

Robert Brack Huntley
Long CV

Birth

7:30pm Friday 23 September 1949, 2.9kg
Townsend Maternity Hospital
298 Cottingham Road
KINGSTON UPON HULL
East Yorkshire
ENGLAND, UK.

Life certificates

Certificate	Issued	Number	Details
Birth	01/10/49	DF 571 758	born 23/9/49
Marriage	15/12/71		Barry Neil Martin, celebrant
Australian citizenship	20/04/82	0086 642	
Declaratory Aus Cit	15/06/83	36 522	

Schools attended

Name	Town	State	Country	Grades	Dates
Appleton Rd Kindergarten	Hull	Yorks	England		1953
					1954-55
Grasby Rd Primary	Hull	Yorks	England	1 and 2	1956-57
Lugard Primary	Nakuru		Kenya	3 to 6	1958-61
Shebbear College	Beaworthy	Devon	England	7 and 8	1961-62
Hessle High	Hessle	Yorks	England	8 to 10	1962-65
Altona Tech	Altona	Vic	Australia	10	1965
Brighton Tech	Brighton	Vic	Australia	10 to 12	1965-67
RMIT Applied Physics	Melbourne	Vic	Australia	certificate	1968-71
				diploma	to 1972
				B.App.Sc	to 1977
				M.App.Sc	to 1986

Secondary School Results

Year	1962-63	1963-64	1964-65	1965	1966	1967
Grade	7	8	9	10	11	12
Teacher	Engs?	Svenson	Wrig'worth	Speed	Edward	
Head	Morgan	Hebden	Bashford	Tredinnick	Tredinnick	Geddes
English	A-	A	A	87	86	pass
Maths	B	A	A	I 96, II 97	A 98, B 97	100

Year	1962-63	1963-64	1964-65	1965	1966	1967
Grade	7	8	9	10	11	12
Phys+Chem	A-	B+	A	I 92, II 92	Ph 97, Ch 95	97
Biology		C				89
History	C	B		social st 86	56	
Geography	B	A	A			
French	B+	A	B+			
Latin	C+	C+				
Art	B		music A			
Phys Ed	D	C	C-			
Tech Drg		B+	A	88	85	75
Mach Shop	B		A	83		pass
Intro to Eng						72
NOTE					DUX	DUX

Scholarship

Advanced Education, Jan 1968, all fees for entire RMIT course. Signed by Malcolm Fraser, then Minister for Education.

Achievement Certificates

Certificate	Institution	Date	Citation
Pianoforte grade 1	RS Music	21/11/62	merit
Certificate of App Phys	RMIT (1967)	4/3/71	equiv completion
Diploma of App Phys	RMIT (1972)	6/6/73	pass
Radioisotopes for grads	AAEC	10/5/74	pass
Modern I (Quantum phys)	RMIT	7/7/75	highly commended
B.App.Sc.	RMIT (1973)	31/5/77	pass
Vacuum Technology	Footscray IT	8/2/80	pass
M.App.Sc	RMIT (1973)	4/6/86	pass

Education Summary

Primary and secondary education UK, Kenya (1958-62) and Australia (1965-67).

Dux of Brighton Technical School, year 11 (1966) and year 12 (1967).

B.App.Sc. RMIT (1975)

Final year project "Development of an X-ray facility for radiation dosimetry studies"

MRL-R-910 (1983).

M.App.Sc. RMIT (1986)

Thesis "A microcalorimeter as a working standard of ionising radiation absorbed dose"

RMIT (1986)

Copies available.

Miscellaneous technical short courses

- Radioisotope Course for Graduates no 19, Australian School of Nuclear Technology, Australian Atomic Energy Commission (March 1974)
- Vacuum Technology, Footscray Institute of Technology (February 1980)
- Current Experiences with Self Tuning Controllers, NSW Institute of Technology (July 1987)
- Introductory Course in Digital Signal Processing, Melbourne University (February 1988)
- Statistics for Research Workers, Melbourne University (May 1991)
- LabVIEW Basics I, National Instruments (September 1998)
- Temperature Measurement, National Measurement Laboratory (October 1998)
- Manager Development Training, MITF (October 1998)
- LabVIEW DAQ, National Instruments (February 1999)
- LabVIEW Basics II, National Instruments (March 1999)
- Matlab for Signal Processing, CSSIP (April 1999)
- LabVIEW advanced, CPE Systems (August 1999)
- Uncertainty in Measurement, NML? (October 2000)
- Visual Basic for Applications (Excel) (October 2000)
- MS Access 97 (December 2000)
- First Aid level 2, St John Ambulance (April 2001)
- Food Handling, Box Hill TAFE (2002)
- Food Safety Supervisors, Victoria University (March 2003)

Scouts

Section	Formation	Joined	Left
Cubs	Nakuru, Kenya		
Scouts	Shebbear, Devon		
Group Committee	1st St Albans, Australia	1985	1988
Treasurer	1st St Albans, Australia	1986	1988
P+S committee, PR	Melb Gang Show	1986	1996 (P+S disbanded)
Band - lay leader	1st St Albans	Sep 1986	
Band - lay leader	Sunshine District	Mar 1988	
Band - AAL	Hoadley Area	Jul 1989	Dec 2003

Voluntary Service

Organization	Position	Started	Finished
St Albans Heights PS	Committee member		
St Albans Meadows PS	Treasurer		
Scope	Bus Driver		
Green Cross	Bus Driver		

South Gippsland Concert Band	Treasurer		
Bass Coast Health	Driver		
Various, see rbh49.com	Website manager		

Employment - Summary

Position	Organization	Started	Finished
Trainee Draughtsman	Davy-Ashmore	1967 (vacations)	1970
Utilityman (Electrical)	Vic Pipelines Commission	1969	1970
Technical Assistant 1 & 2	Defence Standards Laboratories	.May 70	.Oct 72
Technical Officer 1 & 2	Materials Research Laboratories	.Oct 72	.Jun 77
Physicist 1	Australian Radiation Laboratory (ARL)	.Jun 77	.Dec 77
Physicist 2	ARL (became ARPANSA on 5/2/99)	.Dec 77	.Dec 91
Physicist senior grade C	ARPANSA	.Dec 91	
Physicist executive grade I	ARPANSA		.Dec 03

Employment - details

July 1969 to April 1970 (9 months) - Technical Assistant

Cathodic Protection Section, Victorian Pipelines Commission (VPC, Gippsland natural gas pipeline from Dutson to Dandenong).

May 1970 to June 1977 (7 years) - Technical Assistant and Technical Officer

Materials Research Laboratories (MRL, previously Defence Standards Laboratories, DSL), Nuclear Studies Group.

Calibration of tactical Radiation Indicating and Computing (RADIAC) and protection level equipment for ionising radiation dosimetry.

Development of calibration facilities for RADIAC and protection level equipment. See MRL-R-910.

Modelling of ionising radiation interactions using Monte-Carlo simulations.

June 1977 to December 1977 (6 months) - Scientist grade 1 (physicist)

Australian Radiation Laboratory (ARL), Health Physics section, calibration of radiation safety monitors under Ian Leith at Lonsdale Street premises.

December 1977 to December 1991 (14 years) - Scientist grade 2 (physicist)

December 1991 to December 2003 (12 years) - Senior Professional Officer (grade C, physicist), then Executive, level 1 (senior physicist)

ARL which on 5/2/99 became the Australian Radiation Protection And Nuclear Safety Agency (ARPANSA), Medical Radiations Branch, Ionizing Radiation Standards (IRS) Section under Tom Swindon, then Neville Hargrave (1977 to 1995), then John Boas, then Dave Webb. IRS was originally located at ARL's Melbourne University premises, later at a new purpose built laboratory in Yallambie near Heidelberg, Melbourne.

Main activities while at ARL / ARPANSA

Development of measurement standards of ionising radiation absorbed dose. M.App.Sc thesis "A microcalorimeter as a working standard of ionizing radiation absorbed dose" was

accepted by RMIT in 1986.

From 1995, maintenance of the Australian National Measurement Standard of the quantity absorbed dose on behalf of the Commonwealth Scientific and Industrial Research Organization (CSIRO)'s National Measurement Laboratory (NML). This involved collaboration with similar overseas laboratories.

Cooperation with the International Atomic Energy Agency (IAEA) and the World Health Organization (WHO) in connection with their postal dose quality audit program for photon radiotherapy.

Since 2001, provision of reference exposures to assist the IAEA in the quality control of their Thermo-Luminescent Dosimetry (TLD) postal dose quality audit program.

Professional Associations

Graduates Association of RMIT

Professional Officers Association

Australian Institute of Physics - student 9/9/75, associate 2/5/77, graduate 7/8/78, member

Australasian College of Physical Sciences and Engineering in Medicine

Australian Radiation Protection Society

Publications

A. Papers in peer reviewed journals

NJ Hargrave, **RB Huntley** and PD Allen

"Standards and calibration facilities of the Australian Radiation Laboratory for ionizing radiation beams"

Aust Phys Eng Sci Med **12** (1989) 92-99.

RB Huntley and HP Nette

"International Atomic Energy Agency / World Health Organization TLD dosimetry radiotherapy intercomparison"

Aust Phys Eng Sci Med **16** (1993) 44-48.

NJ Hargrave, VG Smyth*, PD Allen and **RB Huntley**

"Intercomparison of the national exposure standards of New Zealand and Australia"

Aust Phys Eng Sci Med **16** (1993) 174-178.

and Errata **17** (1994) 49.

* National Radiation Laboratory, New Zealand.

RB Huntley and J Izewska*

"The 1998 Australian external beam radiotherapy survey and IAEA / WHO TLD postal dose quality audit"

Aust Phys Eng Sci Med **23** (2000) 21-29.

* International Atomic Energy Agency, Vienna.

B. Internal or unreviewed reports

RB Huntley

"The design of a calorimetric standard of ionizing radiation absorbed dose"

ARL/TR032, May 1981.

RB Huntley

"A digital interface for preset time or voltage measurements using an ionising radiation dosimeter"
ARL/TR061, October 1983.

RB Huntley

"Development of an X-ray facility for radiation dosimetry studies"
MRL-R-910, December 1983.

RB Huntley

"An absorbed dose microcalorimeter"
Oral presentation at a combined monthly meeting of the SMBE, ACPSEM and IBME, Melbourne, November 1987.

NJ Hargrave, **RB Huntley** and PD Allen

"The measurement and calibration facilities of the Australian Radiation Laboratory for ionizing radiation beams"
Oral presentation at the EPSM 88 conference, Brisbane, August/September 1988.

RB Huntley

"Variability of the reference source response of an ionisation dosimeter"
Report to section I of the Comité Consultatif pour les Étalons de Mesures des Rayonnements Ionisants, CCEMRI(I)/88-18 (1988).

NJ Hargrave, C Wagg, JG Young, OJ Wilson, PD Allen, **RB Huntley**, PA Burns and JF Boas

"Workshop on calibration of protection instruments for users of the Australian Radiation Laboratory calibration facility, Australian Radiation Laboratory, 23 November 1988."
Rad Prot Aust **8** (1990), 26-27, news item.

NJ Hargrave, PD Allen, **RB Huntley** and VG Smyth*

"Preliminary report on an intercomparison of the national exposure standards of New Zealand and Australia"

Report to section I of the Comité Consultatif pour les Étalons de Mesures des Rayonnements Ionisants, CCEMRI(I)/91-32 (1991).

* National Radiation Laboratory, New Zealand.

SL Sherlock*, NJ Hargrave and **RB Huntley**

"The congruence of the Australian primary standards for absorbed dose and exposure/air kerma"

Report to section I of the Comité Consultatif pour les Étalons de Mesures des Rayonnements Ionisants, CCEMRI(I)/91-33 (1991).

* Australian Nuclear Science and Technology Organisation.

RB Huntley

"Developments in international standardisation of radiation measurements at the primary level: Recent developments in absorbed dose standards: Microcalorimetry and automation"

Lecture number 4, International Atomic Energy Agency Regional Training Course, ARL, 16 March 1993

RB Huntley, P Bera* and HP Nette

"IAEA / WHO TLD radiotherapy intercomparison for Australia"
IAEA-SM-330/70. International Atomic Energy Agency (1994) 177-190.

Based on material presented at the symposium "Measurement assurance in dosimetry", Vienna, 24-27 May 1993.

* International Atomic Energy Agency, Vienna.

RB Huntley

"Status report for CCEMRI(I) on absorbed dose standards at the Australian Radiation Laboratory"

Report to section I of the Comité Consultatif pour les Étalons de Mesures des Rayonnements

Ionisants, CCEMRI(I)/93-31 (1993).

JF Boas, **RB Huntley**, DV Webb and KN Wise

"Development of a megavoltage dosimetry calibration system based on graphite calorimetry"

In *"NPL workshop on calorimeters in radiation dosimetry"*, ed KE Rosser, NPL 1995.

Proceedings of a workshop held at NPL, Teddington, Middlesex, UK, October 12-14, 1994.

DV Webb, **RB Huntley**, JF Boas, KN Wise and NJ Hargrave

"High energy absorbed dose project at ARL"

Oral presentation at the EPSM '95 conference, Queenstown, New Zealand, November 20-24, 1995.

RB Huntley and J Izewska*

"Australian participation in the IAEA / WHO (Western Pacific Region) TLD postal dose quality audit programme for photon radiotherapy"

Poster presentation at the PREM-IT '97 conference, Adelaide, 7-11 September 1997.

* International Atomic Energy Agency, Vienna.

PJ Allisy-Roberts*, M.Boutillon*, JF Boas and **RB Huntley**

"Comparison of the air kerma standards of the ARL and the BIPM for ^{60}Co γ rays".

Rapport BIPM-98/4, 1998.

* Bureau International des Poids et Mesures, Paris.

RB Huntley, JF Boas and H van der Gaast*

"The 1997 determination of the Australian standards of exposure and absorbed dose at ^{60}Co ".

ARL/TR126, May 1998.

* Australian Nuclear Science and Technology Organisation.

RB Huntley and H van der Gaast*

"The 1998 calibration of Australian secondary standards of exposure and absorbed dose at ^{60}Co ".

ARL/TR128, October 1998.

* Australian Nuclear Science and Technology Organisation.

JF Boas, **RB Huntley** and LH Kotler

"Australian measurement standards for ionising radiation - current status and future prospects"

Oral presentation at the ARPS '98 conference, Ballarat, October 1998..

RB Huntley and J Izewska*

"Australian external beam radiotherapy survey and IAEA TLD postal dose quality audit"

Oral presentation at the EPSM '98 conference, Hobart, 15-19 November 1998.

* International Atomic Energy Agency, Vienna.

PJ Allisy-Roberts*, M.Boutillon*, JF Boas, **RB Huntley** and KN Wise

"Comparison of the absorbed dose to water standards of the ARL and the BIPM for ^{60}Co γ rays".

Rapport BIPM-99/17, 1999.

* Bureau International des Poids et Mesures, Paris.

J Davies*, H van der Gaast*, **R Huntley** and D.Alexiev*

"Secondary standards dosimetry laboratories".

Poster presentation at the ANA '99 conference, Canberra, October 1999.

*Australian Nuclear Science and Technology Organisation.

RB Huntley, KN Wise and JF Boas

"The Australian primary standard of absorbed dose"

Oral presentation at the EPSM '99 conference, Surfers Paradise, 24-28 October, 1999.

RB Huntley

"The Australian radiation dosimetry standards and their dissemination"

Oral presentation at IAEA and BEV (Vienna), BIPM, BNHB and IGR (Paris) and NPL (London), November-December, 1999.

RB Huntley, KN Wise and JF Boas

"The Australian standard of absorbed dose"

Oral presentation at the workshop on recent advances in calorimetric absorbed dose standards, held at NPL (London), 8-10 December, 1999. Proceedings published by NPL, Feb 2000.

Ganesan Ramanathan, Peter Harty, Tracy Wright, Jessica Lye, Duncan Butler, David Webb and

Robert Huntley

"The Australian Primary Standard for absorbed dose to water (graphite calorimeter)"

ARPANSA/TR166, June 2014

C. Thesis

RB Huntley

"A microcalorimeter as a working standard of ionising radiation absorbed dose"

M.App.Sc. thesis, department of applied physics, Royal Melbourne Institute of Technology, 30 June 1986.

D. Conference, AbsDos 2003 (organiser RB Huntley)

RB Huntley

"Workshop on recent advances in absorbed dose standards"

Held at the Melbourne office of the Australian radiation protection and nuclear safety agency, August 19-21, 2003.

JF Boas, **RB Huntley** and JR Pilbrow

"EPR dosimetry - applications, problems and prospects"

Oral presentation at AbsDos 2003 conference, ARPANSA August 19-21, 2003.

JF Boas, **RB Huntley**, SL Sherlock, HA van der Gaast and DV Webb

"Continuity of Australian standards of absorbed dose for ^{60}Co - comparison of beam quality correction factors for 18MV beams from clinical and research linacs"

Oral presentation at AbsDos 2003 conference, ARPANSA

August 19-21, 2003.

RB Huntley

"Absorbed dose to arbitrary materials"

Oral presentation at AbsDos 2003 conference, ARPANSA

August 19-21, 2003.

DV Webb, **RB Huntley** and JF Boas

"The role of trilateral comparisons in the assessment of uncertainty"

Oral presentation at AbsDos 2003 conference, ARPANSA

August 19-21, 2003.