



Research School of Astronomy and Astrophysics
Advanced Instrumentation and Technology Centre
Strategic Plan: 2003-2007

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1 September 2004

Foreword

The Technical Section is a key component of the Research School of Astronomy and Astrophysics (RSAA) of the Australian National University (ANU).

The transition from block funding to competitive-grant funding through the Australian Research Council has necessitated a reconsideration of the role of the Technical Section within RSAA and of the way in which the Section can best contribute to achieving RSAA's strategic goals.

RSAA's strategic goals are set out in the RSAA strategic plan, *RSAA Strategic Plan: 2003-2007*. These derive from the ANU's strategic plan, *ANU to 2005 Preparing Ourselves*. The RSAA strategic plan describes broad academic and technical objectives. The present document lists those broad technical objectives and further elaborates objectives for the Technical Section that are consistent with the strategic goals of the School.

As such, this document is the primary point of reference for defining appropriate future activities for RSAA's Advanced Instrumentation and Technology Centre.

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Assoc. Director for Instrumentation
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1 January 2004

Mission Statement

Through the development of leading instrumentation,

- *Fulfill the scientific aspirations of RSAA astronomers*
- *Provide infrastructure for facilities to which Australia has access*
- *Train outstanding instrumentalists*

Key Objectives

- Advance the experimental and theoretical frontiers of technologies that enable astronomical discoveries
- Position the RSAA Technical Section to provide national and international leadership
- Foster excellence and breadth in our staff
- Increase the world-wide visibility of the RSAA Technical Section
- Maintain and grow our astronomical engineering capability
- Diversify our funding base to increase stability and flexibility
- Sustain the operation of the RSAA Technical Section
- Develop programs that train outstanding instrumentalists

Objective

Actions and Principal Performance Indicator

Advance the experimental and theoretical frontiers of technologies that enable astronomical discoveries

Actions:

- Conduct research and development of strategic technologies
- Maintain a watching brief on critical developing technologies
- Identify and develop enabling technologies for the most scientifically useful future facilities

Performance Indicator:

- RSAA leads international technology development in at least one area

Objective

Actions and Principal Performance Indicator

**Position
RSAA
Technical
Section to
provide
national and
international
leadership**

Actions:

- Maximize the productivity of facilities at Siding Spring Observatory
- Provide the scientific capabilities required by Australian astronomers on the telescopes to which they have access
- Strengthen collaborative ties with national instrumentation centers
- Foster strategic partnerships with industry

Performance Indicator:

- RSAA assists other Australian instrumentation groups to win at least one international technology contract

Objective

Actions and Principal Performance Indicator

**Foster
excellence
and breadth
in our staff**

Actions:

- Expect and encourage staff to accept responsibility
- Actively encourage staff training and development
- Implement effective mentoring programs
- Recognise and foster diverse talents and styles
- Actively embrace equity and EEO principles
- Actively recruit staff with suitable qualities

Performance Indicator:

- High level of retention and commitment of staff

Objective

Actions and Principal Performance Indicator

Increase the world-wide visibility of the RSAA Technical Section

Actions:

- Participate in the development of major national and international facilities
- Involve engineering staff in the academic enterprise of the School
- Make RSAA technical capabilities readily accessible to the international community

Performance Indicator:

- Number of international instrumentalists visiting RSAA
- Number of international collaborations
- Number of citations of RSAA technical work

Objective

Actions and Principal Performance Indicator

Maintain and grow our astronomical engineering capability

Actions:

- Establish Advanced Instrumentation and Technology Centre
- Maintain a broad range of core skills
- Adapt staffing to react to project requirements
- Emphasize RSAA-led School, national, and international projects
- Develop strategic astronomical technologies in collaboration with non-astronomical partners

Performance Indicator:

- Breadth and scale of scientifically and technically excellent astro-engineering activities

Objective

Actions and Principal Performance Indicator

Diversify our funding base to increase stability and flexibility

Actions:

- Monitor and increase IGS, RIBG, and RTS returns
- Set aside overhead funds to be used for new initiatives
- Seek external funds for internal projects
- Foster industry participation in funding requests
- Explore philanthropic sources

Performance Indicator:

- Increased variety of funding sources

Objective

Actions and Principal Performance Indicator

Sustain the operation of the RSAA Technical Section

Actions:

- Critically review and improve managerial structures
- Implement procedures for optimal selection and execution of projects
- Maintain RSAA project contingency funds
- Budget for infrastructure depreciation

Performance Indicator:

- Projects completed successfully on-time and on-budget

Objective	Actions and Principal Performance Indicator
Develop programs that train outstanding instrumentalists	<p>Actions:</p> <ul style="list-style-type: none">● Establish an Astronomical Instrumentation PhD program● Enhance graduate training links with other sections of ANU● Seek industry participation in the RSAA graduate training program● Investigate technical apprenticeships● Train technical staff in advanced skills <p>Performance Indicator:</p> <ul style="list-style-type: none">● Number of Astronomical Instrumentation PhD graduates● Number of former staff employed in technology areas