

Deep Sky Report to the AGM, 2014–2015.

Auke Slotegraaf

I'm pleased to report to this meeting that the Section has had a great year.

Administratively, the Section has re-organized into three activity areas: Nebulae & Clusters, Double Stars, and Variable Stars. Dave Blane has generously agreed to be a Variable Star Collaborator and he now oversees the latter two areas, while I maintain the first. The Section's web pages have, following consultation with Dave, been fully restructured to reflect this reshuffling.

In April, the Section published its first "glossy" newsletter, titled 'Nightfall'. Available as a download from the Section's web pages, it features articles by Douglas Bullis, Carol Botha, Hannes & Pieter Pieterse, Magda Streicher, Dave Blane and myself. To date, the PDF has been downloaded 989 times. The next edition will appear in October.

In the Double Star division, Dave reports that activity has been low with no reports having been received from our members. Several "Double star of the Month" articles have been published on the website. Dave Blane continued with his measurements of the double star discoveries made by James Dunlop, and Magda Streicher continued her monitoring of 162 double stars as part of her 12-year follow-up programme.

Bob Argyle, the double star observer from Cambridge University, has published a series of double star measures in *Astronomische Nachrichten*. These were made with the 26-inch Innes telescope in Johannesburg during his recent visits to South Africa. In addition revised orbits for four southern double stars were calculated and published. His publication acknowledges the co-operation and assistance he has received from members of the Johannesburg Centre in getting the telescope to function correctly and for the repair of the Repsold filar micrometer which made his observing possible.

In the Variable Stars division, it is noted that visual estimates were submitted to the AAVSO by Peter Wedepohl, Percy Jacobs and Dave Blane. This year we again had a naked eye nova. Nova Sagittarii 2015 no. 2 reached magnitude 4.5 in April 2015 and was widely observed by observers around the world. South African observers Peter Wedepohl, Percy Jacobs, Dave Blane and Jerome Jooste observed the nova. Jerome also obtained an early spectrum of the nova which was published in *Sky and Telescope* magazine – well done Jerome!

In the Clusters and Nebulae division, observers have continued with their projects, as follows:

Magda Streicher's regular deep-sky writings continue to appear in *MNASSA*, the journal of the Webb Society, *Canopus*, and elsewhere. In the past year she has been

revisiting brighter objects (above 9th magnitude) following the move of her observatory to less rural skies. She is working on Volume 2 of her "Deep-sky Delights", which she is considering bringing out as an e-publication, perhaps before the end of this year. A publisher has expressed interest in a book based on her deep-sky sketches, and negotiations are ongoing.

Richard Ford continues to work hard towards completing the Bennett Catalogue, a compilation of comet-like deep-sky objects identified by past ASSA President and comet hunter Jack Bennett.

Members of the Pretoria Centre continue to chase the ASSA Top-100 objects, and they and their ring leader Percy Jacobs are thanked for their dedication. The Top-100 featured in the 2014 November newsletter of the Centre, and in 2015 March Percy gave feedback on their activities.

The Director continues his observing programme of dark nebulae, with the goal of creating the first visual atlas of these most delightful objects. Astrophotographers and observers keen on collaborating are heartily welcome! Some small effort was put into developing an Android app for visual observers, and work is likely to continue on this in fits and starts in the months ahead. The first interview for a deep-sky documentary was filmed in February, and Hannes Pieterse and Hans van der Merwe are thanked for helping with the design and construction of the camera rig that was used to film the segment. The deep-sky book "Pearls of the Southern Skies" (by Dieter Willasch and myself) was published by Firefly Books (Canada) in November 2014.

During the year, Hannes Pieterse has taken on the task of Programme Co-ordinator for Deep-Sky Marathons, and he is thanked for this wonderful initiative.

Feedback was provided to several astrophotographers about the deep-sky objects they targeted, including Bob Sim and Leslie Rose.

In March, contact was made with Dr Glen Cozens regarding his recent publication on the intriguing catalogue by the early-19th century observer James Dunlop. An independent review of his conclusions is under way.

The Deep-sky Observer's Companion online database (DOCdb.net) continues to be used as a growing online repository, with 213 registered users. Prof Courtney Seligman contacted the Section via DOC with updated information, and I look forward to ongoing collaboration.

The year under review also saw the completion of the first phase of the "Big Five of the African Sky" project, an observing initiative aimed at creating public awareness of our night sky. During this completed phase, resources have been developed, in both English and Afrikaans, which include a handbook, flyers, sticker sets, T-shirts, mugs, and a digital media kit.

The support of ASSA Council, in the form of significant funding for the production of these materials, is gratefully acknowledged. Kos Coronaios, Carol Botha, Hannes Pieterse and Suki Lock are thanked for their significant input and continued support to reach this stage. Kyle Vorster is thanked for proof reading the documents, Hannes for taking care of the Afrikaans translation, and Dave Blane for his early promotional efforts.

During the second phase, ASSA Centres and other pockets of activity will be approached to gauge their interest, and local media will be used to promote the project. The timing will naturally have to coincide with the actual visibility in the evening sky of the Big Five, which spans from January to August. I'd like to take the opportunity now to invite Centre chairs & observing officers, and any other interested parties (for example those active in outreach) to please contact me soonest to express their interest in taking part in the launch in 2016.

Finally, it's a great pleasure to announce that Hannes & Pieter Pieterse have been issued an Observing Certificate for planning and successfully completing an ASSA Top-100 Marathon, on the night of 2014 June 27/28.

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