

**PRETORIA CENTRE OF THE
ASTRONOMICAL SOCIETY OF SOUTHERN AFRICA
ANNUAL REPORT July 1st 2022 – June 30th 2023**

- This was another year disrupted by Covid, but we were able to resume meeting at CBC from October 2022. A video link has been available for out of town members who could not attend in person.
- There were 39 paid up members for the 2022 -2023 financial year

1 MEETINGS

As in the past it has not been easy to find speakers this year, and some of the presentations were prepared at short notice. Offers of talks are always welcome.

- **Attendance**

	actual	on line	Total
27/07/2022	n/a	24	24
24/08/2022	n/a	22	22
28/09/2022	n/a	20	20
26/10/2022	17	10	27
23/11/2022	10	10	20
25/01/2023	13	9	13
22/02/2023	12	?	12
22/03/2023	14	14	28
26/04/2023	11	9	20
24/05/2023	14	9	23
28/06/2023	11	19	30
total	102	146	239
Average	13	15	22

- **The following Main topics were presented.**

2022 07	“Jack Bennett – Founder member of the Pretoria Centre of the ASSA”. Neville Young.
2022 08	“Madala dark matter in the Coma and Virgo galaxy clusters”. Tessa Collins.
2022 09	“Extra-terrestrial life, the Fermi Paradox and the Great Filter”. Danie Barnardo.
2022 10	“How to get the most out of your telescope”. Johan Smit.
2022 11	“Autoguiding adventures”. Neville Young.
2023 01	“Days, nights and seasons on Mercury” Pierre Lourens.
2023 02	“Encounters with Patrick Moore, and his TV programme ‘The Sky at Night’”. Michael Poll .
2023 03	“Astrophotography with a DSLR on a tripod”. Prof Barbara Cunow.
2023 04	“How I built a 150 mm f8.4 Newtonian telescope”. Johan Jordaan.
2023 05	“Southern African impact craters”. Michael Poll
2022 06	“Astrophotography, Radians & degrees” by Andrie van der Linde.

- **What’s up has been presented both in the newsletter and at the CBC meetings by:**

What’s up in August 2022 - by Louis Kloke
 What’s up in late August and in September 2022 - by Michael Poll
 What’s up in October 2022 - by Bosman Olivier
 What’s up in November 2022 - by Neville Young
 What’s up from November 18th 2022 to January 31st 2023 - by Michael Poll
 What’s up in February 2023? - by Danie Barnardo
 What’s up in March 2023 – by Bosman Olivier
 What’s up in April 2023 - by Johan Jordaan
 What’s up in May 2023 - by Johan Smit
 What’s up in June 2023 – Bosman Olivier

- **Meetings have been chaired by:**

Bosman Olivier, Johan Smit, Louis Kloke, Pierre Lourens, Danie Barnardo, Craig Kloke, Michael Poll, Michelle Ferreira and Neville Young.

Thanks are due to those who Chaired the meetings

2 **OBSERVING EVENING REPORT Michael Poll**

Observing evenings on the sports ground of CBC resumed in October 2022 – the first observing evening since February 2020 - so two years and eight months had elapsed since the last one. Not a lot had changed - the traffic noise is the same as ever and the tower lights at the N1/N4 interchange are still as bright. Apart from October 2022 the sky has been relatively cloud free, but apart from the March evening the attendance has been 10 or less, and again, apart from March, only Johan Smit, Michael and Danie have been present from the Centre. The number of targets is now severely limited by light pollution - we can only commonly see the Moon when it is up, star clusters and double stars, and the few planets that have been in the evening sky - nevertheless the visitors have been very enthusiastic. At the October evening Johan Smit organised a video link, but this idea has not proved entirely satisfactory.

For the April evening we re-located to the cricket pitch (on the right by the sight screen - half way down to the playing fields) and it was better site. We were shielded from the N1/N4 interchange and we did not have to put up with the spotlight on the pavilion tuckshop. The horizon also very good. Nevertheless, light pollution still a problem – the sky is very bright, and we are more or less restricted to looking at the planets, double stars, the Moon, and the brighter deep sky objects. (There should be a “National No Outside Lights Week”. It would help Eskom, and those whose blanket claim that “crime increases” during power cuts could actually produce figures to justify the statement). April and May seemed to be OK for floodlights, but on the June evening the flood lights around the cricket pitch would have been a problem but for load shedding -we had not noticed them before.

3 **NEWSLETTER CONTRIBUTORS**

- **Magda Streicher**

A lovely object in a snaky constellation – Serpens

Three in one - 2554A is an edge-on galaxy, in Carina

Marry me - Abell 33 situated in Hydra - the Diamond Ring Nebula

Hide and Seek: the galaxy NGC 404 in Andromeda

A colourful grouping – the h3780 a star group in Lupus

The Sombrero galaxy - NGC 4594 (Messier 104) in Virgo

A possible birth cluster? The open cluster Messier 67 in Cancer,

The best known galaxies NGC 3031 (Messier 81) and NGC 3034 (Messier 82),

NGC 4038 and NGC 4039, the Antenna Nebulae in Corvus

A one arm galaxy: NGC 1672 in Doradus.

Magda Streicher has been sending articles about observing for the newsletter for a long time. She will welcome suggestions about which objects to observe and write articles about for the newsletters from August 2023 onward, but for each month, it must be an object that is visible in the night sky at that time and for the next month.

- **Other contributors**

Photos of the Corona Australis Cloud Complex, taken by Johan Moolman.

Photographs with annotations made by Johan Moolman at his “Urban Star Party”.

Notes about the pandemic and our library – by Neville Young

Saturn observations 30 years apart – by Prof Barbara Cunow (Barbara Cunow has just passed the 42 year mark of her long term Saturn observations).

Book reviews – by Neville Young

Venus photographed inside a Sun halo? - by Neville Young

Pierre Lourens wrote an occasional Feature of the month: “Expansion of the Universe”, “Super Earths” “The Fermi paradox”, and “A Bizarre Starbridge”

4 OUTREACH

We were able to resume Outreach events after the lockdown restrictions were eased. The following events were organised.

July 16th 2022 Six Fountains Residential Estate, Pretoria East. Birthday Party

Johan Smit, Rudolph Strydom and Frikkie le Roux attended. About 30 attendees.

July 27th – July 31st 2022 Karoo Star Party 13th Edition

Johan Smit reported that attendance was down on previous years possibly due to time and cost of travelling. The weather forecast was also unfavourable. There were only about 6 or 7 members present. It was also noted that Kambro has marketed the stargazing and there were some visitors who had booked especially for the event.

Reluctantly the Centre has decided to cancel the Karoo Star Party as an official ASSA Pretoria Centre event on the grounds of:

- Cost. It is getting rather expensive to attend this.
- Distance. It is a very nice venue, but it is not reasonably within easy travelling distance.
- Possible failed event: As a result of Kambro itself marketing the event on their calendar at the last two events there were as many visitors as regulars, and the effect is that there would need to be someone to show these visitors the sky. If there was no-one available or willing to do this (after all, the event is intended for private viewing), the event would be a failure for Kambro too. We would like to avoid the possibility of such an embarrassment.
- Members who wished to still go to Kambro can organise such a trip in their private capacity

August 5th 2022. Jan Celliers Park, Groenkloof.

Gerrit Penning (Bloemfontein Member) hosted a number of friends (about 20). Johan Smit and Bosman Oliver attended.

August 27th 2022 ASSA / ESSA Magaliesberg

Johan Smit, Percy Jacobs & Rudolph Strydom attended from the Centre, also there were members from the Johannesburg Centre. There was good weather and good stargazing, and some solar observing during the day. About 30 attendees

September 23rd 2022 Deelfontein

Bosman Olivier attended. Good observing, some wind.

October 1st 2022 Girl Guides

Johan Smit, Chris Stewart (Johannesburg) and Brendan Fairhurst (Telescope Making Class - TMC) attended stargazing at the Girl Guides Head Office in Randburg. It was an International event, with about 50 attendees including four from the Netherlands. The TMC has donated two telescopes to the Girl Guides, which were in use on the night.

January 3rd 2023 A group of about six members were on-line for the Mars occultation. There was cloud, but some images were obtained

January 16th 2023 Johan Smit did an online presentation on to the Hermanus Centre.

“The Use of Observing Equipment”

February 13th 2023 Johan Smit did a further presentation to the Hermanus Centre

“Battery technology and management of capacity”.

May 5th 2023 University of Pretoria: Blue Crane Space Society

Neville Young attended, together with Allison Coulter and Dave Philips, both from Johannesburg. About 100 students attended. The **Blue Crane Space Society** is a club started by a student and has been going for 2-3 years.

May 6th 2023 Johannesburg Girl Guides

JS was go, but event cancelled at last minute due to rain.

May 13th 2023 Craig Kloke Church Group, Trinity Church, Lynwood

Organised by Craig and Louis Kloke who were present, together with Johan Smit, Rudolph Strydom, Michael Poll and Martin van der Merwe. About 60 attendees. Thanks to Dawn Kloke for providing supper for the presenters.

May 20th 2023 Mountain Club of SA : Wilgepoort

Michael Poll and Johan Jordaan attended, 25-30 attendees. Excellent viewing of various deep sky objects, much appreciated by those present. Provisional booking made for May 11th 2024

June 14th -18th 2.23 Free State Star Party

Johan Smit and Rudolph Strydom attended. About 30 people present.

5 SECTION REPORTS

5.1 Library: Danie Barnardo.

- It is noted that use of the library has been on the decline for a while, possibly as a result of the availability of a vast amount of reference material and information on the Internet, and due to its being unavailable during the lockdown period.
- The library has been scaled down dramatically. Everything not needed was donated to Hospice.
- The leftover contents are now being stored by Neville Young and Michelle Ferreira.
- We are busy planning to make it available again to members.

5.2 Website and Social Media: Danie Barnardo.

- The Committee has noted that print publicity is no longer feasible - publicity is best done via social media. "Publicity" has therefore been included as "Website and Social Media"
- The website is hosted by Afrihost, who provide a reliable service, and is functioning as planned. Compliments for the look and functionality of the website are frequently received and it is generally expressed that the website is fulfilling its role admirably.
- The website proved extremely useful for the advertisement of Centre meetings during the year.
- It is possible to contact the Committee members via the website, eliciting several queries to Committee members during the year.
- A website section to advertise used equipment was also extremely popular.
- The Archive section of the website contains newsletters as far back as 1988.
- We consistently have over 2,000 hits per month and are being visited from all over the world.

Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Jul-22	393	559	873	2,480	310.38 MB
Aug-22	363	525	817	2,470	200.40 MB
Sep-22	431	600	927	3,229	380.80 MB
Oct-22	468	645	1,221	5,465	326.57 MB
Nov-22	315	399	642	1,978	187.18 MB
Dec-22	322	467	692	2,162	317.89 MB
Jan-23	424	524	710	3,146	1.25 GB
Feb-23	286	386	541	2,076	345.52 MB
Mar-23	297	427	628	1,901	278.20 MB
Apr-23	256	341	502	2,209	667.74 MB
May-23	280	389	541	2,091	499.92 MB
Jun-23	268	361	528	2,174	186.21 MB

Locales	Abb	Pages	Hits	Bandwidth
United States	us	200	565	101.49 MB
South Africa	za	154	2,491	135.87 MB
Indonesia	id	35	191	13.77 MB
Russian Federation	ru	24	31	2.82 MB
Czech Republic	cz	22	302	14.84 MB
Israel	il	13	54	7.03 MB
Great Britain	gb	9	55	4.78 MB
China	cn	8	52	25.92 MB
Zimbabwe	zw	8	8	172.28 KB
South Korea	kr	5	40	2.66 MB
Sweden	se	4	4	95.13 KB
Germany	de	4	6	1.08 MB
Seychelles	sc	4	4	65.61 KB
Ukraine	ua	3	3	41.86 KB
Finland	fi	3	25	1022.85 KB
Nigeria	ng	3	26	1.12 MB
Netherlands	nl	2	18	214.43 KB
Mauritius	mu	2	27	1.28 MB
India	in	1	3	971.81 KB
Iran	ir	1	1	6.14 KB
Vietnam	vn	1	1	23.79 KB
European country	eu	1	1	23.75 KB
Greece	gr	1	3	1.89 MB
Canada	ca	1	12	3.56 MB
Spain	es	1	1	23.79 B

5.3 Newsletter Editor: **Pierre Lourens**

[Information about contributions has been extracted by Michael Poll - See 3 above]

- The newsletter is sent out before the monthly viewing evening.
- The newsletter has a fixed format that developed over many years and sets the “standard” amongst ASSA branches for consistency and reliability.
- Newsletters are being exchanged with other centres.

5.4 Telescope Making Class, including ScopeX : **Johan Smit**

- Johan Smit and Percy Jacobs serve as permanent instructors at the class.
- Johan Jordaan completed a 6” telescope this year.
- Len Larson from Johannesburg. Len (80 years old) completed an 8” telescope. “You are never too old to start”.
- Formal relationships are being maintained with Stellafane in the USA.

5.5 Curator of instruments: **Johan Smit**

- There is very little to report on the use of our 12 inch Newtonian in the dome at CBC, because of the fact that the dome rotation and slit bearings need maintenance. It is therefore very difficult to use the dome effectively. Apart from that, the system remains viable.
- Once the dome drive bearings and slit drive have been serviced, I look forward to us using our main telescope again regularly.
- Because of the maintenance required and the fact that it is more sociable to use telescopes outside, observatory was opened on request just to show everyone what an observatory looks like inside.

5.6 Observations Co-ordinator Neville Young

The Pretoria Centre has a WhatsApp group for those members who actively observe and who enjoy sharing their activities. The effect of the sharing incentivises others to observe and also allows members to share their experience and expertise amongst each other. Those who are busy with their own projects at their own homes during the night, keep each other company with wisecracks, brag images and virtual cups of coffee.

The past year has seen 17 group members actively participating. Subjects shared have ranged from Apollo 11 Moon Landing videos, SpaceX launches, Percy Jacobs' spectroscopy observations, Johan Moolman's superb astrophotography, Barbara Cunow's highly informative observations recorded in clever astrophotography techniques, alerts to asteroids and comets and sometimes successful image captures of these objects. A particularly fascinating event was the crashing of the DART spacecraft into the asteroid Dimorphos which orbits its parent asteroid Didymos. If we had known that the impact might just be visible, some of us might have attempted to capture the amazing brightening from the impact.

To illustrate how active the group is, downloading the entire group chat into a spreadsheet reveals that there have been 1858 messages from 1 Aug 2022 until now 3 July 2023!

6 CHRISTIAN BROTHERS COLLEGE

- We were able to resume meetings at CBC from October 2022 onwards, thanks to the good offices of Neville Young liaising with Michelle Goodrum. The Auditorium is not available, but in any case, there have not been enough attendees to justify using it. We have been meeting in a classroom which is not very comfortable and the acoustics in the classroom are not satisfactory. We will try and discuss this problem with CBC at a later date.
- Thanks are due to Mark Yon at CBC for being our contact person.

7 2023 SKY GUIDE DISTRIBUTION

- The Sky Guides were made available from various collection points as in previous years. Bosman Olivier, Michael Poll, Johan Smit and Danie Barnardo were the contact persons.

8 COMMITTEE

- The committee comprised eight persons after the 2022 AGM: Bosman Olivier, Johan Smit, Michael Poll, Pierre Lourens, Danie Barnardo, Michelle Ferreira, Neville Young and Johan Jordaan. The Committee met four times during the year.

9 SOS : STATE OF THE SOCIETY

The Chairman noted the following

9.1 Falling membership numbers and attendances.

- 2002 - 2003 paid up membership was 121, average attendance 70.
- 2008 - 2009 paid-up membership was 111
- 2016 - 2017 paid up membership was 80.
- 2017 - 2018 paid-up membership was 65, the average attendance was 23.
- 2022 - 2023 paid-up membership was 39, average attendance was 22, including online visitors. The average attendance physically present was 13.

9.2 Commentary about the State of the Society:

- Falling away of numbers -- changes in lifestyles and priorities?
- Country Members around Pretoria who are not members of the Centre.
- Not always possible to find outside speakers. The Main Speaker is mostly a Committee Member. Beginner's Corner and What's Up are presented exclusively by Committee members.
- At two meetings during the year all topics were presented by one and the same Committee member.
- We have cut out Beginner's Corner already in order to ease pressure on Committee Members to do presentations.
- There may be a need to consider adapting the format of the Meetings.

- The membership of the Committee is also fairly stagnant: all except two of the present committee members have been on the committee since 2013.
- On the positive side, the Centre has presented quite a number of Outreach events during this and previous years.

10

THANKS

- Thanks are due to all members who have supported and kept the Centre going over the lockdown period.
- Particular thanks are due to Johan Smit for organising the video links and the projection apparatus.
- Thanks are also due to CBC for allowing us to use their premises.