



**A47**

**MINUTES OF THE 47<sup>TH</sup> ANNUAL GENERAL MEETING OF THE SAIP  
HELD AT POTCHEFSTROOM UNIVERSITY FOR CHE,  
POTCHEFSTROOM ON 26 SEPTEMBER 2002 AT 15H30.**

**1. OPENING**

The President of the SAIP, Dr. P.A. Whitelock chaired the meeting and welcomed all present. She requested a moments silence for Prof. Friedel Sellschop who had recently passed away. Prof. Sellschop had been a very active member of the SAIP and Council - he was not only a past President, but also a Honourary Member and a receiptant of the de Beer's Gold Medal.

**2. ATTENDANCE**

Apologies were received from Prof. J. Watterson, Mr. D. Fish, Prof. M. Lee, Dr. E. Sideras-Haddad and, Prof. S.A. Sofianos

The meeting was attended by 95 people.

**3. MATTERS FOR DISCUSSION UNDER GENERAL**

The meeting decided to discuss the following matters under "General":

- 3.1. Changes in by-laws (PAW)
- 3.2. Extension of Conference (PAW)
- 3.3. Problems with the Department of Home Affairs (DH)
- 3.4. SANSO (SHC)
- 3.5. Program for Learners at Conference (KG)

**4. MINUTES OF THE PREVIOUS MEETING**

The minutes of the meeting held on 5 July 2001 (A46) were approved.

**5. MATTERS ARISING FROM THE MINUTES**

**5.1. Report on the State of Physics in South Africa**

Dr. Whitelock reported that the "Report on the State of Physics in South Africa" was complete and would be made available to the membership on the SAIP web-site. Delegates at the conference had received copies of the Executive Summary as well as the Introduction of the Report. Dr. Whitelock expressed her thanks to Dr. N. Chetty for starting the process in 1999 and to Prof. M. Hellberg for seeing the process through to completion despite his not being a member of Council since July 2001. Prof. M. Feast was also thanked for his assistance.

Dr. Whitelock invited the membership to submit comments on the report before 31 December 2002. Comments should be submitted to the Secretary.

**5.2. Transformation Committee**

Dr. Whitelock gave the chair over to Prof. Zingu, chair of the Transformation Committee, who summarized the history of the Transformation Committee. The Report by the Transformation Committee had been submitted to Council and Prof. Zingu summarized the recommendations of the Transformation Committee. The Report will be made available to the membership on the web-site and comments should be submitted to the Secretary before 31 December 2002.

Prof. Nabarro stated that he was unhappy with the recommended re-naming of “Solid State Physics and Materials Science” to “Condensed Matter and Solid State”.

## 6. PRESIDENT’S REPORT FOR 2000 – 2001

Prof. Zingu remained as chair and Dr Whitelock, presented her report for the year 2001 – 2002. (see the copy attached to these minutes for details).

### Highlights of Report

**Education:** The process by which the Working Group of the FET Curriculum Statement was put together was untransparent and Dr. K. Mokhele (NRF) has agreed that the Office of the President of the NRF will liaise between the SAIP and the Ministerial Project Committee to try to resolve the problems with the Working Group. Dr. Whitelock expressed her thanks to Dr. Mokhele for his offer and to Prof. Grayson for her efforts in compiling comments on the various drafts of the curriculum statement.

**International Physics Olympiad:** The Report by Mr. C. Rijdsijk on his visit as an observer to the 2002 International Physics Olympiad will be available on the SAIP web-site.

**Tours by Dr. Zbig Sobiesierski:** Prof. J.A.A. Engelbrecht and Mr. C. Rijdsijk for organizing the tours.

**The IoP Medal:** The IoP had offered to sponsor a medal and prize to be jointly awarded by the SAIP and the IoP. Council had debated the offer at great length because of a possible clash with the De Beers Gold Medal and so it was decided that the medal be awarded for Physics Development. The request of naming the award “The Nelson Mandela Award for Physics Development” was turned down by the Nelson Mandela Foundation.

### Comments on Report

All those involved in Marketing should be commended for their efforts.

It was suggested that link with the IoP be used to publish the proceedings of the SAIP conference.

The report was then accepted. Prof. Zingu thanked Dr. Whitelock for her work as President and returned the chair to Dr. Whitelock.

## 7. FINANCIAL REPORT FOR 2000 – 2001

The Treasurer, Prof. Engelbrecht tabled the audited statements for the financial year 1 April 2001 to 31 March 2002. (Copy attached to these minutes). He explained aspects of the statements, especially the difference in income due to membership statements having been sent out late. The financial statements were accepted with thanks to Prof. Engelbrecht.

## 8. BUDGET FOR 2001 – 2002

Prof. Engelbrecht presented the budget for the next financial year and proposed an increase in membership fees. The meeting proposed and **approved** the following increase to membership fees for 2003.

Category	2002	2003
Full Members	R120	R200
Institutional Members	R1500	R1600
Associate Members	R80	R100
Retired/Student Members	R30	R50

It was also suggested that members be sent email reminders to pay their fees and that marketing should be improved in order to increase membership. It was agreed that Council would cut back on travel expenses and improve marketing.

Prof. Engelbrecht then reminded members that:

- membership fees are tax deductible
- student prizes will be awarded to members only
- the treasurer should be informed if money has been deposited into the SAIP account so that he can track who has paid.

The budget was approved with thanks to the Treasurer.

## **9. REPORTS FROM SPECIALIST GROUPS**

### **9.1. Applied Physics and Industrial Physics**

The Chair, Prof. Alport reported that APIG has been very dormant since the departure of some its more active members. In the meantime, he has just been a "care-taker" chairman since there was no-one willing to take over at last year's APIG AGM. He reported that a working committee was formed under the chairmanship of Prof. D. Raubenheimer and the future activities and objectives of APIG will be formulated by the working committee.

### **9.2. Astrophysics**

The new Chair, Dr. P.J. Meintjes reported that he will contact the astrophysics community in South Africa to discuss how to proceed and undertakes the responsibility to promote closer collaboration between the physics, astrophysics and space science communities in South Africa. A detailed report of the activities and planned future activities will be presented at the next meeting.

### **9.3. Education**

The Chair, Mr. Rijdsdijk reported that much of the group's time was taken up with the FET Curriculum Statement. Prof. Diane Grayson had forwarded two letters to the panel drafting the new statement outlining the SAIP's point of view, the inadequacies of the statement and the noting the lack of transparency in the process.

During the conference the Education Group had an extensive discussion on the FET curriculum statement and it was decided to ask Council to send an official letter to the drafting panel requesting SAIP involvement in the process so as to safeguard the interests of physics in SA.

During the year there were two tours by Zbig Sobiesierski: one immediately following the SASOL SciFest in March and the other, a more extended one to the northern parts of SA, in August. Both were organized in conjunction with the IoP who supplied funding and SASOL SciFest who provided the infrastructure and facilitated the tours.

FEST also funded Case Rijdsdijk to attend the 33<sup>rd</sup> International Physics Olympiad (IphO), in Bali, Indonesia and a full report will be posted on the SAIP website. It is hoped that in the not too distant future SA will be able to compete in future Olympiads.

The SAIP was also involved in facilitating a tour of US students from the Pittsburgh HEP Group through parts of Gauteng and the Western Cape. This outreach project was initiated by Julia Thompson of the University of Pittsburgh and present feedback indicates that we may well repeat this exercise. Simon Connell was very much involved with the Gauteng leg.

Finally it is hoped that in the course of the coming year the role of the Group will become a little more defined and certainly to clarify two aspects of the groups activities: physics education research and educator (teacher) support.

### **9.4. Lasers, Optics and Spectroscopy**

The chair, Dr. E. Rohwer reported that the attendance at lectures and the number of contributions at this conference have increased significantly. This can be partly ascribed to the efforts of the National Laser Centre (NLC) and its rental pool encouraging activity in the lasers field. There is a process underway to establish an African Laser Centre.

In 2003, the Group will hold a Winter School at the annual SAIP meeting

### **9.5. Nuclear, Radiation and Particle Physics**

The Committee for 2002-2003 is: Dr. Z.Z. Vilakazi (Chair), Mr. J. Keshaw (Vice-chair), Dr. S. Mullins (Secretary). During the conference there were 16 Orals presentations and 2 Posters in this Group. The sessions were well attended. Two prizes were awarded (best MSc presentation and best PhD presentation). There was also a successful Summer School held at the Kruger Park in January 2002.

### **9.6. Solar, Terrestrial & Plasma Physics**

The Chair, Prof. Adri Burger, reported that two workshops and one conference were held by members of the Group. A workshop on Dusty Plasmas in Durban was attended by about 100 people. A small workshop on Cosmic-Ray Modulation, held in Potchefstroom, was attended by 25 people. A conference (IAEA supported) on the technical aspects of running a magnetic observatory was held in Hermanus and attended by about 45 people. The suggestion for the theme of the Group for next year's conference is "Space Science and Society". There will also be a one hour discussion on the National Astrophysics and Space Science Programme (NASSP) which will be hosted by UCT from 2003..

The committee for 2002-2003 is: R.A. Burger (Chair), S. Pillay (Secretary)

### **9.7. Solid State Physics and Material Science**

Issues addressed by the Executive during the past year included : The matter of funding by the NRF (this now forms part of the "Review of Physics" process), a document entitled "Submission by the Solid State Physics and Materials Science Specialist Group", submitted to Council for their deliberations with the NRF, funding of overseas speakers and sponshorships for the awards programme.

A successful Spring School on Magnetism was hosted on behalf of the SSPMS by Dr Aletta Prinsloo and co-workers from RAU. Prof Frank Steglich was the Invited Lecturer at the Spring School and during SAPI 2002. Prof A Every presented the Non-specialist lecture "Measurements of Near-surface Elastic Properties of Solids and Thin Supported Films".

The Awards programme was once again a main event, and prizes were awarded for publications, oral and poster presentations of PhD, MSc and Hons students.

Many members of the Specialist Group also served on many other bodies, including FEDSET, AS&TS, NSTF, SA Council for Natural Professional Scientists, Mintek Board, NRF Board, SAIP Council and various NRF panels.

### **9.8. Theoretical Physics**

The OTP Management Committee elected for 2002-2004 is HB Geyer (Chair), WD Heiss, DP Joubert, FGScholtz and SA Sofianos. The Theoretical Seminar was oversubscribed timewise and some contributions appeared in the poster session, which is seen as a positive development.

A very successful 14th Chris Engelbrecht Summer School in Theoretical Physics was held in January 2002 with the theme "Quantum gravity, string theory and cosmology". The next school is planned for early 2004 and all SAIP members are invited to propose topics for future schools. Tentative proposals have been received for Nanophysics and Advanced Scientific Computing.

The 14th school was followed by a 2 week workshop within the framework of the recently established Stellenbosch Institute for Advanced Study (STIAS). This involved a number of African participants and may lead to the establishment of a number of postdoctoral positions with outside funding.

The African Institute for Mathematical Sciences (AIMS) initiative by Neil Turok from Cambridge involves the three Western Cape universities and this postgraduate program in mathematics and theoretical physics, with its emphasis of involving African students, will probably be operational in the second half of 2003.

## **10. REPORTS FROM REPRESENTATIVES ON OTHER BODIES**

Details were given in the President's Report

## **11. THE FUTURE OF PHYSICS IN SOUTH AFRICA**

Dr. Whitelock summarized the "Future of Physics in South Africa" process that is currently underway. (Details may be found on the SAIP web-site.) The initiative is a collaboration between the SAIP and the NRF, that draws on the strength of both organizations. Dr. Whitelock suggested that an International Panel would compile the final report and indicated that she anticipated funding would be made available by from the Department of Science and Technology.

There was some concern that the International Panel would make suggestions that were impractical for South Africa.

There is a demand for appropriately trained physicists in South Africa.

Suggestions on the process as well as nominations for the International Panel should be sent to the Secretary.

## **12. GENERAL**

### **12.1. Changes in By-Laws**

The recommendation to change Clauses 6.5. and 7.5 of the By-laws to:

**“All members will be invited to nominate physicists for the award. The submission must consist of a full Curriculum Vitae of the nominee, accompanied by a full motivation that must clearly describe the fields of activity in physics in which the nominee has excelled, what her/his actual contributions were and the standards by which these contributions have been measured..** Nominees must have been normally resident in South Africa up to the closing date set by Council for the receipt of nominations. Only work done by a SA citizen or someone with a permanent residence permit will be considered for this purpose. The work must have been done in South Africa or during a temporary visit abroad.”

was unanimously approved.

### **12.2. Extension of Conference**

Dr. Whitelock proposed that the conference be held over three full days with the banquet held on the evening of the last day (i.e. Friday) in order to fulfill the demand for presentation time and in particular to fit all the student prize presentations into the program. The extension will also stimulate more interest.

### **12.3. Problems with the Department of Home Affairs**

Prof. D. Heiss explained the problems that international Post-docs have with the Department of Home Affairs and urged the SAIP to liaise with other organizations to impress on the government to ease restrictions. Prof. Malherbe stated that he felt that this had already been done and that the information could simply not have been passed to the relevant Home Affairs Office.

### **12.4. SANSO**

Dr. Connell gave a quick introduction to SANSO, a new nuclear organization that had been form. Application for membership will be available soon.

### **12.5. Program for Learners at Conference**

Mr. K. Govender suggested that a programme for learners be put together at the Annual Conference to stimulate interest in physics.

## **13. FUTURE CONFERENCES**

2003 Stellenbosch (US): already approved  
2004 Bloemfontein (UFS): already approved  
2005 No venue

## **14. CLOSURE**

The President thanked members for their attendance. The meeting closed at 17h50.

**Secretary**  
**Ms. J. Padayachee**

**President**  
**Dr. P.A. Whitelock**

**SAIP URL: <http://www.sun.ac.za/physics/saip/>**



# South African Institute of Physics

## PRESIDENT'S REPORT 2001-2002

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### 1. Council

The Council elected for the term July 2001 to July 2003 was as follows:

Patricia Whitelock (President)  
Edmund Zingu (Vice-President)  
Jaynie Padayachee (Secretary)  
Japie Engelbrecht (Treasurer)  
Johan Malherbe (Past-President)  
Ramesh Bharuthram  
Simon Connell  
Hendrik Geyer  
Diane Grayson  
Harm Moraal

#### Executive Committee

Patricia Whitelock  
Edmund Zingu  
Jaynie Padayachee  
(alternates: Johan Malherbe, Japie Engelbrecht)

The portfolios and conveners of council committees are:

Transformation	Edmund Zingu
Awards	Harm Moraal/Michael Feast (alternate)
Communications	Hendrik Geyer
Conferences	Johan Malherbe
Education	Diane Grayson
International Liaison	Ramesh Bharuthram
Marketing	Simon Connell

SAIP is represented on the SA Council for Natural Scientific Professionals (SACNASP), Federation of Scientific, Engineering & Technological Societies and Allied Professions (FEDSET) and the National Science and Technology Forum (NSTF) by J Malherbe and on the Microscopy Society of Southern Africa by J Engelbrecht.

Council meetings took place during the conference in July 2001, at the University of Natal, in October 2001 at the National Accelerator Centre, in February 2002 at the University of Pretoria and, with the conference organizers, in May 2002 at Potchefstroom University and finally again in Potchefstroom just prior to the Annual Meeting in September.

### 2. Membership

As of September 2002 the SAIP membership was as follows: 288 Ordinary, 11 Honorary, 51 Student, 27 Associate, 25 Retired, 10 Emeritus and 4 Institutional. This gives a total of 416 individual members, compared to about 500 for the last few years. A total of 45 new members were recruited during the period July 2001 to September 2002. The decrease in total numbers is very largely the result of the cancellation of membership (removal) of members who had not paid their subscriptions for several years. As of September the existing honorary members are: L Alberts, F Hahne, FJ Hewit, G Heyman, A Klug, FRN Nabarro, D Reitmann, P H Stoker, A Strasheim, JH van der Merwe, CB van Wyk.

I am saddened to note the death of one of my predecessors as SAIP President, Prof JPF Sellschop, also an honorary member of SAIP and winner of the De Beers Gold Medal. He was one of South Africa's great physicists, still working until the day before his death and will be missed by many.

### 3. Finances

The treasurer, J Engelbrecht, reports that payment of membership fees by depositing directly into the SAIP account was initiated during the past year. Due to requests from members, this was also modified to allow membership fees to be paid via the Internet. Invoices for 2003 will be modified to contain all the required information to make paying of membership easier. The issuing of membership invoices by email is also being investigated, though it is practically impossible to keep the database of email addresses of members up to date. You are therefore urged to inform the Secretary of changes to your email address.

While the financial ship remained on an even keel, expenses will have to be carefully monitored to ensure that the Institute remains financially sound. Sponsorships from outside should also be encouraged by all members having contact with industry.

#### 4. Annual Conference

The 46<sup>th</sup> Annual Conference was held at the University of Natal in Durban during July 2001, where 227 papers were presented. The conference was opened with a public lecture from Dr Robert Stobie (sadly deceased in May 2002), the Director of the South African Astronomical Observatory, with a talk on the Southern African Large Telescope. The SAIP was particularly pleased to welcome the Chief Executive, Alun Jones, of the Institute of Physics (UK) who also hosted a reception for delegates and their guests on the first evening.

This year, 2002, the conference is being organized by Potchefstroom University for CHE, in September rather than in the traditional July. With 304 delegates registered two weeks before the conference, and 241 papers being presented, it appears this change has done nothing to dampen enthusiasm for the conference. The situation is being monitored with great interest in view of the controversy which always surrounds the time of year of SAIP conferences. The 2003 conference will be hosted by Stellenbosch, back in the usual July slot.

#### 5 Awards

The Silver Jubilee Medal of the SAIP is awarded every two years, and in 2001 was presented to RS De Mello-Koch from the University of the Witwatersrand for (1) the high quality and productivity of his research in theoretical physics, and (2) his highly rated teaching abilities. The Awards Committee were also impressed by De Mello-Koch's broad background in physics and engineering. The De Beers Gold Medal is the most prestigious honour of the society and is awarded every second year, in even-numbered years. The name of the 2002 recipient will be announced at the De Beers Gold Medal Banquet in Potchefstroom. The SAIP is very grateful to De Beers for sponsoring this medal and for subsidizing the banquet at which the award is made; this provides a significant boost for South Africa physics. The prize is associated with considerable interest both locally and abroad, e.g. Physics Today, the magazine of the American Physical Society has, in recent years, asked to be informed of the details as soon as possible.

A considerable number of other awards are also made to students for the best papers and posters presented at the conference each year in specific specialist fields. We see these as an important component of SAIP conferences and wish to express the SAIP's gratitude to the sponsors who make them possible. In 2002, for the first time, an SAIP Student award will be made in recognition of outstanding experimental or theoretical research accomplishments, as presented at the annual conference of SAIP. The award is restricted to student members of SAIP and will be an amount of R1000 sponsored, for 2002 only, by the CSIR. The SAIP sponsored a R1000 prize for the person with the highest physics score in the National Science Olympiad. The winner for 2002 was Raphaela Thaele from the Deutsche Schule Kapstadt.

#### 6. Specialist Groups

Membership of the specialist groups is as outlined below, in early September 2002. The two columns indicate individuals primary and secondary interest.

	1 <sup>st</sup>	2 <sup>nd</sup>
Astrophysics	44	10
Lasers, Optics and Spectroscopy	33	19
Solar-Terrestrial/Plasma	21	22
Nuclear, Particle and Radiation	60	32
Solid State and Materials Science	120	43
Theoretical	18	28
Education	30	42
Applied and Industrial	41	76
General	9	19

#### 7. Electronic Newsletter and Web Pages

The electronic newsletter has been produced regularly by Elmarié Mortimer (iThemba LABS) providing a very useful link between the membership. If you would like to receive this and are not already doing so, please send your email address to the secretary ([jpadayachee@bonbon.net](mailto:jpadayachee@bonbon.net)). The web page (<http://www.sun.ac.za/physics/saip/>) is organized by H Geyer, and the new material on Careers, and Women in Physics has been provided by the Secretary, J Padayachee.

#### 8. Report: The State of Physics in South Africa

In 1999 and 2000 the SAIP conducted surveys of its members and of other physicists in South Africa. Unfortunately Council were slow to deal with these data, and in 2001, Maciej Soltynski of the Institute for Futures Research (IFR) at Stellenbosch, was commissioned to make the analysis and contextualize the

findings. This required an overview of national frameworks and policies for science and education, as well as an examination of international trends in physics. This too got off to a slow start as the task proved more complex than IFR had originally envisaged. An executive summary of the report has been distributed with conference packages at Potchefstroom and the complete document will be available for download from the SAIP's web page in the very near future. This report will inform the SAIP's future policy and in particular the "Future of Physics" investigation (see below). We are particularly interested in receiving comments from the membership about this document and its findings, and these should be addressed to the secretary.

## **9. Transformation**

Over the years Council became aware of negative attitudes that have developed towards the Institute and a dwindling of interest in the SAIP, and in Physics. As part of a process of introspection, Council established the Transformation Committee in 2001 to consider aspects of SAIP that required change. The Transformation Committee consisted of N Chetty, J Malherbe, A Mathews, J Padayachee (secretary), P Whitelock (chair until July 2001) and E Zingu (chair after July 2001). The change in chairperson was considered necessary following PA Whitelock's election as SAIP President. The committee met during the 2001 conference in Durban and at the South African Astronomical Observatory in October 2001. They also made considerable progress via email exchange.

Council considered a report from the Transformation Committee at its meeting in May 2002. The Transformation Committee focused on those aspects that affect the effectiveness and popularity of SAIP. The Transformation Committee has made proposals in respect of the language policy, the membership and structure of Council, and the functioning of the specialist groups. Certain changes that have been proposed will require a referendum by the membership as these changes will require changes in the constitution. Some of the proposals will also be addressed in the forward-look at "The Future of Physics in South Africa" that is being planned (see 10).

## **10. The Future of Physics in South Africa**

The physics community has been expressing ever growing concern about the state of physics and physics education in South Africa. Furthermore, the SAIP has, over the years, made numerous representations to government highlighting these concerns and suggesting how the situation might be improved. During 2001/2 the SAIP and the NRF agreed to work together to review the situation in physics and to look for a viable way forward. It was agreed that, if the process was to be effective, it must have widespread credibility within the community in its widest sense (government, scientists, industry, higher education), but especially among physicists. A process of regional consultation was therefore initiated, concentrating on, but not limited to, the physics community. Draft terms of reference were drawn up and can be read on the SAIP web page - these will be refined as the process proceeds. We would like to ask two very broad questions:

- (1) What can and should physics be doing for South Africa?
- (2) What can South Africa do for physics?

The broad answers should provide a strategy for physics and its funding in the region. The study, which has the full support of the department of Science and Technology, will be the first of its kind for physics in South Africa and may well provide a framework for similar studies of other disciplines.

## **11. Education**

As the Council representative for education, D Grayson coordinated our efforts in this area. In 2001 the National Department of Education released draft curriculum statements for Grades 1 to 9 for eight learning areas, including the Natural Sciences. Several respondents, including the SAIP found the Natural Sciences curriculum statement to be seriously flawed and submitted comments to that effect to the Minister of Education. As a result of a number of such submissions, the curriculum statement was rewritten and has been greatly improved. In May 2002 the Department of Education initiated a process to develop curriculum statements for the Further Education and Training (FET) band, which covers grades 10 to 12. Working groups were established in a number of subject areas to produce draft curriculum statements, which are then circulated to field-testing committees. D Grayson represented SAIP on the field-testing committee for the Physical Sciences. The documents produced to date in this area are also problematic. The SAIP has expressed its concern at the lack of scientists on the working group. A one-hour discussion about the FET Curriculum Statement is set aside in the Education session at the Potchefstroom Conference in September

During the past year the South African Universities' Vice-Chancellors' Association (SAUVCA) and the South African Qualifications Authority (SAQA) have been engaged in a process of setting standards for the most common generic degrees, including the BSc. The BSc standards have been released for comment. The standards-setting committee was chaired by J Cooke (Natal). D Grayson and S Pillay were also members of the committee and D Grayson worked extensively with the chairperson on various revisions. If adopted, the BSc standards will provide the basis for programmes that will lead to well-educated, well rounded scientists who will have the knowledge and skills to make a valuable contribution to South Africa.

### **11.1 International Physics Olympiad**

C Rijdsdijk (SAAO) attended (on behalf of SAIP) the 33<sup>rd</sup> International Physics Olympiad (IPhO), as an Observer and the first Congress of World Federation of Physics Competitions, in Bali during July 2002. This

was made possible by sponsorship from the Foundation for Education, Science and Technology (FEST) and the organizers of the Olympiad. There were teams from 72 countries around the world, none from Africa and only two from the southern hemisphere. Rijdsdijk suggests that South Africa should aim to take part and although standards are extremely high, it will be possible for us to compete, but it will take money and human resources. A full report has been submitted to FEST and outlines a strategy that would enable South Africa to begin to compete in the 35<sup>th</sup> IPhO in Korea in 2004. The report will be made available via the SAIP web page.

## **12 Marketing**

Most of the marketing projects have been coordinated by, and in many cases originated from, S Connell. K Govender (NECSA) is drawing up framework document for physics clubs in schools. This initiative aims to tap the energy for science from the learners themselves. SAIP would play a facilitating role; the idea involves maintaining a web site with information on available tours and talks, drawing on SAIP members from industry, academia and national facilities. SAIP would also provide adjudicators for school competitions.

SAIP, together with the provincial Education Departments, provided the local support for an NSF funded initiative, Science Emasondosondo lead by Prof Thompson and Dr Dodd from the USA, which involved outreach visits to disadvantaged schools by a mobile physics laboratory. The pilot programme began in August in the Gauteng and Western Cape provinces, spanning three weeks in each province, and reaching about 3% of the government schools. Local researchers and postgraduate students participated in the programme. The next phase involves evaluation, reporting, redesign and fundraising for a larger programme in the next year. It is hoped that the programme will become sustainable and form an important part of our science awareness and teacher support activities. The brochure advertising SAIP to students, drafted by Dennis Chinnery, was finalised and distributed to various Physics centres.

## **13 International Union of Pure and Applied Physics (IUPAP)**

The aims of IUPAP are: to stimulate and promote international cooperation in physics; to sponsor suitable international meetings and to assist organizing committees; to foster the preparation and the publication of abstracts of papers and tables of physical constants; to promote international agreements on the use of symbols, units, nomenclature and standards; to foster free circulation of scientist; to encourage research and education. The members of the South African Liaison Committee for IUPAP, during the period 2002/3, are EC Zingu (Chair), R Bharuthram, N Chetty, J Cleymans, DJ Grayson, WD Heiss, H Moraal, JF Prins, ZZ Vilakazi, all nominated by SAIP, and PA Whitelock (ex officio, as President SAIP).

### **13.1 Women In Physics**

The First International Conference on Women in Physics, was held at the UNESCO headquarters in Paris, 7-9 March 2002. Thanks to generous sponsorship by the NRF and the conference organizers, the International Union of Pure and Applied Physics, the SAIP were able to send 3 delegates to this meeting. Our delegation comprised J Padayachee (Team Leader – University of Natal), E Viljoen (iThemba LABS) and M Diale (University of Pretoria). The conference was attended by over 300 delegates (about 15% of them men) from 65 countries. Its primary purpose was to understand the severe under-representation of women worldwide and to develop strategies to increase their participation in physics. The detailed, 21 page, report of our team, makes interesting reading and includes detailed recommendations for schools, universities, governments and funding agencies. It can be downloaded from the SAIP web page. ([www.sun.ac.za/physics/wip.html](http://www.sun.ac.za/physics/wip.html)).

## **14 Links with the Institute of Physics (IoP)**

The Institute of Physics (UK) has a policy of interacting with physics societies throughout the world in a very broad attempt to strengthen international physics. The SAIP has enjoyed a close relationship with the IoP for some years. In August 2002, following some negotiations by H Moraal, I signed a Companion Society Agreement which agreed that members of SAIP who pay an Affiliation Fee will be able to be members of the IoP - Affiliate, Student, Associate Member, Member or Fellow as appropriate, with benefits including: monthly copies of "Physics World", access to any three of the IoP's electronic journals and books published by IoP at IoP member rates. The Affiliation Fee is R240, with an introductory rate of R160 for 2002. Further details are given in the 2002 conference brochure.

### **14.1 Tours by Dr Zbig Sobiesierski**

Z Sobiesierski is a senior lecturer in Science in Context, in the school of Interdisciplinary Sciences at the University of the West of England as well as a part time lecturer at Cardiff University. In 2001 he received the IoP Public Awareness of Physics Award. Thanks to financial assistance from the IoP and from SASOL SciFest it was possible for Z Sobiesierski to make two South African tours during 2001/2. The first week followed his appearance at the Grahamstown science festival in March, where he gave sell-out workshops on "slime" and a lecture entitled "Seeing is Believing". The tour included a public lecture at the Port Elizabeth Technikon as well as 2 lectures for high schools and 5 for primary schools. We are grateful to J Engelbrecht and C Rijdsdijk (SAAO) for organizing this and for accompanying Dr Sobiesierski. The second tour took two weeks and was organized as part of SciFest-on-the-Road. It included schools and colleges in KwaZulu Natal, Gauteng and Northern Province.

## **14.2 IoP Medal**

The IoP very generously offered to sponsor a medal and prize which would be jointly awarded by SAIP and IoP. After much deliberation the SAIP Council suggested to IoP that the award should recognize the combination of scholarly output with the development of research capacity, inspiration of future scientists or the development of the discipline in South Africa. This proposal met with the approval of the IoP Council and the Mandela Foundation were approached with a request that the award be named "The Nelson Mandela Award for Physics Development". Unfortunately, after four months of deliberations, this request was turned down. We therefore ask the SAIP membership to make suggestions for a name for the Medal and prize; please send these to the secretary **before 25 October 2002**. The award will be made every second year starting in 2003. We are grateful to the IoP for this symbol of their generosity, support and understanding of the problems faced by physics in South Africa.

## **15 High Energy Stereoscopic System (HESS) - First Light Workshop**

PA Whitelock represented SAIP (and the National Research Foundation) at the workshop on gamma-ray astronomy in Windhoek (Namibia) and attended the first-light ceremony at the HESS telescopes on 2/3 September 2002. The event was organized by Potchefstroom University and the physics department of the University of Namibia - two of the 19 organizations from 8 countries involved in the experiment. She conveyed the congratulations of the SAIP to those involved in the in getting the first of four Cherenkov telescopes operational and indicated that she looked forward to seeing linkages and collaboration with the various other astronomy initiatives underway in South Africa and particularly with the NRF's National Facilities at HartRAO and SAO.

## **16 New Journal of Physics**

As announced in the 2001 Presidential Report, the SAIP had signed a Memorandum of Agreement between the Deutsche Physikalische Gesellschaft e.V (DPG), the IoP and the SAIP, to cooperate in the formation of the "New Journal of Physics" (NJP). The SAIP agreed to endorse the NJP, encourage authors and to promote the journal to its membership. During 2002, A Leitch (UPE) was appointed onto the editorial board of NJP, following the request for an SAIP nomination for someone with a particular interest in solid state physics.

## **17 Microscopy Society of Southern Africa (MSSA)**

J Engelbrecht reported that the MSSA hosted an extremely successful international conference on Electron Microscopy (ICEM-15) from 2 – 6 September 2002 at the International Conference Centre in Durban. More than 1200 delegates attended, and 5 plenary talks were presented by specialists in the field. This conference certainly contributed to proving that South Africa can host international events, and to greater involvement from overseas researchers, research groups and industries in future with their South African counterparts. MSSA has also embarked on an outreach programme to Africa, as well as disadvantaged students and schools in South Africa. Optical microscopes are donated to schools, training is provided for teachers and learners on these instruments. Bursaries are made available to enable students to attend local conferences of the Society; a prize is also sponsored at the national Expo for Young Scientists.

## **18 Acknowledgments**

I am grateful to the members of SAIP council for all their efforts on behalf of SAIP, their drive, help and support was invaluable. The simultaneous change of Treasurer and Secretary at the beginning of the year presented a challenge to the new incumbents - fortunately for us all they proved more than equal to the task. I am particularly grateful to Edmund Zingu (Vice-President), Jaynie Padayachee (Secretary) and Japie Engelbrecht (Treasurer), not only for their very determined hard work, but also for their persistent good humour.

Patricia Whitelock  
President  
Cape Town September 2002





**NOTES TO FINANCIAL STATEMENTS**  
**FOR THE YEAR ENDED 31 MARCH 2002**

1.	Ordinary, Associate, Retired and Student members	21 454.52
	Institutional Members (NECSA)	1 500.00
		<b><u>R22 954.52</u></b>


Income from membership varies due to timing of accounts.

2. Refund by BoE : Prizewinner's account closed.
3. <sup>RAU and</sup> Durban Conference (2001 and 2002)
4. Honoraria paid to outside helpers (Greyling, McLeary) as approved by the previous Council.
5. Prizes awarded by Specialist Groups:

SB Malinga	R 400
J. Minnie	R 400
N Kgadi	R 800
A du Plessis	R 400
Dr EG Rohwer	R 500
L McDermott	R 600
	<b><u>R3 100</u></b>
6. a) Replacement of rental car tyre (damaged during Kalmus tour) R 363.28  
b) Refund of membership fees overpaid by Honorary members R 330.00  
c) A du Plessis prize money repaid R 400.00  
**R1 093.28**
7. For the investigation of Physics in South Africa.
8. For the history of Physics in South Africa.

Certified as a fair reflection of the financial transactions, equity, liabilities and assets of the South African Institute of Physics.

  
.....  
**President**

  
.....  
**Auditor**

  
.....  
**Treasurer**