

## **Opening and Introduction**

**J. Loy, D.V. Webb and R. B. Huntley**

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### **1. Introductory remarks by Dr David Webb, Session 1 Chairman**

“Just in case you don’t know who I am, I’m David Webb, ... I’ve been running the Ionizing Radiation Standards Section at ARPANSA, and I’d like to welcome you to the AbsDos 2003 Workshop.

“I should mention that we’re live, we have microphones that I think work, and we have a video at the back there, so you’re being watched and recorded ...

“I’d like to ask our CEO, Dr John Loy, to make a few words of welcome and ... to wish you a very successful meeting.”

### **2. Opening by Dr John Loy, CEO of ARPANSA**

“Good morning everyone, my name’s John Loy and I’m the CEO of the Australian Radiation Protection and Nuclear Safety Agency, ARPANSA. The Ionizing Radiation Standards Section is part of ARPANSA. Those of you who are from ARPANSA know all that. Those of you who are from Australia know it - but I’m glad to see there are people from nine countries here, which is terrific. Obviously the idea of running this as a satellite to the World Medical Physics Congress has been appropriate.

“ARPANSA, for those of you who don’t know it, is not unique in the world, but there are not all that many organisations that have brought together a radiation protection laboratory and the regulatory function in the same house. ARPANSA is both a radiation protection scientific organisation and a nuclear and radiation regulator. So in protecting the health of the people of Australia, we’ve got to think on the one hand of the science of radiation protection and on the other hand of how this can be translated into regulation, both radiation protection and nuclear safety.

“When we come to thinking about absorbed dose standards, we at ARPANSA are both challenged by the intellectual excitement of the issues surrounding maintaining and developing standards on one hand, but we are also challenged by being aware that we need to propagate the standards into real life calibration services to support users of radiation for cancer therapy in this country. We’re concerned about the science and we’re also involved in providing support services that help patients.

“In the papers being presented at AbsDos both parts of the issue are represented - there are arcane papers about the incredibly complex details of the science here, and of course maintaining standards is nowadays always complex and difficult. I remember when I first heard about physics, the standard for the metre was the distance between two plugs in a platinum bar somewhere in Paris, and that all seemed quite straightforward. Of course with a more difficult concept like absorbed dose, naturally the idea of a standard is a much more complex thing in and of itself. But we need to bring ourselves back to the fact that, ultimately, this difficult standard is applied in the world for many purposes, but especially for medicine. It is one of the foundations upon which you can be sure that people are getting what they expect and need in medical treatment.

“The papers that are being presented and the program overall does cover the breadth of issues, and with the uncertainty workshop, which is *certain* to happen, I think it also deals with some of the fundamental science underlying all techniques of measurement. At the end of the day there are uncertainties, there must be uncertainties. The essence of the problem is getting a grasp of those and understanding them, so that you understand the precision of the measurement and the uncertainty around it.

“So welcome to ARPANSA, and for those of you who’ve come from overseas, welcome to Australia and to Melbourne. Unfortunately you’re in an enclosed room - occasionally I hope you’ll get out and enjoy what is a glorious winter day in Melbourne. Although it may have changed by the time you get out - you’ve probably heard about Melbourne’s notoriously changing weather.

“But before I pass over to the chairman of the organising committee, Robert Huntley, I should take the opportunity to pay particular tribute to him. The fact that you’re here and this Workshop is happening, is in no small measure due to his great energy and commitment in bringing it about. He’s worked pretty hard to have it happen. And I think in the spirit of a standards scientist, he just doesn’t sit back and get other people to do things, if something needs done, he gets it done himself. I think that’s a really practical and direct involvement. It means of course that it’s also pretty resource effective and that’s great, and that’s the way we all have to work.

“So, we at ARPANSA are very glad to have this Workshop and we’re very grateful to Robert for all the work and commitment he’s put into it, and I wish you well over the next three days. I’ll pop my head in from time to time when I think I might understand something, and look forward to hearing the outputs and outcomes of the meeting. Good luck, thank you.”

### **3. Introduction by Ionizing Radiation Standards Section Manager, Dr D.V. Webb**

“Thank you John. That’s kind of you to express those sentiments, and I must admit that I echo them strongly. Bob has put in an immense effort into the organisation of this meeting, and I hope that it will all become well justified and the results will speak for themselves.

“I guess we have a mixture here of both scientists from the standards area and also from hospitals. Hopefully the hospital people will be interested in the (as John says) the arcane elements of calorimetry and what have you, but they are the underpinnings of the standards and it goes to perhaps give a broader picture of the process.

“I’m going to ask Bob to give you a bit of a snapshot if you like, and I think he’s also going to give you a bit of the housekeeping things that need to be dealt with.

### **4. Introduction by Workshop Organiser, R. B. Huntley**

“OK, well thanks John and thanks Dave, for your kind words.

“Without further ado, welcome everybody and thank you for coming, some of you from a very long way off, the other side of the planet in fact. This workshop as you know continues, well most of you would know, continues a series of similar meetings that have been happening every few years, mostly at NPL I think. The last one was certainly at NPL in 1999, and there are a lot of familiar faces.

“The main aim of this current meeting is to present and discuss recent progress in the development of absorbed dose standards. But we do have another important aim, and that is to

consider the uncertainties of primary absorbed dose standards, which was recommended by the recent symposium in Vienna, run by the IAEA. To address that issue, which is going to be on Wednesday, mostly, we have Dr Frank Pernicka from the IAEA, who's been invited to come along and address us, and also Mr Robin Bentley from the Australian National Measurement Laboratory, who will come tomorrow to run the uncertainty workshop for us.

"We'd just like to put in a word for our sponsors, who've partially sponsored the visits of our two invited speakers. Varian Medical Systems - you probably gathered that they were a sponsor by the insert in your kits - and the Australasian College of Physical Scientists and Engineers in Medicine, whom I prevailed upon to also chip in - the Victorian / Tasmanian Branch, that is.

"Dr Pernicka will summarise the recommendations of the Vienna symposium on Wednesday, and later on, on Thursday, he'll also give an invited address to the local Branch of the College. That will happen here, on Thursday evening. Mr Bentley will present his excellent tutorial, which I have attended and I can certainly vouch for, on the practical application of the *revised* ISO Guide to the Expression of Uncertainty in Measurement.

"As you can see from your program, there's a whole spectrum of topics, including calorimetry, both graphite and water, ionometry, chemical and solid state dosimetry, the uncertainty assessment day on Wednesday, and linacs, protocols and other general interest items. Quite a wide range of stuff, and a panel discussion on Thursday, which should summarise the findings of the whole thing.

"Now unfortunately we have had a few problems with our calorimeters, which is one reason why we're not presenting very much at this workshop. The main thing is that our graphite calorimeter has suffered two thermistor failures in the jacket. We've been fortunate enough to obtain the loan of a similar calorimeter from the IAEA, but then unfortunately a couple of weeks ago we also suffered a jacket thermistor failure in that one, so we are in rather a mess. We currently have both those calorimeters under repair. An earlier attempt to use the ARPANSA calorimeter with a single thermistor was under way when the second thermistor failed, so that project just didn't proceed. But as I said, we are working on repairing those. It shouldn't be too difficult (*laughter*). It has been done before by others.

"... I'd like to thank everybody involved in setting up this workshop including, but not limited to; ARPANSA for hosting the meeting; Duncan Butler and the ARPANSA Secretariat for organising the catering; Duncan Butler for the program and synopses book which you've all received; Lew Kotler for organising the booklet about radiation standards which you also received; Roland Sargent, Keith Pardalis and Dave Tomlinson for audio visual and IT support; Duncan Butler and Milly Cox for looking after the Registration Desk; and finally all of you guys for coming and making it a success, which I hope it is. Thank you."

### **Note added in proof**

Thanks are also due to John Briggs for setting up and managing the AbsDos 2003 web site.