

**XVI Reunión Científica de la Sociedad Española de Astronomía
Granada, 15-19 de julio de 2024**

**Sesiones Paralelas Tradicionales
Programa detallado**

Vía Láctea y sus componentes (VL1). Lunes 15, 17:45 – 19:30**GAIA y surveys****Moderador: Mercè Romero**

17:45	María Luisa García Vargas: MEGASTAR: la librería estelar de alta resolución ($R \sim 20000$) observada con MEGARA en GTC: segunda reléase (invitada)
18:15	Mar Carretero-Castrillo: New stellar bow shocks around O and Be runaway stars found using WISE and Gaia DR3
18:30	Judith Ardèvol: Dynamics of spiral arms across stellar populations in hydrodynamical simulations
18:45	Xabier Pérez-Couto: White dwarf spectral classification using Gaia XP spectra: an unsupervised machine learning approach
19:00	John Eduard Martínez-Fernández: Exploring the Milky Way metallicity gradient using open cluster stars
19:15	Lara Pallas-Quintela: Gaia's XP spectra reddening removal using machine learning techniques.

Vía Láctea y sus componentes (VL2). Miércoles 17, 9:00-11:00.**CHEMODIN+CLUSTERS****Moderador: Hugo Tabernero**

09:00	Elena Manjavacas: What are the First JWST/NIRSpec spectra revealing about Young Brown Dwarfs? (invitada)
09:30	Miguel Gómez Garrido: Exploring the short timescale variability of the SiO masers in evolved stars.
09:45	Diego Cuenda Muñoz: Lithium, rotation and metallicity in the open cluster M35
10:00	Judit Donada Olliu: High-resolution spectroscopy of the old, high-latitude open cluster UBC 1052
10:15	Christian Duque-Arribas: Low-resolution spectral indices to derive M-dwarf abundances using wide binary systems
10:30	Álvaro Martínez: Kinematic studies of the Nuclear Stellar Disk
10:45	José María Arroyo Polonio: Chemo-dynamical characterization of the Sculptor dwarf galaxy

Vía Láctea y sus componentes (VL3). Miércoles 17, 17:45-19:30.**NP+Supernovas****Moderador: Nadeja Blagorodnova**

17:45	Carmen Sánchez-Contreras: Exploring Emerging Ionized Regions of Pre-Planetary Nebulae: An ALMA Close-Up (invitada)
18:15	Álvaro Mas-Aguilar: Observations of gamma-ray pulsars with the Large-Sized Telescope prototype (LST-1)
18:30	David Barba-González: Virialized equation of state and phase transitions in warm and dense matter using molecular dynamics.
18:45	Arnau Aguasca-Cabot: Novae at gamma rays with the LSTs of CTAO: present and future
19:00	Javier Méndez-Gallego: The high energy spectrum of HH 80-81: Protostellar objects as gamma-ray emitters in the Milky Way (?)
19:15	Teresa Huertas-Roldán: New radio detections of molecular and atomic emission towards C-rich planetary nebulae

Vía Láctea y sus componentes (VL4). Viernes 19, 9:00-11:00**Stars and BH****Moderador: Sergio Simón**

09:00	Eulalia Gallego Cano: New insights into the population of young, massive stars near Sagittarius A* (invitada)
09:30	Abel de Burgos: New evolutionary clues to understand the nature of massive stars

09:45	Javier González-Payo: Multiplicity of stars with planets
10:00	Ruben Fedriani: Revealing Star Formation in the Galactic Center with JWST-NIRCam
10:15	Elisa Masa Andrés: Multi-species modelling of M1-92: the death of a star told by its isotopic ratios.
10:30	Pedro Mas Buitrago: Using autoencoders and deep transfer learning to determine the stellar parameters of 286 CARMENES M dwarfs
10:45	Joan-René Mérou: GPU-accelerated searches for long-transient gravitational waves from newborn neutron stars

Vía Láctea y sus componentes (VL5). Viernes 19, 11:30-13:30. Stars+FE+Dust

Modera: Sara Rodríguez Berlanas

11:30	Carlos Martínez-Sebastián: He-rich O-type stars as tracers of past binary interaction
11:45	Beatriz Ruiz-Granados: Fan region as seen by QUIJOTE MFI experiment (invitada)
12:15	Marc del Alcázar I Julià: Unveiling the star formation history of the thin and thick discs: a new strategy using BGM FAST
12:30	Maialen Orte García: On the chlorine abundance in HII regions
12:45	Elena Díaz-Márquez: Characterizing the stellar population in the infrared dark cloud G14.225-0.506
13:00	Christopher Brook: Constraining gas metal mixing strength in simulations using observations of the Milky Way's disc
13:15	Jaime Alonso Hernández: Effects of (internal) UV and X-ray emission in AGB's envelopes
13:30	Daniel Galán Diéguez: Where are the fast rotators in Cygnus OB2? A new study from an observational approach
13:45	Benjamín Montesinos: Stellar structure and synthetic spectra of rapidly rotating stars

SP_Galaxias (GX1) lunes 15 ISM/Dust observations/simulations for the environment Modera: Montserrat Villar

17:45	Omaira González Martín: Descubriendo al polvo debajo de la alfombra de los núcleos activos con James Webb (invitada)
18:00	Irene Shivaiei: Unveiling Dust Beyond the Local Universe in the JWST Era (invitada)
18:15	Carmen Blanco: Unveiling the spatially resolved ISM in the lensed A1689-zD1 galaxy at $z \sim 7.1$
18:30	Donaji Esparza Arredondo: Studying the dusty-gas properties of AGN using a simultaneous fit of mid-infrared and X-ray data
18:45	Zahra Sharbaf: Ultra-deep imaging of M33: exploring its stellar halo with broad band imaging for the first time
19:00	Antonio Arroyo Polonio: Unraveling the Kinematics of IZw18: A Detailed Study of Ionized Gas with MEGARA/GTC
19:15	Nelida Diaz-Fernandez: Gas flows, radial migration, and the nature of spiral arms in spiral galaxies

SP_Galaxias (GX2) miércoles 17 observations/simulations for the environment stellar populations Modera: Pablo Perez González

11:30	Blanca Moncada Cuadri: Diffuse Gas Study in a Sample of Tidal Dwarf Galaxies
11:45	Shane O'Sullivan: The magnetised intergalactic medium revealed by SKA Pathfinder telescopes
12:00	Raúl González Díaz: BETIS: Bidimensional Exploration of the warm-Temperature Ionised gas
12:15	Enrique Galceran García: Determining Star Formation Histories and Metallicity Evolution with Convolutional Neural Networks
12:30	Iker Millan Irigoyen: PopStar: New high resolution stellar populations models for current and future instruments
12:45	Helena Domínguez Sánchez: Decoding Galaxies: Harnessing Neural Networks for Precise Stellar Population Analysis in the J-PAS Survey (invitada)
13:00	Paula Macías Pardo: Galaxies in the CATARSIS clusters: study of the properties and reconstruction of the SFHs from their SED modeling
13:15	César Esteban: The radial abundance gradients in the outer disc of the Andromeda Galaxy.

SP_Galaxias (GX3) miércoles 17 AGN Modera: Jose Acosta Pulido

17:45	Montserrat Villar: AGN feedback can produce metal enrichment on galaxy scales (invitada)
18:00	Eduardo Ros: Charting new territories: High-resolution VLBI exploration of supermassive black hole vicinities in active galactic nuclei
18:15	Elena Arjona-Gálvez: The role of AGN feedback on the evolution of dwarf galaxies from cosmological simulations
18:30	Juan Escudero Pedrosa: The Recurrent Flaring Activity of the Blazar AO 0235+164
18:45	Jacobo Ebrero: Obscuring winds in AGN as probes of cosmic feedback
19:00	Begoña García Lorenzo: Unveiling the central kpc of Type I AGN host galaxies in Seeing-Limited IFS data
19:15	Alice Deconto-Machado: AGN winds, feedback, and radioloudness effects in high-redshift type 1 AGN
19:30	Ignacio del Moral Castro: A Multiwavelength Study of Dual AGN in the Nearby Universe

SP_Galaxias (GX4) Jueves 18**Interactions/mass assembly****Modera: Santi Roca Fabregas**

09:00	Eirini Angeloudi: Constraining in-situ vs. ex-situ stellar mass in nearby galaxies with Artificial Intelligence
09:15	Carlota Prieto: Understanding the role of galaxy interactions in the Early Universe with MIRI/JWST observations of 'Big Three Dragons', a galaxy merging system at redshift $z=7.15$
09:30	Pablo Corcho-Caballero: Ageing and Quenching in the Local Universe
09:45	Mauro Stefanon: Divide et Impera: Galaxy Assembly in the Early Universe from NIRSpec/IFU Observations of ALMA/REBELS Galaxies
10:00	Bernabé Cedrés: GLACE survey: OSIRIS/GTC tuneable imaging of the galaxy cluster ZwCl 0024.0+1652. The Mass–Metallicity relationship and the effect of the environment
10:15	David Crespo Iglesias: Mass density profiles derived using the submillimetre galaxies magnification bias
10:30	Pablo G. Pérez-González: Little red dots, a new population of galaxies discovered by JWST
10:45	Jesús Vega Ferrero: Identifying stellar disk truncations in Euclid galaxy images using Segment Anything Model

SP_Galaxias (GX5) Viernes 19**Machine learning/Cosmology****Modera: Ángel R. López-Sánchez**

09:00	Jorge Sarrato-Alós: Inferring the dark matter distribution in galaxies with machine learning methods
09:15	Ginés Solaèche: EXPLORING GALAXY PROPERTIES OF eCALIFA WITH CONTRASTIVE LEARNING
09:30	Asier Castrillo: SNR in PHANGS galaxies, machine learning segmentation and optical properties
09:45	Siddhartha Gurung Lopez: High precision reconstruction of Lyman-alpha line profiles attenuated by the intergalactic medium using artificial neural networks.
10:00	Santi Roca Fabrega: The AGORA CosmoRun models: satellites, stellar disk morphology and the Circumgalactic Medium
10:15	Ramón Rodríguez-Cardoso: Environmental quenching of satellite galaxies in a cosmological zoom-in simulation of a Milky Way-mass halo: a new project within the AGORA Collaboration
10:30	Matías Gámez-Marín: The origin of long-lasting kinematic satellite planes in Λ CDM: when and how do they appear ?
10:45	Diego Álvarez Ortega: SMILE: Search for Milli-LEnses to discriminate between dark matter models

SP_Galaxias (GX6) Viernes 19**JWST/miscellanea****Modera: Omaira Gonzalez Martin**

11:30	Atulit Srivastav: The Three Hundred: $M_{sub} - V_{circ}$ relation
11:45	Ángela García Argumánez: On the formation epoch of massive galaxies using spatially-resolved HST+JWST imaging data
12:00	Bruno Rodríguez Del Pino: Co-evolution within a highly star-forming galaxy group at $z\sim 3.7$ witnessed by JWST/NIRSpec IFS
12:15	Antonio Gimenez Alcázar: Low- z analogs to LyC emitters explored with MEGARA
12:30	Isabella Lamperti: NIRSpec IFS observations of a massive galaxy at $z\sim 3.5$ at the centre of a proto-cluster
12:45	María Kopsacheili: New larger sample of Supernova Remnants in NGC 7793, using MUSE IFS
13:00	Alba Vidal García: Where infall meets outflows: turbulent dissipation probed by CH+ and Ly α in the starburst/AGN galaxy group SMMJ02399-0136 at $z = 2.8$

13:15	Mauricio Hernán Rojas del Campo: Emisión de rayos X (R-X) de la fuente erasst j045650.3-203750
13:30	Joao Pedro Benedetti: Don't judge a book by its cover: digging deeper into NGC 6868
13:45	Cristina Cabello: A 2D spatially-resolved study of local analogs of high-z galaxies

Enseñanza, divulgación y patrimonio (EDP1)

Enseñanza

Modera: **Amelia Ortiz**

15:15	Mirjana Povic: SciGirls - Empowering girls and female teachers through astronomy in conflict-affected rural areas
15:30	Elena Manjavacas: The SEA Mentoring Program for Female Astronomers
15:45	Cintia Cabada Malvar: Tardígrados y astrobiología: donde la astrofísica y la biología se encuentran en la Universidade de Vigo
16:00	Luis González: Teaching Astronomy with the Virtual Observatory
16:15	Marcos Villaverde Aparicio: Divulgación en el Observatorio del SKA y el papel de la Ciencia Abierta en diseminación
16:30	David Montes: Visitas guiadas al Observatorio UCM
16:45	David Nespral: El observatorio astronómico del Teide, presente y futuro
17:00	Miguel Querejeta: Real Observatorio Astronómico de Madrid: ciencia, historia y patrimonio
17:15	Laura Hermosa Muñoz: Allande Stars: divulgación científica en zonas rurales

Enseñanza, divulgación y patrimonio (EDP2)

Inclusión, divulgación, patrimonio

Modera: **David Montes**

17:45	Santiago Pérez-Hoyos: Enfoques divulgativos con perspectiva desde la Ética Espacial
18:00	Laura Toribio San Cipriano: Phy6cool: Escuela de verano de física de partículas, astropartículas y cosmología
18:15	Beatriz M. González García: "Piensa globalmente, actúa localmente" - Las Space Science Experiences CESAR
18:30	Miguel Á. Satorre: La magia de la ciencia
18:45	Jorge Rivero González: La astronomía para paliar la segregación escolar: lecciones aprendidas de la participación en el programa Magnet
19:00	Nataly Ospina: RECA Education: An initiative to bring astronomy to Colombian schools
19:15	Amelia Ortiz-Gil: Telegrama a un planeta: Comunicando Astronomía con los aliens

Instrumentación y supercomputación (IS1) Martes 16**Contribuciones a instrumentos internacionales****Modera: Francisco Prada**

17:45	S. Sánchez Expósito: Spanish contribution to the development of the SKA Regional Centres Network: A sustainable approach (invitada) .
18:15	J. Manel Carrasco: The PhotSat mission: Ultraviolet and optical all-sky monitoring with a cubesat
18:30	J. Planelles: Technological development and preparation for scientific exploitation of Athena XIFU
18:45	I. M. Ferro Rodríguez: CAB contribution to the instrument ELT-HARMONI: closing its final design

Instrumentación y supercomputación (IS2) Miércoles 17**Técnicas y herramientas****Modera: Irene Ferro**

11:30	D. de Andrés Hernández: The three hundred project: mapping the matter distribution in galaxy clusters via deep learning from multiview simulated observations (invitada) .
12:00	F. Prada: The revolution of SPAD detectors in Astronomy
12:15	J. Bazán: Código astrofísico, guía para convertir tu software oculto en un objeto científico
12:30	I. Labadie García: Remote and interactive visualisation of spectral datacubes
12:45	V. P. Koushika: Automated Redshift estimation from X-ray AGN spectra
13:00	A. R. López Sánchez: PyKOALA, a multi-instrument tool for reducing IFS data
13:15	V. Pérez-Díez: Towards an Astronomical Use of New Generation Geodetic Observations - Imaging and Astronomical Results

Instrumentación y supercomputación (IS3) Viernes 19**Descripción general de proyectos****Modera: F. Garzón**

09:00	J. Aceituno: Calar Alto: 50 años de observación del universo y hacia el futuro con instrumentación de vanguardia (invitada) .
09:20	L. Bellot Rubio: The Tunable-Imaging Spectropolarimeters/Fixed-Band Imagers for the European Solar Telescope
09:35	A. Cifuentes Santos: Optical interferometry with Cherenkov Telescopes: first scientific results with MAGIC and expansion to MAGIC + CTA-LST1
09:50	M. C. Cárdenas Vázquez: METIS instrument: status of the IMAGER, the SCAO and MITESI
10:05	L. Balaguer-Núñez: The Gaia4Sustainability project
10:20	S. Wu: BOOTES Network
10:35	F. AstroHita: TecnoHita Instrumentación, la evolución tecnológica de AstroHita
10:50	Gonzalo José Carracedo Carballal: Presentando RayZaler: un simulador optomecánico para instrumentación astronómica

Instrumentación y supercomputación (IS4) Viernes 19**Instrumentos nacionales****Modera: J. Aceituno**

11:30	A. Gil de Paz: TARSIS, the 8 arcmin ² IFU for the Calar Alto 3.5m telescope. (invitada)
12:00	F. M. Montenegro Montes: CATARSIS survey optimization: dithering strategies and field scheduling with deep reinforcement learning

12:15	J. Flores-Martín: Comisionado de Multi-Array of Combined Telescopes (MARCOT), un instrumento multi-apertura en el observatorio de Calar Alto
12:30	M. Fernandez: PANIC upgraded: the CAHA near-infrared camera has a new detector
12:45	D. Reverte Payá: GTC Science Operation Status and Instrumentation plan
13:00	V. J. S. Béjar: Results of the GTC Adaptive Optics commissioning and prospects for the first science
13:15	F. Garzón: New EMIR performances after detector upgrade
13:30	A. Marin-Franch: On sky performances and first scientific results of JPCam, the 1.2 Gpixel camera for the wide-field 2.6m Javalambre Survey Telescope
13:45	A. M. Arriero Lopez: Thermal design and modeling of the Tenerife Microwave Spectrometer: towards high precision spectral measurements of the microwave sky

Cosmología y Astropartículas (CA1) Martes 16

Cosmology/Dark Matter

Modera: Nataly Ospina

15:15	Helena García Escudero: El papel de los neutrinos masivos en las tensiones cosmológicas (invitada)
15:45	Kim Phan: Type Ia supernova cosmology with the near-infrared
16:00	Jose María Palencia: Understanding extremely magnified stars. Dark matter & stellar populations
16:15	Jacobo Asorey: Cosmology with wide extra-galactic ASKAP radio surveys
16:30	Adrián Gutiérrez Adame: PNG-UNITsims: the response of halo clustering to Primordial Non-Gaussianities as a function of mass
16:45	David Vallés-Pérez: "On the assembly state of dark matter haloes through cosmic history"
17:00	M. Angeles Perez Garcia: Constraining self-interacting fermionic dark matter in admixed neutron stars using multimessenger astronomy

Cosmología y Astropartículas (CA2) Martes 16

Instruments/high energy

Modera: M. Ángeles Pérez García

17:45	Pol Bordas: First Science with the LST-1 (invitada)
18:15	Daniel Morcuende: The first detection of VHE gamma rays from the quasar OP313 at redshift $z = 0.997$ by LST-1: the furthest VHE gamma-ray blazar
18:30	Jorge Otero-Santos: BL Lacertae strikes again: second gamma-ray mega-flare observed by LST-1
18:45	Ruben Lopez-Coto: The hunt of PeVatrons: the origin of the most energetic photons observed in our Galaxy
19:00	Edgar Molina: A gamma-ray view of microquasar outbursts

Cosmología y Astropartículas (CA3) Jueves 18

Instruments/miscellaneous

Modera: Rubén López-Coto

09:00	Alicia López-Oramas: Transient TeV astronomy with Cherenkov telescopes in the Canary Islands (invitada)
09:30	José Alberto Rubiño-Martin: The QUIJOTE experiment: status, latest results and future plans (invitada)
10:00	Mateo Fernández Torreiro: New measurements of the Sunyaev-Zeldovich effect in the late 2020s: scientific forecasts for NIKA3 and other future millimetre instruments
10:15	Jyothis Chandran: Mapping the distribution of hot gas with the thermal Sunyaev-Zeldovich effect from the millimetre-sky observations with ILC-based methods
10:30	Nataly Ospina: Diffuse Supernova Neutrino Background search at Super-Kamiokande
10:45	Stefano Menchiarì: Contribution of young massive stellar clusters to the Galactic diffuse γ -ray emission

Física solar (FS1) Martes 16**Modera: H. Strecker**

09:00	A. Asensio Ramos: Multi-object multi-frame blind deconvolution with a spatially variant convolution neural emulator (invitada).
09:30	G. Castelló: Spectral analysis of solar filaments using Convolutional-NeuralNetworks (CNNs)
09:45	A. Reche García: Deep learning para la detección, análisis y monitorización de filamentos solares
10:00	J. V. Rodríguez: Predicción del Índice del Número de Manchas Solares mediante Técnicas de Aprendizaje Automático, Parámetros Precursores y Análisis Espectral: ¿Atravesando un Mínimo de Gleissberg?
10:15	J. C. Trelles Arjona: Quiet Sun magnetism from ViSP data Multiline Inversions around 630.1 nm
10:30	M. Koll Pistarini: Vortex Flows in the Solar Atmosphere: Detection and Heating Mechanisms in 3D MHD Numerical Simulations
10:45	LI. Melis: Self-consistent models of prominence thin threads including Alfvén wave heating

Física solar (FS2) Martes 16**Modera: J. C. Trelles**

17:45	H. Strecker: Active region evolution studied from different vantage points (invitada).
18:15	A. Moreno Vacas: Polar stereoscopic analysis with Solar Orbiter
18:30	I. F. Albert: A search for ion-scale reconnecting current sheets in the solar wind
18:45	M. Flores Soriano: Implications of the magnetic configuration of active regions for solar radio burst polarization and GPS signal integrity
19:00	C. Larrodera: Sheaths and magnetic obstacle evolution from the inner to the outer heliosphere.
19:15	S. Toledo Redondo: Waves near the proton cyclotron frequency in the solar wind and in the Earth's magnetosphere

Ciencias Planetarias (CP1) lunes 15**Small bodies****Moderador: Miguel A. Satorre**

17:45	Stephen Schwartz: DART Impact secondary cratering
18:00	Adriano Campo Bagatín: From DART/Hera to RAMSES: Coming full circle in impact risk mitigation space missions
18:15	Laura Parro: Clues about the internal structure of asteroids through the analysis of surface features
18:30	Luisa Fernanda Zambrano-Marín: Asteroide 2020BX12, el último Binario descubierto en el radar de Arecibo
18:45	Paula G. Benavidez: Kuiper Belt Object Size-Frequency Distributions: Reconciling Recent Observations and Cosmogonic Insights
19:00	Jennifer López-Viejobueno: Polarization from meteoroid grains in the Earth thermosphere
19:15	José María Gómez-Limón Gallardo: Insights into (19521) Chaos: Evidence for a Compact Binary System

Ciencias Planetarias (CP2) martes 16**Mars/SS planets****Moderador: Adriano Campo Bagatín**

17:45	Miguel Ángel López Valverde: Scientific overview of the NOMAD spectrometer on board the Trace Gas Orbiter, after 5 years of atmospheric observations on Mars
18:00	Adrián Brines Montoro: Injection of water vapor into the Martian upper atmosphere during the perihelion season observed with ExoMars-TGO/NOMAD
18:15	Francisco José García Izquierdo: Caracterización experimental de propiedades físicas de regolitos planetarios mediante fotopolarimetría
18:30	Ethan James Larsen: Nubes orográficas extremadamente alargadas y estrechas en Marte
18:45	Aurelien Stolzenbach: Dust and ice in the Martian atmosphere: distribution, variability and characteristics during a whole Martian Year as observed in solar occultation by the ExoMars-TGO/NOMAD spectrometer PROVISIONAL
19:00	Asier Anguiano-Arteaga: Estudio microfísico de los agentes colorantes en la Gran Mancha Roja de Júpiter
19:15	Julia Martikainen: Retrieving optical properties of Martian dust analogues from laboratory data

Ciencias Planetarias (CP3) jueves 18**Exoplanets/miscellanea****Moderador: Francisco González Galindo**

09:00	Rafael Luque: Splendidly Synchronized: Six Sub-Neptunes Spinning a Shiny Star
09:15	Manuel Mallorquín Díaz: Mass and radius determination of young planets and the implications for their gas envelope evolution
09:30	Juan Bautista Climent Oliver: A new window into cool dwarf's magnetospheres: radiation belts and beyond
10:45	Nicola Nari: HD 20794: A bright G6V star observed with ESPRESSO and HARPS
10:00	Isabel Rebolledo: JWST view of the β Pictoris Disk: Asymmetries, Dust Populations, and Hints of a Collision
10:15	Ada Canet: Impacto de los vientos estelares en la evolución de las primeras atmósferas de planetas terrestres. Una aproximación MHD
10:30	Fernando Tinaut Ruano: Exploiting the near-ultraviolet as a diagnostic tool for the composition of primitive material in the Solar System
10:45	Miguel Á. Satorre: Cambios estructurales de metanol en el Sistema Solar