

august 2006



monthly newsletter of the johannesburg centre of assa

Old Republic Observatory, 18a Gill Street, Observatory, Johannesburg
PO Box 412 323, Craighall, 2024



Mosaic of nine Canopus covers for the astronomical year 2005/2006

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notice of next meeting – assa johannesburg

The next monthly meeting of the Johannesburg Centre of the Astronomical Society of Southern Africa will be held at the old Republic Observatory, 18a Gill Street, Observatory, Johannesburg on Wednesday **16 August 2006** at 20h00
Guest speaker:

WITS UNIVERSITY PHYSICIST

Professor Fabio Frescura

Title to be announced (see web for details)

PLEASE NOTE: Date changed to **16th August**, due to the public holiday on the 9th.

assa johannesburg committee members 2006/2007

Portfolio/Interest	Name	E-mail	Contact details
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ATM	Keith Lou	mwkdklou@mweb.co.za	083 756 7206
Curator of instruments	Dave Hughes	davehu@global.co.za	082 412 6665
Curator assistant	Frans v. Nieuwkerk	machteld@iafrica.com	
Curator assistant	Rodney Hyman	elemod@global.co.za	
PR & Media Liason	Sharon Tait	labelconnection@mweb.co.za	(011) 477 7512

ATM: Amateur Telescope Making classes are held on the premises of Parktown Boys' High School on most Saturday afternoons.

Article submissions to Canopus:

You are invited to submit short articles and/or letters to the Editor. All formats are welcome. Please note that the **deadline for a submission is the 15th of the month**, for printing in the following month's edition. Successful articles will appear in both the printed copy (booklet) as well as the full colour electronic PDF version. See contact details above.

ASSA Johannesburg Centre's electronic mailing-lists & subscriptions:

A suite of mailing lists exist; you are encouraged to visit the assajhb website for detailed information.

www.assajhb.co.za

outgoing chairman's report

by Brian Fraser

We have been very fortunate to have had a committee of dedicated, active, capable and energetic people running the affairs of the Johannesburg centre. They have been a pleasure to work with and have managed the affairs of the centre with a degree of excellence that I believe we have not experienced before.

With the loss of most of our catering equipment and half of our chairs in a series of burglaries we were effectively forced to use the lecture hall next to the Innes dome for all of our monthly meetings. This has had advantages in that the facilities are more comfortable and we have had the use of the 65cm Innes refractor on a number of occasions. However the equipment in this observatory was damaged and it is now out of order. Repairs have been started and hopefully it won't be too long before the telescope is functioning again.

SAASTA, our landlords at the observatory site, have taken more than two years to get going on refurbishing the site and have only just started with the first phase of their plans. Due to a break-in at the beginning of the year where some switchgear and copper cables were stolen from one of the buildings on the ridge, we are not able to use the Sir Herbert Baker building or our own two observatories as there is now no electricity supply to those buildings. This sorry state has persisted for about six months and there is as yet no indication as to when it will be remedied. Hence we are unable to use our telescopes and to hold public viewing evenings as we did in past years.

Despite these problems we have had a very active and successful year.

We had a team of volunteers representing us at HobbyX at the Dome in Northgate and we specially thank the numerous members who were there for their time and efforts. HobbyX gives us exposure to like-minded people and generates a lot of interest in telescopes and astronomy.

ScopeX was once again a huge success and is popular with members and visitors alike.

Our keynote speaker this year was internationally acclaimed astrophotographer David Malin, all the way from Australia. He presented two excellent talks to the society and went on to visit other centres in Southern Africa. We also had the privilege of other top speakers from around the country. Case Rijdsdijk from Cape Town and Dr Matie Hoffman from Bloemfontein gave talks and there was an interesting presentation by Tony Voorvelt and his team on light and electricity. Many members assisted in making the day such a wonderful success.

In August 2005 we hosted a Jupiter viewing evening at the observatory with a talk by Dave Gordon and in October we held a special Mars evening where Dave gave a talk on the red planet. This was followed by viewing with the 65cm refractor and other telescopes belonging to members.

We were fortunate to have a host of interesting talks and speakers at our monthly meetings.

Meetings held during the year were as follows:

August	Prof Uwe Reimold	Vredefort Dome and Impact Craters
September	Robert Groess/Dave Gordon	Pluto
October	Dries van Zyl	Weather and Atmospheric Phenomena
November	Prof Okkie de Jager	The HESS telescope
December	Star Party	Henley on Klip
January	Ed Finlay	ET. Does he exist?
February	Dr Eben Mulder	The Pebble bed modular reactor
March	Ad Sparrius	Kuiper Belt and Oort cloud objects
April	Planetarium Visit	Dave Gordon/Ed Finlay/Brian Fraser
May	Dr Warren Tennant	Scales of Motion in the Atmosphere
June	Gary Els	Longitude

We usually have between 40 and 80 people attending these talks.

At the start of the year we decided to form “teams” of members to sort out some of the problems we were facing. In some areas this has worked exceptionally well and in other areas we have found that it was impractical to stick to this idea.

For instance, our library has been exceedingly well organized by a team consisting of Alec Jamieson, his wife, Sue, and Atze Herder and they have done a sterling job in sorting and cataloguing our books and magazines. The new library room is in the building complex behind the Innes dome and it now houses all our books and magazines in an orderly fashion. Thanks to Alex, Sue, Atze and Dave Hughes for all the effort in setting it up.

We found that to get our web site organized it was more practical to assign the task to one person and we are fortunate to have Chris Curry managing this very important portfolio and doing most of the hard work. Thanks, too, to Nils Schwartz for his initial contribution. This is an ongoing project and will take some time to settle down, but it is looking good.

Robert Groess stepped in as editor of Canopus and he has taken the production of our monthly newsletter to a new height. It is always exceptionally well done, timeous and has a great mix of news, views and humour and is eagerly sought by interested astronomers all across the country. Robert’s expertise is much appreciated by all who read Canopus. We are now providing the option for members to receive Canopus electronically, if they so wish.

Our treasurer, Dave Gordon, has had a busy year managing not only our normal finances but also keeping track of the rather large budget that we had for ScopeX and continues to excel in the quality and professional sets of figures he produces. Dave is stepping down next year and we thank him for a good job well done.

The second most important position on the committee is undoubtedly the position of secretary and here again we have been privileged to have Lerika Cross's professional hand to guide us along the way. One cannot overemphasize the huge contribution Lerika has made to the running of the centre. This was recognized by many members and the committee decided to present Lerika with the Papadopoulos award in recognition of her efforts over a number of years.

But the most important member of the committee has to be Sharon Tait, who has managed and arranged the catering at all of our functions this year. The social aspect of our meetings is just as important as the talks that we have and a chat over coffee, teas and biscuits is an ideal opportunity to meet other members and share your views. And Sharon, with the occasional help of one or two members, has provided all the refreshments. In her PR position she also fields many phone calls from the public, some more intelligent than others.

We also owe thanks to Dave Hughes for pretending to be a curator of instruments and to Karen Breytenbach for very ably handling the PR position and arranging various excursions. And to all the other members who have helped to keep the society running.

Thanks to a generous donation of a 6-inch telescope from Ed Finlay we have started having some casual observing sessions after the meetings. Thanks also to Dave Hughes, Keith Lou, Chris Curry and others for providing telescopes and helping to entertain the visitors.

Earlier this year we were saddened by the death, within a month or so, of our most senior honorary member, oom Eben van Zyl and his wife, Freda. Eben was a past chairman of the Jhb. centre and received much praise and acclaim for the books that he wrote, edited and published in his senior years. His contribution to the centre and to astronomy in South Africa was enormous and will be long remembered.

We hope that in the new year the facilities at the observatory will be repaired and that it will once again be a safe and convenient place for astronomy. If this does not happen then the centre will have to seriously look at alternative sites where we can pursue our main interest, which is after all, astronomy.

Brian Fraser

(new) chairman's editorial

Robert Groess

When you are as spoiled to be in the presence of someone who makes a job look easy, it is often true that a great deal of applied talent and hard work goes unnoticed. Such is the case in point with Brian Fraser. Brian's calm demeanour and abundant wisdom in the face of the multitude of challenges in keeping the Centre on course, is perhaps, at times, greatly underestimated. Brian has been chairman of the Centre on and off for a many number of years and I would like to commend him on having 'handed-over' the chair, with the Centre being in a state of health better than it has been in a long time (perhaps, ever). Thank you, Brian, for having coordinated such an excellent committee. And speaking of which...

... having been showered on with accolades recently, I figure another round would do our committee no harm. When next you bump into a committee member (past or present) of the Centre – realise that what you enjoy in any aspect of the society, has been brought to fruition because of the passion, hard work and unity conjured up by – I honestly claim – to be a heroic team of people. I greatly look forward to another astronomical year on board with such dedicated individuals.

Monthly meetings draw their crowds upon the strength and entertainment of the feature speaker. If you have any astronomical or related ideas and concepts you would particularly liked explained – chances are that many of our members would find similar interest, and would greatly appreciate your participation in nominating someone whom you feel would be most able to explain or entertain your curiosity. Alternatively, if you would like to nominate yourself for presenting a ~ 45 minute talk upon something you'd like to share with the Society, the committee warmly invites you to tender your proposal. Our members are friendly and do not bite (at least they have not done so yet), and you would come away with the reward of having enriched a few people's lives in the course of an evening.

Allow me also to thank (in advance), Kobie van Zyl of TechnoPro for having very generously offered to host the Centre's website locally, free of charge. Thank you very much Kobie – your gracious offer will not only greatly assist in speeding up download speeds for our members, but will also make the job of continuously updating the site by our able webmaster, Chris Curry, a much more pleasurable experience. (Our website is currently based in the UK for various reasons, which drastically hampers download speeds at times.)

Wearing two different hats now, I must get back to the job of Editor, and so, with, once again, plenty of material to chew through at your own pace, welcome to another jam-packed edition of Canopus.

Robert

**The Astronomical Society of Southern Africa
Johannesburg Centre
Income Statement for the Financial Year ended 30 June 2006**

	R 2006	R 2005
Income	109,357.61	75,556.75
Members Subscriptions, Joining Fees & Donations	15,545.00	22,902.50
Donation - Insurance on AV projector	648.00	648.00
Donation - Web Hosting	0.00	624.00
Donations - Telescope Making Class	0.00	1,500.00
Scope-X Gross Income	82,076.00	26,144.35
Sky Guides, planispheres, CDs, books, magazines	7,716.41	2,500.00
Special Events - Mike Melville, Mars, & Gas Giants	1,500.00	5,558.00
Symposium 2004 Income	0.00	14,210.01
Interest on Call Account	1,872.20	1,469.89
Expenditure	106,081.18	63,582.36
Bank Charges	1,198.95	1,329.60
Donations - Eban van Zyl	300.00	0.00
Hobby-X : Printing	392.25	0.00
Insurance - AV Projector	648.00	648.00
Meeting Refreshments & Kitchen Consumables	774.35	385.20
Post Box Rental	225.00	440.00
Posters, Framing & Block Mounting, Signage	709.10	956.80
Printing & Distribution - Canopus	8,070.10	5,149.01
Rent/Venue Hire - SAASTA	10,038.84	8,214.84
Scope-X Expenses	75,522.56	24,606.33
Security	1,873.98	2,944.94
Sky Guides, Planispheres, CDs, Books - Cost	3,800.00	1,500.00
Speaker's Gifts - monthly meetings	959.70	950.00
Subscriptions - Sky & Telescope, Astronomy	1,568.35	390.00
Symposium 2004 Expenses	0.00	15,359.92
Web Site Expenses	0.00	707.72
Net Surplus	3,276.43	11,974.39
Nedbank Bank Balance at 30 June	16,472.21	7,525.14
Nedbank Call Balance at 30 June	75,905.61	74,033.41
Cash Float at 30 June	594.95	210.58
Amount held in trust for ATM Class	4,562.29	4,442.00
Accruals (amounts not shown in Cash Book but reflected in Income Statement)		
SAASTA - Rent	6,846.84	6,846.84
SAASTA - Hire of facilities	456.00	228.00
	<u>7,302.84</u>	<u>7,074.84</u>

encarni's reflections

Encarni Romero Colmenero – erc@sao.ac.za

Hello all,

I have two bits of good news for this month from SALT. The first one is that our first science paper has finally been accepted and will be published in Monthly Notices of the Royal Astronomical Society very soon, closely followed by two other scientific papers from two South African scientists and their collaborators. Whoo hoo!

The other bit of good news is that our observing efficiency has improved a lot over the last couple of months, and this is mostly due to more robust telescope and subsystem control software. Every full Moon, when the sky is so bright that we are restricted to observing very bright objects (and, as you might imagine, we don't get many requests to observe bright objects with SALT!), we have dedicated the week to improving the control software and fix glitches, bugs and most sources of irritation (and believe me, at 3 or 4am during the long winter nights, there are plenty of those!), and this has clearly paid off! We have been able to acquire our targets much quicker and also have had fewer problems at the telescope, so much so that we are currently slightly ahead on our schedule with regards to the current high-priority scientific proposals we must observe. So, this month we are very proud of ourselves... and justifiably so, if I may say so myself!

The other side of the coin is, of course, that there are other problems that have nothing to do with software, and which are harder to track down and fix. For example, the image quality issues I discussed a while back, for which the Spherical Aberration Corrector, the SAC, turned out to be responsible. We are still uncertain about the exact "sentencing" for the SAC, although we know now that it will involve taking it off the telescope, probably towards the end of August or beginning of September. Since SALT cannot operate without it, we will be using that time to work on parts of the telescope that cannot be removed without 'crippling' the telescope, such as the scientific instrumentation: SALTICAM, our imaging camera, and the Robert Stobie Spectrograph, RSS, formerly known as PFIS.

SALTICAM will undergo some refurbishment that will improve its focus, its filter mechanism and, most importantly for us, it will have an autoguider installed, which will mean that long exposures will finally be possible with it! RSS is still being commissioned, so there are many fixes that we are planning to tackle during that time.

We are not yet sure how long all this will take, which means that SALT will probably be offline for at least a month, probably longer. But please don't feel sorry for us SALT Astronomers – our much improved observing efficiency at the telescope has also led to a backlog of data for us to pre-reduce, check and send to their rightful owners, and we are all so busy playing catch-up that we have not had the time to automate most of the process!

So a lot of our work during that time will be dedicated towards improving our post-observation handling and delivering of the data. My own personal interest, being responsible for our queue-scheduling software, is improving the software as much as possible to make it much easier for all of us at the telescope, and I hope I'll get plenty of time during the 'quiet time' to work on it. So, when SALT finally gets put all back together, it's all going to be even more amazing!

And on that happy note, I'll sign off. Until next time,
Encarni

cano-puzzle

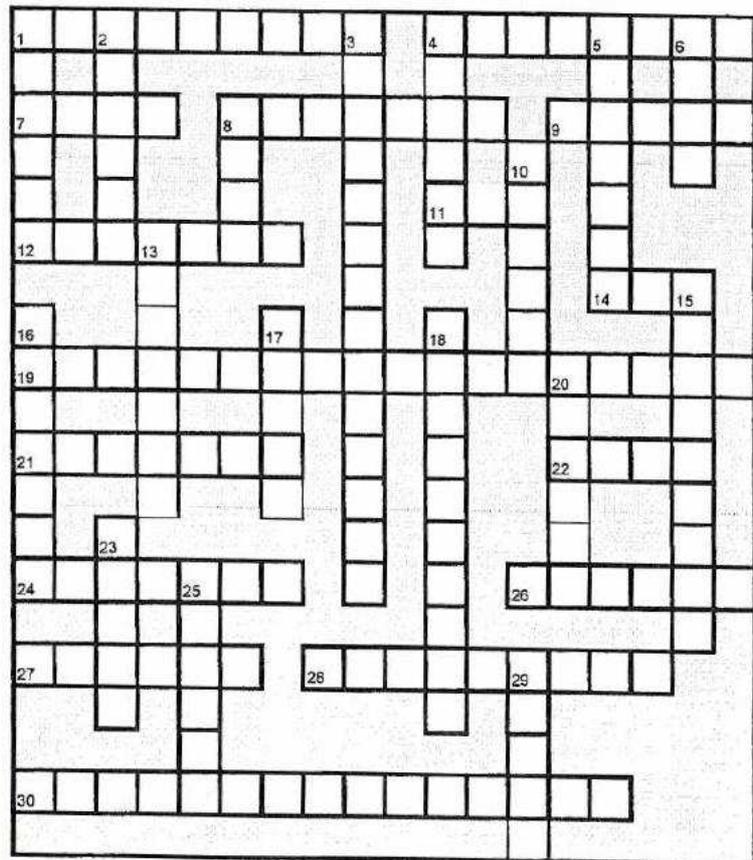
K.G. Stewart

ACROSS

- 1 SMALL PET
- 4 END OF THE RIVER
- 7 A CRANE
- 8 THE RUDDER
- 9 INDIAN
- 11 ROYAL BEAST
- 12 STAR IN THE CROWN
- 14 PRIOR AND POSTERIOR
- 19 SOUTHERN OBJECT
- 21 NEBULA IN MONOCEROS
- 22 WHITE STAR OF THE LADY
- 24 SISTER
- 26 GRAVING TOOL
- 27 PROTECTOR
- 28 UNICORN
- 30 CROWN

DOWN

- 1 WATER NEBULA
- 2 DOMESTIC BEAST
- 3 JOVIAN NEBULA
- 4 MIGHTY BIRD
- 5 STAR IN FLIGHT
- 6 WONDERFUL BIRD
- 8 OF BERENICE
- 10 BLACK BIRD
- 13 HEART OF THE SCORPION
- 15 WATER MAMMAL
- 16 ANOTHER SISTER
- 17 — EL GENUBI
- 18 AROUND SIRIUS
- 20 BIG BEAKED BIRD
- 23 WHALE
- 25 YELLOW STAR OF THE DRAGON
- 29 NEBULA OF THE MIGHTY BIRD



atm class 2005/2006 annual report

by Chris Stewart

The ATM class has been running on a continuous basis since 1994 – i.e. for 12 years – growing slowly but steadily year by year and serving an ever-wider region. Although run under the auspices of the Johannesburg Centre, the ATM class functions autonomously and is self-funding. We encourage newcomers to the class to formally join the Society (be it our own Centre or one more conveniently located for the individual), but this is not mandatory for participation in the class. Our philosophy is that by assisting people to equip themselves and thereby enter the field of practical astronomy, and by demonstrating that our Centre has an active group of “do-ers”, some will inevitably be attracted to the Centre (or at least the Society). This has proven to be a valid perspective, as the Class continues to be the prime recruitment path for our Centre, attracting “quality” members who involve themselves deeply.

During the past year, we have seen 36 new-comers formally joining the class and we have also helped several outsiders. A major proportion have of course found their way to us via the public Scope-X and Hobby-Ex events and a few via our Internet presence, but a surprising number have heard about us through some invisible underground network. People arrive at random times and work at different paces according to the spread of abilities and the usual constraints on personal time. Family, work and outside events all have their influence. Consequently, we long ago adopted a flexible, relaxed approach that accommodates these vicissitudes. At any one time, you will therefore see almost all stages of the ATM process in play, while attendance ebbs and flows. From our register, which is not “policed” and is thus only a rough guide, we see that in the past year attendance averaged about 15, peaking at 30 with a minimum of 6. There have been only a few Saturdays, such as during the year-end holiday season or when a major event has compromised our venue, when the Class has been closed.

Over time there have been many improvements, enabled by the modest surplus we can accrue through the class fees (which really only cover the costs of materials) and, of course, through experience. We remain indebted to Parktown Boys’ High School, and specifically John Scott for the continued use of their excellent facilities to house the Class free of charge, which really helps to keep costs down, thereby making the Class accessible to those of lesser means. This year we have managed to expand our materials stock levels, to the extent that it was necessary to acquire a second cupboard to house them.

As always, we seek to ease the ATM process; this means identifying problems or impediments and finding ways to overcome them, preferably permanently. In this regard, a major improvement in the past year was the acquisition and modification of a potter’s wheel, for the purpose of bevelling and edging. Not only does this speed up the chores of bevelling and flattening the blanks, allowing people to get on sooner with the “real” work of

grinding, but has encouraged several to fashion elliptical (rather than rectangular) secondary mirrors, which improves the final image through diminished obstruction and diffraction. A number of people can cluster around the machine at one time, talking and bonding as they work, which has the added advantage of building camaraderie.

Another bottleneck to the process, a perennial problem, arises from the need to educate people regarding testing and figuring. We have long sought the means to enable a group of people to view through the tester simultaneously (without inadvertent disturbance of the test set-up by the inexperienced!) while the tutor guides the group through the interpretation. Finally, technology is getting to the point where we can have an economically viable solution. So far, we have acquired a closed-circuit CCD camera with zoom lens to put on the tester, and a moderately large flat-screen TV as a monitor. These are housed in a custom-built cabinet. The next steps are to build a power supply and incorporate the camera into a dedicated tester for the Class.

Over the years we have found many fruitful sources to scavenge good-quality parts for telescopes. For instance, several generations of photocopiers have come to the end of their useful lives, blessing us with a steady stream of excellent first-surface flat strip mirrors suitable for fashioning into adequate secondary mirrors. Sadly, the inexorable march of progress means this golden era is almost history, as copiers move rapidly towards compact scanner/printer technology. The stream has already slowed to a trickle that will inevitably cease. So, unless we miraculously find an alternative free source of such materials, or an inexpensive commercial supply of quality secondaries, we expect to have to start making precision flat mirrors from scratch. We know how to do this, and already have the means to test, but it will mean more work for all. Just another challenge.

As has become usual, the 5th annual ScopeX (which has been reported on separately) acted as the focus and impetus for a mad last-minute effort to finish a number of scopes. Although home-made telescopes are never really “finished” (one always finds things to add or improve), a gratifying number of new or modified instruments were ready for public display. I am pleased to report that a number of more advanced instruments are under construction, notably a slew of larger mirrors, a schiefspiegler and a Dall-Kirkham. Hopefully others will follow these examples, encouraged to try the road less traveled.

This Class has only succeeded over the years through the dedicated efforts of a few, who give up much of their personal time to help the newcomers. It seems unfair to single out a handful for special mention, because most people in the Class play an active part in helping and informing those newer to the game, but I would like to give special thanks to Dave Hughes, Keith Lou and Johan Smit for their sterling efforts over the last year. Besides a large amount of behind-the-scenes work and the ever-present guiding hand during the class, they have been a source of innovation. Also, thanks to Lerika Cross for her encouragement as well as secretarial services, and of course for being the driving force for ScopeX, our ATM showcase.

You Might **NOT** Be An Astronomer If You Think That...

AURORA BOREALIS is an exotic dancer in Nome, Alaska

AN ASTRONOMICAL UNIT refers to the cost of an Air Force toilet.

BETELGEUSE is the stuff you squeegee off the windshield of your car.

CLOCK DRIVE refers to the street beneath Big Ben.

A GASEOUS PROMINENCE is Newt Gingrich.

HYPERED FILM is when you really need to brush your teeth.

LIGHT POLLUTION is a few beer cans in the yard.

AN UMBRA is something you need during a rain shower.

A PENUMBRA is something you need to write a note with during a rain shower.

PLUTO is Mickey's sidekick.

NORTHERN LIGHTS is a brand of mentholated, low nicotine cigarettes.

PERIHELION is a guy who sang "That's Amore" in the 1950s.

SOLAR CORONA is warm Mexican beer.

AN OFFAXIS GUIDER is a persistent backseat driver.

A MAKSUTOV is a wine bottle filled with gasoline and thrown at tanks.

A STAR PARTY is a Hollywood bash.

SCHMIDT-CASSEGRAIN is a German meal made with rice.

REFRACTOR is when Vito breaks your leg for the second time.

ZODIACAL LIGHT is a low alcohol beer.

A STAR CHART predicts the future.

THE PHOTOSPHERE is a snapshot of a beach ball.

A GRAVITATIONAL LENS is the new contact your kid drops through an open grate.

A NEUTRON is a fig cookie.

A LIGHT YEAR is a period of time when you don't have enough cash.

A BLACK HOLE is that sump in your basement.

SOLAR WIND is what your fat uncle had after Thanksgiving dinner.

URANUS is an anatomical feature rather than a planet.

Waldeman's Laws:

1st Law: The skies are never clear within 3 days of new moon, since there is not enough solar energy reflected off the moon to dissipate the clouds.

2nd Law: Rare astronomical events usually occur within 3 days of full moon and/or within 30 apparent degrees from the sun (gravitational interpretation of Murphy's law).

3rd Law: When observing, the object you want to see will always be below the horizon or less than 10 degrees from the horizon with the most light pollution (since frustration is related to entropy, it must always increase).

4th Law: Supernovae, comets, and asteroids are always discovered by someone else (because no matter where you are, the sun will always set earlier somewhere else, and therefore someone else will find it first).

5th Law: 90 percent of meteors occur behind you when everyone else is facing you (so they can all say, "ooh!... *you* missed a good one!)

librarian's report 2005/2006

by Alec Jamieson

Library Activities

The previous Librarian, Evan Dembskey, passed on a catalogue of the books in the library as a work in progress. The catalogue contained 565 titles and related details of the books, but no shelf location information. Evan advised further that the alphanumeric identification evident on many of the books had not been used for many years and could be ignored.

It was decided to classify the books according to the Dewey Decimal System (DDS), which would facilitate browsing of books by subject matter on the shelves and in the catalogue. In addition to books on astronomy, the library has books on mathematics, physics, chemistry and space exploration. Application of the DDS has resulted in these categories of books being clearly demarcated on the library shelves, and grouped according to a classification system widely used in libraries. Due to deterioration in security at the Herbert Baker building, the library was moved to a room in the building on the terrace behind the telescope dome.

Starting in November, the library has been opened at 6:00 PM on monthly meeting days. Each opening has drawn visitors to the library, and to date 28 books have been lent out. The library open-times had a friendly, social atmosphere in which many more books were browsed.

The library contains over a thousand issues of various astronomy related magazines. All magazines not required for filling gaps in the Sky and Telescope, MNASSA and Canopus collections have been sorted into date order and stored in boxes. Two archive copies of Canopus have been made. All magazines surplus to requirements are for sale at R5 each. This creates space in the library, moves magazines on to secondary readership and makes a modest contribution to the section's funds. During the year 186 surplus magazines were sold for R930.

The library has subscriptions to *Astronomy* and *Sky & Telescope* magazines. The Sky and Telescope collection dates back to Nov 1944, and it is unfortunate that in August last year the S&T subscription was inadvertently allowed to lapse for several months. This is not the only break in the past 4 years. The subscription has been renewed, and efforts will be made to obtain second hand copies of the missing S&T issues.

The editor of Canopus receives newsletters from other centres both locally and overseas and retains them for his reference. The librarian and the editor of Canopus will liaise on this matter periodically.

Old correspondence and minutes have been filed in date order and stored in a “Tidy File” stacked box system. An interesting snippet gleaned from the old correspondence was that the attractive, leaded glass library shelf units were made from the packing crates used to transport the 26 1/2” main observatory telescope to site in the 1920’s.

There has been keen interest in books on telescope making and observing guides. Books on general astronomy have attracted less interest. In addition to advanced books on astronomy acquired from the former Republic Observatory, there are many books aimed at the beginner level of amateur astronomy, and existing members should encourage new members to make use of this resource.

Library To-Do List

- Binding of the balance of the Sky and Telescope collection.
- Fill gaps in the two Canopus archive collections by requesting donations from membership.
- Put the library catalogue on the web site.
- Dispose of surplus copies of books.
- Library housekeeping tasks such as: -
 - Marking books as ASSA Jhb library property.
 - Marking all book spines with Dewey classification numbers and author abbreviation letters.
 - Etc.
- Create an asset register for ASSA Jhb section property, many items of which are stored in the library, because there is nowhere else to store them.
- Remove the balance of the Franklin Adams sky survey plates and all other remaining items of ASSA Jhb property from the Herbert Baker building. Some of the Franklin Adams plates are annotated by hand and some are prints by the Government Printer. The plates annotated by hand may deserve better preservation than the prints.

Acknowledgements

- Advice and information on Dewey decimal classification from Mrs Anina Langton, professional librarian and business colleague.
- Information on Dewey decimal classification system from Johannesburg Public Library.
- Assistance of Dave Hughes plus his transport and additional manpower, with the strenuous task of relocating the library.
- Donation of books, magazines and equipment from the estate of the late G Tremeer, former member.
- Donation of books and magazines by honorary life member, Jan Eben van Zyl, now deceased.
- Donation of books by Bernd Portugall, former member.

- The above donations were largely responsible for the increase in the library book count from 565 to 787. After the above-mentioned magazine donations, the library's unbroken Sky and Telescope collection runs from November 1944 to February 2004, with some issues thereafter.
- Donation of a computer and peripherals by Pyromet Technologies Pty Ltd for library and other ASSA Jhb. information management tasks. At present there is not enough space in the library for this computer, and the library windows are not burglar barred. This computer is in the possession of Atze Herder for safekeeping until it can be deployed in the library.
- Assistance of the library volunteers Atze Herder, Sue Jamieson and Ilse von Willich.

Conclusion

The library is in regular use again, although there is room for improvement in the number of members using the library. More can be done to raise the profile of the library with new members. This librarian was a member of the society for over a year without knowing of the existence of the library.

I have enjoyed the role of librarian for the ASSA Jhb. Centre in the past year, and offer myself for re-election to the position.

.....
Alec Jamieson, Librarian
27th June 2006

radio silence in the northern cape

excerpt of an article by Sasha Planting, Financial Mail, 3 June 2006

Government is to establish a radio astronomy park in the Northern Cape that is free from radio interference from cellphone masts, television broadcast signals and aircraft radar. It is designed to attract projects and investment from foreign astronomers and assert SA's growing reputation as an ideal astronomy destination.

The Astronomy Geographic Advisory Bill has been drafted. If enacted, this will declare the region north west of Carnavon in the Northern Cape, the proposed site of the astronomy park and the SKA and KAT telescopes, a radio-quiet reserve. "The challenge is to provide sufficient protection for radio astronomy observations without unnecessarily denying radio communications services to the local community," says SKA project manager and renowned astronomer Bernie Fanaroff.

Astronomers working on KAT, for instance, will collaborate with those working on SA's Southern African Large Telescope in complementary observations to form a formidable and powerful astronomical team.

discovery returns home

edited NASA News Release: Monday, July 17, 2006

Space shuttle Discovery and its crew of six returned to Earth through thick clouds July 17th, ending an impressive mission that put NASA's space program back on a solid, safer course. Discovery landed at Kennedy Space Center at 9:14 a.m. (EDT) in only the second shuttle flight since the 2003 Columbia disaster.

The smooth landing was sure to leave NASA officials jubilant, after conquering the chronic threat of foam chunks that break off the external fuel tank during launch – still a problem, but not a serious one in this mission.



The shuttle came in from the south, swooping over the Pacific, Yucatan Peninsula, Gulf of Mexico and across Florida to cap a 5.3 million-mile journey that began on the 4th of July. A last-minute build-up of clouds prompted NASA to switch the shuttle's direction for landing. By the time Discovery approached, it was so cloudy, Commander Steve Lindsey couldn't spot the runway until about a minute before landing.

At touchdown, hoots and whistles came from the few hundred astronauts' relatives and Space Center workers at the runway. This was the first landing at Kennedy in nearly four years. Last year's flight of Discovery, after weather delays, came down at Edwards Air Force Base in California, the backup site. Mission Control waited until almost the last minute before notifying the astronauts that the weather was good enough to come home. The shuttle, with Lindsey and pilot Mark Kelly at the controls, plunged out of orbit an hour before touchdown with the firing of the braking thrusters, and began the hour-long descent at 8:07 a.m. EDT.

NASA officials had been certain going into Monday's landing that Discovery's heat shield was intact and capable of protecting the spaceship during the fiery re-entry. Repeated inspections of the ship's thermal skin on orbit had given NASA confidence. Unlike on Discovery's flight a year ago, the external fuel tank shed little foam during lift-off. That flight was the shuttle's first after the Columbia disaster, when a chunk of falling hard foam doomed the shuttle in 2003.

Officials acknowledged re-entry was, along with the launch, the most dangerous phase of the mission and nothing could be taken for granted until Discovery was safely back home following its trip to the International Space Station. Toward that end, Discovery's astronauts and flight controllers kept close watch on a slightly leaking power unit that tested out fine a day earlier in orbit.

NASA did not know whether harmless nitrogen gas or flammable hydrazine was dripping from the auxiliary power unit, one of three needed to drive the hydraulic landing systems. The leak was small, managers said. If it worsened during re-entry, the unit would shut down automatically and Discovery would have become the first shuttle to land with only two functioning auxiliary power units.



Discovery sported a new, tougher type of landing gear tire for improved safety. In another shuttle first, a GPS receiver was on board to help guide Discovery down to the 3-mile-long landing strip.

Some at NASA, including the chief engineer and NASA's top safety officer, wanted to put off the latest mission until further repairs could be made to a particularly vulnerable area of the fuel tank. But NASA Administrator Michael Griffin opted to press ahead with what turned out to be the space agency's first Independence Day launch.

The shuttle carried up seven astronauts, but departed the space station on July 15th, with six – Lindsey, Kelly, Michael Fossum, Piers Sellers, Lisa Nowak and Stephanie Wilson. German astronaut Thomas Reiter was left behind for a half-year stay, joining two other men, and boosting the station's crew size to 3.

The Discovery crew conducted three spacewalks, one of them to test shuttle patching techniques, and used a 100-foot inspection crane to check the shuttle's entire thermal armour for any damage from launch or orbital debris. The rocket-ship turned out to be the cleanest seen in orbit from a debris perspective. The astronauts also demonstrated that the boom could function as a work platform for spacewalkers and delivered several thousand pounds of supplies to the space station, still in need of restocking because of the 2 ½-year grounding of the shuttle fleet after Columbia's demise.

Atlantis is scheduled to blast off as early as August 27th. Unlike Discovery's missions, which focused primarily on the flight test aspects, the Atlantis crew will haul up a major space station piece – a building-block beam – and attach it to the orbiting outpost.

AAVSO Special Notice #13

Supernova 2006dd in NGC 1316 (Fornax)

(June 20, 2006)

Daniel W. E. Green, Central Bureau for Astronomical Telegrams, reports (Central Bureau Electronic Telegram 553) the discovery by Libert A. G. (Berto) Monard, Pretoria, South Africa, of a bright apparent supernova in NGC 1316 (= Fornax A) at unfiltered CCD magnitude 15.0–15.1 on an image taken June 19.167 UT, and confirmed by Monard on June 20.155 at magnitude 14.5–14.6, using the 0.30-m Schmidt-Cassegrain reflector at the Bronberg Observatory near Pretoria, South Africa. Nothing is visible at this location on the Digitized Sky Survey (limiting magnitude 20.5 R) or on Monard's image from June 2.153 (limiting magnitude 17.5 R).

Monard gives the following position for SN 2006dd, which is offset 0.3" west and 16" North of the nucleus of NGC 1316:

R.A. 03:22:41.62 Decl. -37:12:13.0 (2000)

Additional observations from Monard: Filter photometry (all +/- 0.15 magnitude) centered on June 20.158 UT: 14.66 B, 14.41 V, 14.60 R, 14.30 I.

Please observe visually or photometrically with a B, V, and/or Ic filter.

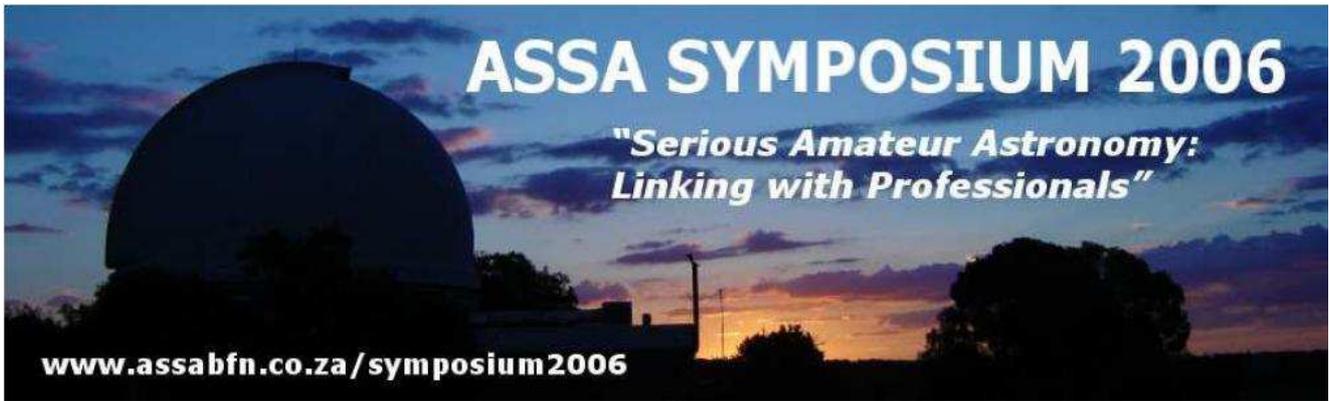
A chart for NGC 1316 by G. D. Thompson and J. Bryan, Jr. (sequence is photoelectric V or photovisual v) is available at this URL:

<http://www.aavso.org/cgi-bin/searchcharts3.pl?name=sn%202006dd>

Report observations to the AAVSO as 0318-37 SN 2006DD. In the Chart field, put TB to indicate Thompson/Bryan.

Note that NGC 1316 is the home of the Type Ia supernovae SN 1980N (IAU Circular 3548, photographic discovery by Wischnjewsky) and SN 1981D (IAU Circular 3583, visual discovery by Evans).

Congratulations to Berto on his latest discovery!



BOYDEN OBSERVATORY
Bloemfontein, South Africa

28-30 September 2006

www.assabfn.co.za/symposium2006

mail@assabfn.co.za

Contact persons:

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Aim of the Symposium: Amateur astronomy is entering a new era. New opportunities exist due to the availability of sophisticated new equipment, transformations in global communications & data sharing and an increased awareness of astronomy among the public.

The Symposium aims to expose participants, in a practical manner, to a selection of current topics in amateur astronomy and equip them for the changing environment. Professional astronomers will share their thoughts and expert amateurs will demonstrate their knowledge to participants. The theme also takes into account that amateur astronomy as a hobby should nevertheless be a relaxing and fulfilling experience.

the sky this month

site location: lat. **26.0 deg S** long. **28.0 deg E** local time – UT = **+2.0 hrs.**

august 2006

dd hh			dd hh		
1 02	Spica 0.3N of Moon	Occn	21 01	Mercury 0.5N of Saturn	
2 09	FIRST QUARTER		22 05	Venus 2.9S of Moon	
2 10	Jupiter 4.6N of Moon		22 16	Saturn 2.4S of Moon	
4 18	Antares 0.4N of Moon	Occn	22 23	Mercury 1.5S of Moon	
7 02	Mercury greatest elong W(19)		23 18	Regulus 1.8S of Moon	
7 12	Saturn at conjunction		23 20	NEW MOON	
9 11	FULL MOON		25 14	Mars 0.5N of Moon	Occn
9 14	Neptune 2.9N of Moon		26 03	Moon at apogee	
10 21	Moon at perigee		27 00	Venus 0.1N of Saturn	
11 06	Neptune at opposition		27 19	Mercury 1.3N of Regulus	
11 07	Uranus 0.3N of Moon	Occn	28 08	Spica 0.4N of Moon	Occn
16 02	LAST QUARTER		29 23	Jupiter 4.8N of Moon	
20 18	Pollux 2.1N of Moon		31 24	FIRST QUARTER	

september 2006

dd hh			dd hh		
1 02	Antares 0.5N of Moon	Occn	20 00	Regulus 1.8S of Moon	
1 06	Mercury superior conjunction		21 15	Venus 0.8N of Moon	Occn
5 11	Uranus at opposition		22 09	Moon at apogee	
5 12	Pluto stationary		22 15	NEW MOON Annular Eclipse (38%) (15h03)	
6 00	Neptune 3.0N of Moon		23 05	Equinox	
6 05	Venus 0.7N of Regulus		23 09	Mars 1.9N of Moon	
7 16	Uranus 0.3N of Moon	Occn	24 02	Mercury 1.6N of Moon	
7 21	FULL MOON Partial Eclipse (20h51)		24 14	Spica 0.4N of Moon	Occn
8 05	Moon at perigee		26 13	Jupiter 4.9N of Moon	
14 12	LAST QUARTER		27 24	Mercury 1.1N of Spica	
15 20	Mercury 0.2S of Mars		28 09	Antares 0.5N of Moon	Occn
16 24	Pollux 2.0N of Moon		30 11	FIRST QUARTER	
19 04	Saturn 2.1S of Moon				

Brackets indicate time (SAST) of maximum eclipse for Johannesburg.

local times of rise and set for the major planets

Date	Sun		Mercury		Venus		Mars		Jupiter		Saturn	
	Rise	Set	Rise	Set	Rise	Set	Rise	Set	Rise	Set	Rise	Set
Aug 9	6.43	17.48	5.33	16.20	5.30	16.09	8.04	19.38	11.03	0.07	6.42	17.41
Aug 19	6.34	17.53	5.56	16.50	5.36	16.26	7.43	19.27	10.27	23.32	6.07	17.07
Aug 29	6.25	17.57	6.22	17.41	5.40	16.43	7.22	19.16	9.52	22.59	5.32	16.33
Sep 8	6.14	18.01	6.38	18.27	5.40	17.00	7.01	19.05	9.17	22.26	4.57	15.59
Sep 18	6.03	18.05	6.45	19.04	5.39	17.17	6.40	18.54	8.43	21.54	4.21	15.25
Sep 28	5.52	18.09	6.47	19.35	5.36	17.33	6.19	18.44	8.10	21.23	3.45	14.51