism Industry Development Michael Healy. Reviewer Jansson Antmann from Limelight Magazine wrote, “Without a doubt, Winton and Longreach have earned their place alongside the likes of Aix-en-Provence, Bregenz, Glyndebourne, Salzburg, Santa Fe or even Bayreuth... all leave an indelible impression on those who take part. Opera Queensland deserves to be congratulated for its invaluable contribution, not just to opera but to the arts in general, and for the impact it has made on the lives of everyone it touches.” This program is likely to continue to attract still more visitors interested in taking part in the blended experience.

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 and interest in the Gondwana Stars Observatory are experiencing rapid growth, rising from a few hundred visitors in 2022 to 1,700 visitors in 2023, with continued growth expected in the next reporting period. Visitor feedback has been overwhelmingly positive, with a focus on the unique content delivered and the tour experience that sparks an interest in astronomy. Visitors often express fascination with the darkness of the area, frequently making comparisons with their home night skies and expressing surprise at the impact of light pollution on their perception of the night sky.

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 April the Museum participated in International Dark Sky Week with Facebook posts on light pollution and the importance of conserving the night sky. The astronomy team supported the Australasian Dark Sky Alliance Youth Ambassadors of 2022 by creating a video for their social media campaign to raise awareness about light pollution. As part of this campaign, the Museum offered five sets of two adult passes for tours at the Gondwana Stars Observatory.

How has your Place been promoted?

The Jump-Up Dark-Sky Sanctuary continues to receive excellent regional and national coverage following the announcement of its International Dark-Sky Sanctuary designation. This coverage has included radio, TV, podcasts, internet outlets and print media. The Museum has maintained a consistent social-media presence highlighting the positive effects of dark skies and the 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).

During the reporting period a new permanent exhibit was introduced at the Observatory's entrance. The exhibit features a scaled Moon (1:5,800,000), with a topographical relief magnified x20 crafted from bronze. This unique display is securely mounted in a custom-made wrought-iron structure. The addition offers visitors a chance to engage with our natural satellite, encouraging contemplation of the vastness of the universe.

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

- The Museum Shop introduced a Deep-Time Astronomy wheel chart, a planisphere highlighting 30 Southern Hemisphere night-sky objects, their locations, formation history and optimal viewing times.
- The Museum also regularly includes information about The Jump-Up Dark-Sky Sanctuary in social-media posts and Museum member newsletters.

Professor Graeme Nimmo, Her Excellency the Honourable Dr Jeannette Young AC PSM, Governor of Queensland, and Executive Chairman David Elliott with the recently installed bronze Moon exhibit.

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:

- On 28 February the Museum participated in the Outback Queensland Tourism Association Muster to promote the Gondwana Stars Observatory during Outback Queensland's 2023 travel season and to travel agents.
- The Museum offers 50% off Observatory tours for locals, Prep-A-Dino participants, work-experience students and interns, and free tours for current Museum staff members.
- During the reporting period the Gondwana Stars Observatory was officially designated as an observatory by the Astronomical Society of Australia.
- In May the Dynamic Destination project, including the Gondwana Stars Observatory, received a regional commendation in Public Architecture at the Central Queensland Regional Architecture Awards.
- The Museum received a highly commended in the 2023 Museums Australasia Multimedia and Publication Design Awards in the Children's Book category for the Deep-Time Astronomy wheel chart.
- During the reporting period Education & Astronomy Manager Grant Salmond and Head of Development Naomi Miles participated in a podcast with Australasian Dark Sky Alliance Chair Marnie Ogg. The podcast aimed to promote dark-sky conservation efforts that can be achieved by all, including insights into the International Dark Sky Place designation process. Additionally, content was supplied to the Australasian Dark-Sky Alliance newsletter.
- The Museum has developed comprehensive staff-training videos hosted on its training portal. These videos focus on the Deep-Time Astronomy tour, elaborate on the significance of being an International Dark-Sky Sanctuary and outline the measures taken to maintain this designation.
- The Museum regularly shares articles and content on light pollution and night-sky observations through the Museum 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, involves visitors as citizen scientists, contributing valuable data to iNaturalist for long-term conservation efforts. The program has, to date, identified 790 species through 2,993 observations, with 5,592 identifications. The program's 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 the Winton Shire Council to conduct a thorough lighting audit and catalogue the lighting in the township. Additionally, the astronomy team has performed a sky-brightness survey of the town.

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. Given The Jump-Up's remote location, it faces few risks to its dark-sky status. Isolation from the nearest urban centre means that light pollution is not noticeable. Public lighting is controlled by the Museum and adheres to the QPR, QEPA, AS 4282 and IDA regulations. As the majority of private titles in the Winton Shire consist of large blocks of pastoral land, development rights and subdivision are notoriously difficult. Although pastoral property homesteads are all located well away from The Jump-Up Dark-Sky Sanctuary, property owners wishing to install any infrastructure that requires lighting within 10km of The Jump-Up will be encouraged to adopt IDA regulations, and a revised Lighting Management Plan will be submitted to the IDA.

Briefly describe future plans (in 2024 and beyond) to engage with existing and new partners and how you will expand the dark-sky movement.

In 2024 and beyond the Museum aims to elevate the frequency of Deep-Time Astronomy tours, drawing in a minimum of 2,500 visitors through the Gondwana Stars Observatory. The strategy involves hosting regular tours and partnering with third-party agencies to create exclusive night-tour packages, including a catered twilight tour. Additionally, there's a focus on developing an inclement-weather alternative for Gondwana Stars Observatory night tours, showcasing the seasonal night sky of The Jump-Up in the theatre.

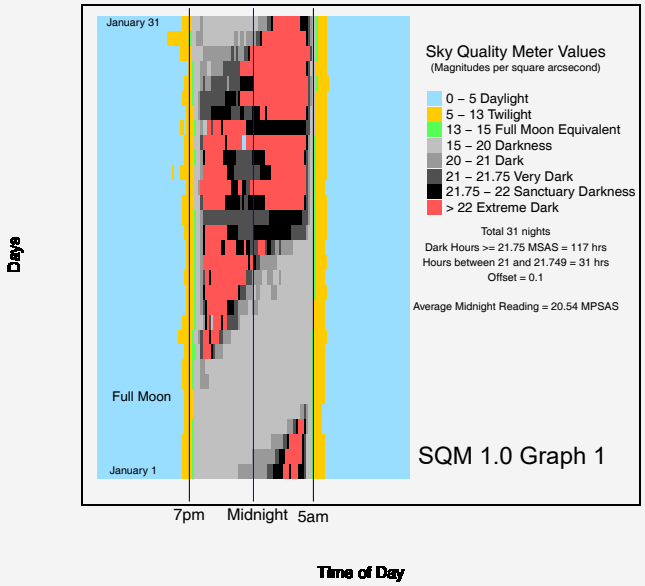
Additional information

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

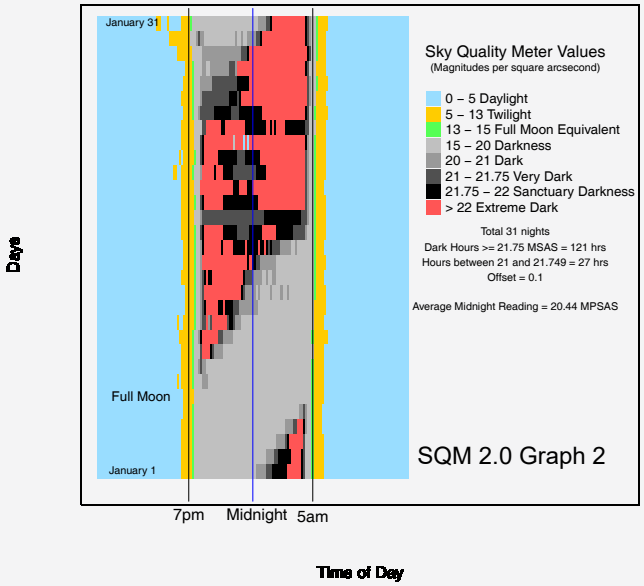
The greatest single benefit of The Jump-Up's IDA certification is the assurance it offers to visitors, validating the authenticity of their dark-sky experience. Astrotourism, an emerging and sustainable environmental-tourism trend, focuses on observing dark light-pollution-free skies, creating unique experiences. This niche tourism sector is crucial for remote areas like Winton, leveraging the region's clear, dark skies to create economically sustainable experiences that often require one or more overnight stays.

Monthly sky-darkness graphs comparing SQM 1.0 in Dinosaur Canyon and SQM 2.0 at The Jump-Up base.

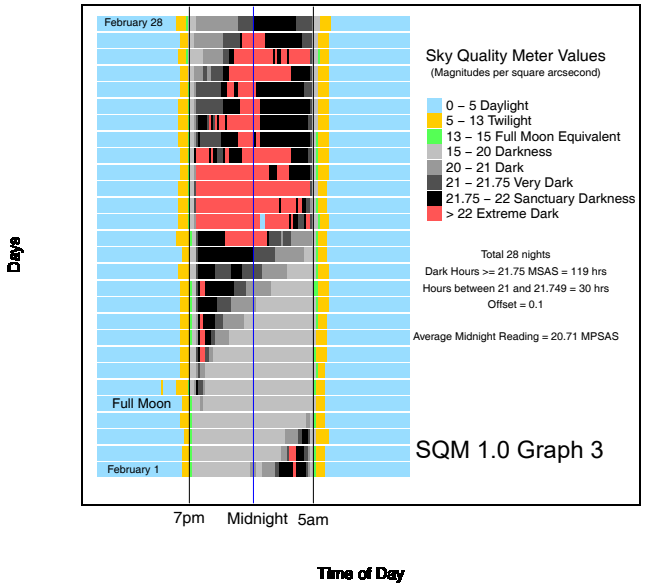
Sky Darkness Plot January 1 to January 31, 2023
Dinosaur Canyon SQM 1.0



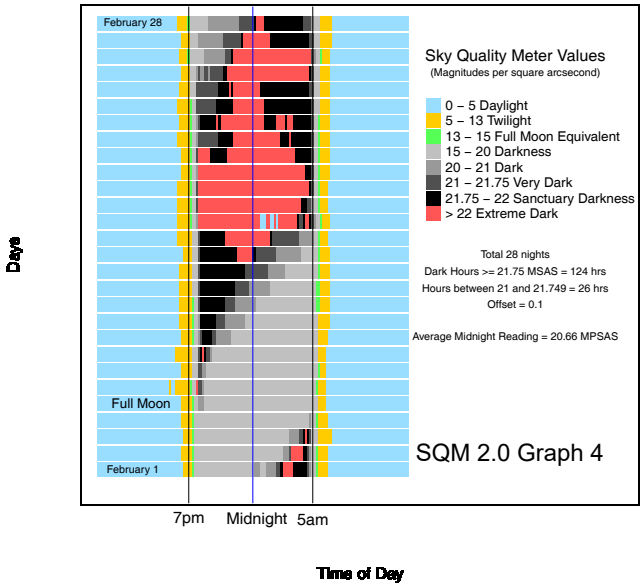
Sky Darkness Plot January 1 to January 31, 2023
The Jump-Up Base SQM 2.0



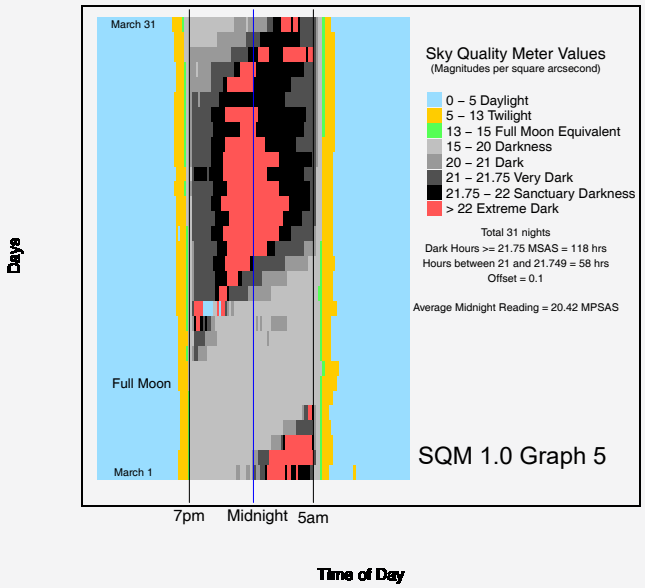
Sky Darkness Plot February 1 to February 28, 2023
Dinosaur Canyon SQM 1.0



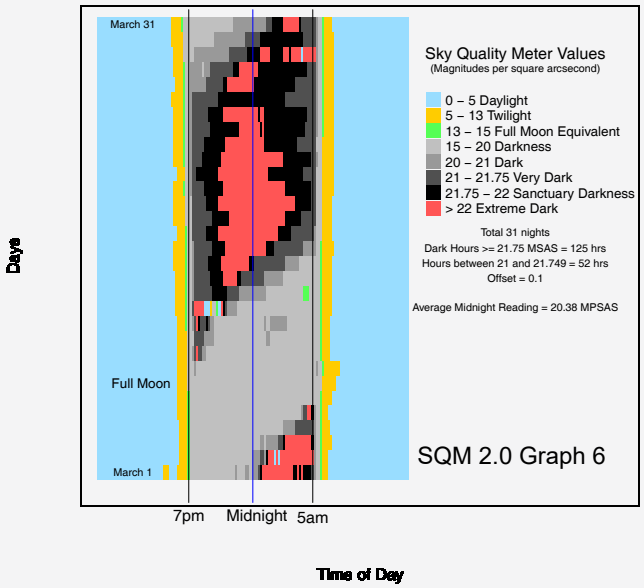
Sky Darkness Plot February 1 to February 28, 2023
The Jump-Up Base SQM 2.0



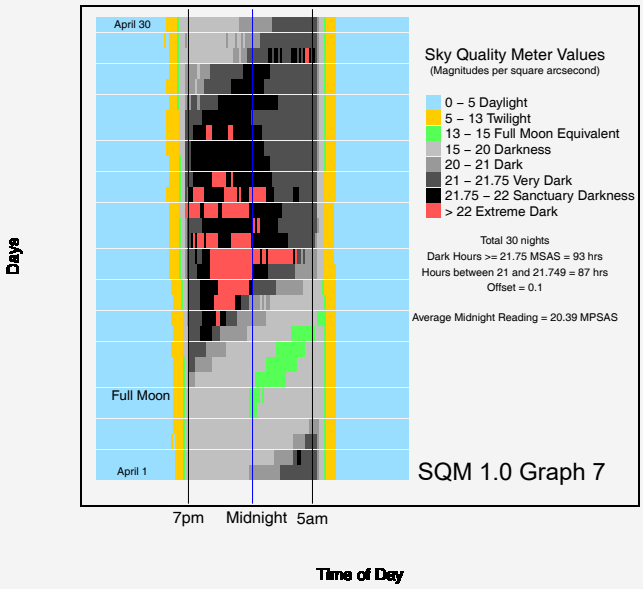
Sky Darkness Plot March 1 to March 31, 2023
Dinosaur Canyon SQM 1.0



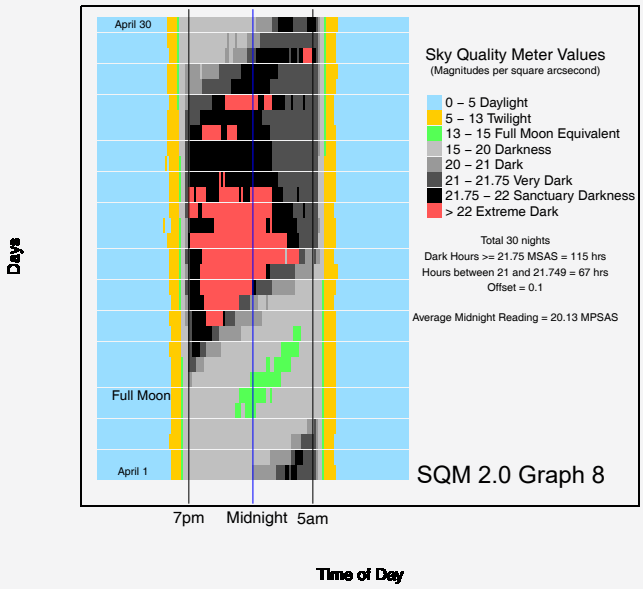
Sky Darkness Plot March 1 to March 31, 2023
The Jump-Up Base SQM 2.0



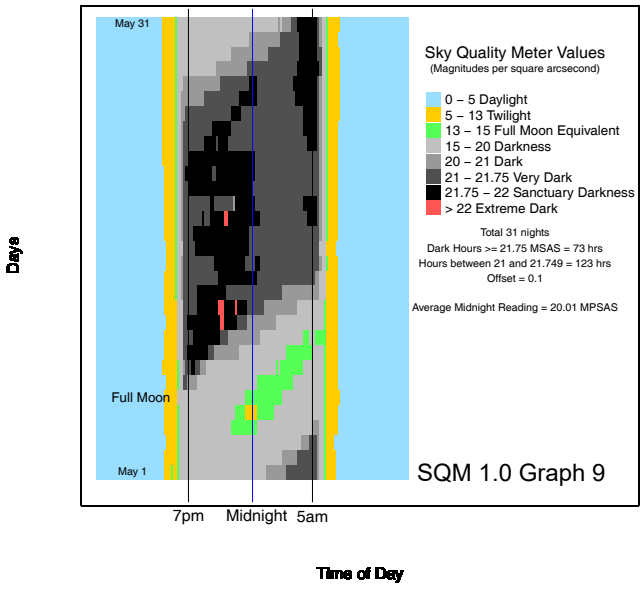
Sky Darkness Plot April 1 to April 30, 2023
Dinosaur Canyon SQM 1.0



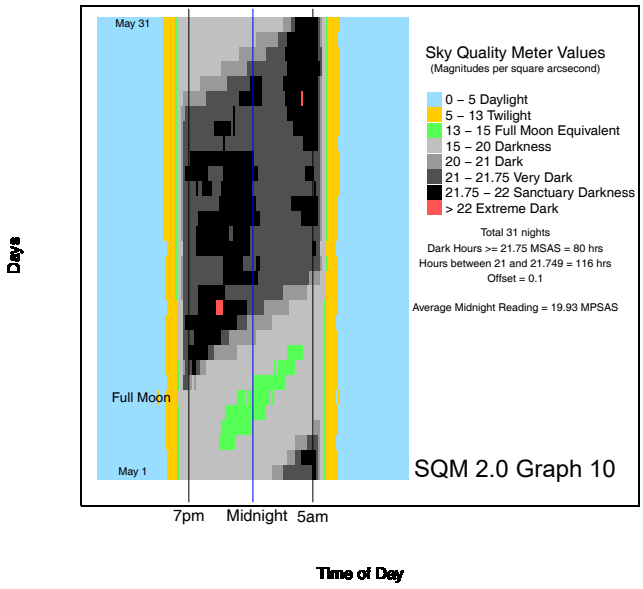
Sky Darkness Plot April 1 to April 30, 2023
The Jump-Up Base SQM 2.0



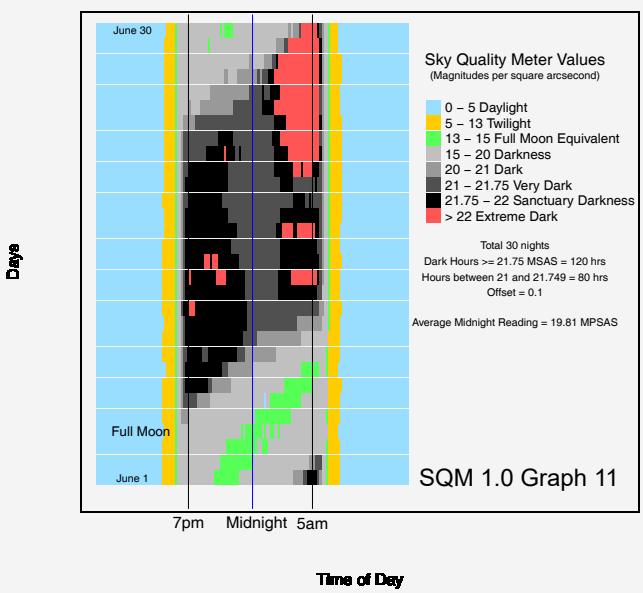
Sky Darkness Plot May 1 to May 31, 2023
Dinosaur Canyon SQM 1.0



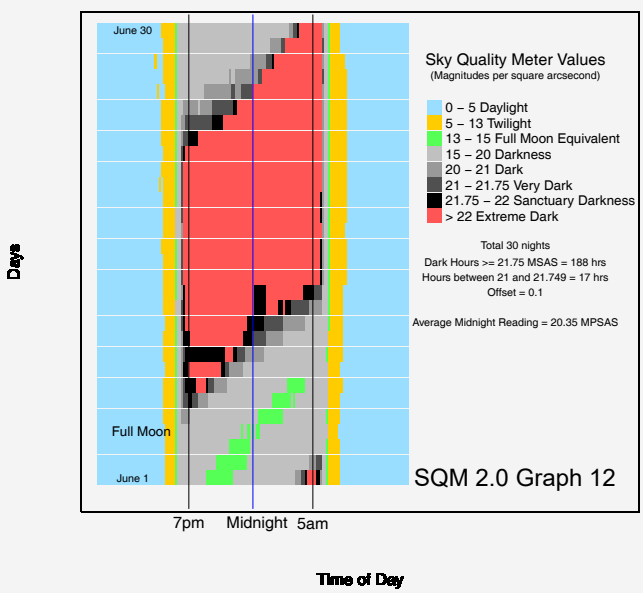
Sky Darkness Plot May 1 to May 31, 2023
The Jump-Up Base SQM 2.0



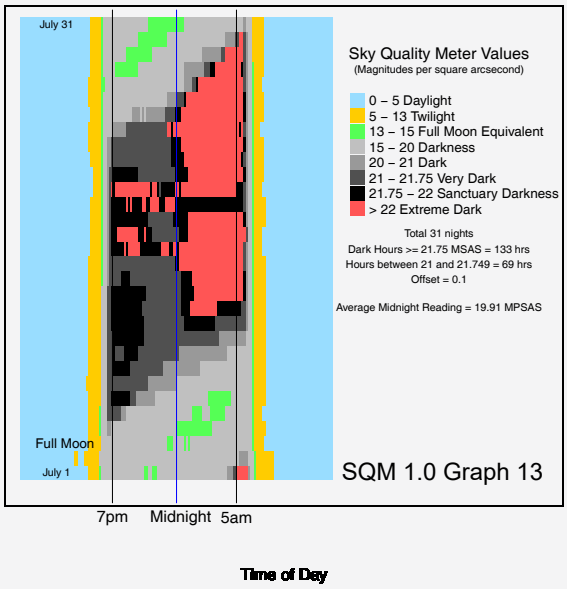
Sky Darkness Plot June 1 to June 30, 2023
Dinosaur Canyon SQM 1.0



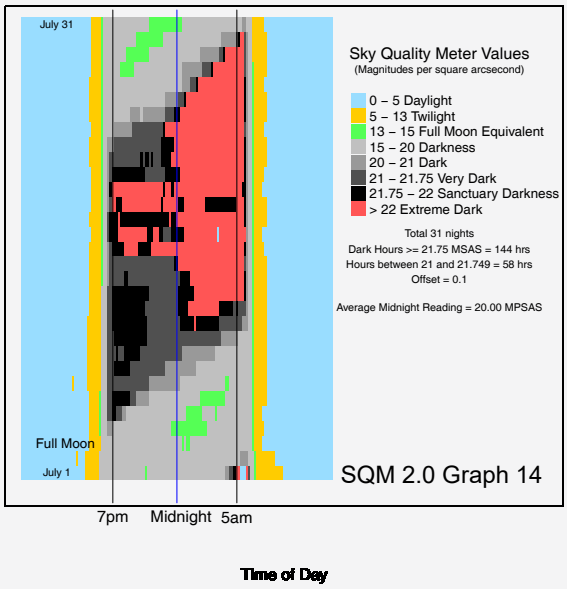
Sky Darkness Plot June 1 to June 30, 2023
The Jump-Up Base SQM 2.0



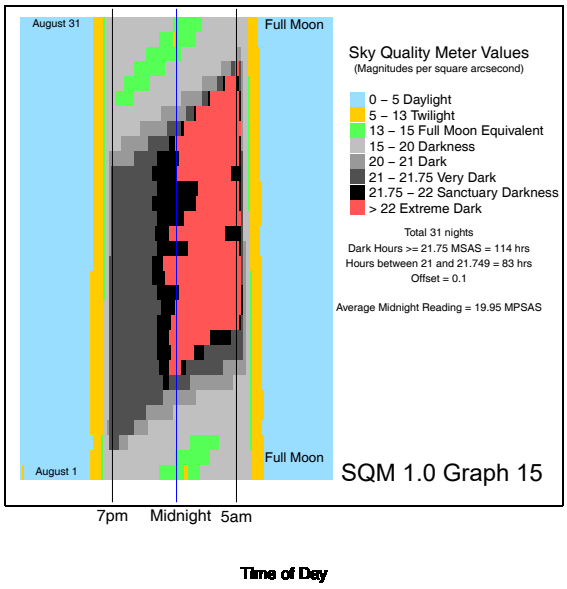
Sky Darkness Plot July 1 to July 31, 2023
Dinosaur Canyon SQM 1.0



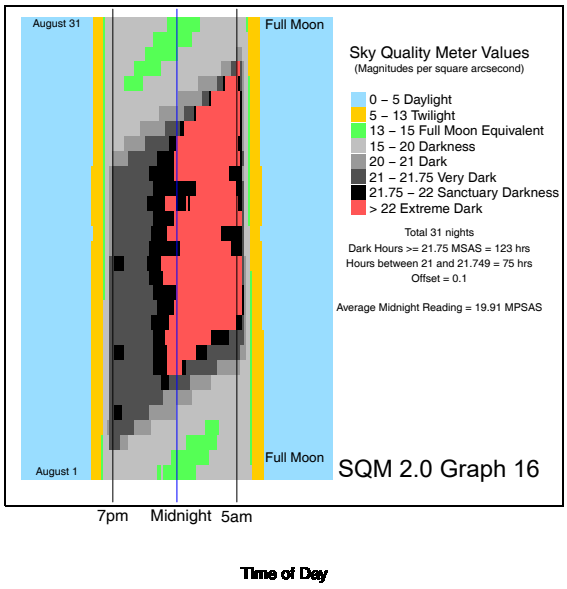
Sky Darkness Plot July 1 to July 31, 2023
The Jump-Up Base SQM 2.0



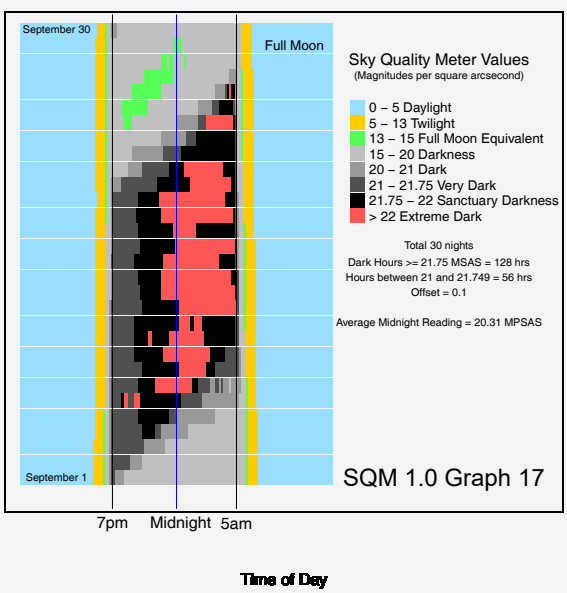
Sky Darkness Plot August 1 to August 31, 2023
Dinosaur Canyon SQM 1.0



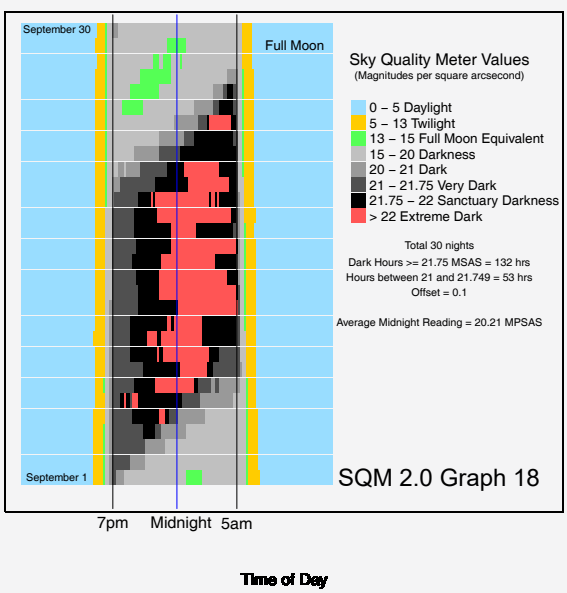
Sky Darkness Plot August 1 to August 31, 2023
The Jump-Up Base SQM 2.0



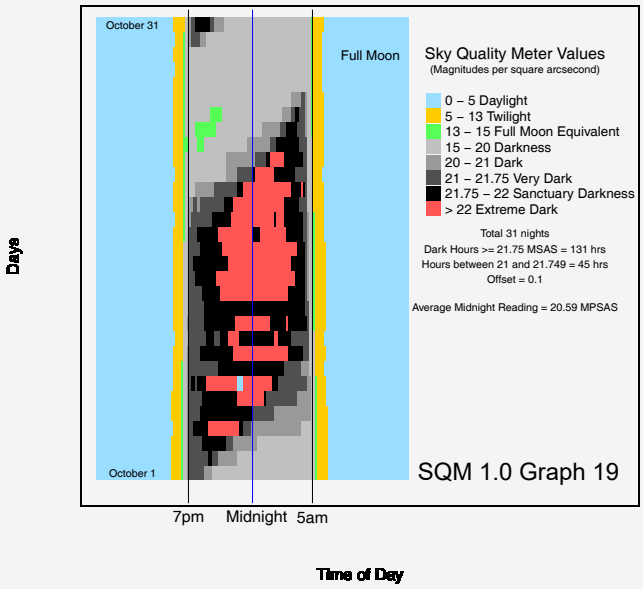
Sky Darkness Plot September 1 to September 30, 2023
Dinosaur Canyon SQM 1.0



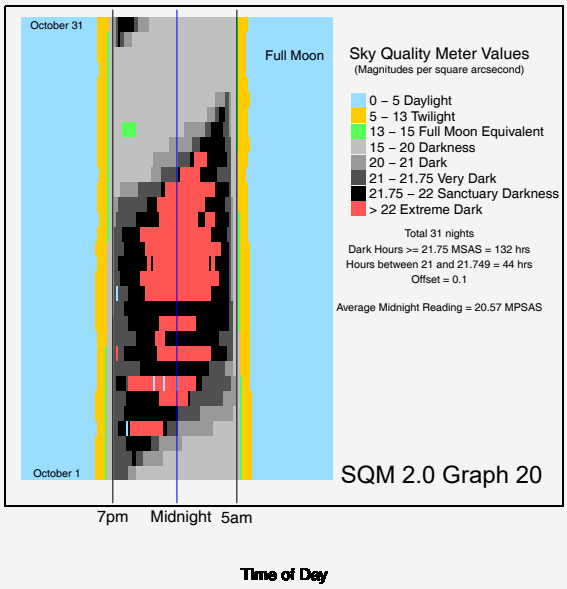
Sky Darkness Plot September 1 to September 30, 2023
The Jump-Up Base SQM 2.0



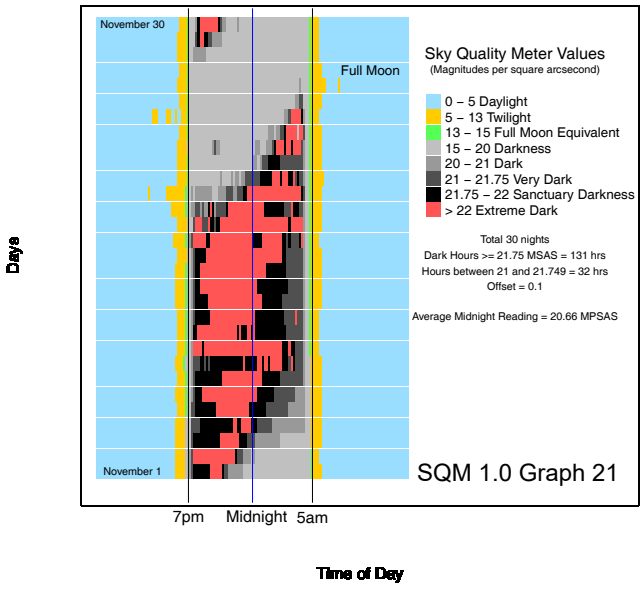
Sky Darkness Plot October 1 to October 31, 2023
Dinosaur Canyon SQM 1.0



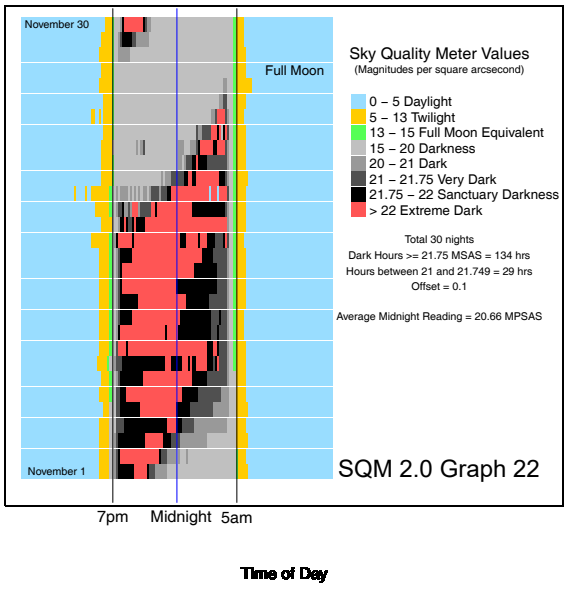
Sky Darkness Plot October 1 to October 31, 2023
The Jump−Up Base SQM 2.0



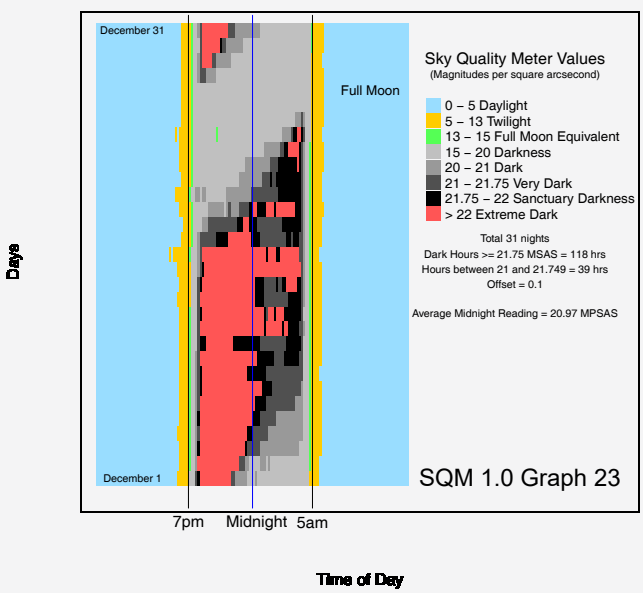
Sky Darkness Plot November 1 to November 30, 2023
Dinosaur Canyon SQM 1.0



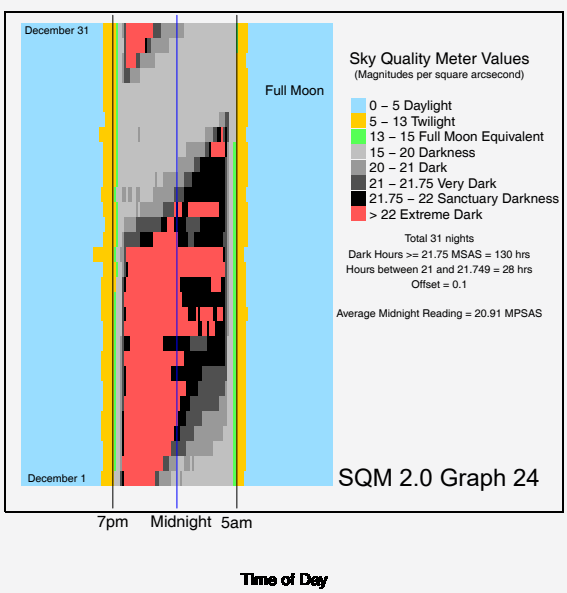
Sky Darkness Plot November 1 to November 30, 2023
The Jump−Up Base SQM 2.0



Sky Darkness Plot December 1 to December 31, 2023
Dinosaur Canyon SQM 1.0



Sky Darkness Plot December 1 to December 31, 2023
The Jump−Up Base SQM 2.0

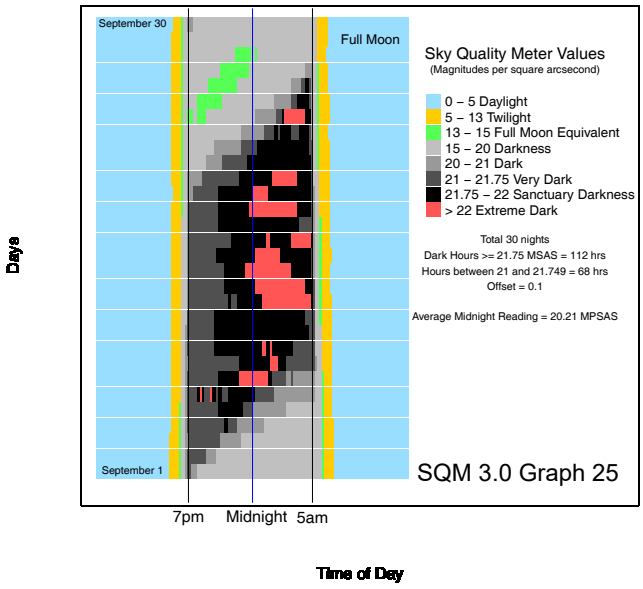


In the latter part of 2023 the installation of a permanent sky-quality meter (SQM 4.0) in the Winton township marked a significant step in assessing the relative sky darkness in comparison to The Jump-Up Dark Sky Sanctuary. Winton township is positioned 24km north-west of The Jump-Up Dark-Sky Sanctuary by road and approximately 17.5km directly. Specifically, The Jump-Up western side (SQM 3.0) is located in the western corner of The Jump-Up Dark-Sky Sanctuary, closest to the Winton township.

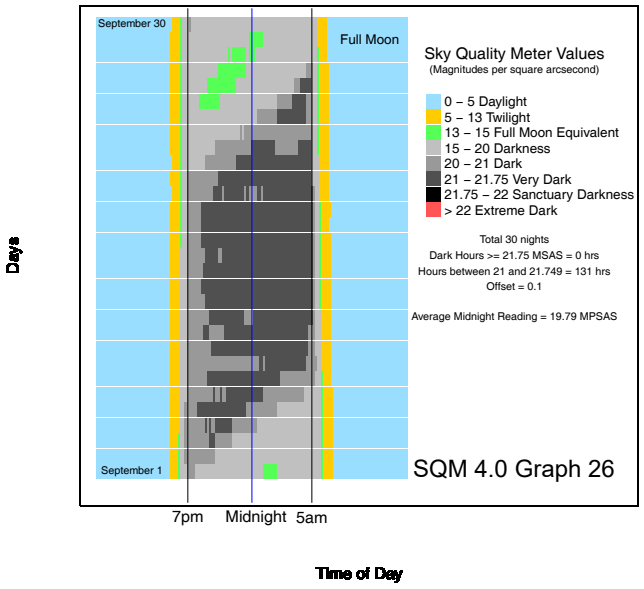
In contrast, SQM 4.0 is located near Winton's main street and now offers crucial comparative data to assess whether Winton's light pollution is encroaching and if its sky glow is expanding, when analysed alongside the data collected from The Jump-Up Dark-Sky Sanctuary.

Despite urban lighting, including overhead street lights, Winton consistently records impressive MPSAS readings of 21 and above. In a series of October measurements the sky-quality meter even recorded readings of 21.75 MPSAS and higher. This data offers valuable insights into preserving the dark-sky quality within The Jump-Up Dark-Sky Sanctuary and establishes a benchmark for assessing the impact of light pollution from its nearest urban centre.

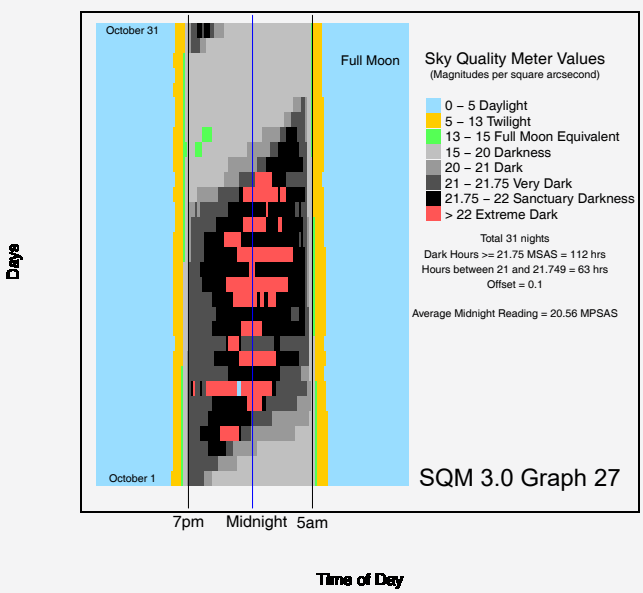
Sky Darkness Plot September 1 to September 30, 2023
The Jump−Up Western Side SQM 3.0



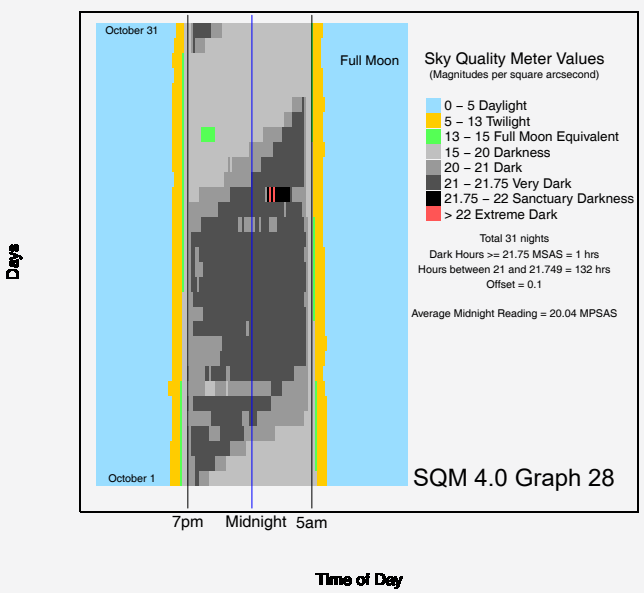
Sky Darkness Plot September 1 to September 30, 2023
Oondooroo Street SQM 4.0



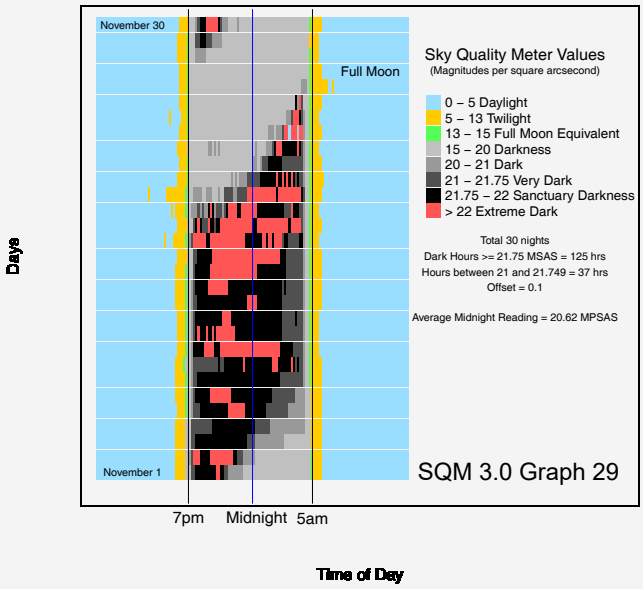
Sky Darkness Plot October 1 to October 31, 2023
The Jump−Up Western Side SQM 3.0



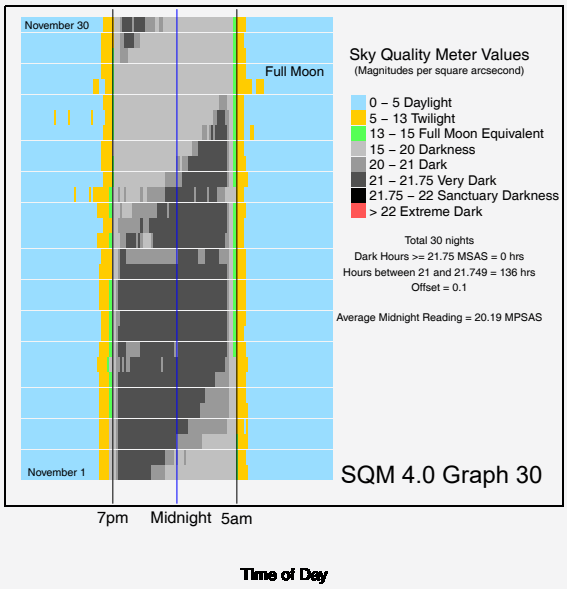
Sky Darkness Plot October 1 to October 31, 2023
Oondooroo Street SQM 4.0



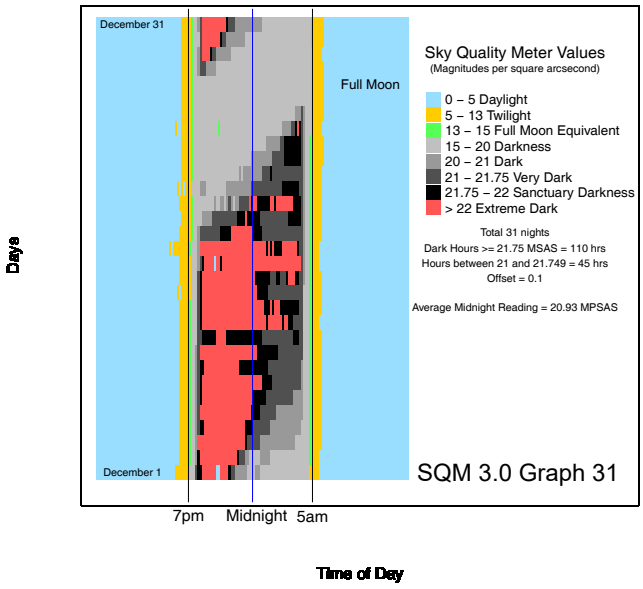
Sky Darkness Plot November 1 to November 30, 2023
The Jump−Up Western Side SQM 3.0



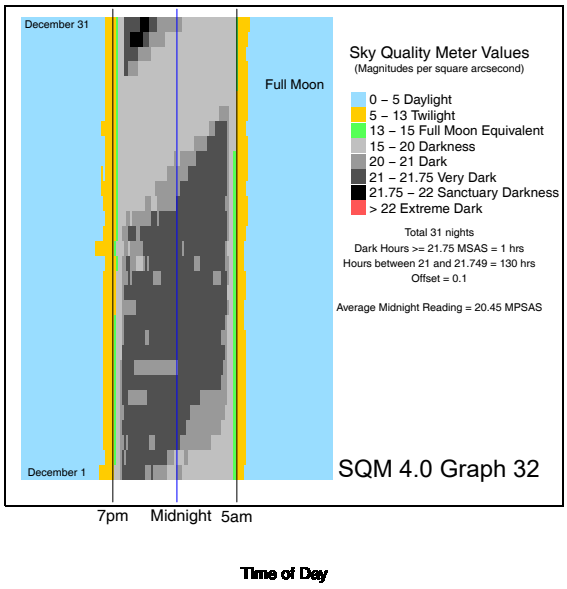
Sky Darkness Plot November 1 to November 30, 2023
Oondooroo Street SQM 4.0



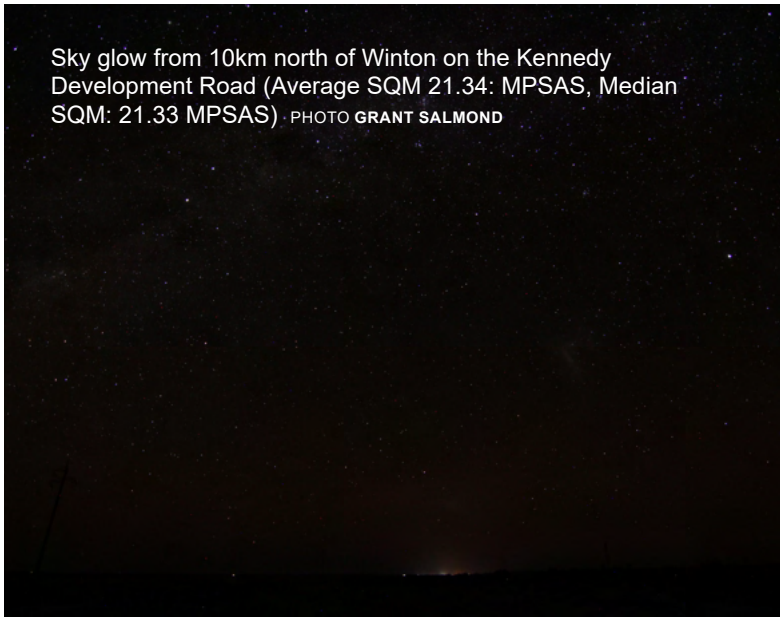
Sky Darkness Plot December 1 to December 31, 2023
The Jump−Up Western Side SQM 3.0



Sky Darkness Plot December 1 to December 31, 2023
Oondooroo Street SQM 4.0



Sky glow from 5km north of Winton on the Kennedy Development Road (Average SQM: 21.27 MPSAS, Median SQM: 21.28 MPSAS). PHOTO **GRANT SALMOND**



Sky glow from 10km north of Winton on the Kennedy Development Road (Average SQM 21.34: MPSAS, Median SQM: 21.33 MPSAS) PHOTO **GRANT SALMOND**