

The AAPM's Cooperation in Medical Physics with Low and Middle Income Countries

Actions, Achievements and Future Prospects



JIPM 2013 : 1ère journée Internationale de Physique Médicale

7 nov. 2013 Paris (France)



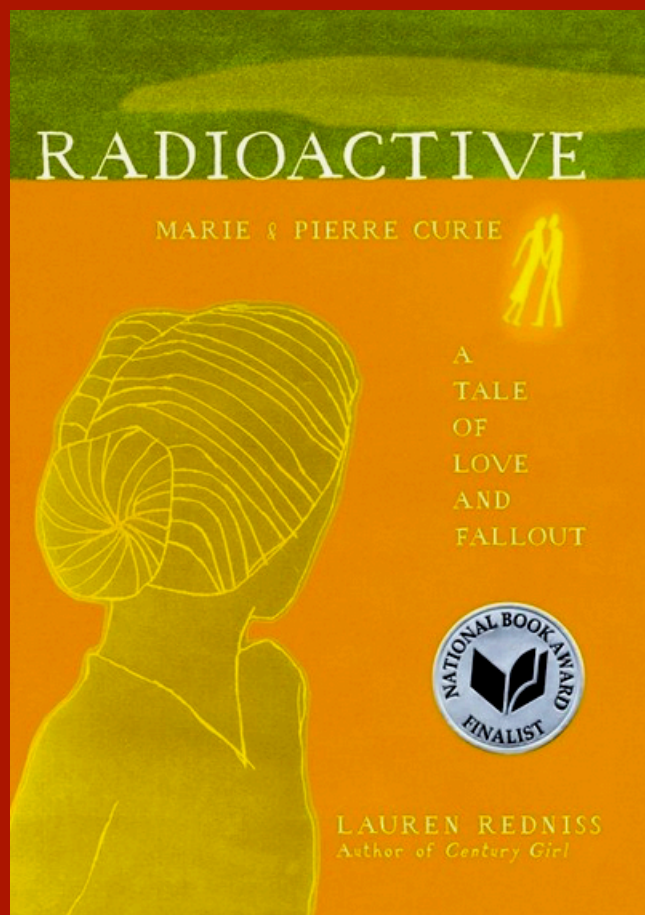
Yakov Pipman, D.Sc.
Medical Physicist Emeritus
Chair - International Education Activities Committee

Greetings from the AAPM and from New York!



Dedicated October 28, 1886

From January 14 to April 17, 2011, the artwork from *Radioactive* was the subject of an exhibition at the New York Public Library, 42nd Street and 5th Avenue.



MEMORIAL HOSPITAL GREET'S MME. CURIE

The New York Times

Published: May 29, 1921

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Marie Mattingly Meloney promised to Marie during their first meeting in Paris to obtain for her the 1 g of radium that Marie requested. The price for 1 g of radium in 1920 was \$100,000.

Mrs Meloney raised the \$100,000 in less than a year, mostly by means of small donations and help from many women throughout the country.

She also convinced Marie Curie to travel to the United States to receive the gift.



it was probably one of the most interesting afternoons Mme. Curie has had since she arrived here, for the four grams of radium in the big steel vault of the hospital are the largest amount of the precious element gathered in any one place in the world. A little more than three grams were the gift to the hospital of Dr. James Douglas, a former member of the Board of Trustees, and three-

had tried to keep away from publicity.

Dr. Stone escorted Mme. Curie to the room where the four little jars of radium are kept, each one of them worth \$100,000. They are in a vault, the radium being dissolved in water and the emanations from it used, which is possible only when so large an amount can be had as the source. They are linked up by a tube with another room, to the apparatus by which the emanations are controlled and placed in tubes.

Mme. Curie examined the jars and the apparatus with great interest, asking short, quick questions, and understanding apparently in a moment the use of any piece of apparatus that was new to her. It gave her pleasure that the one who explained the working of the tubes and valves to her was a former pupil of hers in Paris, Dr. Gioacchino Failla. She was also shown the measuring room, where the radium emanations are first measured so that their strength may be determined before being used on a patient. Then she was shown X-ray plates of cancer patients before and after radium treatment, and pathological slides also illustrating the treatment.

Gioacchino Failla, first Director of Medical Physics - then called the Radium Department - at Memorial Hospital, inventor of the semi-automatic Radon Plant.

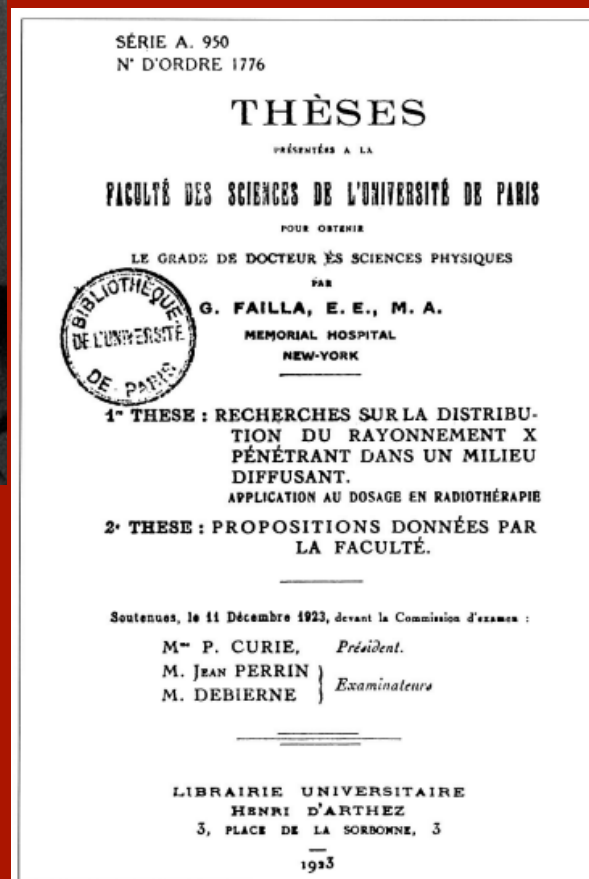
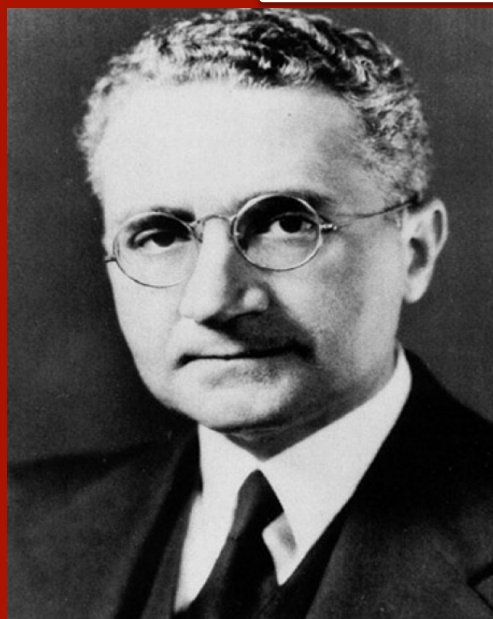
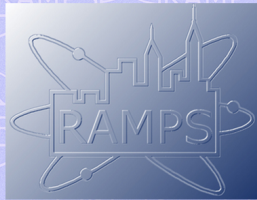


Fig. 14-4. Title page of thesis presented at the Sorbonne. (Courtesy of Mme. G. Graiss, Bibliothèque Interuniversitaire Scientifique Jussieu, Paris.)

The line to the AAPM passes through New York...

Welcome to the Radiological and Medical Physics
Society of New York, RAMPS



The earliest organization of Medical Physicists in the USA

...by 1948 the meetings were on a scheduled basis with elected officers and records....active in RAMPS included Mones Berman, Hanson Blatz, Carl Braestrup, **Giacchino Failla**, Sergei Feitelberg, Elizabeth Focht, Hiram Hart, Lillian Jacobson, Robert Loevinger, LeoMarinelli, Eleanor Oshry, Edith Quimby, Edward Siegel, Aaron Yalow, **Rosalyn Yalow**, and others

1958

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2013



Historical Review Article

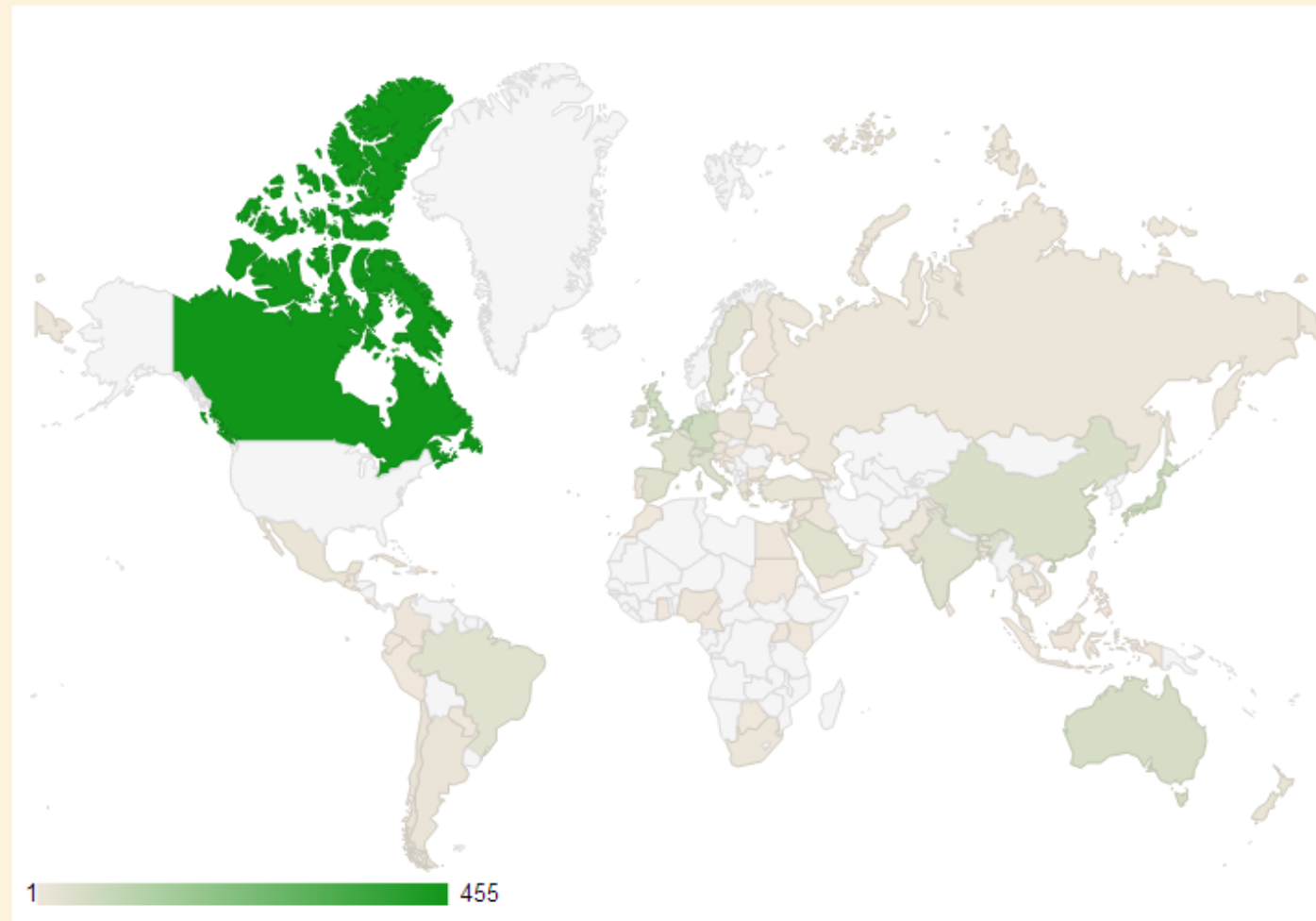
AAPM and RAMPS—antecedents and perspectives

John S. Laughlin

Memorial Sloan-Kettering Cancer Center, Medical Physics Department, New York, New York 10021

AAPM members – not just in North America

Mouse over the map below to see the number of members and affiliates in countries outside of the US
(NOTE: The map feature does not work with IE8)



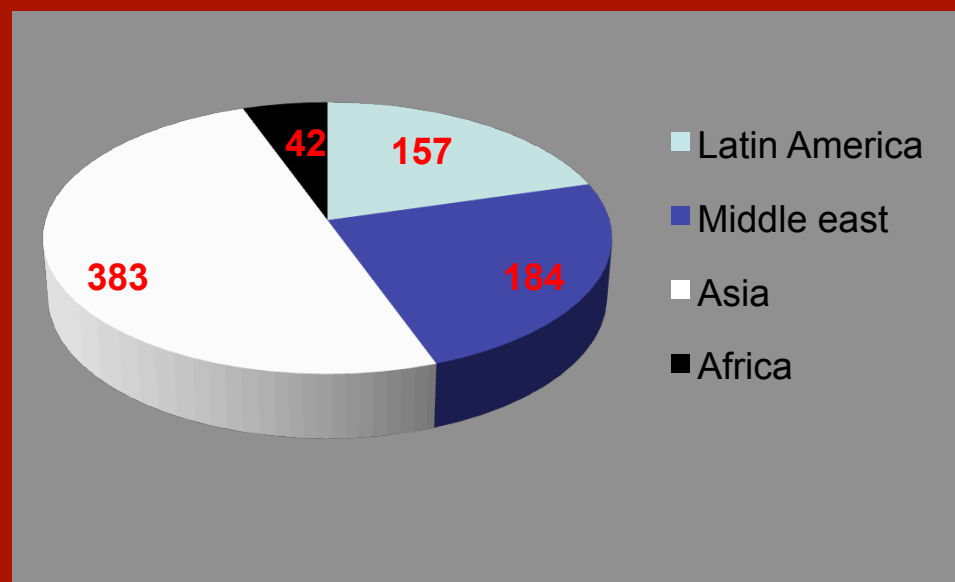
Where are our members?

Just a sample!

Argentina	11
Bangladesh	6
Brazil	30
Canada	453
China	48
Cuba	1
Germany	64
Ghana	2
India	34
Iran	0
Iraq	3
Morocco	1
Nigeria	5
Poland	9
Rusia	0
Spain	36
UK	59
USA	6646

AAPM members

US	6646
Canada	453
Other countries	1077
Total	8176



AAPM received a lot from other countries

Among the 420 AAPM fellows

Suresh K. Agarwal - India

Muthana Al-Ghazi - Iraq

Caridad Borrás - Spain

Chen-Shou Chui -Taiwan

Joanna Cygler - Poland

Carlos E. de Almeida - Brazil

Doracy Fontenla - Brazil

Michael Goitein - UK

John Laurence Humm - UK

M. Saiful Huq - Bangladesh

and...

Renate Muller-Runkel - Germany

Adel A. Mustafa - Palestine

Orhan Nalcioglu - Turkey

Ravinder Nath - India

Azam Niroomand-Rad - Iran

Colin G. Orton - UK

Nikos Papanikolaou - Greece

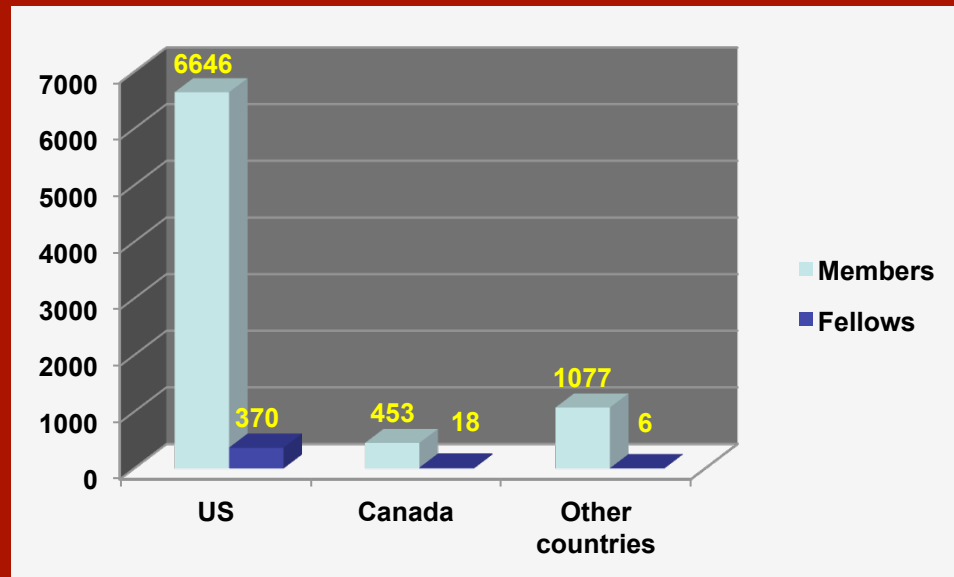
E. Ishmael Parsai - Iran

Yakov M. Pipman - Argentina

Ervin B. Podgorsak - Slovenia

Ulf F. Rosenow - Germany

The "give and take" at the AAPM



**International Educational Activities Committee
IEAC**

International Affairs Committee -IAC

International Affairs Committee -IAC

African Affairs

Asian Oceanic Affairs

European Affairs

Latin American Affairs

Middle East Affairs

International Affairs Committee -IAC

Equipment Donation Program - with IOMP

Exchange Scientist Program - 38 listed members

International Information - newly formed

International Library (AAPM/IOMP)

33 active libraries in 24 countries (Africa, Asia, Europe, the Middle East, and Latin America)

Newest library established in Lagos, Nigeria in 2013.

International Portal Working Group

Partners in Physics - over 120 sponsored members in Developing Countries

International Information SC - Plans and commitments

- Facilitate the exchange of information
- Compile regulations and work methodologies in other countries
- Compilation of training programs in Medical Physics
- Create a Calendar of courses in other countries
- Database of licensing issues
- Coordination and collaboration with regional and international bodies
- Compile information on exchange programs
- Catalog of online educational materials
- Collect contact information

Waiver of registration fees to the AAPM Annual meeting for 15 qualified applicants each year. Presenters of accepted papers from developing countries.

In Indianapolis, 2013:

MEXICO - 3

BRAZIL - 3

CHINA - 3

INDIA - 4

CHILE - 1

COLOMBIA - 1

International Educational Activities Committee IEAC

- International Scientific Exchange Programs
ISEP – 34 courses since 1992
- WG in support of IAEA Interregional project “Strengthening Medical Physics in Radiation Medicine” – completed in 2013
- WG on Cooperative Agreements between the AAPM and other National and International Medical Physics Organizations
 - SEFM
 - AMPR

ISEP courses

1992 Islamabad, Pakistan

1993 Warsaw, Poland

1994 Tehran, Iran

1995 Istanbul, Turkey

1996 Rabat, Morocco

1997 Moscow, Russia

1998 Cairo, Egypt

1999 Sao Paulo, Brazil

1999 Cluj Napoca, Romania

2000 Bangkok, Thailand

2001 Dhaka, Bangladesh

2002 Riyadh, Saudi Arabia

2002 Sao Paulo, Brazil

2003 Cairo, Egypt

2004 Chengdu, China

2004 Abu Dhabi, UAE

2005 Manila, Philippines

2005 Yaoundé, Cameroon

In Latin America

- ALFIM founded at the AAPM annual meeting in Chicago, 1984
- Steady support of ALFIM workshops and congresses:
 - 1988-Austin
 - 1994-Rio de Janeiro
 - 2000-Chicago
 - 2001-Caracas
 - 2004-Rio de Janeiro
 - 2007-Cartagena
 - 2010-Cuzco
 - 2013-Costa Rica
- Numerous national meetings and workshops



Asian Oceanic Affairs Subcommittee China

- **Asian Oceanic Affairs Subcommittee (AOA-SC) works with North American Chinese Medical Physicists Association (NACMPA), participate in Regional courses and meetings in China.**
- **Advise to Chinese Health Department on guidelines and polices. Dialogue with China Medical Devices officials on setting up QC standards.**

Taiwan

- **Involvement with, and support of, local and regional conferences**
- **Contribution to graduate programs**

Thailand, Malaysia, and Singapore


- **Regional Workshop on Modern Radiotherapy Techniques in 2012 (over 200 attendees, four AAPM faculty)**
- **ISEP in November 2013**
- **Ongoing contacts**

In Africa

Dakar, Senegal: Several engagements as part of 'Radiating Hope' team to implement an HDR program at Institut Curie, to improve treatment techniques, and to assist with department-wide issues. December 2012 and April and June 2013. More in 2014.

- **Nigeria:** Several hands-on training visits to support a National MP training program. Started in 2010 and accelerated in 2012 and 2013. Plans for more in 2014.

Resources



*We advance the science,
education and
professional practice of
medical physics*

- My AAPM
- AAPM
- Public & Media
- International
 - Exchange Scientist Program
 - Library Program
 - Developing Countries
- Medical Physicist
- Members
- Current & Prospective Students
- Meetings
- Education
- Government Affairs
- Publications

International Portal

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The American Association of Medical Physicists (AAPM) is an international organization and provides a variety of programs, membership opportunities, and resources for medical physicists, students, and related medical and scientific professionals anywhere in the world.

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- Journal
- Membership
- Int'l Educational Programs
- IAC

Educational Resources Available to Medical Physicists in Developing Countries

The [IOMP/AAPM Library Program](#) serves as a resource for medical physics and related communities in developing countries.

Developing Country Educational Associates (DCEA) have access to the following resources.

AAPM Virtual Library
The web-based Virtual Library contains many of the Continuing Education Courses presented at the AAPM Annual Meetings. [Log into the Virtual Library](#) and view the courses.




AAPM Summer School Proceedings
The Proceedings of the AAPM Summer Schools are available on CDs to Developing Country Educational Associates. [Place an order.](#)

AAPM Task Group Reports
The reports of the many [AAPM Task Groups](#) are available to all.

International Affiliates	173
PIP	129
DCEA	2222

Resources

Education

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Virtual Library

Presentations posted in the Virtual Library include:

- streaming video and/or audio of the speakers
- transcription of the audio for numerous presentations
- slides of the presentations

Unlimited access to the virtual library is included as a benefit of AAPM membership at no extra charge. Join the hundreds of other AAPM members who are using the AAPM Virtual Library for their continuing education, research, and information needs.

Medical Physics Continuing Education Credits (Members Only)

The AAPM On-Line Learning Services Subcommittee is actively posting continuing education question/answer sets for several of the Virtual Library presentations.

If you're not familiar with the Online Learning Center program, please review the information [posted here](#).

Now Available

Meetings

Physicists of Note

Items of Interest

Educators Day

Vendor Presentations

CRCPD

DVD/CDs

Webcast of the Month



We hope you find this month's Webcast valuable and that you return each month during the year to benefit from new offerings in the series.

Resources

Publications

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The AAPM supports its mission by disseminating scientific and technical information in the discipline of medical physics.

Medical Physics



Medical Physics (*The International Journal of Medical Physics Research and Practice*) is our flagship publication with authors and subscribers throughout the world. It is available in print and online through individual and library subscriptions. Subscription provides online access and sophisticated search capability through the entire journal archive at no additional charge, and a significant number of featured articles are also available without charge. RSS feeds from Medical Physics provide notification of new articles published in selected topical areas regardless of subscription.



The **Journal of Applied Clinical Medical Physics** (JACMP) is an open-access journal, which publishes papers that will help clinical medical physicists perform their responsibilities more effectively and efficiently for the increased benefit of the patient.



AAPM Reports are technical reports on specific topics that are prepared by experts drawn from the AAPM membership who work together in Task Groups under the guidance of the AAPM Councils and Committees. All AAPM reports are published on-line with open-access without subscription.

AAPM Monographs and CD-ROM Proceedings are reviews of medical physics topics and are primarily the output of many of the AAPM Summer Schools. These are available for purchase from the **Medical Physics Publishing Corporation**.

DVD/CD-ROM copies of Selected Presentations from the AAPM Annual Meetings, recent AAPM Summer Schools other meetings are available for purchase from **Association Archives**.



The **AAPM Newsletter** is published for the members of the Association and carries news and articles related to the activities of the Association.

Resources

Publications

AAPM Reports

Print copies may be purchased from [Medical Physics Publishing](#).

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Click on headings to sort columns

#	ISBN	YEAR	TG#	COMMITTEE	TITLE
255	9781936366293	2013		Therapy Imaging Subcommittee Working Group	An introduction to molecular imaging in radiation oncology: A report by the AAPM Working Group on Molecular Imaging in Radiation Oncology (WGMIR) Medical Physics, Vol 40, Issue 10
229	9781936366170	2012		High Energy Brachytherapy Source Dosimetry (HEBD) Working Group	Dose Calculation for Photon-Emitting Brachytherapy Sources with Average Energy Higher than 50 keV: Full Report of the AAPM and ESTRO -- Full Report Dose calculation for photon-emitting brachytherapy sources with average energy higher than 50 keV: Report of the AAPM and ESTRO -- Short Report published in Medical Physics, Vol 39, Issue 5, 26pp.
217	9781936366248	2013	217	Radiation Protection Subcommittee Task Group #217	Radiation Dose from Airport Scanners: Report of AAPM Task Group 217
216	9781936366064	2007	69	Work Group on Radiation Dosimetry Task Group #69	TG-69: Radiographic film for megavoltage beam dosimetry Medical Physics, Vol 34, Issue 6

Challenges in LMI countries

- Difficulties with equipment donations
- Communication and access to external resources - advise and technical support
- Underutilization of resources at hand.
- Need for gradual but steady addition of equipment to assure its proper utilization.
- Equipment Maintenance
- Need for mentoring and training in problem solving
- Conflict between responsibility and liability
- Hierarchical structure at the workplace not conducive to taking initiative
- Need for very practical training in addition to didactic lectures.

[illegible]