



POSITION DESCRIPTION

Position Title:	Physicist
Cluster / Business Unit / Division	Business Excellence
Section or Unit:	Detection & Imaging
Classification:	Band 4/5
Job Family:	Research
Position Description Number:	PD-2102
Work Contract Type:	Professional
STEMM/NON-STEMM:	STEMM

POSITION PURPOSE

As part of the ANSTO Detection & Imaging (AD&I) business unit, the Physicist will support the development of advanced radiation detection technologies, delivery of scientific & technical advice and the commercial objectives of the unit. The technology development activities will fall within a newly formed business unit and will therefore have a strong commercialisation focus.

ORGANISATIONAL ENVIRONMENT

ANSTO is the national organisation for nuclear science and technology. We focus on undertaking leading edge research, delivering innovative scientific services and providing specialised advice to government, industry, academia and other research organisations.

The ANSTO Detection & Imaging (AD&I) business unit is part of the Business Excellence cluster which drives and stimulates integration, innovation and engagement amongst our internal and external stakeholders. The group plays a key role in ANSTO's future growth and development projects and helps to facilitate ANSTO's evolution into a more outward-looking organisation.

The AD&I business unit houses the Commercial Development team and the Ionising Radiation team. The Commercial Development team is focused on the development activities for transitioning radiation detection & imaging technologies to market. The Ionising Radiation team provides core radiation detection activities (including: Advice & International Engagement), on behalf of ANSTO, to our stakeholders in Government. Both the Commercial Development and Ionising Radiation capability teams directly report to the AD&I Chief Technology Officer. Due to the demarcation of national security classification work activities of the Ionising Radiation team, the reporting line of these activities is through the Leader, Nuclear Stewardship (NSSS); and the Group Executive, NSSS. Broader activities, such as R&D, being performed on behalf of Nuclear Stewardship, will also be reported through this line.

ACCOUNTABILITIES & RESPONSIBILITIES

Key Accountabilities- Band 4

- Develop specialist knowledge and experience in radiation detection physics to assist in the development of new radiation detection concepts.
- Assist in the provision of scientific knowledge to ensure the trusted advice and specialised service meets customer requirements.
- Assist in solving scientific problems by seeking knowledge and alternative solutions and developing new techniques, methods and experimental capabilities
- Support to staff within the team with the overall aim of advancing team capabilities.
- Keep abreast of industry best practice and technological developments
- Contribute to the development of intellectual property while working as part of a broader team that is developing high technology readiness level radiation detection systems.

- Undertake additional duties as required during periods of leave of other staff

In addition to performing all Band 4 accountabilities, the Band 5 role includes these additional accountabilities

- Apply specialist knowledge and experience in radiation detection physics to the development of new radiation detection concepts.
- Independently solve scientific problems by seeking knowledge and alternative solutions and developing new techniques, methods and experimental capabilities
- Use scientific knowledge to provide trusted advice and specialised services to meet customer requirements;
- Represent ANSTO in a range of domestic and international fora including meetings, technical working groups and conferences.

Decision Making

- The ANSTO values, organisational corporate plan, business plan, operational excellence program and AD&I strategy and plans provide the context for the position.
- The position works within a framework of legislation, policies, professional standards and resource parameters. Within this framework the position has some independence in determining how to achieve assigned objectives however will be constrained by the project deliverables and timeframes.
- The position is responsible for completing assigned work objectives given to them by their line management, project manager or senior team members.
- The position is accountable for providing support to senior team members in the provision of advice to stakeholders.
- The levels of authority delegated to this position are those approved in accordance with the project management structure and issued by the Chief Executive Officer. All delegations will be in line with the ANSTO Delegation Manual AS-1682 (as amended or replaced).

In addition to all Band 4 decision making, the Band 5 role includes these additional decision making requirements

- The position is fully accountable for the accuracy, integrity and quality of the content of advice provided and is required to ensure that decisions are based on sound evidence, but at times may be required to make effective judgements under pressure or in the absence of complete information or expert advice.
- Determine key work priorities within the context of agreed work plans and project plans and consult with the line manager on complex, sensitive and major issues that have a significant impact on the project.

Key Challenges

- Rapidly establishing knowledge in the field of radiation detection and using core skills to support the development of technologies that meet the requirements of key stakeholders.

In addition to performing all Band 4 challenges, the Band 5 role includes these additional challenges

- Proposing new future concepts that enhance detection/imaging capability and lead to new opportunities for technology applications and commercialisation.

KEY RELATIONSHIPS

Who	Purpose
Internal	
Manager	<ul style="list-style-type: none"> • Receive guidance and direction • Provide advice and recommendations • Provide regular updates on key tasks, issues & priorities • Recommend and gain endorsement for project activities, plans and other initiatives • Escalate issues and propose solutions
Project team	<ul style="list-style-type: none"> • Support team members and work collaboratively to contribute to achieving outcomes • Provide advice and analysis • Contribute to group decision making processes, planning and goals • Collaborate and share accountability • Negotiate and resolve conflicts •
ANSTO staff/teams	<ul style="list-style-type: none"> • Build constructive and productive relationships within ANSTO in support of the delivery of client services, advice and radiation detection equipment

POSITION DIMENSIONS

Staff Data	
Reporting Line	Reports to Principle Scientist – Ionising Radiation
Direct Reports	Nil
Indirect Reports	Nil

Financial Data (2021/2022)	
Revenue / Grants	N/A
Operating Budget	N/A
Staffing Budget	N/A
Capital Budget	N/A
Assets	N/A

Special / Physical Requirements	
Location:	Lucas Heights Working in different areas of designated site/campus as needed
Travel:	May be required travel to ANSTO sites from time to time Frequent travel both internationally and nationally
Physical:	Office based physical requirements (sitting, standing, minimal manual handling, movement around office and site, extended hours working at computer) Laboratory work may require standing for long periods and operating equipment. Laboratory facility physical requirements (lifting, sitting, standing, operating equipment, manual handling) Wearing personal protective equipment for the handling of hazardous and/or radioactive materials

Radiation areas:	Perform duties in an area where radioactive materials are handled under tightly controlled safety conditions Perform duties with and in an area where hazardous chemicals or radioactive materials are handled under tightly controlled safety conditions
Hours:	Willingness to work extended and varied hours based on operational requirements After hours work may be required for short and infrequent periods
Clearance requirements:	Satisfy ANSTO Security and Medical clearance requirements

Workplace Health & Safety

Specific role/s as specified in AG-2362 of the ANSTO WHS Management System	All Workers Other specialised roles identified within the guideline a position holder may be allocated to in the course of their duties
--	--

ORGANISATIONAL CHART

Refer to published Organisational Chart.

KNOWLEDGE, SKILLS AND EXPERIENCE

Band 4	Band 5
1. Degree in Physics, Mathematics, Engineering or equivalent experience	Degree in Physics, Mathematics, Engineering and at least 3 years relevant experience in the detection of ionising radiation
2. Knowledge of the interaction of ionising radiation with matter and its detection	Substantial knowledge of the interaction of ionising radiation with matter and its detection
3. Knowledge of ionising radiation measurement techniques and the associated nucleonic equipment	Well-developed knowledge of ionising radiation measurement techniques and the associated nucleonic equipment
4. Demonstrated experience developing innovative solutions for technical, scientific or engineering problems.	Same as band 4
5. Demonstrated computational skills, including the use of Matlab and/or C++	Demonstrated experience programming in Matlab and/or C++ and using statistical data analysis techniques.
6. Ability to apply mathematical methods.	Same as band 4
7. Ability to analyse, interpret and report scientific findings	Experienced in the analysis, interpretation and reporting of scientific findings
8. Ability to develop and maintain productive working relationships internal to ANSTO;	Ability to develop and maintain productive working relationships internal and external to ANSTO;
9. Good verbal communication skills with the ability to communicate clearly	Excellent verbal communication skills with emphasis on the ability to communicate clearly

	with people at a variety of organisational levels and varied technical understanding
10.	Significant demonstrated experience in radiation detection experimental techniques and/or simulations
11.	Experience in client relationships, meeting client expectations and operating within deadlines;

LINKED ROLE TRANSITION REQUIREMENTS

- Minimum 3 years working as Physicist (band 4) or equivalent experience
- Demonstrated capability to independently manage substantial project tasks to successful completion
- Demonstrated ability to independently and responsibly perform Band 5 accountabilities and apply required knowledge, skills and experience for the Band 5 position including:
 - Undertake Band x accountabilities independently with no direct supervision
 - Apply well-developed knowledge and experience to troubleshoot, investigate and resolve complex systems and problems (relevant to discipline) with no supervision or guidance
 - Independently analyse, interpret and report on scientific findings, to a high standard
 - Utilise judgement to independently assess priorities of projects and tasks to optimise the allocation of resources
 - Providing feedback and contributing to the process of continual improvement in safety, reliability and efficiency and individual knowledge and competency

Transition from Band 4 to Band 5 will occur following a recommendation from the relevant line manager, assessment by management and approval from

Transition within the linked role is not automatic and ability to perform Band 5 accountabilities will need to be demonstrated and assessed. This is to be done by completing the attached form and completing a full written submission demonstrating and justifying how the employee meets the transition requirements noted above.

VERIFICATION

This section verifies that the line manager and appropriate senior manager/executive confirm that this is a true and accurate reflection of the position.

Line Manager		Delegated Authority	
Name:	David Boardman	Name:	Rosanne Robinson
Title:	Principle Scientist – Ionising Radiation	Title:	General Manager Business Development
Signature:		Signature:	
Date:		Date:	



**Physicist (PD-2102)
Band 4 to Band 5 Transition Checklist**

Name:	
Commencement Date:	
Assessment Date:	

Written submission demonstrating and justifying how the employee meets requirements must also be attached.

Requirements for transition	Met Criteria
a) Minimum 3 years working as Physicist (band 4) OR b) Minimum 3 years equivalent experience	<input type="checkbox"/> Yes <input type="checkbox"/> No OR <input type="checkbox"/> Yes <input type="checkbox"/> No
Demonstrated capability to independently manage projects to successful completion	<input type="checkbox"/> Yes <input type="checkbox"/> No

Demonstrated ability to independently and responsibly perform Band 4 accountabilities and apply required knowledge, skills and experience for the Band 5 position including:	
Undertake Band 4 accountabilities independently with no direct supervision	<input type="checkbox"/> Yes <input type="checkbox"/> No
Apply well-developed knowledge and experience to troubleshoot, investigate and resolve complex systems and problems (relevant to discipline) with no supervision or guidance	<input type="checkbox"/> Yes <input type="checkbox"/> No
Independently analyse, interpret and report on scientific findings, to a high standard	<input type="checkbox"/> Yes <input type="checkbox"/> No
Utilise judgement to independently assess priorities of projects and tasks to optimise the allocation of resources	<input type="checkbox"/> Yes <input type="checkbox"/> No
Providing feedback and contributing to the process of continual improvement in safety, reliability and efficiency and individual knowledge and competency	<input type="checkbox"/> Yes <input type="checkbox"/> No

Attach written submission demonstrating and justifying how the employee meets each of the requirements.

Manager Recommendation

I have reviewed the employee’s competence in accordance with Linked Role PD-2102 and certify that the employee meets all requirements for transition and recommend transition from Band 4 to Band 5 be endorsed as demonstrated in the attached written submission detailing how the employee meets each of the requirements.

Name & Title:			
Signature:		Date:	

Principle Scientist – Ionising Radiation

I have assessed the submission and confirm that the employee meets all requirements for transition from Band 4 to Band 5.

Name & Title:			
Signature:		Date:	

General Manager Business Development

I have reviewed all information and approve transition from Band 4 to Band 5.

Name & Title:			
Signature:		Date:	
Effective date of transition:			