



**Universidad
de Valparaíso**
CHILE

Instituto de Física y Astronomía
Facultad de Ciencias, U. de Valparaíso



SEMINARIOS ASTROFISICOS

Lista de seminarios astrofísicos realizados para Profesores, Postdocs, alumnos de Postgrado y Pregrado

Auditorio 11-A, Facultad de Ciencias, Gran Bretaña 1111, Playa Ancha, Valparaíso.

Año 2013

Martes 19 de Marzo de 2013, 14.00 hrs.

Dr. Marcus Mugrauer, Astrophysical Institute and University Observatory, Friedrich Schiller University Jena, Germany

"New observations of the sub-stellar companion of PZ Telescopii"

PZ Tel A is a solar analogue pre-main-sequence star and member of the approximately 12-Myr-old π Pic moving group. It has a low-mass companion (PZ Tel B), which we have observed in several epochs with NACO/ESO-VLT, proving its gravitationally bound nature on a very high significance level. The orbital motion of PZ Tel B relative to its primary is clearly detected on an eccentric orbit, and we find evidence for deceleration of its orbital motion, as expected for an object on a Keplerian orbit moving towards its apastron. Our spectroscopic follow-up observations, obtained with SINFONI/VLT at ESO's Paranal Observatory in the H+K band, confirm that PZ Tel B is a brown dwarf companion with a mass of most likely about 21 Jupiter masses, while a mass below the Deuterium burning limit is possible.

Martes 09 de Abril de 2013, 14.00 hrs.

Auditorio de la Facultad de Ciencias.

Dr. Ashley J. Ruitter, Max Planck Institute for Astrophysics, Germany

"Are most Type Ia supernovae from merging white dwarfs?"

Even after decades of research, the nature of Type Ia supernova (SN Ia) progenitors remains an astrophysical puzzle. The relatively recent surge in high-quality observations of SN Ia spectra has made clear that SNe Ia are not a homogeneous group. Advancement in explosion modeling techniques has additionally proved that more than one SN Ia explosion scenario is not only feasible, but that different explosion mechanisms are probably (at least to some degree) responsible for the observed diversity in SNe Ia. Despite the known diversity, the bulk of SNe Ia are considered "normal", and one might expect that most SNe Ia originate from a specific progenitor formation channel and explosion mechanism. In a recent study, it was shown that prompt detonations of merging carbon-oxygen white dwarfs (violent mergers) fulfill many of the criteria that any promising SN Ia progenitor model must stand up to: the rates are close to those observed, the delay time distribution exhibits the same trend as shown by observations and the bolometric peak brightness distribution of these explosions matches that of observed SNe Ia. I will discuss in more detail the violent merger model, and highlight why understanding the evolutionary processes leading up to the birth of the white dwarf(s) is also of critical importance for solving the progenitor problem.

Martes 23 de Abril de 2013, 14.00 hrs.

Valentino Gonzalez, CGE-California

"Galaxy Growth During the first 2 Gyr of the Universe"

Using the deepest ever HST and Spitzer/IRAC images, available over fields like the GOODS fields, we have found large samples of high-redshift galaxies ($z > 4-8$) with a wide range of luminosities. From this remarkable dataset we have obtained robust estimates of some of the physical properties of these galaxies, in particular, their star formation rates (SFRs) and stellar masses. These quantities have allowed us to develop and test some of the first ideas of how galaxy growth proceeded during the first 2 Gyr of the Universe. In this talk I will primarily discuss the correlation that exists between SFR and stellar mass and what the evolution of this so-called "main sequence" of star forming

galaxies has taught us about early galaxy formation and evolution. I will also review the latest progress in the estimates of the specific SFR (= SFR/Mstar) at high-z. This key quantity seems to evolve with time very differently to what most theories predict, posing an interesting puzzle and possibly providing some clues as to what are the important mechanisms that control galaxy growth in the early Universe.

Lunes 29 de Abril de 2013, 14.00 hrs.

**Ignacio Negueruela,
"Estrellas de Gran Masa en Cumulos y Asociaciones"**

Jueves 2 de Mayo de 2013, 14.00 hrs.

**Stan Stefl, JAO/ESO, Chile
"Near-IR and mm interferometry of classical Be and Herbig B[e] stars"**

Bright classical Be stars with gaseous circumstellar disks are popular targets for near-IR and visual interferometry and spectro-interferometry. Some methods and potential of near-IR interferometry will be demonstrated by our VLTI/AMBER observations and their modeling with the help of the HDUST code. Although the inner and central disk dynamics is already well described at least for a few Be stars, radio data are still needed to model the external parts of the disks and to study their dissipation and interaction with the interstellar medium. For the closest Be stars, ALMA could bring direct images of their outer disks. Although classical Be stars will not belong to high priority ALMA targets, some methods developed for their modeling can be well applied to pre-main sequence Herbig-Haro Be[e] stars, the proto-planetary disk of which are among the most attractive targets both for ALMA interferometry and spectroscopy. Basic differences between near-IR and radio interferometry and their constraints will be sketched.

Jueves 2 de Mayo de 2013, 17.00 hrs.

**Ignacio Negueruela,
"Cumulos Masivos en la Via Lactea"**

Viernes 3 de Mayo de 2013, 15.00 hrs.

**Amparo Marco
"Análisis Fotométrico y Espectroscopico de Cúmulos Abiertos Jóvenes en caso de estudio"**

Martes 14 de Mayo de 2013, 14.00 hrs.

**Paul D. N'nez, Collège de France & Observatoire de la Côte d'Azur
"High angular resolution imaging with long-baseline interferometry"**

Optical interferometry permits to resolve stellar surfaces at milliarcsecond scales and further understand stellar atmospheres. However, reconstructing high angular resolution images from interferometric data is a challenging task due to the sparse knowledge of Fourier data. I will outline a few image reconstruction strategies as well as developments in simulations and instrumentation for current and future optical interferometers. In addition, I will discuss the interpretation of interferometry in terms of correlations between different space-time points of the wavefront. By exploiting higher orders of correlation we can also measure classical interferometric observables while being insensitive to atmospheric turbulence and optical imperfections. I will discuss our efforts to perform intensity (as opposed to amplitude) interferometry with planned large arrays of telescopes.

Jueves 16 de Mayo de 2013, 14.00 hrs.

**Jose Gegoerio Fernandez Trincado, Centro de Investigacion en Astronomia CIDEA.
"First Sample of Quasars in the CIDA VAriability Survey Catalog"**

The CIDA Variability Survey Catalog (CIDA-VSC), contains photometric data of approximately seven million sources (V,R and I bands), corresponding to multi-epochs observations of 10 years (1998-2008). This survey was conducted with the QUEST camera in the 1 m Schmidt telescope at OAN (Observatorio Nacional de Venezuela). The variability survey covers roughly 476 square degrees in the celestial equator ($60 < RA < 150$, $-6 < DEC < 6$). In this work we present the preliminary results of the search of Quasars (QSOs) in The CIDA-VSC. Our method allowed us to recover 80% of QSOs reported by the SDSS-DR9, in an area where both surveys match. In addition, we show a preliminary sample of ~ 254 QSOs candidates in a region of the sky not well studied to date.

Martes 28 de Mayo de 2013, 14.00 hrs.

**Sebastián Ramírez, DFA, U. de Valparaíso
"Observación infrarroja de cúmulos galácticos oscurecidos"**

Massive stars and massive clusters are key components in the galactic structure and evolution. But the census for these objects, even in our galaxy, is far from complete. Most of massive stars are located within highly obscured regions, and just the use of infrared instrumentation and surveys have helped us to unveil the Galactic massive stellar population. In this talk I will present the near-IR spectrophotometric observations and physical characterization of two young stellar clusters with massive stellar population : Masgomas-1 and Masgomas-4. These clusters were

discovered by the MASGOMAS group, have a total stellar mass $> 10^3$ solar masses, and a spectroscopically confirmed population of OB-type main-sequence stars.

Martes 03 de Junio de 2013, 14.00 hrs.

Diego de La Fuente, Estudiante Doctorado Centro de Astrobiología (INTA/CSIC), Instituto Nacional de Técnica Aeroespacial, Madrid.

"Young Massive Clusters as Tools to Map The Galactic Chemistry"

Young Massive Clusters (YMCs) with ages < 6 Myr are ideal tools for mapping the current chemical abundances in the Galactic disk for several reasons. First of all, the locations of these clusters can be known through spectrophotometric distances. Secondly, their young ages guarantee that these objects present the same chemical composition than the surrounding environment where they are recently born. Finally, the YMCs host very massive stars whose extreme luminosities allow to accomplish detailed spectroscopic analyses in the infrared even in the most distant and obscured regions of the Milky Way. Our group has carried out near-infrared spectroscopic observations of hot massive stars belonging to several YMCs in different locations around the Galactic disk. As a very high signal-to-noise ratio is required for accurate models of faint metal lines, special reduction methods have been used. Ongoing NLTE spherical atmosphere models will allow to obtain physical and chemical properties of the cluster members, and therefore precise distances and metal abundances for each cluster. When all these results are put together, we will be able to draw a first two-dimensional chemical map of the Galactic disk. The study of the radial and azimuthal variations of elemental abundances will be crucial for understanding the chemical evolution of the Milky Way. Particularly, the ratio between Fe-peak and alpha elements will constitute a powerful tool to investigate the past stellar populations that originated the current Galactic chemistry.

Martes 04 de Junio de 2013, 14.00 hrs.

Dr. Marco Olivares, Pontificia Universidad Católica de Valparaíso

"Bending of Light in Conformal Weyl Gravity"

In this work we find analytical solutions to the null geodesics around a black hole in the conformal Weyl gravity. Exact expressions for the horizons are found, and they depend on the cosmological constant and the coupling constants of the conformal Weyl gravity. Then, we study the radial motion from the point of view of the proper and coordinate frames, and compare it with that found in space times of general relativity. The angular motion is also examined qualitatively by means of an effective potential; quantitatively, the equation of motion is solved in terms of P-Weierstrass elliptic function. Thus, we find the deflection angle for photons without using any approximation, which is a novel result for this kind of gravity.

Martes 18 de Junio de 2013, 14.00 hrs.

Dr. Edson Carquin, Universidad Federico Santa María.

"Forward physics with the ATLAS detector at the LHC"

In this talk I will show the current state of the measurements done in the forward region (high pseudo-rapidity $= \eta > 3$) using the ATLAS detector at the LHC. I will cover measurements done with the 2010 proton-proton data taken at $\sqrt{s}=7$ TeV by ATLAS at low luminosity and with low pile-up contamination. This measurements include: (forward) rapidity gap cross section, the inclusive forward jet cross section determination, the total forward energy and the energy density flow measured with the ATLAS Forward Calorimeters (FCAL). The description given by the theoretical models and implemented in Montecarlo event generators, will be contrasted with the data and the main features will be discussed. I will also show some results obtained with the ATLAS forward detectors like the ZDC detector in pp collisions. I will also cover briefly the physics potential of ion-ion and ion-proton peripheral collisions at the LHC energies

Martes 06 de Agosto de 2013, 14.00 hrs.

Dr. Yoelsy Leyva Nodal, Pontificia Universidad Católica de Valparaíso.

"Interacting viscous dark fluids"

We revise the conditions for the physical viability of a cosmological model in which dark matter has bulk viscosity and also interacts with dark energy. We impose upon the model the condition of a complete cosmological dynamics that results in an either null or negative bulk viscosity, but the latter also disagrees with the Local Second Law of Thermodynamics. The model is also compared with cosmological observations at different redshifts: type Ia supernova, the shift parameter of CMB, the acoustic peak of BAO, and the Hubble parameter $H(z)$. In general, observations consistently point out to a negative value of the bulk viscous coefficient, and in overall the fitting procedure shows no preference for the model over the standard Λ CDM model.(contact:Dr. Jose Villanueva)

Martes 13 de Agosto de 2013, 14.00 hrs.

Nelson Videla, estudiante Doctorado, Pontificia Universidad Católica de Valparaíso.

"Estudio de Modelos Inflacionarios Intermedios en Teorías Estándar y Alternativas de la Relatividad General"

Se estudian algunos modelos inflacionarios intermedios del Universo temprano tanto en la teoría Estándar como en teorías alternativas de la relatividad General. Se analizan las condiciones generales para que el Universo presente una etapa inflacionaria. Se estudia la dinámica de los diferentes modelos y se encuentran expresiones analíticas para las distintas cantidades físicas. A partir de los datos obtenidos de los satélites WMAP y Planck se restringen los parámetros asociados a cada uno de los modelos considerados.

Martes 27 de Agosto de 2013, 14.00 hrs.

Dra. Amelia Bayo,

"Disk evolution in the Lambda Orionis Star Forming Region: tracing three orders of magnitude in mass"

Most observational studies so far point towards brown dwarfs (BDs) having a similar formation mechanism as the one accepted for low mass stars. In this context, one would expect the disks around the lowest mass end of the IMF to behave in a similar manner as those around slightly higher mass stars. However, observational evidence on properties such as disk life times, put some caveats to this idea.

To further understand this issue, and with a very complete spectroscopic census of Collinder 69 (C69, the central cluster of the LOSFR) as the starting point; we have studied accretion, activity and rotation of the members of this cluster. We present analogies and difference between the stellar and brown dwarf populations as well as comparisons with other star forming regions of similar and different ages to address environmental effects:

1.- We estimate a BD accretion fraction in C69 between 30 and 43%, similar to that of low-mass stars in the same region and compatible with that of BDs reported in the literature for other regions such as Upper Sco (31% acc to Scholz et al. 2007)

2.- We report two changes in the cumulative disk fraction function at 0.3 and 0.6Msun that could trace differences in the disk dissipation mechanism or the disk locking to the central star.

Martes 3 de Septiembre de 2013, 14.00 hrs.

Bruno Dias, ESO.

"Metallicities and alpha-enhancement of red giant stars in 51 Milky Way globular clusters: homogeneous scale and multiple populations"

We are carrying out a survey of 51 poorly studied Milky Way globular clusters, by means of spectroscopy of ~20 red giants per cluster. Optical spectra (4600-5800 Å) were obtained with the FORS2@VLT/ESO, at a resolution $\Delta\lambda \sim 2.5 \text{ \AA}$. We use ETOILE code (Katz et al. 2011) to derive radial velocities, T_{eff} , $\log g$, $[\text{Fe}/\text{H}]$ and $[\text{Mg}/\text{Fe}]$ for each star, by finding the best fitting spectrum among a grid of observed or synthetic stars (MILES and Coelho et al. 2005). The main contributions of this work are: to provide a homogeneous scale of $[\text{Fe}/\text{H}]$, $[\text{Mg}/\text{Fe}]$, and radial velocities for the 51 clusters -- in particular for the 29 more distant and/or highly reddened ones -- to provide a catalogue of confirmed member stars for each cluster, in addition to find interesting cases for follow-up with high resolution data (like the massive clusters M 22, and NGC 5824, for which we found a spread in $[\text{Fe}/\text{H}]$)

Jueves 5 de Septiembre de 2013, 14.00 hrs.

Dr. Norman Cruz, Universidad de Chile de Santiago

"Campos de k-esencia en cosmología"

Los campos escalares de k-esencia contienen términos no canónicos de energía cinética y son comunes en teorías efectivas derivadas de teorías de cuerdas. Se presentan y discuten las principales aplicaciones de estos campos a la cosmología, con énfasis en modelos de energía oscura y unificación del sector oscuro

Lunes 23 de Septiembre de 2013, 15.30 hrs.

Profesor: Dr. Markus Mugrauer, AIU, Universidad de Jena, Alemania

Ciclo: Instrumentación Astronómica y Técnicas Observacionales

- I. Observing with telescopes
- + diffraction at the objective
- + imaging in the prime focus
- + effective focal length
- + extension and reduction of focal length
- + binocular-projection
- + Barlow- and Shapley-lens

Martes 24 de Septiembre de 2013, 12.00 hrs.

Profesor: Dr. Markus Mugrauer, AIU, Universidad de Jena, Alemania

Ciclo: Instrumentación Astronómica y Técnicas Observacionales

II. Types of telescopes

1. Refractors

- + Achromatic and apochromatic optics

2. Reflectors

2.1 Two mirror systems

- + calculation of a 2 mirror system

- + Newton

- + Cassegrain

- + Ritchey-Chretien-Cassegrain

2.2 Mirror-lens systems

- + Schmidt-Camera

- + Schmidt-Cassegrain

- + Maksutov

3. Active optics

- + basics and fundamental components

- + the main principle of the image analysis

4. Adaptive optics

- + basics and fundamental components

- + Different types of wavefront sensors

- + laser reference stars

- + multi-conjugated adaptive optics

Martes 24 de Septiembre de 2013, 14.00 hrs.

Jos de Boer, PhD student at Leiden Observatory in the Netherlands and The European Southern Observatory in Santiago.

"High Contrast Imaging of Circumstellar Disks, Using Polarimetry"

In recent years, imaging of circumstellar matter has taken a flight. By looking at other solar systems being formed, we hope to answer questions about the formation of planets. Also questions of habitability or even life near other stars become more relevant with the current and future developments of high contrast imaging. In this field, we are posed with the problem of overcoming the contrast between the bright star and much fainter surrounding material. A combination of bigger/better telescopes, and different new (and sometimes old) techniques has allowed for the current surge of discoveries, such as direct detection of jupiter sized planets and surprisingly shaped circumstellar disks. This talk will briefly discuss the questions that we are trying to answer; then give a short summary of the different techniques at our disposal; followed by a more thorough discussion of the possibilities that the technique of polarimetry provides us. The latter will be illustrated by a description of current and future optical and IR polarimeters and their (possible) contribution, such as NACO/Pol, ExPo and SPHERE/ZIMPOL

Miercoles 25 de Septiembre de 2013, 14.00 hrs.

Profesor: Dr. Markus Mugrauer, AIU, Universidad de Jena, Alemania

Ciclo: Instrumentación Astronómica y Técnicas Observacionales

III. Detectors

1. Basics of semi-conductor physics

- + band model and doping

- + pn junction

- + photo diode

- + MOS-contact

2. CCD-detectors

- + basics of CCD detectors

- + BCCDs

- + Front- & Back-illuminated CCDs

- + Frame-Transfer & Interline-Transfer CCDs

Viernes 27 de Septiembre de 2013, 14.00 hrs.

Dr. James Di Francesco, National Research Council of Canada

"Herschel overview of the link between clouds and star formation"

The ESA Herschel Space Observatory is a 3.5-m diameter far-infrared/submillimetre telescope, the largest yet launched into space. Its location at the Sun-Earth L2 point allowed it to probe the coldest aspects of the Universe, including the vast molecular clouds that populate the Galaxy. In this talk, I will provide the highlights of one of Herschel's Key Projects, the Gould Belt Survey, which mapped 15 molecular clouds within 500 pc. This survey has revealed the extraordinarily complicated internal structures of molecular clouds for this first time, allowing us to see how mass is assembled within clouds from the diffuse gas to dense cores. Surprisingly, molecular clouds appear rife

with filaments, likely formed by turbulent motions within the cloud. Star formation appears to occur only in the densest cloud filaments that are susceptible to fragmentation, further mass accretion, and collapse. The mass distribution of cores formed in such filaments appears very similar in shape to the stellar Initial Mass Function, suggesting that the turbulent motions forming filaments (and cores) is fundamentally behind the mass distribution of stars.

Martes 01 de Octubre de 2013, 14.00 hrs.

Auditorio de la Facultad de Ciencias.

Sylvain Robbiano, Postdoctoral Researcher del CIMFAV, gracias a proyecto GEMINI-CONICYT

"An introduction to multipartite ranking"

Multipartite ranking is a statistical learning problem that consists in ordering observations that belong to a high dimensional feature space in the same order as the labels, so that the observations with the highest label appear at the top on the list. This work aims to understand the probabilistic nature of the multipartite ranking problem in order to obtain theoretical guarantees for ranking algorithms. In that framework, the output of a ranking algorithm takes the form of a scoring function, a function that maps the space of the observations to the real line which order is induced using the values on the real line. The contributions of this manuscript are the following : first we focus on the characterization of the optimal solutions of multipartite ranking. A new condition on the likelihood ratios is introduced and shown to be necessary and sufficient to make the multipartite ranking well-posed. Then, we look at the criteria to assess the scoring function and propose to use a generalization of the ROC curve named the ROC surface. To be used in applications, the empirical counterpart of the ROC surface is studied and results on its consistency are stated

Martes 15 de Octubre de 2013, 14.00 hrs.

Auditorio de la Facultad de Ciencias.

Neil Cook, PhD. student in Astrophysics, Universidad de Hertfordshire, UK

"Finding Unresolved Brown Dwarfs and Exoplanet Companions to M Dwarfs using Mid-infrared Excess"

We present an optimised method for identifying brown dwarf and exoplanet companions to very low mass stars. We identify an all sky sample of bright M dwarfs based on optical and near-infrared colours, reduced proper motion, with strict $E(H-W2)$ constraints and H-W2 photometric uncertainty less than 4%. We hunt for excess in the mid infrared using H-W1 and H-W2 colours, and comparison samples of other M dwarfs from common multi-colour parameter-space (not including H-W1 and H-W2). These candidates will be followed up with adaptive optics, radial velocities, and light curves (for transit) where appropriate.

Martes 24 de Octubre, 2013

Auditorio de la Facultad de Ciencias

Nikolai Kacharov, Estudiante Doctorado en Landessternwarte Heidelberg-Konigstuhl, Alemania

"Kinematics and chemical elements of the very metal poor Globular Cluster NGC 4372"

NGC 4372 is a poorly studied, old, and very metal poor Globular Cluster (GC) located close to the Milky Way plane and suffers from a severe differential reddening. It was likely dynamically stirred during its frequent crossings of the Galactic disk. Here, we will present its first ever high-resolution observations, taken with the FLAMES instrument at the VLT. Our sample consists of 131 red giant stars that are confirmed cluster members. We found $[Fe/H] = -2.15 \pm 0.05$ dex without a significant metallicity spread. We have also derived the abundances of several alpha, iron-peak and n-capture elements, as well as the p-capture element Sodium, which is crucial to assess the existence of multiple populations in this GC. We also focus on the kinematic properties of NGC 4372. Based on precise radial velocities we find that NGC 4372 has an unusually high systemic rotation to velocity dispersion ratio (1.2 vs. 4.7 kms^{-1}) for its metallicity, which puts it in line with other very metal poor GCs like M 15 and NGC 4590, and which might hold important clues to the origin of those very low metallicity systems. Finally, we found a mild flattening of NGC 4372 in the direction of its rotation. Given its old age, this suggests that the flattening is indeed caused by the systemic rotation rather than tidal interactions with the Galaxy

Martes 12 de Noviembre, 2013

Dr. Eduardo Ibar, Postdoctoral FONDECYT Fellow, Pontificia Universidad Católica

"Exploiting the synergy between ALMA and VLT/AO-IFU: a resolved view to high-z Halpha emitters"

We are undertaking SINFONI AO / NGS observations of 18 mass selected ($M = 10^{9.5-10.5} M_{\odot}$) "main-sequence" star-forming galaxies at $z = 0.84-2.23$ selected from the Hi-z Emission Line Survey (HiZELS), all of which lie within 30 of bright ($R < 14.5$) AO guide stars. Combined with 12 objects from our previous program, our survey will comprise 30 galaxies; 10 at each of $z = 0.84, 1.47$ & 2.23 . SINFONI observations targeting the Halpha emission line are being used to map the distribution and intensity of star formation, dynamics and metallicity on sub-kpc scales. On the other hand, we are using ALMA in Band-7 to obtain imaging at matched resolution in order to provide an estimate for the amount of obscured star-formation ongoing in these galaxies -- a critical observable to understand if the massive clumps of star-formation seen in Halpha are real or not. The combination of these two 'classical' star-formation

estimators will put tight constraints on the star-formation activity, while at the same time it will provide an important test for the validity of the classical SFR correlations. In summary in this project, we aim to address: (i) How does the fraction of primitive disks evolve with z ? (ii) Is the distribution of star formation in more turbulent systems at high- z more centrally concentrated than comparably luminous/turbulent galaxies at lower- z ? (iii) What are the properties of the giant star-forming clumps and how do they reflect the dynamics and gas surface density of the underlying ISM? Answers to these questions are critical for developing models of galaxy formation, in particular to determine if stellar mass assembly at each epoch is dominated by secular isolation or via merger-induced growth.

Martes 26 de Noviembre, 2013

Dr. Claus Tappert, Departamento de Física y Astronomía, U. de Valparaíso

"When new becomes old: the search for post-novae"

Classical novae are cataclysmic variables (CVs) that undergo a thermonuclear explosion once the white dwarf has accreted a critical amount of mass from its late-type main-sequence companion. Nova eruptions are considered recurrent events in the life of most, if not all, CVs. Yet, there is still not much known about the role of such eruptions within the evolution of CVs. Do they occur at every stage? And if yes, with the same frequency? In other words: what are the parameters that favour a nova eruption? A detailed study of post-novae is hampered by the small number of confirmed systems: for more than half of the 200 nova eruptions that were reported before 1980 we still do not even know the position of the post-nova! In 2009 we have begun a systematic search for such systems, and I here report on the progress of the project as well on a few enigmatic systems that we have found in its course.

Martes 5 de Octubre de 2013, 14.00 hrs.

Auditorio de la Facultad de Ciencias.

Dr. Patrice Bouchet, Head Centre of Expertise MIRI/JWST (MICE-France), Service Astrophysique, Institut de Recherche sur les lois Fondamentales de l'Univers.

"Dust Condensation in Core-Collapse Supernovae - The strange case of SN 1987A"

Martes 05 de Noviembre de 2013, 14.00 hrs.

Dr. Patrice Bouchet, Head Centre of Expertise MIRI/JWST (MICE-France), Service Astrophysique, Institut de Recherche sur les lois Fondamentales de l'Univers. "Dust Condensation in Core-Collapse Supernovae - The strange case SN 1987A"