

<http://www.astro.up.pt/>

WHAT'S NEW

- **Conferences >>**
From Fundamental Physics to Space Sciences
- **Cookie Seminars >>**
Study of binaries with radial velocity and astrometry
- **Advanced Courses >>**
Advanced course on chromospheric activity

Training
Continuous Education Courses

RESEARCH
Highlights

OUTREACH
Astronomy in the schools

RESEARCH
Centre of Excellence

OUTREACH
Official outreach partner



Outreach
Partner Organisation

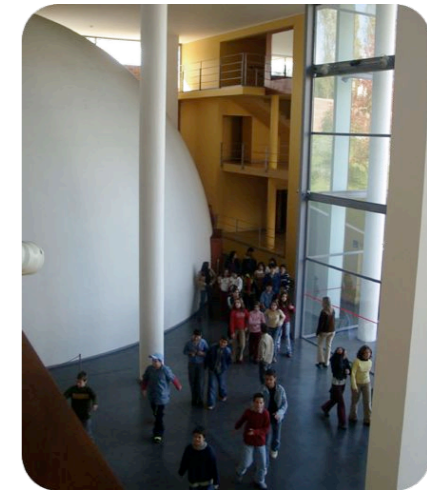
Institution



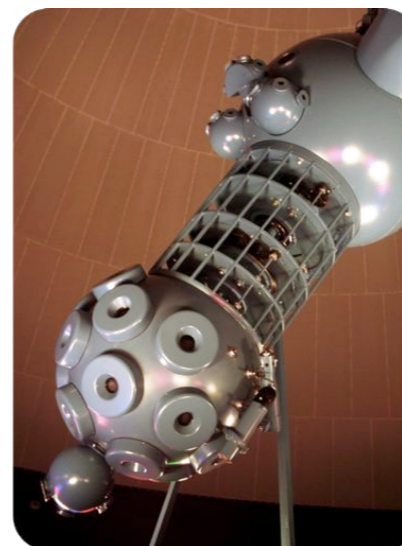
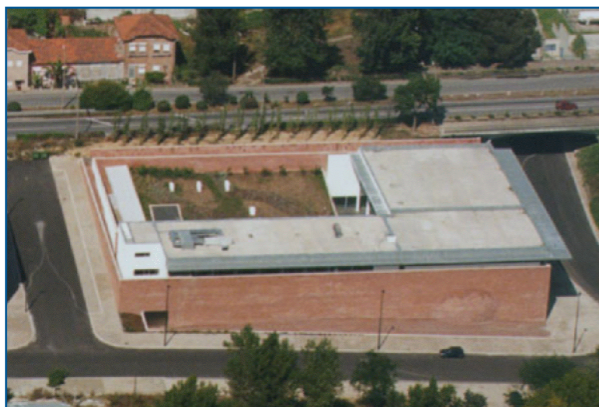
Centre for Astrophysics of the University of Porto (CAUP) is a private scientific institution of the **University of Porto**, non-profit making, officially recognized as an institution of public utility. It has been created in 1989.

Its main objective is to **support and promote Astronomy** through

- **research,**
- **training** at the post-graduate and undergraduate levels,
- **activities for primary and high schools,**
- **science outreach** and popularization of scientific culture.



As the result of a partnership between the **U.Porto**, the City Council and the Ministry for Science and Technology, **CAUP** shares the building with the **Planetarium of Porto**.



Organization and management

Scientific Council

All researchers with a Ph.D.

Executive Board

Pedro P. Avelino (Director)

Nuno M. C. Santos

Pedro T. P. Viana

Elected every three years

Advisory Board

Prof. Michel Mayor (Université de Genève)

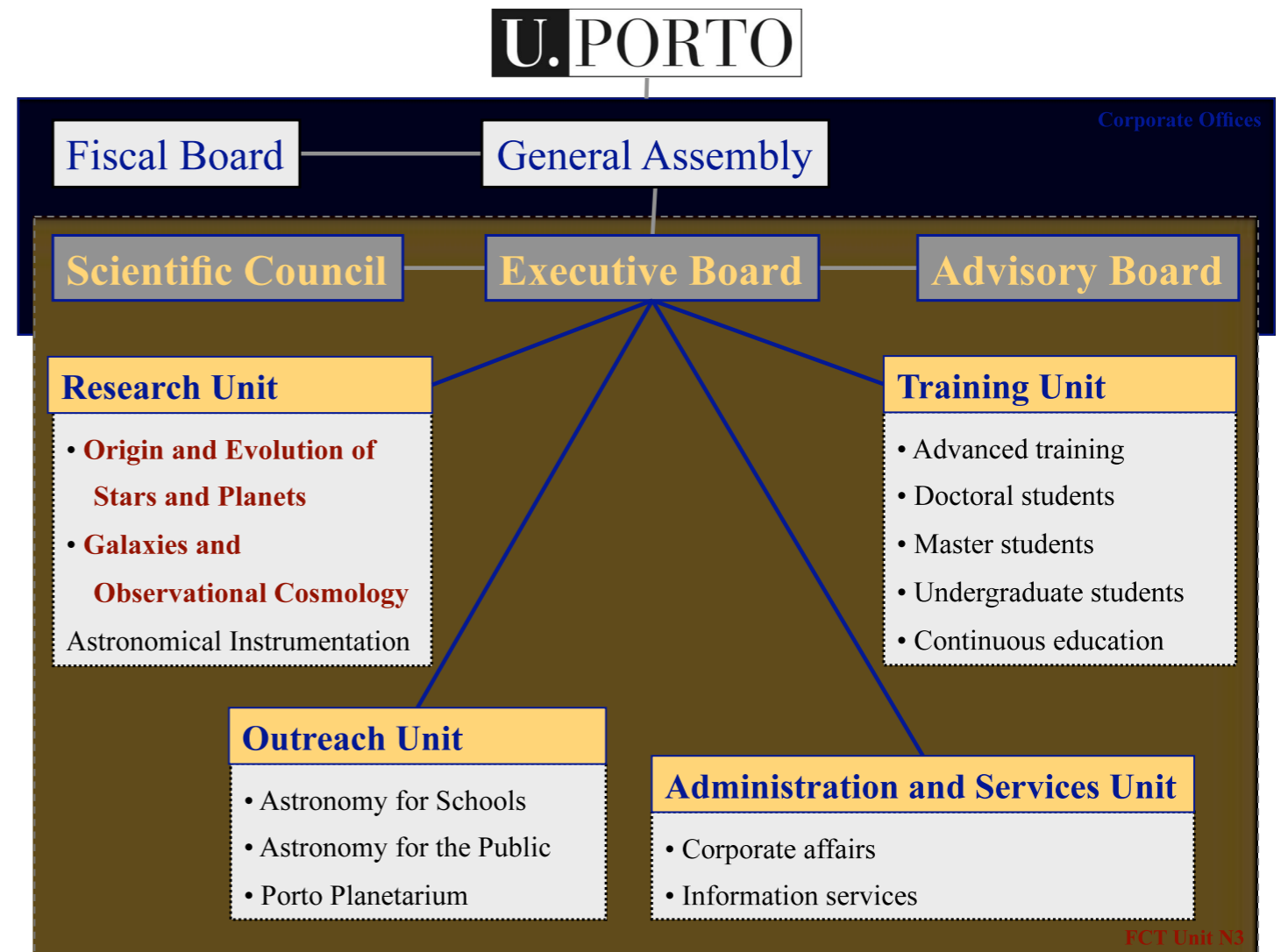
Prof. Thierry Montmerle (Institut d'Astrophysique de Paris)

Prof. Joseph Silk (University of Oxford)

Each member is appointed for a term of 5 years

Heads of the units

Nominated by the Executive Board for each internal unit: research (**UnI**), training (**UnF**), outreach (**ND**), administration and services (**UnAS**)



The team (today)



37 Researchers (30 FTE):

- **12 Lecturers** (5 FTE) – Pedro Avelino, Paulo Maurício de Carvalho, Alexandre Aibéo Fernandes, João Miguel Ferreira, Daniel Folha, Jorge Filipe Gameiro, Jorge Grave, Maria Teresa Lago, João Lima, Catarina Lobo, Mário João Monteiro, Pedro Viana
- **8 Senior Researchers** (8 FTE) – Carlos Correia, Margarida Cunha, António da Silva, Andrew Humprey, Nanda Kumar, Carlos Martins, Polychronis Papaderos, Nuno Santos
- **17 Postdocs** (17 FTE) – Vardan Adibekyan, Michael Bazot, Isabelle Boisse, Isa Brandão, Elisa Delgado Mena, Lokesh Dewangan, Pedro Figueira, Mercedes Filho, Antonio Garcia-Hernandez, Jean Michel Gomes, Patricio Lagos, Marco Montalto, Breezy Ocaña Flaquer, Giancarlo Pace, Alexandre Santerne, Lara Sousa, Sérgio A. G. Sousa

16 PhD Students: Lisa Benamati, Lupércio Bezerra, Leandro Cardoso, Diana Cunha, Rui Fernandes, João Gomes da Silva, Annelies Mortier, Vasco Neves, Mahmoudreza Oshagh, Elsa Ramos, Ana Rei, Bruno Ribeiro, Ângela Santos, Arlindo Trindade, Maria Tsantaki, Pauline Vielzeuf

26 other Students: MScs + PEECs

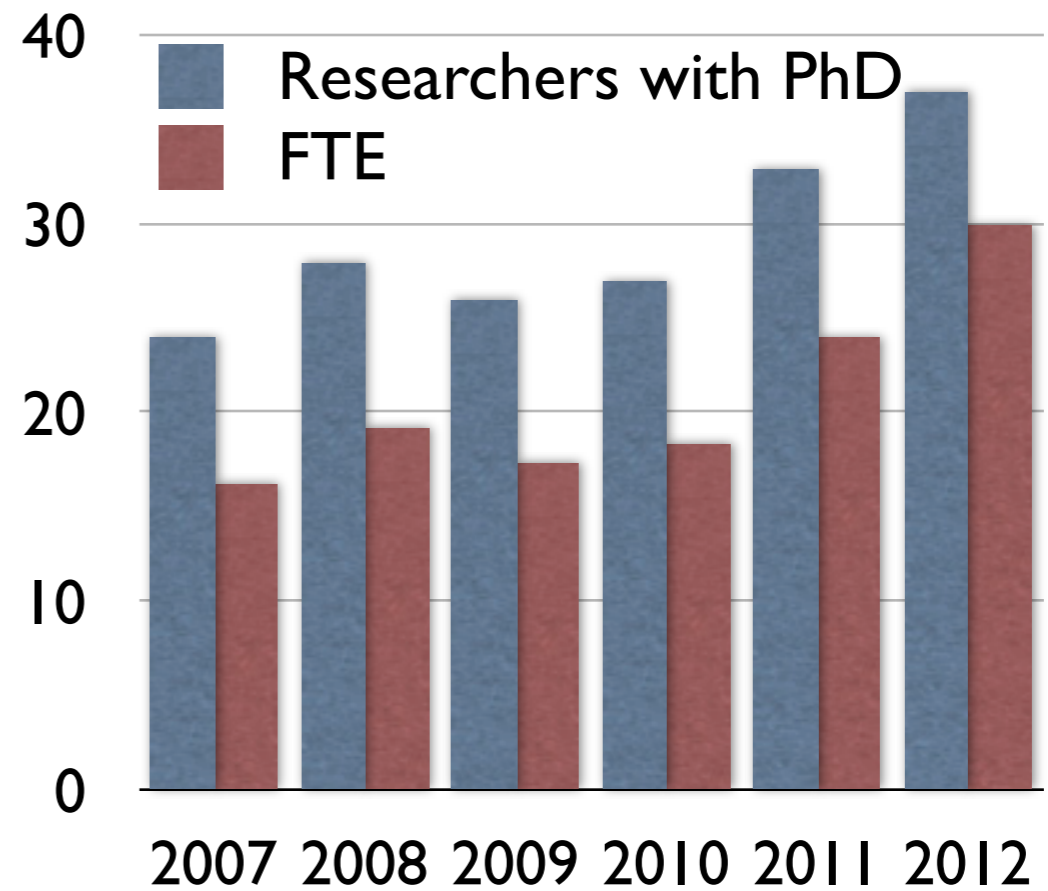
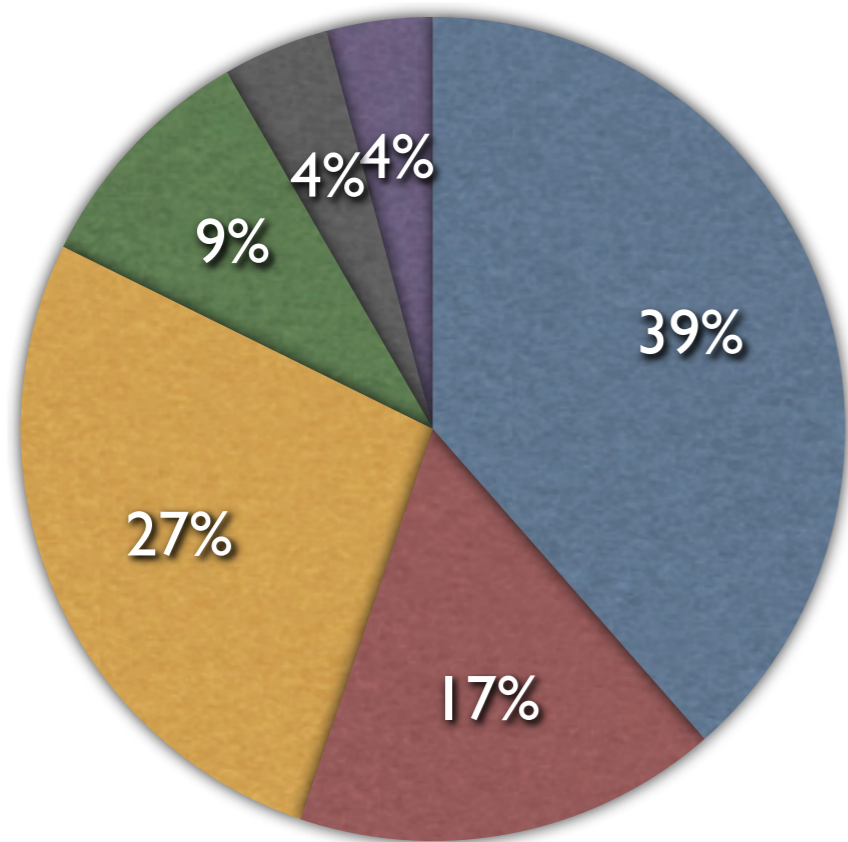
1 Technician (0.2 FTE): Manuel Monteiro

4 Outreach staff - ND (2.5 FTE): Pedro Mondim, Filipe Pires, Ricardo Reis, Nelma Silva

4 Supporting staff - UnAS (3.8 FTE): Manuel Monteiro, Paulo Peixoto, Argentina Pereira, Elsa Silva

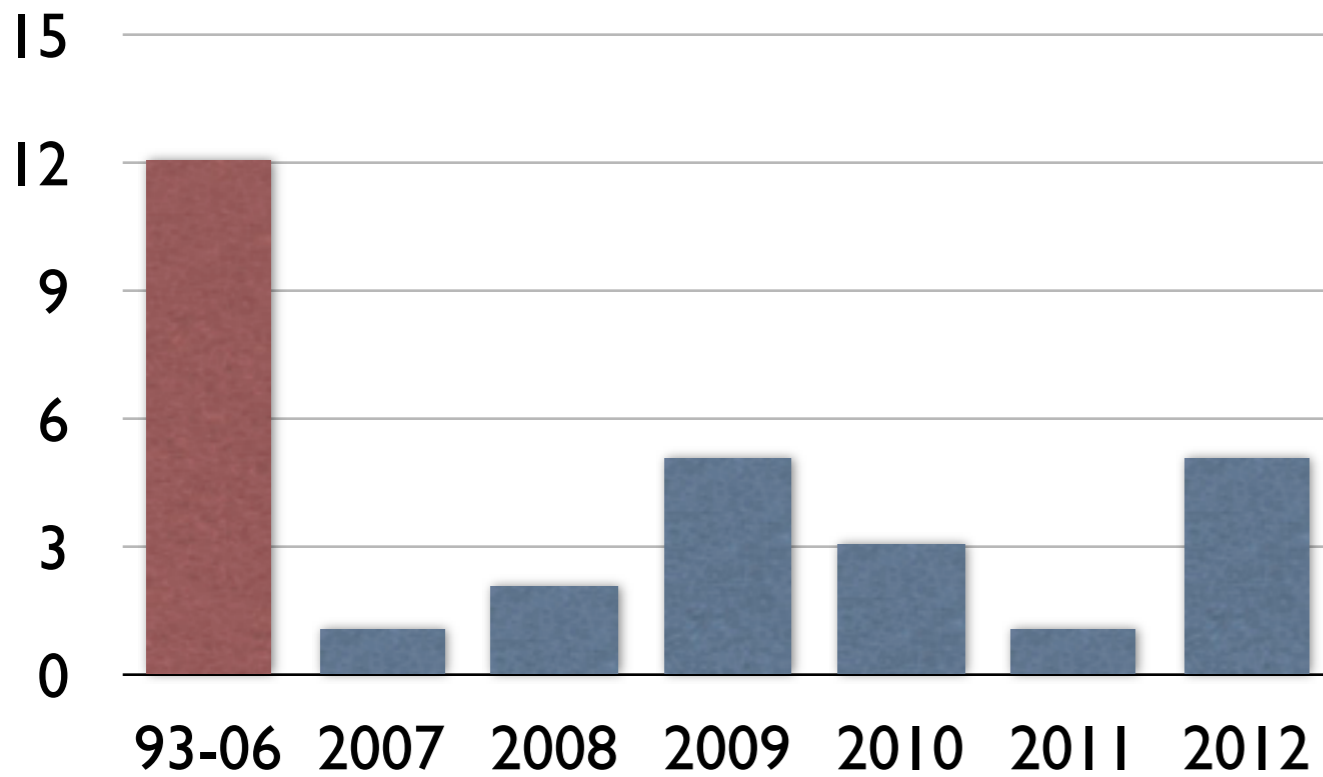
The team (evolution)

- Researchers
- PhD students
- Other Students
- Colaborators
- ND
- UnAS

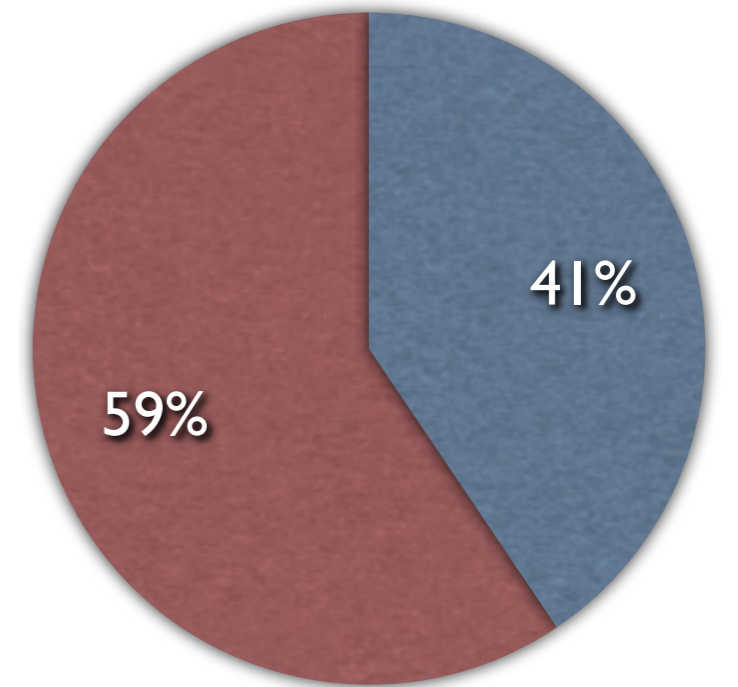


PhD and MSc with CAUP as the host institution

Concluded PhDs 29

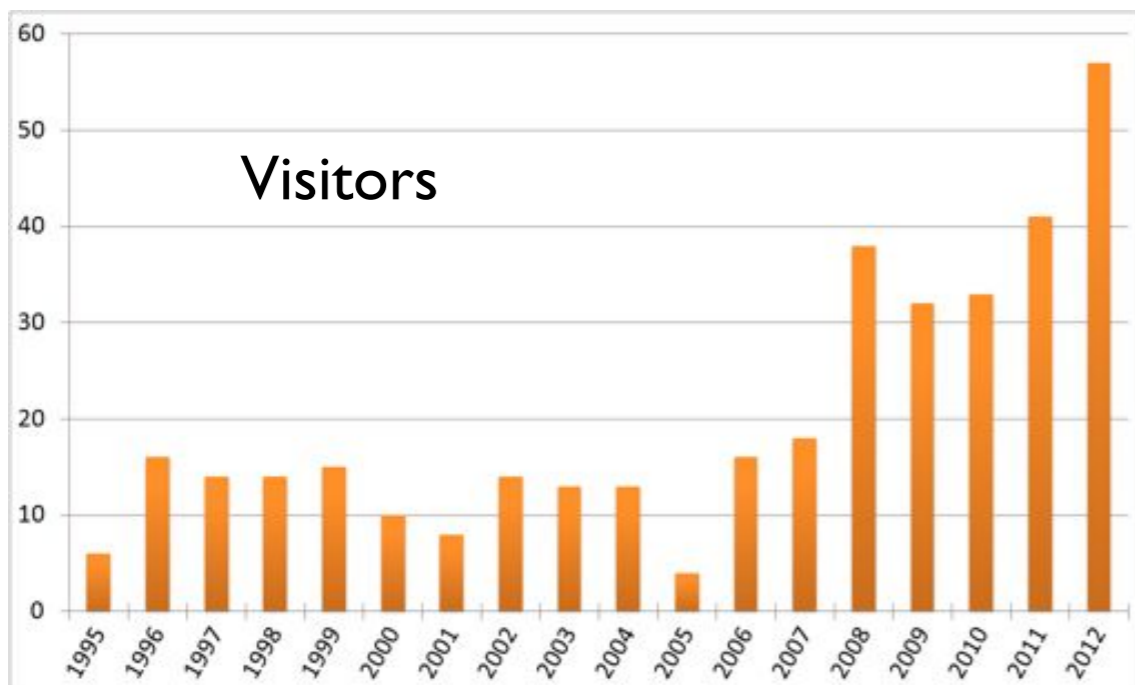


Concluded MScs 106

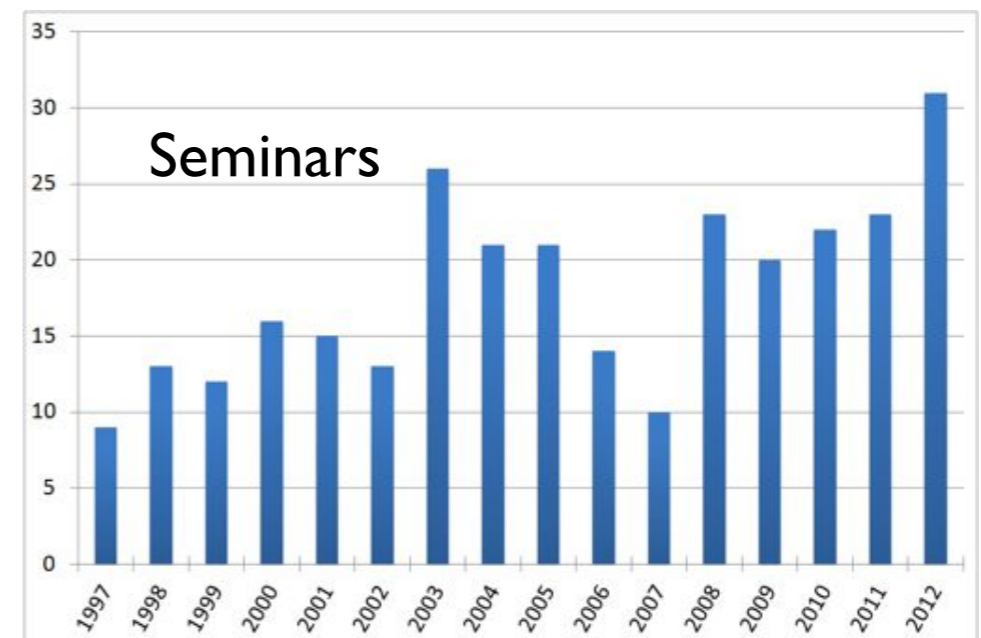


● 2007-2012 ● 1995-2006

Visitors



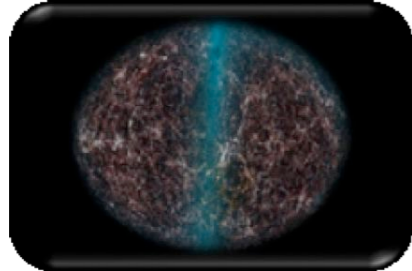
Seminars



Unl - Research Unit

Origin and Evolution of Stars and Planets

The key objective of the team is to provide world-class contributions to the understanding of the formation and evolution of stars and planets.

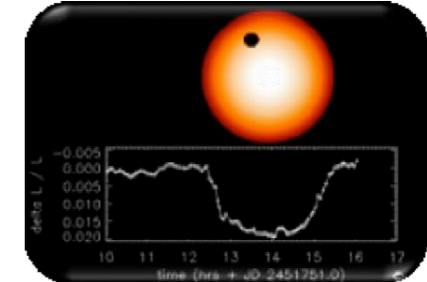
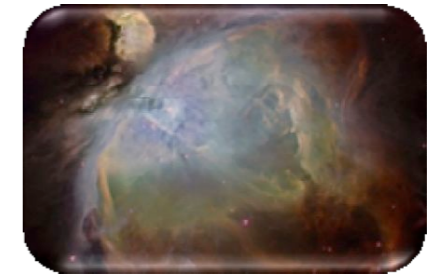


Galaxies and Observational Cosmology

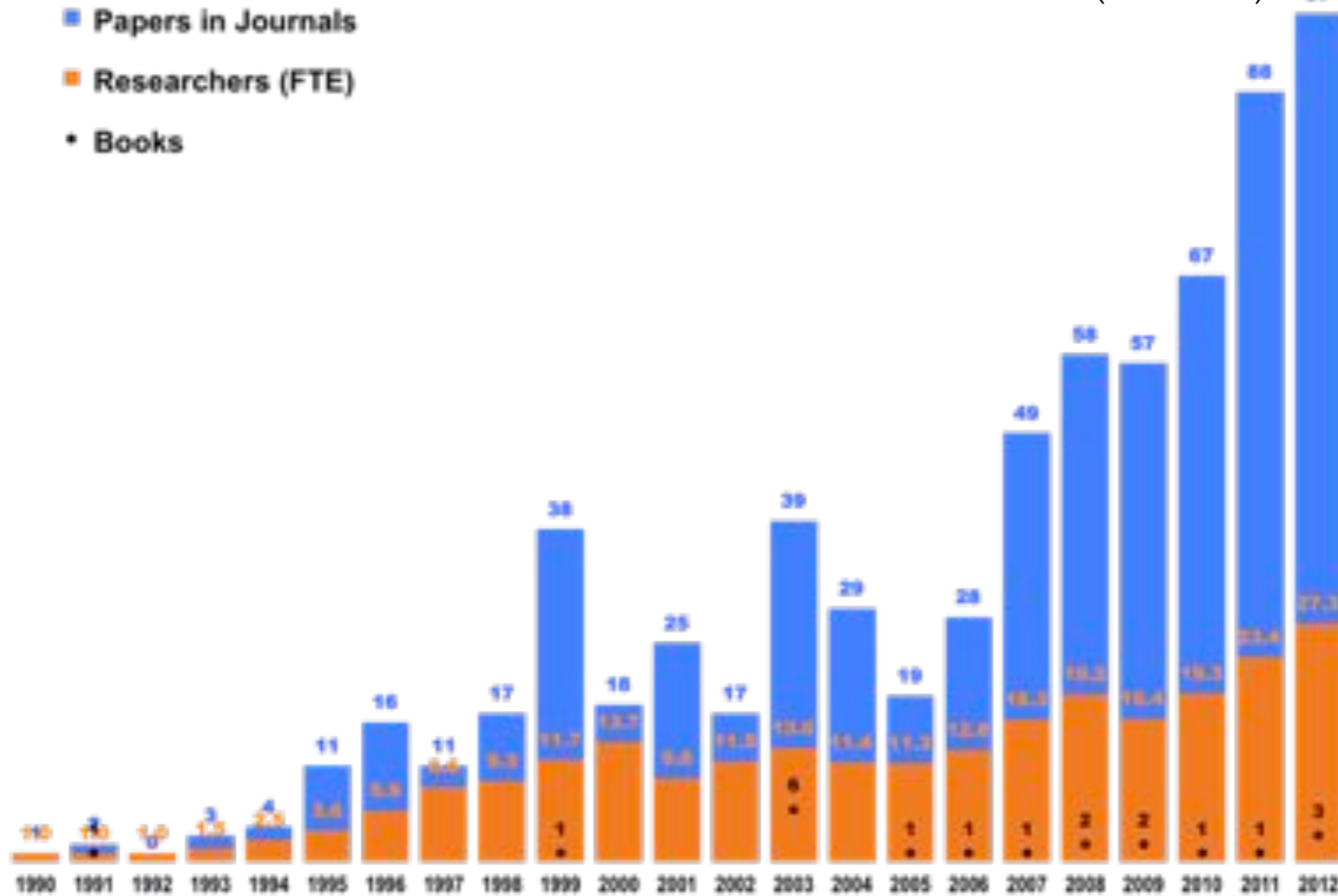
The main objective of the team is to provide world-class contributions to the understanding of the origin and evolution of the Universe and its large-scale structures.

Astronomical instrumentation and Surveys

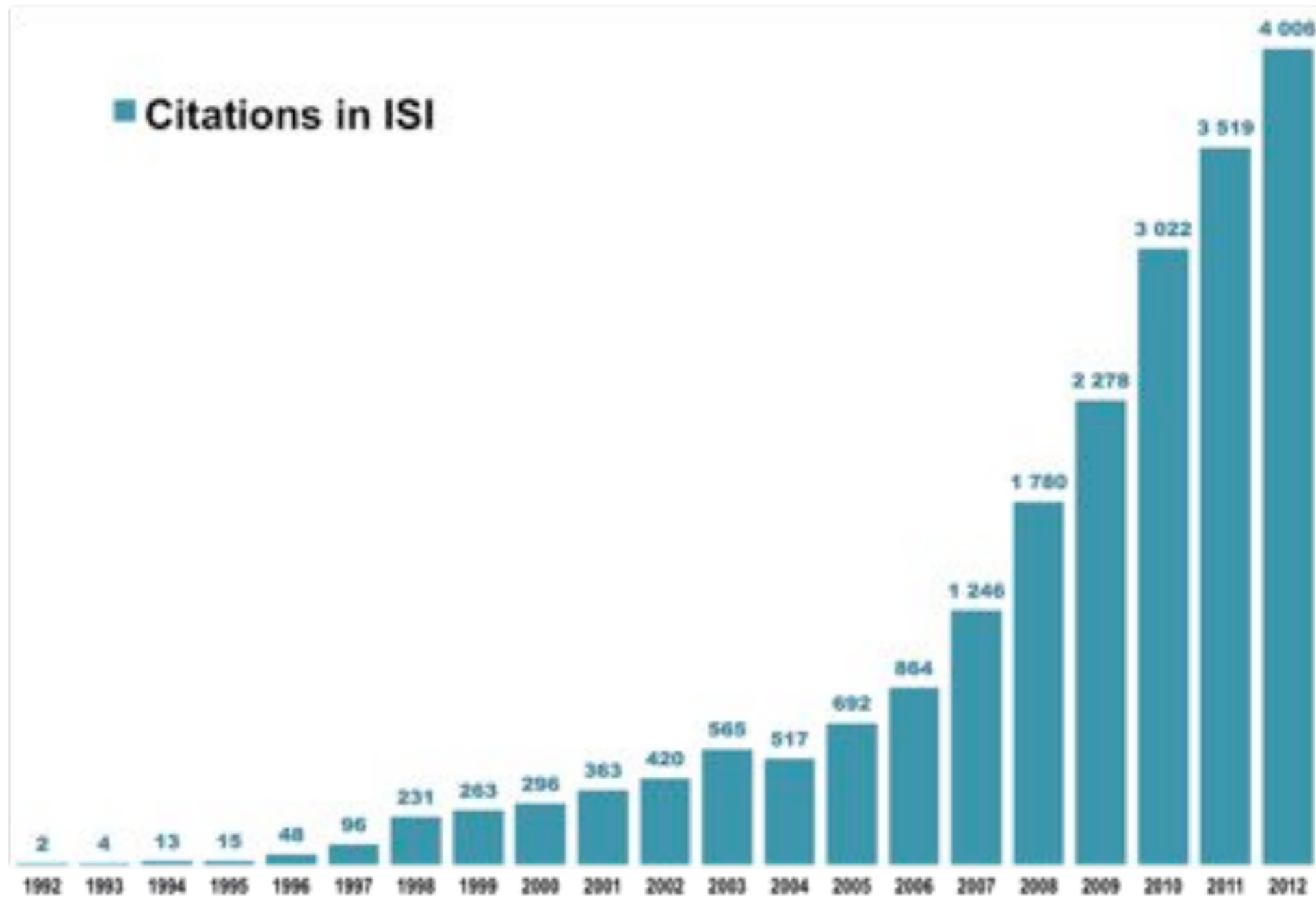
CAUP participates in the scientific and technical development of Astronomical Instrumentation and dedicated observation Surveys, which transverses both major scientific areas in CAUP.



4 Nature + 2 Science
(2008-2012)



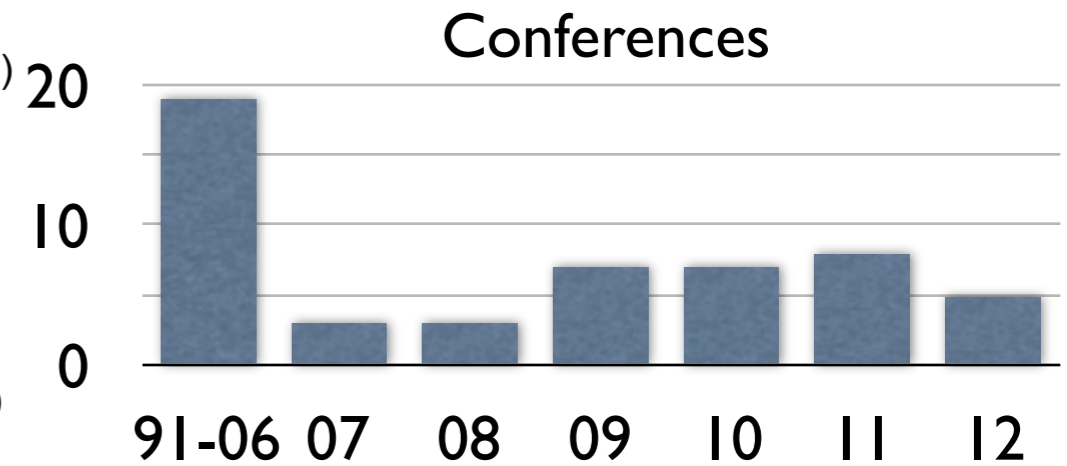
A produtividade global e por investigador no CAUP tem crescido de forma acentuada ao longo do tempo, ultrapassando o valor de 3.5 artigos por ETI por ano em 2012.



Na globalidade dos 686 artigos, em revistas internacionais com revisão, do CAUP no ISI existiam 20145 citações a 31 de Dezembro de 2012, correspondendo a uma média de 29.37 citações por artigo (Science Citation Index Expanded).

Conferences and Workshops

- Conference: **Towards other Earths II: The Star-Planet Connection** (15-19 Sep 2014)
- Workshop: **From Fundamental Physics to Space Sciences** (22 Mar 2013)
- Meeting: **ESPRESSO Progress Meeting** (16-18 Jan 2013)
- Meeting: **Cosmonata@CAUP 2012** (27-28 Dec 2012)
- Meeting: **EXOEarths Internal Meeting 2012** (25-26 Oct 2012)
- Conference: **XXII Encontro Nacional de Astronomia e Astrofísica** (23-25 Sep 2012)
- Meeting: **Euclid Sky Survey Working Group Meeting** (19-20 Sep 2012)
- Meeting: **ESPRESSO Progress Meeting** (19-21 Jun 2012)
- Workshop: **Planetary Systems with Gaia: Near and Far** (24-25 Nov 2011)
- School: **Azores School on Observational Cosmology** (31 Aug to 6 Sep 2011)
- Conference: **COSMO 11 - International Conference on Particle Physics and Cosmology** (22-26 Aug 2011)
- Conference: **Waves and Physics** (20-24 Jun 2011)
- Workshop: **Porto Dynamic Days** (6-9 Jun 2011)
- Meeting: **Plato National Meeting** (2 Jun 2011)
- Meeting: **A&A Board of Directors Meeting** (5-6 May 2011)
- Meeting: **ESPRESSO Technical Kick-Off Meeting** (17-19 Jan 2011)
- Meeting: **Planck CTP Working Group Meeting** (11-15 Oct 2010)
- Conference: **Dwarf Galaxies: Keys to Galaxy Formation and Evolution** (9-10 Sep 2010)
- Conference: **From Varying Couplings to Fundamental Physics** (6-7 Sep 2010)
- Meeting: **Astronomy Challenges for Engineers & Computer Scientists** (6 Sep 2010)
- Workshop: **National Workshop on Alma: Getting Ready for Early Science** (23 Jun 2010)
- Workshop: **1st National Workshop on "The Origin and Evolution of Stars and Planets"** (22 Jun 2010)
- Workshop: **5th Iberian Cosmology Meeting** (29-31 Mar 2010)
- Meeting: **ESPRESSO Progress Meeting** (26-27 Oct 2009)
- Conference: **Towards Other Earths** (19-23 Oct 2009)
- Workshop: **New Insights Into the Sun** (16-18 Sep 2019)
- Meeting: **HELAS Board Meeting** (14-15 Sep 2009)
- Conference: **Progress in Understanding the Physics of Ap and Related Stars** (3-5 Aug 2009)
- Workshop: **2° Iberian Meeting on Asteroseismology** (28-30 Apr 2009)
- Meeting: **Blue Dots Meeting** (28-30 Jan 2009)



Research projects

2009-2013

- 11 European projects (EC/FP6+FP7) - including an **ERC Starting Grant (N. Santos)**
- 14 research projects (FCT)
- 10 cooperation projects (mainly FCT)
- 6 infrastructure projects (FCT & QREN)
- 9+3 national and international outreach projects (CV & EC/FP7)

National Consortium for Research in Astronomy

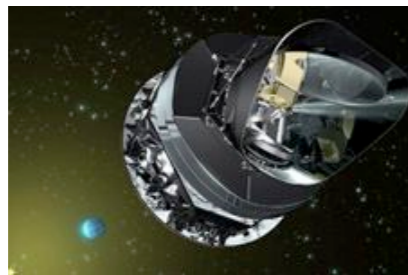


In 2011 CAUP and CAAUL signed a cooperation agreement for the research in Astronomy and Astrophysics, formalizing a long lasting collaboration between the two institutions.

Individual participations in committees

CAUP researchers participate, at an individual role, in several **international committees and working groups (2009-2012)**:

- Margarida S. Cunha ESA, Astronomy Working Group (since 2012)
- Mário J. P. F. G. Monteiro ESA, Science Programme Committee (since 2008)
- Carlos J. A. P. Martins ESO, E-ELT Project Science Team (since 2012)
- M. S. Nanda Kumar ESO, Users Committee (since 2011)
- Nuno C. Santos ESO, Observing Programmes Committee (since 2010)
- Jorge F. Gameiro Astronomy & Astrophysics Board of Directors (2007-2012)
- Maria Teresa V. T. Lago European Research Council, Scientific Council (since 2005)
- Maria Teresa V. T. Lago ESO, Council (since 2001)



CAUP researchers also serve as

- **referees** in major international journals
- **evaluators** for several institutions (EC FP6, EC FP7, ERC, FCT, ESA, ESO, National Agencies, etc).

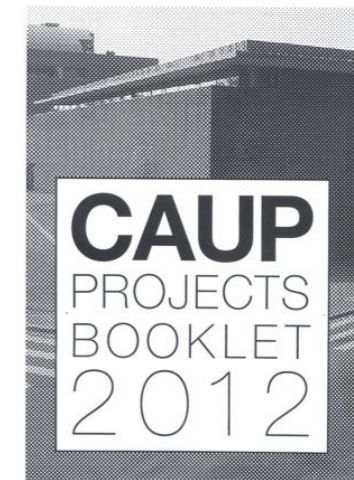
UnF - Training Unit

The support for training in Astronomy takes place at different levels, in close cooperation with the Physics and Astronomy Department at FCUP.

Cookie seminars

Students Day @ CAUP

Astronomy
a degree with career opportunities



Advanced courses

Academic internships

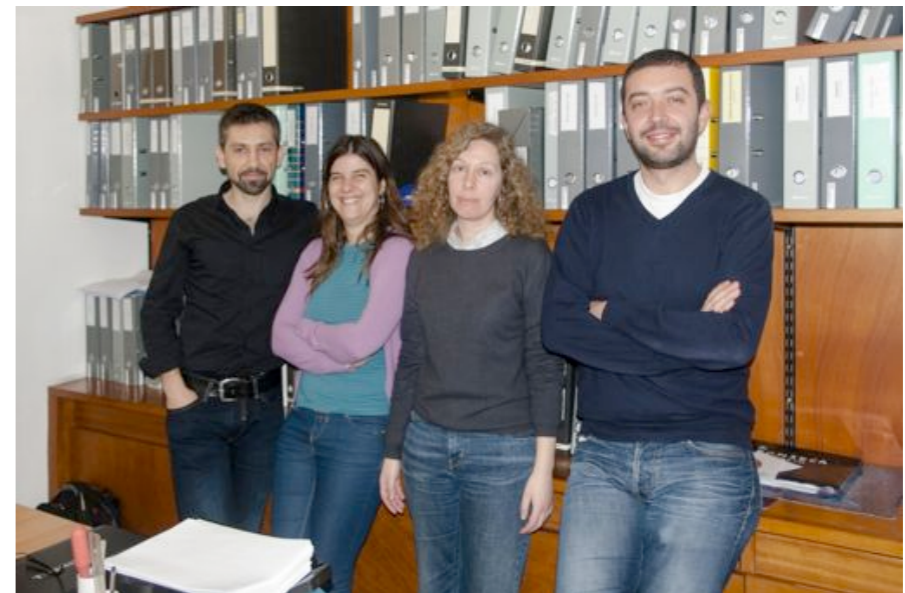
In particular, CAUP

- organizes **advanced courses** (for researchers and postgraduate students)
- CAUP researchers participate in the **teaching of astronomy courses** at all levels in FCUP
- is the host institution for **Masters and PhD projects**
- offers on a regular basis **short introductory courses and workshops** for teachers and the general public (continuous education)
- supports the **participation of students of all levels in research and outreach activities** (as conferences and workshops, seminars, projects, etc).

Administration and Services Unit (UnAS)

This Unit integrates all supporting services necessary to build an efficient and effective set of resources that provide adequate support for the different activities in CAUP. It includes:

- Project management
- Events management
- Information technologies and communications
- Accounting
- Corporate offices support
- All other administrative procedures



ND - Outreach Unit



CAUP's outreach unit, created in 1991, promotes a large number of activities for schools and the general public

All researchers and PhD students contribute to outreach activities.

Main areas of intervention are:

- **Astronomy for the Schools**
- **Astronomy for the Public**
- **Porto Planetarium**

The outreach unit staff also provides general support to the research activities and the popularization of the work we do, including the support in public relations.



Astronomy for the Schools



- Portable planetarium**
- Talks/Seminars**
- Observations**
- Exhibitions**
- Hands-on workshops**

More than **200 000** children have participated in this program.



Astronomy for the public



- Astroteca
- Astronomy at 21!
- Closer to the Stars
- Exhibitions
- Hands-on workshops
- Events
- Astronews

	<p>Mercurio desvendado As imagens da primeira passagem da sonda espacial MESSENGER começam agora a surgir. >> 21 Janeiro 2008</p>
	<p>O Ano Internacional da Astronomia Foi hoje aprovada, na 62ª Assembleia Geral das Nações, a resolução que proclamou 2009 'O Ano Internacional da Astronomia' >> 20 Dezembro 2007</p>
	<p>Júpiter revisitado De Janeiro a Junho de 2007, a sonda espacial New Horizons esteve nas vizinhanças de Júpiter a recolher dados e imagens, que agora começam a ser revelados. >> 16 Outubro 2007</p>
	<p>Qual o futuro da Terra? O que acontecerá à Terra quando o Sol morrer? Essa é uma das perguntas que atormentam os astrónomos desde tempos imemoriais. A descoberta de um planeta em torno da estrela V 391... >> 28 Setembro 2007</p>

Porto Planetarium

- Planetarium shows
- Hands-on Laboratories
- Shop
- Animation of the foyer
- Scientific coordination



ESO Outreach Partner Organization,
since 2012.

Number of visitors (1998-2013) > **400 000**

