

MINUTES OF THE AGM

Minutes of the Annual General Meeting held in Johannesburg on 12th July 2000.

1. Welcome and Opening

Twelve members of ASSA and the Johannesburg Centre of ASSA attended the meeting. A quorum being present, the Chairman of the Johannesburg Centre, Constant Volschenk, welcomed everyone to the meeting and declared the AGM open.

2. Apologies

Apologies were received from the Hon. Secretary Brian Skinner, Dr Jannie Smit, Tim Cooper and Jan Hers.

3. Minutes of the previous AGM

The minutes of the 1999 AGM as published in *MNASSA* (58, 9 & 10) were approved by the meeting, proposed by Chris Stewart and seconded by Danie Overbeek.

4. Matters Arising from the Minutes

There were no matters arising.

5. Report of Council

Constant Volschenk read the report of Council to the meeting.

6. Reports from the Observing Section

Danie Overbeek read the Comet and Meteor section report. The Director, Tony Hilton, read the Computing section report. The Director, Brian Fraser, read the Occultation section report and the Minor planet part was read by Danie Overbeek. Danie Overbeek read the Variable Star section report. Constant Volschenk read the Double Star section report. No reports were received from the Deep Sky, Historical, Solar or Imaging sections.

7. Financial Report

Chris Stewart on behalf of the Hon. Treasurer read out the financial report.

8. ASSA Endowment Trust

Chris Stewart on behalf of Cliff Turk read out the ASSA Endowment Trust report.

9. Election of Honorary Auditor

No directives were received as to the appointment of the auditor.

10. Election of Office Bearers

The following nominations were received from Messrs Overbeek, Turk and M A Gray, for positions on Council for the year 2000/2001, proposed by Mr Brian Fraser and seconded by Mr Constant Volschenk.

President: Mr P van Blommestein
Vice President: Prof D Smits
Dr D M Kilkenny
Mr T P Cooper
Members: Dr C A J Smit
Miss P Booth
Mr C Rijdsdijk
Mr S Walsh
Treasurer: Mr C D Gray
Secretary: Mr B Skinner

These were duly elected as no objections were received at the meeting.

11. Presidential Address

Prof D Smits delivered the Presidential Address: Astronomy at UNISA.

12. Closing

There being no further business, the meeting was closed at 22:06

(Tony Hilton, for Hon. Sec. Brian Skinner)

REPORT OF COUNCIL 1999 - 2000

Council met on five occasions since the last AGM with an average of ten persons present at meetings.

1. Membership

Total membership was 222 as at 1 July 1998 compared with 140 a year earlier. Membership is still R80.00 per annum. To increase the awareness of the ASSA a lapel badge has been produced and all members who have or will be renewing their subscriptions will soon be receiving these in the post, as will all new members. Duplicates will later be available from the Membership Secretary at ± R28 each.

2. Finance

The Honorary Treasurer, Mr Colin Gray, is thanked for administering the finances for yet another year. It is his astute management, which is responsible for the healthy state of our finances. Council wishes to thank the numerous members who have once again made donations to the ASSA and to the ASSA Endowment Trust. Their names have been published in *MNASSA*.

3. Business Manager

Mr Cliff Turk continued as business Manager this year. Sales of *MNASSA* to overseas subscribers are a source of dollar income for the Society and now cover the total cost of *MNASSA* production. In a gesture of appreciation Mr Turk was presented with the Society's Long Service Award as thanks for his many years' work on behalf of Council and in the interests of the Membership.

4. *MNASSA*

Mr Auke Slotegraaf has continued to edit an informative publication that had some memorable issues during the last year. I refer to Vol 58 Nos 9 & 10 and Vol 59 Nos 5 & 6 in particular. Many thanks also go to those members who sent in contributions for publication in *MNASSA*. Members are reminded that *MNASSA* is the only place that they can let all the other members know what they are doing and thereby gain support for their work and possibly recruit further observers in their particular field of interest.

5. Annual Handbook

Miss Pat Booth has continued as Editor of the Annual Handbook and is assisted by the Directors of the observing sections. Cliff Turk distributes the Handbook to destinations all over the world. Council extends its thanks to Pat and Cliff for their work on the Handbook.

6. Honorary Membership

Council has awarded Mr Andrew Gray and Mr Mike Begby honorary membership in recognition of their many years of dedicated service to astronomy. Mr Gray has been active in Durban, Natal Midlands, Transvaal and Cape Centres; and Mr Begby in Harare, Zimbabwe.

7. Observing Sections

Two new Sections, now known as the Double Star Section and the Imaging Section, came into being during the past year. Members are encouraged to participate in the activities of these sections. There is also a Dark-Sky Section planned for the new year as a spin-off

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of the "Dark Sky Initiative" held this year. The Solar Section needs a new Director and Council invite interested parties to apply for the job. Mr Jim Knight is thanked for heading this section for the past 15 years.

8. Award Certificates

Council has finalised the design of the Certificates of Merit for issue to the deserving observers who report their observations to the relevant Section Directors. These will soon be sent to the Directors of Observing Sections.

9. Acknowledgments

Council thanks the following persons or institutions for assistance during the past year:

Dr Robert Stobie, Director of SAAO, for the use of meeting facilities at SAAO.

Directors of the Observing Sections for encouraging astronomical research by amateur astronomers and for forwarding the results of observations to international Astronomical bodies.

The local Centres who have brought astronomy to the public at their various observatories are commended for their efforts.

Last, but not least, the Johannesburg Centre for hosting the Annual General Meeting this year.

10. Finally

Council wishes to thank anyone who contributed to the work of the Society this year despite them not having been mentioned by name.

(Brian Skinner, Hon. Secretary)

COMET AND METEOR SECTION
T P Cooper

Notes on some specific showers observed

The α Crucids were observed by Auke Slotegraaf, Ivor Paul and Magda Streicher. The usual low rates were detected, with ZHR about 5/hour on the night of maximum.

Tim Cooper logged some good hours on the Virginid complex despite poor weather. The observations form part of an ongoing program with Alastair MacBeath of the Society for Popularisation of Astronomy in the United Kingdom.

The π Puppis stream was only observed by Cooper, who found it inactive in 1999.

The η Aquarids were badly affected by moonlight in 1999. Cooper managed some observations before early winter flu set in.

Undoubtedly the highlight of the year were the Leonids. Despite poor weather, 24 observers sent reports. A peak rate of about 500/hour, leading to a ZHR of 1740 was observed just before dawn on the morning of November 18.

The interest shown in the Leonids carried over to the Geminids. A gap in the weather allowed us to observe the nights immediately before and after maximum, and reports were received from 10 individuals totalling 42 hours, making the Geminids the most observed shower of 1999.

Total Observing Time by Observer by Meteor Shower

Observer	Number of showers	Total observing time (h)	Showers observed
Cooper T	9	45.6	α Centaurids (4.0), α Pyxisids (3.0), Virginids (18.7), π Puppids (2.0), η Aquarids (6.0), θ Ophiuchids (3.6), July Phoenicids (1.0), Leonids (0.3), Geminids (7.0)
Slotegraaf A	3	13.4	α Crucids (1.9), γ Normids (5.0), Geminids (6.5)
Paul I	3	12.5	α Crucids (1.2), γ Normids (5.0), Geminids (6.3)
Jones A	3	11.4	Sco/Sgr (3.8), Leonids (2.1), Geminids (5.5)
Streicher M	4	8.0	α Crucids (1.4), April Lyrids (0.8), δ Aquarids (4.2), Leonids (2.6)
Gould T	2	6.9	Leonids (4.2), Geminids (2.7)
v.Blommestein P	2	6.0	Taurids (5.0), Leonids (1.0)
Skinner B	1	5.2	Geminids (5.2)
Turk C	2	5.2	Leonids (2.2), Geminids (3.0)
Du Preez R	1	4.9	Leonids (4.9)
Plomp J	2	4.0	Leonids (2.2), Geminids (1.8)
Van Zyl K	1	3.0	Leonids (3.0)
Gordon D	1	2.6	Leonids (2.6)
Fraser B	1	2.6	Leonids (2.6)
Field R	2	2.5	Leonids(0.5), Geminids (2.0)
Lloyd Evans T	1	2.3	Leonids (2.3)
Erasmus M	1	2.3	Leonids (2.3)
Rambilas O	1	2.0	Geminids (2.0)
Young N	1	1.8	Leonids (1.8)
Poll M	1	1.2	Leonids (1.2)
Cunow B	1	1.1	Leonids (1.1)
Elliot B	1	1.0	Leonids (1.0)
Elliot L	1	1.0	Leonids (1.0)
Nel A	1	1.0	Leonids (1.0)
Liebner S	1	0.8	Leonids (0.8)
Pistorius T	1	0.8	Leonids (0.8)
Venter D	1	0.8	Leonids (0.8)
Kriek N	1	0.2	Leonids (0.2)
Total		150.1 hours	

Summary of Observed Fireballs

There were 22 fireballs reported in 1999. The full reports will be published in a separate MNASSA article but are summarised in the table.

Date of fireball 1999	Name of reporter	Visual magnitude	Time of observation (UT)
February 16	N Young	-5	18h50
March 18	T Cooper	-3	19h16
March 22	T Newman	daylight	—
June 5	C de Villiers	-3	19h29
June 25	Ms Jaume	daylight	15h28
July 2	M Barendse	-4.5	20h15
July 2	R Wade	-4	20h30
July 12	Slotegraaf et al	-4.5	18h20
July 23	G&D Bosch/G Purdon	-7	17h20
August 7	T Green et al	-5	18h20
August 17	S de Clark	-5	21h04
September 17	T Jones	-6	20h21
October 1	T Jones	-4	01h35
October 15	T Jones	-3	01h30
November 17/18	C Turk/T Jones	-5	19h07
November 17/18	R du Preez	-6	01h15
November 17/18	K van Zyl	-3	02h24
December 11/12	C Turk	-4	00h21
December 13/14	A Slotegraaf/I Paul	-3	Not reported
December 14/15	A Slotegraaf/I Paul	-4.5	01h46
December 14/15	B Skinner	-3	00h44
December 14/15	T Jones	-3	00h44

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Summary of Observed Comets

Comet Lee (C/1999 H1) was observed by Tim Cooper, Tony Jones, Danie Overbeek, Trevor Green, Cliff Turk and Peter van Blommestein, and imaged by Andre van Staden and Hugh Lund. The comet reached magnitude 6 during June.

Comet Linear (C/1999 J3) was observed by Cooper, Jones Turk and van Blommestein during September and October when the comet reached magnitude 7.

Comet Lynn (C/1999 N2) was observed by Cooper, Green and Jan Plomp, reaching magnitude 7 during August.

Comet Tempel 2 (10P) was observed by Cooper from August to October as a diffuse object of magnitude 10.

Conclusion

The year in review yielded a satisfying 150 hours meteor observation by 28 individuals,

many of which observed the fine Leonid display. There were 22 fireball reports. Four comets were observed by 9 individuals. The lack of comet observations is largely due to

the high level of cloudy nights during the year. All observers are thanked for their excellent efforts.

OCCULTATION SECTION
B Fraser & M D Overbeek

Once again this report is a combination of the activities concerning lunar occultations and minor planet occultations with the section on minor planet occultations being compiled by Danie Overbeek. And once again the minor planet observations occupy the bulk of the report.

A small group of dedicated observers in Cape Town have made the greatest contribution of lunar occultation observations in 1999 with Peter van Blommestein leading the way with 72 timings. Cliff Turk has mastered the art of predicting reappearances and once again did more reappearances than disappearances - a commendable effort as reappearances are just that little bit more valuable in analysing the profile of the moon, due to their scarcity.

Welcome to two newcomers who were not active in 1998, A Jones and R Bauer, both from Cape Town.

Not a single grazing occultation expedition was reported for the entire year, probably the first time in more than 30 years that this has happened. Although the cloudy weather and the current security situation in the country are contributing factors, one must also ask if perhaps the urge to do useful astronomical work is lacking amongst our members. If this is the case then the efforts of these observers, who use their telescopes for serious observing, are even more laudable. Each one is thanked for his contribution.

Obtaining a reliable time signal is one important requirement for all types of occultation observations and is proving to be a problem for some people, especially those in or travelling to remote areas to do their observations. The director would be very interested in hearing of any innovative solution to this problem, as it would greatly improve the reliability of some observations.

Last years observations are as follows:

Total Lunar Occultations

RM Bauer (5 disappearances)

B Fraser (4 disappearances)

A Jones (24 disappearances)

MD Overbeek (8 disappearances)

B Skinner (3 disappearances)

J Smit (39 disappear., 13 reappearances)

C Turk (25 disappear., 26 reappearances)

P van Blommestein (72 disappearances)

In addition we record the observations of P van Blommestein for 1998, omitted from last year's report, of 50 disappearances.

Danie Overbeek has provided the following summary of minor planet observations.

ASSA/IOTA Planetary Occultation Programme

It was another good year. The minor planet occultation team made a highly successful observation of an occultation of SAO 161848 by 48 Doris. The team consisted of a number of "regulars" augmented by some casual

observers. The following participated during 1999: J Barsby, A Conti, T Cooper, F de Jager, Sonja Enke, T Lloyd Evans, R Field, B Fraser, V Fraser, T Green, M Hanniball, J Hers, T Jones, H Lund, C Mesu, B Monard, D Overbeek, L Pazzi, C Rijdsdijk, J Smit, C Turk, P van Blommestein and W Wyndham.

The writer expresses his sincere thanks to all who helped in this very worthwhile activity.

Special thanks are due to Jan Manek of Stefanek Observatory, Prague who provided prediction updates, based on minor planet positions supplied by the US Naval Observatory, Flagstaff, Arizona. The updates enable us to concentrate on those events which are likely to occur near observing stations.

Thanks are also due to Edwin Goffin and his employer Agfa Gevaert who supplied preliminary predictions. Brian Fraser is thanked for reducing the Doris timings with the help of the "Occult" software provided by David Herald of Canberra.

Thirty-four events were listed for 1999 but actual observations were made in only twenty cases. The rest were not observed due to unfavourable circumstances.

Jan 27, TAC-05 02791 by 132 Aethra: In Pretoria, J Smit had a miss after 2042. Edenvale, Johannesburg Sedgfield and Vanderbijlpark had cloud.

Feb 15, TYC1359 00224 by 17 Thetis: On the Peninsula, T Jones, Cliff Turk and P van Blommestein had dubious misses. In Johannesburg and Pretoria, Hugh Lund and J Smit had misses, J Smit observing an appulse at roughly the predicted time.

Feb 21, TYC0724 00328 by 676 Melitta: In Johannesburg, H Lund had a miss after 1916. Edenvale, Pretoria, Sunninghill Park and Vanderbijlpark had cloud and haze.

Mar 10, TYC0294 00127 by 8 Flora: At Edenvale and Pretoria, D Overbeek and J Smit observed appulses at the predicted time. In Johannesburg, H Lund and J Barsby had misses.

Apr 12, HIP 58741 by 176 Iduna: In Pretoria, Trevor Green had a miss. Bredell had cloud.

Apr 24, TYC5042 00369 by 511 Davida: At Johannesburg, Sutherland, Vredefort, Pretoria, Vanderbijlpark and Windhoek, H Lund, Tom Lloyd Evans, D Overbeek, J Smit, F de Jager and Sonja Enke had misses. Sonja Enke observed an appulse at 00 07 15. Bredell, Sunninghill Park and Durban had fog and cloud.

May 10, TYC7415 00069 by 93 Minerva: At Durban and Bredell, Aldo Conti and Tim Cooper had misses.

May 11, TYC0481 02652 by 483 Seppina: At Edenvale, Johannesburg, Observatory, Pretoria and Rondebosch, D Overbeek, H Lund, Tom Lloyd Evans, J Smit and Case Rijdsdijk had misses.

May 15, TYC6260 01645 by 535 Montague: In Pretoria, J Smit had a miss. Edenvale, Johannesburg and Sedgfield had cloud.

May 24, TAC-17 09136 by 50 Virginia: At Edenvale, Johannesburg and Pretoria, D Overbeek, H Lund and J Smit had misses. Rondebosch had cloud.

May 26, TAC+19 02601 by 103 Hera: At Vanderbijlpark, F de Jager observed from 17 29 40 only and had a miss. Edenvale, Pretoria and Rondebosch had cloud.

Jun 22, TYC0253 00663 by 156 Xanthippe: Misses were reported from Edenvale, Sunninghill Park where there was some cloud, Pretoria and Vanderbijlpark by D Overbeek, B Fraser, J Smit and F de Jager. Rondebosch had cloud.

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Jul 19, TYC5768 00172 by 28 Bellona: At Edenvale, Johannesburg, Sunninghill Park and Pretoria, D Overbeek, H Lund, B Fraser and J Smit had misses.

Jul 21, TYC450 00595 by 184 Dejopeja: At Bredell, Edenvale, Johannesburg and Pretoria, T Cooper, D Overbeek, H Lund and J Smit had misses.

Aug 06, TYC7892 00191 by 1048 Feodosia: From Windhoek, Sonja Enke reported a miss.

Aug 17, TYC0554 00216 by 219 Thusnelda: From Bredell and Pretoria, T Cooper and J Smit reported appulses at about the predicted time. At Harare and Johannesburg, the late Cees Mesu and H Lund had misses.

Aug 19, TYC5229 00023 by 38 Leda: At Bredell, Edenvale, Johannesburg, Pretoria and Rondebosch, T Cooper, D Overbeek, H Lund, J Smit and Tom Lloyd Evans reported misses.

Oct 14, TYC6285 04369 by 48 Doris: Four well distributed chords were obtained by B & V Fraser, T Cooper, F de Jager and D Overbeek. Details have been submitted to MNASSA and IOTA. Simon's Town had cloud.

Oct 14, HIP91758 by 56 Melete: At Bredell, the target star was too low. Rondebosch and Simon's Town had cloud.

Oct 19, TYC1187 00173 by 193 Ambrosia: In Pretoria, J Smit had an appulse at the predicted time. At Rondebosch and Simon's Town, Tom Lloyd Evans and P van Blommestein had misses. Sedgefield had cloud.

Oct 24, GSC 6286 00156 by 48 Doris: Bredell, Edenvale, Johannesburg and Simon's Town had cloud.

Oct 29, TAC+04 00188 by 85 Io: Pretoria had cloud and in Simon's Town, P van

Blommestein "saw nothing".

Nov 12, TYC1326 01717 by 803 Picka: Pretoria and Simon's Town had cloud.

Nov 20, TYC1340 00051 by 683 Lanzia: Pretoria and Simon's Town had cloud.

Dec 02, HIP22021 by 627 Charis: Pretoria, Edenvale and Simon's Town had cloud.

Dec 24, TYC0123 01048 by 238 Hypatia: Bredell, Edenvale, Pinelands and Pretoria had cloud.

Dec 28, TAC+18 01040 by 690 Wratislavia: In Pinelands, Cliff Turk had a miss and in Rondebosch, Tom Lloyd Evans observed a miss at the limit of observability. Edenvale, Johannesburg had cloud and at Sedgefield cloud moved in two minutes before the predicted time.

MD Overbeek (Convener, planetary occultations)

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VARIABLE STAR SECTION
J Hers

If the number of observations was rather smaller than in previous years, this must surely be largely the result of the weather, as many parts of the country experienced an exceptional amount of cloud. Relating my own experience on the southern Cape coast: a beautiful sunny day was almost sure to be followed by mist clouds at sunset, ending any hope of observing a few stars. And apparently other parts of the country were not much more fortunate.

It also remains an unfortunate fact that nearly all variable star observers live in urban centres. And our one observer who lived in a more favourable region (Vanrhynsdorp) decided to give up variable stars in favour of double ones, and as this is also a very important discipline we wish him good luck. In the meantime new observers, especially those living at dark sky sites, are urgently needed. Enquiries from smaller places, such as Niekerkshoop, have been eagerly followed

Observer	Location	Visual	CCD	PEP
T P Cooper	Kempton Park	7		
T Lloyd-Evans	Cape Town	87		
J Hers	Sedgefield	454		
R W Jones	Fish Hoek			463
H F Lund	Johannesburg		88	
C Mesu	Harare	35		
L A G Monard	Pretoria	3 660		
M D Overbeek	Edenvale	12 464		
J A Smit	Pretoria	1 725		
C Turk	Cape Town	264		
C de Villiers	Vanrhynsdorp	74		
S de Villiers	Cape Town			88
S Walsh	Harare	84		
P Wedepohl	Somerset West	210		
N Young	Pretoria	2		
Also observations made by 28 observers in Zimbabwe, kindly forwarded by Simon Walsh		48		
		19 149	88	551
Total observations in 1999:				19 836

up and what remains now is to receive some actual observations. To those in the city the increasing attention that is now being given to the reduction of urban light pollution is of the greatest importance.

But we can have nothing but praise for Win Jones and Fanie de Villiers, who remain the only active AAVSO PEP observers in the southern hemisphere. In spite of serious visual problems, Jones has succeeded in increasing his output over that of last year by no less than 50%, a truly astonishing performance. The PEP observations have been regularly sent to Howard J. Landis, the Chairman of the AAVSO Committee for Photoelectric Photometry.

As in previous years, close and cordial contact has been maintained with Janet Mattei, the Director of the AAVSO in Cambridge, USA, as well as with Frank Bateson, the Director of the Variable Star Section of

the RAS of New Zealand. We are greatly dependent on the star charts produced by these two organisations, and it is satisfying to note that the quality of these charts, and the magnitudes shown are being continually improved.

Finally it is with great sorrow that I have to mention the loss of two of our most valuable observers. J L Jooste, of Reitz, passed away in 1998, and unfortunately news of his decease was only received very much later. "Oom Jannie" was not a very active observer but he went out of his way to introduce astronomy to high school students, encouraging many of them to observe variable stars. Cees Mesu, for much of the time our only active observer in Harare, passed away in 1999. Both of them will be greatly missed.

Observations made during 1999 and received from observers in southern Africa and summarised in the table on the previous page.

REPORT OF THE ASSA ENDOWMENT TRUST FOR 1999

During the calendar year 1999 the Trust received donations of R2902-38 which increased its capital to R16058-42.

Income from investments amounted to R5200-66 from which grants totalling R2500-00 were made, leaving a nett increase of R2700-66 in disposable funds which then stood at R24783-27.

The full year-end accounts appear overleaf.

Members and Centres are reminded that the Trust will consider assisting with funding of worthwhile projects. Initial enquiries should be motivated in writing to the Trust Secretary, 20 Nerine Ave, Pinelands, 7405, or email to cliffturk@yebo.co.za.

Cliff Turk, Secretary,
ASSA Endowment Trust.

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ASSA Endowment Trust (ASSET)

Balance Sheet as at 31st December 1999

1998		R - c
	<u>Trust Capital:</u>	
	12 806.04	Balance at 31st December 1998
	<u>350.00</u>	Donations received during the year
	R13 156.04	<u>2 902.38</u>
	120.00	Sundry Creditors
		1 648.37
	<u>Distributable Reserve:</u>	
	<u>22 082.61</u>	Balance of Income and Expenditure Account
	<u>R35 358.65</u>	<u>24 783.27</u>
		<u>R 42 490.06</u>
	<u>Represented by:</u>	
	<u>Investments:</u>	
	24 000.00	ABSA Bank Ltd. Fixed Deposits
	1 180.75	ABSA Bank Ltd. Equity Shares (at cost)
	133.50	Sundry Debtors
	10 044.40	ABSA Bank Call A/c
	<u>Nil</u>	Cash
	<u>R35 358.65</u>	<u>27 000.00</u>
		<u>1 387.57</u>
		<u>2 874.00</u>
		<u>11 171.74</u>
		<u>56.75</u>
		<u>R 42 490.06</u>

Income and Expenditure Account for the year to 31st December 1999

	<u>Income</u>	
3 490.58	Dividends and interest received	5 200.66
	<u>Deduct Expenses</u>	
120.00	Grant to Natal Midlands	1 000.00
<u>1 620.00</u>	Grant to ASSA	<u>1 500.00</u>
R 1 870.58	Excess of Income for the year	R 2 700.66
<u>20 212.03</u>	Excess of Income from previous year	<u>22 082.61</u>
<u>R 22 082.61</u>		<u>R 24 783.27</u>

Notes:

ABSA Fixed Deposits:	
9.75% p.a. maturing 8 Oct 2000	R 15 000.00
13.00% p.a. maturing 29 Apr 2000	R 12 000.00
ABSA Bank Ltd. Equity Shares (cost)	<u>R 1 387.57</u>
	<u>R 28 387.57</u>

PROCEEDINGS OF THE ANNUAL GENERAL MEETING 2001

Minutes of the Annual General Meeting held in Cape Town on July 25th 2001.

1. Opening

The meeting held at the SAAO was attended by 36 members. The President Mr Peter van Blommestein welcomed everyone and requested that all rise so that a minute's silence could be observed to remember prominent members who had died during the past year, namely Jack Bondiotti, Alan Cousins, Harold Krumm and Danie Overbeek.

2. Apologies

Apologies were received from the following members: Drs D Kilkenny and T Lloyd Evans, and Messrs C de Coning, A Jones and C Rijdsijk.

3. Minutes of the previous AGM

The minutes of the 2000 AGM as published in *MNASSA* were approved by the meeting, proposed by MA Gray and seconded by C Turk.

4. Matters Arising

The Hon Secretary reported that no matters arising had been sent to him.

5. Report of Council

The report of Council was read to the meeting by the Hon Secretary Brian Skinner.

6. Reports from the Observing Sections

The Comet and Meteor section report was read by Mr MG Soltynski on behalf of the Director, Tim Cooper. The Computing section report was not made available by the Director, Tony Hilton, The Deep Sky report was not made available by the Director, Auke Slotegraaf. The Occultation section report

was read by Mr C Turk on behalf of the Director, Brian Fraser. The Variable Star section report was read by Mr MA Gray on behalf of the Director, Jan Hers. The Historical Section report was read by Mr D Field on behalf of the Director, Chris de Coning. The Double Star section report was read by the Director, Chris de Villiers. No reports were received from the Imaging or Solar sections.

7. Financial Report

The unaudited financial report was tabled by the Hon Treasurer, Colin Gray. This indicated a surplus of some R10 000 at year end.

8. ASSA Endowment Trust

The ASSET Secretary, Mr C Turk tabled the Trust's annual report on behalf of the Trustees.

9. Election of Auditor

It was decided to re-appoint Mr R Glass of Horwith Zeller Karro as Hon Auditor. Proposed by Mr C Gray and seconded by Mr C Turk. Adopted unanimously.

10. Presentation of Special Awards

The following persons were awarded with Life Membership in recognition of their work for the ASSA over many years and presented with certificates: Prof Michael Feast, Colin Gray and Cliff Turk and Dr Tom Lloyd Evans who was not able to attend as he has retired to his native Scotland.

11. Election of Office Bearers.

The following nominations were received for positions on Council for the year 2001/2002, proposed by Mr C.R.G. Turk and seconded by Mr M.A. Gray.

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President: Dr D. M. Kilkenny
Vice Presidents: Mr P. van Blommestein
Mr T. P. Cooper
Hon Secretary: Mr B. Skinner*
Treasurer: Mr C. D. Gray
Members: Miss P. Booth
Mr T. W. E. Budge
Mr C. Rijdsdijk
Mr B Skinner

There were no objections expressed, so the above were duly elected.

12. Presidential Address

The Presidential Address was delivered by Mr Peter van Blommestein on the subject of the history of cometary observations in South Africa, beginning with Jan van Riebeeck and ending with the efforts of the ASSA Comet & Meteor Section last year.

13. Closing

There being no further business, the meeting was closed at 21:10.

*Mr Skinner had resigned the position but will act as caretaker.

REPORT OF COUNCIL 2000 - 2001

During the past year we lost four ex-Presidents: Alan Cousins (1944/5), Harold Krumm (1950/1), Jack Bondietti (1984/5) and Danie Overbeek (1961/2 & 1998/9). They all served on Council for many decades.

Council met on five occasions since the last AGM with an average of 11 persons present at meetings.

1. Membership

Total membership was 137 as at 1 July 2001 compared with 188 a year earlier. Membership is still R80.00 per annum. This year saw the adoption of a lapel badge and all members are encouraged to wear these to increase public awareness of the ASSA.

2. Finance

The Honorary Treasurer, Mr Colin Gray, is thanked for administering the finances for yet another year. His astute management has been responsible for the healthy state of our finances. There have also been members who have again made donations to the ASSA and to the ASSA Endowment Trust. These

contributions are gratefully received and the donors' names have appeared in *MNASSA*.

3. Business Manager

Mr Cliff Turk continued as business Manager this year. Sales of *MNASSA* to overseas subscribers are a source of dollar income for the Society and have covered the total cost of the annual *MNASSA* production.

4. *MNASSA*

Mr Auke Slotegraaf has continued as Editor for the last year. *MNASSA* flourishes because of his efforts. Members are reminded that *MNASSA* is the only place where they can find reports of their and other amateurs' work and that of other observers with similar interests.

5. Annual Handbook

Miss Pat Booth has continued as Editor of the annual *Handbook* and is assisted by the Directors of the observing sections. Cliff Turk distributes the *Handbook* to destinations all over the world. Council

extends its thanks to Pat and Cliff for their work on the *Handbook*. It is intended that the *Handbook* format be revised in the near future.

6. Honorary Membership

Council has awarded Drs Michael Feast and Tom Lloyd Evans and Messrs Colin Gray and Cliff Turk honorary membership in recognition of their years of dedicated service to astronomy and Council. Dr Feast served as President as far back as 1957/8 and is currently Emeritus Professor of Astronomy at UCT. Dr Lloyd Evans was President in 1991/2 and has just retired from the SAAO. Mr Gray has identified and solved the finances of the Society, whilst Mr Turk has had an impact on virtually every aspect of amateur astronomy in South Africa including having served as President of the Society in 1986/7.

7. Observing Sections

The Double Star Section has started its observing activities and encourages interested members to make contact and contribute to its activities.

The Imaging Section, brought into being during the year 2000 has not seen much activity over the past year. Society members were encouraged to participate in an Astrophotography competition but very few showed any interest, resulting in this competition being cancelled.

The Dark-Sky Section awakens in February and March each year before hibernating for the rest of the year. It urgently needs a director to co-ordinate its activities for the whole year.

The dormant Solar Section also needs a Director. Perhaps the recent eclipse has awoken one?

8. ASSA Scholarship

The Astronomical Society of Southern Africa Scholarship has been established. It is available in support of second and third year undergraduate studies in astronomy subjects only. Interested members can make enquiries to Council.

9. Acknowledgments

Council thanks the following persons or institutions for assistance during the past year:

Dr Robert Stobie, Director of SAAO, for the continued use of meeting facilities at SAAO. Directors of the Observing Sections for forwarding the results of observations to international Astronomical bodies.

The local Centres who took astronomy to the general public all over the country.

Last, but not least, the Cape Centre for hosting the Annual General Meeting this year.

10. Finally

Council wishes to thank anyone else who contributed to the work of the Society this year and whose name has unintentionally been omitted from this report.

(Brian Skinner, Hon. Secretary)

COMET AND METEOR SECTION
T P Cooper

1. Meteor Showers

The total observing time for meteor showers in 2000 is the lowest in many years. This is largely attributable to continued poor weather, especially over the Highveld during the years peak periods, especially from October to December. Additionally in 2000, the author was unable to observe the Virginid complex as usual, with February entirely lost to cloud, and March and April badly affected. Even the eta Aquarids in May, normally a clear period, were badly affected in 2000.

With such sporadic coverage, no significant results were obtained. In 5.9 hours on the Virginids, Cooper observed 48 meteors of which 40 were plotted for radiant determination. These results are part of the International Meteor Organisation's ongoing Virginid project. With regard to the cloud-

affected eta Aquarids, Cooper was fortunate on the mornings of May 6 and 7, observing 42 and 34 eta Aquarids respectively in 2 hour sessions. Cliff Turk reported that on the nights of June 30/July 1 and July 1/2 he observed a number of meteors which appeared to radiate from about 10 degrees south of Corona Borealis. Over a period of just over 9 hours he observed 31 meteors (no differentiation in the total between potential shower meteors and sporadics was attempted), mainly medium fast, yellow/white and magnitude 1-4. The given radiant position would be close to the star alpha Serpentis. Since I cannot find any record of activity from such a radiant in the past, a watch should be kept on this area in future. Cliff also managed a small number of hours on the Orionids and moon-affected Geminids, including 3 fireballs on the night of December 13/14.

Summary of observed meteor showers

Observer	Shower	Hours	Total observing time per observer		
Cooper T P	Virginids	5.9	Observer	Number of showers	Total observing time (hours)
	eta Aquarids	11.0			
	Leonids	0.9			
Turk C	delta Pavonids	1.2	Cooper T	3	17.8
	Unknown	9.3	Turk C	4	14.7
	Orionids	2.2	Jones T	1	3.5
	Geminids	2.0	Skinner B	1	3.4
				Begbie M	1
Jones T	Taurids	3.7	Total		40.1
B Skinner	Taurids	3.4			
M Begbie	Leonids	0.5			
Total		40.1			

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PROCEEDINGS OF THE ANNUAL GENERAL MEETING 2001

2. Fireballs

2000 saw a total of 12 fireball reports, summarised as follows. The full details will be published in a separate *MNASSA* article.

3. Comets

As was the case with meteors, conditions in 2000 were hardly conducive to observing comets. Only comet Linear (C/1999 S4) was observed, visually by Mike Begbie and Tony Jones, and CCD imaged by Andre van

Staden. The comet had been predicted to become quite bright, and eventually reached magnitude 6. However, just as it was becoming well placed for observation just after perihelion, it disintegrated, and the Director failed to locate the now-hazy, diffuse coma in the smoky winter Gauteng skies.

No other reports of comet observations were received. One can only pray that the year 2001 brings clearer observing conditions.

Date of fireball	Name of reporter	m _v	UT
2000 January 14	Cliff Turk	-3.5	19:32
2000 February 5	Marianne Barendse	-3	20:35
2000 March 8	Peter van Blommestein	-5?	04:15
2000 March 9	Sven Wesemann	-6	03:22
2000 May 8	Tim Cooper	-4	02:59
2000 June 6	Rudolph Brown	-3	21:12
2000 June 29	Auke Slotegraaf & Ivor Paul	-7	18:13
2000 July 27	Tony Jones	-4	23:16
2000 November 4	Cliff Turk	-4	19:35
2000 December 14	Cliff Turk	-3.5	00:25
2000 December 14	Cliff Turk	-5	00:40
2000 December 14	Cliff Turk	-3	00:54

OCCULTATION SECTION

B Fraser & M D Overbeek

In recent years the focus of occultation observers has shifted from lunar occultations to minor planet occultations. This trend continued in the year under review with the number of lunar occultations observed and the number of observers showing a decline.

Once again the Capetonians have contributed most of the lunar occultation timings and they are again thanked for their efforts. For the second consecutive year no grazing occultations were observed. One

hopes that this will not be a permanent arrangement.

Danie Overbeek must be thanked and commended for his continuing motivation of the small group of minor planet observers around the country and for supplying prediction updates and newsletters that help these observers to make successful observations.

Lunar observations were contributed by the following observers:

Cliff Turk (38 disappearances, 12 reappearances)

Peter van Blommestein (45 disappearances)
Brian Fraser (3 disappearances)

ASSA/IOTA Planetary Occultation Programme

For the third year running, observers have succeeded in defining profiles of minor planets. The year produced two multi-chord and two single chord events. Thanks are again due to Edwin Goffin and Agfa Gavaert of Mortsel, Belgium for predictions, the US Naval Observatory at Flagstaff Arizona and Jan Manek of Stefanek Observatory, Prague for producing shadow path updates. These updates are invaluable in helping observers to focus on events which are likely to produce results. Brian Fraser, Director, Occultation Section is thanked for producing profile diagrams, using the "Occult" software developed by David Herald of Canberra, Australia.

Against the successes, one must offset our continued failure to interest KwaZulu Natal and Free State amateurs in the fascinating and useful activity of observing planetary occultations. These amateurs occupy strategic positions and can, with a little effort, do much to improve our knowledge of the sizes and shapes of minor planets.

Jan 15 0500 TYC 5548 00854 occulted by 20 Massalia: Misses were observed by Cliff Turk, T Lloyd Evans and P van Blommestein in Pinelands, Rondebosch and Simon's Town. Bredell, Edenvale and Johannesburg had cloud.

Feb 15 2057 TYC 2412 00074 occulted by 760 Massinga: A dubious miss was observed by T Lloyd Evans in Rondebosch. Bredell, Edenvale and Sedgefield had cloud.

P van Blommestein in Simon's Town had a light sky.

Feb 22 0551 HIP 78094 occulted by 89 Julia: Edenvale and Pinelands had cloud. T Cooper of Bredell was away.

Feb 27 0244 TYC4945 00550 occulted by 70 Anahita: T Lloyd Evans and P van Blommestein of Rondebosch and Simon's Town had misses. Edenvale, Waverley and Sedgefield had cloud.

Mar 02 2307 TYC1864 01114 occulted by 554 Peraga: Edenvale, Simon's Town and Waverley had cloud.

Apr 04 2130 TAC+03d 05659 occulted by 619 Triberga: T Lloyd Evans and P van Blommestein observed misses from Rondebosch and Simon's Town. Bredell, Edenvale, Johannesburg and Waverley had cloud.

Apr 05 0241 TYC6293 02427 occulted by 40 Harmonia: Impossible conditions were reported from Bredell, Edenvale, Johannesburg and Waverley.

Apr 16 0354 TYC6333 01692 occulted by 140 Siwa: Bredell, Edenvale, Simon's Town and Waverley had cloud.

Apr 16 1826 TAC+03d 05564 occulted by 252 Clementina: Bredell, Edenvale, Simon's Town and Waverley had cloud.

Apr 28 0356 TYC8359 03285 occulted by 36 Atalante: Johannesburg had cloud.

May 08 0400 TAC-00d 06886 occulted by 601 Nerthus: Misses were reported by D Overbeek, J Smit and P van Blommestein from Edenvale, Waverley and Simon's Town.

May 10 0035 GSC5606 00443 occulted by 121 Hermione: Weather in Gauteng was impossible. No other reports were received.

May 22 2008 HIP75185 occulted by 5 Astraea: Observations by Magda Streicher of Pietersburg and Albert Brakel of Canberra Australia were combined to form a multi-

PROCEEDINGS OF THE ANNUAL GENERAL MEETING 2001

chord observation. The observation is described in *MNASSA*, 59, 58.

Jun 11 1935 TAC+04d 07462 occulted by 345 Tercidina: D Overbeek and J Smit of Edenvale and Waverley obtained good chords. The observation is described in *MNASSA*, 59, 58. In Vanderbijlpark, F de Jager had a miss.

Jun 15 2322 GSC6852 04074 occulted by 704 Interamnia: Edenvale had cloud. No other reports received.

Jul 02 1833 TYC0286 00891 occulted by 52 Europa: T Cooper, D Overbeek, J Smit and P van Blommestein had misses in Bredell, Edenvale, Waverley and Simon's Town. Pietersburg had rain.

Jul 07 0600 TYC1201 01624 occulted by 230 Athamantis: Simon's Town had rain.

Jul 11 0100 TYC5772 00802 occulted by 476 Hedwig: Magda Streicher and B van Winsen of Pietersburg and Midrand had misses. Simon's Town had cloud.

Jul 11 0507 TYC6917 00515 occulted by 106 Diana: Cliff Turk, D Overbeek, T Lloyd Evans and J Smit of Pinelands, Edenvale, Johannesburg and Waverley had misses.

Jul 16 2208 TYC6281 01261 occulted by 850 Altona: P van Blommestein in Simon's Town had a miss. Three other observers experienced troubles of various kinds.

Jul 17 0109 TYC5231 00830 occulted by 1254 Erfordia: J Smit of Waverley had a miss. Two other observers had problems.

Jul 18 1932 HIP81159 occulted by 856 Backlunda: The entire Cape coast where an occultation could have been seen, had cloud.

Jul 19 1936 GSC6845 00716 occulted by 704 Interamnia: D Overbeek and P van Blommestein of Edenvale and Simon's Town had misses. Sutherland where T Lloyd Evans was observing had cloud.

Jul 28 0525 TAC+18d 00713 occulted by 16 Psyche: B van Winsen had a disappearance at UT 03 24 51.5 and a reappearance at UT 05 24 58.8. Problems were experienced at Edenvale, Nigel, Waverley and Sutherland.

Aug 09 0415 GSC0599 01001 occulted by 88 Thisbe: D Overbeek, B van Winsen and J Smit observed appulses earlier than predicted. This agrees with Jan Manek's update which was unfortunately received too late to alert observers.

Sep 03 0029 HIP15772 occulted by 148 Gallia: Misses were observed by T Cooper, D Overbeek, Dave Gordon, J Smit and F de Jager at Bredell, Edenvale, Frankfort, Waverley and Vanderbijlpark.

Sep 21 0405 TAC+01d 00912 occulted by 412 Elisabetha: In Rondebosch, T Lloyd Evans had a dubious miss. Waverley had cloud.

Oct 04 2325 PPM 722716 occulted by 135 Hertha: In Pinelands, Long E18 20 52.2 Lat S33 56 27.6, alt 15m Cliff Turk had a disappearance at UT 21 23 03.1 and a reappearance at UT 21 23 13.6. Cliff is the first amateur south of the Vaal River to observe a definite occultation in recent years. Bredell, Edenvale Waverley and Sedgfield had cloud.

Oct 6 TYC 2375-02899-1 occulted by 31 Euphrosyne: Cloud and haze were experienced all over South Africa.

Oct 09 2251 TYC6272 02170 occulted by 704 Interamnia: Edenvale had cloud.

Oct 12 0148 TAC-02d 00573 occulted by 235 Carolina: An update from Jan Manek placed the event south of South Africa. Edenvale and Waverley had cloud.

Nov 23 1950 TYC5798 00435 occulted by 3 Juno: In Waverley, J Smit observed an appulse at the predicted time. It was too light for P van Blommestein in Simon's Town.

DOUBLE STAR SECTION
C de Villiers

1. Observations

The past year has not been very fruitful with respect to observations. Due to adverse observing conditions at Observatory (where I had planned to carry out a regular observing programme with the McClean) as well as time constraints due to work and studies, no worthwhile observations were made. Nor were observations received from other observers who had shown initial interest.

2. Projects

The following projects were initiated and have been completed or are in the process of being completed:

2.1. Speckle camera

A digital camera, based on an active-CMOS image sensor, has been designed for the purpose of measuring close double stars by means of the technique known as speckle interferometry. Astronomers at the US Naval Observatory have been very helpful in supplying information for this project. A video tape with speckle images of a number of double stars, as well as the reduced data for these stars, were provided as reference data for developing software for the proposed speckle programme. (Status: I am hoping to complete the camera after the October examinations and before the start of the 2002 academic year.)

2.2. Software

A Windows-based utility program was written to assist observers in the task of extracting suitable double stars for observation from the Washington Double Star catalogue. A number of observers have requested a copy of this program, which is offered free of charge. (Status: Completed,

but an updated version, with additional features, will be released in 2002.)

2.3. Observer certificates

A document that outlines the requirements for obtaining observers' awards for double star work, has been prepared. (Status: Completed.)

2.4. ASSA Double Star Observer's Handbook

Work was started on a Double Star Observer's Handbook in 2000. The handbook will cover all aspects of double star observing, from casual observing with binoculars or small telescopes, to more advanced work. (Status: Nearly completed.)

2.5. CD-ROM

A CD-ROM that will contain the following, is being compiled:

- The 2001 Washington Double Star catalogues, both the standard catalogue and the neglected doubles catalogue.
- A Windows compatible program for extracting data from the WDS.
- ASSA Double Star Observer's Handbook.

The idea is to make this CD-ROM available free of charge to ASSA members who are interested in observing double stars, thereby hoping to encourage more observers to become active in this field. (Status: The CD-ROM will be available after completion of the handbook, which is the only outstanding item.)

3. Expenses

To date no refundable expenses have been incurred.

Presidential Address

From the earliest times of written history here in the Western Cape, the residents have been interested in the natural phenomena around them; the sky, the wind, sea, flowers, animals and mountains. Commander van Riebeeck reported in his daily journal:

1652 December 17th: "At night about 9 or 10 o'clock saw to the E.S.E., southward from the head of the giant, about 80 degrees above the horizon, a strange star with a tail: the tail extending northwards right on to the knee of the giant, and the head mostly to the south, about 10 degrees away."
[He called Orion the giant]

December 18th "Again saw the star with the tail in the same position as yesterday."

December 20th "Saw the star with the tail, now in the N.E., northwards from the belt of the giant, about 60 degrees above the horizon."

December 24th "In the evening we again saw the star with the rail. It had travelled right to the N.N.W. of us

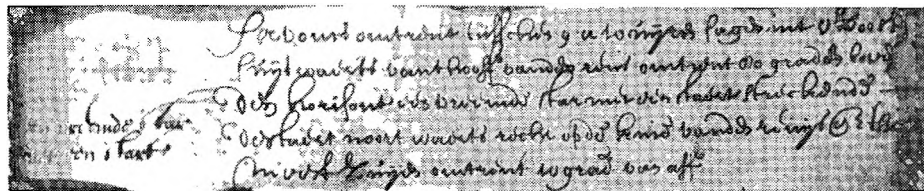
about 50 degrees above the horizon, with the tail a little more dim than before – pointing to E.S.E.; its significance is known to the Lord."

This comet was observed and recorded by the astronomer Hevelius of Danzig, who first observed it three days after Van Riebeeck. Hevelius also calculated the elements of its orbit. The comet had a double nucleus and was as bright as the Moon, so was well known and discussed in Europe. It is good to know that there was confirmation of Van Riebeeck's observation by another observer. We all require this when making and recording observations.

Van Riebeeck's observation of a comet was followed by Commander Z. Wagenaar's report:

1664 December 15th: "About midnight, with a sky partially clouded, we all here saw a star with a darkish ray or tail, which it is said showed itself much more clearly and distinctly about 3 o'clock when it was near day: the star rose in the East and the tail pointed directly North."

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Jan van Riebeeck's record in his Journal of the comet of 1652. Reproduced from McIntyre, D. (1949) *Comets in old Cape Records* Cape Town: Cape Times Limited.

This comet's passage was reported by Daniel Defoe in his "Journal of the Plague Year", and that it foretold "a heavy judgement, slow by severe, terrible and frightful, as was the Plague."

The next comet report was of Halley's comet by Simon van der Stel:

1682 September 8th: "Between 6 and 7 in the evening a comet was seen to the W.N.W. about 6 degrees above the horizon. The tail pointed to the East and was not so large as the comet seen in Holland in 1680 and the beginning of 1681, which had the tail pointing upwards, but the star itself is brighter and larger."

The last report was on September 24th 1682.

There are many subsequent reports of comets in 1686, 1689, 1695, 1733, 1742, 1830, 1835 Halley's on September 1st, and Enkes on September 13th, 1836, 1843, up to the present time. There reports were made and recorded and passed on so that others were able to make use of them, illustrating that astronomical reports have been made from the earliest times of settlement in the Western Cape.

In the different sections of ASSA, members makes observations, which are passed on to the Directors who yearly submit reports for publication in *MNASSA*, which is read all over the world. There Reports have been read this evening.

I know that there are many members who never make observations – or if they do, they are not passed on as they are not members of a Section. Often telescopes are completed after many months of work – or are purchased at great expense – but after a time, not used. There was an advertisement for the

sale of a commercial Cassegrain 8-inch telescope (complete) in the early 1990s for R 4,000, but recently the same size was offered for R 27,000 due to the sinking Rand. After making such an investment it is hard to imagine why reports of observations are not sent in by the owner. Everybody should be encouraged to join a Section. Even members without optical aid can do observations of meteor showers, which are appreciated by the director if he receives them.

Recently I was phoned by Mr Salaam Cader of Simon's Town whose friend reported seeing an aurora beyond Cape Point while fishing at Strandfontein on Wednesday 12th April 2001 at 21:00. Famous recorded reports were "The Zodiacal Light 7pm September 1843, The March from Heerenlogiments Berg to the Oliphants River", and "The Zodiacal Light 7pm September 1844 on the Cape Flats". Both are by the astronomer Piazzzi Smyth.

I have to quote from a favourite astronomer and author of mine, J B Sidgwick on this topic:

"The first milestone is reached when the amateur realises that the armchair is no place to study astronomy and he determines to buy himself some sort of telescope in order to see things for himself.

"Then will follow a period – which can afford to be at least as long as a year and will probably be longer – during which he 'sight-sees' over the expanse of the night sky. This may at the time appear to him to be primarily a pleasurable and exciting exploration, more or less without direction, but he is in fact laying the foundation of that firsthand familiarity with the night sky,

which is one of the characteristics of the amateur astronomer, and also one of the most valuable components of his mental equipment.

“Sooner or later two realisations will be borne in on him; that he has exhausted the potentialities of his small telescope [and that his experience] is crystallising into an interest directed upon one specific branch of the subject,”

and that he needs a larger and more suitable telescope. If this does not happen, then the telescope is used less and less until it is not used at all, and so another potential observer is lost.

I am indebted to Mr Danie Overbeek who instructed me to send in my observations.

In South Africa, we have had professional astronomers who have been able to assist the amateurs for a very long time.

One hundred years after the arrival of Commander van Riebeeck in 1652, now under the Governorship of Ryk van Tulbagh, the French Royal Academy of Science decided to send Abbe N de la Caille to the Cape to: determine the actual longitude of Cape Town; plot the southern sky; measure the length of a degree of longitude as a check on the shape of the Earth; and to determine the exact position of Mauritius and Reunion.

He lived in the house of Mr Bestbier in Strand Street where he set up his observatory. There was a plaque on the wall of a building which used to mark the spot. Abbe de la Caille made a survey of the southern stars which was completed in only a year in August 1752, adding 9450 new stars (which are not visible in the northern hemisphere) to Halley’s list

of 350 stars. He later published a star catalogue of 400 of the brightest stars observed and reduced with the utmost care, which was far superior to any predecessors work, as well as calculating accurately the distance of the Moon from the Earth.

Abbe de la Caille measured the arc of the meridian from Cape Town to Aurora. But he did not measure the deflection caused by gravity pulling the plumb bobs towards Table Mountain, Kapokberg and Riebeeck Kasteel, which caused errors in the results of his triangulation.



The Abbe Nicolas de Lacaille (1713–1762). Reprinted from McIntyre, D. (1951) *An Astronomical Bi-centenary: The Abbe de Lacaille's Visit to the Cape, 1751-1753.*

CENTRE REPORTS

Harare Centre

Minutes of the Annual General Meeting held on 25 July 2001 at the Prince Edward School, Harry Robinson Lecture Theatre.

1. Opening

The Chairman, Mr. S. Walsh opened the meeting at 18:15 and welcomed the members present.

2. Apologies

Forty-six members were present. Apologies were received from Mrs. C. Mendis, Miss. V. Sommerville, Mr. D. Caton, Mr. R. Osborne, Mr. E. Makonese.

3. Minutes of the previous AGM

Some sections were read by the Secretary, Mr. A. Suleman.

4. Matters arising

Corrections noted: Mr. Begbie was an honorary member of ASSA and not the Council. The correct spelling of two names: Pringle-Wood and Capelluto. There were no other matters arising.

With these corrections, the acceptance of the minutes was proposed by Mr. D. Grossmith and seconded by Mr. F. Wilkinson.

5. Treasurer's report

In the absence of the Treasurer, the Chairman gave a brief report on the finances. A complete statement would be presented to the members at the August meeting. The CABS account had a balance of \$27 649.61 of which about \$2 400 was for posters for Dr. F. Diego.

The cost of producing TNCN was about \$40 per copy. With six issues and six monthly notices and postage at \$8.00, the cost of these

was \$360 per annum. In view of this the current subscription of \$200 had to be reviewed. The centre does operate on a cost recovery basis and the 'free' tea/snacks and venue meant that the subscriptions could be kept relatively low. Sending information via e-mail would be cost effective but not many had this facility. TNCN could be collected at meetings and the new committee would look into this. A joining fee would not be implemented as the Centre is trying to encourage the public to join. The subscription amount could be reviewed after six months but it was felt that the administrative load (reminders and receipting) would not be worth the effort.

Although the Centre was not going to raise money for the Cees Mesu Trust Fund through subscriptions, any accumulated surplus would eventually be transferred. The current surplus was the result of funds raised by the solar eclipse events.

A box for donations towards the tea would be considered by the new committee but it was pointed out that Prince Edward School was very happy to have the Centre use its facilities and that a book prize was awarded annually to the best astronomy student at the School.

After some discussion the following was agreed to by a unanimous vote:

Surplus funds would be transferred to the Trust Fund. The subscription for the year 2001/2002 would be \$500 for members, \$250 for students and \$100 for pensioners/non earners.

6. Chairman's report

The Chairman read his report and its adoption was accepted after being proposed

CENTRE REPORTS

by Mr. E. Capelluto and seconded by Mrs. Y. Walsh. There were no matters arising.

7. Election of committee

The Chairman explained the procedure for the elections and informed the members present that some members of the previous committee were prepared to be re-elected.

The following were proposed by Mr. G Rausch and seconded by Mr. T Croyden:

Simon Walsh, Abdulla Suleman, Roy Osborne, Mike Begbie, Dave Pringle-Wood, Gil Rausch, John Winterbottom, Hazel Chinn, Brendan Conway, John Mussell, Paul Robinson, Lynn Morris.

Mr. P. Morris was proposed by Mr. B. Conway and seconded by Mr. G Rausch.

There was an unanimous decision to accept the new committee members.

Chairman:	M. Begbie
Vice Chairman:	S. Walsh
Secretary:	B. Conway
Treasurer:	R. Osborne
Membership Secretary:	G. Rausch
Curator of Instruments:	G. Rausch
Librarian:	J. Winterbottom

Public Relations Officer: D. Pringle-Wood

Council Representative: M. Begbie

Members: H. Chinn, L. Morris

P. Robinson, A. Suleman

8. AOB

No dark site had yet been identified. The Trust Fund had raised \$480 000 and this would suffice to purchase a telescope mirror and the optics which would have to be imported.

The membership was about 80 but had risen to close to 100 because of the interest in the solar eclipse.

The Chairman made a presentation to Mr. G Hofer who was leaving the country. The Chairman acknowledged his contribution to the Centre – the talks given, the photographs taken, the making of a telescope, developing and running the website, being Vice Chairman, his valuable advice and standing in at short notice.

9. Closure

The Chairman closed the meeting at 19:14.

Garden Route Centre

At the Garden Route Centre AGM held at St Francis Church, Swallow Drive, Sedgefield on Saturday 2001 July 7 the following new Committee was elected for 2001/2002:

Chairman:	Jan Hers
Vice-Chairman:	Peter Henderson
Secretary/Treasurer:	Robin Drew
Newsletter:	Jack Koen
Librarian:	Geoff James

Council Rep: Peter Smits
Secretarial Address: P O Box 2272,
Knysna, 6570. Tel: 044-382-5912 E-mail:
robind@pixie.co.za

Meetings are held on the first Saturday of each month at 15:00 in the hall of St Francis Church, Swallow Drive, Sedgefield. We at present have a paid-up membership of 44 (28 single members and 16 family members).

Durban Centre – Chairman's Report

Tonight marks the end of the current year's affairs for the July 2000–June 2001 period of the Durban Centre of the ASSA.

I am taking this opportunity to extend a warm welcome to all new members – may you have a long, happy and fruitful association with the Durban Centre.

First of all, I would like to thank the Committee and everyone else who has been involved in helping to achieve our objectives and in the day-to-day running of the Centre for the past year, and to record a special vote of thanks to Neptune Software for continuing to sponsor our website and especially to Kaine Varley, our webmaster, in England at present, who keeps our web page up to date.

I will now highlight the year's happenings which have been varied and interesting.

July – AGM; August – “Astronomy in New Zealand” by Tony Bray; September – videos: “The Universe” and “Hubble Telescope”; October – “Aspects of Relativistic Cosmology” by Sunil Maharaj; November – “Sunspots and Spectrography” by S Thomson; December – Christmas braai around pool and Observatory; January – “Ocean Tides: Their effects and oddities” by Dennis Sargeant; February – “Near-Earth Objects” by Ooma Rambilas; March – “Antarctica” by Sarah Buchner; April – General quiz; May – “Why is Earth different from the other rocky planets?” by Prof Michael Watkeys; June – video: “Voyager II Spacecraft”.

Our web page attracts quite a few responses from around the world. Quite a few have been in connection with the eclipse for this year and a couple for next year.

The *Ndaba* newsletter which is currently done by Belinda Gordon is now being sent

to more and more members as they all become digitally connected. This is a great saving in running costs to the Centre and thus helps to keep our subs affordable.

Since our faithful and long-standing member Ray Field has retired from the workplace, the Friday viewing evenings have ceased to happen due to his mother's ill health, so we would welcome any volunteers to assist the committee in keeping this tradition going, especially for new members to enjoy as well as guests or anyone interested in astronomy.

Thanks are expressed to Stan Kivell for his continuing work on the folded Newtonian telescope currently under construction.

To the donors of various bits and pieces (of books or equipment), we also extend our deepest thanks.

I would like to thank the Principal, Mr Tony Akal and Vice-Principal, Mr Glen Hogg, of Marist Brothers College, on behalf of the Society for allowing us to be here for another year – he are most grateful to have the use of this wonderful, convenient facility.

In conclusion, to all the members of the Committee my personal thanks for your support and commitment to the affairs of the Centre during my term of office. Without their dedication (and the participation of you, the members), we would not enjoy the fellowship of the active Centre that has developed over the years.

MINUTES OF THE AGM

Minutes of the Annual General Meeting held at SAAO, Cape Town, on 2002 July 31.

1. Opening

Thirty members were present and were welcomed by the President Dr D M Kilkenny who called for a moment of silence in memory of Dr Bob Stobie and the Rev Edward Carey who had died during the past year.

2. Apologies

Apologies for absence were received from the following members: Messrs Case Rijs-

dijk, Tim Cooper, Maciej Soltynski, Dany Duprez, Mike Christianson and all Council members from other parts of the country.

3. Special thanks

The President called on Mr Rupert Hurly who thanked Mr Cliff Turk who had taken on the duties of Secretary at very short notice and had obtained the reports of the Directors of all except one of the various sections, had drawn up the agenda for this AGM and had written the report of Council for the year now ending.



Present at the AGM was the outgoing President Dr Dave Kilkenny (above), Mr Cliff Turk and Dr Ian Glass (right,top) and Mr Rupert Hurly and Mr Peter van Blommestein (right,bottom).

4. Minutes of the previous AGM

The minutes of the 2001 AGM as published in *MNASSA* were accepted on a proposal by Mr Andrew Gray, seconded simultaneously by about 17 members!

5. Matters arising

None had been received in writing and none were raised at the meeting.

6. Financial report

This was brought forward by the President due to the ill health of the Treasurer who had made a special effort to attend. The Treasurer, Mr Colin Gray, commented on the unaudited accounts to the year end and was loudly applauded for his efforts. When audited, the accounts will appear in *MNASSA* but in the meantime members can be assured that the Society is in a very healthy state financially.

The Treasurer's report was accepted unanimously on a proposal which noted the role played by overseas income in the end result. Proposed Mr Rupert Hurly, seconded Mr Andrew Gray.

7. Election of Auditor

Mr Colin Gray asked for this item to be also brought forward so that he could have the pleasure of proposing that Mr Ron Glass CA(SA) of Horwath Zeller Karro be re-elected to this position. He also proposed a vote of thanks to Mr Ron Glass for all the help he has given us over many years. Both proposals were seconded by Mr Cliff Turk and were carried unanimously.

8. Report of Council

This was read by Mr Cliff Turk who asked members to comment if anything had been left out as the report had been written in haste. No such comments were raised and the report

will be published in *MNASSA* at the same time as the minutes of the meeting.

9. Reports of the Observing Sections

The Comet & Meteor report by Mr Tim Cooper was read by Mr Rupert Hurly. The Deep Sky report was read by the Director, Mr Auke Slotegraaf. The Double Star report by Mr Chris de Villiers was read by Dr Ian Glass. A brief note on the Imaging section by Mr Dany Duprez was read by the Secretary. The Occultations report by Mr Brian Fraser was read by Mr Peter van Blommestein. The Solar report by Mr Braam van Zyl was read by Mr Andrew Gray. The Variable Star report by Mr Jan Hers was read by Mr Tony Jones. These reports will appear in full in *MNASSA*.

10. Reports of the other Sections

No report had been received from the Director of the Computing Section. The Dark Sky report was read by the acting Director, Mr Cliff Turk. The Historical report was read by the Director, Mr Chris de Coning. These reports will also appear in *MNASSA*.

11. ASSA Scholarship

Dr Abe Mahomed read a report from the convenor of the Scholarship sub-committee, Mr Maciej Soltynski. This recorded the first awards made by the fund and the full report will be published in *MNASSA*.

12. ASSA Endowment Trust

This was presented as usual by Mr Cliff Turk and showed continued progress. Mr Turk invited members to apply to the Trust for assistance with specific projects which should be properly motivated. The full report will appear in *MNASSA*.

PROCEEDINGS OF THE ANNUAL GENERAL MEETING 2002

13. Election of Office Bearers

Due to certain unforeseen problems, there were not enough nominations to fill all the vacancies on Council. No further nominations could be accepted at the meeting as the Society's constitution is clear that they must be made in writing by June 15 each year. However, Council has the power to fill any vacancies in its own ranks and has already started the necessary co-option process.

The following nominations had been received for 2002/2003, proposed by Mr Cliff Turk, seconded by Dr D M Kilkenny:

President:	Mr T P Cooper
Vice Presidents:	Dr D M Kilkenny Mr C Rijdsdijk Miss P J Booth
Members:	Dr C D Laney Mr B Skinner
Hon Secretary:	Mr C Rijdsdijk
Hon Treasurer:	Mr C D Gray

There were no objections and the above were declared duly elected.

14. Recess

The main business of the evening having been concluded by 21:03, there was a short recess to enable members to stretch their legs while a missing projector screen was found.

15. Presidential Address

The Presidential Address was delivered by Dr D M Kilkenny on the subject of the future of astronomy in southern Africa and was followed by questions.

16. Closing

The meeting closed at 22:30 at which time tea and coffee was served.

REPORT OF COUNCIL 2001–2002

Council notes with regret the deaths of Dr Bob Stobie (President 1997/98) and the Rev Ed Carey.

1. Membership

Subscriptions have remained at R80 per annum and full membership has increased to R208. Lapel badges are still being given to all new full members. There are many more members of Centres who are also automatically local members of the Society.

2. Secretary

During the year Mr Brian Skinner relinquished the post of Honorary Secretary after more than ten years of excellent service during which time he missed only one

Council meeting – and that was due to sickness. Mr Case Rijdsdijk volunteered to take over these duties and is settling in well. We wish him a similarly long tenure.

3. Finance

Our Treasurer, Mr Colin Gray, has had some health problems during the year but he has kept the health of our finances in tip-top condition for which we thank him most sincerely. Many members have again given donations to the Society or to the ASSA Endowment Trust when paying their subscriptions and we are most grateful for these. Our thanks are also due to our Auditor, Mr Ron Glass CA(SA) of the firm Horwath Zeller Karro for continued services and advice.

4. Council appointees

Dr Abe Mahomed and Mr Cliff Turk remain as Membership Secretary and Business Manager respectively and continue to bring in the subscriptions and fees which keep the Treasurer so happy. Between them they circulate *MNASSA* and the *Handbook* to all members and subscribers throughout the world. In addition the Membership Secretary handles the *Sky & Telescope* subscriptions and the Business Manager deals with all advertising in both of our publications.

5. MNASSA

Editor Mr Auke Slotegraaf keeps the standard high in this publication, which is well received both in South Africa and overseas. Contributions are welcome from amateurs and professionals. The reports from the institutions and those of the Directors of the observing sections show the volume of astronomical work being done in the region. Thank you Auke, your contribution to the Society is invaluable.

6. Annual Handbook

Miss Pat Booth continues to edit this invaluable book almost single-handed and is warmly thanked for her efforts. Centre secretaries, section Directors and other interested parties are requested to advise the editor of any changes to information relating to them. (NB E-mail addresses and telephone numbers should be checked every year please.)

7. ASSA Scholarship Fund

After being set up last year, this fund has now made its first grants to second year students studying astronomy subjects at university and we will follow their progress with interest. Mr Maciej Soltynski, Dr Abe Mahomed and

Mr Andrew Gray put in many hours of work to formulate rules and get this fund operative. We thank them most sincerely and they continue to work as the sub-committee dealing with grant applications.

8. Scholarship Fund Trust

Council has received and discussed a proposal for a trust supported by international funds to be formed to assist the study of astronomy in southern Africa at all levels. Work is continuing with this matter and members will be kept informed of progress.

9. Observing Sections

The Dark Sky section is still in need of a permanent Director, but has nevertheless made some progress during the year. The Solar section, which was revived last year, is growing in stature and Council would like to appoint a Director to lead it onwards. Assistance and encouragement has been received from the University of the Free State and the Solar Section of the British Astronomical Association. A new Director is required for the Imaging Section and any volunteer is asked to contact Council.

The reports of all sections will appear in *MNASSA*.

10. Acknowledgments

Council thanks the following for their co-operation and assistance during the past year: The Director of SAAO for the continued use of meeting facilities. The Directors of our observing sections for forwarding observations to international bodies. The Directors of the other sections for their support. All our Centres and members who helped to promote astronomy to the public throughout the region. And especially the Cape Centre for hosting this meeting.

COMET AND METEOR SECTION
T P Cooper

In my report for 2000, I concluded the level of observation had been the lowest in some years due to the poor observing weather throughout the year, and hoped that 2001 would see a turn around. I regret having to make the same conclusions this year. The level of meteor observing was poor, with all main showers obliterated or affected by cloud. Thankfully, weather conditions during the winter allowed us to obtain a good run on Comet Linear (C/2001 A2). Ten fireballs were reported.

Notes on some specific showers observed

All major showers were heavily affected by cloud. For the first time my annual coverage of the Virginids in March and April was

entirely lost. Cloud continued into May, badly affecting the eta Aquarids, and observations were only possible on the mornings of April 28, 29 and May 5, the latter terminated by cloud at 03:15. The July/August showers were lost due to atmospheric pollution from the extreme level of grass burning activity this year in the dry Highveld winter. Cape observers also reported cloud during this period. The Orionids were lost as the rain season began again in Gauteng.

It might have been expected that we would obtain some observations on the Leonids in November, with storm conditions predicted for 2001. However, it appears almost the entire country was below cloud, as reported by Magda Streicher, Brian Skinner, Jan Hers, and Tim Cooper. The latter managed only 15 minutes in a short gap, registering a single 2nd magnitude Leonid. Peter van Blommestein observed on the mornings of November

Summary of observed meteor showers

Observer	Shower	Hours
Tony Jones	Geminids	7.3
Brian Skinner	Geminids	7.0
Tim Cooper	eta Aquarids	5.0
	Leonids	0.25
Peter v.Blommestein	Leonids	3.1
	Taurids	1.0
Karen Koch	Geminids	3.1
Michael Poll	Leonids	2.0
	Geminids	1.5
Simon Walsh	Geminids	0.5
Total		30.75

Total observing time per observer

Observer	Number of showers	Total observing time (hours)
Tony Jones	1	7.3
Brian Skinner	1	7.0
Tim Cooper	2	5.25
Peter v.Blommestein	2	4.1
Michael Poll	2	3.5
Karen Koch	1	3.1
Simon Walsh	1	0.5
Total		30.75

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15–17, recording a handful of Leonids, but nothing out of the ordinary.

The Geminids were observed by Simon Walsh on the morning of November 25, seeing 2 Geminids in 0.5 hours. Other mornings were cloudy. In Bredell the maximum period was entirely washed out, literally, with torrential rain on the morning of December 14. Michael Poll also managed to make a few observations of Geminids in-between the clouds He observed for 10 minutes on the morning of December 12 (2 Geminids) and 80 minutes on December 15, seeing only 1 Geminid and 6 sporadics. However, Brian Skinner, Tony Jones and Karen Koch in the Cape were more lucky, managing around 17 hours observation on the nights of December 13/14 and 14/15. Tony logged 45 Geminids and 22 other meteors in 4.4 hours on the 13/14th. This was the best set of meteor data for the entire year.

details were published in *MNASSA* (2002, **61**, February, 16–19).

Summary of observed comets

Thankfully, conditions allowed a good run on Comet Linear C/2001 A2, and observations were reported by Mike Begbie, David Pringle-Wood, Trevor Green, Tony Jones and Tim Cooper. Bill Hollenbach obtained a number of excellent CCD images. The comet reached 4th magnitude at its peak in June. All observations were combined in a paper published in *MNASSA* (2002, **61**, February, 6–15).

Mike Begbie, Jan Plomp, Peter van Blommestein and Tim Cooper also reported observations of comet Linear C/2000 WM1, the so-called Christmas Comet. The comet brightened to around 5th magnitude in mid-December, and was still under observation at the close of the year.

Summary of observed fireballs

2001 saw a total of 10 fireball reports, summarised in the table below. The full

Date of fireball	Name of reporter	m _v	UT
2001 January 10	Berto Monard	-7	18:09
2001 February 4	Tony Jones	-6	01:05
2001 February 26	Kathleen Wessels	-5	18:00
2001 April 26	Magda Streicher/Tim Cooper	-6	20:36
2001 May 2	Tony Jones	-5	20:30
2001 June 21	Tony Jones	-3	n/a
2001 July 2	Michael Poll	-5	17:28
2001 September 7	Tony Jones	-4	00:35
2001 October 5	Louis Barendse	-7	20:35
2001 December 7	John Ferraz	-7	21:15

DEEP-SKY SECTION

A Slotegraaf

The review of historical deep-sky catalogues continues.

The catalogue compiled by Sir John Herschel during his 19th century visit to the Cape presents a rich collection of observations of southern non-stellar objects. Of particular interest are the so-called “nonexistent” objects in his catalogue – a number of which do, in fact, exist.

Several of Herschel’s objects were further designated “doubtful” in the Revised New General Catalogue. Magda Streicher of Pietersburg has continued to submit observations and sketches of these “doubtful objects”. She has also started on a reobservation of the late Jack Bennett’s catalogue.

Tony Jones of Cape Town has submitted a set of observations of the somewhat perplexing catalogue compiled by James Dunlop – a great number of the entries in Dunlop’s catalogue have still not been identified.

The Director has been paying special attention to the various southern star catalogues and the one deep-sky catalogue compiled by Lacaille. This 18th century astronomer was the first person ever to observe systematically the entire sky, and his deep-sky catalogue is the first of its kind. Identifying Lacaille’s objects in modern catalogues has proven to be less than trivial. Three group observing sessions were held (in Cape Town, Franschoek and Sutherland) with between three and six observers present, ranging in skill from experienced to novice-level. They attempted to repeat Lacaille’s observations using similar telescopes (half-inch aperture, 8x magnification). The results

of these, and future observing sessions, will be reported in *MNASSA*.

Telescopic observation of dark nebulae continues to be a special interest of the Director. An investigation has also been started into the feasibility of developing software to automatically identify dark nebulae in wide-field photographs.

Also receiving attention is the general problem of cross-identification of (southern) non-stellar objects. An object receives different designations when it is included in more than one catalogue, and a comprehensive list of synonyms is desirable. So, for example, Melotte 114 is also van den Berg-Herbst 141, NGC 4755, or simply, the Jewel Box. Detecting errors in catalogues is unglamorous, and perhaps scientifically unexciting, but accurate catalogues nevertheless are the cornerstone of an observational science such as astronomy.

On a further historical note, the first southern deep-sky object that John Herschel studied with attention and produced a sketch of, was identified – it is NGC 2070, the Tarantula Nebula in the LMC. Herschel’s original drawing, in a letter to Sir Thomas Maclear dated 1834 March 2, is preserved in the Cape Archives. A digital copy of the drawing was made and is available on request (see *MNASSA*, 61, August Centrepiece).

The Director welcomes anyone who is interested in joining in the activities of the section. Three deep-sky guides were posted to members. A copy is available for the price of postage, or can be downloaded from the internet.

DOUBLE STAR SECTION
C de Villiers

1. Observations

The digital camera mentioned in the previous report was completed and preliminary results of speckle imaging with the McClean at the SAAO were published in *MNASSA* (2001, 60, December, 145–148). Unfortunately, this project came to a halt owing to the fact that the Section Director (who initiated the project) has since moved to Wellington, and travelling to Observatory has become impractical. It is hoped to encourage other interested observers to continue with this work by making available a similar camera. To this end a notice will be placed in *MNASSA*.

2. Observer Certificates

The requirements for obtaining observers' awards for double star work have been placed

on the official Double Star Section web site. Member Magda Streicher has completed the requirements for the General Observer's Certificate to the Section Director's satisfaction and a recommendation for an award will be submitted to Council under separate cover.

3. Double Star CD-ROM

Permission was obtained from the US Naval Observatory to copy and distribute the USNO Double Star CD 2001.0. In response to a notice in *MNASSA* a number of members requested and received the CD.

4. Expenses

The cost of CD-ROMs and postage amounted to approximately R120.00. This amount will not be claimed, but donated to the Society.

OCCULTATION SECTION
B Fraser

The year 2001 was a very mixed one for occultation observers in Southern Africa. Undoubtedly the one event that has had the most effect on this section was the passing away of Danie Overbeek in the middle of the year. Danie was the Director and driving force in the occultation section for many years and his expertise and wisdom is sorely missed. The naming of the minor planet 5028 "Overbeek" in November 2000 was a fitting tribute to Danie's contribution to astronomy in Southern Africa.

The process of getting the section running smoothly again has taken a while and is still ongoing, but with the help of people like

Edwin Goffin and Jan Manek, who provide the predictions and updates for the minor planet occultation events, and with the input of the dedicated local observers, I feel that we will soon have the network working efficiently again. One change that has been introduced is to only advise observers of events that have a reasonable chance of success for their observing location. This has resulted in far fewer events being attempted by some observers but with a much higher hit rate.

We have established a web site on the SAAO computer network and thank them for allowing us this privilege. This has resulted

in a much reduced postage bill and the ability to offer more information to more observers. There are still some members who do not have access to the internet and they have been kept in touch with important events via the traditional channels.

Once again no reports of grazing occultation expeditions have been received. Part of the reason for this may be the security situation in South Africa, but it might also be the problem of a degree of inertia setting in with amateur astronomers. It would be a sad day if Southern Africa amateurs totally abandoned this important observing tool.

The accurate timing of events has been a problem as not all observers have access to the WWV shortwave radio station and most local time sources have been found to be problematical. Some discussions are at present underway with the New Zealand observers and there may be a solution to be found in the use of the GPS satellite system. Hopefully more news on this topic will be available shortly.

Perhaps the most welcome news of the year (decade?) has been the emergence of a small group of observers in KZN, motivated mostly by Rogan Roth at the Natal Midlands center. John Watson, Harry Tunmer and Alan Hill in Pietermaritzburg and Ray Field in Durban have all been tempted to take their telescopes out. The group managed to get two successful minor planet occultation observations, one by Rogan and one by his brother Paul in the Himeville area. This is really good news and we look forward to many more "hits" from the banana boys. Well done!

When one plots the predicted shadow paths on the map of South Africa, one point jumps out at you immediately. And that is the large area lying between the coastal areas

and Gauteng where we do not have a single observer. We desperately need some observers in the Bloemfontein and Kimberley areas, and elsewhere of course.

Lunar occultations

Once again there was only a small group of observers who participated in observing of lunar occultations.

Peter van Blommestein	
Disappearances	43
Jannie Smit	
Disappearances	20
Reappearances	2
Cliff Turk	
Disappearances	23
Reappearances	12

Minor planet occultations

Danie was still keeping track of some of the results for the first part of the year, and if I omit any pertinent information here then I apologise.

The following participated during 2001: T Cooper, F de Jager, R Field, B Fraser, J Hers, A Hill, H Lund, D Overbeek, L Pazzi, C Rijdsdijk, P Roth, R Roth, J Smit, M Streicher, H Tunmer, C Turk, P van Blommestein, B van Winsen and J Watson.

The writer expresses his sincere thanks to all who helped in this very worth-while activity.

Special thanks are due to Jan Manek of Stefanek Observatory, Prague, who provided prediction updates, based on minor planet positions supplied by the US Naval Observatory, Flagstaff, Arizona. The updates enable us to concentrate on those events that are likely to occur near observing stations. Thanks are also due to Edwin Goffin and his employer Agfa Gevaert who supplied preliminary predictions.

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Predictions were received for 57 events in 2001, of which 17 were rejected for various reasons – mainly because the target stars were too faint.

Jan 04 Hebe: Cooper appulse.
Jan 08 Nanna: Overbeek altitude. Van Blommestein miss.
Jan 28 Amalia: Overbeek miss. Lund miss. Smit cloud. Turk cloud. Van Blommestein cloud.
Jan 30 Philia: Cooper miss. Turk miss. Overbeek miss. Lund low. Van Winsen cloud. Smit cloud. Turk low. Fraser cloud. Van Blommestein cloud.
Feb 25 Philomela: Turk miss.
Mar 28 Aletheia: De Jager miss. Van Winsen miss. Turk cloud.
Apr 05 Edith: Turk cloud
Apr 23 Hesperia: Van Blommestein miss.
Apr 25 Alexandra: Smit miss. Streicher miss. Van Winsen cloud. Fraser cloud. Van Blommestein miss.
May 04 Meliboea: Van Blommestein miss.
May 31 Hispania: Van Winsen miss. Streicher blink.
Jun 24 Dysona: Smit cloud. Van Winsen cloud. Fraser cloud. De Jager rain. Field miss. Rogan Roth miss. Paul Roth 3 sec occultation. Van Blommestein miss.
Jul 17 Aurora: Rogan Roth 9.8 sec. Watson, Tunmer and Hill various observing problems.
Jul 28 Dysona: Smit miss. Roth miss. Van Blommestein miss.
Aug 09 Urhixidur: Roth miss. Smit miss
Aug 27 Marianna: Van Blommestein miss. Roth clouds.
Aug 28 Roberta: Van Blommestein miss. Roth miss.
Sep 10 Fides: Van Blommestein cloud.
Sep 10 Mars: Van Blommestein rain.
Sep 10 Felicitas: Van Bommenstein rain.
Sep 15 Eunomia: Van Blommestein cloud.
Sep 15 Asporina: Van Blommestein rain.
Sep 30 Kalliope: Van Blommestein cloud.
Nov 18 Cohnia: Van Blommestein miss.
Dec 19 Seraphina: Van Blommestein miss.

SOLAR SECTION

Boyden Observatory houses a 20 cm ceolostat that feeds into a 15cm horizontal telescope, with facilities for narrow H α investigation of solar features. After Boyden was closed down in 1987, the telescope was moved to the grounds of the University of the Free State. It was, however, infrequently utilized.

Since 2000 various international and local organizations have invested funds towards the upgrading and utilization of Boyden. Funds for the reinstallation of the solar telescope in its original building were allocated. The telescope was also serviced and its building refurbished. Members of the ASSA Centre requested permission to use the telescope for

observations and a few members were subsequently trained. The telescope is fully operational and is used during club as well as public meetings.

Future research projects: After recent renovations, it is intended that the telescope will be used by the local amateur group, with support from the Physics department of the University of the Free state. A spectrograph facility will be set up on the telescope to study the magnetic fields of the Sun using the Zeeman effect. This research also forms part of one of the research fields at the Physics department, namely magnetic reconnection in plasmas. (Braam van Zyl, Bloemfontein Centre)

VARIABLE STAR SECTION

J Hers

The year 2001 was a very sad one for variable star people and for South Africa particularly as we lost our greatest observer, Danie Overbeek, who died during the year.

According to the available records Danie started observing variable stars in 1951, making some hundreds of observations per year, but he really started in earnest after his return from the USA in 1979, when his yearly total rose to more than 10 000, reaching a maximum of 20 284 in 1992. His total number of observations in our records exceeds 280 000, which is almost twice the previous record achieved by Reginald de Kock, and the actual number may well be more.

After 1999 there was a steady decline, doubtless partly due to increasing difficulty in ascending the rather rudimentary ladder which led to the telescope.

Danie's home-made Newtonian was a rather basic instrument, and I do not know whether it had any accurate circles. But his profound knowledge of the night sky more than made up for any deficiencies and gave him a marvellous ability to find stars quickly.

He specialised in observing cataclysmic variables, the ones which are normally too faint to be visible but which once in a while rapidly brighten enough to become visible. VW Hydri, the best known southern example, brightens to about 9th magnitude with a period of a few weeks, and can therefore be observed by quite small telescopes, but there are very many others – some of which Danie called his “do nothing stars” – and it is highly desirable that these should be observed every clear night. As the number of observers in the far south which are doing this now cannot

Observations made during the year 2001 by observers in southern Africa

Observer	Location	Visual	PEP
T P Cooper	Kempton Park	488	–
J Hers	Sedgefield	282	–
R W Jones	Fish Hoek	–	513
L A G Monard	Pretoria	5519	–
J P L Mostert	Prieska	18	–
M D Overbeek	Edenvale	579	–
J Plomp	Pretoria	30	–
M Poll	Pretoria	51	–
J A Smit	Pretoria	1722	–
C Turk	Cape Town	68	–
S de Villiers	Cape Town	–	20
P Wedepohl	Somerset West	243	–

be much greater than can be counted on the fingers of one hand, there can probably be no better memorial to Danie than for one or more new observers to take up the challenge of this particular work.

There has overseas in recent years been a very noticeable increase in the use of CCDs for variable star work, and if we have been lagging behind this has been due mainly to two reasons: lack of the necessary technical expertise, and expense. Getting more decimal places does not come easily, and one soon gets involved with colour effects and the need for special filters and equally precise magnitudes of comparison stars, things the average visual observer scarcely worries about.

But now these problems are being overcome by two of our observers, Hugh Lund and Berto Monard. Hugh has mainly concentrated on getting more accurate measures of long period variables, while Berto, from his new dark-sky site outside Pretoria, which only became operational at the very end of the year, is concentrating mainly on CV's and supernovae. I wish them both well with their efforts as well as Win Jones with his extraordinary number of PEP measures.

Also a hearty welcome to three new observers: Jan Plomp and Michael Poll, both from Pretoria, and "Mossie" Mostert, from Prieska, a region where he can expect a large number of clear nights.

DARK SKY SECTION

C Turk

This Section is still without a permanent Director for the third year in a row, but nevertheless progress is constantly being made and it is apparent that many people, especially in the Cape area, are becoming more conscious of the problems of bad and invasive lighting.

The early months of 2001 saw the end of our season of *StarWalks* at Kirstenbosch which drew attention to light pollution problems caused mainly by stray light from perfectly legitimate installations. In addition, our share of the entrance fees raised a useful amount of money for the development of future activities. December 2001 saw the start of our second season of Kirstenbosch *StarWalks* which are still well attended and have received much praise, especially from overseas visitors.

Cape Town Municipality is a member of the International Dark Sky Association and

we would be interested to know of any other municipalities which are also members.

The problems of light pollution continue to be drawn to the attention of visitors to SAAO and the Cederberg Observatory at every opportunity and the resultant public interest is gratifying.

Government is currently considering legislation to make obtrusive lighting an offence and we are grateful to the late Dr Bob Stobie of SAAO for his efforts in pressing for this.

The owners of three examples of obtrusive lighting were approached during the year and all listened to us with courtesy and interest. In each case the light intensity was reduced and/or its direction was altered to improve the situation. Reports of any similar incidents elsewhere in the country would be appreciated.

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HISTORICAL SECTION

C de Coning

A fair amount has happened over the last year concerning the Historical Section.

During previous years, a project was started to create a database with a historical perspective, that will be of interest to astronomers in South Africa. Progress has been slow because it was basically only myself working after hours. An archive was also initiated.

During the part year the pace picked up. Whereas most research was done on paper as a rough draft, the private acquisition of a laptop computer enabled me to do much more work. The electronic capturing of data makes it easier to share with other interested persons. The result is that there are now many more persons aware, participating and contributing to the History of Astronomy. Last year I knew of about six persons interested in the topic; at present there are approximately 16 persons.

The database has grown with leaps and bounds, and it should be available as a website in time for the Symposium in December. There are, however, still some problems to overcome.

The archive has tripled in volume, and has thus necessitated more intensive attention.

The material has been organized and I am in the process of structuring and indexing the archive.

During the last year permission was asked and received to scan all the previous copies of *MNASSA*, so that it can be available in electronic form for researchers, and as an additional way of preserving the information. This is, however, a gigantic task, and no work has been started on this project as yet.

During the past year excellent work has been done by several individuals.

- Dirk Vermeulen is about to publish a book on the Republic Observatory

- The Bloemfontein Centre is very active on the historical front. In their newsletters and website, excellent work has been done concerning the editing of the minutes of their centre meetings, and researching the history of the Lamont-Hussey Observatory. Persons to be thanked are Dawie van Jaarsveldt, Braam van Zyl and Gerrit Penning. The information is available on their website. They were assisted in their efforts by Willie Koorts (SAAO) and Dr Seitzer (Michigan University).

TREASURER'S REPORT

C Gray

The unaudited accounts of your Society's trading operations for the year just ended show a surplus of about R 9 000, a pleasing result in the face of relentless cost increases, particularly the unavoidable ones such as printing costs, bank charges and postal tariffs.

Items of note are the expenditure of about R 5 000 relating to the awards of two scholarships, constituting a first for the Society, and the massive increase in the cost to members of *Sky & Telescope* from R400 at the start of the year rising to R575 in December, now set at R520. Your finances are in good shape.

ASSA SCHOLARSHIP
M Soltynski

After many deliberations and much discussion, Council decided to establish the Astronomical Society of Southern Africa Scholarship at the end of 2001. The purpose of the ASSA Scholarship is to encourage the study of Astronomy. The Scholarship is available in support of 2nd and 3rd year undergraduate (and in exceptional cases, Honours) studies in *astronomy subjects only*, at any *Southern African* university, including those which offer astronomy courses to part-time students in distance-learning mode.

Ongoing funding for the Scholarship is from the interest generated from a capital amount especially set aside by Council for this purpose.

It was decided that criteria are a demonstrated interest in astronomy and a good academic record. Preference is to be given to members of ASSA as well as to previous holders of the Scholarship who have made good progress in their studies. Preference will also be given to applicants who are not in receipt of other scholarships

or similar funding. The Scholarship will cover academic fees for *astronomy subjects only*, as well as a contribution towards the cost of prescribed books for these subjects, and is valid for one year. Payment of academic fees will be made directly to the university concerned. The Scholarship shall be awarded based on an evaluation of the applications and the recommendations of the relevant university department. Applicants may be required to be interviewed at an ASSA Centre most convenient to the applicant (ASSA will not bear the travel or any other costs of the applicant in this regard).

It is very pleasing that the Scholarship has now been awarded for the first time. It was awarded this year (2002) to two members of ASSA, Melissa van Gend and Chris de Villiers, who are both studying 2nd year astronomy subjects as part of their BSc degree at UNISA. Chris is also the Director of the ASSA Double Star Section.

Further developments with regard to the Scholarship are under discussion by Council.

ASSA ENDOWMENT TRUST (ASSET)
C Turk

During the calendar year 2001 the Trust received donations of R 1 677.83 which increased its capital to R 1 9476.25.

Income from investments amounted to R 4 478.30 from which grants and expenses totalling R 1 502.20 were paid leaving a net increase of R 2 976.10 in disposable funds which then stood at R 3 0321.44.

Members and Centres are reminded that the Trust will consider assisting with funding of worthwhile projects. Initial enquiries should be motivated in writing to the Trust Secretary, 20 Nerine Ave, Pinelands, 7405 or e-mail to cliffturk@yebo.co.za.

During the coming year, the Trust will apply to be recognised as a Public Benefit Organisation under the new tax laws.

PROCEEDINGS OF THE ANNUAL GENERAL MEETING 2002

ASSA Endowment Trust (ASSET)

Balance Sheet as at 31st December 2001

2000		R - c
	Trust Capital:	
16 058.42	Balance at 31st December 2000	17 798.42
1 740.00	Donations received during the year	1 677.83
R17 798.42		R 19 476.25
Nil	Sundry Creditors	2.20
	Distributable Reserve:	
27 345.34	Balance of Income and Expenditure Account	30 321.44
R45 143.76		R 49 799.89
	Represented by:	
	Investments:	
38 000.00	ABSA Bank Ltd. Fixed Deposits	38 000.00
1 387.57	ABSA Bank Ltd. Equity Shares (at cost)	1 387.57
Nil	Sundry Debtors	2 874.00
5 756.19	ABSA Bank Call A/c	10 412.32
Nil	Cash	Nil
R45 143.76		R 49 799.89

Income and Expenditure Account for the year to 31st December 1999

	Income		
4 062.07	Dividends and interest received		4 478.30
	Deduct Expenses		
1 500.00	Grant to ASSA	1 500.00	
	Stationery	2.20	1 502.20
R 2 562.07	Excess of Income for the year		R 2 976.10
24 783.27	Excess of Income from previous year		27 345.34
R 27 345.34			R 30 321.44

Notes:	ABSA Fixed Deposits:	
	9.65% p.a. maturing 8 Oct 2002	R 18 000.00
	9.40% p.a. maturing 29 May 2003	R 20 000.00
	ABSA Bank Ltd. Equity Shares (cost)	R 1 387.57
	(Market value R 12 615.70)	R 39 387.57

Minutes of the AGM

Minutes of the Annual General Meeting held on 2003 July 12 in the auditorium of Christian Brothers College, Silverton, Pretoria.

1. Opening

The President, Tim Cooper, welcomed those present. The meeting was attended by 10 members, plus an additional 9 members of the Pretoria Centre and 4 visitors.

2. Apologies

Apologies were received from Neville Young, Theo Pistorius & Maciej Soltynski.

3. Minutes of the previous AGM

The minutes of the 2002 AGM, published in *MNASSA*, were accepted (proposed by Tim Cooper and seconded by Dave Gordon.)

4. Matters arising

There were no matters arising.

5. Financial report

The financial report was read by Tim Cooper. It is noted that the accounts have not yet been audited, but were accepted on a proposal by Michael Poll and seconded by Jannie Smit. When audited the final accounts will be published in *MNASSA*.

6. Election of Auditor

On a proposal by Tim Cooper and seconded by Michael Poll, auditors Horwath Zeller and Karro are to be retained.

7. Report of Council

The report of Council was read by Tim Cooper. Tim wished to thank Cliff Turk for the work he did to ensure that all the reports were submitted on time. The report was accepted

on a proposal by Jannie Smit and seconded by Atze Herder.

8. Reports of Observing Sections

The reports were read either by their author or an alternate as follows: Comet and Meteor (read by the Director, Tim Cooper), Deep Sky (read by Dave Gordon on behalf of Auke Slotegraaf), Double Star (read by Michael Poll on behalf of Chris de Villiers), Occultation (read by the Director, Brian Fraser), Solar (read by Mike Haslam on behalf of Braam van Zyl) and Variable Star (read by Michael Poll on behalf of Jan Hers).

The President commented that the report submitted by Mr Hers was an abbreviated version, since he had only just returned to his house which had been flooded some weeks earlier.

The reports of the Observing Sections are to appear in *MNASSA*.

9. Reports of other Sections

The Dark Sky Section report was read by Frikkie le Roux on behalf of Cliff Turk. No reports were received from the Computing and Historical Sections. (The Historical Section report was received after the AGM and will be published in *MNASSA*.)

10. ASSA Scholarship

The report by Maciej Soltynski on the ASSA Scholarship was read on his behalf by Tim Cooper. The full report will be published in *MNASSA*.

11. ASSA Endowment Trust

The report on the ASSA Endowment Trust was read by Tim Cooper. The full report will be published in *MNASSA*.

12. Election of Office Bearers

The election of Office Bearers, nominated by Cliff Turk and Abe Mahomed, was completed on a proposal by Dave Gordon and seconded by Brian Fraser. The nominees for 2003/2004 are:

President	Mr C L Rijdsdijk
Vice Presidents	Dr C D Laney Ms P J Booth Mr T P Cooper
Members of Council	Dr I S Glass Dr P Martinez Mr A B Jones Mr M Poll
Hon. Secretary	Mr C L Rijdsdijk
Hon. Treasurer	Mr C R G Turk

13. Any other business

Tim Cooper announced that an ASSA Long Service Award has been awarded to Jan Hers. The award will be made to Jan by the incoming President, Mr C Rijdsdijk, and takes the form of a book prize.

Tim also requested that all the Centres of ASSA work together to do something spe-

cial for the transit of Venus, next year. This issue needs to be properly coordinated by Council.

14. Presidential Address

Tim Cooper then handed over the Chair to Michael Poll who asked Tim to give his Presidential address. The subject of the address was an interesting topic, 'Amateur observations – Successes and opportunities'.

A question arising from the talk was asked: "Is there a gap in amateur Southern African observing for planetary observations?" Tim replied in the affirmative and that this should be raised at Council.

Michael Poll thanked Tim for his excellent talk and also for his year of Presidency.

15. Closing

There being no further business, the meeting was adjourned at 20:55. Wine, cheese and snacks were then enjoyed courtesy of Tim and Janet Cooper.

Mike Haslam (Acting Secretary ASSA)

Report of Council 2002–2003

Council notes with regret the death of Mr Colin Gray (Treasurer 1994–2003).

1. Membership

Subscriptions have remained at R80 per annum and full membership has increased to 226. Lapel badges are still being given to all new Full Members. There are many more members of Centres who are also automatically local members of the Society.

2. Finance

Our Treasurer, Mr Colin Gray passed away on 9 April 2003 leaving us in a very healthy financial position. Our deepest sympathies are extended to his wife Fiona, children Diana, Roger and Heather and to his five grandchildren. A full obituary will be published in *MNASSA*.

Many members have made donations to the Society or to the ASSA Endowment Trust

when paying their subscriptions and we are most grateful for these. Our thanks are also due to our Auditor, Mr Ron Glass CA(SA) of the firm Horwath Zeller Karro for continued services and advice.

3. Council Appointees

Dr Abe Mahomed and Mr Cliff Turk remain as Membership Secretary and Business Manager respectively. Between them they circulate *MNASSA* and the *Handbook* to all members and subscribers throughout the world. In addition the Membership Secretary handles the *Sky & Telescope* subscriptions and the Business Manager deals with all advertising in both of our publications.

4. MNASSA

Editor Mr Auke Slotegraaf keeps the standard high in this publication which is well received both in South Africa and overseas. Contributions are welcome from amateurs and professionals. The reports from the institutions and those of the directors of the observing sections show the volume of astronomical work being done in the region. Thank you Auke, your contribution to the Society is invaluable.

5. Annual Handbook

Miss Pat Booth has had to resign as Editor of the *Handbook* due to pressure of work. The *Handbook* is now being guided by the Society's Editorial Board with Mr Auke Slotegraaf taking the leading role. Various upgrading is planned and will be implemented as soon as possible, starting with the 2004 edition, which will probably retail for R30.00.

All Centre Secretaries, Section Directors and other interested parties are requested to advise the Editor of any changes to infor-

mation relating to them. (NB. E-mail addresses and telephone numbers should be checked every year please.)

6. ASSA Scholarship Fund

After making its first grants to two second-year students last year, only one grant has been made this year. Grants are available to undergraduate students studying astronomy subjects at University in the second or subsequent years. Mr Maciej Soltynski, Dr Abe Mahomed and Mr Andrew Gray are thanked for their time and the trouble they take to ensure that the grants go to worthy students.

7. Observing Sections

New Directors have been appointed for the Dark Sky Section and for the Solar Section during the year. We congratulate Messrs Cliff Turk and Braam Van Zyl respectively for taking on these tasks and wish them both a long and successful tenure.

A new Director is still required for the Imaging Section and any volunteer is asked to contact Council for more information regarding what is required.

The reports of all Sections will appear in *MNASSA*.

8. ScopeX

Following Johannesburg's very successful exhibition last year and a smaller similar display by Garden Route Centre, much progress was made this year. Johannesburg enlarged their effort considerably and are to be congratulated on a really fine effort. A full report has already appeared in *MNASSA*, so we will just record that there were 43 telescope exhibitors including four commercial ones. Ten lectures were arranged during the day, six of them being presented by professionals.

In Cape Town, a fine venue at Kirstenbosch Botanical Garden was secured with a large exhibition hall and lecture theatre next door. Sixteen telescopes were on display including those of one commercial exhibitor. Unfortunately the weather was not good and only one telescope viewed the Sun for about 30 minutes before the rain followed by total cloud drove everyone indoors where the three lectures were all well attended.

It is understood that displays were also arranged at World's End Observatory, Pietermaritzburg and by the Friends of Boyden in Bloemfontein but no detailed reports have yet been received. Council will be delighted to hear of more similar displays in 2004.

9. Transit of Mercury

Much of the co-operative effort with astronomers overseas (mainly in Europe) came to naught, as bad weather bedevilled us. However, we made contact with those overseas astronomers and are able to gear up for a more intensive effort for the Transit of Venus on 8 June 2004 which will be the first such transit since 6 December 1882. Venus will be more easily visible than Mercury and this will be another opportunity to promote our science to the public.

10. 5th ASSA Symposium

Pretoria Centre pulled out all the stops to produce an exceptional Symposium at Aloe Ridge Hotel. The facilities were very good indeed, as was the subject matter, and many new friendships were made.

Notable attendees were Dr Janet Mattei of AAVSO, Prof Brian Warner of UCT and J Kelly Beatty executive editor of Sky & Telescope. Special thanks to our President, Mr Tim Cooper for being the driving force behind this achievement.

The dates were immediately prior to the total eclipse of the Sun in the far northern parts of South Africa and many delegates took the opportunity to treat themselves to this spectacle.

11. Acknowledgments

Council thanks the following for their co-operation and assistance during the past year:

The Director of SAAO for the continued use of meeting facilities; the Directors of our Observing Sections for forwarding observations to international bodies; the Directors of the other sections for their support; all our Centres and members who helped to promote astronomy to the public throughout the region; and especially the Pretoria Centre for hosting this meeting for us.

Financial Report

Cliff Turk (Hon. Treasurer)

The untimely death of our late Treasurer, Colin Gray, on 9th April caused a glitch in the smooth accounting which he had operated for some years.

During the last week of his life he had tried to complete the third-quarter financial report for Council but was not successful. There is a small discrepancy, probably

caused by some item not being recorded, and one other possible error of approximately R100. The auditors were asked by telephone if the new Treasurer could enlist their aid in balancing these problems and they agreed to make an appointment to do this as soon as they were a little less busy. Nothing further has been heard from them.

This has delayed the writing-up of the last-quarter accounts but this is now in progress, based on the approximate figures for the end of the third quarter. Once the year has been audited fully, the final accounts will be published in *MNASSA*.

In the meantime, I can report that the Society's funds are in a healthy state. We have over R40 000 in the Scholarship fund and more than R50 000 in a money market fund. This latter will be depleted during the first half of 2004 when printing and circulation costs of *MNASSA* will exceed the income at that time of year when very little is received in members' subscriptions.

We have just been told by *Sky & Telescope* that they have had to increase their subscription rates due to rising production and distribution costs. A new direct subscrip-

tion will now cost US\$ 61.95, but members ordering through the Society will be able to order for the equivalent of US\$ 55. The Rand amount required to be paid to the Society will be published in each issue of *MNASSA* and any variation in the exchange rate plus exchange costs will be absorbed by the Society.

The Society will experience increased costs connected with the upgrading of the *Handbook* for 2004, the retail price of which will probably be set at R30 (a 50% increase over 2003). It is hoped that the *Handbook* will become available in bookshops around the country and members are requested to assist in promoting this to various outlets. Full details of prices and discounts can be obtained from the Business Manager.

Report from the MNASSA Editorial Board

Auke Slotegraaf

The Editors would like to thank all those who contributed to *MNASSA* throughout the year, particularly the scientists who submitted research papers for publication, and those who contributed less-formal articles and news notes. *MNASSA* publishes material of interest to professional and amateur astronomers, and is indexed in *A&A Abstracts* and therefore the articles at any level should be of a high standard. Contributions can be divided into the following:

- reader's letters;
- ASSA news (Society-related material; news from Council; activities of members, etc.);
- news notes (local and international news of interest to astronomers);
- research papers (original research papers on all branches of astronomy and astro-

physics; papers are sent to referees before publication);

- general contributions (typically longer and more detailed than news notes, these contributions are less formal than research papers; these include historical articles,
- biographies, obituaries, travel accounts, observing reports, instrumentation development papers and progress reports on on-going research);
- reviews (currently only book reviews are published, but during 2004 this will include web sites and software); and
- the observer's page (accounts of the activities of the various observing sections within the Society).

A 'Style Guide and Instructions to Authors' is available to assist authors in preparing their manuscripts.

Report of the Comet and Meteor Section

Tim Cooper (Director)

The year 2002 was another in which several observing opportunities were lost to cloud. Nonetheless, 18 individuals contributed meteor observations totalling 93 hours (Tables 1 and 2). There were a good number of fireballs reported (Table 3), and gradually the quality of the reports is improving as people report the correct parameters. Only three comets were observed by five individuals during the year, partly due to the weather, and the lower number of bright comets observable in 2002.

Table 1. Total observing time per observer

Observer	n	h
Tim Cooper	5	25.1
Cliff Turk	6	15.7
Magda Streicher	5	14.1
Auke Slotegraaf	1	4.6
Ivor Paul	1	4.6
Brian Skinner	1	4.0
Trevor Gould	2	3.4
Tony Jones	1	3.4
Michael Poll	2	5.9
Mike Begbie	1	2.2
Herman Wiechers	1	2.1
Mauritz Geyser	1	2.0
David Pringle-Wood	1	2.0
Brian Fraser	1	1.6
Theo Pistorius	1	0.7
Martin Wasserfall	1	0.7
Barbara Cunow	1	0.5
Anton Nel	1	0.5
Total		93.1

n: number of showers observed. h: total observing time (hours)

Table 2. Summary of observations

Observer	Shower	h
T Cooper	Virginids	9.2
	γ Normids	0.9
	η Aquarids	7.1
	Leonids	5.9
	Geminids	2.0
C Turk	April Lyrids*	4.0
	Leonids*	1.9
	Geminids*	2.2
	θ Ophiuchids	2.5
	Orionids	1.7
	Geminids	3.4
	α Crucids	1.2
M Streicher	April Lyrids	2.8
	July Phoenicids	1.4
	Perseids	4.4
	Leonids	4.3
A Slotegraaf	Geminids	4.6
I Paul	Geminids	4.6
T Jones	α Crucids	3.4
B Skinner	α Crucids	4.0
M Poll	Leonids	3.2
	Geminids	2.7
T Gould	Leonids	1.2
	Geminids	2.2
M Begbie	Leonids	2.2
H Wiechers	Geminids	2.1
M Geyser	Leonids	2.0
D Pringle-Wood	Leonids	2.0
B Fraser	Leonids	1.6
T Pistorius	Leonids	0.7
M Wasserfall	η Aquarids	0.7
B Cunow	Leonids	0.5
Anton Nel	Leonids	0.5
Total		93.1

h: number of hours observed; * 2001

Notes on some observed showers

The Alpha Crucids were observed by Magda Streicher, Tony Jones and Brian Skinner. As in previous years analysis of the data shows the characteristics of the alpha Crucids to be fast, white and often bright. My annual plotting program on the Virginids was heavily affected by clouds. The Eta Aquarids were observed by Tim Cooper, and by Martin Wasserfall. The latter observed from 01:50–02:30 UT on 5 May, counting 20 eta Aquarids and three sporadics. Cloud severely hampered my own observations this year. The first opportunity came on May 7, after maximum, and I managed observation on only four mornings, with best rates on May 7, and with another good performance on May 10. The Leonids were observed for 24.1

hours. No storm occurred in 2002, but Mike Begbie and Magda Streicher observed best rates with 38 Leonids in 1.2 hours and 29 Leonids in 0.9 hours respectively. The year closed with observations of the Geminids. Best rates were observed by Tim Cooper with 54 Geminids and 16 sporadics in 2.0 hours on the morning of December 14. On the morning of the 15th, Auke Slotegraaf and Ivor Paul were seeing rates down to 10-12 per hour, and by the 16th, rates were almost nil as noted by several observers.

Summary of observed fireballs

2002 saw a total of 17 fireball reports, summarised in Table 3. Full details have been submitted for publication in *MNASSA*. Seven of the 17 were fireballs from known ma-

Table 3. Fireballs recorded in 2002

Date and time (UT)	Name of reporter	m_v
Feb 05 ~19:00	Boet and Jackie Boshoff	-6 ?
Feb 06 19:14	Andrew Gray	-4
Feb 11 17:25	Bill Hollenbach	-4
Feb 11 18:55	Bill Hollenbach	-4
May 07 03:29	Tim Cooper	-3
Jul 21 13:45	Bill Hollenbach, Jane Trembath	-10
Sep 10 20:41	Auke Slotegraaf	-5.5
Sep 12 17:15	June Borchert	-4
Sep 18 16:31	Trevor Green	-5
Oct 21 19:42	Vasili Champanis	-6
Nov 19 01:20	Tim Cooper	-3
Nov 19 01:32	Tim Cooper	-4
Dec 14 00:46	Herman Wiechers, Tim Cooper	-3
Dec 14 01:06	Cliff Turk	-5
Dec 14 02:15	Cliff Turk	-5
Dec 15 01:55	Auke Slotegraaf, Ivor Paul	-4
Dec 15 02:12	Auke Slotegraaf, Ivor Paul	-5

for shower radiants, the remainder were sporadic events.

Of particular interest is the event of 21 July. The first report was from Bill Hollenbach. Follow-up reports came from the Johannesburg Planetarium, and later from some eyewitness reports collected by Trevor Gould. These included Jane Trembath, an airline pilot, who saw the object from her plane. Fragments were located and sent for analysis to Prof Uwe Reimold.

Summary of observed comets

Comet LINEAR C/2000 WM1 was observed by Magda Streicher, Mike Begbie, David Pringle-Wood, Simon Walsh and Tim Coop-

er. The comet was observed from January, peaking at magnitude 2.3, until April. Comet Ikeya-Zhang C/2002 C1 was observed by Mike Begbie, David Pringle-Wood and Tim Cooper. Discovered in February, the comet brightened to magnitude 3 in late March, before fading to magnitude 10 by mid year. Comet SWAN C/2002 O6 was discovered on July 31, peaked at magnitude 6 in mid August and faded rapidly thereafter. It was observed by Mike Begbie and David Pringle-Wood.

A number of observations were received from Peter van Blommestein, which are not included in the above statistics due to missing some requisite minimum information.

Report of the Deep-Sky Section

Auke Slotegraaf (Director)

It is a pleasure to announce to the AGM that two observers have been awarded Observing Certificates. Magda Streicher of Pietersburg will receive a Director's Award for her dedication in completing the entire Jack Bennett Catalogue of 152 cometary deepsky objects

Tony Jones of Cape Town is to receive a General Observer's Certificate for his set of observations of objects discovered by James Dunlop.

The Director continued his review of historical deep-sky catalogues. Initial results were reported in 2002 November at the 5th ASSA Symposium, entitled 'Nonstellar objects in old star catalogues'. This work identified 62 star fields that may contain open cluster remnants. The results were communicated to Bruno Alessi, a Brazilian astronomer studying open clusters.

In 2003 March, the Director helped present a deepsky viewing evening, held at

Simonsvlei and hosted by the 'Sterre en Planete' radio show broadcast on 'Radio Sonder Grense'.

The Section's web page, 'The Deepsky Observer's Companion', was listed in a recent introductory astronomy book as a "valuable resource"; members are reminded that this observing guide is available on the internet for free download, or in printed form for the price of postage. Only one request for the printed guide (from a scholar in Cape Town) was received during the year under review.

The Director is always keen to hear how others see the Universe beyond our solar system - so let's hear from you.

Report of the Double Star Section

Chris de Villiers (Director)

The Section was largely inactive during the past year. No astrometric observations were made by myself, or received from others.

A number of descriptive observations were received from Magda Streicher. No expenses were incurred.

Report of the Solar Section

Braam van Zyl (Director)

Since the early history of ASSA the Solar Section has played an important role. Unfortunately everything came to a halt when the previous Director, Jim Knight, resigned in 2000 and no suitable replacement was found. Good news is, however, that the Solar Section was reactivated thanks to the initiative of the Bloemfontein Centre.

During the seventies the Boyden Observatory at Bloemfontein installed a coelostat solar telescope and used it intensively for a research program. After Boyden was closed down in 1987 the telescope was moved to the grounds of the University of the Free State. It was, however, infrequently utilized. Since 2001 various international and local organizations have invested funds towards the upgrading and utilization of Boyden. It was also decided to develop the observatory into a facility where science awareness of the public could be promoted alongside a modern research facility.

Funds donated by the Charl van der Merwe Foundation were utilized to establish an Educational Walk on the terrain and to reinstall the solar telescope. Thus after 14 years the solar telescope was returned to its original location. The telescope was serviced, the vacant building housing a snake family was refurbished and a CCD camera and computer were also procured.

The telescope has become the focus during daytime visits of school groups. It is a powerful educational tool as it pertains to various themes and topics required by school curricula for example: "Earth, Space and beyond"; "The Earth-Moon-Sun system" and "energy, energy transfer and photosynthesis."

For night-time visitors the telescope can also be focused on the moon.

Although the telescope was restored to working order, no funds or manpower were available to restart a research program. Members of the Bloemfontein Centre took advantage of this opportunity and offered their assistance, which was gratefully accepted. At the same time the ASSA Council requested the Bloemfontein Centre to reactivate the Solar Section which contributed to the appointment of Braam van Zyl as the new Director at the end of 2002.

Twelve members of the Bloemfontein Centre offered their voluntary service to the solar workgroup. Boyden personnel namely Dr P. Meintjes, Dr M. Hoffman, and Mr. Hannes Calitz, an MSc student in astrophysics, provided extensive theoretical and practical training.

Activities of the solar workgroup

- to act as tour guides for visiting groups;
- counting sunspots and active areas on

weekends using the coelostat. Some members observe and record sunspots on a daily basis from their homes (using small telescopes) and forward their data to the AAVSO and ALPO solar sections in the USA;

- photography;
- solar eclipse observing; during the weeks leading up to the eclipse members were involved in a variety of talks to inform the public. Members endeavoured to observe and photograph the eclipse from

Boyden observatory which was unsuccessful due to overcast weather conditions.

Future developments for 2003

- two research programs: (1) the magnetic field of the Sun employing the Zeeman effects (2) sudden ionosphere disturbances (SIDs);
- Mercury transit; and
- recruitment of more members, especially outside Bloemfontein.

Report of the Variable Star Section

Jan Hers (Director)

The following observations made during the year 2002 have been received from observers in southern Africa:

Observer	Location	Visual	PEP
P Bosman	Johannesburg	9	
T P Cooper	Kempton Park	109	
J Hers	Sedgefield	166	
R W Jones	Fish Hoek		80 (+?)
H Lund	Johannesburg	33	
L A G Monard	Pretoria	1213	
J P L Mostert	Prieska	21	
J Plomp	Pretoria	85	
M Poll	Pretoria	117	
J A Smit	Pretoria	1213	
C Turk	Cape Town	175	
S de Villiers	Cape Town		(?)
S Walsh	Harare	160	
P Wedepohl	Somerset West	478	

Report of the Dark Sky Section
Cliff Turk (Director)

During the year the Section had a permanent Director appointed and further progress will hopefully follow as efforts are concentrated on spreading interest in specific areas until the entire country is covered. If anyone would like to assist in their own areas, please contact the Director for guidance.

StarWalks at Kirstenbosch were again popular during the mid-summer months and the light pollution problem is steadily becoming better known. At the same time, funds have been built up which will facilitate a

more general promotion of the Section on a national basis during 2003.

Two unsolicited enquiries have been received from people engaged in businesses related to lighting and productive discussions have been held with both.

We hope that Scope-X/Astronomy Day exhibits around the country will soon all feature the need for controlling light pollution.

News of any successes with improving bad or invasive light problems is welcomed.

Report of the Historical Section*
Chris de Coning (Director)

The calendar year 2002 was an exciting year for the Historical Section. Much has been achieved.

In previous reports it was mentioned that the historical section is working on a database listing all observatories, people, telescopes, as well as anything else that may be of value to the history of astronomy in Southern Africa. The idea is to make the information available to all interested parties and in December 2002 that was achieved. The database has been transformed into a website. The address is [www.sao.ac.za/assa/index.html], which takes you to the ASSA homepage. From there, follow the link to the Historical Section.

In December ASSA held a very interesting symposium in Johannesburg as part of the preparations for the solar eclipse. During this symposium a series of very interesting talks on historical topics was given. It is interesting to note that the number of talks

with historical content have increased from four at the previous conference to 10 with this conference.

One of the long-term goals of the Historical Section is to digitise our peer-review journal, *MNASSA*. Due to the huge scope of the project it was put aside for the time being. However, the American space agency NASA has offered to scan in, and thus digitise all previous copies of *MNASSA* and its predecessor *JASSA*. Auke Slotegraaf, Editor of *MNASSA*, sent them a full set of journals.

(* report received after the AGM)

ASSA Scholarship Report

Maciej Soltynski (Convenor, ASSA Scholarship Committee)

The ASSA Scholarship was established in 2000 to encourage the study of astronomy. The Scholarship is in support of 2nd and 3rd year undergraduate studies (and in exceptional cases, Honours) in *astronomy subjects only*, at any Southern African university. Preference is given to members of ASSA as well as to previous holders of the Scholarship who have made good progress in their studies. Preference is also be given to applicants who are not in receipt of other scholarships or similar funding. The Scholarship covers academic fees for *astronomy subjects only*, and makes a contribution towards the cost of prescribed books for these subjects, and is valid for one year.

It is with pleasure that we can report that in 2002 the scholarship was awarded for the first time to two members of the Society, Melissa van Gend and Chris de Villiers. Both were awarded the Scholarship to assist them in their second year astronomy studies which are part of their chosen curriculum towards the B.Sc. degree at the University of South Africa (UNISA). Their progress will constitute part of this report for 2003.

I would like to thank my fellow committee members, Andrew Gray and Dr. Abe Mahomed, for their time and valuable inputs in evaluating scholarship applications. Thanks is also due to Prof. Derck Smits of UNISA for his contribution to the evaluation process.

ASSA Endowment Trust Report

Cliff Turk (Secretary, ASSA Endowment Trust)

During the calendar year 2002 the Trust received donations of R1770.00 which increased its capital to R21246.25.

Income from investments amounted to R4536.12 from which grants and expenses totalling R1504.00 were paid leaving a nett increase of R3032.12 in disposable funds which then stood at R33353.56.

The full year-end accounts will be published in *MNASSA*.

Members and Centres are reminded that the Trust will consider assisting with funding of worthwhile projects. Initial enquiries should be motivated in writing to the Trust Secretary, 20 Nerine Ave., Pinelands 7405 or email to [cliffturk@yebo.co.za]

Presidential address

Amateur Observations – Successes and Opportunities

Tim Cooper

1. Introduction

The term of ASSA President is served alternately by a professional and amateur astronomer. I belong very firmly to the latter, and I am very conscious of upholding the role of the amateur as a contributor to astronomy in Southern Africa.

Amateur astronomers in Southern Africa have developed a reputation as skilled observers over many years. Geographically, we reside in an important part of the globe, being in the southern hemisphere in a position to observe southern objects at time-critical moments when most other land areas experience daylight. Our observations are in demand. Despite these factors, the number of active observers today remains small, limiting the significance of our observations.

Tonight I want to highlight some areas where ASSA members have contributed meaningful observations, and list others where opportunities exist to contribute to an even greater extent, either by more people becoming involved in existing observing programs, or by participating in new programs already operating in other countries, thereby complementing the global observing network. I will list a number of specific requests that have been made of us by overseas professionals.

2. Variable stars

One of the areas where ASSA members have made a major contribution to science is the study of variable stars (Mattei 2002). The AAVSO database contains over 640 000

southern African observations by 111 individuals. This tradition extends back to H E Houghton, through Reginald de Kock, and in the recent past, to Danie Overbeek, who provided much impetus and the majority of southern African observations. However, with the passing of Danie in 2001, a gap has been left in the coverage of many variable stars, which are now not being observed. It is important that current ASSA observers include these stars in their observing programs, to ensure continued coverage.

Recently the observational records that Alexander William Roberts produced from 1891–1920 at Boyden Observatory were discovered (B van Zyl, private communication). A team headed by Brian Fraser and myself, in conjunction with the AAVSO and the University of the Free State, are in the process of reducing these for further study. This work will enable us to extend the AAVSO records back in time and allow more precise determinations of variable star behaviour.

There are a number of stars that the AAVSO lists as being in need of observation. Some of these desperately require observers, since they are observed so infrequently that it is impossible to make a proper study of the brightness variation through the construction of an accurate light curve. The list of stars for which observations are desperately required is given as Table 1.

3. Nova searching

ASSA members mounted a dedicated search for novae under the leadership of Jack Ben-

nett. His technique was to assign areas of the sky to visual observers who would search using binoculars or the naked eye every night. None were found and the program was abandoned. With modern technology for imaging and computer processing, the techniques for discovery of novae are well established, but no ASSA members are doing this work. There is a need to set this up via a dedicated section with its own Director.

During 2002, there were 15 IAU announcements of new novae or outbursts of nova-like variables (Green 2003: 6).

One of the most prolific nova discoverers is Bill Liller, a retired astronomer living in Chile. He discovers novae through dedicated photographic searches. As a clue he states that most novae discovered in the 1980s were within 15° of the galactic equator, and nearly half within a $30^\circ \times 30^\circ$ box

Table 1. Southern variable stars in need of observations.

Stars very urgently in need of observations

0003-39 V Scl	0707-72 R Vol	1046-28 RS Hya	2049-54 S Ind
0024-38A T Scl	0720-05 TT Mon	1115-61 RY Car	2051-40 RY Mic
0025-46 T Phe	0731-73 S Vol	1345-36 RX Cen	2120-30 S Mic
0044-35 X Scl	0813-34 TU Pup	1346-77 T Aps	2142-47 R Gru
0106-30 U Scl	0925-51 Y Vel	1656-36 RT Sco	2213-21 X Aqr
0109-57 RS Phe	0949-53 Z Vel	1913-31 SW Sgr	2327-46 V Phe
0346-25 U Eri	0955-63 RV Car	2007-47 R Tel	2352-65 R Tuc
0641-36 CH Pup	1032-70 RZ Car	2022-40 U Mic	

Stars urgently in need of observations

0018-62 S Tuc	0918-68 RW Car	1452-54 Y Lup	2034-29 R Mic
0257-51 T Hor	0940-23 RR Hya	1547-36 R Lup	2039-05 Y Aqr
0349-46 U Hor	1010-58A Z Car	1616-07 W Oph	2057-82 T Oct
0512-47 T Pic	1010-58B AF Car	1623-19 Y Sco	2102-21 X Cap
0536-04 Y Ori	1144-41 X Cen	1708-33 RW Sco	2158-28 S PsA
0543-31 S Col	1150-58 W Cen	1735-43 RU Sco	2212-30 R PsA
0556-86 R Oct	1302-12 RV Vir	1741-62 W Pav	2219-38 T Gru
0632-01 SY Mon	1342-36 RT Cen	1821-33 RV Sgr	2228-67 R Ind
0742-41 W Pup	1405-28 RU Hya	1855-12A ST Sgr	2234-62 T Tuc
0756-12 U Pup	1434-17 V Lib	1911-24 TY Sgr	2351-50 R Phe
0824-76 R Cha	1437-19A SX Lib	2008-22 W Cap	2352-09 V Cet

The stars listed here need additional observations. Please be aware that many of these stars are difficult to observe, and should be attempted only by experienced observers. Taken from *AAVSO Bulletin 66: Predicted maxima and minima of long period variables for 2003*.

centred on the star 3 Sgr (Liller 1992: 28). With the proper equipment and dedication, there is clearly scope for ASSA members to follow in Bill's footsteps and contribute to this field.

4. Supernova searching

The first supernova discovered from South Africa was that in the galaxy M83 by Jack Bennett on 1968 July 16 (IAU Circular 2085). Thirty three years later, Berto Monard discovered the first of his ten (to date) supernovae, in the galaxy NGC 1448. His initial discovery was visual, after hundreds of hours of painstaking searching, but since then all his discoveries have been made using CCD imaging on a SCT telescope and computer processing, and have come in quick succession. There is clearly scope for both methods, but Berto is currently the only one searching for supernovae. He gave us an insight to his search techniques with a paper presented at the 5th ASSA Symposium (Monard 2003). There were 292 discoveries of extra-galactic supernovae during 2002 (Green 2003: 7) so there is plenty of opportunity for more ASSA members to become involved in this field.

5. Comets

During recent years, the apparition of several bright comets has led to a resurgence in southern African comet observation. These observations include the study of brightness behaviour, coma morphology, and tail development. This resurgence was certainly fuelled by the appearance of comet Hale-Bopp, with nearly 400 separate observations recorded. Mention must be made of Mike Begbie, who contributed over 80% of these observations. However, many other amateurs are becoming skilled in these observations,

and still more observations are required.

There are still areas where ASSA can make a larger contribution. For one, only the brighter comets are being well observed; we need more data on the fainter comets as well. Secondly, Daniel Green has requested CCD photometry of even fainter comets, not visible visually, especially of far southern comets which are out of reach of our northern colleagues.

I commented on the history of comet discovery at the ASSA Symposium (Cooper 2003a). The last comet discovered from South Africa was in 1978. Needless to say, dedicated searching for comets from South Africa is desperately required. The discoverer is able to share in the Edgar Wilson award for a successful amateur discovery. This annual prize of US\$ 10 000 is shared amongst the amateur comet discoverers for the previous year. There were five amateur recipients for comets discovered in 2002 (Green 2003: 7).

6. Meteors

ASSA also has a rich past of meteor observation. There was a very active group during the 1950s when S C Venter was Director of the Meteor Section. One observer, J H Botham, was particularly active, logging over 100 hours of observing in one year. In recent years, ASSA members have again started to contribute to this field, but there is still much scope for expansion in three key areas:

- monitoring the behaviour of major annual showers. Useful work has been done on the eta Aquarids (Cooper 2003b), but several other showers can be well monitored from here using only the naked eye;
- elucidating the activity of minor showers, mainly by accurate plotting to determine

- annual activity and radiant structure; and
- determining the frequency and nature of short-lived meteor outbursts.

There are two recorded instances of short-lived meteor outbursts (Jenniskens 1995). On the night of 1964 November 25/26 Brian Warner observed 25 meteors in 10 minutes from a radiant near omega Orionis. In 1979, Tim Cooper observed abnormally strong activity from a radiant in Pyxis. Based on the reported observations, Jenniskens and Lyytinen (2003) predict possible outbursts from these in 2012/2035 and 2038/2039 respectively.

In addition, Cliff Turk, Bill Hollenbach and Tim Cooper have reported bursts which have not been further analysed. The latter case occurred most recently, on the morning of 2003 May 4, when 15 meteors were seen from a radiant at $\alpha = 22:20$, $\delta = -27.5^\circ$ in Piscis Australis. What is clear is that these

types of outbursts are probably more common than originally thought, but that most are missed since there are too few observers watching the sky on a continual basis. Many such visual outbursts could be confirmed using forward-scatter radio techniques. A global network has been set up, and virtually the only area on the globe for which a station is missing is South Africa.

It is clear that meteor observing is practiced by too few observers, and often for various reasons those few are not out observing at the same time. We require more observers to join these programs and fill in the gaps left from our location.

7. Planetary occultations

An occultation occurs when a solar system body passes in front of a star. This body can be the Moon, a major planet (of which obviously eight such possibilities exist), or one

Table 2. Successful minor planet occultation observations by amateurs.

Seq. No.	Date	Minor planet	Diam. (km)	Observer(s)	Chords
26	1982 Mar 30	15 Eunomia	>309	Overbeek	1
38	1983 May 05	65 Cybele	>150	Hers	1
48	1984 Aug 08	87 Sylvia	>249	Strobos, Hirsch	1
56	1985 Apr 21	12 Victoria		Van Ellinckhuyzen	½
80	1988 Apr 21	139 Juewa	164±20	Cooper, Wakefield	2
82	1988 Jul 09	250 Bettina	>97	Cooper, Fraser, Overbeek, Wakefield	3
100	1990 Jun 15	3 Juno		Overbeek	1
113	1991 Jun 15	356 Liguria		Lund	1
137	1994 Dec 15	336 Lacadiera	>52	Overbeek	1
182	1998 Jun 27	248 Lameia	62 x 53 or 55 x 52	Overbeek, Cooper, Fraser, Smit, Lund	5
222	1999 Oct 14	48 Doris		Overbeek, Cooper, Fraser, de Jager	4
247	2000 Jun 11	345 Tercidina		Overbeek, Smit	2
257	2000 Oct 05	135 Hertha		Turk	1
311	2002 Jan 07	712 Boliviana		Streicher	1

Extracted from a list of 334 positive events observed globally up to May 2002, maintained by the International Occultation Timing Association. Also see Fraser & Overbeek (1998).

of the host of minor planets, for which the latest count is 208,572 (Marsden 2003: 8). There exists a core group of ASSA observers who observe the latter, and by timing the disappearance and reappearance of stars during such events, we are able to determine the size and shape of the occulting body. A list of successful observations is given in Table 2. In the past, the limited accuracy of the predictions meant that we might achieve success in perhaps 5% of the events observed. Nowadays, with much more accurate positional measurements of both stars and planets, the success rate is perhaps one in two or three.

Nevertheless, there are still too few chords generated by ASSA members to determine accurate minor planet profiles, simply because too few observers are taking part in this important program. A case in point will illustrate the importance of having many observers taking part. The most successful event so far observed from South Africa was the occultation of PPM 236753 by 248 Lameia on 1998 June 27 (Fraser & Overbeek 1998). Five chords were obtained across the profile of the minor planet, which enabled us to derive a size of 55 x 52 km. However, if we superimpose the positions of the five successful stations on a map of the Gauteng region, we realise that dozens of potential observers were in the path, and had these observed we could have defined the profile with much greater accuracy. And this was the most successful to date; most results are based on the chords of at most one or two observers.

8. Solar and lunar observing

The Solar Section languished for many years without direction. Now however, it is being rejuvenated under the leadership of its new

Director, Braam van Zyl. I would urge interested participants to contact Braam, to ensure the long-term viability of observations by ASSA members. In the past, observations have been made in sunspot counting and drawing, and the monitoring of solar magnetic activity.

There has never been any coordinated approach to lunar observation. Despite the fact that many consider the Moon to be a sterile solar system body, there are important areas where observers with small telescopes can contribute, such as the monitoring of TLPs and micro-meteorite impacts. In the case of the Leonids, these impacts have been recorded with video recorders. In recent years, ASSA members have also submitted useful measurements of lunar eclipse darkness, which have been used to measure the dissipation of volcanic aerosols (Keen 2003). This series of observations needs to be continued in support of this long term project, and with three more total lunar eclipses in 2003/4 we have an ideal opportunity to make a valuable contribution to this program.

9. Double stars

The Double Star section under the directorship of Chris de Villiers is the newest observing section of ASSA. Little double star work has been done since the pioneering days of Innes, Finsen, van den Bos and Ros-siter. The section desperately requires more observers to complement the work being done by Chris and Magda Streicher. Quoting from Chris' webpage [www.skywatch.co.za]:

'This branch of astronomy offers...a unique opportunity for the observer to engage in real astronomical research, rather than just admiring the colour differences

often found in a pair of doubles. In fact, this field is wide open to all interested observers, presenting a golden opportunity for serious scientific work. Scientific double star work consists of determining the angular separation between the two components, and the position angle of the (usually) fainter, secondary component with respect to the brighter, primary component. After many observations the apparent orbit may be plotted and the orbital elements calculated. Once the orbit of a pair is known, the masses of the stars may be calculated.'

10. Deep-sky observing

Virtually only Auke Slotegraaf and Magda Streicher are engaged in this work, but both produce a high output of quality observations which are used by the global community. These objects are also considered to be without change, but there are a surprising number of objects which are considered poorly known and for which visual observations are sought. Chief in this category would be uncertainties in the NGC; the Revised NGC (RNGC) listed a great number of objects as non-existent when they do, in fact, exist. With the establishment of the various Data Centres, the RNGC's mischief is largely undone, but there is nevertheless a nomenclature mix-up, which deep-sky observers are helping to sort out (A Slotegraaf, private communication).

11. Conclusions

The foregoing lists some of the major contributions and areas for expansion. But the list certainly does not end here. For the advanced amateur, there are fields of specialised study crying out for attention, especially for those equipped with CCD cameras on

even small telescopes. These are fields which, not so long ago, were beyond the realm of the amateur, to which he or she can now make a serious contribution.

My Presidential Address intends to give some idea of the successes achieved by dedicated amateur ASSA observers in the past, and impetus for improving our contribution in the future. For many of these important observations it is not required to have a large professional telescope. All it takes is patience, motivation and dedication. I sincerely hope that our many members will take these comments to heart in the coming period. Clear skies to you all.

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... Occultation by Titan, continued from p.194

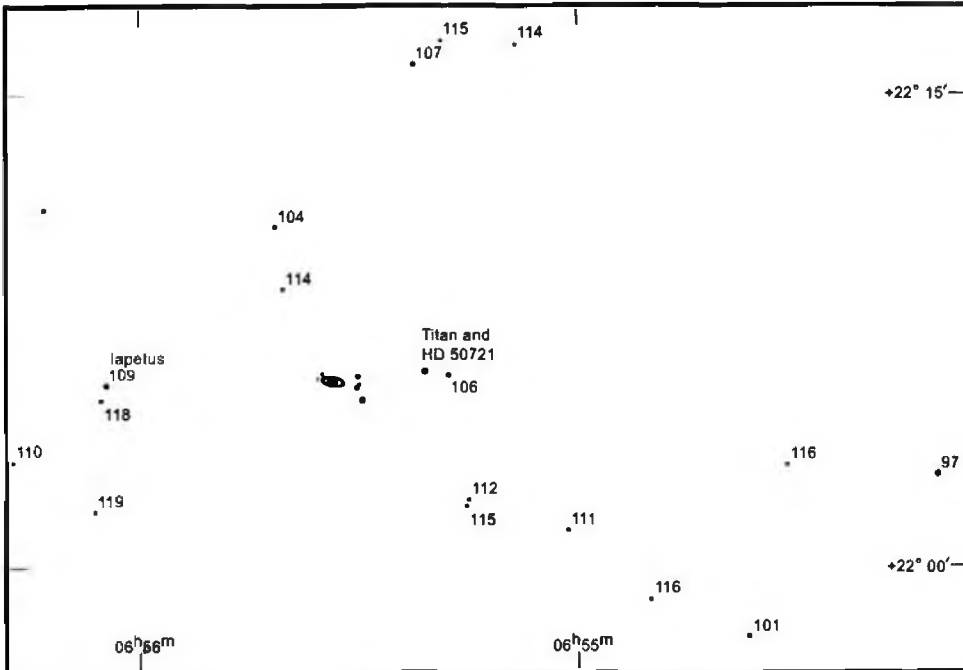


Figure 2. Saturn and its moons on 14 November at 02:11, showing Titan occulting the reddish star HD 50721. The separation between Saturn and Titan will be $2'56''$. Some 7 hours later, Titan will occult the 10.6 mag star shown to its west. East of Saturn lies Iapetus (10.9 mag); several more moons are identified on the close-up diagram below. Stellar magnitudes, taken from the Tycho-2 catalogue and converted to V , are shown with decimals omitted.

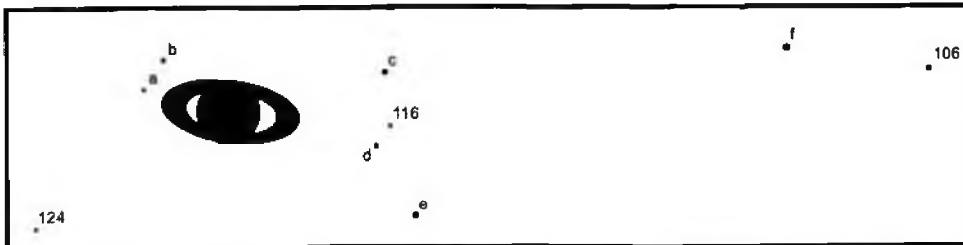


Figure 3. Close-up of Saturn on 14 November at 02:11, showing several of its satellites. The orientation of the diagram is identical to Figure 2, which has north up and east to the left. The satellites, and their visual magnitudes, are (a) Mimas, 12.7 mag; (b) Encelade, 11.5; (c) Dione, 10.2; (d) Tethys, 10.0; (e) Rhea, 9.5; (f) Titan, 8.4 and HD 50721, 8.6 mag.

Quasars and active galaxies

The French astronomers Mira & Philippe Veron (Haute Provence Observatory) have recently made the 11th edition of their quasar catalogue available. It lists all quasars with measured redshifts known prior to 2003 August 1.

It includes close on 50 000 quasars, and an additional 15 000 galaxies with active nuclei. This is nearly double the number in the previous edition, due to inclusion of the Australian 2dF quasar catalogue and results from the first part of the SLOAN sky survey.

These exotic celestial objects are within reach of the amateur equipped with a small telescope and a good set of star charts.

Table 1 lists all quasars with V mag brighter than 13.0, putting them within reach of a 6-inch telescope.

The brightest quasar in the list is **IC 4296** (see finder chart overleaf) located in Centaurus. Despite its southerly declination, it was discovered by Lewis Swift in the 1890s from Los Angeles, California, using a 16-inch refractor. Prof H A Howe observed it

soon after, with a 20-inch refractor from Denver, Colorado. More southerly observers will have a better view, but not much detail is likely to be seen. An 8-inch shows it as a round half-arcminute fuzzy blob. It is the brightest member of a group of 30 or so galaxies (the IC 4296 Group) which include NGC 5140 and possibly NGC 5161, NGC 5188 & NGC 5193.

Table 2 (overleaf) is an extract from the catalogue listing all active galaxies brighter than $V = 12.0$ and south of declination $+20^\circ$. A number of 'famous' deepsky objects are in the list.

Most prominent is **NGC 4594**, the Sombrero Galaxy, in Virgo. In binoculars, it is readily seen as an elongated glow. I have never, however, noticed its nuclear region as being prominent, as one would expect from an active galaxy. However, in a telescope, the nucleus comes into prominence. William Herschel recorded it on two occasions during his systematic observing programme. In March 1788 he wrote about it in his log as follows: "much elongated, bright

Table 1. Quasars brighter than $V = 13.0$

Designation	RA			Dec		V (mag)	redshift (z)
	h	m	s	°	'		
4U 0241+61	02	44	57.6	+62	28 06	12.19	0.045
WENSS 0648+733	06	54	26.6	+73	19 50	11.7	0.114
1WGA J0820.1+3728	08	20	07.7	+37	28 39	11.8	0.082
MCG -02.28.039	11	01	29.9	-12	26 56	12.7	0.026
3C 273.0	12	29	06.7	+02	03 08	12.85	0.158
IC 4296	13	36	39.0	-33	57 58	10.5	0.013
WPVS 95	14	51	33.0	-36	25 56	12.3	0.028
WPVS 97	14	55	53.0	-35	48 22	12.0	0.035
NPM1G+27.0587	18	53	03.9	+27	50 28	12.5	0.062
FIRST J22060-0821	22	06	02.6	-08	21 06	12.34	0.067
RXS J22289-0904	22	28	52.7	-09	04 52	12.8	0.07
RX J23273+1524	23	27	22.0	+15	24 37	12.6	0.044

Minutes of the AGM

Minutes of the Annual General Meeting held at the SAAO Lecture Hall, 2004 August 11 at 20:00.

1. Opening

The meeting opened at 20:05.

2. Apologies

Apologies were received from: Dr Peter Martinez, Tim Cooper, J D Laing, Willem van Biljon, Chris de Coning, Maciej Soltynski and Jan Hers.

3. Minutes of the previous AGM

These had been published in *MNASSA* and Andrew Gray proposed that they be accepted. This was seconded by Peter van Blommestein.

4. Matters Arising

There were no matters arising

5. Report of Council

The Report of Council was read by Case Rijdsdijk. In this report it was announced that the Gill Medal had been awarded to Mr Berto Monard. Since he was not present, it would be awarded to him at an appropriate time in the future, possibly at the ASSA Symposium, by Case Rijdsdijk or alternatively Dr Ian Glass, who proposed the award.

6. Reports of Observing Sections

The reports were read either by their author or an alternate as follows: Comet & Meteor (by Tim Cooper read by Tony Jones), Deep Sky (Auke Slotegraaf), Double Star (by



Outgoing President Case Rijdsdijk (left) and ASSA President 2004–2005 Pat Booth (right).

Chris De Villiers read by Laurie Simone), Occultations (by Brian Fraser read by Peter van Blommestein), Solar (by Braam van Zyl read by Ian Glass) and Variable Star (by Jan Hers read by Cliff Turk).

7. Reports of other sections

The Dark Sky Section report was read by the Director, Cliff Turk. The Historical Section report, by Chris de Coning, was read by Keith Gottschalk. The new Education & Public Communication Section was read by



Present at the AGM were Richard Sessions (top, left) and Laurie Simone (top, right). Chris Forder (bottom, left) and Dr Ian Glass (bottom, right) discuss the late Albert Jansen's book *Star Maps for Southern Africa*, published in July by Struik.



the Director, Case Rijdsdijk. No report was received from the Computing Section.

All reports listed in sections 6 and 7 above were greeted with acclaim and will be published in *MNASSA*.

8. Financial Report

The Hon. Treasurer briefly discussed the report and stated that the ASSA was in fairly good health, but was awaiting the final auditors report.

9. ASSA Scholarship

In the absence of Maciej Soltynski, this was read by Abe Mahomed and will be published in *MNASSA*.

10. ASSA Endowment Trust

The report was read by Cliff Turk who stated that the trust was healthy and the full report will be published in *MNASSA*.

11. Election of Auditor

The Hon Auditor Mr Ron Glass, of Messrs Horwath, Zeller Karro was re-elected on a proposal by Andrew Gray, seconded by several members.

12. Election of Office Bearers

The following were elected *en bloc* as they were the only nominees, on a proposal by Peter van Blommestein seconded by Keith Gottschalk.

President	Ms P Booth
Vice Presidents	Dr C D Laney Mr C L Rijdsdijk Mr A B Jones
Members of Council	Dr I S Glass Dr P Martinez Ms M Streicher Mr M Poll
Hon. Secretary	Mr C L Rijdsdijk
Hon. Treasurer	Mr C R G Turk

13. Presidential Address

The retiring President then handed over the chair to the incoming President and wished her a successful year of office. Ms Pat Booth thanked Case Rijdsijk for his hard work during the past year and called on him to present his presidential address. This consisted of two parts; the first was an overview of the role of Council, that will be published in *MNASSA*, and the second was an illustrated talk entitled "The Sun – A typical star". This consisted of some spec-

tacular images that he had obtained from Dr Helen Mason of Cambridge University and the SOHO satellite. Many of the images were short time-lapse video clips showing in great detail the dynamics of the visible Sun in ordinary and ultra-violet light as well as the X-ray Sun.

14. Closure

After conclusion of the address there was some discussion on the address, after which Pat Booth declared the meeting closed.

Report of Council 2003–2004

Council notes with regret the passing of Dr Janet Mattei during the year. Her energy within the AAVSO will be sorely missed. The President and Council did send condolences to her family and friends on behalf of the ASSA.

complexities of taking over the accounts without the benefit of the advice and mentorship of the previous treasurer, Mr Colin Gray who passed away last year. Accounts are in order and the ASSA is in good health.

1. Membership

During the year subscriptions were increased to R100 with the registration fee being increased to R25. Council felt that these were reasonable bearing in mind that there had not been an increase for some years. At present membership is as follows: members with S&T subscription (99), non-S&T subscribing members (130), Honorary members (12) for a total of 241.

The ASSA thanks acting Director SAAO, Dr Peter Martinez, for enrolling the *MNASSA* students as members, and one hopes that they will remain members into their careers, either as astronomers or engineers and technicians working in the astronomical arena.

3. Council appointees

Dr Abe Mahomed has retired as membership Secretary and Council will need to fill this important position as soon as possible. Council thanked Dr Mahomed for his services over the years and were unsuccessful in persuading him to stay on! Mr Cliff Turk stays on as Business Manager and has taken on the job as Treasurer as well and Council thanks him for his efforts. Distribution of *MNASSA* and the *SkyGuide* requires an enormous amount of work, and several discussions have been held in the course of the year to try and alleviate some of this work. The year was unique in that the President continued as Secretary as well.

2. Finance

The current treasurer is to be thanked and commended for his efforts in sorting the

4. *MNASSA*

The Editor, Mr Auke Slotegraaf, maintains his firm hand at the helm of *MNASSA* and Coun-

cil is grateful for his efforts, and the assistance given to the editor by Dr Ian Glass and Mr Maciej Soltynski. The publication continues to be well received both locally and overseas with contributions from amateurs and professionals alike, and Council is looking forward to receiving observational contributions from NASSP students. Dr Ian Glass has been corresponding with the Institute of Scientific Information, ISI, to get *MNASSA* recognized and thus get more substantial contributions from the scientific community in SA.

5. Annual *SkyGuide*

Council wishes to publicly thank Ms Pat Booth for her many years of dedicated service as editor of the *Handbook*. The new

handbook, *Sky Guide Africa South* has been very well received and it is hoped that the 2005 edition will be even better than the 2004 edition. Mr Slotegraaf, ably assisted by the ASSA's Editorial Board is to be thanked for their efforts. It makes Mr. Slotegraaf's work a lot easier if he receives details of the Centres and Sections early, and it is hoped that the new timing of Centre and ASSA AGMs will help this situation.

6. Reciprocity

Council is glad to announce that a Memorandum of Understanding between the ASSA and the South African Institute of Physics, SAIP, has been agreed to. This enables full members of the ASSA to attend



(left) Dr Abe Mahomed, who has been Membership Secretary since 1995, has retired his position on Council. (right) Mr Cliff Turk, elected Honorary Treasurer, has also taken on the position of Business Manager.

SAIP conferences and meetings and vice versa. It is hoped that members of both the SAIP and ASSA will take advantage of this arrangement.

7. Sections of the ASSA

The Imaging Section Directorship is still vacant and it is hoped that it will be filled in the coming year. In the course of the year Council received requests for the formation of two new Sections: Cosmology and Astrophysics and Education and Public Communication (EPC). Council discussed both and decided that the former, Cosmology and Astrophysics was probably too complex for members of the ASSA. It was suggested to the proposer, Mr Frikkie de Bruyn, that in view of the recent arrangements established with the SAIP, that a home for his field of interest in fact already existed within the SAIP and that members with an interest in this field could present papers at SAIP meetings. This was accepted by the proposer. Council did agree to the setting up of an EPC section and the Director is Case Rijdsdijk. (Further details appear in the Report of Sections, pp 151-152 of this issue - Ed.)

8. Scholarships

Mr Maciej Soltynski, Dr Abe Mahomed and Mr Andrew Gray are to be thanked for their efforts in running the ASSA Scholarship. A full report will appear in *MNASSA* in due course.

The Alan Cousins Scholarship, proposed by Dr Dave Kilkenny will hopefully be established in the coming year. A trust needs to be set up and it is intended that this scholarship be for Ph.D or possible M.Sc students in astronomy.

9. Scope-X

Once again the Johannesburg Centre organized a superb Scope-X. It was very well attended and each year the numbers seem to increase. A full report has appeared in *MNASSA*. The Cape Centre also had a Scope-X held at the MTN ScienCentre. Attendance was disappointing but Council expresses its appreciation for the efforts that are being made to promote astronomy in South Africa. Should other centres wish to hold similar exhibitions they are well advised to consult the people at the Johannesburg Centre. One thing however stands out: the selection of a venue is crucial to the success of such an event.

10. Transit of Venus

Virtually every person even remotely interested in astronomy turned out to participate in or observe this rare event. Some retraced historical routes and events whilst others, from around South Africa and the world, came out to actually observe and time the event. All centres were involved and many amateurs helped out in innumerable ways and again Council wishes to express its gratitude to members for their efforts in making the entire event in South Africa a success. Prof Jay Pasachoff from the US, who came out for the partial eclipse, gave talks on the transit of Venus for members.

11. Constitution

Amendments to the constitution were discussed, drawn up and circulated to members after which they were announced in *MNASSA* and voted on. It is expected that the results will be announced after the next Council meeting, but no problems are expected.

12. The Gill Medal

Only one nomination was received and a worthy one it proved to be. The Gill Medal for 2004 is to be presented to Mr Berto Monard for his outstanding work on the discovery of supernovae. Also his remarkable discovery of a gamma ray burst (GRB) afterglow, which enabled major observatories around the world to make significant follow-up observations again highlighted the important role that amateurs can play in world astronomy. Dr Ian Glass will write the citation to appear in *MNASSA* and the medal will be presented to Monard by the current President, Case Rijdsijk, at the earliest opportunity.

13. Acknowledgements

The Council wishes to express its thanks to the following. Dr Peter Martinez, acting SAAO Director, for allowing the Council to use the SAAO Lecture Hall for its meetings and also the use of many other of the Observatory's resources. The Directors of the various Sections within the ASSA for forwarding data to their respective international bodies and for their support. Finally to all members of the various Centres, especially the Cape Centre for hosting this years AGM.

Report of the ASSA Endowment Trust (ASSET) for 2003 Cliff Turk (Secretary, ASSA Endowment Trust)

During the calendar year 2003 the Trust received donations of R1570.00 which is slightly down on the previous year. Capital increased to R22 816.

Income from investments amounted to R5114 from which grants totalling R1500 were paid leaving a nett increase of R3614 in disposable funds which then stood at R36 698. The full year-end accounts will be

published in *MNASSA*.

Members and Centres are reminded that the Trust will consider assisting with funding of worth-while projects. One such project is currently under consideration and it is hoped others will follow. Initial enquiries should be motivated in writing to the Trust Secretary, 20 Nerine Ave, Pinelands, 7405 or via e-mail to [cliffurk@yebo.co.za].

Balance Sheet as at 31st December, 2003

2002	Trust Capital:	
19 476.25	Balance at 31st December 2002	21 246.25
1 770.00	Donations received during the year	1 570.00
<hr/>		<hr/>
R 21 246.25		R 22 816.25
6.20	Sundry Creditors	6.20
	Distributable Reserve:	
33 353.56	Balance of Income and Expenditure Account	36 967.39
<hr/>		<hr/>
R 54 606.01		R 59 789.84
<hr/>		<hr/>

proceedings of the annual general meeting 2004

2002	Represented by:	
	Investments:	
38 000.00	ABSA Bank Ltd. Fixed Deposits	38 000.00
1 387.57	ABSA Bank Ltd. Equity Shares (at cost)	1 387.57
Nil	Sundry Debtors	Nil
15 218.44	ABSA Bank Call A/c	20 402.27
Nil	Cash	Nil
R 54 606.01		R 59 789.84

Income and Expenditure Account for the year to 31st December, 2003

2002	Income:	
4 536.12	Dividends and interest received	5 113.83
	Deduct expenses:	
1 500.00	Grant to ASSA	1 500.00
4.00	Stationery	Nil
R 3 032.12	Excess of income for the year	R 3 613.83
30 321.44	Excess of income from previous year	33 353.56
R 33 353.56		R 36 967.39

Notes:	ABSA Fixed Deposits:	
	11.79% p.a. maturing 8 Oct 04	R 18 000.00
	9.78% p.a. maturing 28 May 05	R 20 000.00
	ABSA Bank Ltd. 362 Equity Shares(cost)	R 1 387.57
	(Market value R15 312.00)	R 39 387.57

Report of the Comet and Meteor Section
T P Cooper (Director)

Observed meteor showers

The year 2003 saw meteor observations reported by no less than 25 individuals (see Table 1), largely as a result of a number of specially organised campaigns. The year again saw less than desirable coverage due to adverse weather conditions. Nevertheless, useful work was done where weather permitted.

Beta Tucanids: A special watch was organised with Dr Peter Jenniskens in order to observe a potential outburst due to the passage of the Earth through the dust stream of comet C/1976 D1 Bradfield. Stations were set up at Bredasdorp, Stellenbosch and Cape Town, with visual observers and image intensified video at each site. All stations were badly affected by clouds, and a single Beta

Tucanid was observed by Jenniskens. Members of the Weather Bureau at SANAE base in Antarctica were also enlisted as observers. They confirmed no activity from their site.

Alpha Centaurids: Tony Jones, Karen Koch and Tim Cooper observed a total of 8 hours. The shower showed its usual low activity of around 2–3 per hour.

April Lyrids: Magda Streicher continued her coverage of this shower. Cliff Turk supplemented this with observations he made in 2001.

Pi Puppids: A special watch was organised based on Peter Jenniskens's notifica-

tion, and based on a prediction by Jerome Valbaillon, of a possible outburst on April 23. Weather conditions were not entirely favourable, but a watch by several observers indicated no outburst, apart from a brief flurry witnessed by Mike Begbie. Since other observers at the same time witnessed no activity, Begbie's activity may have been due to a narrow, localised streamlet.

Eta Aquarids: Yet again clouds played a role in limiting the coverage of the most southern major shower. Cooper, Streicher and Penning still managed a reasonable 13.6 hours between them, with best rate observed

Table 1. Meteor showers observed

Observer (number of showers observed)	Showers observed and duration	Total time (h)
Tim Cooper (5)	Beta Tucanids 1.2, Alpha Centaurids 3.0, Pi Puppids 1.5, Eta Aquarids 6.0, Geminids 1.5	13.2
Magda Streicher (6)	Pi Puppids 1.5, April Lyrids 3.0 Eta Aquarids 1.9, June Bootids 0.9 Delta Aquarids 3.8, Leonids 1.4	12.5
Gerrit Penning (4)	Pi Puppids 1.1, Eta Aquarids 5.7 Geminids 3.3, Velids 2.4	12.5
Cliff Turk (3)	Delta Pavonids 1.0, April Lyrids 2001 4.0 Orionids 4.0	9.0
Mia Zeelie (2)	Geminids 6.9, Velids 2.0	8.9
Michael Poll (2)	Leonids 0.8, Geminids 3.6	4.4
Auke Slotegraaf (1)	Beta Tucanids 3.6	3.6
Ed Foster (1)	Beta Tucanids 3.6	3.6
Vito Basso (1)	Beta Tucanids 3.4	3.4
Herman Wiechers (2)	Pi Puppids 1.8, Geminids 1.5	3.3
Rui Henriques (1)	Beta Tucanids 3.2	3.2
Jacques van Delft (1)	Pi Puppids 3.0	3.0
Tony Jones (2)	Beta Tucanids 0.5, Alpha Centaurids 2.5	2.7
Karen Koch (2)	Beta Tucanids 0.5, Alpha Centaurids 2.5	2.7
Mike Begbie (1)	Pi Puppids 2.2	2.2
Andre van Staden (1)	Pi Puppids 2.1	2.1
Trevor Gould (1)	Geminids 2.0	2.0
Berto Monard (1)	Pi Puppids 2.0	2.0
Elfrieda vd Berg (1)	Pi Puppids 1.8	1.8
Brian Skinner (1)	Beta Tucanids 1.7	1.7
Dudley Field (1)	Beta Tucanids 1.7	1.7
P van Blommestein (2)	April Lyrids 0.5, Pi Puppids 1.0	1.5
Braam van Zyl (1)	Pi Puppids 1.1	1.1
Peter Jenniskens (1)	Beta Tucanids 0.7	0.7
Herman Bonnet (1)	Pi Puppids 0.5	0.5
	Total	103.3

by Penning on the morning of May 6 with 28 Eta Aquarids in one hour under limiting magnitude 5.4 conditions. During observation, Cooper detected a brief but strong meteor outburst on the morning of May 4 with a radiant at around RA 22^h20^m, Dec -27.5° in Piscis Australis.

Leonids: No outburst was predicted for 2003 for South Africa. Due to poor weather very few observations were made, apart from brief watches by Magda Streicher and Michael Poll, who confirmed very little activity.

Geminids: The year culminated as usual with observations of the Geminids. Trevor Gould observed for 2 hours on December 13/14, and despite a bright moon saw 11 Geminids and 4 sporadics. Tim Cooper observed on December 14/15 for 1.5 hours before moonrise, seeing 23 Geminids and 7 other meteors. The Geminids included a -4 fireball, which travelled a full 3 seconds across the sky. The event was reported also by Herman Wiechers and Michael Poll. Gerrit Penning and Mia Zeelie also observed the Geminids from Bloemfontein, including up to December 16 when rates had dropped to almost zero.

Summary of observed fireballs

2003 saw a total of 17 fireball reports, summarised in Table 2. The full details have been submitted for publication in *MNASSA* as a separate article

Summary of observed comets

Comet NEAT (C/2002 V1) was observed by Andre van Staden, Mike Begbie, Mauritz Geyser, Peter van Blommestein and Tim Cooper from January to March, peaking at magnitude 4. *Comet Kudo-Fujikawa (C/2002 X5)* was observed by Tim Cooper

and Peter van Blommestein in February and March and reached magnitude 6. *Comet LINEAR C/2002 (T7)* was observed by Mike Begbie and Tim Cooper. The comet brightened from magnitude 10.8 in October to 9 by year-end. This comet may become quite bright in 2004. *Comet Encke (2P)* was observed by Mike Begbie during October and November as the comet headed towards perihelion in its 3.3 year orbit. It reached magnitude 7 before being lost in the Sun's glare. An extended period of cloud prevented observation by the Director. *Comet NEAT C/2001 (Q4)* was observed by Mike Begbie and Tim Cooper, finishing 2003 at magnitude 9. This comet is also expected to become quite bright in 2004.

All observers of meteors and comets are heartily thanked for their contributions.

Table 2. Fireballs recorded in 2003

Date 2003	Reporter	m _v	Time (UT)
Jan 30	Ivor Paul	-6	18:20
Mar 06	Cliff Turk et al	-6 to -7	18:22
Mar 06	Cliff Turk et al	-6	18:55
Mar 30	Bill Hollenbach	-6	16:37
Apr 08	Chris de Coning	>-3	19:50
Apr 20	Magda Streicher	-4	21:39
Apr 25	J. van Blommestein	-3?	19:20
May 29	Jacques Cilliers, Jane Trembath	>-3	19:03
Jun 01	Auke Slotegraaf	-4	23:22
Jun 06	Brian Skinner	-5	05:15
July 17	Rob Scott	-5	16:30
Aug 28	Trevor Gould	-6	17:22
Aug 28	Bill Hollenbach	?	19:59
Aug 31	Trevor Gould	-3	18:00
Sep 28	L v. Amersfoort	?	18:45
Nov 09	Trevor Gould, Mauritz Geyser	-6	01:18
Dec 14	Herman Wiechers, Michael Poll, Tim Cooper	-4	20:11

Report of the Deep-sky Observing Section
Auke Slotegraaf (Director)

The year under review has seen a marked increase in activity in the work of the Section.

Magda Streicher of Pietersburg has continued to document southern sky splendours, sketching upwards of 120 objects. She revisited the Bennett catalogue, observed the 23 obscure Hogg open clusters, and initiated her own project on star chains.

The Bloemfontein Centre Deepsky Group, under the capable leadership of Gerrit Penning, has established their own observation program for the year, consisting of 20 deep sky logs. The logs are considered a great method for recording observation history and to serve as a future reference point. In addition, the logs also contain other observation exercises (e.g. navigational) and contain guidance for the observation of satellites, planets etc. On 28 February 2004, observations officially started as members were introduced to the activity plan for the year. The deep sky group consists of about 12 highly motivated members. Observation evenings are organized twice a month as the Moon and clouds allow. It usually takes

place from members' homes in the city. One reason why the Centre considers its deep sky group to be effective is the use of binoculars during such evenings and the fact that ordinary backyard astronomy is done. A dedicated deep sky webpage was also constructed for the Deep Sky group.

The Director has continued work on open cluster remnants, and is well-along with the development of software to extract data from various catalogs (currently, the UCAC2 and 2MASS catalogues) in order to analyse cluster stars in terms of proper motion, photometric membership, etc. The software is able to generate and partially interpret colour-magnitude and two-colour diagrams using isochrones, radial density profiles and vector point diagrams. It is intended that these routines will eventually be used to automatically search for clusters in large stellar databases. Analysis of various star-groupings is underway, including those groupings listed by Loden, Isserstedt and Uranova, as well as those presented by the director at the previous ASSA Symposium.

Report of the Double Star Section
Chris de Villiers (Director)

Observing: No active observing was done by the Section Director (SD), and no observation reports were received from other observers. The SD hopes to encourage observers to take an interest in double stars by publishing regular double star lists and related information in future issues of *MNASSA*. The Editor of *MNASSA* has agreed to make space available for this purpose.

Book review: The SD submitted a review

on *Observing and Measuring Visual Double Stars* (Argyle, Ed.), which was published in the June 2004 issue of *MNASSA*.

Projects: The SD has embarked on two projects, of which details will be published in *MNASSA* in due course: (1) Comparison of existing methods of determining orbits of double stars, and a proposed new method. (2) Search for new binary stars in the UCAC2 catalogue.

Report of the Occultation Section
Brian Fraser (Director)

This was one of our less active years for a long time. This was due partly to the director not being able to spend as much time as he would have liked on the running of the section due to work and domestic commitments.

However a number of the regular observers continue to enjoy the challenges of occultation observing and have reported as follows.

Lunar occultations were observed by Jannie Smit (Pretoria; 10 disappearances, 3 reappearances), Peter van Blommestein (Simons Town; 48 disappearances) and Cliff Turk (Cape Town; 26 disappearances, 13 reappearances).

In November 2003, there was an occultation of a star by Titan, one of Saturn's moons, and this event caused much interest

in Europe. A team of observers from France and Germany travelled to Southern Africa to observe the event and amateurs all over the country were alerted. Unfortunately the eastern and northern portions of the country were clouded out. Good results were obtained in Namibia, Cederberg and Sutherland and by Albert Jansen in Prince Albert.

There were not many minor planet occultations of bright stars and far fewer events were attempted. One success was obtained by Tim Cooper who observed an occultation by the minor planet Zerbinetta on 2003 April 9/10.

Obtaining a good time signal is still one of the major obstacles to getting good observations and this problem needs to be solved if we are to attract new members to this interesting aspect of amateur astronomy.

Report of the Solar Section
Braam van Zyl (Director)

Solar activities such as active regions, coronal mass ejections, flares and sunspots were relatively constant during the year and provided interesting observation opportunities. The average sunspot count per day numbered 109 with a minimum 11 of and a maximum of 238.

Unfortunately the number of amateurs involved in the counting of sunspots remain only a handful. Hopefully the increased awareness will lead to the enrolment of more members in 2004

Although not one of the two solar eclipses were visible from South Africa, the Mercury transit on 7 May 2003 compensated for this. Public days were organized by the National

Science and Engineering and Technology week (SET) in Cape Town and Bloemfontein as well as at the South African Museum Planetarium of Cape Town, University of Pretoria, Boyden Observatory and Rhino and Lion Nature Reserve at Krugersdorp. Hundreds of members of the public were reached through these events. Various other members of ASSA from all over the country observed from their homes and workplaces. ASSA members from Bloemfontein collaborated and interacted with amateurs from Brazil, Spain and France. Information, photos and data on contact times were exchanged. Invaluable lessons were learnt from this event that could be applied to en-

sure the smooth running of operations during the Venus transit. Mauritz Geyser and his team from Pretoria placed South Africa on the map by means of a live web cast.

The Mercury transit contributed to a greater public awareness and interest in the Sun and its activities. Interested individuals made more inquiries than usual.

An interesting development in the field of amateur astronomy is that more and more amateurs are studying and observing the Sun via the Internet especially those who do not have daily access to telescopes.

ASSA Bloemfontein

The centre has an observation group who uses the coelostat solar telescope at Boyden Observatory. The following activities were hosted: (1) The Mercury transit; (2) To act as

tour guides for visiting groups; (3) Counting of sunspots and active areas on weekends using the coelostat. Some members observe and record sunspots on a daily basis from their homes (using small telescopes) and forward data to the AAVSO and solar sections in the USA; (4) Spectrograph measurements; and (5) Involvement in ongoing research projects namely (i) the influence of the Sun on climate changes and (ii) the influence of solar activities on the navigational abilities of racing pigeons

As this past year has proven to be exhilarating and provided spectacular solar events. I urge all ASSA centres to become involved with or to organize solar observation groups – even if you are only one or two dedicated amateurs, you can make an invaluable contribution!

Report of the Variable Star Section Jan Hers (Director)

The following observers reported variable star observations during 2003:

Peter Bosman - Midrand	2
Tim Cooper - Pretoria	153
Dave Gordon	3
Jan Hers - Sedgefield	95
Berto Monard - Pretoria	123
Johannes Mostert - Prieska	12
Jan Plomp - Queenswood	18
Michael Poll - Gezina	97
Jannie Smit - Pretoria	1348
Cliff Turk - Cape Town	66
Peter Wedepohl - Somerset West	307
Total	2224

Report of the Dark Sky Section
Cliff Turk (Director)

Over the past few years the section has acquired a small monetary reserve from admission fees to the StarWalks held at Kirstenbosch in the summer months. This year the weather was against us and we barely broke even. However, the funds held will allow us to develop our activities further.

To make the public aware of the problems of light pollution is a long process but some progress is being made and a number of enquiries answered as our efforts are becoming better known.

We now require interested members in various parts of the country to help with publicity in their home towns. This would entail mentioning light pollution as a problem in as many forums as possible, e.g.

astronomical lectures or public demonstrations and viewing sessions. The director will assist any volunteers with copies of pamphlets and news items from similar groups around the world and will assist with the supply of suitable slides to illustrate the problems which are encountered and their solution.

Last year it was hoped to start a regular newsletter, but this had to be postponed for various reasons. It is now requested that anyone who would like to receive such a newsletter every six months passes their names and addresses to the director so they can be added to the distribution list.

Contact details appear in the *Sky Guide* and *MNASSA*.

Report of the Historical Section
Chris de Coning (Director)

The past year had its highlights concerning the History of Astronomy.

Website

The ASSA web site has undergone a major overhaul during the past year. The part of the web site dedicated to the Historical Section also greatly benefited from the overhaul. The layout of the site is much improved, and it is easier to read and find information. Some content has been added, especially in regard to the Natal Observatory. Many thanks to Auke Slotegraaf, the webmaster, for all his help.

Archive

The archive has received no new material

during the past year. Due to the complexities and scope of the task of indexing the archive this will be done sometime in the future.

Activities

The Bloemfontein Centre of the Society is once again very active in the historical field. They are the only centre with a dedicated historical section, and with a website [<http://www.geocities.com/assabfn/spacetides/historicalnotes.htm>] dedicated to the topic.

A great deal of basic research was done especially regarding the Lamont Hussey observatory. Persons who had dealings with the observatory were interviewed, lost and forgotten instruments were recovered and stored for safekeeping at the Ehrlich Park

Fire Station Museum (now also an Astronomy Museum).

Publications

Individuals in their private capacities wrote articles with historical content. Please note my appreciation to the following people:

During the past year articles were published in *MNASSA* covering the proceedings of the Fifth Astronomy Symposium. Contributions with historical content were made by:

- Jan Hers ("Variable Stars in South Africa – A Historical Review")
- Rupert Hurley ("de la Caille at the Cape")
- Tim Cooper ("A History of Comet Discovery")
- Dr Wayne Orchiston published an insightful article titled "J.F. Skjellerup: A forgotten name in South African cometary astronomy" (*MNASSA* 62, 3&4).
- Dr Ian Glass published an article titled "A Biographical Index to *MNASSA* and *JASSA*". This is an index of all the mentions made of prominent astronomers in *MNASSA*, and its predecessor *JASSA*.

This is a necessary and excellent publication and a great example of the essence of historical research. To the historian sources are the core of his trade and this article directly addresses this issue (*MNASSA* 62, 11&12).

- Willie Koorts published articles in preparation for the transit of Venus. One article was on the British expeditions to South Africa, and another about the American expedition to Wellington. ("The 1882 transit of Venus and the Huguenot Seminary for Girls" (*MNASSA* 62, 9&10) and "The 1882 transit of Venus: The British expeditions to South Africa" (*MNASSA* 63 3&4)).

Future plans

The Historical Section is proud to announce that it will host an international symposium on the astronomical history of Africa. Interested persons were contacted and a committee to organise the event and referee the papers was put together. It is too soon to give details except that we plan to hold the symposium at approximately the same time as the official opening of SALT.

Report of the Education and Public Communication (EPC) Section Case Rijdsdijk (Director)

This new section was formed this year. With the rising popularity of astronomy around the world and particularly in South Africa there is a growing public demand for information, materials and talks. The latter as a result of the building of the Southern African Large Telescope (SALT), the completion of the High Energy Stereoscopic System (HESS) and the bidding by SA for the Square Kilometre Array (SKA). It is

also quite clear that the National Facilities (SAAO and HartRAO) cannot do this by themselves and it is here that ASSA can play a significant role in promoting and informing the public of these, and other, developments in astronomy.

Many members have done this for years, but it is as well if there can be some sort of consistency and also to distribute press releases from SA and around the world that

can be used internally as news items and also for mentioning in talks etc. As Director I will be asking for centres to appoint an EPC liaison person to whom news items can be forwarded for local distribution. In return it would be really useful for me to have a record of the number of talks given and to whom. I mention this as it helps enormously for fund raising!

In addition to this I think that the ASSA Centres should be trying to take a more active role in supporting schools. It is therefore necessary to have a knowledge of the new curriculum and to develop appropriate resources. I have a variety of educational resources, topics and ideas that are available on request.

During the year I was invited to deliver the Bernard Price Memorial Lecture for the Institute of Electrical Engineers. Entitled "Fingerprinting the Universe with SALT", it was delivered on consecutive days in Johan-

nesburg, Durban, East London, Port Elizabeth and Cape Town in October. Audiences were excellent, both in number and in the quality of questions asked. A shortened version was presented at the dinner of AFCON conference in Cape Town in December.

In addition numerous talks were presented to schools, adult groups such as Rotary, Cognoscenti Club, MENSA, Scope-X and the ASSA Cape Centre. In addition teacher training workshops on the theme "Earth and Beyond" were given to teachers in Beaufort West, Grahamstown (SciFest), Sutherland and at two Space Camps set up by the SAAO.

Advice was also given to various organizations on astronomical and related displays at the MTN ScienCentre and the SAAO Visitor Centre.

I will in future be writing the newspaper column and the radio broadcast under the auspices of the ASSA rather than the

ASSA Scholarship Report for 2003
Maciej Soltynski (Convenor, ASSA Scholarship Committee)

The ASSA Scholarship was established in 2000 to encourage the study of astronomy at any Southern African university at the 2nd and 3rd year level. The holders of the Scholarship for 2002 were Melissa van Gend and Chris de Villiers.

Melissa van Gend completed her year of Astronomy study at UNISA successfully and re-applied for a further year of study and was granted the ASSA Scholarship for 2003.

Chris de Villiers passed two of the three Astronomy modules he undertook at UNISA in 2002.

My thanks go to fellow committee members, Andrew Gray and Dr Abe Mahomed, for their contributions to administering the ASSA Scholarship.

Minutes of the AGM

Minutes of the Annual General Meeting held at the SAAO Lecture Hall, 2005 August 17.

1. Welcome

The President, Pat Booth, welcomed all those present which included herself, Andrew McConell, Peter Martinez, Tony Jones, Cliff Turk, Ian Glass, Dudley Field and Case Rijdsdijk from Council and eight ordinary members.

2. Apologies

There were apologies from all up-country members and Maciej Soltynski, Auke Slotegraaf, Dave Laney, Bernard Mayer, Rupert Hurly, Daryl Momberg and Chris Forder.

3. Minutes of the last AGM

This was held on 2004 August 11 and was published in *MNASSA*, 2004 October. Keith Gottschalk proposed that these be accepted. This was seconded by Cliff Turk.

4. Matters arising

There were no matters arising from the minutes.

5. Report of Council

This was read by the President.

6. Reports of observing sections

These were read. There were no reports from the Variable Star and Imaging Sections.

7. Reports of other sections

These were also read. There was no report from the Computing Section.

8. Financial Report

The Hon. Treasurer, Cliff Turk, delivered his report. Acceptance proposed by Keith Gottschalk, seconded by Case Rijdsdijk.

9. ASSA scholarship

A short report on this was read out.

10. Endowment Trust

Cliff Turk gave a brief report on the status of the trust and was thanked for his efforts.

11. Election of auditor

Cliff Turk proposed that the same auditors be retained. This was seconded by Tony Jones.

12. Election of Office Bearers

Two valid proposals were received for Cliff Turk, as Business Manager and Case Rijdsdijk as a member of Council. There were several other proposals, but these were deemed invalid because they were either late or had not been properly completed. Therefore in terms of Section 10 of the ASSA Constitution the existing Council would serve for another term.

Report of ASSA Council 2004 – 2005

1. Membership

At present membership is as follows:

Members with <i>Sky & Telescope</i> subscription	107
Non- <i>S&T</i> subscribing members	115
Honorary members	11
Total	233

These numbers are a little down on last year's total of 241.

2. Finance

The current Treasurer is to be thanked and commended for his efforts. The accounting structures he inherited are now almost resolved and the Treasurer has kept council informed of his progress at the regular meetings during the year. Accounts are in order and ASSA is in good health.

3. Council Appointees

Mr Cliff Turk stays on as Business Manager as well as Treasurer and Council thanks him for his efforts. Distribution of *MNASSA* and the *SkyGuide* requires an enormous amount of work, and several discussions have been held in the course of the year to try and alleviate some of this work. Mr Dudley Field has kindly taken on the job as Membership Secretary and Council wishes him well and thanks him.

4. *MNASSA*

The Editor, Mr Auke Slotegraaf, maintains his firm hand at the helm of *MNASSA* and Council is grateful for his efforts, and the assistance given to the Editor by Dr Ian Glass and Mr Maciej Soltyński. However it is becoming an expensive publication with limited professional appeal. Ways of saving costs have been and are still being looked into, and it is possible that it may in future appear as an electronic journal.

5. *SkyGuide*

The new handbook, *Sky Guide Africa South* has again been very well received. The print run was increased to 4000, which proved a little too much, but costs were more than covered. There were a few problems with the binding and it is hoped that the 2006 edition will overcome this. Mr Slotegraaf, ably assisted by the Editorial Board, are to be thanked for their efforts. It makes Mr Slotegraaf's work a lot easier if he receives details of the Centres and Sections timeously, and in spite of the new timing of AGMs, Centres were still a little slow in sending through details to Mr Slotegraaf.

6. Sections of the ASSA

The Imaging Section Directorship is still vacant, as it was last year. Mr Braam van Zyl retired from the Solar Section and Council is pleased to announce that Mr J van Delft has been appointed the new Director. There is little news of the Computing Section and this will

be addressed by Council in the coming year. Reports from Sections are still not coming in on time and sometimes not at all. Mr A Jones has proposed a new approach to stimulate interest in observing. Regrettably, despite his hard work, there was a complete lack of response to this initiative.

7. Logo

There had been a move to create a new logo for the ASSA. Designs were asked for and several were submitted. Copies were made and Council had a secret ballot that clearly indicated that members were happy with the existing one.

This means that progress can now be made with the generation and awarding of the merit observing certificates. Ms Magda Streicher has kindly offered to sponsor these and Council is most grateful to her for this.

8. Scholarships

Mr Maciej Soltynski, Dr Abe Mahomed and Mr Andrew Gray are to be thanked for their efforts in running the ASSA Scholarship. The Alan Cousins Scholarship is still only an idea and it is hoped that a decision on its future will be taken this year.

9. Scope-X

Once again the Johannesburg Centre organized a superb Scope-X. It was very well attended and in spite of some really awful weather, numbers were up again. This was probably due to the invited speaker, Mr Mike Melville, the commercial space pioneer, originally from South

Africa, now based in the USA. A full report has appeared in *MNASSA*.

There was no Scope-X in the Cape or anywhere else, which is a pity as it is a great way to promote the Society, astronomy and recruit new members. Should other Centres wish to hold similar exhibitions they are well advised to consult the people at the Johannesburg Centre.

10. Constitution

Amendments to the constitution were accepted and were announced in *MNASSA*. It was a well-timed amendment as it will be used this year!

11. Acknowledgements

The Council wishes to express its thanks to the following:

- Prof Phil Charles, SAAO Director, for allowing Council to use the SAAO Lecture Hall for its meetings and also the use of many other of the Observatory's resources.
- The Directors of the various Sections within the ASSA for forwarding data to their respective international bodies and for their support.
- Finally to all members of the various Centres, especially the Cape Centre for hosting this AGM.

Report of the Comet and Meteor Section

T P Cooper (Director)

Observed meteor showers

The year 2004 saw a reduction in the number of hours observation, mainly due to weather. Nevertheless, some useful results were obtained on several meteor showers.

April Lyrids: a special watch was arranged due to favourable conditions in 2004. Around 25 hours observations were reported, with best rates of around a dozen Lyrids per hour under LM=6.1 skies on the night of April 21/22. Penning, van Delft and Cooper also observed

the *Pi Puppids*, with 9 hours observation yielding only 8 potential members. From this we concluded there was no enhanced activity in 2004. At Magda Streicher's request, she and Cooper observed the potential *September Taurids*. In 6 hours observation we plotted less than a handful of candidates. The *December Phoenicids*, for which Moon conditions were favourable in 2004, were entirely lost to cloud. The year's observation culminated with a fine *Geminids* display. Highest rates were observed by the Director on

Table 1. Meteor showers observed during 2004

Observer (number of showers observed)	Showers observed and duration (hours)	Total time (h)
Tim Cooper (5)	April Lyrids (6.0), pi Puppids (3.9), Eta Aquarids (2.5), September Taurids (3.0), Geminids (8.1)	23.5
Magda Streicher (3)	April Lyrids (5.3), September Taurids (3.0), Geminids (2)	10.3
Jacques van Delft (2)	April Lyrids (0.5), pi Puppids (3.8)	4.3
Ronel du Preez (1)	April Lyrids (3.8)	3.8
Gerrit Penning (2)	April Lyrids (2.7), pi Puppids (1.1)	3.8
Karen Koch (1)	Geminids (3.7)	3.7
Kos Coronaios (2)	April Lyrids (1.0), Geminids (2.3)	3.3
Dudley Field (1)	Geminids (3.2)	3.2
Tony Jones (1)	Geminids (3.0)	3.0
Michael Poll (2)	Orionids (0.6), Geminids (1.9)	2.5
Auke Slotegraaf (1)	Geminids (2.5)	2.5
Barend Botha (1)	April Lyrids (2.5)	2.5
Mia Zeelie (1)	April Lyrids (2.1)	2.1
Cliff Turk (1)	Geminids (2.0)	2.0
H J van Heerden (1)	April Lyrids (1.6)	1.6
Brian Fraser (1)	Geminids (1.5)	1.5
Trevor Gould (1)	Geminids (1.4)	1.4
Wayne Mitchell (1)	Leonids (1.0)	1.0
Koos van Zyl (1)	Geminids (0.6)	0.6
Total		76.6

the morning of December 14 when he logged 56 Geminids and 30 non-Geminids between 00:00 and 01:00 UT under LM=6.0 skies.

Summary of observed fireballs

2004 saw a total of 24 fireball reports. The full details have been submitted for publication in *MNASSA* as a separate article.

Summary of observed comets

As cloud affected the observation of meteor showers, so too it affected the observation of comets. Nevertheless, eight individuals produced useful observations of several comets. The Director used these observations and observations of several previous comets to prepare a paper co-authored with Mike Begbie and presented at the Sixth ASSA Symposium, entitled 'An Analysis of Comet Brightness Behaviour from ASSA Observations'.

C/2001 Q4 NEAT peaked at magnitude 3.0 in May. Coincidentally *C/2002 T7 LINEAR* reached magnitude 3 at about the same time, and observers were treated to two naked eye comets in the evening sky during May. Both comets were well observed. *C/2003 K4 LINEAR* was observed from late May at tenth magnitude, and peaked at magnitude 6 in August. In December the comet was still under observation as a magnitude 7 object crossing the False Cross. *C/2004 Q2 Machholz* was observed from September 11 at magnitude 10, and by year end had brightened to magnitude 4 with a short tail. *C/2004 R2 ASAS* was observed briefly as a ninth magnitude diffuse object before it was lost in the solar glare. With a small perihelion distance of $q=0.11$ AU it appears the comet did not survive perihelion passage and was lost.

All observers of meteors and comets are heartily thanked for their contributions.

Table 2. Comets observed during 2004

ICQ	C/2001 Q4 NEAT	C/2002 T7 LINEAR	C/2003 K4 LINEAR	C/2004 Q2 Machholz	C/2004 R2 ASAS	88P Howell
COO02	•	•	•	•	•	•
STR03	•	•	•	•	•	•
BEG01	•	•	•	•	•	—
VAN15	•	•	•	•	—	—
PRI04	•	•	•	—	—	—
VAN13	•	•	—	—	—	—
TUR	—	—	•	•	—	—
JON07	•	—	—	—	—	—

Key: ICQ: Observer code; COO02 = Tim Cooper, STR03 = Magda Streicher, BEG01 = Mike Begbie, VAN15 = Koos van Zyl, PRI04 = David Pringle-Wood, VAN13 = Peter van Blommestein, TUR = Cliff Turk, JON07 = Tony Jones. A • indicates the comet was observed.

Report of the Dark Skies Section

C R G Turk (Director)

It is sad to report that not one reply was received to the two appeals made in the report for 2003. Three people have shown some interest in dark skies, but temporary uncoordinated efforts are not likely to have much lasting effect.

The Director badly needs liaison officers in areas other than Cape Town to whom queries can be directed. These liaison officers would also promote talks on light pollution to clubs and organisations within their area. This is a pretty daunting task to start with, but a little reading will soon produce some ideas for short entertaining talks. It does not have to be technical – in fact that sort of approach usually puts listeners off, unless they happen to be part of the already converted. What we need is to interest many more people in the subject, and that can only be really well promoted if we take their viewpoint into consideration.

Even the IAU has expressed an opinion that there is little to gain from trying to lobby governments to introduce legislation when so few of the population have ever heard of the subject. Many of our own Society members still think of the problem only in astronomical terms and do not consider the enormous waste of money (and sometimes dangers) involved in badly directed lighting. How can we expect non-astronomers to give any support to our cause unless we explain it to them? Not one of our own members showed any interest in receiv-

ing a periodical newsletter following last year's appeal for names and addresses.

During 2004, the Director has had requests for information and advice from one property developer and three individuals concerned about the effects of lighting in new developments under construction. All have been from the Cape Town vicinity. We need to spread an awareness of light pollution, invasive lighting, glare, loom – call it what you will – so that hopefully planners will consider the implications before irreparable damage is done.

The Cape StarWalks held every summer at Kirstenbosch hit very bad luck in the past summer. Some nine evenings were planned, but cloud caused last-minute cancellation of seven of them. Unfortunately, although Kirstenbosch is an ideal location with all the advantages of security, no nearby lighting and a barrier of trees to shield us from the lights of the Cape Flats, its position next to the mountain makes it very prone to localised cloud.

Open nights at SAAO and at Cederberg Observatory continue to inform the visiting public about light pollution, but we do not hear if similar efforts are being made at other astronomical establishments open to the public. It would be nice to be able to include some more such places in this report next year.

Report of the Deep-Sky Observing Section

A Slotegraaf (Director)

During 2004, deepsky observing continued to be a popular branch of amateur observational astronomy.

Magda Streicher of Pietersburg has continued her systematic recording of deepsky objects, particularly of galactic clusters. She had continued her “star string” project – searching for and recording asterisms – logging 28 new ones in the year under review. She is also working towards her Herschel 400 certificate, and has recorded 70 objects. During the year she visited the UK, visiting various astronomical sites, such as the home of William Herschel, Sir John’s grave, and more.

In Bloemfontein, Gerrit Penning has continued as coordinator of the Centre’s Deepsky Group. Their year began with the introduction of 15 observation logs to help members plan their observing sessions. This culminated in 13 formal observation evenings throughout the year. All the deep sky members obtained binoculars and some members bought 8- to 12-inch telescopes. Binoculars allowed everyone to participate in the evening and effective skills in navigating the night sky were acquired. The experience earned from these sessions was applied during public open nights at Boyden Observatory. During a visit to Scope-X 2004 in Johannesburg, the Bloemfontein Centre kick-started a telescope making project and two 8-inch telescopes were completed at the time of writing this report.

During the year, observations submitted to the Section were added to the growing deepsky database. Some of these, including sketches of selected objects, have been published on the ASSA website.

I’m aware that deepsky observations are often made by folk nationwide, but that only a small fraction is reported to this Section. I’d like to invite all Society members, and especially Centre members (who may be unaware of the Section), to send in their observations for inclusion in the database. Feedback will be given for all observations submitted.

As described in the previous report to Council, the Director continues to search for open cluster remnants by sifting through archival data. During the year, a copy of the 2MASS All-Sky Point Source catalogue was obtained. This 10-DVD database has proved challenging to integrate with the automated cluster-search software.

The Director has also sporadically worked on the development of an exciting observing activity to encourage first-time star gazers and to further develop the skills of beginner and intermediate-level observers. Work on the *SkyGuide* interrupted this project, which was resumed at year’s end. Completion is anticipated during 2005 following discussions with other active observers. [See p 175 of this issue – Ed.]

Report of the Double Star Observing Section

C de Villiers (Director)

There is, once again, little to report this year.

In order to determine the level of interest in double star observing, an enquiry was forwarded to all Centres. The response was generally positive, and the Section Director plans to establish and maintain regular contact with the Centres and other interested parties in due course.

With this in mind, the document entitled 'Requirements for Double Star Observer Award Certificates' has been updated and will be available in paper as

well as electronic (PDF) format by the end of August 2005. A copy of the paper version will be sent to all Centres.

Some progress has been made with the previously announced project aimed at investigating an alternative means of determining double star orbits from noisy measures. The Section Director hopes to publish this work in *MNASSA* by the end of 2005.

Of note is Tim Cooper's possible discovery of a new binary (or multiple) system while observing comet 9P Tempel 1.

Education and Public Communication

C Rijdsijk (Director)

In December 2004 a summary of the Revised National Curriculum Statement, RNCS, was circulated to all centres as requested in hope that this would enable them to help teachers with the "Earth and Beyond" part of the RNCS. There has been little response to this, and so it is planned this year to distribute some of the resources to various centres to help them a little further.

Members of ASSA and the Centres do a huge amount of PR work without them being aware of it. Every time a member helps out at Scope-X, the SAAO Open Nights etc. you are communication astronomy to the public. Please keep a record of the number of people and send them to me: its numbers that generate

money! Scope-X itself is a great promoter of astronomy!

The director has been active in running workshops for an Advanced Certificate of Education, ACE, programmes for WCED, a Space Camp for the SAAO, workshops for UCT's outreach programme "Earthwise" and GeoTeach, an education programme for the Cape Centre and several public talks/lectures including the President's Invitation address for the SA Inst. of Electrical Engineers. In addition in collaboration with the Cape Peninsula University of Technology, CPUT, an Astro-Tourism course has been started, this is at present ongoing and a report on its success will be submitted at the next AGM. The director

would however like to express his thanks for support from the Cape Centre.

I am sure however that many centres have been quite active, but have not let the director know of their activities. One reason why this is important, is that many of these activities require funding, and there is ample money "out there". The problem is accessing this funding. To do this one usually needs to submit a proposal and an important part of the

proposal is a proven track record in what you are seeking money for! I can really only approach funders if I can say that in the course of the last six months (say) the ASSA and its Centres ran workshops/ interacted with schools in their local area etc. and to continue with these efforts money is needed! So please – send me as much detail as possible: this one area where your umbrella organization, ASSA, can help.

Historical Section

C de Coning (Director)

Introduction

The past year (calendar year 2004) had its highlights concerning the history of astronomy.

Website

The part of the ASSA website dedicated to the Historical Section has been updated in August 2004. Some content has been added, especially in regard to the transit of Venus, a few prominent observers, Bronberg and Boyden Observatories and the Grubb 8-inch telescope.

A second update occurred in October 2004. Some content has been added, especially in regard to the early days of the Royal Observatory, Cape of Good Hope, with all the astronomers involved. Many thanks to Auke Slotegraaf, the webmaster, for all his help with the website.

Archive

The archive has received new material during the past year from G G Cillie.

During the past year all the material that was stored in boxes at my house, and archival material of ASSA Council were added together and sorted into approximate categories. Due to the complexities and scope of the task the indexing the archive will still take some time.

Activities

A transit of Venus occurred on 8 June 2004. Because of the rarity and public relations value, many astronomical groups around the country closely observed the event. Due to its historical significance some of the observing events were at sites of historical value, such as Touwsrivier and Wellington. Major centres also monitored the event and reports were received from Cape Town, Pietermaritzburg, Bloemfontein, Graaff-Reinet and Harare. The events were not organised by this Section but I am sure that in addressing the public some historical content was explained.

Magda Streicher was approached by an estate agent who informed her that a farm with an observatory in Haenertsburg, Northern Province, was for sale. After visiting the farm she realised that it was the place of retirement for Cyril Jackson, a prominent South African astronomer who discovered 72 asteroids and three comets. Due to her initiative the site is now registered at the National Monuments Council and a museum was established. She gave a talk at the ASSA Symposium held at Johannesburg.

Publications

Individuals in their private capacities wrote articles with historical content. Please note my appreciation to the following people:

T.P. Cooper, B. Fraser, D. Cooper, M. Hoffman and B. van Zyl for their publication on A.W. Roberts in *MNASSA* (vol 63, nos 11 & 12, December 2004). Roberts worked on variable stars and made approximately 70 000 observations. His work was never published and the Bloemfontein Centre found his observation catalogue. With a grant from the AAVSO the observations are being

captured electronically to add to their database.

Willie Koorts published articles in preparation for the transit of Venus. ("The 1882 transit of Venus: The British expeditions to South Africa", *MNASSA*, vol 63, nos 3 & 4, April 2004).

Obituaries

MNASSA published obituaries on Janet Mattei (not South African but with strong links to this country; *MNASSA* Vol 63, nos 5 & 6, June 2004) and Albert Jansen (*MNASSA* Vol 63 nos 7 & 8, August 2004).

I would like to thank A Slotegraaf and fellow contributors for their hard work in preparing the obituaries.

Symposium

A committee has been formed to organise an international symposium on the Astronomical History of Africa (AAHS). Everything is coming together nicely and the event will be held at the Observatory grounds in Cape Town, 8 and 9 November 2005. Attendees will have the chance to be present at the official opening of SALT on 11 November.

Report of the Occultation Section

✍ B Fraser (Director)

There are very few amateurs joining the observing sections of ASSA and the occultation section is no exception. We rely on a handful of members who continue to enjoy the pleasures of serious astronomy whilst making a valuable contribution to the science.

Once again we have used the predictions supplied by Eberhard Riedel of IOTA for grazing occultations and Edwin Goffin in Belgium for minor planet occultations. The LOW software supplied by Eric Limburg is used for Lunar occultation predictions.

A number of the regular observers continue to enjoy the challenges of occultation observing and have reported the following.

Lunar occultations

Occultations were observed by Jannie Smit (Pretoria; disappearances 22, reappearances 2), Peter van Blommenstein (Simons Town; disappearances 48) and Cliff Turk (Cape Town; disappearances 31).

Jan Hers was in the Karoo at the time of the May 4th eclipse and observed the occultation of Alpha Librae. This star underwent a grazing occultation at a site near Beaufort West but unfortunately no observers were able to travel to the graze line.

Minor planet observations

In past years we limited our efforts to observing stars brighter than about 10th magnitude. During the year 2004 there were not many convenient minor planet occultations of stars this bright. However a number of possible events were attempted but no hits were recorded.

Tim Cooper observed misses for all these events: 51361 2000 SS124 (May 02), Tatsuo (June 11), Delia (July 17), Aslog (August 23) and Toutatis (September 27).

Francois de Jager also observed a miss for the Delia event.

The observers who participated are Magda Streicher (Pietersburg), Jannie Smit (Pretoria), Tim Cooper (Bredell), Brian Fraser (Henley on Klip) and Francois de Jager (Vanderbijlpark).

Report of the Solar Section

J J van Delft (Director)

I would like to thank Council for the confidence they showed by electing me as the new Director of the Solar Section. I feel privileged to serve in this position and hope to develop a sound platform for solar observations in the solar section according to the ASSA constitution.

Everybody started 2004 with only one thing on their mind: the Venus transit. Preparations for this event were made in most of the Centres and in addition to local media coverage, cooperation with overseas amateurs and solar organizations were obtained. Several public gatherings were organized countrywide and the response was very good.

In Bloemfontein a solar observation day was held in February at Boyden Observatory. Participants were introduced to basic solar physics, solar observation and a practical session on how to use the 20-cm coelostat solar telescope at Boyden.

In April 2004 we began to publish a monthly solar bulletin based on sunspot observations. Reports on solar activities also forms part of this publication. At first it was published on the website of the Bloemfontein Centre and at present it is also published on the national ASSA website.

A start was also made with solar photography. Pictures of the Sun showing sunspots were taken and published on the Bloemfontein Centre's web site. Personally I developed a solar observation website where solar pictures are on display.

During the year public demonstrations on the coelostat telescope at Boyden and solar activities presentations were held on open days.

Solar observation presentations were held at the annual congress of Agri Northern Cape in Kimberly, annual farmers committee meeting in Wepener, group gatherings at Welbedacht and

at the ASSA Symposium in Johannesburg.

An article on solar observation and research was published in *Landbou Weekblad* and in *Volksblad* during 2004.

International connections were made and maintained with the AAVSO solar section and the ALPO solar group. Sunspot observations and solar pictures are exchanged on a regular base.

Braam van Zyl played a great role in the activities of 2004 before he resigned as the section's Director and I'd like to take this opportunity to thank him for his dedication and effort.

ASSA Scholarship Report for 2004

Maciej Soltynski (Convenor, ASSA Scholarship Committee)

The ASSA Scholarship was established in 2000 to encourage the study of Astronomy at any Southern African university at the 2nd and 3rd year level. There was no holder of the Scholarship in 2004, although a few inquiries were received. The first holder of the Scholarship, Melissa van Gend, (2002–2003), obtained her BSc degree (which included a number of final year astronomy courses) from UNISA at the beginning of 2004. In 2004 she obtained her post-graduate certificate in education, and advised that she planned to teach science and mathematics.

Honorary Treasurer's Report to AGM - 2005

These figures are all provisional as the books have only just gone to the auditors and it will be some time before they come back so we can publish the final accounts in *MNASSA*.

The really pleasing progress is that we have enough money in the Plus Plan account to be able to pay our biggest annual bill which is the printing of the *SkyGuide* costing approx R60 000. This is almost half of our total yearly expenses and we do not have to borrow from reserves or from the trust fund as in the past.

During the past year, notable figures are as follows:

Cost of *SkyGuide*: R59 344
Income from *SkyGuide*: R95 456
Cost of *MNASSA*: R39 337
Income from *MNASSA*: R24 785
Cost of publishing: R11 000

From this it can be seen that the loss on *MNASSA* has been reduced to less than R15 000, while the *SkyGuide* made an excess of just over R36 000. The success of the *SkyGuide* has been phenomenal and we must thank Auke Slotegraaf for his great efforts which have produced this result. The publishing costs mentioned above are largely computer programs to assist the editor with layouts etc. so they cannot be accurately apportioned between the two publications.

Interest received during the year was R 6 100 and donations were R 7 600, the latter including R 2 500 from the trust.

It is a comfortable feeling to have this source of income to supplement the R21 000 from subscriptions. Funds received for *Sky & Telescope* subscriptions were R 22 300 which was just R 19 less than the amount we had to pay to the publishers in USA. With the ever changing Rand/Dollar exchange rate, this is a remarkable achievement.

The Scholarship Fund which was started with a grant of R40 000, now has R 45 000 at the year end including interest to date and after a scholarship was awarded this year.

Overall, your Society is well-placed financially and can face the future with confidence.

(Cliff Turk, Hon Treasurer)

Bloemfontein Centre
Chairman's Report 2004-2005

Thank you for the opportunity to present the Bloemfontein Centre of ASSA's annual report for 2004-2005.

The main emphasis of the year was on continued growth in the member's proficiency as amateur astronomers and the Centre's active public outreach efforts. The year saw various members acquiring commercial as well as self-built telescopes. The Centre continued to hold official quarterly meetings, as well as workshops, excursions, public programs and practical activities.

Quarterly meetings: Themes presented during the four official Centre meetings (held at Boyden Observatory) included "Hyperspace", "Tour through the *SkyGuide* 2005", "Astrophotography", "Open discussion on actual topics in the world of astronomy and spaceflight".

Workshops and other notable events: The Centre completed the renovation of their clubhouse on the premises of Boyden Observatory after many hours of dedication and effort. The primary purpose of the clubhouse is to serve as a marketing point on the hill to inform visitors of the concept of amateur astronomy. It was first used in October 2004 during the Boyden Celebration event (*MNASSA* vol. 63 no's 11 & 12).

During March 2005, the Centre hosted a Beginners' Day in Amateur Astronomy at Boyden for new and existing members, equipping them for practical activities and a "career" in amateur astronomy.

During April 2005, the Bloemfontein Centre took part in the Scope-X activities hosted by ASSA Johannesburg. Two members exhibited their newly completed 8-inch telescopes and the Centre's stall attracted numerous visitors with informative material obtained from the clubhouse on Boyden.

During the year, the Centre was also awarded the organizing role for the 2006 ASSA Symposium and arrangements began at an early stage.

Public outreach: The Centre continued to assist the Friends of Boyden in their public outreach programs. Members served as presenters, telescope assistants and tour guides during public open evenings and various private group evenings, reaching hundreds of people with their knowledge and skills. Members who acquired telescopes set up their instruments during some of these events to much awe of the visitors.

Two successful public open days were held in February 2005 in association with Boyden, attracting almost 100 visitors (*MNASSA* 64, 37).

In November 2004, an excursion to the Mabula Game Lodge in the Eastern Free State was held for the Leonid meteor shower. Although it was cloudy, the event was still a memorable one. In June 2005, three Centre members hosted an open air show and observation session for a nature society at Barkly-West in the Northern Cape where almost 40 people attended.

The Centre also re-launched its acclaimed *SpaceTides* Newsletter service – a free e-mail newsletter on astronomy and spaceflight to the public [<http://www.assabfn.co.za/spacetides>].

Practical observation sessions:

Deep Sky Activities: Deep sky sessions were held in the city at members' houses, at Boyden Observatory, during fieldtrips mentioned above and at De Oude Kraal Country Estate near Bloemfontein. Members all brought binoculars or telescopes, ensuring active participation by all.

For 2005, a set of 17 deep sky session logs were compiled for those members interested in following a pre-defined observation program.

Solar Activities: Member Jacques van Delft became director of ASSA's Solar Section and continued his studies on solar and climatic change. He hosted various national presentations on the theme, hosted radio talks, gave a lecture at the 2004 ASSA Symposium and a number of articles appeared in national news magazines relating to his work. Monthly Solar Bulletins continued to be compiled and sunspot counts were performed on a regular basis.

Comets and Meteor observations: Mary and Paul Fanner from Kipaberley participated in an informal count of the Eta Aquarid meteor shower. No reported comet observations were made during the year. A presentation on the Deep Impact mission was compiled for Boyden Observatory.

Historical research: Member Dawie van Jaarsveldt received a paper copy of

the Centre's history since its establishment (1959) up to 2004 after he worked many hours to digitize and archive the complete Centre history based on minutes and Centre reports. The complete archive is available on the website and is regarded as a great accomplishment for the preservation of the Centre's auspicious history.

Astrophotography: Members became more skilled in the use of CCD techniques. The Centre's astrophotography webpage was continuously updated with new photos from members.

In summary, the Centre experienced a stable year in which its identity was fixed as an outpost and base for amateur astronomy in the central region of South Africa. The greatest challenge that now awaits the Centre is to ensure that active new members join the club and become part of the amateur astronomical community.

(Gerrit Penning, Chairman)

Johannesburg Centre
· Chairman's Report 2004-2005

Thanks to the efforts of a few talented and dedicated members of the society we have successfully completed another active and rewarding year. I might mention some of the highlights.

In October 2004 we hosted the 6th biennial ASSA Symposium and managed to attract an impressive list of top speakers, both amateur and professional. This 5-day event was thoroughly enjoyed by the 70-odd people who attended. It was the first time in the 12-year history of this event that the Johannesburg Centre has hosted it.

Then for Scopex 2005 we managed to get, as the keynote speaker, Mike Melvill, the first private astronaut who flew the rocket ship SpaceShipOne into space in 2004. Despite having rain for most of the day, an annoying fire alarm and finally a power cut, many attendees regarded this Scopex as the best ever. Thank you to SAASTA and SAA for sponsorship around Scopex 2005.

We have a very friendly relationship with the new owners of the observatory, SAASTA (South African Agency for Science and Technology Advancement) and in 2004 we were asked to contribute some ideas for the development of the site. Which we did.

We had hoped to have some news this year regarding the future of the observatory, but the wheels of officialdom turn slowly and nothing has been forthcoming yet. Proposals around the establishment of a science park have been put for-

ward and if and when this happens, we could end up as part of a larger scientific community.

Because of the uncertainty surrounding the future of the site we deliberately did not embark on any infrastructural work on the observatories and buildings, except for some minor maintenance.

Our secretary Lerika Cross, continues to be the pivot around which the society revolves. Apart from the huge task of organizing Scopex, including organising sponsorship and exhibitors, she also arranges most of the speakers, books the venues, arranges accommodation and transport for visiting speakers, makes dozens of phone calls and sends out hundreds of emails every year. She has also now assumed the duties of our membership secretary. Her wisdom and energy have played a major role in our success this past year. Thank you Lerika.

Also a big thank you to Sharon Tait, who has arranged refreshments at nearly all of our functions, including Scopex. Sharon also attends to most of our PR and media relation needs and it is she who fields those phone calls from inebriated people who want to know "what is that big bright planet in the sky? The one with the flashing red light".

Thanks also to our miserly Treasurer, Dave Gordon, who manages to ensure that our finances are in a sound way. He does this mainly by refusing to reimburse members for the money they have spent on running the society. Not really.

We get refunded. Eventually. Dave has also shared his love of and interest in the planets by presenting a number of short talks at the monthly meetings.

Our mirror making class keeps on rolling along, with a gusto that never seems to stop. Chris Stewart, Dave Hughes, Vince Nettman and others dedicate virtually every Saturday afternoon to helping newer members grind and polish telescope mirrors of all shapes and sizes. They must have supervised the making of more than 200 mirrors over the years. Not all get to be completed but many do and they end up in excellent telescopes.

Chris Penberthy gave up the editorship of Canopus after a successful but taxing spell of some 5 or 6 years. Thanks Chris, for the excellent job you did and for the high standard you achieved. The editorship was taken over by Marianne Botha at the beginning of this year, but due to work commitments she has had to pass it on and from July 2005 we will have a new editor.

One of the casualties resulting from moving our monthly meetings to the lecture room down the hill, has been the loss of easy access to the library and we need to devise a plan to make it easier for our members to use the library facilities. Our library consists of over 500 books and many years of magazines and newsletters and we hope to find a means of once again making it accessible to all members.

Much work, mainly by Chris Stewart and Evan Dembsky, went into setting up our website. During the year we decided to update it and move to a new computer site. This is taking time and we need the

assistance of some of our members to set up this web site and keep it up to date.

We again manned a stand at the hobby-x exhibition and a team of volunteers, led by Jerome Jooste, gave up three days of their time to once again ensure that it was a success. Thanks to all those involved.

Talks specifically aimed at beginners were on our schedule for the year, but got lost somewhere along the way. For the upcoming year we hope to revive them, perhaps in a different format. After all we were all beginners at some time and those of us with some experience owe it to the newer members to pass on our knowledge.

Our monthly meetings continue to attract good attendances, thanks to the varied program and excellent speakers we have managed to attract. Attendances have been in the 40-70 range

Monthly meetings and talks were as follows:

Dr Barbara Cunow, "Dust in Galaxies" (2004 August); Richard Wade, "Great Zimbabwe. Archaeoastronomy" (2004 September); ASSA Symposium (2004 October); Etienne van Zyl, "Sutherland Tour - reminiscences" (2004 November); Star Party in Henley on Klip (2004 December); Dave Gordon, "Cassini mission to Saturn" (2005 January); Brian Fraser, "Astronomical events and the Extinction of the Dinosaurs (2005 February); Prof Morris Viljoen, "The Geology of planet Earth" (2005 March); Dr. Chris Engelbrecht "Hot Topics in Physics" (2005 April); Planetarium visit; an informal look at interesting objects

(2005 May) & Brian Fraser, "Variable Stars – How and Why" (2005 June).

In addition we hosted a Saturn viewing evening with the 26½-inch Innes refractor, but unfortunately this was clouded out. The evening was not wasted as Dave Gordon gave an entertaining talk on the giant ringed planet. Although we have the use of this telescope, we seldom do so as it is such a cumbersome instrument to set up and move around.

Membership usually drops off at the beginning of the year as some people don't renew but picks up again steadily throughout the year. Currently we have around 190 members as well as a fair number of family members.

As we close the year there are a number of unresolved issues that will have to be taken care of by the new committee. Arranging secure tenure with SAASTA, completing the new web site and keeping it up to date, and hosting a series of beginners talks are just some of the items to be arranged.

To all the members of the committee who have given of their time, their ideas and their energy to keep this centre running I would like to say that is not a thankless task, for on behalf of all the members I would like to say a big "Thank You".

(Brian Fraser, Chairman)

Natal Midlands Centre Chairman's Report 2004-2005

At the end of another busy and successful year in the life of the Kwazulu-Natal Midlands Centre, I am happy to present this annual report. Last year I mentioned the general lethargy that appeared to be afflicting our members, in that there seemed to be very little support for any of our activities other than coming to monthly meetings occasionally. Therefore, it has been good to see an improvement in this regard, even though there is still some way to go! The challenge later this evening is to see the response to my suggestions about serving on the committee in the coming year, due to the fact that 5 of our existing committee are retiring from office, all of them having served the Centre faithfully for years.

One of the signs of a healthy society is a steady increase in membership, and this year has been no exception, with a net increase of some 13 people.

We have also been treated to some excellent speakers and presentations at our monthly meetings, which I'm sure has helped to not only swell the membership, but also to improve the attendance figures. My sincere thanks to all who have given of their time to prepare such interesting and stimulating programmes month by month, and of course, to Frikkie de Bruyn for co-ordinating it all. Maybe your turn will come up in the year ahead?

While mentioning Frikkie, I must also thank him for the efforts he has put in

to preparing articles for *Stardust*, keeping us up to date with developments in the world of Physics and for mounting the recent display on Albert Einstein at the Natal Society Library. If you watch TV on Sunday mornings, you may even catch a glimpse of him as a film star!

Despite the rising costs of running the Centre, you will see later that our financial situation continues to be sound, and once again, it has not been necessary to increase annual subscriptions. Roger Clifford has kept a very tight rein on the purse strings, but has also contributed in many other ways to the well being of the Centre over the past years. As he retires from office, I would like to thank him for all he has done, and to honour him with the meritorious service award for 2004/5.

Briefly to mention some of the other aspects of the Centre's activities, I must thank Johan Hefer for willingly taking on the task of Secretary in the midst of very hectic job commitments, Willem van der Merwe for his PRO work and liaison with the many and various newspapers, and Trevor Morley for looking after the observatory grounds. The Centre's library has been somewhat of a disaster area, as the logistics of carting books and tapes around has proved to be too cumbersome. The recent acquisition of a small cupboard in the Girl Guide hall will hopefully improve the situation.

My continued admiration goes to Rogan Roth for his sterling work in editing *Stardust* every month, but also for his efforts in many other ways, including some magnificent presentations at monthly meetings, and an ever increasing

involvement with our education programmes. I also thank him for his personal support and encouragement during the year, and sincerely hope that you will vote for him to remain on the committee.

The annual Basic Astronomy course was a great success last year, but the applications for this year's course are so few that with only two weeks to go, it may well have to be cancelled for this year.

Our weekly viewing sessions at the observatory will of course continue during the next three months.

In conclusion, my sincere thanks to you all for keeping the Centre alive and for turning out so faithfully on this miserable evening! As I retire from the committee, I look forward to being an active member for as long as I am able. My best wishes to the new committee for the year ahead.

(John Watson, Chairman)

Pretoria Centre
Chairman's Report 2004-2005

The 2004/2005 year has flown by very quickly. It has been interesting exercise to go through the events of the past year.

At the AGM a year ago, Dries van Zyl addressed us on "South African Weather and Atmospheric Phenomena". His photographs of highveld lightning were memorable. In August the long title of the talk was "Archaeoastronomical Aspects of the Great Zimbabwe/Mapungubwe Cultural Complex", presented provocatively by Richard Wade. Tim Cooper used Beginner's Corner to highlight the encroachment of Light Pollution in our society and proposed a program for us to measure the deterioration of our viewing conditions.

September brought Jorrie Jordaan visit our centre and talk about "Ocean Tide Principles and Prediction". This was the meeting where the new name tags were first distributed.

Who can forget the comet model made by Koos van Zyl at the October meeting? The main topic then was "Interplanetary Transfers" by Michael Poll.

In preparation for the Huygens landing on Titan early in 2005, Neville Young and Mike Haslam presented a talk on the Cassini Huygens Mission in November.

Lorna Higgs kicked off 2005 with an entertaining and novel look at "Bright stars – and their history".

In February we happy to welcome back an old friend, Claire Flanagan (director of the Johannesburg Planetarium) with her talk entitled "What Every South African Needs to Know about Pulsars and the

Square Kilometer Array". Andrie van de Linde made his first presentation to the society with a Beginner's Corner.

The Huygens probe had landed successfully on Titan, so Neville Young and Mike Haslam reported back at the March meeting.

Another old friend returned in April. Brian Fraser spoke about Variable Stars, how we observe them and more importantly, why it is valuable to do so. Wayne's advice on how to Make Observing a Pleasure was an entertaining talk containing some basic but very important observing hints.

A fascinating and eye-opening presentation was made in May by Prof Okkie de Jager who discussed "The Thermal and Non-thermal Universe". The talk made us aware of forefront South African technology being used at a gamma-ray observatory in Namibia. Johan Smit's newfound enthusiasm for telescope making led to the first of what could be many follow-up talks.

In June I was very sorry to miss Robert Gross from Wits University talking about "The South African Large Telescope at SAAO". Beginner's Corner was presented by a beginner presenter at our centre - Peet van der Walt shared his enthusiasm for spotting Messier objects.

Tonight, I am equally disappointed to miss Morris Viljoen's talk.

Additional edification and entertainment was provided in Beginner's Corner, What's Up and the evening's chairman

by Tony, Johann Swannepoel, Michael-Poll, Mike Haslam, Wayne, Lorna, Koos, Andrie, Barbara and Peet.

Exhibitions

There have not been as many extramural activities as in previous years.

Wayne and Rynhardt organised a Public Day at Kollonades in August 2004. It was well attended, there was plenty interest, but despite the many enthusiastic intentions, we are not aware of any new members from that event. The mother of her blind daughter was able to let her 'feel' what the solar system looks like.

Chris Barnard took a good opportunity and arranged for us to do a star show at the Kyalami Castle in April. The centre was rewarded for this effort with a R1000 donation.

The annual Scopex Exhibition organised by the Johannesburg Centre was on a rainy, cold Saturday on 16th April. Several Pretoria members turned up during the day. Despite the weather, the exhibition was successful.

I know that Wayne has been giving talks to schools and that Gert van Biljon entertained guests at a weekend away.

Excursions

Nylsvley was the only centre outing for us this year. Early in May, before the cold came in, between 20 and thirty members and families and friends headed for this country venue 100 minutes drive away. The weather was an inhibiting factor, but nevertheless, some good astronomy was done and the weekend away was good for the soul.

Activities

Toastmasters: Over a few months in the 2nd Half of 2004, Michael, Neville, Pierre, Smitty, Swannie, Wayne and Koos attended a course in public speaking presented by the Centurion Toastmasters club. Besides learning plenty about the art and getting lots of nerve-wracking practice, we certainly had great fun. Putting into practice what one has learned is the most difficult part. The option of another course has been given to members, but there is no further interest.

Lunar Parallax Project: Barbara Cunow used the lunar eclipse last year to do a collaborative project with the University of Wisconsin-Madison to measure parallax to the moon from northern and southern hemispheres. The results can be found at [<http://astro.unisa.ac.za/~cunow>].

Observing evenings

The monthly observing sessions at our local observatory have become so popular that clouds hardly ever miss an evening. Michael and Smitty have nevertheless kept the evenings running despite the poor seeing conditions.

Nametags

Centre members now have nametags again, making it easier to remember names and make renew friendships.

A general perspective

At the beginning of my term as chairman, I expressed my wish in a newsletter article, that our centre become more active and particularly to extend the

activity more widely amongst the membership. It is perhaps a sign of our times that our daily lives are busier than ever and so many of the projects are still waiting for the starting gun.

The entire documented history of the Pretoria Centre has now been archived onto CD. Not only does this make it more available for research, but it means that it is duplicated and protected against loss. The next and most useful step is for some aspiring or retired historian to use that marvellous resource to document the centre history.

A survey of the resources within our membership and their likes and dislikes, would help in planning centre activities. This remains an opportunity for someone with a statistical interest.

Pierre Lourens has steadfastly stuck to his task of gathering articles for the newsletter each month. Adding the finishing touches and an artistic flare however remains a need, and Neville and Smitty have been helping out where they can. We continue to keep an eye open for a computer literate layout artist who can take over this last stage of the newsletter.

Similarly, Mauritz does a marvellous job keeping the Pretoria Centre website updated. The webpage is an important access point to astronomy for local people. We receive very regular enquiries through the website. There are hundreds of hits each month. Here again, the talents of an artistic web page designer would add that finishing touch.

Michael Poll is still at work on his astronomy education certificates. There is a very definite need for a form of document-

ed astronomy education which Michaels course will certainly help to fill.

The Schanskop telescope project is underway but not making the progress Johan Swanepoel had hoped for. We need to maintain the momentum with the Voortrekker Monument Heritage Site to build our 14 inch telescope into a new observatory on Fort Schanskop hill.

A Big Bang presentation at the Fort was called off late last year due to some conflicting responsibilities within the Heritage Site organisation. Ad Sparrius had a talk prepared. Hopefully an opportunity will arise where we can make use of his prepared hard work.

The committee

Five committee meetings were held. Thank you to the committee members for their support and hard work. Besides the committee members I have mentioned earlier, Tony Viljoen as secretary has kept us well minuted all year - a thankless, for-granted task.

Lorna Higgs, besides contributing with talks, makes sure our meetings are advertised in the press.

Michael Poll has stepped in yet again to take over chairmanship when the regular chairman has been away. This in addition to his monthly inputs to the newsletter. Thank you Michael for reading the report in my absence.

My role in the Centre in the new year is uncertain due to changing work circumstances. Whatever role I am able to play, I wish for the the Pretoria Centre a vital and active year ahead.

(Neville Young, Chairman)

Cape Centre
Chairman's Report 2004-2005

Introduction

In some ways, the last twelve months marked the real start of the twenty-first century for the Cape Centre of ASSA. It is symbolic of our new century that our much-travelling chair is the first whose business is software. It is symbolic that Naresh Darjee for the first time produced the Cape Observer ambidextrously, or in the simultaneous parallel quantum world of print & on the internet. It is symbolic that less talks use the OHP or slide projector, than talks which now use a laptop, data projector, & laser pointer.

Review: The Cape Centre 2004/2005

At the start of the year we set ourselves some goals under the topic "Back to basics" with the themes "People, Participation, and Education." The key objectives under each of these were: *People*: Increase member numbers through advertising. *Participation*: Increase participation through: (1) good educational talks; (2) an overhaul of equipment; (3) increased electronic communication and resources. *Education*: Provide more education through: (1) An educational talk series, and (1) above; (2) Increased participation in observation, particularly Dark Sky nights and Star Walks; (3) Outreach. In retrospect there was some good progress, but also some areas of disappointment:

People and membership

This is the greatest disappointment of the

year. We have very few new members. On the upside, it appears that we are attracting some young new members. Advertising has however not commenced in the way foreseen. A new brochure has been produced, and this will shortly be printed for distribution.

Participation

This is the area where great progress was made. The old equipment of the Centre was auctioned off, and the Ron Atkins telescope was rebuilt to a more modern lighter Dobsonian design. Since rebuilt, the scope has been in very frequent use, both at the Observatory on Wednesday, as well as by members. This is a great sign!

We have also had increased usage of the Yahoo! group, and although the Centre still does not have a dedicated website, the announcements, photos and other resources of the group has helped in furthering communication amongst members.

This year the talk formats were modified somewhat. In previous years the responsibility to organise talks was rotated amongst committee members. This meant that a member was often saddled with the job, without actually wanting to do it. This year we decided to do it on a more volunteer basis, and to combine this with a regular educational lecture series (more on this below). The hope is that this produces more informative and interesting lectures. We believe this was successful, but ultimately the members must let us know if this is the case.

Last, but by no means least, the *Cape Observer* was completely redesigned and revamped. This has been a huge success, and the editor has received numerous complements.

The Committee arranged the first ASSA or SAAO celebrations of "Yuri's night", 12 April, commemorating the first human Spaceflight in 1961. We celebrated this as a braai, which also welcomed the incoming Director of SAAO, Dr. Phil Charles. We aim at making this an annual event.

Education

We were privileged to have Case Rijdsdijk present a series of educational talks on Astronomy and Physics during the year. This was extremely successful, and well attended. Thank you Case!

The Dark Sky evenings and Star Walks were less successful. Star Walks in Kirstenbosch were almost totally rained or clouded out, except for a single poorly attended evening. Our Dark Sky nights were also not very well attended. However, a new potential site for Dark Sky at Silvermine Reserve has been identified, and hopefully this provides easier access for those in the Southern Suburbs and Atlantic. This site has yet to be test driven in earnest.

An initial outreach programme to some schools in the Western Cape was very well received, and this will continue in the next year.

Finances

The treasurer's report appears elsewhere, but suffice it to say that with the sale of

equipment we are in good financial position.

Thanks

Finally, I would like to thank the committee for their work during the year, without them none of this would happen. Also, thanks to Karen for the management of the Library, to Karen and Val for preparation of teas, to Naresh for his hard work in editing the *Observer*, and to Lia for her help with this, plus her series on Albert Einstein, with which we celebrated 2005 as the year of Physics.

(Willem van Bijl, Chairman, with additions from the Vice-Chair's report)

**Garden Route Centre
Chairman's Report 2004-2005**

Mr Peter Henderson reviewed the twelve monthly presentations delivered at meetings of the Centre during the preceding year.

His ill health had seriously curtailed attention which he could devote to the Centre activities and has necessitated his withdrawal from the committee.

He referred to the services rendered by each member of the committee and thanked them for their contributions to the successful running of the year's activities.

The Chairman also thanked the ladies who had provided and served refreshments at meetings, and pointed out that the Centre was fortunate in having the Church hall venue.

Finally he emphasized the need for the retiring members of the committee to be replaced by those who were willing to assist in administration of the Centre.

(extracted from the minutes of the
Garden Route Centre AGM)

**Durban Centre
Chairman's Report 2004-2005**

I would like to take this opportunity to thank the Committee for their dedication to duty during the past year. A special thanks is due to Jessica Hudson who in addition to the secretarial duties of the Centre, has also devoted much time in researching and promoting the idea of a planetarium to the powers that be. I would like to say more about that later. Jessica is also an invaluable link to modern electronic communications technology, which has largely outpaced the senior citizens on your committee. Peter Cramb, Dennis Sargent and Stuart Thompson stalwarts of the committee with many useful contacts both astronomical and in the business world. Ooma Rambilass who has run our library for many years in spite of her many other commitments.

Belinda Gordon for collating and preparing the *N'daba* magazine each month and showing the flag of the Centre at various public gatherings with her excellent astronomy presentations. Rob Suberg for his conscientious minding of the Centre's assets and ferreting out some very interesting speakers for our meetings. Geoff Nelson who gave enthusiastic support until pressure of work forced him to scale down his input.

There are many Non-committee members who devote much time and effort to the Centre and here I would like to thank Sheila Begg for posting the *N'daba* magazine to the non-email recipients, Raymond Field for the "At the Eyepiece" articles in the magazine and also for conducting his popular

viewing evenings. We thank Malcolm Keeping for his past efforts in presenting the NASA updates at our meetings and thank Grant Nurden for taking up this mantle when work commitments forced Malcolm to discontinue. I would also like to give special thanks to Hilton Ratcliffe who not only has been the main speaker at two meetings during the year, but is also regular contributor of articles to *N'daba* and to many others who have assisted the society in any way over the past year.

Whilst on the subject of thanks, I extend, on behalf of the society, our sincere thanks to Mr. Tony Akal and the Board of the Marist Brothers College for the continued use of the facilities for our meetings.

And last but not least a very sincere thank you to you all, members of the Centre for your lively interest and support at our meetings and functions

We have enjoyed full and varied programs for our meetings, over the past year with many interesting talks.

August 2004: Nigel Wakefield, Fellow of the Royal Astronomical Society, gave a most interesting talk on the observatories of southern Africa.

September 2004: Dr Catherine Cress University of KZN spoke on the topic 'The Cosmic Microwave Background: Relic light from the early Universe'.

October 2004: David Long spoke about satellite communications with animations from weather satellites. He also spoke of a schools project where schools are helped to monitor satellite weather data.

At the November 2004 meeting, Bill Hayward gave a report-back on the Amateur Telescope Making class. Hilton Ratcliffe gave a short account of his visit to Sutherland and the main speaker was Peter Dreyer who spoke on 'Ancient Astronomy' with specific reference to the Sumerians.

January 2005: Andy Telfer, Founder/Director of Spirit of Adventure Leadership Training school, gave a talk entitled 'Leadership in Crisis'. He cleverly used the film of Ernest Shackleton's Antarctic exploration to illustrate leadership qualities.

February 2005: Ray Field outlined the astronomical events of interest for 2005.

March 2005: Prof Mike Watkeys, 'The Right Stuff- The Origin of the Ingredients that Make up our World'.

April 2005 In a provocatively titled talk 'Big Bang or Damp Squib', Hilton Ratcliffe queried some of the tenets of the Big Bang theory. Unfortunately we will have to wait for part II for Hilton's ideas on an alternative theory.

May 2005: Andrew Collier gave us fascinating and beautifully illustrated insight into life with 'SA Scientific Base in Antarctica'.

June 2005: Botanic Gardens Star Party. Martin Clements invited ASSA Durban Centre to participate in a public event that took place at the Botanic Gardens. Over 200 people attended the event reaffirming the public's interest in astronomy. The main speaker was Prof Arthur Hughes ('Planets and Geometry') while several members gave supporting presentations including Belinda

Gordon – Constellation, Grant Nurden – ‘NASA update’, and Stuart Thompson who was on hand to demonstrate the SKY GLOBE computer program. Geoff Nelson in his dual role as ASSA Member/Camera Club member showed the visitors aspects of telescope making. The evening was clear and many members of the public took the opportunity to view the skies through telescopes set up by Ray Field, Peter Cramb and Fritz Schoneveld.

I said that I would say more about the Planetarium Project. As you know this is an initiative to get a planetarium sited in the Durban area. It has been mainly driven by your secretary who has spent many hours spent preparing presentations, numerous phone calls and visits to the corridors of power to sell the idea that Durban needs a planetarium. While she has met many ‘brick-walls’ she has managed to ‘get the ear’ of no lesser person than the Mayor himself. I am sure that Jessica’s determination and in-depth researching the project is starting to pay off as more of the political leaders become aware of the benefits that a planetarium would bring the City. The attendance at the Botanical Gardens Star Party was a firm statement of the public interest in matters astronomical. A very big thank you to Jessica for the tremendous amount of work that she has put into this project and when and (if) Durban gets a planetarium it will be largely a result of her efforts.

Our next year promises to be an exciting one with a planned visit to Sutherland and early next year the total eclipse in Turkey. Unfortunately for the stay-at-

homes there is nothing to see here but may be this is the time to throw caution to the wind and make the trip. We look forward with interest to the findings of the Deep Impact comet probe and further debate on the big bang.

Have a great year ahead.

(R S Bond, Chairman)

Minutes of the AGM, 16 August 2006

Cliff Turk (Acting Secretary for AGM)

1. The meeting opened at 20h03 with 23 members present (more arrived later)
2. The Notice of meeting was taken as read having been circulated to all members with the June *MNASSA*.
3. Apologies were received from: Drs IS Glass and T Lloyd Evans, Mrs M Streicher, Messrs M Poll and MG Soltynski.
4. Minutes of last AGM were taken as read, having been published in *MNASSA* and there were no matters arising.
5. The Report of Council was read by the retiring President, Miss P J Booth and will be published in *MNASSA*
6. The reports of the observing and other sections were read, either by the Directors of those Sections or various other members standing in for them. The reports will be published in *MNASSA*. The exceptions to this were the Imaging and Computing Sections which are presently without directors and the Double Star Section whose Director has just resigned.
7. The Financial report from the Hon Treasurer was presented and will also be published in *MNASSA*. It shows a very healthy state of affairs.
8. The report of the ASSA Scholarship committee, prepared by Mr MG Soltynski, was read on his behalf. It too will appear in *MNASSA*.
9. The ASSA Endowment Trust report was read by the Secretary of the Trust and will also appear in *MNASSA*.
10. The Auditor, Mr R.G. Glass was re-elected on the proposal of the treasurer, Mr CR Turk seconded by Mr AB Jones.
11. The Retiring President, Miss PJ Booth read the list of nominees for office and as there were no conflicting nominations, the following were declared elected by unanimous agreement of the meeting:

President:	Dr CDL Laney
Vice Presidents	Mrs M Streicher
	Miss PJ Booth
	Dr P Martinez
Members	Dr IS Glass, Mr A Herder
	Mr M Poll, Mr A Van Zyl
Hon Treasurer	Mr CRG Turk
Editor <i>MNASSA</i>	Mr WP Koorts
Comet & Meteor	Mr TP Cooper
Deep Sky	Mr A Slotegraaf

The remaining offices will continue to be filled by the current incumbents, subject to their agreement, or failing that Council will appoint a member to the position at the first opportunity.
12. The formal part of the meeting closed at 20h59 and was immediately followed by the retiring President's address in which she gave details of her trip to Libya to see the recent Total Eclipse of the Sun on 29 March 2006 for which she was thanked in the usual way.
13. From 21h18 until final closure at 22h05, Mr C de Coning gave a resume of his investigation into a future path for the Society which created some lively discussion. Mr de Coning was thanked for his efforts in collecting and collating all the suggestions as well as for his able presentation. ☆

Report of ASSA Council 2005/6

1. Membership

It was with regret that Council received the news during the year of the deaths of two of our Past Presidents Pieter van Blommenstein and Rupert Hurly, the latter of whom was also an Honorary Member. Last year the demise of another of our Past Presidents and Honorary Members, David S Evans, was accidentally omitted from the Report of Council. Mr TP Cooper has been elected an Honorary Member of the ASSA.

At present membership is as follows:

Members with <i>S&T</i> subscription	102
Non- <i>S&T</i> subscribing members	118
Honorary members	11
New	6
Total (previous year 233)	237

2. Finance

Mr CRG Turk, as Treasurer and acting-Business Manager is to be thanked and commended for his continued efforts. Accounts are in order and the ASSA is in good financial health.

3. Council Membership and Appointees

There being only two valid nominations received for the year, Council membership remained substantially the same. Mr Tony Jones resigned as Vice President and Mrs M Streicher was appointed to the vacancy. Mr Braam van Zyl was appointed to fill the consequent vacant Council Member seat. The Webmaster, Mr Auke Slotegraaf, resigned at the end of December. Council is very grateful

for his excellent work on the website. Mr Gerrit Penning was appointed as Webmaster in his place. The Honorary Secretary Mr C Rijdsdijk resigned on 14 June 2006 as he is leaving Cape Town shortly. Council thanks him for his services since 2002.

4. MNASSA

The Editor, Mr Auke Slotegraaf resigned in February. He is to be thanked for his services here since 1994. Dr Ian Glass and Mr Willie Koorts stepped into the breach for the rest of the year. Mr Maciej Soltynski continued as Book Review Editor. The experiment to turn *MNASSA* into an electronic journal was begun with the SAAO kindly offering to host it. Council is most grateful to the Director of the SAAO for this facility.

5. Annual Handbook

The *Sky Guide Africa South* has again been very successful. The print run was decreased to 3 500 copies and these were sold out. The binding problem was also successfully overcome. Mr Auke Slotegraaf, ably assisted by the ASSA's Editorial Board, is to be thanked for his efforts. Mr Slotegraaf resigned from the Editorship at the end of 2005. The success of the publication is entirely due to his expertise and his setting of a professional standard for its layout and composition. Council greatly appreciates this and the three years of hard work he has put into it. The 2007 edition will be undertaken by Mr Tony Jones.

6. Sections of the ASSA

The Imaging Section Directorship is still vacant as it was last year. Mr C Rijsdijk resigned in June from the Directorship of the Education and Public Communication Section. Council thanks him for his work since the inception of this Section. All other Directors remain in their posts.

7. The Future Direction of the ASSA

Council authorized the setting up of a website to initiate discussion on the way forward for the ASSA hosted by Mr C de Coning. A lively discussion then took place. Mr de Coning will present a collated report of these discussions later this evening.

8. Scholarships

Mr Maciej Soltynski, Dr Abe Mahomed and Mr Andrew Gray are thanked for their efforts in running the ASSA Scholarship. The scholarship was again awarded for 2006.

9. ScopeX

Once again the Johannesburg Centre organized a superb ScopeX. It was very well attended. The invited speaker was Dr David Malin from Australia.

10. Public Relations

Dr David Malin went on a successful mini tour, speaking in Bloemfontein and Cape Town, after ScopeX. His visit to South Africa was partly subsidised by the ASSA. Council for the first time voted by e-mail to approve the subsidy.

The Cape Centre's presence at the Hobby-X exhibition, held in Cape Town in June, was sponsored by the ASSA.

11. History Symposium

A very successful Historical Symposium, due to the efforts of Dr Ian Glass, Mr Maciej Soltynski, Mr Willie Koorts, Mr C de Coning and Mr Auke Slotegraaf, was held at the SAAO on 8-9 November. Several overseas visitors were among the 65 who attended. Council thanks the National Research Foundation for their significant financial support of the symposium.

12. Opening of SALT

A few of the participants in the Historical Symposium, but regrettably not all who wanted to go, attended the opening of SALT on 10 November. Equally regrettable is that the ASSA received no invitation to the opening.

13. Acknowledgements

The Council wishes to express its thanks to the following:

- Prof Phil Charles, Director, SAAO for allowing the Council to use the SAAO Lecture Hall for its meetings and also the use of many other of the Observatories resources.
- The Directors of the various Sections within the ASSA for forwarding data to their respective international bodies and for their support.
- Finally to all members of the various Centres, especially the Cape Centre for hosting this year's AGM. ☆

Report of the Comet and Meteor Section

TP Cooper (Director)

Table 1. Summary of observed meteor showers

Magda Streicher (4)	Eta Aquarids (3.8), July Phoenicids (3.6), Upsilon Pegasids (2.7), September Taurids (3.1)	13.2
Tim Cooper (4)	Eta Aquarids (6.1), Upsilon Pegasids (4.5), Alpha Monocerotids (1.3), December Phoenicids (0.7)	12.6
Koos van Zyl (1)	Upsilon Pegasids (3.8)	3.8
Karen Koch (1)	Eta Aquarids (2.5)	2.5
Tony Jones (1)	Eta Aquarids (2.4)	2.4
Total		34.5

Notes on observed meteor showers

Eta Aquarids – four observers logged a total of 14.8 hours observation. Cloud again prevented complete coverage of the maximum, but highest rates were observed by the Director of 40/hour on the mornings of 5/6 May.

July Phoenicids – Magda Streicher observed weak activity on the mornings of 12/13 July.

Upsilon Pegasids – this potential shower was observed at the request of Hal Povennire, Florida, USA. In 11.1 hours observation Koos van Zyl, Magda Streicher and Tim Cooper logged only 8 possible Upsilon Pegasids.

Alpha Monocerotids – weather only permitted 1.3 hours observation by the Director on the night of 21/22 November. With previous outbursts in 1985 and 1995, the shower did not exhibit any enhanced activity in 2005.

Summary of observed fireballs

2005 saw a total of 13 fireball reports. The full details have been submitted for publication in *MNASSA* as a separate article.

Notes on some observed comets

Table 2 summarises six of the seven comets observed during 2005. C/2004 Q2 Machholz peaked at magnitude 3.5 in January and was observed until May, by when it had faded to magnitude 9. C/2003 K4 LINEAR was observed during January, peaking at magnitude 7.5 and until March, by which time it was magnitude 10-11. C/2005 A1 LINEAR was observed during March at magnitude 9. 9P Tempel 1 was well observed. The comet remained rather faint, peaking at perhaps magnitude 10 and little condensed, even after the impact by the Deep Impact probe on 4 July. The ASSA observations

were reported in *MNASSA*, 64 (11&12), 182. 21P Giacobini-Zinner, a single observation on 17 July at magnitude 13.1. 37P Forbes, a single observation on 8 August at magnitude 11.8. C/2005 E2 McNaught a single observation during November at magnitude 12.

The year also saw the passing of Michiel Bester on 15 April, aged 87.

Obituaries were published by the Director in *MNASSA*, 64 (7&8), 118 and *International Comet Quarterly*, 27 (3), 157. With 6 discoveries to his name, Mike jointly held the record for comet discoveries from South Africa.

All observers of meteors and comets are heartily thanked for their contributions. ☆

Table 2. Summary of observed comets

Observer code	9P Tempel 1	C/2003 K4 LINEAR	C/2004 Q2 Machholz	C/2005 A1 LINEAR	21P Giacobini Zinner	37P Forbes	C/2005 E2 McNaught
COO02	•	•	•	•		•	•
BEG01	•	•	•				
STR03	•				•		
VAN15	•						
PRI04		•					

Key: ICQ

Observer code:

- COO02 = Tim Cooper
- STR03 = Magda Streicher
- BEG01 = Mike Begbie
- VAN15 = Koos van Zyl
- PRI04 = David Pringle-Wood
- TUR = Cliff Turk

Comets:

- 9P Tempel 1
- C/2003 K4 LINEAR
- C/2004 Q2 Machholz
- C/2005 A1 LINEAR
- 21P Giacobini Zinner
- 37P Forbes
- C/2005 E2 McNaught

• indicates the comet was observed

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Report of the Deep-sky Observing Section

Auke Slotegraaf (Director)

In the year under review, members of the Deep-sky Section were involved in both observing and astronomy popularizing.

Magda Streicher has continued her excellent observing programme, which for the year under review included the study of 384 deep-sky objects, 90 asterisms (of which 21 are her own discoveries) and almost 100 double-star observations (including the possible discovery of a faint companion to a triple-system in Aries).

Furthering her ongoing interest in asterisms, she co-operated with Jenni Kay of Australia on a "Small Clusters and Asterisms" project and has been working towards her Herschel 400 certificate (having logged 87 to date).

In addition to a regular newspaper column and regional radio talks, her "Deep-sky Delights" column appears regularly in *MNASSA*. In the period under review, Magda published an article on double stars in Circinus, in *Deepsky Observer*, the journal of the Webb Society. A special publication (co-authored with Jenni Kay) of Magda's observations of the Jack Bennett Catalogue is being prepared by Bob Argyle of the Webb Society. Magda's deep-sky sketches appear regularly in the Australian magazine *Sky and Space* to illustrate Jenni Kay's deep-sky column.

Magda will also be representing the Section at the 2006 ScopeX with a display of deep-sky photographs and drawings and promoting the Section's workbook (see below).

Gerrit Penning, the Bloemfontein Centre deep-sky coordinator, reports that during the year, various deep-sky evenings in and around the city were held. Informal evenings were also arranged after meetings. At the start of the year, a monthly observation schedule was compiled, but due to practical reasons, little of the schedule could be followed and observations were not as numerous as in 2004. For the current year it was rather decided to focus on specific constellations that were most suited for observation of its deep-sky objects. Unfortunately clouds and rainy weather hampered some practical club activities and it was further restricted by the fact that the Bloemfontein Centre's deep-sky coordinator was out of the country for a few months.

Beginners were properly trained in night-sky observations and some members acquired or even built telescopes. The Centre can now proudly say that the majority of its deep-sky members have telescopes of sufficient aperture.

The venues of some of the Centre's deep-sky evenings included Boyden Observatory, Barkly-Wes, De Oude Kraal Country Estate and the city of Bloemfontein. The greatest challenge now lies in motivating advanced members to further their interest in deep-sky and persuading them to follow discipline in self-development.

In July 2005, the Section published a booklet containing naked-eye star maps, intended as a first-step in observing the night sky. Called *Discover!*, the workbook aims to teach the constellations and at the same time encourages the novice to use binoculars or a small telescope to search the southern skies and record any deep-sky objects they find. *Discover!* was compiled by myself, with valuable advice received from Magda Streicher and Gerrit Penning. In January 2006 a second edition was prepared.

The workbook is advertised to ASSA members in the 2006 *SkyGuide*, in various issues of *MNASSA* and on the ASSA website. *Discover!* was also mentioned on several e-mail lists, in newspaper columns and on my personal website.

Discover! is also available for download from the ASSA website and from my personal website.

From my homepage, 413 copies of *Discover!* were downloaded. In addition, 94 copies of a preliminary *Advanced Discover!* workbook and 64 copies of *DOC* (the *Deep-sky Observer's Companion*), were downloaded. An unconfirmed number of copies were downloaded from the ASSA website, kindly hosted by SAAO.

Reproduction, binding and distribution of the workbook was undertaken by Magda Streicher and myself. Magda has distributed 41 copies (costing R530), mainly to local high schools, social clubs and at game parks and camps in the Kruger National Park. I have distributed 95 copies (costing R890) including sending sets to ASSA Centres who accepted an invitation for the free workbooks; responses were received from the Bloemfontein, Durban, Garden Route, Johannesburg & Natal Midlands Centres. In addition, 28 copies were distributed to individuals who were unable to download the free electronic version and requested printed versions instead (at a cost of R25 per copy to cover printing, ring binding and postage).

In summary, for the year under review, at least 160 paper and 413+ electronic copies of *Discover!* were distributed. ☆

Report of the Occultation Section

Brian Fraser (Director)

As the years pass, so the average age of our observers increases – which is another sad way of saying we still don't have any younger astronomers joining the observing sections. Our society is not the only one in the world experiencing this sorrowful phenomena as we read that even organizations like the AAVSO suffer from the same problem. We were saddened to hear of the death last year of one of the most active occultation observers in the section, Peter van Blommenstein. Peter was one of our stalwarts and with his departure we are have lost one of our friends and regular contributors. Last year Jannie Smit was also not able to do as much observing as he would have liked, due to health problems, but I am happy to report he has now recovered and is back into his old routine.

Our priorities have changed over the years and today we have a small but very active minor planet occultation observing group. In years gone past we focused much more on lunar occultations and grazing occultations. Minor planet occultations can be observed from your own backyard and if you are lucky enough to be located in the shadow track then you will get a positive observation. In recent times we have been using the predictions of Steve Preston of IOTA, which we have found to be extremely accurate. So much so that we have even traveled to the predicted path with some confidence of getting a positive observation. This wasn't the case

in previous years. We even had the good fortune to get positive observations of two occultations of two separate events on a single night, 5 August.

I will repeat a comment that I have made before – we still do not have enough observers in our country doing minor planet occultation observations. And sadly even the small number of active of observers are so spread out that we often miss out on getting valuable results because we end up getting only one positive observation. If we just had another 3 or 4 observers in the PWV area and 2 or 3 in each of Bloemfontein, Kimberley and the Western Cape we could catch many more of these spectacular and important events.

Getting a good time signal has been a problem that has haunted our efforts over the years. But I am please to announce that at the time of writing I have received a GPS-based receiver/timing device built to suit our requirements and will be making this unit available to observers after doing some trial runs with it. First indications are that it is perfect for our needs.

Observations reported for the year 2005.

Lunar Occultations.

Cliff Turk	43 disappearances	
	9 reappearances	
Brian Fraser	4 disappearances.	☆

Report of the Education and Public Communication Section

Case Rijdsdijk (Director)

I will take the liberty of extending this report to cover a bit more than just the last ASSA year. The reason for this is that I will be re-locating to Wilderness and would like to continue with the EPC efforts at the previous levels. But in order to do this it would be really great if all centres could simply e-mail me and let me know what it is that they have done in terms of public talks, night viewing sessions, newsletters sent out etc. just to collect the stats: **not** for the director to claim glory! It is vitally important that if one or other centre needs to fund raise, then being able to say what it is that the ASSA has done in the past year in very helpful, if not essential. This report can then be of real use to other centres. Funders don't really like to hear that "we do a lot of things" – they would rather hear things like, in 2005 we delivered 134 talks to the public around the country, visited 84 schools and gave talks there, 12 678 people attend our night viewing sessions etc. These things need to be quantified.

Although no reports have been received from the various centres I know that many have been very pro-active. Of particular import in the annual ScopeX which is run by the Johannesburg Centre and is something of which we can all be proud. Their efforts in promoting astronomy are to be lauded and the fact that for the last two years they have managed to get two prominent international speakers is just reward for their efforts.

The last speaker to attend ScopeX was Prof David Malin, the world famous astro-photographer whose talks in Johannesburg, Bloemfontein and Cape Town were as usual, very different and stimulating. In future I think we should try and get more publicity for events like this

I know that the Cape Centre has, as usual, supported SAAO with its monthly Open Nights and that members have given talks to schools and the public, as has the director. I am sure that other centres have done similar things and it would be really great if details of these efforts could be forwarded to me so that I can build up a data base for distribution to all centres in this report.

The director has also produced some resources which are now on the Education page of the SAAO website. They will be fine tuned as there are a few minor problems of software incompatibility – some numbers appears as letters etc! But it is an ongoing process which can only improve with time.

I would like all centres to please send me details of what they are doing – just a short note, something along the lines of: "Last night Peter Bloggs spoke to the Middelorp Probus group on What's Up in the Night Sky. The meeting was attended by 27 people",

or “Joe Soap went to the Chris Hani High school and gave a workshop on the Solar System to 68 Gr 9 learners”.

Have a good year and I look forward to hearing from you all – I know you have something to report! ☆

Report of the Historical Section

Chris de Coning (Director)

Introduction

The past year (Calendar Year 2005) had the following highlights concerning the History of Astronomy.

Website

Preparatory work was done on the part of the web site dedicated to the Historical Section. However no update occurred, but it will be done in 2006.

Archive

Due to the complexities and scope of the task the indexing the archive will still take some time.

Publications

A Historical diary for events to be commemorated was published in *MNASSA*, 64 (3&4).

Individuals in their private capacities wrote articles with historical content. Please note my appreciation to the following people:

- Jan Hers for his excellent article on the recollections of William Finsen published in *MNASSA*, 64 (3&4).
- Auke Slotegraaf for the article on Hipparcos’s long-lost star cata-

logue. *MNASSA*, 64 (3&4).

- Brian Fraser for the article on “The Union /Republic Observatory and Minor Planet discoveries”. *MNASSA*, 64 (7&8).
- Pat Booth for the article on “The Rings of Uranus – the South African Story” *MNASSA*, 64 (9&10).

Obituaries

MNASSA published obituaries on the following astronomers:

- David Evans; *MNASSA*, 64 (1&2).
- Michiel Bester; *MNASSA*, 64 (7&8).
- Pam Cook; *MNASSA*, 64 (9&10).

I would like to thank A. Slotegraaf and fellow contributors for their hard work in preparing the obituaries.

Symposium

The first ever Symposium for the History of Astronomy for the whole continent of Africa was a success. It took place on 8 and 9 November 2005 on the premises of SAAO with 62 delegates attending. On 10 November the delegates were invited guests at the opening of SALT at Sutherland. This event, especially the opening of SALT, was history in the making. ☆

Report of the Solar Section

JJ van Delft (Director)

Publicity and awareness was the main focus in the Solar section for 2005.

The monthly solar bulletin is well established during this year and according to web statistics downloads nationally and internationally were experienced. Solar reporting in the *MNASSA* also started during 2005 and will be built up into a solid publication during 2006.

Solar presentations during 2005 where held at the following organizations:

- SARL (South African Radio league) Roodepoort, followed by a live radio broadcast presentation on short-wave radio.
- SENWES, Hartbeespoort at there annual Silo Conference.
- CUT (Central University of Technology) Bloemfontein at their annual research presentation day.

Solar observations continued during the 2005 period and we ended the year with 3 observers. ☆

Report of the Dark Sky Section

CRG Turk (Director)

During the year the Director has continued to include aspects of light pollution in all the talks he has given to various groups – a total of only 12 in 2005 compared with 24 in the previous year.

Photographs were supplied to one member to assist with giving lectures in Natal, but the response to the appeal in the past two reports has still been very poor.

We vitally need experienced astronomers to constantly tell the public about this problem so that it becomes better known. At the same time we have to accept that our finances do not run to legal action against offenders as this route can only be a very expensive business while there

is no legislation in place to define what may or may not be an offence. In fact, to date, only one country in the world has national legislation covering the problem, although several others do have local by-laws giving some protection. It has been suggested that our Constitution gives us wide ranging freedoms under which we could take action, but what would be the cost of going to the Constitutional Court and who would foot the bill?

Legal action, in my opinion, is not the best path to follow. It is much better to educate the public to the widespread problems which light pollution causes and to gain co-operation rather than make enemies through civil action. If, at the same time, we can persuade some

local authorities to declare invasive light to be a recognised nuisance, then those who refuse to co-operate and continue to pollute can be dealt with in the Magistrates Court much more promptly and at less expense.

During the coming year the Director will be attending the 6th European Dark-Sky Symposium in the UK where he hopes to gain from the experiences of others in organising campaigns over a wide area. ☆

Report of the Variable Star Section

J Hers (Director)

Summary of Variable Star observations for 2005

Tim Cooper	Kempton Park	769	
Brian Fraser	Pretoria		236 (Pep)
Win Jones	Fish Hoek		1767 (Pep)
Michael Poll	Gezina	103	
Jan Smit	Pretoria	257	
Cliff Turk	Cape Town	25	
Peter Wedepohl	Somerset West	236	
Total Visual:		1390	
Pep:			2003

☆

ASSA Endowment Trust Report for 2005

Cliff Turk (Secretary to Trustees)

The Trust capital has grown to over R30 000 during the year and a further R70 000 distributable reserve brings total assets up to over R100 000 for the first time.

This provides the Trust with a reasonable income in spite of falling interest rates and we are able to consider requests for assistance from the Society, Centres or individuals. The only provisos are that the expenditure must be for the benefit of astronomy and that no individual may profit from the funds. One such project

is under discussion at present and others are expected shortly.

During the year, the Trust's holding of ABSA Bank shares was disposed of under the offer made by Barclays Bank and we are hoping we will not be hit by Capital Gains tax, especially as we are exempt from income tax.

The Trust continues to support ASSA with an annual grant and would like to hear of additional projects which it can support. ☆

ASSA Scholarship Report for 2005

Maciej Soltynski (Convenor, ASSA Scholarship Committee)

The ASSA Scholarship was established in 2000 to encourage the study of Astronomy at any Southern African university at the 2nd and 3rd year level. For 2005 the Scholarship was awarded to Renée Holzek, a final year B.Sc student at the University of Pretoria. Her subjects for 2005 included Astronomy modules from UNISA up to the final (third) year level. At the end of 2005 Renée

obtained her B.Sc. with distinction from the University of Pretoria. She advised that she will be undertaking a B.Sc. (Hons) in Astrophysics at the University of Cape Town in 2006.

Andrew Gray, Dr Abe Mahomed and Prof Derck Smits are thanked for their valued inputs on Scholarship matters during 2005. ☆

ASSA Financial Report for 2005

Cliff Turk (Hon. Treasurer)

The Society's finances are in a very good state, probably the best at any time during its 84 years existence. There are still a few problem areas which cost us money, but the majority have been blocked and the main cash drains are a thing of the past.

nor misleading items in the document prepared by the auditors and I refused to sign it as correct. I reported this to Council and the document has been referred back to the Auditor for correction. Publication will take place as soon as possible.

During the last few years the Society has been able to set aside R40 000 for its Scholarship Fund and has added to this since the end of the reporting year. In spite of this our liquidity is constantly improving which will enable us to undertake a number of additional projects.

During the first half of the 2005/2006 financial year, the trend set over the past three years has continued and we have been able to provide finance for projects being run by Centres. Section Directors and Centres are welcome to approach the Society for support for specific projects and all will receive consideration.

Unfortunately, the annual accounts to 30 June 2005 have not yet been published. There were a number of mi-

Financially, the way ahead looks good. ☆

Annual General Meeting

The Annual General Meeting (AGM) of the Astronomical Society of Southern Africa (ASSA) was held on 25 July 2007 at SAAO, Cape Town, hosted by the Cape Centre. The reports of the various ASSA Sections were published in the August issue of *MNASSA*.

Minutes of the AGM

1. The meeting was opened at 20h15 by the President, Dr Dave Laney. There were over 30 members present.
2. The notice of meeting had been circulated to all members with the June *MNASSA*.
3. Apologies were received from W Koorts, T Cooper, C Rijdsdijk, B Fraser and L Labuschagne
4. Minutes of the last AGM were taken as read, having being published in *MNASSA*, and there were no matters arising.
5. The Report on Council was read by L Simone and will be published in *MNASSA*.
6. The reports of the Observing and other Sections were read, either by the directors of those Sections or various other members standing in for them. The reports will be published in *MNASSA*. The Imaging Section has only recently appointed a Director and no report was submitted for this AGM.
7. The Financial report was read by the Hon. Treasurer, Cliff Turk, and will also be published in *MNASSA*. The state of affairs remains healthy.
8. The report of the ASSA Scholarship was read by Mr MG Soltynski. It too will be published in *MNASSA*.
9. The ASSA Endowment Trust report was read by Mr Cliff Turk and will also be published in *MNASSA*.

annual general meeting

10. The Auditor, Mr RG Glass, was re-elected on the proposal of the treasurer, Mr CR Turk, and seconded by Mr MG Soltynski
11. The Secretary, L Simone, read the list of nominees for office and, as there were no conflicting nominations, the following were declared elected by unanimous agreement of the meeting.

President:	Mrs Magda Streicher
Vice Presidents:	Dr Peter Martinez Dr Dave Laney Mr Michael Poll
Secretary:	Mr Laurie Simone
Treasurer:	Mr Cliff Turk
Business Manager:	Mr Cliff Turk
Membership Secretary:	Mr Dudley Field
Council Member:	Mr Maciej Soltynski
Council Member:	Miss Patricia Booth
Council Member:	Mr Atze Herder
Council Member:	Dr Matie Hoffman

All remaining positions for Sectional Directors and other designated positions were filled and will be published in *MNASSA*.

12. After the break, Laurie Simone introduced the new President, Magda Streicher, to the attending members. Magda then invited the past President Dr Dave Laney to give his presentation.
13. The meeting closed at 22h00 ☆

Report of ASSA Council 2006/2007
Delivered at the ASSA AGM, 25 July 2007

1) Membership

As on 19 June 2007, there are:

Members	245	compared to 233 last year.
Full	99	
Honorary	10	
Limited	129	
New	7	enrolled and approved on 19 June

The above figures should be improved in 2007/8. The bug with the email address on the ASSA website has been removed and enquiries for membership have increased. The membership form has also been updated and posted on the website with the latest procedure to subscribe to *Sky & Telescope*.

2) Finance

Council would like to thank and commend Mr CRG Turk for his continued efforts as Treasurer and Business Manager. The accounts are in order and ASSA is in good financial health.

3) Council Membership and appointees

Mr Anthony Jones was reappointed as editor of *Sky Guide* and was also appointed to the Editorial Board. Mr Willie Koorts was appointed as editor of *MNASSA* and Mr Gerrit Penning continued as webmaster. Mr Case Rijdsdijk resigned as Secretary and Mr Laurie Simone was appointed to fill the vacancy. Mr Case Rijdsdijk was appointed Sectional Director for Education and Public Communication. Council would also like to thank all members of ASSA for their willing participation with the nominations for Council and the remaining positions for the 2007/8 year.

4) MNASSA

Council would like to thank Mr Willie Koorts for services as editor of *MNASSA*. At the Council meeting of 20 February it was announced that the Publication Board decided that *MNASSA* remains as is – as a hard copy and not electronic.

5) Sky Guide

Council would like to thank Mr Anthony Jones for services as editor of *Sky Guide*. *Sky Guide* was released for sale in November with an increased run of 500 to 4 000

annual general meeting

copies. Mrs Magda Streicher together with Mr Cliff Turk has set the wheels in motion to place *Sky Guides* with the game parks. This publication has gained popularity with each year and a bigger run is anticipated with the next issue.

6) Sections of the ASSA

Council would like to thank Mrs Magda Streicher and Mr Tim Cooper for the effort to initiate and submit a proposal to Council for an Observers Workshop. The proposal was well received, approved and tabled by Council. Unfortunately due to some last minute hiccups the Workshop was cancelled.

Initially both Natal Centres declined to hold the Symposium for 2008. Due to the efforts of Mr Brian Fraser and Mrs Magda Streicher the Symposium has resurfaced and it will now go ahead. A date for 2008 has yet to be confirmed.

7) The future Direction of the ASSA

One has to take some later correspondence into consideration of which an email from Chris Middleton was to the point. The subject has been debated long enough. There is not much more that can be said and unfortunately ASSA has been subject perhaps unfairly to a certain amount of criticism. Now we need to be pro-active.

8) Scholarship

Mr Maciej Soltynski, Dr Abe Mahomed and Mr Andrew Gray are thanked for their efforts in running the ASSA Scholarship. The scholarship was again awarded for 2007.

9) Lunar Eclipse, 3 March 2007

Council would like to thank Mrs Pat Booth, assisted by Mr Auke Slotegraaf, for their tremendous effort on organizing the photographic competition for the above event. This was a good public relations exercise as it involved all the Centres. Similar ideas for the forthcoming year would be welcomed.

10) 7th ASSA symposium

Congratulations from Council to the Bloemfontein Centre and Boyden Observatory for a successful Symposium. Sixty five people attended.

11) ScopeX

The best ever! Council would like to congratulate Lerika Cross, the Johannesburg Centre and participants for another successful ScopeX.

12) ASSA Website

Council would like to thank Mr Gerrit Penning for being an excellent webmaster. It is evident from email feedback that activity on the website has really picked up.

13) Acknowledgements

ASSA Council wishes to express their appreciation and thanks to the following: Prof Phil Charles, Director, SAAO for allowing the Council to use the Auditorium for its meetings and the use of other of the Observatory facilities, the Directors of the various Sections for forwarding data to their respective international bodies and for their support, and finally to all members of the various Centres, and especially the Cape Centre for hosting the AGM. ☆

Treasurer's Report for 2006/2007

Cliff Turk (Hon. Treasurer)

This year has been a period of transition following the increased costs of producing *Sky Guide* and changes relating to subscriptions to *Sky & Telescope*, but things seem to be settling down nicely.

The immediate difference from the previous year is that our funds in the Plus Plan account are down to R75 000 compared with R100 000 last year. However, this is explained by there still being just over R16 000 due to us for sales of *Sky Guide 2007* and that we have already made an initial payment of R10 000 towards the expenses for *Sky Guide 2008*.

Sky Guide continues to be our big revenue earner and regular orders for copies continue to increase every year.

MNASSA costs continue to exceed income but these are carefully controlled so that things do not get out of hand. During this year *MNASSA* content became available online and fees amounting to some R4 000 have been received subsequent to the year end. This is a very welcome contribution to our expenses.

As the year ended, changes were being made to the way in which our members can subscribe to *Sky & Telescope*. This will give the Society a small drop in income, but it will save a lot of work for the Membership Secretary as well as some time for the Treasurer.

Overall, our finances are healthy and the Society is in a good position to move forward into the future. ☆

Endowment Trust Report 2006

Cliff Turk (Secretary, ASSA Endowment Trust)

During the year the trust received R4 851.74 in interest on investments of which R2 500 was paid out as a grant to ASSA, leaving R2 351.74 transferred to the distributable reserve.

Capital at the start of the year showed a figure of R30 174.75 but this was inflated because it included a capital gain made last year but did not allow for the capital gains tax of R3 852.00 due. Thus the true opening capital

should have been R26 322.75.

During this year, donations of R6 178.91 have been received to bring the capital at year-end to R32 501.66. The distributable reserve is now R72 678.43.

The Trust received two requests during the year for assistance but neither of them was proceeded with. One may be revived in the future. ☆

Magda Streicher's Presidential inaugural address

As ons terugkyk op die afgelope dekade kan ons net verstom toekyk hoe sterrekunde verander het, danksy nuwe tegnologie. Ons beleef voorwaar 'n goue tydperk wat die professionele sterrekundige, asook die amateur, tot groter hoogtes gelei het.

Om as president van ASSA te dien is 'n eer en besondere voorreg. Sterrekunde is 'n wonderlike uitdaging en hierdie gedeelde passie van ons sal steeds groter motivering in die hand werk. Laat ons saam die nuwe jaar aanpak en kontak met mekaar behou. Hiermee gee ek derhalwe aan 'n ieder en elk die versekering dat ek sal poog om 'n waardevolle bydrae tot ons vakgebied te lewer. Ons en die sterreheemel is 'n vennootskap, 'n voorreg wat tydloos is.

Looking back over the past decade we can only stand amazed at how astronomy has changed, thanks to new technology. We are indeed experiencing a golden era that has taken both professional and amateur astronomers to greater heights.

To serve as president of ASSA is an honour and a special privilege. Astronomy is a wonderful challenge, and this shared passion will bring about ever greater motivation as we tackle the new year together and maintain contact with one another. With this I therefore give each and everyone the assurance that I will try and make a valuable contribution to our field. We, and the starry night skies, are a partnership, a privilege that is timeless. ☆

annual general meeting



**ASSA Presidents,
past and present.**

From left to right:

Dr IS Glass,

Dr CD Lancy,

Ms PJ Booth and

Mrs M. Streicher.

Photo:

A. Slotegraaf

centre reports

The Centres also held their AGMs and submitted their Chairperson Reports to Council. Five Centres, namely Bloemfontein, Cape, Durban, Johannesburg and Pretoria, sent theirs for publication in *MNASSA*.

Bloemfontein Centre

Gerrit Penning

The Centre's year successfully started with two public outreach programs in July 2006. One such program consisted of an astronomy open day in a bookshop located in the largest Mall in Bloemfontein, where members presented several short lectures on various popular astronomy topics. It was followed two weeks later by outdoor shows presented during the annual Arts Festival. It was heartening to see how members were more than willing to assist with these programs.

A major highlight for the year was certainly the 7th ASSA Symposium

organized by ASSA Bloemfontein in cooperation with Boyden Observatory. This national event took place from 28 to 30 September 2006 and was held mainly at Boyden Observatory as well as at venues within Bloemfontein city. The gathering drew an average of 68 astronomers from all over the country, amateur and professional. The theme was "Serious Amateur Astronomy: Linking with Professionals" and centred on ways in which amateur astronomers can contribute to the work done by professional astronomers. From post-symposium feedback it seems that the event was thoroughly enjoyed

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by its participants. The special overseas guest was Dr Patrick Seitzer of the University of Michigan. A report about the Symposium was written for *MNASSA* and a full write-up can be found on the Society's website. It is hoped that the momentum and enthusiasm created by the Symposium will be carried forward into the future. Boyden Observatory and the University of the Free State are thanked for their technical advice and the making available of their facilities.

Members of ASSA Bloemfontein continued to assist the Boyden Science Centre and the Friends of Boyden Observatory in its public outreach and educational programs. Members shared their knowledge about astronomy and space and performed roles as presenters, guides and telescope assistants during the observatory's open evenings.

Several observation evenings were held during the year, most consisting of informal deep-sky events, either at Boyden Observatory or other dark sites outside the city. Although not always overwhelmingly attended by members, these evenings were certainly very informative and enjoyable and played a large part in how members came to see the Centre and their hobby in astronomy. It seems though, that it is becoming more difficult to encourage people to go outside for observations. Light pollution, secu-

rity and the digital age (i.e. internet, software applications) are probably contributing factors. It also remains a challenge to coach beginners while at the same time fulfilling the needs of the more advanced members.

Although the Centre is quite active in general, there were very few amateur observations being performed that could potentially contribute to professional research. A lack of specialized members and too little motivation among members to take up advanced amateur astronomy play a role in this regard. Support from ASSA National towards training and facilitation will be appreciated.

Topics presented to members during quarterly meetings included "Global Dimming" (video), "The New Solar System" and "Astronomy Software".

Together with Boyden Observatory and the Friends of Boyden, the Centre played an important role in supplying the media and public with information about Comet McNaught in January 2007. Member Hannes Pieterse won acclaim and prizes for his photos of the comet and member photos appeared on several international websites such as *SpaceWeather* and *Sky & Telescope*. It was expected that the comet's apparition would increase member numbers to some higher extent, but very few new members joined after its appearance.

At 30 June 2007, total club membership stood at 45 (one of the highest numbers on record). The year was marked by an immense increase in new members (18). Most of these new members joined after attending public astronomy shows and astronomy courses presented by the club.

The Centre's official newsletter to members, *Die Naghemel*, continued to be published intermittently. The Newsletter contained some excellent articles by Hannes Pieterse on the use of digital cameras for basic astrophotography and also served as a written archive of all the events and activities that took place in the Centre and in Bloemfontein astronomy. The Centre's e-newsletter to the public, *SpaceTides*, was sent out either monthly or bi-monthly.

Two highly successful courses were presented in February and March for beginners and existing members respectively, both taking place on Saturdays at Boyden Observatory. The beginner's course was attended by 30 people and served as an opportunity to orientate new members and to gain potential new members. The advanced course for members was very well supported and, according to members who attended, was one of the most enlightening courses presented in recent years.

The Centre's telescope making project culminated in a year which saw the most telescopes being completed by members since our first club visit to ScopeX in 2004. No fewer than eight telescopes were exhibited at ScopeX in Johannesburg in April 2007, owned by members Mia Zeelie, James Ross and Hannes and Thinus van der Merwe. Maurits van Wyk also completed a beautiful 8-inch reflector. James Ross should be commended for his leadership and expert hand in driving the telescope making efforts of Bloemfontein. A challenge now remains to convince a large number of non-members who are building telescopes to join the Centre.

In summary it was a busy year for ASSA Bloemfontein and its members. There were quite a few highlights and a number of successes. It is now time for a new leadership to take charge of the Centre's operations and I wish them the best of luck. Build forth on the solid foundation that has been laid in the past few years, but make sure that more than anything else, you enjoy astronomy as a hobby together with the other club members. As soon as you enjoy it as much as the others, anything you undertake is an automatic success! ☆

Cape Centre Georg Mayer

We had a very busy year and managed to arrange activities that included not only talks on a wide range of theoretical and practical topics, but also excursions and a number of public “outreach” activities. Some of the highlights were:

The solar eclipse of September 2006 was itself “eclipsed” as a celestial event by the great Comet C2006 P1 (McNaught) appearing in January. It caused a hectic change of schedule and a lot of extra activities. What an experience sitting at Blouberg beach looking at the occultation of Venus which coincided with the visit of the comet and the great comet itself against the backdrop of Cape Town and Table Mountain at sunset! This was definitely the highlight of my astronomical life and will be difficult to beat. The comet gave us many opportunities for public astronomy on the beaches at Sea Point, Blouberg and elsewhere and we also had a club outing to Hout Bay to look at the comet together. The views of its beautiful, curved long tail during January had the general public and amateur astronomers all streaming to the best vantage points and also provided many opportunities for the photographers among us.

Talks by international speakers, including well-known author & telescope builder Richard Berry and Dr Noah Brosch (Tel Aviv Observatory) and by prominent local experts, including Dr Phil Charles, Prof Renée Kraan-Korteweg, Prof Michael Feast,

Dr Gert-Jan van der Merwe, Dr Jeff Murugan, Prof Patricia Whitelock and Dr Duncan Miller. Their topics ranged from cosmology to the Vredefort Dome, to the role of amateur astronomy and the National Astrophysics and Space Science Programme. Our invited guest speakers also included, among others, Case Rijdsdijk, Wayne Herschel, Wayne Traub, Kevin Govender and ASSA Deep-sky Director, Auke Slotegraaf. We also had numerous talks presented by our own members on topics ranging from comets to eyepieces, go-to telescopes, Tycho Brahe & Kepler – from “astronomy around the world” to satellite tracking, telescope building, and the “place of the solar system in the Milky Way & universe”. We also watched some DVDs and there were some practical demonstrations.

Our regular activities included assisting the SAAO during their monthly Open Nights and when the weather allowed it, our practical observing at Contermanskloof during our Dark-Sky evenings. This year our most notable dark-sky outing may have been our fun Mini Messier Marathon. We’ll do something similar in future, probably based on the ASSA Deep-Sky 100 list. Excursions included visits to the Cederberg and Sutherland Observatories and a club visit to the Planetarium, with a talk by Prof Anthony Fairall.

The partial annular solar eclipse on 22 September 2006 gave us the opportunity for public astronomy at the SAAO and

at the Canal Walk shopping centre in cooperation with the MTN Science Centre. Outreach activities included talks at other societies, talks at the MTN Science Centre for Astronomy Month and skygazing from the roof of the Canal Walk shopping centre, skygazing events at schools (such as Wynberg Boys, Herschel and Western Cape Academy of Science) and from Clifton for the KFM "Moonstruck" Beach party. We continued with the Stargazing at Kirstenbosch evenings – again, when the weather allowed us to do so. Our stand at the Hobby-X exhibition was once again very well attended. Setting up the exhibition and manning it was a team effort. Thank you to all concerned.

Fun evenings for the whole family included our year-end function where entries for our limerick competition became the main focus point, and a quiz evening.

We finally got a presence on the Internet with our website, where members can also download the *Cape Observer*. Among others, this method of delivery of the newsletter helps to save on postage. Our website has proven to be very popular and we received numerous e-mail enquiries from people who use it as a starting point for enquiries about amateur astronomy in general and our club in particular. We now also have a dedicated e-mail address and a telephone number that serves as an information service.

Thank you

Thanking people always means the risk of leaving someone out, but I wish to thank

everyone who helped to make our events for the year possible, in particular:

The SAAO, and especially Phil and Anne Charles for allowing us on site and the use of their well equipped auditorium. We are very grateful that some of the professional astronomers are prepared to give talks to Cape Centre and we are also thankful to the SAAO for hosting our web page and to Roy Emmerich for his assistance in this regard.

Isobel Basset and Cynthia Strydom have been extremely helpful: they are really the glue keeping things together regarding our contacts with the Observatory. Kevin Govender presented a talk and lends a hand in many ways: I won't forget him sitting with all the children on the lawn during the solar eclipse! Cedric's help for helping out with the nitty gritty stuff and keeping things in working order is also much appreciated.

Also thanks to the Iziko Planetarium and the MTN Science Centre for all their support, cooperation and collaboration as well as Mr Johannes Loubser of Fair Cape Dairies for allowing us on to his land for our Dark-Sky evenings. Similarly to the Cederberg Observatory for hosting us in November last year.

Special thanks to our committee and other members for all their efforts to make the above activities such a success. It was my pleasure and privilege to chair of the Cape Centre of ASSA for the past year and I wish the incoming chairperson and committee a successful year. ☆

Durban Centre
RS Bond

Our report starts on a note of sadness for, as you know, in April we lost a stalwart member, friend and Treasurer; Dennis Sargeant. Dennis was a member of the Centre for many years and for much of that time had been a guiding influence on the committee as chairman and later as treasurer. His knowledge and experience will be sorely missed. Dennis was a man of many outstanding qualities and achievements. We recognized in him his broad knowledge of the astronomical world but he was well known in the business world as MD of T-H. Many will remember his leading role as President of the SA Magical Society, but I think all of us will remember his infectious laugh which often would emanate from a room full of people, indicating that Dennis was present. However, the show must go on and we are deeply indebted to Logan Govender who has agreed to be co-opted onto the committee to prepare the Treasurer's Report and he has agreed to stand for election to the committee for the coming year. Thank you Logan.

I would also like to thank the members of your committee for another year of guiding the affairs of the Centre. Jessica has a demanding schedule at work, but nevertheless manages to record our activities and keep our affairs on track (as well as stepping into the breach as a main speaker where she spoke knowledgeably on the topic of Stellar Thermodynamics).

Belinda, editor of *Ndaba*, has continued to produce the newsletter and send them to those with email. Sheila Begg has again posted *Ndaba* to those members who do not have email and we thank her most sincerely for this chore. Unfortunately Sheila fractured her leg a couple of months ago and has been immobilized. We wish her a speedy recovery. I would also like to extend our thanks to Tony Akal and the Board of Marist Brothers for the continued use of their facilities for our meetings. There are of course many non-committee members who make a valuable contribution to the running of the Centre. Logan continues to avail us of his data projector and most importantly the expertise to operate it.

The membership of the Centre was 96 last July and is currently 84. The drop in membership was largely due to 'writing off' a number of members who had failed to pay their subs. Subsequent attempts to contact them were unsuccessful. On a more encouraging note, four new members have joined recently and several others have shown interest in joining after the AGM when new subs are due.

Speaker topics during the year covered a wide range of subjects ranging from the chances of getting hit on the head by a piece of space junk, South Africa's involvement with the International Polar and Heliophysical Years and a chat

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with Fred Hoyle through the auspices of a DVD. Once again Centre members gave the main speaker talks during the year and seven out of the total of eleven were presented by members. Outside speakers included Andrea Boattini, Prof Arthur Hughes and John Fielding. Future speakers include Prof Mike Watkeys, David Long, Rob Blore and Dr Axel Hofmann.

On 20 April, Martin Clements again invited the Centre to participate in the Star Party at the Botanic Gardens. This time the weather played ball and those visitors that were not carried away by the live music were able to view from several telescopes (including Ray's) that had been set up away from the lights. Apart from the main speaker for the evening, Prof

Mike Watkeys, Logan Govender gave a well illustrated talk on how a person with no previous astro-viewing experience could, within a short viewing session, learn to recognise over 200 celestial objects. Talking of viewing, Ray Field has restarted the regular viewing sessions at 18h30 onwards on the Friday following the new Moon. Thanks also Ray for your 'Eyepiece' contributions to *Ndaba*.

To end on an exciting note, ASSA has requested that the two KZN Centres host the 2008 ASSA Symposium and the Committee has accepted this honour. The committee will keep you informed on developments. It will be a great opportunity for members to contribute to the occasion and also interact with other enthusiasts from all over the country. ☆

Johannesburg Centre

Robert Groess

It has been another eventful year for the Johannesburg Centre of ASSA. When looking at the goals we had set last year (and some taken from previous years too), great strides have been made towards the realization of key elements that were placed on the agendas of committee actions gone by.

One of the greatest milestones that have been reached is the strengthened relationship we have built with our landlords, the South African Agency for the

Advancement of Science (SAASTA). As a direct result, we have been very fortunate in that SAASTA have graciously written-off past monies that were assumed to be owed to them by our Centre – accrued finances which have subsequently been earmarked for refurbishing of the 26" Innes refractor along with the dome building in which it resides. With the International Year of Astronomy coming up in 2009, there is an excellent potential to further strengthen our ties with SAASTA, who

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are also our official, non-commercial sponsor of ScopeX.

With the passing of one of our most esteemed members earlier last year, the committee also thanks the Estate of the late Jan Eben van Zyl, for making the largest monetary donation to this Centre to-date, for the sum of R20 000. The committee wishes to utilize these finances in a way which would be beneficial to our membership and in a way that would honour Eben van Zyl. No action has yet been taken.

That being the good news, we have not yet been in a position to properly address some of the shortcomings of the infrastructure on the Observatory grounds, such as the loss of power cables due to theft more than a year ago and general lack of maintenance of the telescope domes. This means that most of our equipment at the top of the hill remains paralyzed and this will no doubt be one of the pressing actions that need to be addressed by the new committee.

While developments on the Observatory grounds by SAASTA continue to be rolled out, these developments are currently only in their first phase which addresses the administration building (not used by our Centre) to the west of our meeting venue. While plans are in place to upgrade observatory-related infrastructure in good time, such plans are contingent on SAASTA acquiring

the relevant funding for such endeavours – something that remains out of our hands in any event.

On a more positive note, the 26-inch Innes Refractor has been retrofitted and upgraded by our own members and currently the telescope itself is in a position to be used for observing. Before this can be practically realized though, further progress still needs to be made, in particular, the insulators for the dome power slip-rings are in the process of being replaced. Without this, the facility would not be suitable for public viewing sessions. Similarly, the weatherproofing (flashing) also needs attention. These are technically building maintenance issues and thus fall under the umbrella of our landlords. Members of our Centre are in the process of refurbishing the dome as far as possible and we hope to have the telescope available for viewing at the September book launch by Dirk Vermeulen on the history of the Observatory.

One of the regular benefits the Centre provides to its members is the sourcing of guest speakers for monthly meetings. We have been fortunate to have hosted numerous speakers of high calibre over the past year with a wide spectrum of topics on astronomy and beyond. Meetings have generally been very well attended, averaging approximately 60 attendees. The list of guest speakers for 2006/2007 were as follows:

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Month	Guest Speaker	Topic
August	Prof. Fabio Frescura	Pulsars
September	Alex Fortescue	Satellite Earth Observations
October	Prof. Terrence McCarthy	The Story of Earth & Life
November	Gary Els	Rand Water
	Robert Groess	Rings of Andromeda
January	Dr. Percy Amoils	Backyard Astrophotography
February	Trevor Gould	The Pre-Solar Nebula
March	Gary Els	Sun Spots
April	Chris Middleton	W. Ursae Majoris Stars
May (Planetarium)	Prof. Richard Schilizzi	SKA - Cosmic Whispers
June	Claire Lee	The Dark Side of the Univ.

Membership for the year ending 30 June 2007 is summarized as follows:

Category	Number
Ordinary (incl. Family)	148
Pensioners	7
Students	1
Honorary	4
Gratuity	18
TOTAL	178

The feedback surrounding ScopeX this year has been very well received, with comments such as ScopeX being a truly "worldclass" event as judged by previous editor of *Astronomy* magazine and our ScopeX special guest this year, Richard Berry. Much is written on ScopeX in other reports and will not be echoed here.

None of this would of-course be possible without the unfaltering support of your committee members and all the hard work they put into this Centre.

Chris Curry, who initially doubled as vice-chair and webmaster continued with great groundwork on bringing our website up-to-date. Chris has also been very instrumental in re-furbishing parts of the 26-inch Innes refractor, a task which continues to be a work in progress.

Our Library continues to be run and operated in a professional manner and, with the help of the Johannesburg Public Library, the task of classifying our books according to the Dewey Decimal system have been completed. Our Librarian Alec Jamieson has also taken on the additional task of distributing the postal copies of *Canopus*, a task performed with equal dedication and integrity. Alec's big secret to success is his wife Sue, who no doubt contributes to much of the work performed behind the scenes, and on behalf of the Johannesburg Centre, a very big thank you to Sue as well. Assistant to the Librarian

(and possibly better described as our Archivist), along with being our council spy, Atze Herder has performed a very good job in sorting the library's collection of periodicals and magazines and has sourced missing copies while selling off duplicates in a very systematic fashion. Atze also performed the task of acting Treasurer during ScopeX with great fidelity.

While on the topic of Treasurer, we have been less fortunate with this portfolio this past year, as our elected Treasurer, Bruce Dickson has gone to greener pastures by immigrating to Canada a few months ago. Our previous Treasurer, Dave Gordon enthusiastically stepped in to take over (a task he had previously performed with a degree of excellence not seen before in this Centre), only to sadly become a victim of the violent crime that pervades this country. The committee has subsequently assisted in keeping our financial records on track and thanks to the very transparent ways in which Dave Gordon kept the books, were able to seamlessly augment them.

Amateur Telescope Making class representatives Chris Stewart and Keith Lou, (along with other trusty stalwarts) have undoubtedly contributed to the ongoing success of the class, details of which are to be found in the ATM report.

Curator of Instruments Dave Hughes and his assistants have been an invaluable source of wisdom and technical ex-

pertise in retrofitting the 26-inch Refractor with various components which had either degraded due to age or had been damaged in the vandalism incident last year. Furthermore Rodney Hyman has installed the electronics for the racklift in the dome and has also provided spectacular engraving on our speaker gifts.

Recently co-opted onto the committee, Kobie van Zyl has very graciously offered to host our website free of charge and has taken on the job of webmaster. This means our website is now hosted locally and not in some foreign country where internet delays are substantial at times, particularly with the uploading of new items by the webmaster. As with anything that wishes to remain at the cutting edge, our website continues to undergo a process of change (all with the intention of being for the better) and any feedback for the webmaster will be golden.

Someone who brings more balance to the committee than perhaps even she herself realizes is Sharon Tait, our very able PR and Media Liaison Officer, who also handles catering for our monthly meetings and special events in her stride without batting so much as an eyelid.

In my capacity as Editor of *Canopus*, I would like to collectively thank everyone who has helped me make the task that much easier by writing and sourcing topical articles locally and from around the world. *Canopus* celebrated

its official 25th year in existence in July and has in the meantime acquired some corporate sponsorship to cover the costs of printing the cover in full colour.

Lastly, and certainly not least, the gravitational force binding the committee

together in such a stellar fashion, almost all of you certainly know Lerika Cross, without whom, I do not know where we would be. Lerika performs far more than a secretarial role and it is a real honour to be serving on a committee with her. ☆

Pretoria Centre

Michael Poll

This has again been an active and successful year. The paid up membership for the period 2006/07 was 107.

Monthly Meetings

Monthly meetings have been held as usual on the fourth Wednesday of the month and still follow the format of previous years, with a “Beginner’s Corner”, “What’s Up?” and a main topic.

In July 2006 Prof Okkie de Jager spoke about using gamma rays to measure galaxy formation, and in August Lorna Higgs explained how to observe solar eclipses and detailed what could be observed. In September Johan Smit revisited the Bennett Catalogue (of southern nebulae and clusters) and encouraged people to observe these objects as a project. In October Barbara Cunow showed us how simple apparatus could record deep-sky objects in a talk entitled “Astrophotography with a Small Camera”. In November Andre du Preez discussed cosmic dynamics in “A cosmic window”. January’s main topic was presented by Johan Smit with a nicely illustrated talk

on “Stellar Evolution”. In February Robert Gross gave us the background into the research that received world wide attention and which suggests that the Andromeda Galaxy has undergone a collision with M 32. March saw Prof Cor Rademeyer give us an insightful talk about Spectroscopy and in April Ad Sparrius was at his entertaining best with “Cubewanos, Alindas, Atens and Centaurs”, which was a discussion about the groups of smaller objects in the solar system. In May Prof Andre Buys gave an analysis of the drawings of Leonardo da Vinci and in particular a diagram of what could have been a design of a telescope. Prof Buys showed us a beautiful telescope that he had constructed, based on da Vinci’s drawings. In May Dr Chris Engelbrecht told us about neutron stars. “Beginners Corner” has been presented this year by Johan Smit, Michael Poll, Fred Oosthuizen, Dirk Wolmarans, Hein Stoltsz, Karl Crous and Jan Plomp. “What’s Up?” by Wayne Mitchell, Johan Smit, Andrie van der Linde, Lorna Higgs, Hein Stoltsz, Tony Viljoen and Dirk Wolmarans.

The Centre thanks all these speakers for their contributions. Thanks to those people who chaired the meetings, and dutifully submitted reports to the newsletter. Thanks are also due to those who make the running of our monthly meetings a success – including Johan Smit for the digital projector and those who have offered such a projector as back-up, Wayne Mitchell for running the Library and Rynhardt van Rooyen for attending to the financial matters. We are, as usual, grateful to Christian Brothers College for allowing us the use of the Auditorium and classroom and in particular to Gordon Britz for arranging these facilities.

Monthly Observing Meetings

This report is similar to last year, except that there have perhaps been fewer cloudy evenings. These meetings continue to be well attended. We have had a number of visitors and visiting groups to the observing evenings, including a Voortrekker group in August and three visitors from the Johannesburg Centre in September. A number of Medunsa students came in February and were back for a further session the following week. In May a number of children from Laerskool Rayton, who were brought by Charl de Jager in celebration of Science Week, and some visitors from the Johannesburg Centre were present.

No formal log of objects observed is kept but as many as possible are recorded in the “Observing Evening Report” in the

newsletter. Some specific events that coincided with the observing evenings were: a re-appearance of Io from eclipse (18 August 2006); Comet Mc Naught (19 January 2007); and an early evening occultation of Elnath (beta Tauri) (17 May 2007). Thanks are due to Johan Smit for operating the Centre’s 12-inch telescope and for the maintenance of the instrument.

Activities during the year

A number of activities were mounted during the year. In general, presentations to other organisations are done by the Centre in the interests of the promotion of science and willing donations from the institutions go towards Centre funds.

Tswaing Crater; 26 August 2006

An overnight stay for Centre members at the Tswaing Crater was organised. Although only 13 people attended it was a very pleasant weekend. The crater was as impressive as ever and there was good observing in the western and northern sky. It has been suggested that we combine a visit with the Johannesburg Centre sometime in the future.

University of Pretoria Molecular Virology Group; 25 November 2006

This group held a weekend at Nylsvlie and requested the Centre to provide an astronomy evening. Michael Poll attended and gave a presentation. After the early evening thunderstorm cleared, stargazing proceeded until after mid-

night. About 20–30 people were present and the evening was well received.

Hoërskool Wonderboom South; 7 February 2007

Mr Lio Lombard from an organisation called Water Educational Techniques attended the January meeting and asked for assistance in giving science outreach programmes to schools. Andrie and Casper van der Linde and Michael Poll attended for an evening at the Hoërskool Wonderboom South. Three talks were given during the evening, only the last of which, by Louis Barendse, was about astronomy. The Centre representatives were there to do observing, but it had clouded over by the time the lectures had finished.

Dutch Reformed Church at The Reeds; 16 February 2007

Tinus Koekemoer invited the Centre to present an astronomy evening to the Church youth – the age group was 11–16 years. Michael Poll took a telescope and there were about 40-plus attendees.

Voortrekkers; 17 February 2007

Johan Smit gave a talk about “How a telescope works” to a Voortrekker group to assist them towards their Astronomy Badge. During the talk he built up a telescope of 5–10x magnification with spectacle lens sized elements.

Menlo Park Primary School; 21 February 2007

The Centre was invited to do an as-

tronomy evening at the school by the school Science Club. Johan Smit gave a presentation about the mechanics of the solar system and the relative sizes of stars. There was observing afterwards. About half a dozen centre members brought telescopes.

ScopeX; 21 April 2007

The Centre had an information table at ScopeX. Several members exhibited telescopes. Johan Smit is to be congratulated on receiving an award for his cleverly designed and beautifully constructed binocular mount.

Dark Sky Weekend; 15-17 June 2007

About 20 members and spouses with about 10 telescopes attended a dark-sky weekend at the residence of Mike Haslam and Joy Hodgson-Miles. The weekend was very successful with a superb dark sky (even better than Nylsvlei) and in lovely bushveld. Observing continued until midnight on the first night and until after 02h00 on the second night. It is noted that home-built telescopes outnumbered commercial ones. It is hoped that we will return to this venue for a similar weekend sometime in the future.

Thanks are due to all Centre members who supported these events.

Telescope Making Classes

The telescope making class is still very active as is shown by the number of telescopes completed and the prizes

achieved at ScopeX. Combining the class with the Johannesburg Centre has proven to be a good decision. There are six instructors involved in the class with Johan Smit actively participating since the beginning of 2005. With a total of 124 participants until May 2007, definitely makes it the biggest and busiest class in the country and probably one of the most active in the world. The Pretoria Centre can be proud to be associated with this venture.

Projects currently underway include: Fred Oosthuizen who has designed and built a caustic tester. Dirk Wolmarans has started on a Stevick-Paul design. Johan Smit is still busy with a 10-inch mirror and started on a 14-inch – he also designed and completed the award winning binocular stand, already mentioned. Percy Jacobs has completed his 6-inch as well as a 10-inch this year. Henry Viviers is busy with the final figuring of 8 and 12-inch mirrors. Hetta Pretorius is currently polishing a 10-inch mirror – her already completed 6-inch telescope achieved a special mention at ScopeX for an innovative focuser design. Surita Siebrits is doing the final figuring of a 6-inch the mirror, Louis Coetzer completed a 6-inch mirror on 14 July and is currently busy building his telescope. Danie Barnardo has completed a 6-inch telescope which was used at Warmbaths – he is currently busy making a 10-inch. Hannes Bronkhorst is currently busy with the final figuring of a 6-inch mirror. Charl Viljoen and

Pat Kuhn are grinding 6-inch mirrors. Gustav from Rustenburg is grinding an 8-inch mirror by remote instruction.

Committee

The committee comprised ten persons after the last AGM, but in 2007 Dirk Wolmarans and Wayne Mitchell resigned for personal reasons. The Committee met five times during the year. Thanks go to all the committee members for their support and for helping the Centre to remain active. As usual, finding speakers was one of the hardest tasks the committee faced. We are fortunate to have obtained quality outside speakers for the main topics and thanks are due to those committee members who were able to make contacts.

The Schanskop Observatory Project

A sub-committee under the chairmanship of Fred Oosthuizen is overseeing this project, which proposes to house a 14-inch telescope in an observatory at Fort Schanskop. The Centre proposal made to the City of Tswane Metropolitan Municipality (CTMM) to establish an astronomical observatory to be erected on the south-western section of the car park at the Schanskop Memorial (which is situated east of, and adjacent to, the Voortrekker Monument) has been agreed to. A proposed plan, architectural perspective and floor plan have been drawn up. The cost of the project is estimated at R700 000 and various ways of funding this amount are being investigated.

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The CTMM envisage incorporating the enlarged Southern City Gateway Nature Reserve and Game Park into a major tourist attraction. Day tours of the CTMM area will culminate in the park with night tours of the skies provided by the Centre. Although this commitment by our members will be onerous, it could also be to our advantage as this will be a commercial undertaking and therefore of long term monetary value to ASSA in Pretoria. With the large amount of interest now being generated amongst the general public and students in astronomy by the recent commission-

ing of SALT and the possible locating of the proposed European Extremely Large Telescope (E-ELT) at Sutherland, we as a group could play a vital role in furthering this interest in astronomy.

Thanks

Thanks which might not be mentioned elsewhere are due to Pierre Lourens for publishing the newsletter, to Neville Young and Johan Smit for assisting in the production; to Mauritz Geysler who has produced and maintained the Centre website and to Mike Haslam for the circulation by e-mail of *Astro News*. ☆

news notes

Two lunar-destined spacecraft

There seems to be a sudden flurry of interest in the Moon after decades of inactivity. Or is it pure coincidence that two lunar-destined spacecraft were scheduled to launch in September 2007?

One of these is China's **Chang'e 1**, named for a Chinese legend about a young fairy who flies to the Moon. Chang'e 1 is planned to be the first of a series of Chinese missions to the Moon. The satellite carries 24 pieces of lunar probe equipment, including a CCD stereo camera, microprobe instruments and a high-energy solar particle detector. It is destined to orbit the Moon for one year.

The second lunar mission is Japan's **SELENE** (**SE**lenological and **EN**gineering **EX**plorer), nicknamed Kaguya. The primary objective of this 2-ton spacecraft with its suite of 15 instruments, is a global survey of the Moon, obtaining data on elemental abundance, mineralogical composition, topography, geology, gravity, and the lunar and solar-terrestrial plasma environments. Also to develop critical technologies for future lunar exploration, such as lunar polar orbit injection, three-axis attitude stabilization and thermal control. The mission consists of three satellites, viz: an orbiter containing most of the scientific equipment, a VLBI (Very Long Baseline Interferometry) Radio (VRAD) satellite and a relay satellite. ☆

Minutes of the ASSA AGM, Saturday, 26 July 2008

The Annual General Meeting (AGM) of the Astronomical Society of Southern Africa was held on Saturday, 26 July 2008 at the Johannesburg Planetarium, hosted by the Johannesburg Centre.

1. Welcome

The meeting was opened by Robert Groess, Chairman of the Johannesburg Centre who introduced our current president, Magda Streicher.

2. Present

There were 17 ASSA members present and three non-members.

3. Apologies

Apologies were received from Dudley Field, Peter Martinez, Cliff Turk, Tim Cooper, Case Rijdsdijk, Auke Slotegraaf, Jacques van Delft, Maciej Soltynski, Michael Poll, Chris de Coning, Lia Labuschagne, Kevin Govender and Jannie Smits.

Cliff Turk has not been well and members were made aware of this by Cliff and reminded again at the AGM by the Secretary. For this reason Cliff was not able to submit his reports, but they will be submitted for publication in *MNASSA*.

4. Ratify Previous Minutes

The minutes of the AGM of the Wednesday 25 July 2007 as published in *MNASSA* were ratified by Magda Streicher. No corrections were required.

5. Report on Council

Laurie Simone read the Council report which will be submitted for publication in *MNASSA*.

6. Reports of Observing Section Directors

A) Comet & Meteor Section – Report read by Brian Fraser

B) Deep Sky Section – Report read by Laurie Simone

C) Double Star Section – Report read by Atze Herder

D) Imaging Section – Report read by Oleg Toumilovitch

E) Occultation Sections – Report read by Brian Fraser

F) Solar Section – Report read by Laurie Simone

G) Variable Stars – Report read by Chris Middleton

Achievement Awards were presented by the Directors of their sections after reading out their reports. A separate list will be circulated and published of the recipients.

All the above reports will be submitted for publication in *MNASSA*.

7. Reports of other Sections

A) Dark Sky Section – Refer to notes under item 3 “Apologies”

B) Education and Public Communication – Report read by Laurie Simone

C) Historical Section – Report read by Robert Groess

All the above reports will be submitted for publication in *MNASSA*.



While vote counting at this year's AGM was underway, Magda Streicher, Robert Groess, Atze Herder and Laurie Simone could relax for a moment. Picture: Oleg Toumilovitch

8. Financial Report

Refer to notes under item 3 "Apologies"

9. ASSA Scholarship Report

The report was read by Laurie Simone and will be submitted for publication in *MNASSA*.

10. ASSA Endowment Trust Report

Refer to notes under item 3 "Apologies"

11. Election of Auditor

Ronnie Glass was nominated as auditor by Brian Fraser and seconded by Atze Herder.

12. Election of Office Bearers

Lerika Cross prepared the ballot papers to vote to determine Vice Presidents and Council Members. This was necessary as the constitution only allows three Vice Presidents and four were nominated, and four Council Members and seven were nominated. We had 17 ASSA Members present and eligible to vote. The majority of votes received were as follows; Magda Streicher 17, Michael Poll 16 and Matie Hoffman 13 votes. All three were duly elected as Vice Presidents.

The majority of votes for Council Members were as follows; Case Rijdsdijk 14, Lerika Cross 13, Kevin Govender 10 and Pat Booth 9 votes. All four were duly elected.

The remaining nominations on Council were determined prior to the AGM. The final list of Council Nominees will be circulated by the Secretary and published in *MNASSA*.

After the break Magda Streicher introduced Peter Martinez, the New President, on ASSA Council by reading out a short resumé submitted by Peter.

Dr Martinez is a senior astronomer at the South African Astronomical Observatory in Cape Town. He holds a PhD in astrophysics from the University of Cape Town and is also an alumnus of the International Space University in Strasbourg. Dr Martinez's research area is aster seismology, the study of the oscillations of stars to probe their internal properties and evolution. In recent years he has worked with various government Departments and agencies on the development of the future South African space programme. Dr Martinez deeply regrets not being able to be here this evening owing to other commitments, but looks forward to visiting the Centres of the ASSA and meeting with members in the coming year. He wishes all members present a very successful and productive AGM and looks forward to working with the newly elected Council and the ASSA Centres.

13. Awards

Please refer to the notes under item 6.

14. Any other business

There was no other business.

15. The next Council meeting

The next Council meeting will be on Tuesday, 26 August 2008.

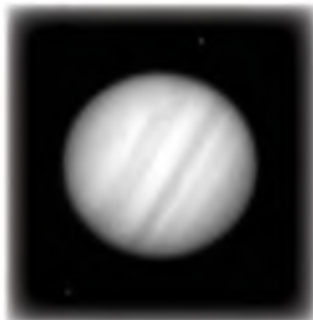
16. Presidential Address

Past President, Magda Streicher gave a Power Point presentation.

17. Closing

Magda Streicher then handed over to Robert Groess to close the meeting.

Robert thanked the ASSA Council for the privilege of holding the AGM in Johannesburg with the Johannesburg Centre as host and thanked all members and non-members for attending. ☆



After the formal part of the AGM, attendees were treated with viewing through the 26-inch Innes refractor. It was Magda's first ever visit to the Johannesburg Observatory. Jupiter offered a good view of its Great Red Spot, closely flanked by two moons, Europa and Io. Pictures: Oleg Toumilovitch

Report on Council 2007/2008

Laurie Simone, ASSA Secretary

Introduction

It gives me great pleasure to report on Council for this last year. It has been a positive year throughout, with our President Magda Streicher setting the example. Testimony of this is the correspondence received from Dudley Field submitted at the last Council meeting, and I quote; "I am sure that on behalf of Council, I want to congratulate our President, Magda, for a wonderful year. Magda you are really going to be a hard act to follow! It is a long time since a President has been so committed, so giving of their time. Thank you!"

Magda attended most Council meetings in Cape Town, yet her excursions did not stop there. In November you will have found her visiting the Garden Route Centre, February in Durban to offer assistance with the Symposium, the Louis Trichardt Club in April, and Boyden in May and the OOG in June. She was also at numerous game parks to promote ASSA's publication of the *Sky Guide*. As one member aptly put it, this was the Magda Road Show, but she is too late for the position of CEO at Eskom as they have just appointed Bobby Godsell.

Most of the observing is done beyond the Western Cape and when Magda suggested that the AGM be held in Johannesburg I and later Council had no hesitation of stamping their approval. Council would

like to thank Lerika Cross and Brian Fraser from the Johannesburg Centre for all their hard work to make this event possible.

Terms of Reference (T.O.R.)

ASSA is about Astronomy and the one exercise that is at the heart of Astronomy and the most important item in this report is manuals for observers. We have at this stage a T.O.R. drawn up by Lerika Cross under the watchful eye of Auke Slotegraaf. The T.O.R. has been approved by Council and is presently a work in progress. This exercise has to reach a satisfactory conclusion no matter how long it takes, sooner rather than later. For this to happen we appeal to all the observing Section Directors to co-operate with Lerika to make this possible. The T.O.R. clearly indicates what directions one can take once these manuals are published. If you do not have a copy, please contact your secretary or Lerika Cross. Council would like to thank Lerika and Auke, the originators of the TOR, and all ASSA members who made a contribution.

ASSA Web Site / Astronomy Starter Pack (ASP)

How Gerrit Penning, the originator of the Astronomy Starter Pack, also finds the time to keep the ASSA site updated and still go out there to earn a living is remarkable. Council would like to thank Gerrit for his efforts. As at the financial year-end of 29 February 2008, 166 CD's have been

sold. The ASP is a great accompaniment to *Sky Guide* and Council recommends that the Centre representatives encourage their members to purchase the set.

The ASSA web site is an excellent vehicle for promoting ASSA. There have been numerous enquiries from overseas, mostly for information and in some cases participation. A case in point is the Parallax Project with Milan University. This project is completed and we anticipate publication of an article in *MNASSA* in the near future.

The site was also the source for arranging participants for a live TV Show, *African View*, shown on the 18 March on DSTV. The programme was about meteors and impact craters. Magda Streicher, Tim Cooper and Case Rijdsdijk all had a hand in getting Trevor Gould and Prof Marian Tredoux on the programme, together with Prof Roger Gibson, head of the Impact Cratering Research Group from the University of the Witwatersrand Geosciences and Prof W.U. Reimold, former head of the same research group.

The ASSA web site is our link to the rest of the world and creates awareness that astronomy is alive and well in South Africa. The trick to increase the number of viewers to the site is to reply to correspondence promptly. On numerous occasions we have been thanked for a prompt response. This is not always possible and we should give some thought to appointing an astronomer to respond to astronomical enquiries,

especially if it promises participation in projects as we have done with Milan in Italy. It will also reduce pressure on Gerrit Penning our Web Master and the Secretary who would only answer queries of a secretarial nature.

I have laboured at length about the ASSA web site as I believe it is a vital function of ASSA and we should always be looking to enhance and upgrade the site. Centre members should be encouraged to visit the site as it may encourage them to apply for membership. For a small subscription fee you get 6 issues of *MNASSA* and the *Sky Guide*. This alone makes it worth while. In the future the ASP could be included, obviously at an extra cost. The Observer Manuals could also be included in the mix.

The 8th ASSA Symposium 2008, Durban

Recent correspondence received from Magda Streicher declares that the Symposium was a success.

Asteroids – South Africa and Poland

Asteroids have been added to Tim Cooper's portfolio. He will be working in conjunction with Anna Marciniak in Poland. The original source for this participation is Maciej Soltynski. Tim has already had several contacts with Anna and they have agreed on a way forward.

Imaging Section

This is a post that was vacant for a few

years and Council would like to thank Oleg Toumilovitch for taking up the position. Reports are that this section has taken off well. Oleg also initiated the photo competition of the lunar eclipse which was done through the ASSA web site.

Short Notes

Magda has also been in contact with the different TV and Radio stations and we can anticipate seeing and hearing more about astronomy in South Africa on 50/50 and RSG radio, amongst others. Magda is also working closely with amateur astronomers in Australia. Magda reports that for this year South Africa leads the world on reported observations of variable stars.

Last, but not least, is to encourage the promotion of *Sky Guide* with the Game Parks.

ASSA and the Constitution

The *Way Forward* as initiated by Chris de Coning took a back seat this year, yet we have gone forward. Chris's intentions were good and they are still valid, however change can only be accomplished if changes are made to the constitution. The ASSA constitution, or any constitution for that matter, is the back-bone of any society or organization and change is not to be taken lightly. The one change that should be made as soon as possible is to legalise email nominations. Other possible changes are to open the way for additional Council Members. Do we want three Vice Presidents? Is one year enough for one president?

We can agree that the one criterion that a President must have is that he or she has to be an astronomer, amateur or professional. However, the President is also required to drive the Association. If not, the Secretary will find himself in the uncomfortable position of having to assume leadership. Your present Secretary is not an astronomer. A Secretary does not have to be. This is an administrative function and it does take up considerable time. Senior members of Council, past and present, should give serious thought to what is been reported here, and that possibly the roles of President, Vice Presidents and Secretary should be re-defined. Again this aims at changes to the constitution. Today's technology is also to be considered where the speed of change is phenomenal. We need to adapt.

Conclusion

It has been a pleasure as Secretary to work with Magda. During my short tenure as Secretary, I honestly believe that we can grow the Association. This report reflects some of the advancements we have made and there is no reason why we cannot move forward from here. We need younger members, yet we also need senior members for guidance. Once again, and I believe I also speak for Council, we would like Centre Representatives to encourage their members to join ASSA.

Last but not least, on behalf of Council, we would like to thank all members of ASSA who have made a contribution, however big or small, to make this year a successful one. ☆

2008/9 Office Bearers

ASSA Council Members for 2008/9

Title	Member elected	Email Address
President	Peter Martinez	peter@saa0.ac.za
Vice President	Magda Streicher	magda@pixie.co.za
Vice President	Michael Poll	pollmnj@icon.ca.za
Vice President	Matie Hoffman	hoffmamj.sci@ufs.ac.za
Treasurer	Cliff Turk	cliffturk@absamail.co.za
Business Manager	Cliff Turk	cliffturk@absamail.co.za
Membership Secretary	Dudley field	dudley.f@absamail.co.za
Convener, Scholarships	Maciej Soltynski	Maciej@telkomsa.net
Secretary	Laurie Simone	picodot@mweb.co.za
Council Member	Case Rijdsdijk	particles@mweb.co.za
Council Member	Pat Booth	PBOOTH@sli.wcape.gov.za
Council Member	Kevin Govender	kg@saa0.ac.za
Council Member	Lerika Cross	lerika@icon.co.za

ASSA Specific Designations 2008/9

Position	Member elected	Email Address
Editor <i>MNASSA</i>	Willie Koorts	mnassa@saa0.ac.za
Webmaster	Gerrit Penning	gpenning@webmail.co.za
<i>Sky Guide, Africa South</i>	Anthony Jones	abjones@iafrica.com

ASSA Section Directors 2008/9

Section	Member elected	Email Address
Comet, Meteor & Asteroids	Tim Cooper	tpcoope@mweb.co.za
Dark Sky	Cliff Turk	cliffturk@absamail.co.za
Deep-sky	Auke Slotegraaf	auke@psychohistorian.org
Double Star	Atze Herder	awherder@wol.co.za
Solar	Jaques van Delft	jvdelft@vodamail.co.za
Occultation	Brian Fraser	fraserb@intekom.co.za
Variable Star	Chris Middleton	wbrooke@netactive.co.za
Imaging	Oleg Toumilovitch	oleg@foton.co.za
Education & Public Communication	Case Rijdsdijk	particles@mweb.co.za
Historical	Chris de Coning	siriusa@absamail.co.za

ASSA Centre Representatives 2008/9

Centre	Member elected	Email Address
Cape Centre	Lia Labuschagne	lee@thenewradiant.com
Garden Route Centre	Case Rijsdijk	particles@mweb.co.za
Durban Centre	Peter Cramb	peterc@astronomydurban.co.za
Midlands Centre	Frikkie de Bruyn	debruyn1@telkomsa.net
Bloemfontein Centre	Chris de Coning	siriusa@absamail.co.za
Pretoria Centre	Michael Poll	pollmnj@icon.ca.za
Johannesburg Centre	Robert Groess	groess@gmail.com

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Report of the Comet and Meteor Section

TP Cooper, Director

Table 1. Summary of observed meteor showers

Observer (no. of showers observed)	Showers Observed and duration (hours)	Total Time (h)
Dudley Field (3)	Orionids (5.0), Leonids (2.8), Geminids (7.0)	14.8
Tim Cooper (4)	Pi Puppids (2.8), eta Aquarids (7.2) Taurids (2.0), Leonids (1.0)	13.0
Koos van Zyl (1)	Orionids (8.4)	8.4
Tony Jones (1)	Geminids (6.9)	6.9
Carol Botha (1)	Geminids (6.8)	6.8
Magda Streicher (2)	April Lyrids (3.8), Perseids (1.6)	5.4
Auke Slotegraaf (1)	Geminids (5.4)	5.4
Karen Koch (1)	Geminids (4.1)	4.1
Wayne Mitchell (2)	Orionids (2.1), Leonids (2.0)	4.1
Michael Poll (2)	Orionids (2.0), Leonids (1.6)	3.6
Cliff Turk (2)	Delta Aquarids 2006 (2.0), Geminids 2006 (1.2)	3.2
Kos Coronaios (1)	April Lyrids (1.8)	1.8
Fiona Hobson (1)	Geminids (1.2)	1.2
Total		78.7

Notes on observed meteor showers
Magda Streicher and Kos Coronaios observed the **April Lyrids** from their northerly vantages in Limpopo. Magda observed best rates on the morning of April 22, seeing 8 Lyrids in 2.3 hours under LM=5.9. Tim Cooper observed

the **pi Puppids** despite poor conditions and a first quarter moon. During periods when cloud allowed observation the shower was found to be inactive. Cloud severely hampered observations of the **eta Aquarids**, the Director the only observer logging 7.2 hours with rather low rates of

only 8/hr on the morning of May 6 with LM=5.2. Koos van Zyl and Dudley Field managed some useful observations of the **Orionids** from the Cape, and Michael Poll and Wayne Mitchell from cloud affected Gauteng. Highest rates were observed by Koos with 18 Orionids in 0.75 hrs on the morning of October 21 with LM=5.6. Weather conditions only permitted four observers 7.4 hours observation of the **Leonids**. Predicted maximum was during daylight hours for South Africa and the Director observed only 3 Leonids in 1 hour on the morning of November 19 under poor conditions of LM=5.0. Conditions in 2007 were particularly favourable moon-wise for the **Geminids**. No observations were possible from Gauteng or Limpopo due to inclement weather, but Cape observers enjoyed clear skies, where Carol Botha, Karen Koch, Tony Jones, Dudley Field and Auke Slotegraaf logged 30 hrs observations between them. Carol Botha observed highest rates of 24 Geminids/hr in the early morning of December 14 with LM=5.2.

Summary of observed fireballs

2007 saw a total of 16 fireball reports. The full details will be submitted for publication in *MNASSA* as a separate article.

Summary of observed comets

Six comets were observed by nine observers during 2007, summarised in the table below.

Notes on specific comets observed

The highlight of 2007 occurred early in the year, with the surprise brightness of comet C/2006 P1 **McNaught**, peaking at about magnitude -5 and visible in daylight. The results of ASSA observations were summarised in *MNASSA*. Comet C/2007 E1 **Garradd** was a single observation of magnitude 12 by Theo Smith. Comet C/2007 E2 **Lovejoy** peaked at magnitude 8.3 in April. Comet C/2007 F1 **LONEOS** was only observed by Simon Walsh and Tim Cooper, brightest in November at magnitude 6.8. Comet 17P **Holmes**

ICQ Code	C/2006 P1	C/2007 E1	C/2007 E2	C/2007 F1	SP	17P
COO02	•		•	•		•
SMI08	•	•	•			
WAL	•			•		•
STR03	•		•			
BEG01					•	•
VAN15	•		•			
MITxx						•
VANxx						•
VERxx						•

Key to observers in Table:

BEG01 = Mike Begbie

MITxx = Wayne Mitchell

STR03 = Magda Streicher

COO02 = Tim Cooper

SMI08 = Theo Smith

VAN15 = Koos van Zyl

VERxx = Vermeulen

WAL = Simon Walsh

VANxx = Andrie van der Linde

brightened to magnitude 2.5 later in the year following an outburst and comet 8P Tuttle reached magnitude 6. A few observations of both comets were made from South Africa, but most observa-

tions came from Mike Begbie shortly after his move to the UK.

All observers of comets and meteors are heartily thanked for their contribution ☆

Report of the Deep-sky Observing Section

Auke Slotegraaf, Director

It is a pleasure to thank the following individuals for their contributions to the section in the year under review: Magda Streicher, Carol Botha, Richard Ford and Gary Lillis. Magda continues to be a stalwart of the Section and her strong, independent work is admirable. Long may she continue to plumb the depths of the deep-sky! Carol, Richard and Gary are relatively new observers and the quality of their work is such that they received Merit Awards for their contributions.

More than 378 copies of the Section's observing tutorial, *Deepsky Observer's Companion*, have been downloaded from the Director's website (with an unknown number downloaded from the ASSA website).

The Observing Checklist was revised and formed the basis of a successful deep-sky workshop presented by the director at ScopeX in Johannesburg. Following the workshop, Magda presented a well-received video-illustrated talk on sketching techniques.

Work continued throughout the year to digitize old deep-sky publications for inclusion in the section's online database. Most of the work consisted of making digital images of pre-photographic era sketches of deep-sky objects, manipulating the images and annotating them. Forty-three such publications were digitized at high resolution. Several hundred photographic negatives, taken with the Radcliffe telescope from 1948 to 1950, were also digitized and referenced.

In the year ahead, it's hoped that all available historical sketches will be digitized and that the collection of old, rare deep-sky related books will be electronically captured. This material can then be incorporated into the database and made freely available for reference. Members interested in helping with this archiving task should contact the director, who will be more than keen to make use of their kind offer. ☆

Report of the Double Star Section

Atze W. Herder, Director

I have been appointed new director of the Double Star Section in July 2007. Therefore only the second half of 2007 can be reported on. During this time only one observation was received – from Magda Streicher. For personal reasons this Section did not receive a lot of attention. During 2007 little support was shown from the ASSA members.

We believe that valuable observations of double stars can still be done, particularly being in the southern hemisphere. The shortage of interest could be attributed to a lack of an observation manual. It is believed that many southern double stars are still unconfirmed and perhaps we could do something about them. ☆

Report of the Education and Public Communication Section

Case Rijdsdijk, Director

It is with regret that I still have to report that, despite many requests, I have still only had a response from the Cape, Johannesburg and Garden Route Centres. I am sure that all the other Centres are also busy speaking to schools and the general public in addition to assorted other activities. I still believe it is important to collect this information as it is well known that, should ASSA require funding from any agency (eg. for ScopeX and the director's sponsored trip to Egypt), the first thing that agency will ask for is evidence to support such an application. All that I require is a short e-mail with the date, place, audience, numbers and topic. Also notice of any articles published in the popular press or scientific journals would be appreciated. I hope the 2009 report will reflect a better report – it is after all the International Year of Astronomy (IYA)!

Having said that, there have been a number of highlights and I am sure that many of

these will be repeated and added to next year.

The Johannesburg Centre again organized, arguably their most successful, ScopeX which was generously supported by South African Agency for Science and Technology Advancement (SAASTA). Attendance figures were up and as usual there was a good list of speakers with all talks very well attended. One of the highlights was the "Camera Obscura" and a detailed report of this, with sketches and images, could be submitted to *MNASSA*. Many thanks to Lerika Cross and other centre members. In addition to this, this Centre has done many other outreach activities.

The Cape Centre has again been active, particularly with the SAAO open nights and several members have spoken at schools and at the MTN Science Centre, with whom good relations continue. The

Cederberg Observatory has held open nights every Saturday (except full Moon nights!) and these have been well attended.

Another highlight this year was the invitation by the University of Milan for ASSA to participate in a joint effort in measuring the parallax of Mars and the Moon. Unfortunately, the weather was not very supportive! Efforts at Boyden in Bloemfontein with the help of Dr Matie Hoffman (UFS) and Lucas Ferreira (Garden Route Centre, GRASSA) were rained or clouded out, but Lucas persevered and on his return to the Garden Route was successful: the weather in Italy and SA was good and appropriate simultaneous images taken. The results have been written up in Italy, checked in SA, and they have been submitted to the *European Journal of Physics*. A report will be submitted to *MNASSA* in due course.

GRASSA has started with an outreach programme, with Lucas Ferreira hosting an open night in the National Park on World Earth Day, the director starting an outreach programme in association with the National Parks Board and continues to work closely with the Western Cape Education department..

The Section continues to deliver many public talks around the country, publish regular articles in the popular press and gives weekly radio talks on SAFM and FMR. Several members attended the education workshop organized by Kevin Govender at the SAAO in preparation for IYA. In addition a schools curriculum in Astronomy has been drawn up in conjunction with the Square Kilometre Array, SKA. Finally the director was sponsored by the National Research Foundation, NRF, to represent ASSA at the first Middle East-Africa, Regional IAU Meeting (MEARIM) in Cairo. ☆

Report of the Occultation Section

Brian Fraser, Director

Two grazing occultations were attempted during the year in the Midvaal area. Neither of them was successful due to the weather and star visibility. Participants included Dave Blane, Kevin Pearce, Gary Els, Andre van der Walt and Brian Fraser.

Notices of minor planet occultation predictions were sent out to the regular observers but again no successful

hits were recorded. Observers taking part included Magda Streicher, Tim Cooper, Jannie Smit and Brian Fraser.

Once again we have used the predictions provided by Dr Eberhard Riedel for the grazing occultations and Steve Preston for the minor planet occultations. We greatly appreciate the predictions that these services provide. ☆

Report of the Historical Section

Chris de Coning, Director

During the past year (calendar year, 2007) the following has happened concerning the History of Astronomy.

Website

During 2007 the Website underwent a mayor change. Its presentation and layout was completely revised.

Archive

The complexity and scope of indexing the archive is enormous and will take a long time to accomplish. A space has been set aside in the McClean building at SAAO, Cape Town, for the archive. Initial categorising of documents has been done and they are being stored in special boxes recommended for this purpose.

Publications

Individuals in their private capacities wrote articles with historical content. Please note my appreciation to the following people:

- KS Schindler for "EC Slipher's Mars Expeditions to South Africa" published

in *MNASSA* Vol. 65 nos 7 & 8, August 2007.

- IS Glass for "The Discovery of the nearest star" published in *MNASSA* Vol. 65 nos 11 & 12, December 2007.
- B Warner, *Cape Landscapes: Sir John Herschel's sketches 1834 – 1838*. University of Cape Town Press, Cape Town, 2006 (released 2007)

Rescue of old photo's

The SAAO needed room for a new computer system. It was decided to renovate the MRM (Multiple Refractor Mount) building, meaning that there was no more room for the plate store and its content of glass photographic plates. I wish to express my great gratitude for Ian Glass and Auke Slotegraaf who mounted a rescue mission, sorted through a mass of photographic plates and rescued those of historical and scientific value. Auke then photographed all the plates so we now have a digital record available. ☆

Report of the Solar Section

Jacques van Delft, Director

Solar observation and reporting in the *Solar Bulletin* continued during 2007. By the end of 2007 monthly observations of five observers were received. Presentations on solar observations were presented at the Science Unlimited expo in Pretoria

during March and in Pietermaritzburg during August. More than 2 000 school learners attended these presentations.

As the director of the Solar Section I received an invitation for an interview on

Radio Rosestad, together with Dr Matie Hoffman, on solar activities. This one hour radio talk was held during May 2007. For observing sunspots, 2007 was not an easy year as we are now at the minimum of the solar cycle so most of

the observations done were low to zero readings.

I would like to thank Council for the opportunity to serve in this position and I am looking forward to continuing in 2008. ☆

Report of the Imaging Section

O.R. Toumilovitch, Director

The past 12 months have been a good test period for the re-activated Imaging Section. Amongst the vast choice of activities and enthusiasm of interested members the Section has also identified the challenges and directions for improvement. In few words they are:

- The activities of the Section on the national level, such as Photographic competitions and Imaging a particular celestial event or an object, represent a very effective way of promoting the Astro-photography and astronomy in general, attracting new members for the society and assisting members interested in a specific field in establishing connections between themselves. The challenges which I have come across during such activities are normally associated with maintaining the website and preparing some form of a guiding document in time. These challenges are easily rectified when assistance from the other members is available. Good example is the Eclipsed Moon Awakening Photographic competition, which will be analysed later.
- The Southern African astro-photographers are very enthusiastic members

of the society and are very persistent in overcoming technical challenges and achieving good results. What can be more rewarding for us than creating a wonderful and unique image of a celestial object and be able to share it with others! The Image Gallery on the Imaging Section's website has been established to provide a platform for displaying the outstanding work of our astro-photographers. From now on it will be regularly updated with new images. But these images may just remain rather as a work of art than carry an educational and scientific value, if they are not used for that. It is planned to establish an Image Database in conjunction with Image Gallery. The Image Database will have more technical information about each image and will be available to students, astro-presenters and all ASSA and its centres members. It can be distributed in to every Centre's library on a compact disk and updated yearly with the latest version. This will be an outgoing project without any time constrains.

- It is very difficult to imagine any observing section's activities without us-

ing astro-imaging tools today, but it is the fact, that various ASSA observing sections until today are concentrating on preserving the "classic" techniques and instruments for observing and measuring rather than adopting new tools to their section's activities. I myself am a firm believer that it is of paramount importance for any astronomer, professional to be or an amateur, to learn and understand; first the usage of a mechanical telescope and only then progress to the latest state-of-the-art computerised instruments. It is sad to read a good article or a report which uses a reference image, "borrowed" from the internet, created by the top professionals in their field, when the image might be available from our own astro-photographers. There might be some excused and founded reasons of cause, but that's the point. In most cases the image with good educational and scientific value is a result of joint effort between two or more people and that will be acknowledged in the final result. The astro-photographers are there for the observing sections, we just need to make a first step. You know what you need, we know how to do it and we have the equipment. It's time to start moving!

- At this point of my report I'd like to suggest that ASSA National together with it's Imaging Section approach the SAASTA, the organizer of the Science lens Competition to make an accent on astronomy in this year's competition and to start work on the "ASSA Na-

tional Astro-photography Exhibition". This will be a mobile exhibition and will be displayed over the IYA-2009 in various Centres around the country. Also, based on it, the national competition can be conducted for several various categories, where the votes will be submitted by centres members.

- The last, but not the least point of my introduction is astro-photography workshops and presentations. These are very important and should be conducted at the centres and clubs by members who volunteer themselves for this task and feel that they can share their knowledge and experience with others. I haven't received any official reports of such workshops or it's attendance, but was told, that there was a well attended workshop, organised by Hannes Pieterse of Bloemfontein Centre. From my personal experience I can assure you, that astro-photography workshops and presentations are always very well attended and increased interest in this field is positively reflected in every single event, conducted by the Imaging Section over the past year.

Here is the summary of the Section's activities:

- The Imaging Section website, hosted by FOTON Optoelectronics, has been established and well visited every month by at least 500 people from all over the world, as per built-in stats analysing software. This is expected to increase once the gallery is fully operational.

- The “Eclipsed Moon Awakening” photo-competition has been successfully conducted and enjoyed a great support and participation from across the country. Over 40 images have been received as reports and competition entries. My special thanks to the supporting team who were there right from the first announcement to the judging (in no specific order): Pat Booth, Auke Slotegraaf, Gerrit Penning, Willie Koorts. For the early reports from their locations, my thanks to Kos Coronaios, Carol Botha, Magda Streicher, Willie Koorts, Auke Slotegraaf and to all those, who contributed by entering their fine work of astro-photography in to the competition. From all of us, our thanks to the ASSA council and all those who contributed prizes for this event.
- Imaging Section, with the support of the Johannesburg Centre, has conducted two astro-photography workshops. One at the Observatory, before the centre’s public viewing was attended by over 25 people, after the presentation everyone was given an opportunity to produce their first astro-image, using their own digital camera with a 100mm refractor and even with a 26-inch Innes refractor. **Imagine their excitement!**
- The second workshop was conducted at ScopeX as a part of this year’s new attraction – ASSA Section’s workshops. This was reportedly attended by 66 people.
- Over the period from December 2007 to January 2008, Kos Coronaios and myself participated in an attempt to reproduce the Cassini’s determination of the Astronomical Unit from observations of the trigonometric parallax of Mars-project, initiated by the Technical college of Aalborg in Denmark. Between Kos and myself 18 images were produced, a third of which was sent to Denmark. Though the stars position from our images could be measured to sub pixel precision, the images couldn’t be used due to other reasons. The images are planned to be published on the section’s website.
- The last year presented the astro-photographers with many interesting opportunities, some of the images were sent to the Imaging Section and will be displayed in the gallery. In addition to the work already mentioned the list of images includes: Comet 17P/Holmes, Asteroid Vesta, Comet C/2007 W1 (Boattini), Asteroid 146 Lucina, Various Deep-sky Images, Solar activity, Eclipses and Light pollution monitoring. Images of Mars, Saturn, Jupiter were produced using 26-inch Innes refractor at the Johannesburg Observatory.

The Imaging Section of ASSA is always open for suggestions and joint projects. We are waiting for your contributions in the form of interviews, stories and astronomy related images. ☆

Scholarships Report for 2007

Maciej Soltynski (Convenor, ASSA Scholarships Committee)

The ASSA Scholarship was established in 2000 to encourage the study of Astronomy at any Southern African university at the 2nd and 3rd year level.

For 2007 the Scholarship was re-awarded to Wendy Williams, who held the Scholarship in 2006. At the end of 2007 Wendy received her BSc degree with distinction from UCT. She achieved distinctions in two third-year astrophysics modules (Stellar Astrophysics and Galactic & Extragalactic Astrophysics) and distinctions in two-third year advanced physics modules and the class medal in three of these modules. In 2008 she plans to study for her BSc (Hons) in astronomy at UCT in the National Astrophysics and Space Science Programme (NASSP).

South African Astronomical Observatory - Astronomical Society of South Africa Scholarships

The discussions with SAAO which were initiated and supported by Dr Peter Martinez in 2006 resulted in the establishment of initially one SAAO-ASSA Scholarship for 2007 with a value of R4 000. It is planned that this number of scholarships will be increased by one each year, up to a maximum of three (in 2009 and onwards). The Scholarships are financially supported by SAAO

and are administered by ASSA. The purpose of the SAAO-ASSA Scholarship is to encourage current or *intending* undergraduates (i.e. 1st, 2nd or 3rd year) studying for a BSc degree at any university in South Africa, who have a stated interest in astronomy, to prepare for furthering their interest. The Scholarship will be granted to holders in subsequent years, subject to satisfactory progress. Applicants must be resident in South Africa.

The first-ever award of the SAAO-ASSA Scholarship (for 2007) was made to Mpati Ramatsoku, a second year undergraduate astrophysics student at the University of Cape Town, studying for her BSc degree. Of the five courses she undertook, Mpati achieved a distinction for the second year course, Classical & Quantum Mechanics. She plans to continue with her studies in 2008.

Expression of appreciation

Andrew Gray, Dr Abe Mahomed and Kevin Govander (SAAO) are thanked for their valued inputs in evaluating Scholarship candidates during 2007. Thanks also go to Cliff Turk for dealing with the financial administration of the Scholarships and to the university lecturers who supplied assessments of candidates. ☆

Treasurer's Report for 2007

Cliff Turk

Total assets are now well over R250 000 (quarter million) which includes the value of the Scholarship fund, the Symposium Fund and funds held for Sections.

Sales of *Sky Guide* for 2008 will be approximately R125 000, plus another US \$125. This is our main money source. Online sales of publications arranged by Maciej Soltynski are showing an income of over R4 000 per year and are increasing. At the same time normal subscriptions to *MNASSA* have also shown

a small gain during the past 6 months and it is hoped this will continue.

We are now in a position that at the end of the financial year we have enough funds to be able to meet our commitments for the whole of the following year, which is a nice comfortable situation. This is especially pleasing when we remember that as recently as 1999 and 2000 we had to borrow several thousand Rands each from three of our members to avoid being unable to meet our liabilities at the financial year end. ☆

ASSA Awards for 2007/2008

ASSA and its sections issue rewards to members who actively partake and submit their observations. These rewards will hopefully encourage recipients to continue their good work but also those who have made casual observations but did not send them in or others who are still considering it but have not yet got so far as actually doing some observing.

There were no nominations in the Double Star, Occultation and Solar Sections.

Comet and meteor Section (Director, Tim Cooper)

General awards to:

Kos Coronaios – for observations of the alpha Scorpiid and April Lyrid meteor showers, and comets C/2006 P1 and C/2007 E2

Koos van Zyl – for observations of the Orionids and alpha Crucids and comets C/2006 P1 and C/2007 E2

Andrie van der Linde – for observations of comets C/2006 A1 and 17P

Mike Begbie – for observations of comets 8P and 17P

Wayne Mitchell – for comets C/2006 P1, 17P and 73P, and the Orionids and Leonids

Magda Streicher – for comets C/2006 A1, C/2007 E2, 4P and 73P, and the April Lyrids, Perseids and eta Aquarids

Mary Fanner – for observations of the eta Aquarid and Geminid meteor showers and pho-

tos of comet C/2006 P1

Dudley Field – for observations of the Orionids, Geminids, Leonids, alpha Crucids and eta Aquarids

Tony Jones – for observations of the Geminids

Carol Botha – for observations of the Geminids

Karen Koch – for observations of the Geminids and alpha Crucids

Michael Poll – for observations of the Orionids and Leonids

Auke Slotegraaf – for observations of the Geminids

Theo Smith – for observations of comets C/2006 P1, C/2007 E1 and C/2007 E2

Directors award to:

Simon Walsh – for his excellent set of images of comets C/2006 P1 McNaught, C/2007 E2 Lovejoy and 17P Holmes.

Deep-sky Section (Director, Auke Slotegraaf)

The General Observer's Certificate is awarded to members reporting observations made during at least three observing sessions. Recipients were:

Richard Ford – for continued observations throughout the year

Carol Botha – for continued observations throughout the year

Gary Lillis – for continued observations throughout the year

Education and Public Communication Section (Director, Case Rijdsdijk)

Lucas Ferreira – for significant contributions to an international collaboration to determine the parallax of Mars and the Moon

Berto Monard – for his outstanding contribution to astronomy with his Supernova search programme.

Lerika Cross – for her outstanding contributions to ScopeX, thereby promoting astronomy and space science, not only within ASSA, but also to the general public.

Imaging Section (Director, Oleg Toumilovitch)

Auke Slotegraaf – for his contribution towards promoting of amateur astronomy through astro-photography in 2007 on his website.

Kos Coronaios – for valuable contributions to the Imaging Section of ASSA in the field of astro-photography.

Percy Amoils – for achievements in the field of imaging deep-sky objects and for providing ASSA and its members with outstanding work in astro-photography.

Variable Star Section (Director, Christopher Middleton)

David Blane (BLD) – 202 visual.

Brian Fraser (FBN) – 62 PEP.

Tim Cooper (COM) – 2114 visual.

Percy Jacobs (JPM) – 7 visual.

Win Jones (JRW) – 396

Michael Poll (PMO) – 115 visual.

Tom Lloyd-Evans (LTE) – 789 visual.

Berto Monard – timeseries photometry (part or full night) on cataclysmic variables (CVs).

Peter Wedepohl (WPT) – 98 visual.

Jan Smit (SJX) – 5 visual.

Special Awards of Merit

Christopher Middleton – for the field of study in W Ursae Majoris and cataclysmic variable stars, AAVSO states him as Top Observer, list in thousands of numbers.

Brian Fraser – in recognition of his unconditional and dedicated contributions and observations of occultations over many years. ☆

Eighth Biennial ASSA Symposium: Durban 2008
 Mike Reid (Chairman, Organising Committee)

It is with a sense of great pleasure that I can report on the 2008 Biennial ASSA Symposium, which was held in Durban on 7-9 August, hosted jointly by the Durban and Midlands ASSA Centres. The venue was the Durban Country Club which, in spite of its as-yet-incomplete refurbishment project, was a delightful haven, providing good food, fantastic views and a very comfortable suite of rooms in which to explore and absorb the theme of the Symposium: *The Interaction between Astronomy and Cosmology*.

The proceedings were opened by the outgoing ASSA President, Mrs Magda Streicher, followed by the first keynote address. This was by Prof Phil Charles (Director of the SAAO) on the history of SALT since its inauguration. In all a total of 24 papers were presented, ranging through amateur and professional subjects, from an amusing account of



(Above) The first symposium delegates to arrive on Thursday, 7 August, were welcomed by Mike Reid (Symposium Chairman), Roger Bond (Durban Centre Chairman), Nigel Wakefield, Wayne Hutcheon and Ken Pullock.

Keynote addresses were given by Prof Phil Charles, Director of SAAO (bottom, left) and Prof George Ellis, University of Cape Town (bottom, right). Pictures: P. Cramb



Report of ASSA Council 2008/9 Laurie Simone, ASSA Secretary

The ASSA Annual General Meeting (AGM) was held on Wednesday, 29 July 2009 at the Auditorium, SAAO, Cape Town where the following report was presented.

Membership (as on 9 July 2009)

Members	261
Honorary	15
New	20

In October 2008 Council received a letter of resignation from Dudley Field. Due to pressure of work it was impossible for him to continue as Membership Secretary. Council expresses their thanks and appreciation to Dudley for his services. Council is most appreciative with the help received from Lerika Cross, Margaret Kumalo and Peter Martinez for keeping the membership database up to date in the absence of a Membership Secretary.

Council Membership and appointees

A proposal was made and approved by Council to start a Cosmology Section. Frikkie de Bruyn from the Natal Midlands Centre was appointed as the Section Direc-

tor. To date, the section has 42 participants. Council thanks Frikkie for his time and effort for the successful implementation of this Section.

During the year Council received an application from John Saunders of the Hermanus Astronomical Club for it to become an ASSA Centre. All the requirements were met and the application was successful. Council congratulates and welcomes the Hermanus Centre to ASSA.

Gerrit Penning resigned his position as Web Master during the year. Council would like to thank Gerrit for his tremendous efforts in keeping the ASSA web site up to date and for all his contributions to the Society. Christian Hettlage was appointed to replace Gerrit Penning. Council welcomes Christian to this position. Christian adapted straight away and has also taken over responding to astronomical questions, much to the relief of the Secretary.

At the Council meeting of 23 June, Lucas Ferreira was officially nominated and ap-

proved as Section Director of the Double Star Section. He replaces Atze Herder who submitted his resignation at the beginning of the year.

MNASSA

At the meeting of 23 June an amount of R16 000 was approved by Council to update the software required for the publication of *MNASSA*. Council would like to thank Willie Koorts for his services as editor.

Sky Guide

Council would like to thank Anthony Jones for his services as editor of *Sky Guide*.

Sections of the ASSA

Council would like to thank all the Section Directors for their tremendous efforts. Their activities can be measured by the 26 recipients of awards for observations. Council thanks Magda Streicher for the design and printing of the awards of which some will be presented later on tonight.

Scholarship

Council would like to thank Maciej Soltynski and the Scholarship committee for their efforts.

Symposia

Council would like to congratulate the Durban and Midlands Centres in Kwa-Zulu Natal for a successful 8th symposium. The 9th symposium has been awarded to the Cape Centre to take place in 2010 on a date still to be determined.

ScopeX

Council would like to congratulate Lerika Cross, the Johannesburg Centre and participants for yet another successful ScopeX.

ASSA Website

The ASSA website is our window to the world and it became a focus of attention in Milan, Italy. An international parallax campaign to measure the distance to the Moon and Mars, submitted by Davide Cenadelli, University of Milan, Italy, to the European Journal of Physics has been accepted. Two members of the Garden Route centre, Lucas Ferreira and Case Rijdsdijk, were contributors to this paper. Council congratulates them on this exciting achievement.

Astronomy Starter Pack (ASP)

Due to work pressure Gerrit Penning has stopped the production and distribution of the ASP. Presently we are waiting for a decision from Durban Centre to see if they will not take on this function. Because of the popularity of the ASP, one way or the other we will need continuity with this project.

Acknowledgements

ASSA Council wishes to express their appreciation and thanks to the following people: Dr Peter Martinez for his contribution to Council as President for the past year, the SAAO for the use of the auditorium, Cliff Turk for his services with the busy port-folios as Treasurer and Business Manager and all Council Members for their contribution during the year.

Thanks and appreciation from Council to Lia Labuschagne and the Cape Centre for giving up their Wednesday night meeting to host the AGM for ASSA and to Karen Koch for arranging the tea and biscuits. Council would also like to thank the

Cape Centre and the members who assisted with the bi-monthly open nights. Last but not least, Council would like to thank all ASSA members for their contributions during the year, no matter how big or small. ☆

Report of the Comet and Meteor Section
 TP Cooper, Director

Table 1 lists four meteor showers observed by six individuals, totalling 31.4 hours observations.

Table 1. Summary of observed meteor showers

Observer (no. of showers observed)	Showers Observed and duration	Total Time hrs
Tim Cooper (2)	Pi Puppids (1.0), eta Aquarids (8.5)	9.5
Dudley Field (3)	Alpha Crucids (2.1), Pi Puppids (3.1), alpha Capricornids (2.4)	7.6
Koos van Zyl (1)	Alpha Crucids (6.3)	6.3
Karen Koch (2)	Alpha Crucids (2.3), Alpha Centaurids (3.0)	5.3
Magda Streicher (1)	Eta Aquarids (2.2)	2.2
Kos Coronaios (1)	Alpha Centaurids (0.5)	0.5
Total		31.4

Notes on observed meteor showers

Alpha Crucids - Observed by Dudley Field, Koos van Zyl and Karen Koch. Koos observed up to 3/hr under limiting magnitude (LM)=5.8 skies on the morning of 20 January.

April Lyrids - Magda Streicher and Kos Coronaios observed from their northerly vantages. Magda observed best rates on the morning of 22 April, seeing 8 Lyrids in 2.3 hours under LM=5.9.

Pi Puppids - Tim Cooper observed despite poor conditions and a first quarter moon. During periods when cloud allowed observation the shower was found

to be inactive.

Eta Aquarids - Observed by Magda Streicher and Tim Cooper. Normal date of maximum was missed due to cloud. Best rates were observed of 19/hr on the morning of 7 May under LM=5.2 and 24/hr on the morning of 10 May under LM=6.2.

Summary of observed fireballs

2008 saw a total of 4 fireball reports. The full details have been submitted for publication in *MNASSA* as a separate article.

Summary of observed comets

Table 2 lists seven comets observed by six

individuals during 2008. In addition Simon Walsh provided observations of comets 1P and C/2007 E2 made in 2007 and not previously reported.

Table 2. Summary of observed comets

ICQ Observer Code	C/2006 Q1	C/2007 E2	C/2007 N3	C/2007 W1	C/2007 G1	2P	6P	8P	17P
SMI08				
WAL		.		.		.			
BEG01								.	.
COO02							.	.	
STR03								.	
CORxx				.					

Key to observers in Table:

BEG01 = Mike Begbie COO02 = Tim Cooper CORxx = Kos Coronaios
 SMI08 = Theo Smith STR03 = Magda Streicher WAL = Simon Walsh

Notes on specific comets observed

C/2006 Q1 McNaught - observed by Theo Smith in July at magnitude 12.

C/2007 E2 Lovejoy - observed by Simon Walsh in 2007

C/2007 G1 LINEAR - observed by Theo Smith in July at magnitude 12.

C/2007 N3 Lulin - observed by Theo Smith in July at magnitude 12.

C/2007 W1 Boattini - observed by Theo Smith, Kos Coronaios and Tim Cooper at magnitude 6 and imaged by Simon Walsh.

2P Encke - observed by Simon Walsh in 2007.

6P d'Arrest - was not observed visually but was CCD imaged by Tim Cooper at magnitude 11.

8P Tuttle - observed by Tim Cooper at magnitude 6.5-8 during January and February. The comet was observed and sketched by Magda Streicher in January.

17P Holmes - Mike Begbie continued to submit observations post-outburst of this comet from his more northerly vantage point in the UK. The comet was then too far north for observation from South Africa.

Summary of asteroid observations

Photometry was conducted by Chris Middleton on asteroid 352 Gisela on 5-6 June. Anna Marciniak has used his data to confirm a sidereal period of just over 7.48 hours for this asteroid.

All observers of comets and meteors are heartily thanked for their contributions. ☆

Report of the Dark Skies Section

Cliff Turk, Director

The Director apologises that there was no report last year due mainly to his own health problems which are now over.

During the extended period since the last report, Nigel Wakefield, our local officer in Natal, has been overseas where he met the Director of the British Campaign for Dark Skies and returned with several useful notes. These included four copies of Bob Mizon's book *Light Pollution*. One of these has since been passed to each of our local officers and to the library of SAAO which didn't have a copy.

We have now acquired a light meter for accurate measurement of sky brightnesses. Quantitative data can now be obtained and the measurements can be repeated in the future. In this way improvement or deterioration in the environment can be monitored. For more info on this meter, see <http://unihedron.com>.

The cost of the items in the above two paragraphs has been covered by funds raised from *SkyWalks* at Kirstenbosch,

organized jointly by the Dark Sky Section and the Cape Centre who share the proceeds of entrance fees and donations.

It has been noted that many street light fittings and those on railway platforms have been replaced with full cut off (FCO) luminaries as the old ones reached the end of their lives. Clearly, the problems of light pollution are being recognized by various authorities even though the general public has been slower to cotton on.

Carol Botha, an ASSA member from Bellville, has reported great success in her efforts to protect Betty's Bay from the effects of invasive light and she has had remarkable co-operation from the local Council. She is now following up on lighting (or the restriction of it) in parks in the Bellville area where the officials concerned are considering establishing dark "observing areas" in at least one park. Thank you Carol for these tremendous efforts – I know only too well how much time and effort it takes. ☆

Report of the Deep-sky Observing Section

Auke Slotegraaf, Director

It is a pleasure to thank the following individuals for their contributions to the Section in the year under review: Magda Streicher, Richard Ford and Gary Lillis.

Magda continues to be a stalwart of the Section. She and Jenni Kay of Australia are still collaborating on writing an observer's book of southern asterisms and open clusters. Richard Ford has submit-

ted regular reports of observations made mainly from the Cape, while Gary Lillis of Walmer (Port Elizabeth) has continued his observations for the "ASSA Top 100" project, including remarkable sketches with his notes.

Astrophotos of deep-sky objects were received from Oleg Toumilovich, Lucas Ferreira, Dany Duprez, Kos Coronaios, Zbig Zembaty, Dieter Willasch and Daan van der Merwe. These images have been indexed for inclusion in the proposed online database.

During the year under review, the *Deep-sky Explorer's Atlas* was produced, a set of 30 star-charts covering the sky visible from mid-southern latitudes. Stars down to magnitude 8.0 are shown as well as several thousand deep-sky objects. These charts are freely available for downloading (see www.psychohistorian.org) and the hope is that they will be useful to novice observers who have not invested in a good star atlas yet. Helpful comments during the design stage were received from Chris Stewart, Kos Coronaios, Gary Lillis and others.

Work continued on the digitization of old deep-sky publications, with selections being made for material not available in the NASA/SAO ADS database.

Several deep-sky articles were published on the Director's website, while the deep-sky observing tutorials continue to be downloaded frequently.

A great deal of effort has been put into the design of a comprehensive web-based database of deep-sky observations. It consists of two components: an astronomical database and software to manage it. The database lists 17 200 objects and over 32 000 observations and comments. As designed, the application software will allow observers to manage and plan their own observing sessions, record and share their observations, and obviously, access all available observations and comments on record. Think of it as a Google for deep-sky observing. Helpful advice regarding the design of the application was received from Magda Streicher and Chris Stewart, as well as several non-ASSA members. The writing of the software to drive the database has, however, been the bottleneck. The main culprit has been the Director's lack of expertise and time. After some discussion, it was decided to approach ASSA for funding to have the software professionally developed. Hopefully by the next AGM I will be able to report on the positive reception of this database amongst deep-sky observers here and internationally. ☆

Report of the Double Star Section

Lucas Ferreira, Director

Having just taken over the directorship of this section, I sadly have very little to report. Recently there has been little reported activity as those who have done some observations have sent them directly overseas.

My immediate goal is to:

- identify those who are doing double star work
- inspire others to take an interest in observing double stars
- try and find other methods of ob-

serving double stars, i.e. digitally vs. micrometer

- make regular contributions to *MNASSA* and the local newsletter on observations or topics of interest

I have updated the website and plan to enlarge the site in the coming months, as well as posting results and items of interest.

I sincerely hope that by this time next year I will be able to give members a more positive report. ☆

Report of the Education and Public Communication Section

Case Rijdsijk, Director

General

Though the situation is much better than last year, it is still disappointing that the director has received so few details from Centres about their activities. Partial statistics have been received from several Centres. As mentioned on several occasions, the time will come when ASSA wants to start fund raising and, invariably, any proposals that are submitted to potential funders will be more favourably received if there is some evidence of public outreach, particularly amongst the educational community. It is known that all Centres have frequent activities and it is a mystery as to why information on these cannot simply be collected, kept and sent to the director in time for the annual report, or simply sent to the director as and when

they happen. Thank you to those who sent in details.

Last time it was suggested that a “form” be filled in and mailed back, but there was a “cyber” moan about bureaucracy! This year the director will send out a digital “form” to all Centres so that they can simply fill in the details and e-mail them back. Centre representatives, I will be mailing you the form for distribution – sorry about the extra work!

Activities

The Cape Centre has been very active and several successful public events were held. The International Year of Astronomy (IYA2009) was launched at the SAAO and the Cape Centre was very involved

in that. As they do every year, they assist the SAAO staff with the monthly Open Nights, which this year, because of IYA2009, have become bimonthly! In addition, members have addressed organizations such as ProBus (PROfessional and BUSiness), U3A (University of the Third Age) as well as school groups, both at schools and at the MTN Sciencentre, with whom excellent relations exist. Several societies and schools were also visited and the Cederberg Observatory again hosted a number of school groups.

The Johannesburg Centre again organised ScopeX this year which was extremely successful with an attendance of well over 1 000 people. The evening session was particularly well supported. During the day, nearly 300 school children were bussed in and they attended an assortment of activities. Again the event was generously supported by SAASTA (South African Agency for Science and Technology Advancement) and the Director of Science Awareness, Mr Shadrack Mkansi, presented the prizes for best photographs and for the best telescopes. In addition Auke Slotegraaf, ASSA Deep-sky director, and the EPC director were flown in to give assorted presentations and judge the astro-photography exhibition. Other activities included science demonstrations by Experilab and the SA Rocket Society. There were also exhibitions by book publishers and a wide variety of telescope distributors, camera, binocular and optical accessory manufacturers. In addition, the Centre has been very active in getting

many prominent speakers to address the Centre members and the public.

The Pretoria Centre has also had a good year addressing schools, ProBus, Rotary, school groups, Westrand Astronomy Club and various youth organizations, all of which have been well attended. In addition they have organized a number of out-of-town excursions to, amongst other places, Tswaing Crater and a Karoo Star party in Britstown. Details available in their Annual Report.

The Garden Route Centre (GRASSA) organized a viewing session in the George Botanical Gardens during the eclipse which was well attended and a display in the George Library to celebrate IYA2009. Good relations have been established with the SA Institute of Electrical Engineers (SAIEE) and a joint meeting was held. This was very successful and will be repeated on an annual basis. The highlight was the publication of a collaboration with the University of Milan and two members, Lucas Ferriera and the director, to measure the parallax of the Moon and Mars in the *European Journal of Physics*.

The Director has had a busy year attending SciFest Africa again where he delivered a talk. In addition he has addressed several groups during the year, including the Cape Centre and the MTN Sciencentre. Locally he has delivered a series of lectures on astronomy to U3A, in both George and Knysna, and has spoken twice for the monthly general meetings on astronomy.

He also addressed the SAIEE in George. He is much in demand for giving talks to schools, tourists and other local organizations. Earlier in the year he visited the Bloemfontein Centre at Boyden Observatory and discussed several issues about the Visitors' Centre and gave a talk in the evening and visited the Vredefort Dome – possible venue for an excursion in future. He also visited Mthatha as part of the SciFest AF-

rica outreach programme. He continues to write for several newspapers and popular magazines, promoting astronomy.

Finally the director would like to congratulate and thank Tony Jones for doing such an excellent job on producing the annual *Sky Guide Africa South* – great job and it makes a significant contribution to raising the awareness of astronomy. ☆

Report of the Historical Section

Chris de Coning, Director

Introduction

During the past year (calendar year 2008) the following has happened concerning the History of Astronomy Section.

Website

The Website has undergone a major change. In 2007 the look and layout was totally changed. In 2008 more content was added to the website. This process is ongoing.

Archive

Due to the complexities and scope of the task, indexing the archive will still take some time.

Publications

Individuals in their private capacities wrote articles with historical content. Please note my appreciation to the following people:

- I.S. Glass for *PROXIMA The nearest star (other than the Sun)*, Mensa, Cape Town, 2008.
- P.E. Spargo for “The History of the Hoba Meteorite” Part I (*MNASSA* Vol. 67 nos 5 & 6, June 2008); Part II (*MNASSA* Vol. 67 nos 9 & 10, October 2008); Part III (*MNASSA* Vol. 67 nos 11 & 12, December 2008)
- H.J. van Heerden for “Boyden Observatory, then and now” published in *MNASSA* Vol. 67 nos 7 & 8, August 2008.

Obituaries

MNASSA published obituaries on the following astronomers:

- Peter Smits: *MNASSA* Vol. 67 nos 9 & 10, October 2008.
- Arthur C Clarke: *MNASSA* Vol. 67 nos 5 & 6, June 2008. ☆

Report of the Imaging Section

O.R. Toumilovitch, Director

The second active year of the Imaging Section has proven that astro-photography is a fast growing and very important sector of astronomy – professional and amateur. Here is the summary of the Section's activities.

The Imaging Section website, hosted for a second year by FOTON Optoelectronics, has been the main channel of communication between our astro-photographers and those who are interested in Section's activities. It has provided a good platform for the exhibiting the work of South African astro-photographers. Unfortunately, during one of their meetings in September/October 2008, ASSA Council has requested me to remove the line "This web page is proudly sponsored by FOTON Optoelectronics" from the bottom of the page. This came as a real surprise to me as the whole ASSA Imaging Section website is based on FOTON Optoelectronics website, as we had enough space available. Furthermore, everything was confirmed and agreed upon by the council representatives back in August 2007, prior to establishing the website. At the moment of writing this report, half-a-year later, the issue still stands unresolved.

The highlights of the section activities during the year are:

- Participation in the live web-cast on the Moon Shadow website during the 26 January partial Solar eclipse.

- Extensive observations and imaging of Comet C/2007 N3 (Lulin).
- Participation in and images of the Earth Hour initiative.
- SOHO team has kindly provided the ASSA Imaging Section with the weekly updates of the latest most interesting images of their solar observations for display on our website.

Every small contribution in the form of images, articles or reports are important to the Section. I would like to specially mention several active photographers for their persistence and support, as well as achieving wonderful results in astro-photography during the past year. They are:

- Kos Coronaios, who has regularly provided his excellent astro-images and reports of public events.
- Dieter Willasch for his outstanding set on images of the Comet Lulin.
- Carol Botha whose solar system images have been published twice in the *BBC Sky at Night* – a great achievement in promoting the ASSA internationally.
- Greg Roberts who has contributed a number of very interesting images and video clips of man-made space objects, as well as deep-sky objects.

They have been nominated for Director's awards:

- Kos Coronaios – Directors Award (2008/2009) for continuous support

and contributions to the Imaging Section.

- Dieter Willasch – Directors Award (2008/2009) for outstanding work in the field of deep-sky objects and Comet Lulin imaging.
- Carol Botha – Directors Award (2008/2009) for achievements in the Solar System photography and contribution into promoting the South African astro-imaging internationally.
- Greg Roberts – Directors Award (2008/2009) for providing the Im-

aging Section with the set of outstanding images and video clips of man-made space objects, as well as deep-sky objects.

I'd like to thank everyone who has supported the Imaging Section by providing their images, ideas and willingness to participate in the Section's activities during the past year. The Imaging Section of ASSA is always open to suggestions and joint projects. We are awaiting your contributions in the form of interviews, reports, stories and astronomy related images. ☆

Report of the Occultation Section

Brian Fraser, Director

Once again we had a year with very little positive to report.

Kos Coronaios in Louis Trichardt has been experimenting with photographing lunar occultations of bright objects and has obtained some interesting results.

A few minor planet occultations were attempted by our regular group of observ-

ers but no positive events were observed. We have again relied on the minor planet predictions provided by Steve Preston and have used the *Occult4* software for lunar occultation predictions.

Thanks are due to the following members for their continued support: Magda Streicher, Tim Cooper, Jannie Smits and Kos Coronaios. ☆

Scholarships Report for 2008

Maciej Soltynski (Convenor, ASSA Scholarships Committee)

The ASSA Scholarship was established in 2000 to encourage the study of Astronomy at any Southern African university at the 2nd and 3rd year level. The Scholarship is funded by ASSA with significant financial

support from the ASSA Endowment Trust.

In 2008 the ASSA Scholarship was awarded to Daniël Olivier, a second-year BSc Astronomy and Physics student at UNISA.

Daniël is involved with the ASSA-Johannesburg Telescope Building group.

The holder in 2006 and 2007, Wendy Williams, obtained her BSc(Hons) in Astronomy with distinction at UCT in the National Astrophysics and Space Science Programme (NASSP). She plans to undertake an MSc in Astronomy at UCT in 2009.

Renée Holzek, holder of the ASSA Scholarship in 2005, completed her MSc in Cosmology at UCT. She was awarded a Rhodes Scholarship and started her DPhil studies in Cosmology at Oxford in October.

South African Astronomical Observatory - Astronomical Society of South Africa Scholarships

The purpose of the SAAO-ASSA Scholarships is to encourage current or intending undergraduates (i.e. 1st, 2nd or 3rd year) studying for a B Sc degree at any university in South Africa, who have a stated interest in astronomy, to prepare for furthering their interest. The Scholarships are financed by SAAO and are administered by ASSA.

2008 saw a second SAAO-ASSA Scholarship being made available. Mpati Ramatsoku, who held the Scholarship in 2007, was re-awarded the Scholarship. She is 2nd year undergraduate student at the University of Cape Town, studying for her BSc degree, which includes Astrophysics. The other SAAO-ASSA Scholarship was awarded to Rocco Coppejans, a 2nd year BSc student at the University of Pretoria who is focusing on physics.

2009 will see a third SAAO-ASSA Scholarship being made available, so that from then on in any year there may be a maximum of three Scholarships awarded. The value of each Scholarship in 2008 was R4 000.

Expression of appreciation

During the year, Dr Ian Glass was invited to join the Scholarships Committee. He, Andrew Gray, Dr Abe Mahomed and Kevin Govender are thanked for their valued inputs in the evaluation and selection of candidates during 2008. Thanks go to Cliff Turk for dealing with the financial administration of the Scholarships and to the university lecturers who supplied assessments of candidates. ☆

Report of the Trustees of ASSA Endowment Trust

Cliff Turk, Trust Secretary

At the end of the last financial year, total funds had increased to R116 950 of which R36 340 was capital, with R76 950 in the distributable reserve. At that time there were estimated liabilities of R3 660.

The Trust continues to grow slowly but there are few calls for its assistance with projects to be supported. There have been a few tentative enquiries but one was not fully and clearly motivated and two others

fell outside the scope of the Trust's objectives. Applicants are requested to contact the Trust Secretary in the first instance for some guidance.

New tax regulations have enabled the Revenue Service to demand tax on our interest earnings, but we will again apply for tax exemption. ☆

Treasurer's Report Cliff Turk, Honorary Treasurer

During the last financial year the Scholarship Fund has been increased to R70 000 and the income therefrom is available for disbursement.

Total funds held at the year-end were just over R350 000 of which R85 000 is allocated for the Scholarship Fund and small amounts are held for future Symposia and some Sections.

The growth in assets is mainly due to sales of the popular *Sky Guide 2009* which will provide a nett income of around R77 000 but this is partly offset by the usual loss on *MNASSA* which should be approximately R25 000. There are still outstanding amounts both due and payable for both publications.

Council has committed funds to provide the *MNASSA* Editor with an updated package of computer programmes which will also ensure we are not breaking any copyright restrictions unintentionally. This is likely to involve a cost of about R10 000.

The loss of Membership Secretary during the year has created a situation where some amounts received into our banking account have remained unidentified and this has resulted in some members not receiving publications. It cannot be stressed too much that when members make payments directly to the banking account, they **MUST** notify the Membership Secretary with a breakdown of what the funds are for – or the renewal of their membership will not be recorded. This also applies to some Centres and other organisations which make bulk payments on behalf of members.

Overall, the Society is in a very healthy position and is able to meet all its commitments for the coming year from present funds. It is unlikely that there will be any increase in subscriptions or the price of publications in the foreseeable future. This is especially pleasing when we remember that as recently as 1999 and 2000 we had to borrow several thousand Rands each from three of our members to avoid being unable to meet our liabilities at the financial year-end. ☆

ASSA Awards for 2008/2009

ASSA and its sections issue rewards to members who actively partake and submit their observations. These rewards will hopefully encourage recipients to continue their good work but also those who have made casual observations but did not send them in or others who are still considering it but have not yet got so far as actually doing some observing. The following rewards were made during 2008/9.

Long Service Award

Pat Booth

Honorary Awards

Case Rijdsdijk, Magda Streicher and Maciej Soltynski.

Merit Awards

Chris de Coning, Kos Coronaios and Greg Roberts

Comet and Meteor Section

General Observer's Certificates to: Dudley

Field, Koos van Zyl, Karen Koch, Magda Streicher, Kos Coronaios, Simon Walsh, Theo Smith and Chris Middleton.

Cosmology Section

Director's Certificates to: Case Rijdsdijk and Maciej Soltynski.

Deep-sky Section

Merit Certificates to: Richard Ford, Gary Lillis, Dany Duprez, Lucas Ferreira, Kos Coronaios and Kemeels Mulder.

Imaging Section

Director's Certificates to: Kos Coronaios, Dieter Willasch, Carol Botha and Greg Roberts.

Variable Star Section

Director's Certificates to: Berto Monard and Tim Cooper.

General Observer's Certificates to: Brian Fraser, Michael Poll, Jan Smit, Peter Wedepohl, David Blane and Percy Jacobs. ☆

news notes

Anniversaries in 2009

The Year of Astronomy 2009 celebrates Galileo's telescopic discoveries four hundred years ago. The precise dates of his epoch-making observations of the Moon are controversial but we can be reasonably sure they began some time in 1609. His famous publication, the *Sidereus Nuncius* or *Sidereal Messenger* was of course published in 1610. For the history of this

topic see http://www.pacifier.com/~tpope/Moon_Page.htm. The engraving on the front cover of this issue shows him at the age of 40, and was supposedly copied in the nineteenth century from a long lost painting. However, the engraver seems to have added a telescope, which did not exist in 1602, the claimed date of the original!