

13/12/17

Armagh Observatory and Planetarium

Corporate Plan

2018-21

Table of Contents

Vision – the Four Pillars of the Armagh Observatory and Planetarium	3
Foreword by Archbishop Richard Clarke, Chair of the Board of Governors	4
Introduction from Professor Michael Burton, Director and Chief Executive	5
Our Journey	6
Vision, Mission and Brand	7
Our Organisational Values	8
Principles	9
Linkages to the Programme for Government	10
Corporate Plan Themes	11
Theme 1: Research – The Cosmic Journeys of Galaxies, Stars, Planets and People.....	12
Theme 2: Education and Community Outreach – We are all Equal under the Stars.....	12
Theme 3: History and Heritage – Living Space	13
Theme 4: Leadership and Governance – Delivering Excellence.....	13
Board of Governors, Management Committee and Senior Management Team	14
AOP Board of Governors	14
AOP Management Committee	15
AOP Senior Management Team (SMT)	16
Map and Contact Details	17
List of Acronyms	18

Vision – the Four Pillars of the Armagh Observatory and Planetarium

Pillar 1: Research

The Cosmic Journeys of Galaxies, Stars, Planets and People

- Is there life elsewhere in the universe?
- What is the fate of the universe?
- What are black holes?
- What external factors affect life on earth?



Pillar 2:

Education and Community Outreach

We are all Equal under the Stars

- Educate in the STEM subjects
- Inspire young people
- Teaching through entertainment
- Communicating science through outreach



Pillar 3:

History and Heritage

Living Space

- Two hundred years at the forefront of bringing astronomy to the world
- Preserving and recording the environment
- A living heritage
- The Robinson legacy in Armagh



Pillar 4:

Leadership and Governance:

Delivering Excellence

- Delivering for our customers
- Developing our people
- Managing and maximising our resources
- Demonstrating good governance



Foreword by Archbishop Richard Clarke, Chair of the Board of Governors

Armagh Observatory was established by my predecessor Archbishop Richard Robinson in 1790 with the aim of increasing human understanding of the universe, its origins, and the processes which maintain and cause it to develop. Astronomy is arguably the science most readily appreciated by a wide audience, a source of inspiration for human curiosity through the centuries. One only has to stand outside on a clear night to see a myriad of stars, and to allow one's mind to reflect on such questions as how they came into being and where we fit into the universe. The motto of the institution "The Heavens declare the glory of God" – the verse with which Psalm 19 begins – remains as apt today as when inscribed on the fabric of the Observatory during its foundation. The Planetarium, founded in the twentieth century, seeks to offer scientific answers to these questions in a manner that is fully accessible to the non-specialist.

The combined Observatory and Planetarium is a truly unique organisation – worldwide – where research and education, history and heritage come together. It brings a sense of place to the City of Armagh, and is a source of pride for its citizens.

Over the past three years, the Board of Governors and the Management Committee have worked with the Department for Communities and its predecessor department to bring the Observatory and the Planetarium within a wholly single entity, and exploit the synergies between them. We have appointed Professor Michael Burton as Director of the new organisation. He is now leading the development of a single, coordinated scientific establishment. Over the past year, three *Vision* documents have been developed by the AOP under the themes of 'research', 'education and outreach', and 'history and heritage', each describing an exciting future for an integrated organisation. It is a future focussed on bringing together new collaborations and partnerships, forging new directions and developing AOP's status as a recognised player on the world stage.

This vision for the future is not without challenge in an increasingly uncertain world. The Board of Governors and Management Committee look forward to continue to working with the Department for Communities in ensuring that the necessary resources are found to make this vision possible.

I welcome the direction outlined in this, the first *Corporate Plan* for the Armagh Observatory and Planetarium, and look forward to enjoying the progress that is made in achieving its goals in the coming years.

Introduction from Professor Michael Burton, Director and Chief Executive

The Armagh Observatory and Planetarium (AOP) is an exemplar for Northern Ireland on the world stage, an institution excelling in research and public outreach in science, set within a heritage environment that is rich in scientific history. A place where the story of humanity's ongoing quest for understanding about the cosmos can be heard and experienced.

The organisation has existed as two separate entities until recently, pursuing their own objectives. They have recently been brought together into a single body, and are in the midst of a process of integration. This is a challenging process for all involved, not just in dealing with different cultures, but also with differing policies, procedures and practices.

The Corporate Plan presented here is a three-year strategy to achieve stability for the organisation and to provide a firm foundation for the future, upon which a greater ambition can be realised.

Over the past year AOP has been engaged in writing three *Vision* documents for the pillars of research, education and community outreach, and history and heritage, which underlie the purpose of our organisation and what we aim to do and achieve.

To these, we have added the fourth pillar of leadership and governance, which makes these possible, in order to produce the strategy presented in this Corporate Plan. In doing so, AOP has engaged with its key stake holders and partners, as well its own staff. In itself, the plan is also an interim strategy to create a new organisation that our sponsors and partners can be confident in, one they are able to support into the future.

The long-term vision is of a world class institution conducting both frontline scientific research as well as excelling in the delivery of public outreach and education in science, and engaging with the local community, and providing a catalyst for seeding high-value economic growth. While at the same time remaining entwined within an environment that is rich in history and where the story of the development of science can still be seen *in situ*. It is of a must-see attraction for local, national and international visitors, where depth and quality is emphasised over transience and quantity.

Bringing all these aspects together will entail a new build for the Planetarium, an iconic building for Armagh capable of supporting the multi-faceted organisation described in the *Vision* documents, one able to take advantage of future opportunities for growth and innovation. A place that will remain an exemplar for the best of Northern Ireland through the 21st century. In this Corporate Plan we are laying the foundations in the newly unified organisation so that we may work towards achieving this long-term vision in our next Plan.

Our Journey

The Armagh Observatory is the oldest scientific institution in Northern Ireland and the longest continuously operating astronomical research institute in the UK and Ireland.

The cultural and heritage importance of Armagh Observatory and Planetarium is significant, and almost as important as our scientific credentials. The organisation was founded by Archbishop Robinson in 1790, through the 1791 Act, passed by the Irish Parliament for *“settling and preserving a Public Observatory and Museum in the City of Armagh for ever”*.

The foundation of the Planetarium on the same site by Dr Eric Lindsay, the 7th Director of the Observatory, greatly enhanced the organisation’s public face and outreach activities. The Planetarium is 50 years old in 2018, and is also the oldest in the UK and Ireland.

The combination of an active Observatory and Planetarium on the same site, carrying out a vibrant research, education and public outreach programme, together with their rich scientific history that is still embedded within its heritage, is truly unique. It strengthens our status nationally and internationally and places AOP on the world stage, an example of the best that Northern Ireland offers.

AOP is an active participant in several international scientific projects such as GOTO, LOFAR, Mopra, Rozhen & SALT, a regular user of major facilities such as those of ESO and the NHO, and engaged in the development of future missions such as CTA, DKIST & SDO – projects ranging from inter-university collaborations to global science endeavours.

Armagh Observatory and Planetarium became a single Statutory Corporation through the Armagh Observatory and Planetarium (NI) Order in 1995 – but still acted as two separate independent bodies.

In 2015, a transformation and change project commenced, with a view to creating a unified organisational structure managed by one Chief Executive with a Senior Management Team. This included the development of a revised governance structure, as well as developing single business, financial, estates, HR and ICT systems. AOP is now mid-course in the process of creating a more streamlined and effective organisation.

An extensive consultation has since been undertaken. A new Corporate Plan has been developed with a revised vision and mission. It is presented here as a three-year plan to stabilise the organisation following the merger of Observatory and Planetarium.

The Plan provides a firm foundation for the future, upon which a long-term vision can be developed, centred around a new build for the Planetarium, providing an iconic entrance to the City of Armagh. This will ensure that the Armagh Observatory and Planetarium remains a world class institution for research and public outreach in science, and a place that Northern Ireland can be proud of.

Vision, Mission and Brand

Our Vision aims to build on AOP's position as a thriving astronomical research and education institute, continuing to increase our understanding of the cosmos and humanity's place within it. The Vision also aims to ensure that the Observatory and Planetarium is recognised as a unique and special place. This rests upon a rich history and heritage, and a legacy of learning and classic architecture, all founded on the foresight of Archbishop Robinson. AOP adds significantly to the brand value of the Armagh region as a key tourist destination.

Our research and education staff possess a special knowledge bank which underpins our ability to communicate the importance and relevance of science to the public, especially with regard to humanity's stewardship of the planet. AOP is keen to explore the development of collaborative projects with partners from industry and education that can add to the vitality of the local and regional economy, for instance involving the space sector and the application of digital technology to immersive visualisation and the virtual experiences of different environments.

AOP's vision and mission statements demonstrate the symbiotic and integrated relationship between the two complementary elements of the organisation – the Observatory and the Planetarium. They illustrate the importance of engaging with people from all community backgrounds in STEM subjects and the importance of translating “big science” into the everyday lives of people through exciting, innovative education and outreach projects. Our brand then encapsulates the core elements of what we do and aspire to achieve.

Vision

Armagh Observatory and Planetarium, as part of the transformation process into a single, integrated organisation, has developed a new vision statement:

“Armagh Observatory and Planetarium is renowned throughout the world as a unique Centre of Excellence for research, education, inspiration and outreach in space and science.”

Mission Statement

The Mission of the Armagh Observatory and Planetarium is:

“To advance the knowledge and understanding of astronomy and related sciences through interactive engagement and the execution, promotion and dissemination of astronomical research nationally and internationally, in order to enrich the intellectual, economic, social and cultural life of all members of the community.”

Our Brand

*Armagh Observatory and Planetarium
Exploring the Cosmos since 1790.*

*Explore and Discover, Teach and Inspire.
Research and Education entwined with History and Heritage.
A “must see” destination for local, national and international visitors.*

Our Organisational Values

Armagh Observatory and Planetarium is an Arm's Length Body of the Department for Communities of the Northern Ireland Executive. In addition to our commitments to the Department, set out in our Management Statement and Financial Memorandum and the Seven Nolan Principles of Public Life¹ which underlie an individual's personal code of conduct, AOP has embraced the values outlined below. They shape our behaviour when undertaking our mission, in interacting with each other, with our customers, partners, funders and other stakeholders, and in discharging our governance responsibilities. They complement the vision and reflect the characteristics of a truly unique establishment, set within an inspiring setting and location.

Value	
Creative and innovative.	We are an energetic organisation ready to build on opportunities as they arise.
Agile and adaptable.	We are ready to embrace and adapt to change to ensure that we remain effective and relevant in a complex and ever-changing world.
Leading in a City of learning. <i>"The one exclusive sign of thorough knowledge is the power of teaching." Aristotle</i>	We enjoy learning and development to advance knowledge and the understanding of science.
Ambition and excellence in all that we do.	We are ambitious. We strive for excellence in all that we do, improving ourselves, our teams and the quality of research, education and outreach services that we deliver.
Adding to our proud legacy.	We will continue to build and add to the Robinson legacy through innovation and the pursuit of new opportunities.
Team work.	Synergising our different skills sets, we work together with professionalism and integrity, passion and commitment, to communicate knowledge about science.
Collaboration and partnership.	We work with internal and external partners, both locally and globally, to achieve our goals and create new knowledge.
Customer focused. <i>"Pleasure in the job puts perfection in the work." Aristotle</i>	We will commit to meeting customer expectations – internal as well as external – of a leading institution and value the opportunity we get to make a meaningful difference to their lives.
A sense of place.	We recognise the special contribution that the Observatory and Planetarium bring to Armagh and the importance of public access to our facilities and grounds, a shared space for all that brings with it a sense of place.
Equality.	We are a diverse organisation, committed to creating opportunities for under-represented groups.

¹ The Seven Nolan Principles of Public Life are Selflessness, Integrity, Objectivity, Accountability, Openness, Honesty and Leadership.

Principles

Our ambition is to ensure that the Armagh Observatory and Planetarium is a world class Planetarium excelling in education and outreach, uniquely complemented by a world class Research Institute envied through the world. Working together, they build on a unique heritage that makes the Armagh Observatory and Planetarium a “must visit” destination for local, national and international visitors and students.

Armagh Observatory and Planetarium plays a leading role in science, education and outreach:

- in remaining at the forefront in key areas of scientific research,
- in helping to develop the STEM agenda across our society,
- in providing a quality visitor attraction,
- in nurturing a new generation of young people excited by the possibilities that science brings, and
- in disseminating and upholding the principles of science in an increasingly complex and sometimes irrational world.

AOP is transforming its governance and operating arrangements so that it is able to achieve these objectives, to ensure the continued vitality of its programmes and ability to take advantage of new opportunities for growth and innovation.

Linkages to the Programme for Government

In conducting its operations AOP contributes directly to the Programme for Government (PfG) in a number of ways, and to a range of indicators as listed below. As part of our strategy, as will be specified in our annual Business Plans, we will identify where contributions can be made to the outcomes-based approach in delivering better outcomes for citizens, providing KPIs to monitor our performance.

PfG indicators that AOP contributes to:

- Improved educational outcomes
- Reducing educational inequality
- Improving the quality of education
- Improving the skills profile of the population
- Improving cultural participation
- Increasing the confidence and capabilities and people and communities
- Increasing the proportion of people working in good jobs
- Increasing the competitiveness of the economy
- Increasing innovation in our economy
- Improving regional balance of economic prosperity through increased employment
- Improving internet connectivity
- Increasing environmental sustainability
- Increasing respect for each other
- Increasing shared space
- Improving our attractiveness as a destination
- Improving our international reputation
- Increasing the proportion of graduates moving into employment or on to further education
- Increasing the quality of life for people with disabilities

PfG outcomes that AOP contributes to:

- We prosper through a strong, competitive regionally balanced economy
- We live and work sustainably – protecting the environment
- We have a more equal society
- We are an innovative, creative society, where people can fulfil their potential
- We have more people working in better jobs
- We care for others and we help those in need
- We are a shared society that respects diversity
- We are a confident, welcoming, outward-looking society
- We have high quality public services
- We have created a place where people want to live and work, to visit and invest
- We connect people and opportunities through our infrastructure
- We give our children and young people the best start in life

Corporate Plan Themes

Armagh Observatory and Planetarium aspires to be world class in the research we conduct and in the education and outreach experience we deliver. There is a proud record of achievement that extends across four centuries.

These three themes – research, education and outreach, history and heritage – represent our place and purpose on the world stage. They are described further in the accompanying Vision documents. To these we add a fourth theme – Leadership and Governance – about how we run the organisation efficiently, effectively and sustainably.

Together, these four themes form the core to this Corporate Plan. Upon them a world class institution can then be grown, supported by an infrastructure and facilities that will meet the needs and expectations of the 21st Century – a new build of the Planetarium that will provide an iconic entrance to the City of Armagh, as well as a fit-for-purpose establishment that is able to support it. This Corporate Plan lays the groundwork for the newly combined Observatory and Planetarium so that this vision can be achieved afterwards.

In the following pages we describe the purpose, the activities we will undertake, and the strategic objectives we will pursue, under each of the four themes². These then will provide specific tasks in our annual business plans.

The strategic objectives should not, however, be considered as prescriptive of all that AOP will pursue, as it is in the very nature of science that objectives need to be flexible, with direction determined by results obtained. Their pursuit, however, even when direction changes, serves the broader purpose of growing AOP so that it is indeed able to stand and perform on the world stage. Success will, of course, also depend on the amount of resource that is made available to make their pursuit possible.

² Note also that, for simplicity, years given in the text that follows are the first for the financial year; i.e. “by 2018” means, the “end of the 2018/19 financial year”, etc.

Theme 1: Research – The Cosmic Journeys of Galaxies, Stars, Planets and People

Purpose: *Remain a leader on the international stage of science by conducting and facilitating world leading astronomical research.*

AOP will work to strengthen and maintain its position as a peer-recognised leader on the international stage in science and astronomy. This will require AOP to continue and sustain efforts to renew, refresh and revitalise organisational expertise and infrastructure, ensuring that AOP is well-placed to anticipate, maximise and respond to emerging opportunities within the fields of astronomy and space research. AOP will create and maximise opportunities to ensure that the relevance and application of its work and research is understood by a wider audience, recognising the importance of engagement and support, with and from the wider civic society, business/commercial and education sectors.

- 1.1 By 2020 to have successfully retained a peer-led and externally validated 'Quality Rating' for the AOP research programme (measured through the RAE or an equivalent exercise).
- 1.2 By 2019 to have begun a pilot 'Digital Incubator Hub' project in partnership with other stakeholders.
- 1.3 By 2018 to have delivered one international scientific meeting showcasing AOP research and outreach.
- 1.4 By 2019 to have initiated at least one collaborative research project involving a new strategic direction with a national/international partner.

Theme 2: Education and Community Outreach – We are all Equal under the Stars

Purpose: *Ensure continuous development of programmes around the four pillars of Education, Inspiration, Entertainment and Outreach.*

We aim to deliver sustained growth in the number of people benefitting from AOP services. We will work to diversify our existing visitor profile with a particular emphasis on attracting increased numbers of young adults in post-primary and third level education in Northern Ireland. We will develop new partnerships across the education sector, identifying opportunities to enhance and improve the learning outcomes for children and young people, drawing on experience and insights harvested from our research programme. We recognise the importance of retaining existing visitors and will ensure that our exhibits and services continually evolve to reflect new technologies and meet or exceed customer expectations.

- 2.1 By 2020 to grow total per annum visitor numbers to 55,000 (baseline=48,500, 2016).
- 2.2 By 2019 to have delivered at least four post-primary/tertiary education outreach & engagement projects.
- 2.3 By 2020 to increase the percentage of children & young people from Northern Ireland who have participated in AOP activities at least once in the last 12 months to 15% (baseline=13%, YPBAS 2016).
- 2.4 By 2018 to strengthen and improve AOP's contribution to and engagement with civic society (measured through a stakeholder survey).

Theme 3: History and Heritage – Living Space

Purpose: *Protect and promote the history and heritage of the institution and its environment. Develop connections to the wider community locally, nationally and internationally. A shared space for all to enjoy.*

Armagh Observatory and Planetarium is widely regarded as a unique institution throughout these islands, not least due to the position it occupies in providing a sense of 'Place' and a deep connection with the City of Armagh. We will work to tell that story to as wide an audience as possible. Reflecting on our commitment to a 'living history', we will engage with emerging technologies, as the Observatory did in previous centuries, to advance appreciation and understanding of science and the world around us.

- 3.1 By 2020 to achieve Museum Accreditation demonstrating AOP's commitment to managing its collections effectively, for the enjoyment and benefit of its users.
- 3.2 By 2019 to be engaged in the development of innovative digital solutions that enable a global audience to experience, appreciate and understand the contribution of AOP to knowledge creation through the ages.
- 3.3 By 2018 to contribute to the development and implementation of 'Place' within Armagh and regional tourism strategies, recognising the uniqueness and special contributions of AOP.
- 3.4 By 2018 to develop and implement an Estates Management Strategy that respects, protects and preserves the built and natural heritage of AOP, and provides a feasibility study to prepare for a new build featuring an integrated science, education and outreach centre.

Theme 4: Leadership and Governance – Delivering Excellence

Purpose: *Ensure fit for purpose governance and support services are in place to support the delivery of organisational objectives.*

AOP recognises its responsibility to demonstrate good standards of governance and accountability. We will ensure that efficient and effective business processes are in place to support the delivery of our Vision and objectives and to assist performance management. We will actively engage with customers and stakeholders to develop meaningful partnerships and collaborations to assist the delivery of common goals. We will continue to work closely with the NI Executive and the Department for Communities to ensure that our strategy and priorities are aligned to the Programme for Government and Departmental priorities.

- 4.1 By 2018 develop a single organisational brand and identity that clearly demonstrates AOP's vision and values;
- 4.2 By 2019 have delivered an agreed and resourced restructuring proposal and embedded HR Strategy to develop a culture which mirrors AOP's values and supports the delivery of the AOP Vision;
- 4.3 By 2018 create an effective performance culture focused on delivery of AOP Corporate Strategy within a well-defined path, from Vision Pillars – Corporate Plan Objectives – Business Plan Objectives – Team Plans – Individual Objectives;
- 4.4 By 2020 develop proposals for a further review of governance arrangements to include a more commercial approach to funding and income and the ability to maximise on AOP's Charity status, to ensure the future sustainability of AOP within a shrinking public purse.

Board of Governors, Management Committee and Senior Management Team

AOP Board of Governors

	Name and Contact Details	Representing
1	His Grace, The Most Reverend Dr Richard Clarke Archbishop of Armagh	The Chapter of the Church of Ireland Cathedral of Armagh
2	The Very Reverend Dean Gregory Dunstan Dean of Armagh and Keeper, Robinson Public Library	
3	The Venerable Archdeacon T Scott	
4	The Venerable Archdeacon Andrew Forster	
5	The Reverend Canon D Hilliard	
6	The Reverend Canon W J A Dawson	
7	The Reverend Canon J Moore	
8	The Reverend Canon R J N Porteus	
9	The Reverend Canon N Hughes	
10	The Reverend Canon W B Paine	
11	The Reverend Canon W M Adair	
12	VACANT	Queen's University, Belfast
13	Mr W G H Berry	Ministerial Appointee
14	Professor Rene Oudmaijer School of Physics and Astronomy, University of Leeds	Nominated by the Governors of AOP
15	Professor Alan Hibbert Dept. of Applied Mathematics and Theoretical Physics, Queen's University Belfast	Nominated by the Governors of AOP

AOP Management Committee

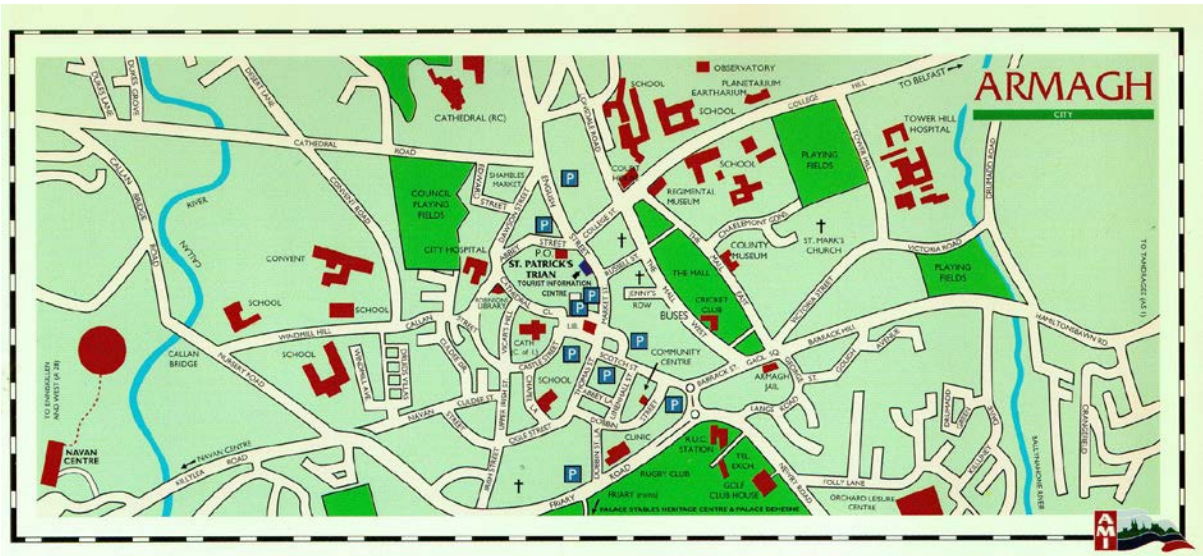
	Name and Contact Details	Representing
1	Mr John Briggs	Appointed by Chair of the Governors
2	VACANT	Nominated by the Governors
3	Professor Rene Oudmaijer School of Physics and Astronomy, University of Leeds	Nominated by the Governors
4	The Reverend Canon D Hilliard	Nominated by the Governors (Dean and Chapter)
5	Mr R Brett Hannam	Ministerial Appointee
6	Dr Mike McKay Human Spaceflight Operations Department, European Space Agency, Germany	Ministerial Appointee
7	Mrs Primrose E Wilson	Ministerial Appointee
8	Mr Patrick McGurgan	Ministerial Appointee
9	Mr Stan Brown Forensic Science Northern Ireland	Ministerial Appointee
10	Professor Louise Harra Mullard Space Science Laboratory, University College London	Ministerial Appointee
11	Professor Michael Merrifield School of Physics and Astronomy, University of Nottingham	Nominated by the Science and Technology Facilities Council
12	Professor Mihalis Mathioudakis Astrophysics Research Centre, Queen's University Belfast	Nominated by the Queen's University of Belfast
13	Professor Tom Ray School of Cosmic Physics, Dublin Institute for Advanced Studies	Nominated by the Dublin Institute for Advanced Studies

13/12/17

AOP Senior Management Team (SMT)

Professor Michael Burton	Director and CEO
Carol Corvan	Head of Corporate Services
John News	Head of Education and Community Outreach
To be appointed	Head of Research

Map and Contact Details



Armagh Observatory and Planetarium
 College Hill, Armagh, BT61 9DG
 Northern Ireland, UK
 Tel: 028-3752-2928
 Websites: www.armagh.ac.uk



The fourth Director, John Dreyer, standing outside the front entrance to Observatory next to the enclosure housing the meteorological station on the North Lawn, c1883. The 1827 dome is to left. On the roof of the main building can be seen the Robinson Cup Anemometer, the prototype for measuring wind speed used the world over. The dome housing the Troughton telescope, the oldest in the world still in its original setting, is to rear.

List of Acronyms

Acronyms	Name	Location
ALMA	Atacama Large Millimetre Array	Chile
AOP	Armagh Observatory and Planetarium	Armagh
CTA	Cherenkov Telescope Array	La Palma & Chile
DfC	Department for Communities	Belfast
DKIST	Daniel K Inouye Solar Telescope	Hawaii
E-ELT	European Extremely Large Telescope	Chile
ESO	European Southern Observatory	HQ Munich, Facilities Chile
GOTO	Gravitational-wave Optical Transient Observer	La Palma
LOFAR	LO Frequency Array	Europe-wide, inc. Birr
Mopra	Mopra Radio Telescope	Australia
NHO	Northern Hemisphere Observatory	La Palma
NICS	Northern Ireland Civil Service	Northern Ireland
RCUK	Research Councils UK	UK
Rozhen	Rozhen Telescope	Bulgaria
SALT	South African Large Telescope	South Africa
SDO	Solar Dynamics Observatory	Space
SKA	Square Kilometre Array	South Africa & Australia
STFC	Science Technology Facilities Council	UK