

MEDICAL PHYSICS WORLD

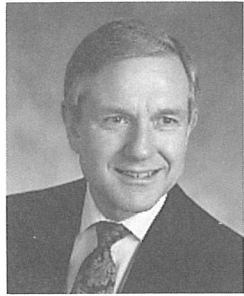
Bulletin of the International Organization for Medical Physics

IOMP Home Page address: <http://www.iomp.org>

69 Adhering National Organizations 1998

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President's Message



Dear Fellow Member of IOMP,

Firstly, let me congratulate new members Bangladesh, Chile, Egypt, and Nepal. Welcome to the IOMP. A listing of the Officers of these new member organizations can be found in the Directory located on the IOMP web site (www.iomp.org). Mention of the IOMP web site reminds me to also congratulate our Secretary-General Gary Fullerton for the excellent work he has done to upgrade our Home Page into something worthy of an organization representing over 16,000 medical physicists in 69 countries. If you have not paid a visit to our web site recently, I urge you to do so. Apart from the usual listings of committees, boards, officers, national members, and libraries (we now have 75 active IOMP Developing Countries libraries!), you will find a very interesting history of the IOMP by Professor John Mallard, and details of several IOMP-sponsored events, especially plans for World Congress 2000. Gary's plans for future developments of our web site include a listing of graduate medical physics educational programs worldwide and an on-line textbook (see Secretary-General's Report). As Gary mentions in his report, we have now moved maintenance of our Home Page from the University of Wisconsin, Madison, to the AAPM Headquarters, where we have access to professional webmaster support. We owe a great deal of gratitude to our colleagues in Wisconsin, John Cameron, Larry DeWerd, and especially Kwan-Hoong Ng, our first honorary (i.e. unpaid) webmaster, for helping us to establish our Home Page. We thank you profusely.

Several new projects are just beginning. I have formed an ad hoc Awards and Honors Committee to consider whether the IOMP should establish awards for outstanding contributions to medical physics. The nearest that we have to such an award is the Award of Excellence administered by the International Union of Physical and Engineering Sciences in Medicine. This has been, and I think should continue to be, the major international award for medical physics, but only one such award is made every three years (it was every six years until recently!), so very few medical physicists can ever hope to reach this pinnacle. Very many more deserve recognition for their efforts and I want this ad hoc committee to recommend ways that we might achieve not only this, but also ways to honor those medical physicists responsible for making our profession what it is today by naming the awards in their honor. Past Secretary-General John Cameron has graciously agreed to chair this committee.

Another project that I feel would be of benefit to our members is development of a series of electronic "brochures" for posting on our web site, that describe what medical physicists do. These would be designed to be read by members of the general public, patients, administrators, government officials, etc. There would be a different "brochure" for each sub-specialty of medical physics. Initially, these would be developed in English but translation into other languages would soon follow. In my opinion, because medical physics is often a "mystery" to almost everyone but ourselves, this could be of significant benefit to medical physicists worldwide, both in developed as well as developing countries. If medical physics is to continue to grow and flourish as a profession, it is imperative that we let people know who we are, what we do, how we do it and, most importantly, why medical physicists play such an important role in the healthcare industry. I plan to start the development of these "brochures" within the next few months. Anyone interested in working on this project should contact me as soon as possible.

(Continued on page 6)

Table of Contents

President's Message	1
Secretary-General's Report	2
Officers and Council of the IOMP	2
Scientific Program Plans	
Underway for Chicago '2000	
World Congress	5
Vice President's Report	6
Report From the Developing	
Countries Committee (DCC) ...	6
Letter From the President of	
IUPESM	8
Report From the Education and	
Training Committee (ETC)	10
Donations of Used Equipment	10
Report From AAPM International	
Scientific Exchange Programs	
Course/Workshop in Egypt	12
Request For Support	
International Scientific	
Exchange Program — The	
Physics of Radiation Therapy	
Cluj, Romania	12
Request For Support	
International Scientific	
Exchange Program — The	
Physics of Radiation Therapy	
Sao Paulo, Brazil	12
Managing Radium	12
Advertising Rates/	
Order Form	13
Obituary — Harold Elford Johns .	16
Editor's Corner —	
Maria Sklodowska-Curie's	
Achievements — Part II	18
International Conference on	
Medical Imaging, Medical Physics	
and Precision Radiation	
Therapy	20
Calendar of Events	20
Medical Physics Events Calendar .	20
International Organization	
For Medical Physics	
Corporate Affiliates, 1998	21
Honoary Treasurer's Report	22
IOMP Libraries Program Report .	23

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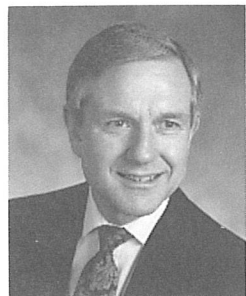
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(Continued on page 6)

Table of Contents

President's Message	1
Secretary-General's Report	2
Officers and Council of the IOMP	2
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Vice President's Report	6
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Letter From the President of IUPESM	8
Report From the Education and Training Committee (ETC)	10
Donations of Used Equipment	10
Report From AAPM International Scientific Exchange Programs Course/Workshop in Egypt	12
Request For Support International Scientific Exchange Program — The Physics of Radiation Therapy Cluj, Romania	12
Request For Support International Scientific Exchange Program — The Physics of Radiation Therapy Sao Paulo, Brazil	12
Managing Radium	12
Advertising Rates/ Order Form	13
Obituary — Harold Elford Johns .	16
Editor's Corner — Maria Sklodowska-Curie's Achievements — Part II	18
International Conference on Medical Imaging, Medical Physics and Precision Radiation Therapy	20
Calendar of Events	20
Medical Physics Events Calendar .	20
International Organization For Medical Physics Corporate Affiliates, 1998	21
Honoary Treasurer's Report	22
IOMP Libraries Program Report .	23

Secretary-General's Report

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Electronic Communications Initiative

Since my last report, the IOMP has restructured and moved the IOMP homepage (<http://www.iomp.org/>) to a host computer at the Headquarters of the American Association of Medical Physicists in Medicine in Washington, DC. The professional AAPM webmaster now maintains the IOMP site on a secure computer facility and the homepage is directly under the direction of the IOMP Secretary-General. This move gives IOMP greater long-term stability as well as increased responsiveness to change. The global intent of the new IOMP web page design is to open the business of the Organization to participation of medical physicists from all member countries. Individual pages for each member nation improves international awareness of worldwide developments and activities in medical physics. At the time of this writing 27 of 69 member nations have replied and placed information of their activities on the IOMP homepage and I hope to have information from all countries by the end of the year. Each of you with internet access has the most recent information concerning international medical physics available on demand day or night—use it!

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(Continued on page 6)

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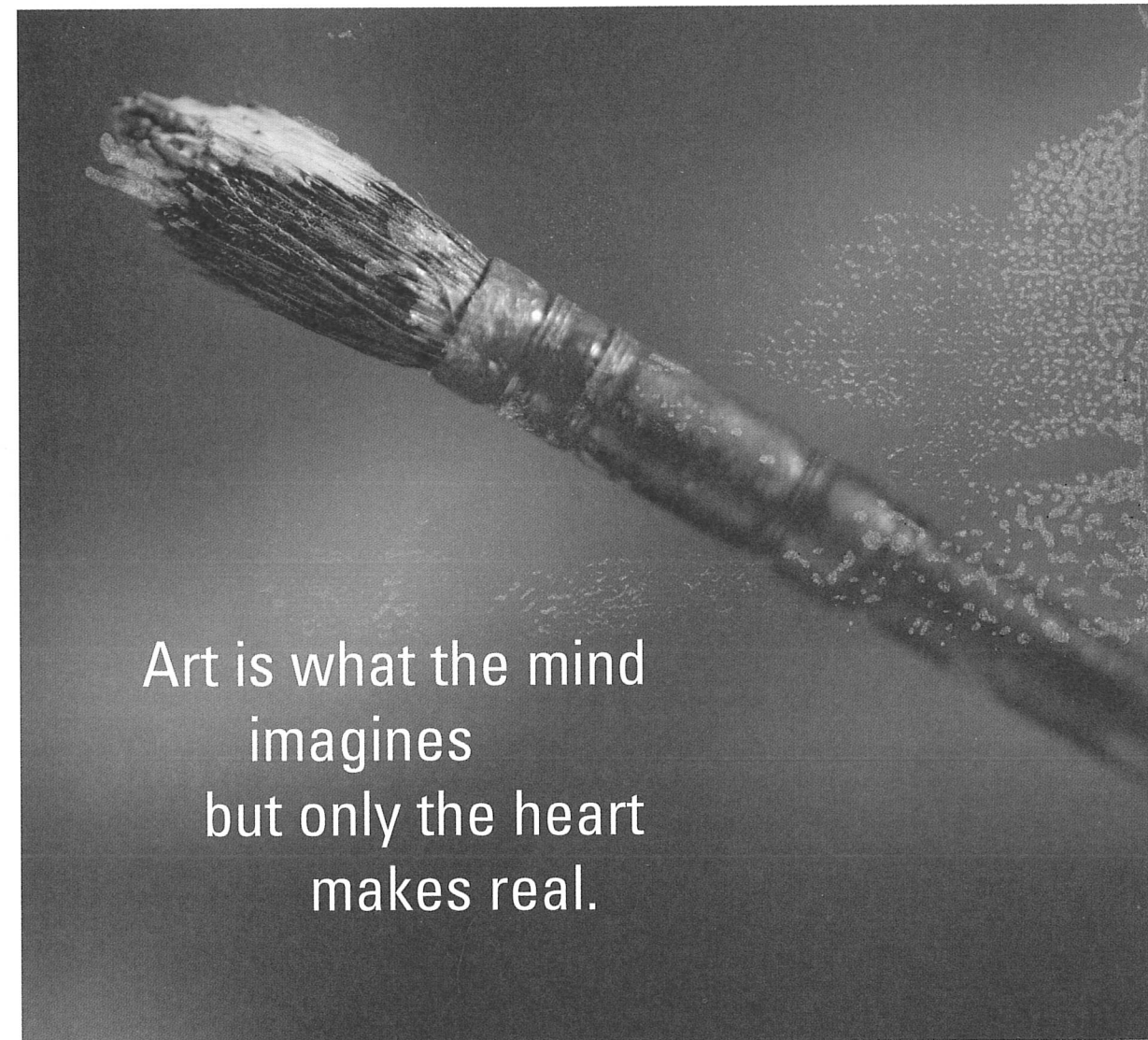
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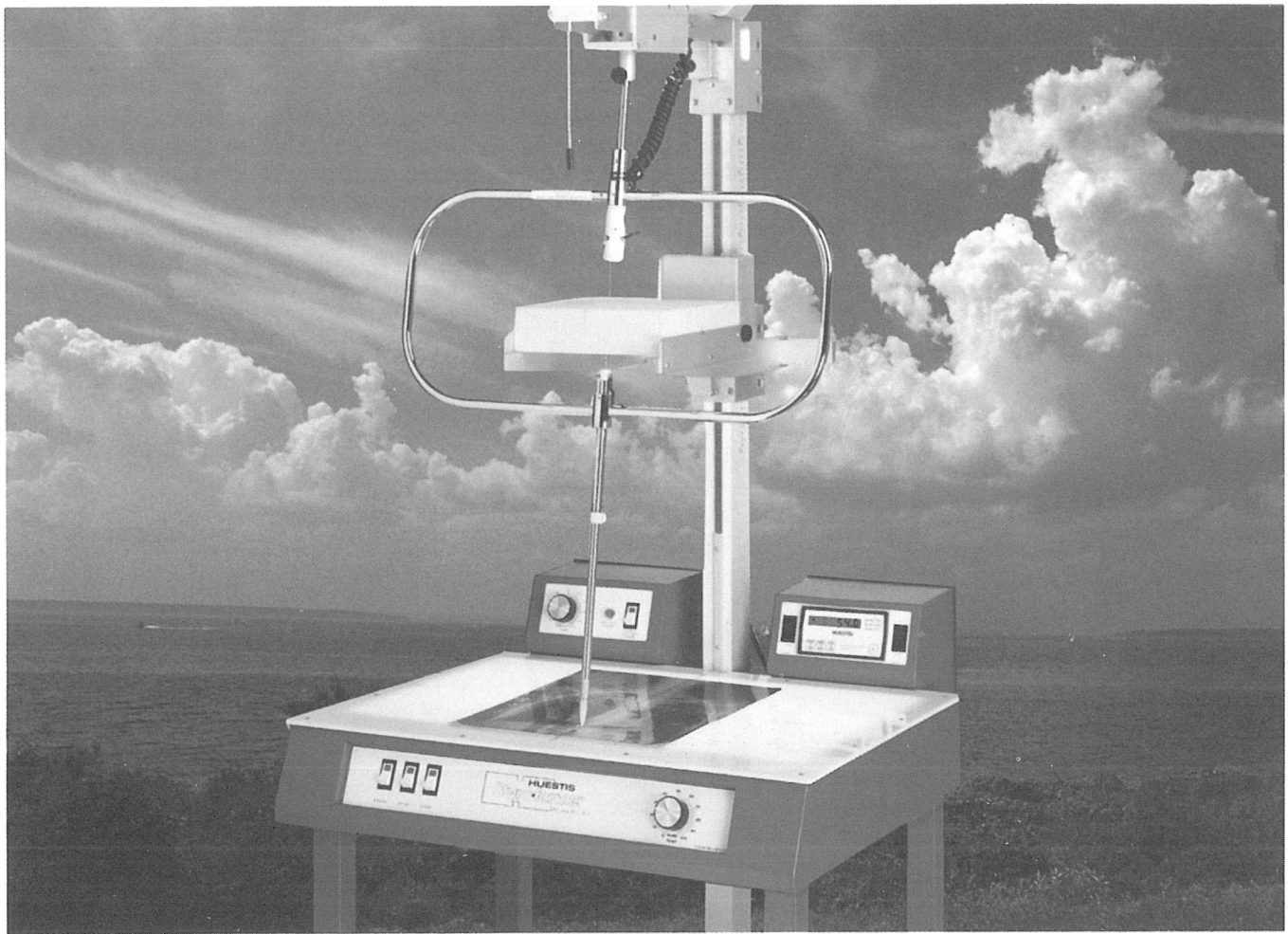
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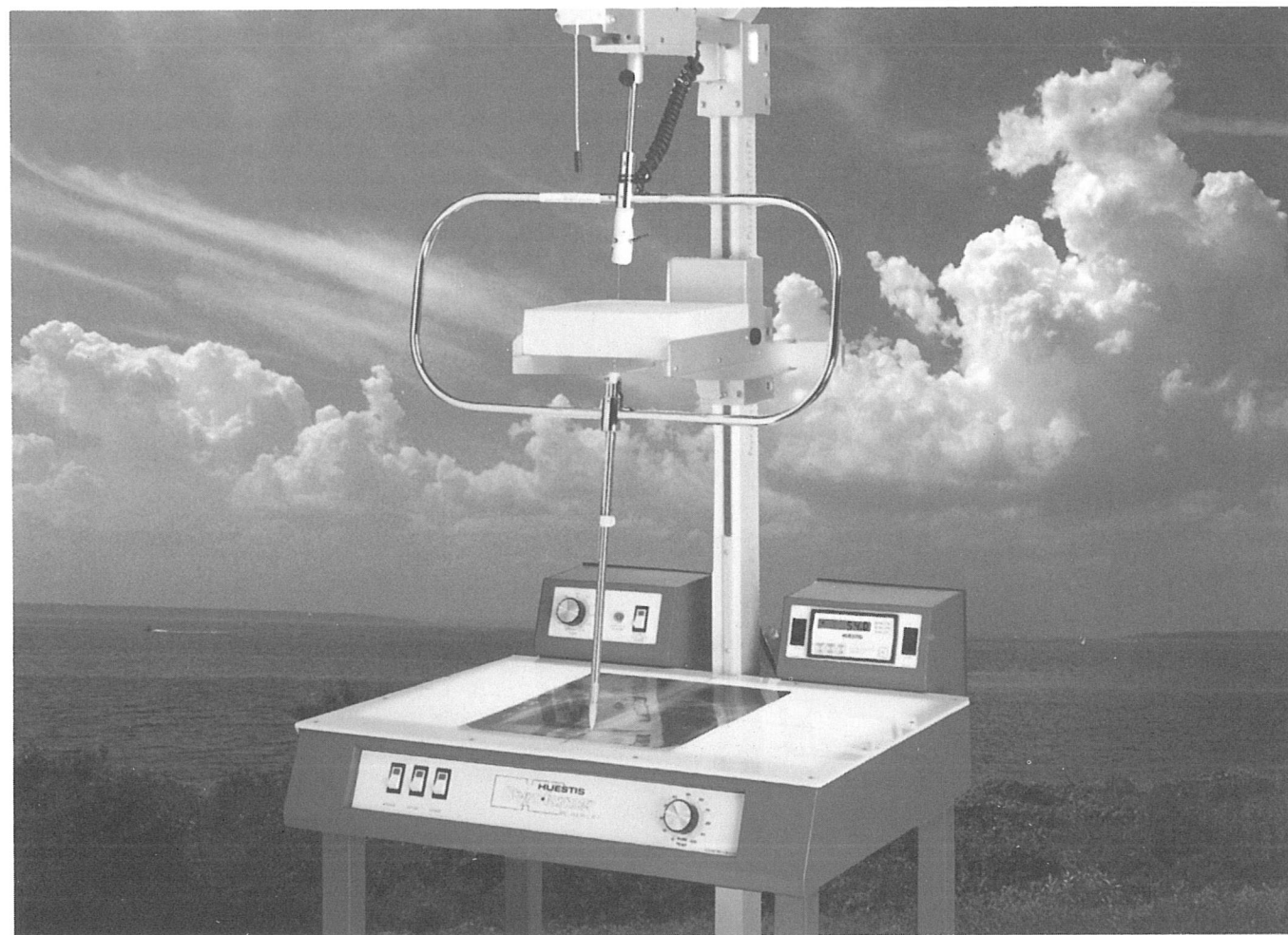
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Scientific Program Plans Underway for Chicago '2000 World Congress

The next World Congress of Medical Physics and Biomedical Engineering will be on July 23-28, 2000 in Chicago, Illinois. This triennial World Congress is a joint effort of six societies (*International Union for Physics and Engineering Sciences in Medicine, International Federation for Medical and Biological Engineering, International Organization for Medical Physics, American Institute for Medical and Biological Engineering, American Association of Physicists in Medicine, and the IEEE Engineering in Medicine and Biology Society*). The Congress also has collaboration commitments from twenty-two other scientific and educational organizations. On the basis of these partnerships, the Organizing Committee now predicts Chicago '2000 attendance in excess of 8,000 at the first World Congress of this type in the USA since 1988.

The theme for the Chicago '2000 is "Global Information Networking for the Twenty-first Century." The information technology theme includes uses and impact on research, education, and patient care. The theme will be reflected in the opening session, plenary sessions, panel discussions, and other invited presentations throughout the week. The Scientific Program will include approximately 1,500 scientific presentations over a five-day period. International peer review committees will select presentations from submissions by physicists and engineers throughout the world. Although several sessions of scientific presentations will be devoted specifically to information networking, presentations will cover the entire scope of current topics in medical physics, medical and biological engineering.

For the first time in World Congress history, the submission, selection, and distribution of program information

for the year 2000 meeting will be entirely electronic. An International Advisory Committee has been formed to ensure, among other objectives, that all submitters have access to the technology to use electronic submissions to the program. The Scientific Program Executive Committee will work closely with the International Advisory Committee to ensure that the needs and interests of Chicago '2000 participants from all countries are incorporated into the planning process.

Chicago '2000 Co-Presidents, Bill Hendee and Al Potvin, formed the Scientific Program Executive Committee in 1995. It consists of two medical physicists, Russ Ritenour, and Bruce Thomadsen, and three Biomedical Engineers, John Enderlee, Joe Bronzino, and Morton H. Friedman. The Executive Committee has defined the overall scientific program and is working with the various organizing and collaborating societies to form a 30 member General Scientific Program Committee (GSPC). The GPSC, which will be hard at work by early 1999, consists primarily of the chairs and co-chairs of the various program tracks, or subject areas. The track chairs and co-chairs have responsibility for reviewing and selecting proffered papers and subdividing the program tracks by detailed subject area as needed.

A Preliminary Scientific Program along with a wealth of other information about Chicago '2000 and the participating societies is found on the official web site for the meeting www.wc2000.org. Comments or suggestions for improvements are welcome.

Russell Ritenour, Chair
Scientific Program Executive Committee
riten001@tc.umn.edu
Phone: (612) 626-0131, Fax: (612) 626-1951
www.drad.umn.edu/faculty/ritenour

Vice-President's Report

I am more and more inclined to think that my role as Vice-President of IOMP resembles that of the US Vice-President: being kept informed and having, in fact, not so much to do since everything of importance is in the hands of the President, Colin Orton, and the indefatigable Secretary-General, Gary Fullerton. What remains is dealt with by the Chairpersons of the respective Committee, especially by Azam Niroomand-Rad of the ETC.

Still, I have been able to add my modest comments to the ideas and initiatives developed and implemented by the above persons. In addition, as a Chairman of the DCC of IUPESM, I have tried unsuccessfully to obtain current information on the activities of the Developing Countries Committees of the IOMP and IFMBE.

On the other hand, I have published and distributed to old and new recipients 200 copies of the latest issue (No. 11) of the DCC Bulletin *Medical Physics and Biomedical Engineering* on behalf of the IUPESM with the financial support from the IOMP (\$400.00).

Oskar A. Chomicki, Ph.D.
Vice-President, IOMP

(Continued from page 1)

Finally, let me express my appreciation for the efforts of the Chairs of our Education and Training and Developing Countries Committees, Azam Niroomand-Rad and Andries Van Aswegen, and Curator of IOMP Developing Countries Libraries Marilyn Stovall, for their outstanding work on our behalf. I know how many hours of voluntary work they have devoted to their programs. They deserve our thanks and our support.

Colin G. Orton, Ph.D.
President, IOMP

(Continued from page 2)

6. Students in developing countries will have the right to download and duplicate any or all of the chapters referenced in the GOMPs textbook without charge. 7. The procedure provides Publishers with direct access to the global medical physicist membership of IOMP (69 countries and \times 16,000 members in 1998). 8. It is anticipated that this on-line exposure will significantly improve the marketing of medical physics in-print textbooks and improve the quality of commercial medical publications by increasing the global market size. 9. It is anticipated that this procedure will provide acceleration in the rising level and uniformity of quality of contemporary medical physics support available in all countries. 10. It is anticipated that contemporary medical physics educational materials will be available to students in all countries. The first portions of the GOMPs textbook will be available in 1999.

Authors wishing to participate in this project should contact the IOMP Secretary-General.

Gary D. Fullerton, Ph.D.
Secretary-General, IOMP

Report From the Developing Countries Committee (DCC)

I am glad to report that the Committee has been set up and has commenced with its work. The Committee members have been given responsibility for certain geographical regions according to the current IOMP membership. The following are the members and their regions:

Name	Country	E-mail
Ms. Mariana de Cabrejas	Argentina	macabre@cnea.edu.ar
(South & Central America): Argentina, Brazil, Chile, Columbia, Cuba, Ecuador, Mexico, Panama, Trinidad & Tobago, Venezuela.		
Dr. Stelios Christofides	Cyprus	scstelios@cytanet.com.cy
(Middle East): Bulgaria, Cyprus, Georgia, Greece, Jordan, Turkey.		
Dr. Kwan-Hoong Ng	Malaysia	dwlng@tm.net.my
(South East Asia & Far East): Hong Kong, Indonesia, Korea, Malaysia, People's Republic of China, Republic of the Philippines, Thailand.		
Dr. Abdus S. Mollah	Bangladesh	asmollah@dhaka.agni.com
(Indian subcontinent & surrounding countries): Iran, India, Pakistan, Russia, Sri Lanka.		
Dr. Marta Radwanska	Poland	radwanska@novell.ftj.agh.edu.pl
(Eastern Europe): Estonia, Hungary, Lithuania, Moldova, Poland, Romania, Slovenia, Ukraine.		
Dr. Habib Zaidi	Switzerland	hzaidi@dmnu-pet5.hcuge.ch
(Northern Africa): Algeria, Ghana, Morocco, Nigeria, Sudan.		
Dr. Wynand Strydom	South Africa	wjstry@mcd4330.medunsa.ac.za
(Central & Southern Africa): South Africa, Tanzania, Zimbabwe, Zambia.		

An important task of the Committee is organizing the dispatch of donated equipment to recipients in the various countries. In this regard Mohammed K. Zaidi (zaidimk@inel.gov) is actively involved and is doing excellent work. A report on available equipment is given in this issue of *MPW*.

The other Committee members are Dr. Marilyn Stovall (mstovall@notes.mdacc.tmc.edu) and Ms. Ann Dixon-Brown (brownas@rdd-phru.cam.ac.uk) who are responsible for the IOMP Libraries program and the IOMP Twinning program respectively.

The full address of the Committee members are available on the IOMP website.

Any requests or suggestions on possible help from the DCC will be highly appreciated. Please contact the Committee member in your region or myself directly.

Andries van Aswegen, Ph.D.
Chair, DCC

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Dr. Stelios Christofides	Cyprus	stselios@cytanet.com.cy
(Middle East): Bulgaria, Cyprus, Georgia, Greece, Jordan, Turkey.		
Dr. Kwan-Hoong Ng	Malaysia	dwlng@tm.net.my
(South East Asia & Far East): Hong Kong, Indonesia, Korea, Malaysia, People's Republic of China, Republic of the Philippines, Thailand.		
Dr. Abdus S. Mollah	Bangladesh	asmollah@dhaka.agni.com
(Indian subcontinent & surrounding countries): Iran, India, Pakistan, Russia, Sri Lanka.		
Dr. Marta Radwanska	Poland	radwanska@novell.ftj.agh.edu.pl
(Eastern Europe): Estonia, Hungary, Lithuania, Moldova, Poland, Romania, Slovenia, Ukraine.		
Dr. Habib Zaidi	Switzerland	hzaidi@dmnu-pet5.hcuge.ch
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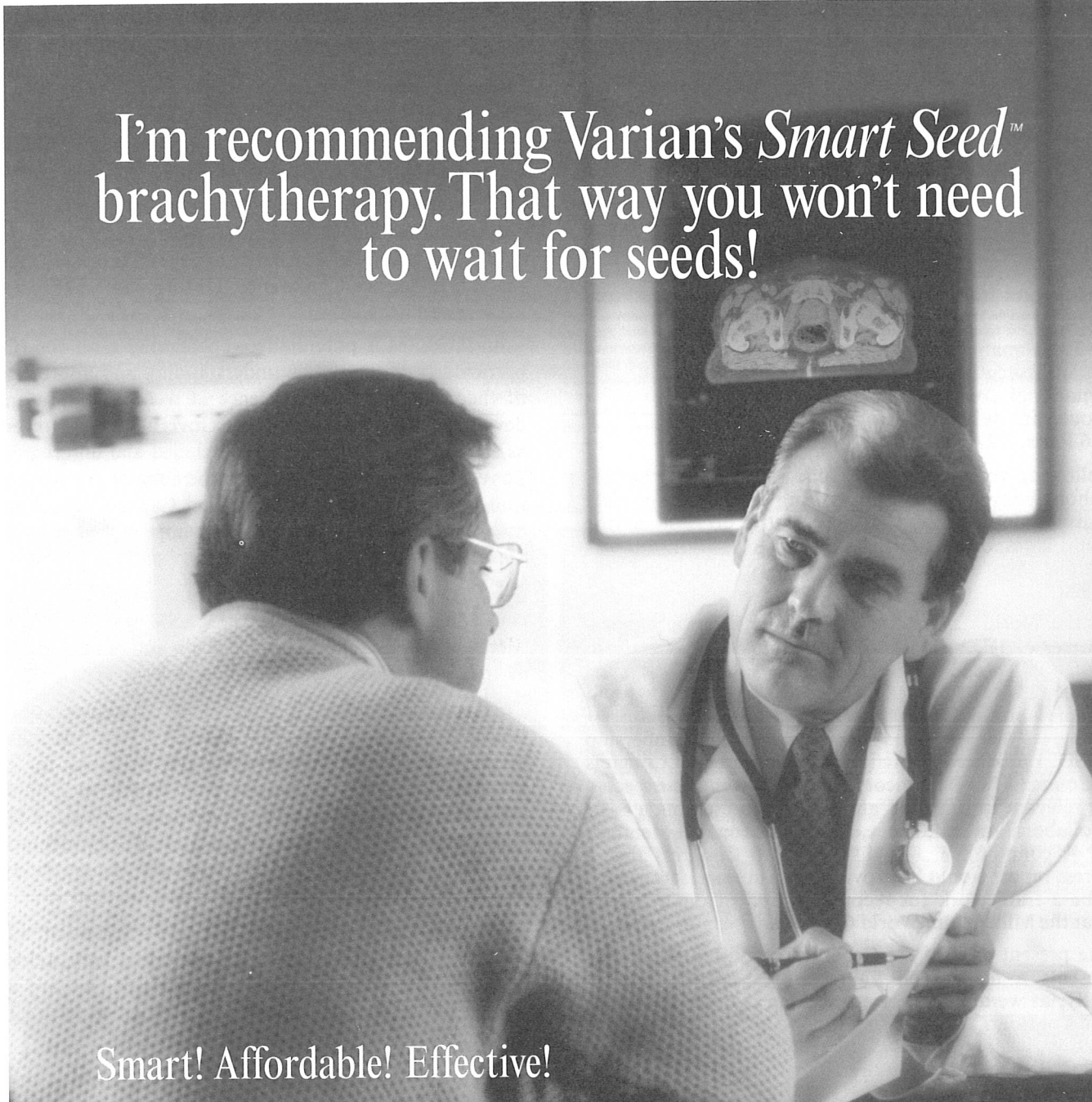
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Andries van Aswegen, Ph.D.
Chair, DCC



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Letter From the President of IUPESM

29 September, 1998

Dear Colleagues,

Negotiations with the International Council of Scientific Unions (ICSU), seeking Full Membership of IUPESM, are continuing. The current situation is encapsulated in my recent letter to the Assistant Executive Director of ICSU (to be known in the future as the International Council for Science). To provide you with an update, in a spirit of openness and with her approval, the letter is reproduced here.

Mrs. T. Bahmani Fard,
Assistant Executive Director,
International Council for Science,
51 Boulevard de Montmorency,
75016 Paris, FRANCE

Following your letter of 15 June 1998 and our helpful telephone conversation, I am writing to express formally the disappointment of IUPESM at the decision of the General Committee "that the Associate relationship was the most appropriate method of cooperation at the moment."

At the World Congress last year, many national representatives of IUPESM and its constituent organizations, IOMP and IFMBE, questioned the value of Associate Membership of ICSU and indeed whether it should continue. As the incoming President, I gave a commitment to Congress that we would seek urgently Full Membership of ICSU. I produced an Action Plan, endorsed by Congress and Council. The Plan incorporates programmes expected to be relevant to IUPESM and ICSU, representing a basis for collaboration and, hence, a rationale for Full Membership. A commitment was also given to Congress that a progress report would be provided in Autumn 1999, which will be a framework for reconsideration of our relationship at the Millennium World Congress.

The present view of the General Committee, therefore, represents a major and unpromising set-back. Consequently, as we discussed, I am seeking that the Executive Board considers further our proposal so that, on mature reflection, it might feel able to recommend to the General Committee and General Assembly that IUPESM should become a Full Member of ICSU/ICS. A copy of our previous submission is attached for completeness.

Factors which might form the basis for this reconsideration include the following:

1. ICSU and IUPESM both attach high priority and importance to public (and Government) understanding of science and its benefits for mankind. With due respect to all the Unions, the exploitation of science, engineering and technology by IUPESM can probably be best understood and appreciated by the public, who can identify with and support its immediately demonstrable benefits for their health and disabilities. IUPESM is, therefore, potentially a major asset of ICSU as a "jewel in the (public) crown." A key topic of our programmes focuses on this issue. We have proposed collaboration with ICSU and are awaiting a constructive response.

2. Another priority topic on the agenda of both IUPESM and ICSU is that of developing and emerging countries. Programmes submitted in support of our proposal for

Full Membership are specially tailored for the needs of developing countries in education, training and continued professional development; global biomedical information networking; Health Technology. Although IUPESM's Constituent Organizations are making commendable progress, if ICSU accepted the invitation for collaboration it could give additional stature and support.

3. Following an encouraging conversation with Dr. Stuyck-Taillandier, the enclosed letter was sent in June proposing collaboration between IUPESM and ICSU at the World Science Conference. Unfortunately, I have not yet received a response.

4. IUPESM is potentially a substantial asset for ICSU particularly in the public understanding and appreciation of the direct benefits of science as well as in relation to developing countries (and their Governments). However, as an Associate, IUPESM feels excluded and unrecognized. For example, your letter stressed the hope of our participation in the new ICSU Program on Capacity Building in Science. In addition, I have been approached by a Full Member Union suggesting collaboration.

I strongly suggest that maximum value and benefit could be obtained mutually if IUPESM were to be a Full Member of ICSU, able to participate and contribute fully as an equal partner rather than on the periphery.

Consequently, I shall be grateful if your Executive Board could reconsider the status of our relationship urgently and, hopefully, endorse our proposal for Full Membership. Such a positive step would undoubtedly increase the commitment and enthusiasm of IUPESM's Constituent Organizations and National Representatives and facilitate both a positive Progress Report in 1999 and outcome at the Millennium World Congress.

Frankly, have described IUPESM's potential value to ICSU and made several apparently very relevant proposals on which a response is awaited, we are at a loss to know what more is required of us to secure Full Membership.

As always, your helpful assistance and that of Dr. Stuyck-Taillandier is greatly appreciated.

With my best wishes and kindest regards.

Yours sincerely,

Professor Keith Boddy, CBE, DSc, FRSE.
President

Copies to:

Dr. Stuyck-Taillandier
IUPESM Council Members

Although I will continue to make every effort and persevere, obviously a successful outcome cannot be assumed. In twelve months, I will provide a frank and detailed report to form the basis of our discussion at the Millennium World Congress on the future of our relationship with ICSU/ICS and, perhaps, even IUPESM itself.

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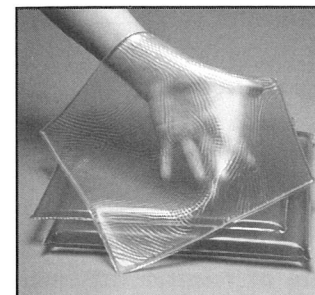
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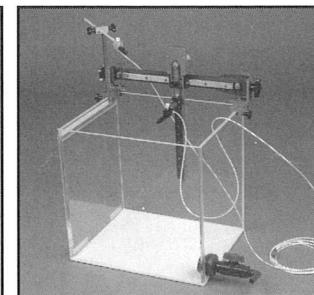
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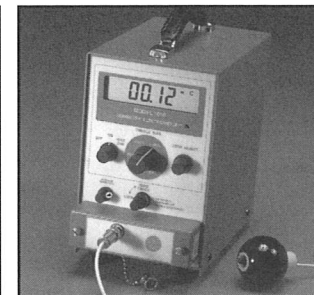
MEDICAL PHYSICS TOOLS



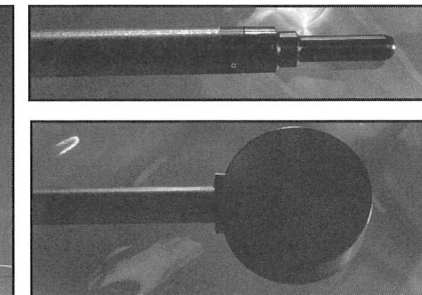
Bolus-I and Bolus-II bolus
These bolus sheets are made from a solid, homogeneous, tissue-equivalent gel with a density of 1.03g/cc. Ideal for radiotherapy applications above 1MV. Bolus-I is encased in a tough layer of thin plastic skin. Bolus-II is "skinless" for greater conformity to steep body contours.



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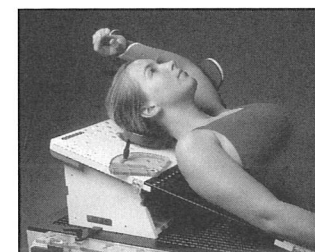


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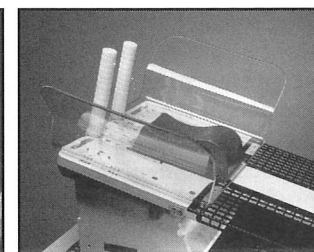


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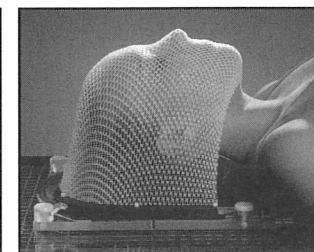
PATIENT POSITIONING



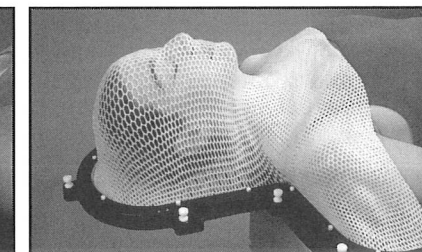
Breastboards
Our breastboards truly "set the standard" for accurate and repeatable patient set-ups and patient comfort. Our popular MT-250 breastboard (shown above) features rigid, radio-transparent carbon fiber grid treatment panels and your choice of head supports, arm positioning options, and elevation systems. *Ask about our NEW lightweight, durable carbon fiber breastboard*



Wing Board™
This lightweight, comfortable, economical device supports a patient's arms and elbows at approximately 30° with hands overhead. Shown here mounted to our MT-250 breastboard for additional patient set-up flexibility and comfort. The Wing Board is also available with an overhead arm positioner/hand grip for enhanced positioning accuracy.

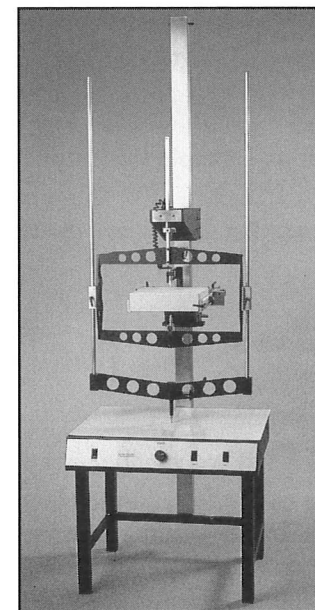


Uni-frame®
The easiest-to-use head and neck positioning system on the market, the Uni-frame system features low-temperature thermoplastic bonded to a rigid U-frame for precision and control. Softened thermoplastic becomes rigid when cooled, creating an accurate mold of the patient's facial contours. Full line of baseplates available. New snap-in reloadable Uni-frame saves time and money!

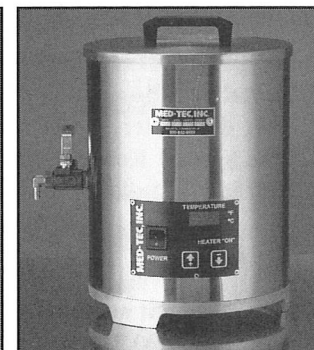


Type-S™ head & shoulders system
This unique new system provides maximum head and upper body fixation by capturing the head, neck, and shoulders under a continuous thermoplastic sheet. Features snap-in reloadable thermoplastic and a carbon fiber grid baseplate, making this the most cost-effective, accurate, and user-friendly head and shoulders system available.

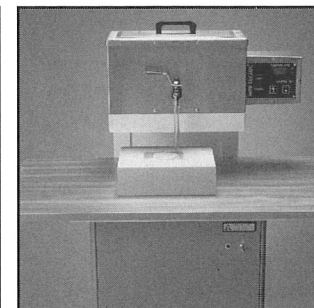
CUSTOM BLOCKING



FC/2000 hot-wire cutter
Advanced features and precision construction make our new FC/2000 hot wire cutter easy to operate. Minimizes the need for tolerance adjustments to ensure precision foam blocks.



Production alloy melters
Our durable shielding-alloy melters have a heavy-gauge stainless steel inner and outer wall construction, full-wrap ceramic heaters, and heated no-drip ball-valve dispenser. Both 1.5 gallon and 3.0 gallon melters feature exclusive push-button programming temperature control and digital temperature readout. Can be used with either 158° F low-melt alloy or 203° F medium-melt cadmium-free alloy.



Block casting systems
An efficient system for producing quality shielding blocks, our MT-550 casting system features a solid-state electronic alloy melter mounted on a flat refrigerated cold plate. The alloy melter has a digital readout, push-button programming, and ball-valve dispenser. Cooling plate is precision-surfaced and will accommodate 3-4 blocks at once. Optional built-in vibrator improves block homogeneity and speeds up the block solidification process.



Shielding alloy and Flat-foam™
We offer certified composition shielding alloy in both 158° F low-melt and 203° F medium-melt (cadmium free) at guaranteed lowest prices. Our Flat-Foam Dow® oncology foam is a high-quality 40 PSI foam designed to provide a flat and parallel surface — essential to the shielding block pouring process. Plus, we carry a complete line of mold room equipment and accessories.

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Report From the Education and Training Committee (ETC)

ETC Policies and Procedures for Supporting Educational and Training Programs

The objectives of the International Organization for Medical Physics are to organize international cooperation in medical physics and allied subjects. The Education and Training Committee addresses these objectives by assisting with the promotion of internationally sponsored Education and Training Programs co-sponsored by IOMP National Member Societies and/or Regional Organizations as well as other countries (non-member) that seek our assistance.

Following are the ETC policies and procedures for supporting such programs:

General Procedure:

1. An Application Form for ETC support (available on the IOMP web site or from the Secretary-General) should be submitted by the Program Director to the ETC member representing that country/region as early as possible, preferably one year prior to the program date.
2. The request for sponsorship or financial support will be reviewed by the regional member of the ETC and recommendation of approval will full funding, partial funding, or disapproval will be submitted to the ETC Chair. Upon review of the regional member's report, the ETC members will vote to approve (or modify) the recommendation.
3. The Application Form and the Committee's final recommendation will be submitted to the IOMP Secretary-General by the ETC Chair for official consideration and authorization by the IOMP Officers. This should be completed as early as possible, at least six months prior to the program date.
4. The final recommendation will be communicated to the Program Director by the Chair of the ETC (or the regional member involved).

General Requirements:

1. Any request for financial support should have a detailed statement as to how the organizers plan to utilize the IOMP funds.
2. A post meeting report is obligatory within two months after the program date.
3. No vendor's presentation is allowed during any scientific program sponsored by the IOMP unless it is scientific and is presented by a medical physicist/scientist.
4. Registration fees for the IOMP members participating from developing countries (a list appears on the IOMP web site) should be the same as the registration fees for local participants.

Priorities for Financial Support:

Preference is given for funding educational and training programs which promote *the greatest benefit to the largest number* of medical physics participants. This is best demonstrated by written support from the IOMP National Member(s) or Regional Affiliate, whichever is appropriate, if such organizations exist. In order of priority, funding will be considered for:

1. Local expenses for organizing regional courses/workshops involving more than one country.
2. Local expenses for organizing a course/workshop for a single country.

3. Local expenses for organizing regional/local conferences that include at least a one-day course/workshop.
4. Travel expenses of faculty responsible for generating a major portion of the regional/local course/workshop.

Exclusions for Financial Support:

1. A non IOMP member; except countries with pending IOMP Membership Application.
2. A country cannot receive second grant in any three-year period.
3. Conferences in the form of research presentations without course/workshop shall not be supported. These applications should be submitted to the Science Committee.
4. Travel expenses of individuals for attending or presenting a research conference shall not be supported.

IOMP effort to Promote Medical Physics Education Worldwide

IOMP Education and Training Committee is compiling information about graduate and training programs worldwide. The global listing of graduate education programs in medical physics is an aid to both students and professionals in medicine. Direct links to web pages for graduate programs provides easy access for students wishing to locate study opportunities. The global survey of interconnected programs also provides a quick introduction for medical professionals to the level and extent of education, professional training and research training required for well-trained medical physicists.

Program information will be posted on the IOMP web site (www.iomp.org) as they become available. Thus far, we have received information from Columbia, Ecuador, Philippine, Poland, South Africa, Thailand, USA (Detroit and San Antonio), and Venezuela. To help in this endeavor Program Directors should fill out the information form (available on the IOMP web site) and return it by e-mail to Gary Fullerton, IOMP Secretary-General.

Azam Niroomand-Rad, Ph.D.
Chair, ETC

Donations of Used Equipment

This equipment is needed:

- Rectal monitor, cavity chamber, portal imaging device, film dosimeter, TLD reader, radiation field analyzer, CT, Virtual Reconstruction or a simple simulator for a hospital in India.
- A used gamma camera operating in a spect mode for Algeria.

This equipment needs a home:

- A 300 and 400 Theraplan system.
- A Co-60 machine with 3KCi source.
- Kellket Superficial X-ray machine.
- Beam monitoring Keithley 35060.

They are in good working condition and recipient has to pay for shipping and handling. For more information contact: Mohammed K. Zaidi, MS, Tel. 208-526-2132, Fax: 208-526-2548, E-mail: zaidimk@id.doe.gov.

PIPSpro

Portal Image Processing System

PIPSpro is a software programme specially developed for the processing of medical images, and particularly for enhancing, analysing, and displaying portal images in radiation therapy. It runs on any PC computer using Microsoft Windows 3.11, 95 or NT, and can import images from film digitisers, electronic portal imaging systems, and other sources of medical images. Many sophisticated and powerful enhancement and analysis routines are provided, but PIPSpro is very easy to use and lives up to our motto: "Image Processing Made Easy". Optional modules are available for Quality Control, Dosimetry, Movie Display, and Dewarping.

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Morphological operations
Custom filters

Analysis

Measurements
Histograms
Profiles
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Fiducial point analysis
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Chamfer matching
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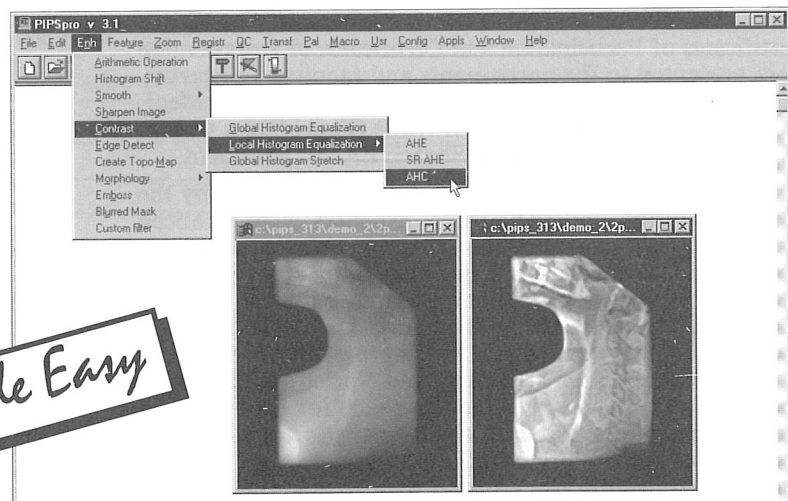
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Report From AAPM International Scientific Exchange Programs Course/Workshop in Egypt May 10-14, 1998

The 7th AAPM/IOMP Scientific Exchange Course/Workshop in Radiation Therapy Physics was held successfully in Cairo, Egypt, May 10-14, 1998. The Course/Workshop was co-sponsored by the International Organization for Medical Physics (IOMP) Education and Training Committee. The objectives of this course/workshop were to exchange information concerning medical physics profession and to present advanced radiation therapy physics to clinical physicists in Egypt and nearby countries.

The Course/Workshop was offered in collaboration with the Egyptian Association of Medical Physics, EAMP at the Kast El Eimi Center of Oncology and National Cancer Institute in Cairo, Egypt. Professor Ahmed Shafei, President of EAMP was the Host Director and Dr. Nader Sherbiny, Ms. Zeinab el Taher, and Mr. Kasem Abd El Halim (EAMP Treasurer) were the organizers of this Course/Workshop. The AAPM faculty were Drs. Madjid Aissi, Leroy Humphries, Faiz Khan, Azam Niroomand-Rad, Bhudatt Paliwal, and James Purdy. In addition, Dr. Nisar Syed and Dr. Aly Razek presented some clinical aspects of this program. About 92 medical physicists and radiation oncologists attended this Course/Workshop.

The Course/Workshop also included calibration of photon and electron beams as well as chamber calibration intercomparison. Eight electrometers and 14 ion chambers were intercompared using Co-60 beam and CNMC dosimetry equipment that had been calibrated by the AAPM, ADCL at the University of Texas MD Anderson. There cobalt machines, one 18MV and one 6 MV photon beam and one electron beam were calibrated using AAPM TG-21. Calibration discrepancies up to 10% were detected and resolved. A total of 28 Khan's books, with author's discount, and 10 AAPM reports and monograph were also donated to the major radiation therapy centers in Egypt. Certificates of Participation and Certificates of Appreciation were presented to the participants and faculty. The certificates were signed by Drs. Rothenberg, AAPM President, Azam Niroomand-Rad, AAPM ISEP Chair, Colin Orton, IOMP President, and Ahmed Shafei, EAMP President.

The local expenses of the faculty were supported by the Host Institution and their travel expenses were financed by funds provided by the AAPM, Medical Physics Foundation, and vendors. **Corporate Sponsors (+\$1,000)** were CNMC Company, Computerized Medical Systems (CMS), Cook Inc., Hek Medizintechnik, GmbH, and Varian Oncology Systems. **Contributors (\$100-499)** were Argus Software, Huestis Medical, and Nucletron. Corporate Sponsors were offered a table-top space for exhibition of their products in a room adjacent to the lecture hall. We are grateful to these organizations and companies for their generous contributions. We also wish to acknowledge the commitment and effort of Drs. Aissi, Shafei, Sherbiny, Ms. Zeinab el Taher, and Mr. Kasem Abd El Halim in the past few years in organizing and implementing this Course/Workshop as well as the effort of the local organizing committee staff in Egypt. We also like to thank Dr. Humphries for donating his time and expertise repairing dosimetry equipment and to the AAPM faculty for volunteering their time and effort in this endeavor.

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Chair, AAPM International Scientific Exchange Programs Chair, IOMP Education and Training Committee

*Pakistan (1992), Poland (1993), Iran (1994), Turkey (1995), Morocco (1996), Russia (1997).

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INTERNATIONAL SCIENTIFIC EXCHANGE PROGRAM
THE PHYSICS OF RADIATION THERAPY

Cluj Cancer Institute — Cluj, Romania — June 10-14, 1999

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Managing Radium

For much of this century, radium sources were widely used in medical and industrial applications all over the world. Because of radium's unfavorable characteristics, almost all countries now have stopped using the sources. About 30,000 spent radium sources now need to be safely stored and managed—many of them in the developing world. Radium's long half-life means that the sources eventually need to be disposed of in deep geological repositories, which are not available yet. For many years, the IAEA has been giving advice to countries on how radium sources can be conditioned for safe storage, pending their final disposal. But many countries do not have the technical infrastructure needed to ensure that the conditioning operation can be done properly and with the necessary quality assurance.

To address problems, the IAEA is providing hands-on assistance to developing countries that have stopped using radium sources. The approach involves the collection, treatment, and conditioning of all identified spent radium sources in a country by expert teams in a single campaign. The programme began in 1996 in the Latin American region, where four national campaigns now have been completed in Uruguay, Nicaragua, Guatemala, and Chile. One campaign in the Europe and East Asia region was successfully completed in Croatia in 1997. For the near future, the Agency will use a similar approach to establish expert teams in the African and Asian regions. Printed from: *IAEA Bulletin*, 40/1/1/1998.

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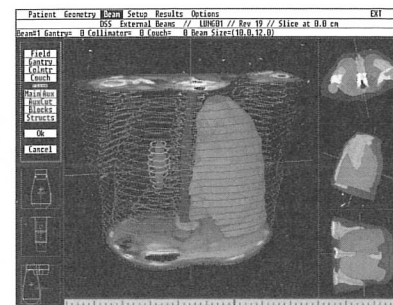
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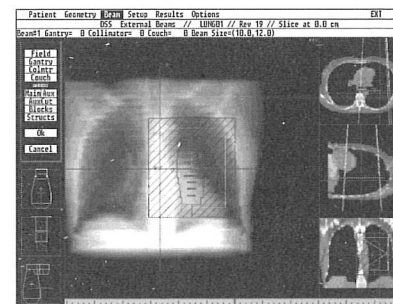


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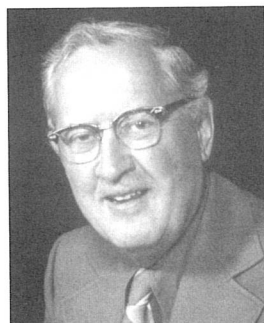
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Obituary

Harold Elford Johns

1915 - 1998

Dr. Harold E. Johns, a name synonymous with Medical Physics and respected around the world as a great Canadian scientist and humanitarian, died in Kingston, Ontario, Canada on August 23 at the age of 83, after a long, characteristically tenacious battle with Parkinson's disease.



He is remembered with love by his wife Sybil, daughters Gwen, Claire and Marilyn and their families, brothers Martin, Paul, Edward, sister Ruth and many relatives, friends and colleagues.

Harold was born in Chengtu, China of missionary parents, his father was a Professor of Mathematics at West China University. He obtained degrees in mathematics and physics at McMaster University and University of Toronto. After winning a scholarship to study under Dr. J. D. Cockcroft at the Cavendish Laboratory, Cambridge, the opportunity was dashed by the outbreak of the Second World War, and he spent those years as a Physics Professor at the University of Alberta and teaching fighter pilots at the Commonwealth Training Scheme. He then moved to Saskatoon where he pioneered the development of the Cobalt-60 Radiotherapy Unit, treating the first cancer patient in the fall of 1951. He moved to Toronto in 1956 where he headed the Physics Department of the Ontario Cancer Institute and founded the Department of Medical Biophysics, University of Toronto, where he remained until his retirement in 1980.

His early career in Medical Physics concentrated on radium dose calculations, depth-dose data for the University of Saskatchewan 22 MeV Betatron, and the physical aspects of cancer therapy, but he also did fundamental work on neutron cross-sections and electron range-energy relationships. With this background, he embarked on his most significant project to develop the world's first Co-60 cancer treatment unit, using a 1000 Ci source produced in the NRX reactor at Chalk River, Ontario, Canada, the results from which were first published in a letter to Nature in 1951. The seed for this idea came from a series of lectures by Prof. Val Mayneord, which he attended in Toronto in 1946. At the same time he and his graduate students were measuring the RBE for Betatron X-radiation, studying skin effects, calorimetry, developing clinical dosimetry and working on collimators and isodose distributions for therapy machines. Much of this accumulated knowledge and experience culminated in the publication of the first edition of "*The Physics of Radiation Therapy*" in 1953, and the subsequent second edition co-authored by Dr. Jack Cunningham in 1961 and renamed "*The Physics of Radiology*," which became the leading textbook in the field.

Johns realized that advances in radiation physics needed to be matched by those in molecular biology and biophysics, in order to better understand the effects of radiation on the tumour. With the complex nature of damage by ionizing radiation, he decided to explore the effects of UV damage on the cell. In 1960 he went on sabbatical to Cal Tech in California, USA to work in photobiology with Prof. Max Delbruck who later became a Nobel Prize winner.

H. E. Johns was instrumental in the discovery of thymine dimer photoproducts in DNA and their photoreactivation. This heralded a whole new career in molecular photochemistry and photosensitization, product analysis and reaction kinetics, and provided an impetus for scientific and clinical studies of phototherapy, photo-oxidative stress, energy transfer and photo-repair in biological systems.

Having made improvements to the physics and biology of cancer treatment, Johns realized that a third element was needed to help the oncologists better visualize and localize the tumour, in order to better direct the treatment beams and therefore improve the therapeutic ratio for killing cancer cells while sparing healthy neighbors. To achieve this end, he spent a sabbatical with Prof. Jack Boag in 1971 at the Royal Marsden in England to work on xeroradiography and the newly emerging field of imaging.

It is to his credit, and in part of his legacy, that the fruits of his many labours in all aspects of diagnostic and therapeutic radiology, medical physics, medical biophysics and imaging, continue to flourish at the OCI, across Canada and everywhere medical and scientific research is pursued by those who derived some benefit from the knowledge and inspiration of his life and work.

Johns was a team player, and believed that if a thing was worth doing, it was worth doing to the best of one's ability. He was a great teacher, a hard worker who brought out the best in all around him by his selfless example to excel. He transformed the Ontario Cancer Institute into a world class R&D establishment through exemplary personal dedication and perseverance. It is entirely through his efforts that the network of several generations of Medical Physicists has developed and continues to flourish. He created and fostered an open atmosphere of challenge and discovery that reflected his character and inquiring mind. He respected all those around him and encouraged them all to pursue any and every idea and support each other, whether by participating in the Student Seminars, visiting his office to report on progress or learn how to write a paper, membership in the Squash Ladder, or attending the Retreats at his cottage on Lake Boshkung.

During his career he published over 250 peer-reviewed papers, trained over 100 graduate students. He was a Fellow of the Royal Society of Canada, a member of the International Commission on Radiation Units and Measurements, and received many prestigious awards and honours, including medals from the British Institute of Radiology, Canadian Association of Physicists, Roentgen Society, Health Physics Society and American College of Radiology. From the American Association of Physicists in Medicine he received the William D. Coolidge Award in 1976, was the Schultz Lecturer and gave the Harold F. Batho Memorial Lecture in 1980.

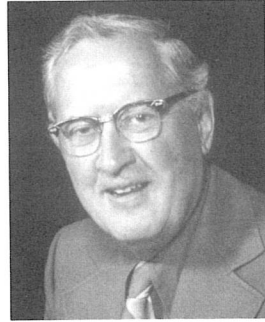
His greatest public accolade was his investiture in 1977 as an Officer of the Order of Canada, and he is being inducted into the Canadian Medical Hall of Fame on October 28, 1998. However, perhaps his greatest living legacy is the world-wide distribution in over 80 countries of an estimated 3,000 Cobalt-60 teletherapy units, two-thirds of which are built in Canada by AECL. These are estimated to have treated over seven million cancer patients.

The Medical Physics community honour his passing and acknowledge his many contributions. Harold E. Johns will long be remembered. Those who were privileged to meet him or whose lives were touched by him, admire his achievements, remember his great *joie-de-vivre*, and cherish his humanity and generosity.

Clive L. Greenstock
AECL, Chalk River, Canada

Obituary Harold Elford Johns 1915 - 1998

Dr. Harold E. Johns, a name synonymous with Medical Physics and respected around the world as a great Canadian scientist and humanitarian, died in Kingston, Ontario, Canada on August 23 at the age of 83, after a long, characteristically tenacious battle with Parkinson's disease.



He is remembered with love by his wife Sybil, daughters Gwen, Claire and Marilyn and their families, brothers Martin, Paul, Edward, sister Ruth and many relatives, friends and colleagues.

Harold was born in 1915 in Chengtu, China of missionary parents, his father was a Professor of Mathematics at West China University. He obtained degrees in mathematics and physics at McMaster University and University of Toronto. After winning a scholarship to study under Dr. J. D. Cockcroft at the Cavendish Laboratory, Cambridge, the opportunity was dashed by the outbreak of the Second World War, and he spent those years as a Physics Professor at the University of Alberta and teaching fighter pilots at the Commonwealth Training Scheme. He then moved to Saskatoon where he pioneered the development of the Cobalt-60 Radiotherapy Unit, treating the first cancer patient in the fall of 1951. He moved to Toronto in 1956 where he headed the Physics Department of the Ontario Cancer Institute and founded the Department of Medical Biophysics, University of Toronto, where he remained until his retirement in 1980.

His early career in Medical Physics concentrated on radium dose calculations, depth-dose data for the University of Saskatchewan 22 MeV Betatron, and the physical aspects of cancer therapy, but he also did fundamental work on neutron cross-sections and electron range-energy relationships. With this background, he embarked on his most significant project to develop the world's first Co-60 cancer treatment unit, using a 1000 Ci source produced in the NRX reactor at Chalk River, Ontario, Canada, the results from which were first published in a letter to Nature in 1951. The seed for this idea came from a series of lectures by Prof. Val Mayneord, which he attended in Toronto in 1946. At the same time he and his graduate students were measuring the RBE for Betatron X-radiation, studying skin effects, calorimetry, developing clinical dosimetry and working on collimators and isodose distributions for therapy machines. Much of this accumulated knowledge and experience culminated in the publication of the first edition of "The Physics of Radiation Therapy" in 1953, and the subsequent second edition co-authored by Dr. Jack Cunningham in 1961 and renamed "The Physics of Radiology," which became the leading textbook in the field.

Johns realized that advances in radiation physics needed to be matched by those in molecular biology and biophysics, in order to better understand the effects of radiation on the tumour. With the complex nature of damage by ionizing radiation, he decided to explore the effects of UV damage on the cell. In 1960 he went on sabbatical to Cal Tech in California, USA to work in photobiology with Prof. Max Delbruck who later became a Nobel Prize winner.

H. E. Johns was instrumental in the discovery of thymine dimer photoproducts in DNA and their photoreactivation. This heralded a whole new career in molecular photochemistry and photosensitization, product analysis and reaction kinetics, and provided an impetus for scientific and clinical studies of phototherapy, photo-oxidative stress, energy transfer and photo-repair in biological systems.

Having made improvements to the physics and biology of cancer treatment, Johns realized that a third element was needed to help the oncologists better visualize and localize the tumour, in order to better direct the treatment beams and therefore improve the therapeutic ratio for killing cancer cells while sparing healthy neighbors. To achieve this end, he spent a sabbatical with Prof. Jack Boag in 1971 at the Royal Marsden in England to work on xeroradiography and the newly emerging field of imaging.

It is to his credit, and in part of his legacy, that the fruits of his many labours is all aspects of diagnostic and therapeutic radiology, medical physics, medical biophysics and imaging, continue to flourish at the OCI, across Canada and everywhere medical and scientific research is pursued by those who derived some benefit from the knowledge and inspiration of his life and work.

Johns was a team player, and believed that if a thing was worth doing, it was worth doing to the best of one's ability. He was a great teacher, a hard worker who brought out the best in all around him by his selfless example to excel. He transformed the Ontario Cancer Institute into a world class R&D establishment through exemplary personal dedication and perseverance. It is entirely through his efforts that the network of several generations of Medical Physicists has developed and continues to flourish. He created and fostered an open atmosphere of challenge and discovery that reflected his character and inquiring mind. He respected all those around him and encouraged them all to pursue any and every idea and support each other, whether by participating in the Student Seminars, visiting his office to report on progress or learn how to write a paper, membership in the Squash Ladder, or attending the Retreats at his cottage on Lake Boshkung.

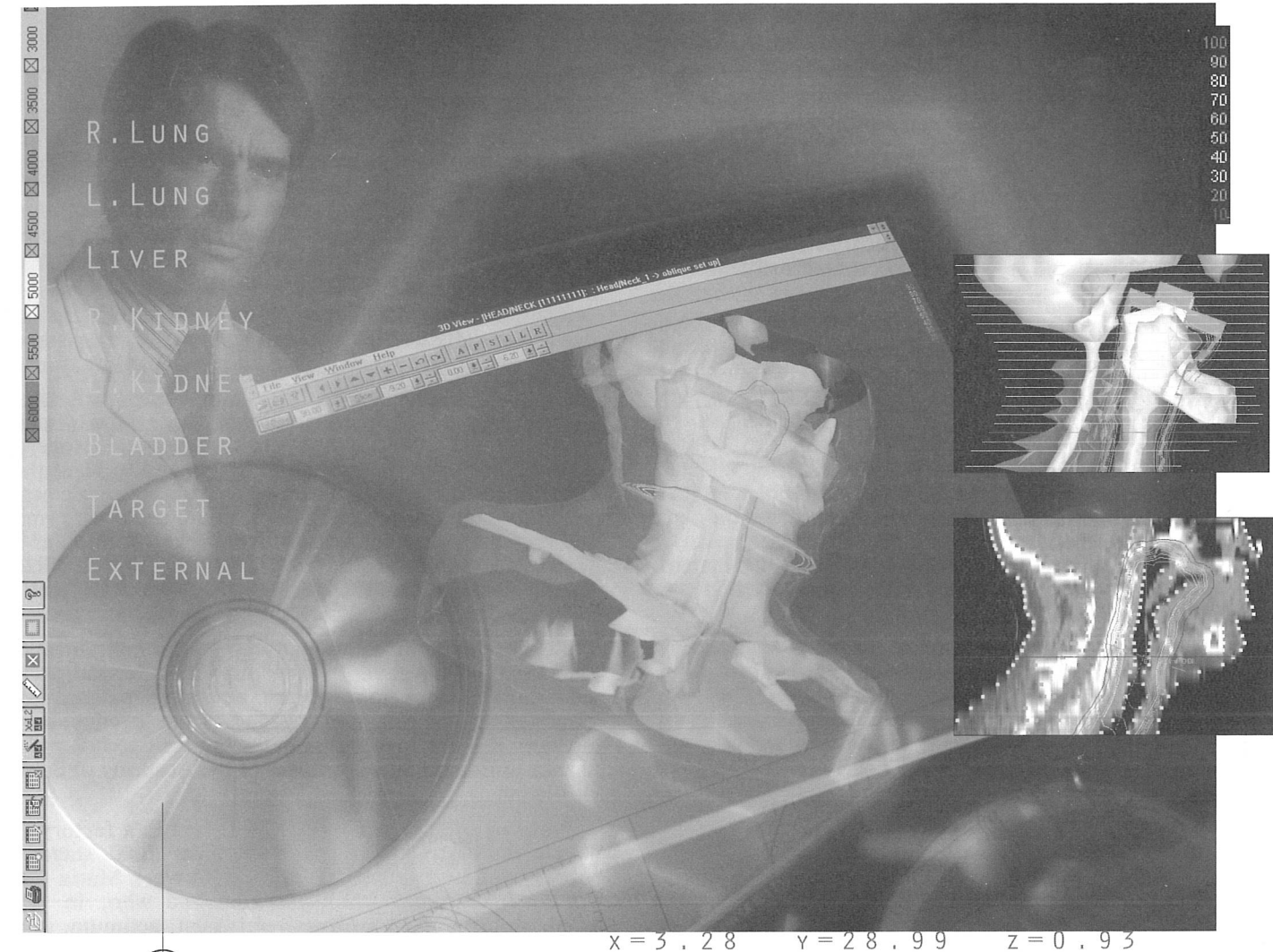
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Editor's Corner

Maria Sklodowska-Curie's Achievements - Part II

(Continued from MPW Vol. 14 (1), 1998, Page 14)

The First Stage (1896-1909): Great Discoveries

The great love of knowledge and aspirations to scientific career led Maria to the world's largest research centre, i.e. Sorbonne in France, where working far into the night and living virtually on bread and butter, and following lectures of several famous physicists of that time; Maria graduated with a diploma of a license in physical sciences in 1893, and in 1894 was placed second in the license of mathematical sciences.

It was at that time, that the accomplished and respected French scientist, Henri Becquerel, discovered penetrating radiation emitted by uranium and its salts. He found that this radiation had an effect on photographic plates and caused electrical conductivity of the air. He also noted that the new type of radiation was very similar to X-rays, discovered earlier by Roentgen. Maria Curie, as a sharp researcher, quickly observed that the new phenomenon could open up new vistas of research and discoveries, and, looking for a thesis, she applied to Becquerel with a request to do research, under his supervision. She started her own investigations in Becquerel's laboratory in 1897, which proved to be the turning point in her life.

Maria Curie's first task was to develop an accurate method to investigate the properties of uranium radiation. The technique based on the uranium-induced electrical conductivity in the air proved to be the best method of investigation. The use of piezoelectric quartz for compensating very small voltages and currents was among the best innovations proposed by the French physicist, Pierre Curie. The method proved to be accurate in measurements of very small currents of the order of 10-12 A. Pierre Curie, who was to become Maria's husband, was thus instrumental in helping Maria master the piezoelectric method.

In 1898, almost at the same time as the Viennese researcher, Gerhard Carl Schmidt, she discovered that thorium features a similar activity as that of uranium. The property of these elements, exhibited by emitting energy in the form of radiation, was called "radioactivity" by the Curies. Maria was led to the conclusion that radioactivity was an atomic property. This astonishing and far reaching conclusion brought about the discovery of new radioactive elements.

Among the substances investigated for their radioactivity, minerals predominated. Pitchblende was found to be four times as radioactive as the metal uranium, and chalcocite was twice as active as uranium. However, it seemed clear from previous studies that no mineral other than uranium should exhibit higher activity. In order to provide an explanation of this astonishing fact, Maria Curie came to the unusual and bold conclusion that chalcocite contained microscopic quantities of a new and unknown element whose strong radioactivity was responsible for the activity of natural chalcocite.

The importance of the above conclusion was fully appreciated by Pierre Curie, who decided to stop his own research and join Maria in the work that she had undertaken. The Curies arranged their work in such a way that while Maria undertook carrying out radiochemical analyses to obtain pure elements by separation and

purification, Pierre devoted himself chiefly to the physical study of the properties of radiations emitted by those elements. They started their investigations on their own, without adequate means or research laboratory.

The first element to be discovered by radiochemical analysis was a very rare, but active, species which was later to be called polonium in honor of Maria's native country - Poland. The second radioactive element discovered by Pierre and Maria and their assistant Gustave Bemont, was radium. This discovery was reported on December 28, 1898.

The discovery of radioactivity by Henri Becquerel, and even more discoveries of new radioactive elements by Pierre and Maria Curie, were unquestionably a starting point for a new branch of science.

According to chemical tradition, those who discover new elements should investigate the chemical properties as to grant them all their "civil" rights and to place them accordingly in the Mendeleev periodic table of elements. Since the quantity of radium in uranium ore is very small, the amount of radium isolated from 5 kg of uranium ore lent to Pierre and Maria by G. Bemont, was sufficient for them to indicate the discovery, but was too small to carry out further studies.

To have radium compounds of higher concentrations they had to have very large quantities of radioactive materials. Several tons of the new raw material were obtained in the form of residues from production of uranium in Saint Joachimstal in the present Czech Republic, thanks to Eduard Suess, member of the Academy of Science in Vienna.

The Curies had the residues processed in a factory and in the laboratory they undertook the final stages of purification and concentration. In this work Maria Curie was assisted by Andre-Louis Debierne who, in 1899, discovered the third radioactive element, actinium, in the pitchblende residues. In 1902, they were able to isolate a few milligrams of pure radium chloride. Maria became convinced that the atomic weight of radium ranged from 138 to 226.45, depending on the purity of the compound. In later measurements it was found to be 226.45. The results obtained for radium convinced other chemists that the new radioactive element did in fact exist.

In 1899, Becquerel, Victor Meyer and Schweidler found that the rays given off by radioactive substances became deflected in a magnetic field. Pierre Curie soon showed that this radiation consisted of two kinds of rays: some of them were penetrating and underwent strong deflection in the magnetic field, and others were far less penetrating and less liable to be deflected. The latter radiation was to be later called alpha rays, and the former beta rays. Some time later, Paul Villard discovered the third kind of rays, later to be called gamma rays: they could not be deflected by a magnetic field at all.

Maria Curie became concerned with a thorough study of alpha rays, which led her to some interesting results indicating that this radiation obeyed other physical laws than beta and gamma rays whose absorption coefficients fell off with the increase in the thickness of the absorbing layers. Alpha rays exhibited an opposite effect: they became more absorbed after passing thicker layers. Maria

(Continued on page 19)



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(Continued on page 19)

(Continued from page 18)

advanced a hypothesis that alpha radiation is made up of very small particles which, when emitted by radioactive substances, lose their kinetic energies passing through. In addition, Maria was the first one to notice that alpha particles had strictly defined paths. Later, William Henry Bragg referred to the lengths of these paths as alpha particle ranges.

Soon after the discovery of radium, the Curies observed that all substances close to a strong radium sample became active. They referred to this phenomenon as "induced radioactivity." This very idea was in itself revolutionary, although it did not permit the proper interpretation of the induced radioactivity. It is safe to say, however, that this idea anticipated, in a way, the discovery of artificial radioactivity by Irene and Frederic Joliot-Curie.

In 1902, Pierre found that the radium emanation decay followed an exponential law. A new quantity, a decay constant was introduced. In 1903, Pierre Curie and A. Laborde determined the heat energy released by radium. In 1904, Pierre and Becquerel reported the biological effect of the radium radiation.

At that time, Maria Curie was busy preparing her doctoral thesis: "Research on the Radioactive Substances." In June 1903, she obtained the diploma of Docteur des Sciences Physiques. The historical text summarized for the first time the results of her previous work that led to the discovery of polonium and radium. In 1903, Maria and Pierre shared with Becquerel the Nobel Prize for Physics.

On April 19, 1906, Maria lost her husband who was trampled to death by a heavy horse-drawn wagon when

he was crossing rue Dauphine at the Quai. A few months after her husband's death she was designated by the Faculty of Science of the University of Paris to give lectures in the capacity of Charge du cours de physique general. At the same time she took charge of the laboratory where she had worked as an assistant. Maria found great help in carrying out laboratory and organizational functions from a talented and well experienced physicist and associate, Andre Debierne. The laboratory quickly rose to international fame and became a well known centre for research. The number of reports originated at Maria Curie's laboratory which were published between 1906 and 1910 totaled 69.

The highest honor for Maria was that in 1909 she was offered the chair of General Physics at the Science Faculty of the University of Paris.

When appraising Maria Curie's own work and that done under her supervision, it becomes clear that she was able to master the extensive knowledge in both very large fields of science: physics and chemistry. Within less than 25 years after the discovery of polonium and radium, the number of radioactive elements was as high as 40. The new radioactive substances were classified according to their sequence into three radioactive series: (1) uranium-radium series, (2) thorium series, and (3) actinium series.

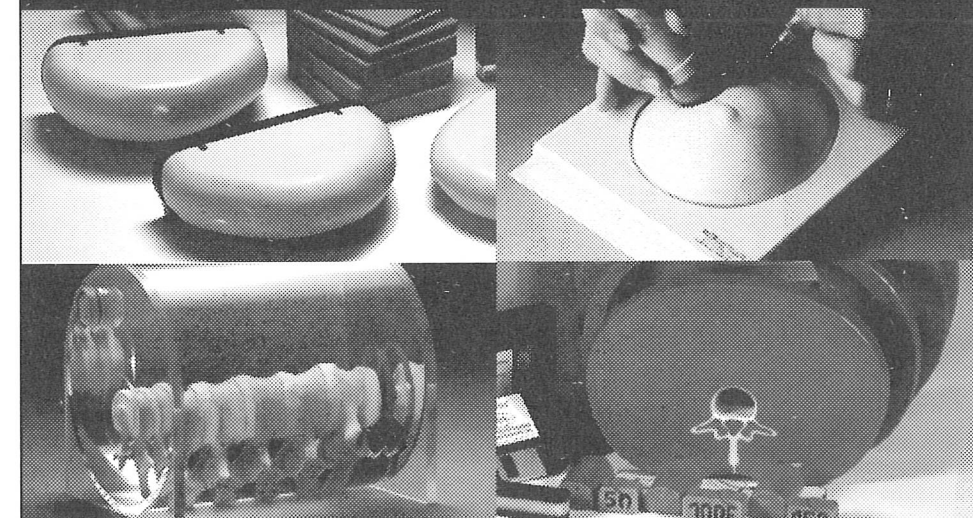
Maria Curie's scientific research work will be continued in the next issue of MPW.

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Article by: Cezary Anatol Pawlowski.

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International Conference on Medical Imaging, Medical Physics, and Precision Radiation Therapy

Guangzhou, China, November 4-6, 1999

Co-Presidents:

Nan-Zhu Xie Emeritus Professor Dept. Medical Physics Guangzhou Medical College Guangzhou, China	William R. Hendee Professor and Vice-Chair Dept. Radiology Medical College of Wisconsin Milwaukee, Wisconsin USA
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Calendar of Events

25-26 February 1999: 4th International Stereostactic Radiosurgery Society Congress, Sydney, Australia. (Eleanor Loveridge, Conference Action Pty Ltd, P.O. Box 1231, N. Sydney NSW 2059, Australia; [Tel: +61] 2-9956-8333; Fax: (+61) 2-9956-5154; E-mail: confact@real.net.au; URL: <http://www.conferenceaction.com.au/isrs/>).

1-5 March 1999: A Practical and Theoretical Course in Radiotherapy Physics: Part B: Brachytherapy, Radiobiology and Treatment Machines, Sutton, Surrey, UK. (Dr. Alan Nahum, The Joint Department of Physics, The Royal Marsden NHS Trust, Sutton, Surrey SM2 5PT UK; [Tel: +44 181 642 6011, Ext. 3309; Fax: +44 181 643 3812; E-mail: alan@icr.ac.uk]).

6-11 April 1999: 5th Biennial ESTRO Meeting on Physics for Clinical Radiotherapy, Göttingen, Germany. (European Society for Therapeutic Radiology and Oncology, Av. E. Mounier 83, 1200 Brussels, Belgium; [Tel: +32.2.775.93.47; Fax: +32.2.779.54.94; E-mail: info@estro.be; <http://www.estro.be>]).

10-12 May 1999: 3rd International Congress of the Croatian Society of Nuclear Medicine, Opatija, Croatia. (Dr. Damir Dodig, KBC REBRO, Kispaticeva 12, 100000 Zagreb, Croatia; [Tel: +385 1-233-3850; Fax: +385 1-233-5785]).

21-23 July 1999: DOSGEL '99: 1st Int'l Workshop on Radiotherapy Gel Dosimetry, Lexington, KY, USA. (Dosgel Secretariat, Centre for Medical and Health Physics, School of Physical Sciences, Queensland U. of Technology, GPO Box 2434, Brisbane Q 4001, Australia; [Fax: +61 7 3864 1521; E-mail: dosgel1@mednet.qut.edu.au; URL: <http://mednet.qut.edu.au/gels/>]).

25-29 July 1999: 41st Annual Meeting of the American Association of Physicists in Medicine, Nashville, TN, USA. (Lisa Rose Sullivan, Project Manager, AAPM, One Physics Ellipse, College Park, MD 20740-3846 USA; [Tel: 301-209-3387; Fax: 301-209-0862]).

25-30 July 2000: World Congress on Medical Physics and Biomedical Engineering and the AAPM Annual Meeting, Chicago, IL, USA. (American Association of Physicists in Medicine, One Physics Ellipse, College Park, MD 20740-3846, USA; [Tel: 301-209-3350; Fax: 301-209-0862; E-mail: aapm@aapm.org; URL: <http://www.wc2000.org>]).

24-29 August 2003: World Congress on Medical Physics and Biomedical Engineering, Sydney, Australia. (Gary Fullerton, UT Health Sciences Center, 7703 Floyd Carl Dr., San Antonio, TX 78284-7800 USA; [Tel: 210-567-5550; Fax: 210-567-5549; E-mail: fullerton@uthscsa.edu]).

Medical Physics Events Calendar

The AAPM Web Pages have undergone extensive revision and updating in recent months. The Medical Physics Events Calendar (<http://www.medphys.org/calendar/calendar.htm>) is the electronic version of the calendar printed in the journal Medical Physics, but has the added advantage of being more current and having hotlinks to both the web sites of the events and to the email addresses of the contacts. It also contains links to the calendars of several related organizations.

The AAPM Medical Physics Resource Page (<http://aapm.org/medphys.html>) contains lists of links to web sites containing information that physicists may find helpful, including other medical physics resource pages. It also contains a list of electronic mailing lists. Paramount among these is the Medical Physics Network, which now has over 1,300 subscribers worldwide.

The AAPM Organizations Page (<http://aapm.org/orglist.html>) is a companion to the Resource Page and contains links to associations and agencies of interest to medical physicists. These include ISO, IPPEM, ABR, ACMP, ISMRM, etc.

It is expected that many of these links will eventually be incorporated into one of the World Congress 2000's (<http://www.wc2000.org/>) goal of linking the world's medical physics communities and making resources available to all through the Internet. Suggestions for web pages to be included can be emailed to me at EventsEd@aol.com.

Carter Schroy, Ph.D.
Associate Editor, MPW
Calendar of Events

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23-26 February 1999: 4th International Stereostatic Radiosurgery Society Congress, Sydney, Australia. (Eleanor Loweridge, Conference Action Pty Ltd, P.O. Box 1231, N. Sydney NSW 2059, Australia; [Tel: +61] 2-9956-8333; Fax: (+61) 2-9956-5154; E-mail: contact@real.net.au; URL: <http://www.conferenceaction.com.au/isrs/>).

1-5 March 1999: A Practical and Theoretical Course in Radiotherapy Physics: Part B: Brachytherapy, Radiobiology and Treatment Machines, Sutton, Surrey, UK. (Dr. Alan Nahum, The Joint Department of Physics, The Royal Marsden NHS Trust, Sutton, Surrey SM2 5PT UK; [Tel: +44 181 642 6011, Ext. 3309; Fax: +44 181 643 3812; E-mail: alan@icr.ac.uk]).

6-11 April 1999: 5th Biennial ESTRO Meeting on Physics for Clinical Radiotherapy, Göttingen, Germany. (European Society for Therapeutic Radiology and Oncology, Av. E. Mounier 83, 1200 Brussels, Belgium; [Tel: +32.2.775.93.47; Fax: +32.2.779.54.94; E-mail: info@estro.be; <http://www.estro.be>]).

10-12 May 1999: 3rd International Congress of the Croatian Society of Nuclear Medicine, Opatija, Croatia. (Dr. Damir Dodig, KBC REBRO, Kispaticeva 12, 100000 Zagreb, Croatia; [Tel: +385 1-233-3850; Fax: +385 1-233-5785]).

21-23 July 1999: DOSGEL '99: 1st Int'l Workshop on Radiotherapy Gel Dosimetry, Lexington, KY, USA. (Dosgel Secretariat, Centre for Medical and Health Physics, School of Physical Sciences, Queensland U. of Technology, GPO Box 2434, Brisbane Q 4001, Australia; [Fax: +61 7 3864 1521; E-mail: dosgel@mednet.qut.edu.au; URL: <http://mednet.qut.edu.au/gels/>]).

25-29 July 1999: 41st Annual Meeting of the American Association of Physicists in Medicine, Nashville, TN, USA. (Lisa Rose Sullivan, Project Manager, AAPM, One Physics Ellipse, College Park, MD 20740-3846 USA; [Tel: 301-209-3387; Fax: 301-209-0862]).

25-30 July 2000: World Congress on Medical Physics and Biomedical Engineering and the AAPM Annual Meeting, Chicago, IL, USA. (American Association of Physicists in Medicine, One Physics Ellipse, College Park, MD 20740-3846, USA; [Tel: 301-209-3350; Fax: 301-209-0862; E-mail: aapm@aapm.org; URL: <http://www.wc2000.org>]).

24-29 August 2003: World Congress on Medical Physics and Biomedical Engineering, Sydney, Australia. (Gary Fullerton, UT Health Sciences Center, 7703 Floyd Carl Dr., San Antonio, TX 78284-7800 USA; [Tel: 210-567-5550; Fax: 210-567-5549; E-mail: fullerton@uthscsa.edu]).

Medical Physics Events Calendar

The AAPM Web Pages have undergone extensive revision and updating in recent months. The Medical Physics Events Calendar (<http://www.medphys.org/calendar/calendar.htm>) is the electronic version of the calendar printed in the journal Medical Physics, but has the added advantage of being more current and having hotlinks to both the web sites of the events and to the email addresses of the contacts. It also contains links to the calendars of several related organizations.

The AAPM Medical Physics Resource Page (<http://aapm.org/medphys.html>) contains lists of links to web sites containing information that physicists may find helpful, including other medical physics resource pages. It also contains a list of electronic mailing lists. Paramount among these is the Medical Physics Network, which now has over 1,300 subscribers worldwide.

The AAPM Organizations Page (<http://aapm.org/orglist.html>) is a companion to the Resource Page and contains links to associations and agencies of interest to medical physicists. These include ISO, IPPEM, ABR, ACMP, ISMRM, etc.

It is expected that many of these links will eventually be incorporated into one of the World Congress 2000's (<http://www.wc2000.org/>) goal of linking the world's medical physics communities and making resources available to all through the Internet. Suggestions for web pages to be included can be emailed to me at EventsEd@aol.com.

Carter Schroy, Ph.D.
Associate Editor, MPW
Calendar of Events

International Organization For Medical Physics Corporate Affiliates, 1998

Gammex/RMI
P.O. Box 620327
2500 W. Beltline Hwy. at Univ. Ave.
Middleton, WI 53562-0327 USA
Contact: Ms. Peggy Lescrenier
Vice President
Tel: (510) 246-8200, Fax: (510) 246-8284

IOP Publishing Ltd.
Techno House Redcliffe Way
Bristol BS1 6NX United Kingdom
Contact: Mr. Jim Revill
Tel: 44-1179-297481
Fax: 44-1179-294318

Keithley Instruments, Inc.
Radiation Measurements Division
28775 Aurora Road
Cleveland, OH 44139 USA
Contact: Laurel Brennan
Marketing Communications Supervisor
Tel: (216) 248-0400, Fax: (216) 349-2307

Magnox Electric Plc.
Berkeley Technology Centre
Berkeley, Glos GL13 9PB United Kingdom
Contact: Dr. T. Swan
Radiological Protection Manager
Tel: 44-11453-810-451
Fax: 44-11453-812-529

Medical Physics Publishing
4513 Vernon Boulevard
Madison, WI 53705-4964 USA
Contact: Ms. Betsy Phelps
Tel: (608) 262-4021, Fax: (608) 265-2121

Med-Tec, Inc.
P.O. Box 320
Orange City, IA 51041 USA
Contact: Mr. Clayton Korver
Tel: (712) 737-8688, Fax: (712) 737-8654

Multidata Systems Int'l Corp.
9801 Manchester Road
St. Louis, MO 63119 USA
Contact: Mr. A. O. Roestel
Tel: (314) 968-6880, Fax: (314) 968-6443

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22301 Mt. Ephraim Road
P.O. Box 68
Dickerson, MD 20842-0068 USA
Contact: Mr. M. Turkanis
Vice President

Nuclear Associates
Division of Victoreen Inc.
100 Voice Road, P.O. Box 349
Carle Place, NY 11514-0349 USA
Contact: Mr. Martin J. Ratner
General Manager
Tel: (516) 741-7614

Nucletron Corporation
7080 Gateway Drive
Columbia, MD 21046-2133 USA
Contact: Ms. Rosemarie DeLabio
Director, Marketing Services
Tel: (410) 312-4100, Fax: (410) 312-4199

Siemens Ltd.
Corporate Management
1300 Pandurang Budhkar Marg Worli
Bombay 40018 India
Contact: Mr. S. R. Patri, Director
Tel: 91-22-493-1350/60
Fax: 91-22-494-1552

Theratronics International Limited
413 March Road, P.O. Box 13140
Kanata, Ontario K2K 2B7 Canada
Contact: Mr. Ronald Dunfield
Tel: (613) 591-2100, Fax: (613) 592-3816

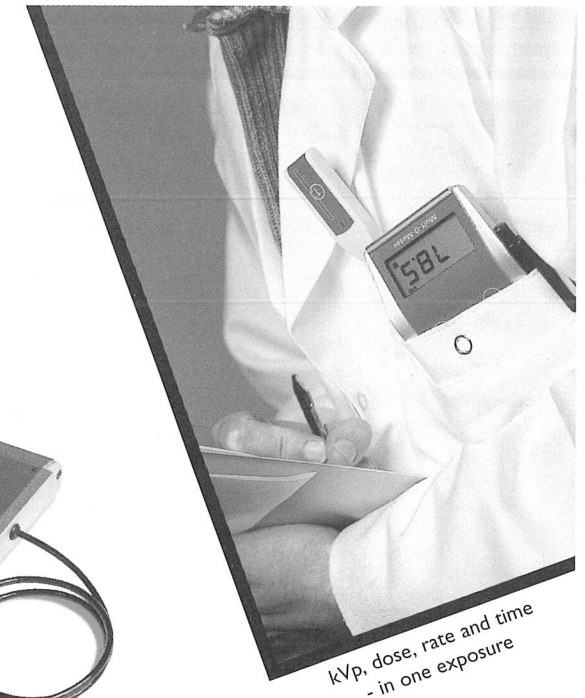
TSG Integrations
Div. of Intelligent Inst. Pvt. Ltd.
202 Ashok Bhawan
93 Nehru Place
New Delhi 110 019 India
Contact: Mr. S. L. Kapoor
Managing Director
Tel: 91-11-6420136, Fax: 91-11-6442728

United Kingdom Nirex Ltd.
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Harwell
Didcot OX11 0RH United Kingdom
Contact: Mr. T. Curtin
Head of Corp. Communications
Tel: 44-19467-24888
Fax: 44-19467-24889

Varian Associates Inc.
Worldwide Product Development
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Honorary Treasurer's Report

Many of you will have noted that during the course of last year I changed my address for correspondence from the Oxford Radcliffe Hospital NHS Trust to my home address. This was due to the fact in April 1997 I decided to make a career change after working for over 30 years as a Medical Physicist in the Oxford Hospitals (yes, it is never too late!!!), and became a civil servant working for the Government. I have thoroughly enjoyed the last eighteen months working for the Department of Health in the NHS Executive as Committee Secretary to the National Screening Committee, though at times it has been difficult to find time for the work of the IOMP Treasurer. I therefore apologize to those that have often waited sometime for me to respond to their emails or correspondence; there are simply never enough hours in the day or night!!!

I would simply like to say to those folks who would like to try their hand at another job that they should not be afraid to try before it is too late; the rewards are high. I now know that the training we receive as medical physicists equip us for a vast range of different work experiences. We are definitely multi-skilled workforce with a great deal of drive, lots to offer any employer, capable of original thought especially in logistics and lateral thinking, excellent team players, good at giving and receiving critical appraisals. (N.B. most physicists will have had to stand their corner in tight clinical/scientific situations several times throughout their careers which I have found to be the case outside of medicine, here they seem to work in trying to secure universal approval for policy decisions before propounding any!!! . . . the case of team decision making, and I have found this to be a whole new ball game!!!). Go on give it a whirl. . . .

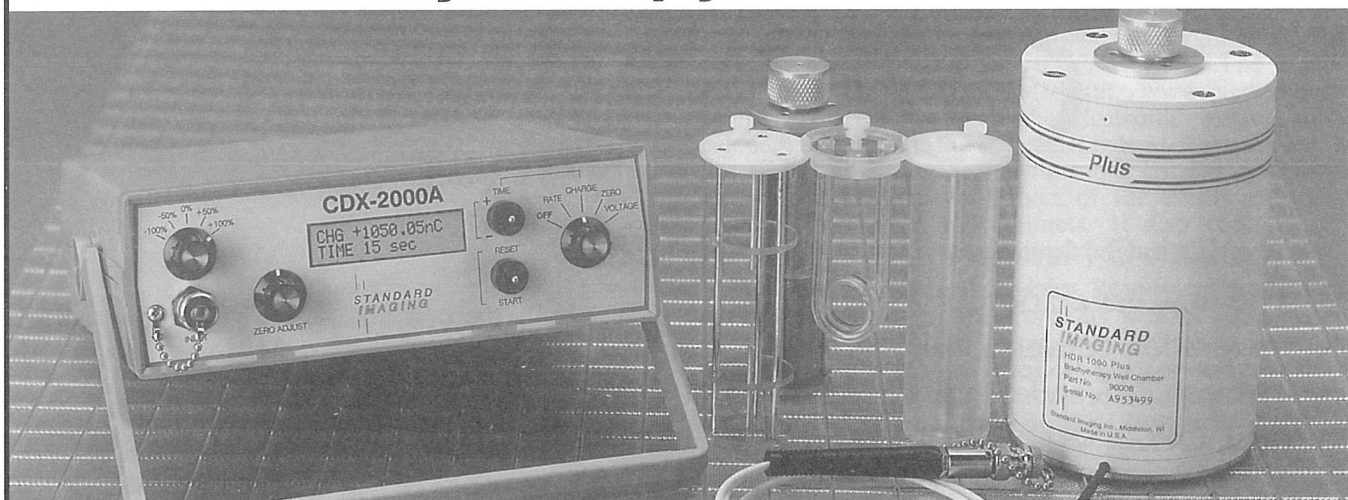
Now back to the matters in hand and to IOMP Treasury business. Below are the accounts as they stand at 30

September 1998. In summary with regard to subscription renewals which went out in April/May 1998 for renewals for 1998 and back dated requests for outstanding subscriptions for both 1996 & 1997. Of the 9 countries who did not pay their subscriptions for 1996, which amounted to US\$ 855, no further remittances have been received. For 1997, of the 31 countries which amounted to an outstanding amount of US\$ 14,550, 6 countries paid in full while 4 countries paid reduced subscriptions or used them internally for training courses since their countries were experiencing economic difficulties, a sum of US\$ 9,320 was recovered. To date in 1998, 26 of 66 countries have renewed their subscriptions, 13 have received waivers to use this money on internal training courses and of the estimated income from subscriptions for 1998 of US\$ 31,808, US\$ 16,317 have been received to date. Renewal of Corporate Membership for 1998 has not been very good and of the present 15 members only the following: Med-Tec Inc, USA; Nucletron Corporation, USA; Theratronics Ltd., Canada; Institute of Physics Publishing, UK; Medical Physics Publishing, USA, are currently paid up members for 1998. Requests went out to 17 companies with whom we actively do business in the medical field. Other years I have resorted to sending out invitations to around 75-100 companies but with little or no success. Reminders to both Country and present Corporate members will have been sent out by the time that you read this report in *Medical Physics World* and I ask all treasurer's to respond as quickly as possible since lack of income will restrict very severely the much needed support the developing countries need for assistance with conferences and training courses.

Please do not hesitate to contact me should you have any queries regarding any of the financial aspects of this report. (See page 23 for financial statements).

Ann Dixon-Brown
IOMP Honorary Treasurer

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IOMP BALANCE SHEET — UK Account — 1 January 1997 - 30 September 1998

	1997 £(GBP)	1998 1/1/97 - 30/9/98 £(GBP)
Opening Balance	16,024.13	5,451.35
Income:		
Subscriptions: Country Members 1996	244.27	Country Members 5,088.85
Country Members 1997	5,179.53	Country Members 9,390.22
Corporate Members	3,567.25	Corporate Members 848.51
Donations:		
UK Donations:		
Institute of Physics	2,000.00	
Institute of Physics & Engineer in Medicine	3,000.00	
Theratronics	352.42	
Rio de Janeiro	3,327.02	
	114.31	93.58
World Congress 1994		
Bank Interest		
Total Income	33,808.93	20,892.51
Expenditure:		
IUPESM Subscription	2,500.00	2,500.00
Congresses, E&T Programmes etc.:	World Congress 1997 24,057.39	Ukraine - Nice 486.32
		India 1,793.72
		Mexico 1,812.68
Other	MPW 462.97	MPW 337.87
	Repay Corp. Subs. 407.52	AAPM - IOMP Website 180.72
Postage & Packing	567.80	548.86
Bank Charges (including costs of rising overseas cheques & electronic bank charges)	341.98	224.02
Total Expenditure	28,337.58	7,884.19
Closing Balance	5,471.35	13,008.32

IOMP BALANCE SHEET — USA Account — 1 September 1997 - 30 August 1998

Income:		Expenses:	
Deposits		Office Operations	\$ 672.21
1/12/98 \$1,000.00 Medical Physics Foundation, Inc. — Education Program restriction		(Exec. Secretary)	
1/22/98 \$1,000.00 Transfer: Colin Orton		Postage	\$ 181.27
3/18/98 \$2,114.87 Transfer: Colin Orton		Supplies, etc.	\$ 267.06
		Travel	\$ 0.00
		Library Program (Shipping Fees)	\$ 468.11
		<i>Expense Sub-total</i>	\$1,588.65
<i>Income Sub-total</i> \$4,114.87		Account Balance	\$2,526.22

IOMP Libraries Program Report

We currently have 75 active libraries in 46 countries. This number is down from the peak of 82 libraries following a survey mailed to all libraries in late 1997. Libraries were asked to verify the address and contact at the library and return the survey form to us. All libraries returning the form within 3 months were left on the active list and the 12 who did not return forms were marked inactive. A second effort was made to contact those not responding. Returned surveys resulted in the reactivation of three libraries.

During calendar year 1997, 26 donations were initiated and to date in calendar year 1998, 34 donations have been initiated. The number of donations completed is not always known because we rely on the donor to tell us that the donation has been shipped and the recipient library to notify us when the donation is received.

We are working with Kathy Burroughs (kathy@aapm.org) at AAPM to coordinate donated subscriptions of Medical Physics for all libraries needing ongoing subscriptions through the Partners in Physics program. We also continue to work with Brenda Trigg to coordinate donations of IOPP books to new and existing libraries. The Society for Radiological Protection has contacted us about donating their quarterly journal to all interested libraries. We are working to coordinate this effort.

We provided a list of currently active libraries and countries currently served to Gary Fullerton to be incorporated in the IOMP web site.

Anyone wishing to donate materials or establish a library is asked to contact the curator.

Marilyn Stovall, Ph.D.
Curator, IOMP/AAPM Libraries

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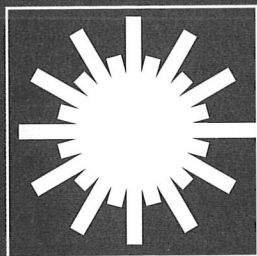
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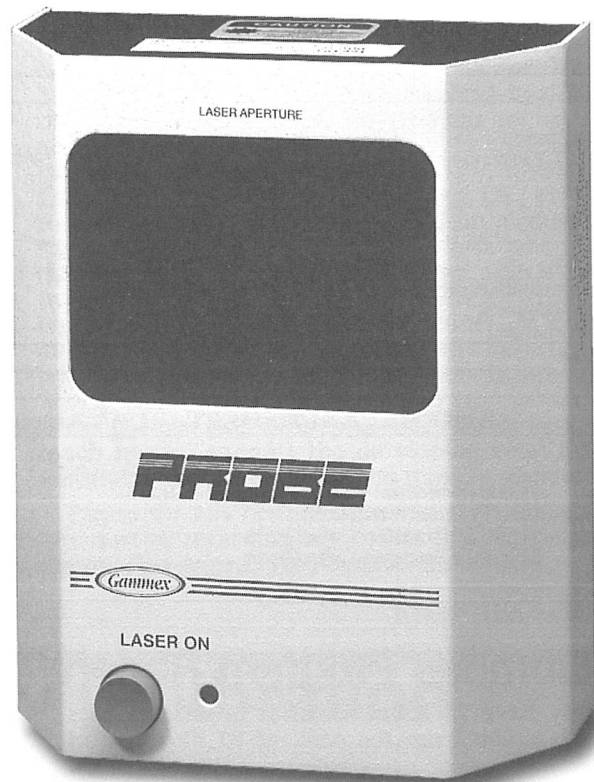
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