

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	
	$\gamma$ Normids	0.9	
	$\eta$ Aquarids	7.1	
	Leonids	5.9	
C Turk	Geminids	2.0	
	April Lyrids*	4.0	
	Leonids*	1.9	
	Geminids*	2.2	
	$\theta$ Ophiuchids	2.5	
	Orionids	1.7	
	Geminids	3.4	
M Streicher	$\alpha$ Crucids	1.2	
	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	$\alpha$ Crucids	3.4	
B Skinner	$\alpha$ Crucids	4.0	
	Leonids	3.2	
M Poll	Geminids	2.7	
	Leonids	1.2	
T Gould	Geminids	2.2	
	Leonids	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	$\eta$ 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

major 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.

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#### **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.