

ASSA AGM 2021

Report on ASSA 2020 / 2021 Activities (Chris Stewart)

Preamble

Thank you, Mr Chairman.

First, I would like to thank the Pretoria Centre for hosting this meeting, Bosman Olivier for chairing it, and all attendees for your participation.

Second, I wish to thank the Council members for their indefatigable commitment and support over the past year, especially considering the trying times under which we are operating.

There is a great deal more going on behind the scenes than meets the eye, much of it tedious - your tireless efforts and considerable expertise are deeply appreciated.

State of the Nation

Covid continues to hamper our activities, particularly by precluding travel and physical meetings at unpredictable intervals. Some of us have tragically lost friends and family members to the virus; you have our sincere condolences. The recent death of José da Silva is particularly poignant in this respect, as he was about to take over the reins of the Spectroscopy Section, a specialised field with few practitioners to draw from. Please do take care and stay well.

Fortunately, thanks to electronic communications technology, many of our communal activities are now taking place on-line as the “new normal”, to the additional benefit of individuals who would not otherwise be able to attend Centre meetings. Some Centres have joined forces, with one Centre inviting another to their monthly meeting, thereby sharing the reach of the speakers. Some have even teamed up with other astronomy groups abroad, building alliances, broadening the range of topics and deepening the available pool of expertise.

The same applies to Sections, the Deep Sky section having had a very successful interactive meeting with observers as far afield as Sweden asking questions, sharing favourite targets and taking notes of experiences across the hemispheres. In addition, similar interactions with AfAS (the African Astronomy Society) are ongoing.

Review of activities

I present here brief summaries of the reports received to date, which will be made available on the website.

Communications

The Internal communications through the mail groups are working well, being widely used and keeping members up-to-date. ASSA liaison with the media has shown a marked increase since the CV19 Lockdown was announced and two events received wide publicity, i.e. Tim Cooper's work on Bolide 2018LA which struck Botswana in June 2018, and Clyde Foster's discovery of an eruption on Jupiter's surface. The "Ask an Astronomer" feature on the website; has produced over 120 questions since the last AGM, of which career guidance queries were usually passed on to the SAAO.

Citizen Science

No report available, due to time constraints on the Director.

Cosmology

The cosmology section is a platform for ASSA members to highlight relevant research that they encounter. Following the CHIME radio telescope's commissioning, two themes have largely dominated astrophysics over the past year - Fast Radio Bursts and the possible early detection of a fifth force in Nature.

Deep Sky

The Section's activities have been chronicled in 2 multi-topic issues of the beautifully presented Nightfall publication. Highlights included online observing using remote observatories, hydrogen-alpha images of the LMC, and observations of the Hogg star clusters. In addition, 5 special reports were produced, each dedicated to a specific topic ranging from star formation and planetary nebulae, to a resource guide for astronomy education.

Double & Variable stars

The year has seen increased observation and discussion activity, with webinars giving access to more specialists than ever before. Work on exoplanets, high-energy systems, and photometry proceeded, with observations being directly submitted to the appropriate clearinghouses in support of international scientific initiatives. Notably the Director collaborated on an international paper and continued mentoring beginners for the AAVSO.

Historical

A concerted effort was made to update the website. All the Handbooks of ASSA to 2003 were digitized and are now available on the web. (From 2004 this became the Sky Guide, which is available from Struik.) The material of the Digital part of the Archive was properly archived, the Section was represented in the centenary

celebrations of the SAAO and articles with historical content were published in MNASSA.

Imaging / Astrophotography

Given the Covid lockdowns, there was a notable shift to narrowband imaging from the cities. The Flickr collection continues to showcase the talent of our astrophotographers, with some of their output being featured in Nightfall. A last-minute competition for photographs of the recent conjunction has just been concluded; the three winning entries will be showcased in the next issue of SGAS.

Instrumentation

The Section directly supports the needs of both ASSA members and the general public regarding selection, purchase, construction, maintenance and use of instrumentation.

This is mostly done via the Amateur Telescope Making (ATM) class, the ever-growing Telescope Making SA Facebook page, e-mail correspondence, telephonic discussion, and WhatsApp/SMS. Despite ATM classes being on hold due to lockdown, work continues with several instruments in progress.

Etsuo Takayanagi was able to get the majority of his classic Cassegrain's novel skeletal optical tube assembly constructed prior to his return to Japan. Notably, this included a novel hybrid pantograph / helical focuser realized through 3D printing, which you can see here. A great number of other interesting 3D printed parts have emerged, notably geared drives and bearing supports for equatorial platforms capable of taking large telescopes.

Percy Jacobs has successfully completed construction of a second, higher-resolution spectrograph in order to better serve the scientific community's need for quality spectra of chronically underrepresented southern hemisphere objects.

Observing & Outreach

The Director has reluctantly resigned for personal reasons. Although social distancing has precluded group observing activities, impacting on outreach, many opportunities to observe on an individual basis occurred, which were advertised through the usual channels. The most recent conjunction event spurred a successful photo challenge. As usual, many queries from the public have been fielded and answered directly, shared in the discussion group ,or forwarded to an appropriate Specialist. Notably, three comets were observable during the period under review, though 156P Russel could only be captured photographically.

Photometry & Spectroscopy

With photometry being mostly practiced in variable star observation, the emphasis continues to be on promoting spectroscopy and supplying spectra to global research programs. Practitioners submit spectra directly to research programs per demand.

It would be appreciated if someone with an interest in this topic would step forward to take over the reins from Percy. You do not need to be an expert, and you will get guidance.

Shallow Sky

Observation of solar system objects is another area of prolific Pro-Am collaboration. Clyde's Spot, the convective outbreak in Jupiter's South Temperate Belt region, that Clyde Foster discovered at the end of May 2020 continued to be followed by both the amateur and professional planetary communities. The storm is still developing and has taken the form of a folded filamentary Region. It was beautifully captured in April this year by the Juno spacecraft on its 33rd Perijove. This discovery led to numerous presentations, publications and media appearances.

ASSA reports on meteor, etc. sightings are published in MNASSA, whilst sighting reports from the public are analysed and responded to by Tim Cooper (for comets / meteors / asteroids) and Greg Roberts (for satellites).

Meteor studies led by Tim Cooper resulted in reports in MNASSA and 4 papers, involved 8 meteor showers observed for a total of 35.75 hours, and the recovery of meteoritic fragments. 47 fireball event reports were investigated, a new meteor stream was discovered and the radiants of over 11 000 individual meteors were determined.

Scholarships

Due to poor performance of our invested funds during 2020, no scholarships were offered in 2021. However, having obtained their BSc degrees both 2019 Awardees have gone on to pursue BSc (Hons), with Collins pursuing her interests in Cosmology and General Relativity, and Mulaudzi combining studies in particle- and nuclear-physics with a search of MeerKAT data for evidence of dark matter. Clearly our faith in these high achievers was not misplaced.

Scholarships Committee	
Dr Claire Flanagan	Scholarship Convenor
Dr Ian Glass	Retired Professional Astronomer
Sivuyile Manxoyi	EUNAWE, SAAO outreach
Maciej Soltynski	Previous Scholarship Convenor
Dr Vanessa McBride	OAD, SAAO, UCT

Conclusion

Note that all reports received will be available for perusal on the ASSA website.

Despite the troubling times and the restrictions on physical gatherings, members of the Society continue to actively pursue their interests. Centres have found ways to keep their members in touch, and Council remains engaged and functional.

It even appears that lockdown-induced boredom and the reduction in work travel times are raising public interest and activity in astronomy.

On balance, I think we are doing very well. Our communications have definitely improved but could always be better. Scholarships took a knock due to funding, but the team is fully committed with an excellent track record and the bursary recipients have excelled.

Citizen Science and our Observing & Outreach areas were affected by manpower limitations. Some changes are in place to improve these areas.

My sincere thanks to everyone for your selfless commitment.

ASSET: ASSA Endowment Trust summary (Chris Stewart)

The endowment trust was established many decades ago, the intention being to have a means to support the Society should it run into financial strictures. It is entirely separate from the Society, managed by Trustees who have the best interests of ASSA at heart.

Whilst the Society has managed its finances such that there has been no need for intervention, and although we continue to actively work against ever being in that position, it is comforting to know that we have some guardian angels out there.

For a difficult period, the passing of some trustees affected their ability to transact on the accounts. All existing Trustees FICA records have now been updated with the Master's Office and the accounts of ASSET can again be transacted fully. Peter Cramb continues to stand as acting Secretary, independent compilers have been appointed, and the Annual Financial Statements are being brought up to date - including any remaining tax obligations with SARS. The Trust's objectives are also currently being reviewed to align with future requirements.

I would like to express Council's appreciation to the Trustees for their dedication in this noble cause.

Financial Report (AJ Nel)

Please see separate document for the report.

Acceptance

(Audience voted to accept the reports without dissent.)

Council Office Bearers 2021 / 2022 (Chris Stewart)

Normally the President’s term is 2 years, but last year the decision was made on an exceptional basis to extend my term to 3 years. Whilst I am grateful for this show of confidence, I am happy to be able to announce that we have attracted new members with specific expertise that will definitely strengthen our operations.

Not only do we remain in good shape, but are successfully accommodating the changing operational environment. We expect to tackle the new year with vigour, augmented by the fresh perspectives of the new appointees. Accordingly, you will see some minor tweaks to our structure as shown in the tables below:

Role	Council Members 2021/22
President	Chris Stewart
Vice President (Outgoing President)	Case Rijdsijk
Vice President (Incoming President)	Dr Daniel Cunnama
Treasurer	AJ Nel
Membership Secretary	Eddy Nijeboer
Secretary	Lerika Cross
Council Member	Dr Pierre de Villiers
Council Member	Dr Ian Glass
Bloemfontein Representative	Thinus van der Merwe (TBC)
Cape Chair	Christian Hettlage (Acting Chair)
Durban Chair	Amith Rajpal
Garden Route Chair	Case Rijdsijk
Johannesburg Chair	Alison Coulter
Pretoria Chair	Bosman Olivier
Hermanus Chair	Dr Pierre de Villiers

Structure & how it works. Core council / Financial Subcommittee

Per the Constitution and long tradition, the Core Council members are appointed by the Core Council itself. Whilst this is at their discretion, it is motivated by the best interests of the Society and informed by wider consultation. Every effort is taken to ensure competent and committed individuals are identified for the roles.

For the long-term health of the organisation, it is necessary both have a periodic refresh in personnel and to retain the institutional knowledge of longer-term incumbents. Accordingly, we adopted the practice of appointing an “incoming” Vice President who will have time to learn the ropes prior to ascending to the presidency, whilst the former President is retained as the “outgoing” Vice President in an advisory capacity. We also endeavour to alternate the Presidency between professional and

amateur astronomers, which helps strengthen the historical bond between amateur and professional astronomers, something almost unique in the world of science.

Today, I would like us all to welcome professional astronomer Dr. Daniel Cunnama as incoming Vice President and professional Communications specialist Dr. Sally MacFarlane as our comms coordinator. We also thank Eddie Neijboer for making himself available as membership Secretary. May you all enjoy your terms of office.

Centre Chairs & Representatives

Centre Chairs are elected per the custom of the Centres and they are automatically members of Council, in order to ensure proper representation of the wider membership.

In the event that a Centre Chair is unable or unwilling to attend Council, be it temporary or for a longer term, a Committee member may be appointed as Centre Representative to fill the role.

The Cape Centre were unable to find a willing candidate for Chairman at their recent AGM. As a result, Vice Chair Christian Hettlage is acting as Chairman until a suitable person can be elected. We welcome the new Johannesburg chair Alison Coulter and wish her every success.

The Bloemfontein Centre is still trying to get back on their feet following a long period of dormancy. I would appreciate it if Thinus van der Merwe would convey our encouragement to the Centre Committee, and I appeal to the other Centres to support and keep in contact with them.

Appointees

Role reporting into Council	Appointees
Convener of Scholarships	Dr Claire Flanagan
Communications Coordinator	Dr Sally MacFarlane
Observing Director	Angus Burns
Webmaster	John Gill
Web Manager: SAAO Liaison for Website	Dr Christian Hettlage
ASSA Archivist	Chris de Coning
Social Media Liaisons	Allen Versfeld (Youtube, Twitter) Martin Heigan (Flickr) Kos Coronaios (ASSA FB Admin) Chris Stewart (Mail groups)

Council appoints people to manage various defined roles that exist to support the Society's aims and purpose in general. We have a new role of Comms Coordinator filled by Dr. Sally MacFarlane. This will strengthen our communications capabilities – something that now more than ever is critical to our success. The various social media liaisons will of course assist her with our presence in channels such as Twitter, Flickr, FaceBook, etc.

Sections, which are in effect Special Interest Groups, exist to assist interested members in advancing their expertise in specific fields of astronomical endeavour. They naturally wax and wane according to general levels of interest and the availability of suitable Directors. We welcome Angus Burns, who will be promoting observing in general, with the new Observing section encompassing the former Deep & Shallow Sky sections and more. Happily, Dr. Daniel Cunnamo has expressed an interest in engaging external entities with respect to preserving our endangered night sky, and will kick-start our dormant Dark Sky section. With the sad loss of Jose da Silva, Percy Jacobs has kindly agreed to continue running Spectroscopy and Photometry whilst a replacement is sought.

Special Interest Groups	Directors
Dark Sky Section	Dr Daniel Cunnamo
Double and Variable Stars Section	Dave Blane
Photometry, Spectroscopy Section	Percy Jacobs
Cosmology and Astrophysics Section	Bruce Dickson
Southern African Astronomy History Section	Chris de Coning
Astrophotography Section	Martin Heigan
Instrumentation Section (including ATM)	Chris Stewart

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In recognition of the vital role our publications play, we have formalised their supporting structure somewhat, bringing in more recognition and support from Council without interfering in their operations.

Nightfall, originally the Deep Sky section's newsletter, has grown into a formidable magazine in its own right, and is being recognised as such. Where MNASSA continues its role as the Society's formal publication of record, Nightfall as a complementary channel brings lavishly-illustrated wide-ranging articles.

I would like to take the opportunity to give thanks to the unsung heroes of the back room, without whose diligent support our publications could not retain their high standard.

ASSA Awards

President's Award, Astronomy Outreach: Carol Botha

Carol has vigorously promoted astronomy for several decades. She originally entered outreach through involvement in the National Science Week, followed by many more years in collaboration with OOG, and continues to be very dedicated to the mission via various avenues.

President's Award: Tim Cooper

The Society has previously conferred recognition of Tim Cooper's impressive body of work, and rightly so. However, Tim is not one to rest on his laurels: he is "the gift that

keeps on giving". Not only is Tim unstinting in his excellent work, but generous too. In achieving international recognition for his personal efforts, he has been careful to graciously share the limelight with ASSA. A case in point is the recent successful recovery of meteorite fragments based on scant observations of a bolide - a magnificent sleuthing task, covering an immense swathe of ground, crossing international borders, and requiring cooperation from many official entities. On top of his scientific workload, Tim has been a lodestone for the society, always available to dispense invaluable, level-headed wisdom when needed. I have no hesitation in commending Tim for the President's award

McIntyre Award: Auke Slotegraaf

Since 2003, with but a few gaps, Auke Slotegraaf has worked tirelessly on behalf of ASSA to produce the annual Sky Guide. Despite each year bringing its own unique challenges, and having set a punishingly high standard in its first issue, he has consistently ensured that the content has remained high-quality, relevant, easily assimilable and useful - as well as being presented in a modern, fresh style. In parallel, Auke's literary contribution to the beautiful 2014 book, Pearls of the SOUTHERN SKIES, is an edifying delight to read.

Either of these is impressive; taken together, this body of work is a magnificent achievement.

Whilst these have both been collaborative endeavours, Auke's contributions are indisputable, and the world would be poorer without them.

I have no hesitation in proposing that ASSA confer the McIntyre award in recognition of Auke's literary and scholarly contributions.

Director's Award, Instrumentation: Johan Smit

Johan has for many years been a foremost contributor to the Amateur Telescope Making class, procuring materials, guiding beginners and selflessly fabricating parts so as to enable others to successfully complete their telescopes. In addition, he has explored many new techniques and approaches that advance the art in novel ways, most recently via 3D printing

Director's Award, Instrumentation: Percy Jacobs

As an active member of the astronomical fraternity, Percy Jacobs needs no introduction. His enthusiasm to promote observing, telescope making, and participation in the Society's affairs is well known and recognised. However, his work in contributing spectroscopic observations to international scientific organisations in support of their research sets him apart. Percy has recently completed building his second home-made spectroscope in order to provide even higher resolution observations than his already

impressive first spectroscopy was capable of, an indication of his ongoing commitment to this very important niche. Few people build a telescope, fewer yet build an Ha solar scope, and a vanishingly small number build spectroscopes. The Instrumentation Director's award serves to recognise this accomplishment, and it is hoped that his example will be followed by others in time to come.

Director's Award, Archive and History: Em Prof. Brian Warner

We admire and acknowledge a lifetime of passionate dedication, the many contributions, research and publications made by Brian Warner to the field of the History of Astronomy in South Africa.

Keynote Address (Speaker: Tim Cooper)

Please see video recording of Tim Cooper's exciting account of one of the greatest sleuthing adventures of all time.

Closing (Chris Stewart)

Thank you, Tim, for the fascinating account. It highlights once again how pro-am collaboration is alive and well in the world of Astronomy.

Again, my heartfelt thanks to the team for their sterling efforts in these troubled times, especially Lerika and Bosman for organising tonight's meeting, and to Tim for his presentation.

Conjunction of Mars, Venus and the crescent Moon (11-13 July 2021)

Astrophotography Competition

Shortly after sunset on the evenings of July 11 to 13, weather permitting, there was a fine conjunction (close approach) between Mars, Venus and the crescent Moon in the western sky. The trio was closest on the 12th, as the Moon passed by. Such events are pretty to watch and present opportunities to capture a relatively rare sight photographically.

On the 12th, the Sun set at about 17h00 SAST (there was some variance according to your location), with the planets reaching the horizon about two hours later. The Moon set at approximately 18h25 on the 11th (and of course later on the following days, as it moved from west to east through the sky). During the intervening time between sunset and the planets setting, the sky naturally darkened progressively. Given the proximity of the celestial bodies to the horizon during that time, it should have been possible to include interesting foreground detail illuminated by twilight.