

FIRST CIRCULAR

XXV Trobades Científiques de la Mediterrània

Gaia: the Galaxy in a petabyte

Maó, Menorca (Spain)
30th September - 3rd October, 2009

Presentation

Every year, just at the end of the summer, the Section of Physics and Technique of the “*Institut Menorquí d'Estudis*” (IME) and the “*Societat Catalana de Física*” (SCF) organize the “*Trobades Científiques de la Mediterrània*”. The primary goal consists of providing a frame of interchange of experience and knowledge on a current research topic in the field of Physics. Aside from constituting a scientific forum, these encounters also try to facilitate the relationship and communication between scientists and technicians working on similar areas.

This year, the SCF-IEC joint the *Institut de Ciències del Cosmos* of the *Universitat de Barcelona* (ICC-UB) and the *Institut d'Estudis Espacials de Catalunya* (IEEC) to organize the “XXV Trobades Científiques de la Mediterrània” under the title “**Gaia: the Galaxy in a petabyte**”. The Gaia ESA Cornerstone mission (2012-2017) is a European project in space astrometry that will observe with unprecedented accuracy positions, velocities and physical properties of more than one billion stars in our Galaxy and beyond. Nowadays more than 300 European scientists, organized in the Gaia Data Processing and Analysis Consortium (DPAC), are in charge of the design, management and reduction of the data produced by Gaia being the scientific exploitation of the mission the final aim of all this technical and human effort. The first astrometric mission (Hipparcos, ESA, 1989-1997) observed 120000 stars with precision of milliseconds of arc. Gaia will reach, for a billion of stars, a precision of microseconds of arc. The fact that Hipparcos had rendered around 2000 publications is a sign of the impact that Gaia can reach. Gaia will obtain, for first time, a significant census of our Galaxy.

This meeting bears the intention of establishing and reaffirming the relations among astronomers working in fields where Gaia data will be fundamental for the future research. Gaia will survey objects ranging from minor bodies in our Solar System through galaxies in the nearby Universe. Obvious objectives of the mission are the dynamical, chemical and star formation evolution of the Milky Way and our Local Group, fundamental Stellar Physics and Solar System minor body studies. Thinking on the time schedule, three years before the launch, it is now time to begin to carefully prepare the exploitation and to create the collaborations and networks necessary to address the main objectives of Gaia in the best conditions.

Main goals of the meeting are: 1) To transmit to the Spanish Astronomical Community the experience of the groups involved in Gaia mission preparation; 2) to identify common interests on present and future research lines; 3) to create, from now on, workgroups and networks to prepare for the huge task of Gaia scientific exploitation and 4) to analyse the synergies with present and future surveys from ground and space.

Scientific program

First session will be devoted to describe the actual status of the Gaia mission and to detail its final products: astrometry, radial velocities and spectrophotometric data. The meeting will follow with plenary sessions in which the Spanish teams attending to the meeting will present its science cases emphasizing their interest in the scientific exploitation of the Gaia data. Parallel sessions will allow fruitful discussions and the identification of future collaborations (see the conference website for the program).

Conference website <http://www.ieec.cat/mediterrania2009>

Proceedings

No publication in a proceeding's book is expected. Oral contributions and posters, all in a pdf format, will be requested during the conference. This material will be uploaded on the meeting's web page.

Scientific Organizing Committee

Local Scientific Comitee: Xavier Luri (ICC-UB, IEEC), Ignasi Ribas (IEEC, CSIC) and Jordi Torra (ICC-UB, IEEC)

Advisory Scientific Comitee: Emilio Alfaro (SEA, IAA), Minia Manteiga (UdC), Francisco Garzón (IAC), Carme Jordi (ICC-UB, IEEC), David Martínez Delgado (IAC), Carme Gallart (IAC), Francesca Figueras (ICC-UB, IEEC), David Barrado Navascues (LAEX), Rene Duffard (IAA)

Registration

Pre-registration deadline: 30th June 2009

Registration deadline: 20th of July, 2009

The registration fee is free for the PhD students (a letter of presentation from the advisor is needed), 100€-150 € for senior scientist before and after deadline respectively, and 50€ for the accompanying persons. Social diner, excursion and coffee breaks are included in the fees. Depending on the available final funding, lodging and meals grants will be available for students and recent postdocs.

Venue

The workshop will take place from Wednesday 30th September to 3rd October 2009 at the "Institut Menorquí d'Estudis", Camí des Castell 28, Maó (Menorca).

Travel information

Menorca Island is the Northern island of the Balearic Islands and can be easily reached from the most important European cities. Additional information will be posted at the web page when available.