

Física Teórica y del Cosmos

Áreas de conocimiento: Física Teórica, Astronomía y Astrofísica, Física de la Tierra

Director: José Santiago Pérez

Secretario: José Ignacio Illana Calero

Página web: <http://www.ugr.es/~fteorica/>

Profesorado: CU:10, PTU:21 , PDI Contratado y Otros:19.

Tesis Leídas

- Initial state structures and final state correlations in heavy ion collisions

Doctorando: Alba Soto Ontoso

Director: Javier López Albacete, Hannah Petersen

Fecha de lectura: 22/06/2018

- The Wilsonian Renormalization Group in Gauge/Gravity Duality

Doctorando: Francisco Javier Martínez Lizana

Director: Manuel Pérez-Victoria Moreno de Barreda

Fecha de lectura: 21/07/2017

- Beyond standard model particle constraints from stellar evolution

Doctorando: Adrián Ayala Gómez

Directores: M. Inmaculada Domínguez Aguilera (UGR) & Oscar Straniero (INAF-Osservatorio Astronomico d'Abruzzo)

Cotutela internacional: UGR & Univ. de Roma Tor Vergata

Fecha de lectura: 28/09/2017

- 3D analysis of the ionised gas structure in spiral galaxies with CALIFA

Doctorando: Laura Sánchez Menguiano

Director: Isabel Pérez Martín, Sebastián Sánchez (IAA)

Fecha de lectura: 20/12/2017

Grupos de Investigación.

FQM108 ASTROFÍSICA

- Responsable: EDUARDO BATTANER LOPEZ

FQM292 EVOLUCION Y NUCLEOSINTESIS ESTELAR

- Responsable: CARLOS ANTONIO ABIA LADRON DE GUEVARA

FQM330 FISICA DE ALTAS ENERGIAS

- Responsable: FERNANDO CORNET SÁNCHEZ DEL ÁGUILA

FQM101 FISICA TEORICA (PARTICULAS ELEMENTALES)

- Responsable: FRANCISCO DEL ÁGUILA GIMÉNEZ

Dirección y participación en Proyectos I+D

- 2017 Física Teórica de Partículas Elementales, Competitivo, 01/01/2017-31/12/2020

Responsable JOSÉ SANTIAGO PÉREZ

Publicaciones en revistas

- 2018 Artículo: Short-distance matrix elements for D_0 -meson mixing for $N_f=2+1$ lattice QCD, Physical Review. D.

Particles and fields, , , -

MARÍA ELVIRA GÁMIZ SÁNCHEZ

- 2018 Artículo: All-flavor Search for a Diffuse Flux of Cosmic Neutrinos with Nine Years of ANTARES Data, The

Astrophysical Journal. Letters, 853, L7, 1-5

SERGIO NAVAS CONCHA

- 2018 Artículo: The CARMENES search for exoplanets around M dwarfs . First visual-channel radial-velocity

measurements and orbital parameter updates of seven M-dwarf planetary systems, Astronomy &

Astrophysics, 609, , id.A117-24 pp.

JUAN CARLOS SUÁREZ YANES

- 2018 Artículo: The CARMENES search for exoplanets around M dwarfs. HD147379 b: A nearby Neptune in the

temperate zone of an early-M dwarf, Astronomy & Astrophysics, 609, , id.L5-7 pp.

JUAN CARLOS SUÁREZ YANES

- 2018 Artículo: Radio synchrotron spectra of star-forming galaxies, Astronomy & Astrophysics, 611, A55, -

SIMON VERLEY

UTE LISENFELD

- 2018 Artículo: Spatially resolving the dust properties and submillimetre excess in M 33, Astronomy &

Astrophysics, , , -

MÓNICA RELAÑO PASTOR

SIMON VERLEY

UTE LISENFELD

- 2018 Artículo: The AMIGA sample of isolated galaxies. XIII. The HI content of an almost "nurture free" sample, *Astronomy & Astrophysics*, 609, , 17-45
UTE LISENFELD
- 2018 Artículo: Herschel Spectroscopy of the Taffy Galaxies (UGC 12914/12915 = VV 254): Enhanced [C II] Emission in the Collisionally Formed Bridge, *The Astrophysical Journal*, 855, , 141-154
UTE LISENFELD
- 2018 Artículo: The CARMENES search for exoplanets around M dwarfs. High-resolution optical and near-infrared spectroscopy of 324 survey stars, *Astronomy & Astrophysics*, 612, , A49-63 pp
JUAN CARLOS SUÁREZ YANES
- 2018 Artículo: Characterisation of the Hamamatsu photomultipliers for the KM3NeT Neutrino Telescope, *Journal of Instrumentation*, 13, P05035, 1-16
SERGIO NAVAS CONCHA
- 2017 Artículo: Type Ia Supernovae keep memory of their progenitor metallicity, *The Astrophysical Journal*, 836, 1, 9-15
INMACULADA DOMINGUEZ AGUILERA
- 2017 Artículo: Probing the Broad-line Region and the Accretion Disk in the Lensed Quasars HE 0435-1223, WFI 2033-4723, and HE 2149-2745 Using Gravitational Microlensing, *The Astrophysical Journal*, 835, 2, 132-145
JORGE JIMENEZ VICENTE
- 2017 Artículo: Impact of atmospheric effects on the energy reconstruction of air showers observed by the surface detectors of the Pierre Auger Observatory, *Journal of Instrumentation*, 12, 2, P02006-
ANTONIO BUENO VILLAR
- 2017 Artículo: On the (non-)uniqueness of the Levi-Civita solution in the Einstein-Hilbert-Palatini formalism, *Physics Letters. Section B: Nuclear, Elementary Particle and High-Energy Physics*, 768, , 280-287
JOSÉ ALBERTO OREJUELA GARCÍA
- 2017 Artículo: Twisted finite-volume corrections to K13 decays with partially-quenched and rooted-staggered quarks, *Journal of High Energy Physics*, 1703, 120, -
MARÍA ELVIRA GÁMIZ SÁNCHEZ
- 2017 Artículo: Muon counting using silicon photomultipliers in the AMIGA detector of the Pierre Auger observatory, *Journal of Instrumentation*, 12, 03, 1-24
ANTONIO BUENO VILLAR
SERGIO NAVAS CONCHA
- 2017 Artículo: Tearing of the mantle lithosphere along the intermediate-depth seismicity zone beneath the Gibraltar Arc - The onset of lithospheric delamination, *Geophysical Research Letters*, , , -
DANIEL ALEXANDER STICH
JOSE MORALES SOTO
ROSA MARÍA MARTIN LEON
- 2017 Artículo: Separation of scattering and intrinsic attenuation in Asama volcano (Japan): evidences of high volcanic structural contrasts, *Journal of Volcanology and Geothermal Research*, , , -
JESUS MIGUEL IBAÑEZ GODOY
- 2017 Artículo: Intrinsic limits on resolutions in muon- and electron-neutrino charged-current events in the KM3NeT/ORCA detector, *Journal of High Energy Physics*, 1705, 008, 1-29
SERGIO NAVAS CONCHA
- 2017 Artículo: LSSGalPy: Interactive Visualization of the Large-scale Environment Around Galaxies, *Publications of the Astronomical Society of the Pacific*, 129, 975, 058005-
SIMON VERLEY
- 2017 Artículo: On the (non-)uniqueness of the Levi-Civita solution in the Einstein-Hilbert-Palatini formalism, *Physics Letters. Section B: Nuclear, Elementary Particle and High-Energy Physics*, 768, , 280-287
BERT JANSSEN
JOSÉ ALBERTO OREJUELA GARCÍA
- 2017 Artículo: Powerful H2 Line Cooling in Stephan's Quintet. II. Group-wide Gas and Shock Modeling of the Warm H2 and a Comparison with [C II] 157.7 μ m Emission and Kinematics, *The Astrophysical Journal*, 836, 1, 76-113
UTE LISENFELD
- 2017 Artículo: Search for photons with energies above 10^{18} eV using the hybrid detector of the Pierre Auger Observatory, *Journal of Cosmology and Astroparticle Physics*, 1704, 4, 009-
ANTONIO BUENO VILLAR
- 2017 Artículo: A targeted search for point sources of EeV photons with the Pierre Auger Observatory, *The Astrophysical Journal*, 837, 2, L25-
ANTONIO BUENO VILLAR
- 2017 Artículo: Combined fit of spectrum and composition data as measured by the Pierre Auger Observatory, *Journal of Cosmology and Astroparticle Physics*, 1704, 4, 038-
ANTONIO BUENO VILLAR
- 2017 Artículo: Two-dimensional multi-component photometric decomposition of CALIFA galaxies, *Astronomy &*

- Astrophysics, 598, 1, 1-18
ESTRELLA FLORIDO NAVIO
- 2017 Artículo: Limits on the Mass and Abundance of Primordial Black Holes from Quasar Gravitational Microlensing, *The Astrophysical Journal*, 836, 2, 18-23
JORGE JIMENEZ VICENTE
- 2017 Artículo: Diffuse flux of galactic neutrinos and gamma rays, *Journal of Cosmology and Astroparticle Physics*, 1703, 03, 013-029
MANUEL MASIP MELLADO
- 2017 Artículo en prensa: The Wolf-Rayet star population in the dwarf galaxy NGC 625, *Astronomy & Astrophysics*, , , -
MÓNICA RELAÑO PASTOR
- 2017 Artículo: KIC 8262223: A Post-mass Transfer Eclipsing Binary Consisting of a Delta Scuti Pulsator and a Helium White Dwarf Precursor, *The Astrophysical Journal*, 837, 2, 114-
ANTONIO GARCÍA HERNÁNDEZ
- 2017 Artículo: Evidence of chaotic modes in the analysis of four ζ Scuti stars, *Astronomy & Astrophysics*, 601, 54, -
ANTONIO GARCÍA HERNÁNDEZ
- 2017 Artículo: Photometric and spectroscopic variability of the B5IIIe star HD 171219, *Astronomy & Astrophysics*, 603, A41, 1-7
JUAN CARLOS SUÁREZ YANES
- 2017 Artículo: Search for relativistic magnetic monopoles with five years of the ANTARES detector data, *Journal of High Energy Physics*, 07, 054, 1-16
SERGIO NAVAS CONCHA
- 2017 Artículo: New Constraints on all flavour Galactic diffuse neutrino emission with the ANTARES telescope, *Physical Review D: Particles, Fields, Gravitation and Cosmology*, 96, 062001, 1-8
SERGIO NAVAS CONCHA
- 2017 Artículo: Precise surface gravities of delta Scuti stars from asteroseismology, *Monthly Notices of the Royal Astronomical Society*, 471, 1, L140-L144
ANDRES MOYA BEDON
ANTONIO GARCÍA HERNÁNDEZ
JUAN CARLOS SUÁREZ YANES
- 2017 Artículo: Semi-empirical seismic relations of A-F stars from COROT and Kepler legacy data, *Monthly Notices of the Royal Astronomical Society*, 471, 2, 2491-2497
ANDRES MOYA BEDON
ANTONIO GARCÍA HERNÁNDEZ
JUAN CARLOS SUÁREZ YANES
- 2017 Artículo: First all-flavor neutrino pointlike source search with the ANTARES neutrino telescope, *Physical Review D: Particles, Fields, Gravitation and Cosmology*, 96, 082001, 1-15
SERGIO NAVAS CONCHA
- 2017 Artículo: New insights on Mt. Etna's crust and relationship with the regional tectonic framework from joint active and passive P-wave seismic tomography, *Surveys in Geophysics*, , , 1-41
JESUS MIGUEL IBAÑEZ GODOY
- 2017 Artículo: Automatic Detection of Long Period Events Based on Subband-Envelope Processing, *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, , , 1-9
ALEJANDRO DÍAZ MORENO
- 2017 Artículo: Accurate and $\log g$ of ζ Sct stars using Asteroseismology, *EPJ Web of Conferences*, 160, , -
ANDRES MOYA BEDON
ANTONIO GARCÍA HERNÁNDEZ
JUAN CARLOS SUÁREZ YANES
- 2017 Artículo: Asteroseismic modelling of the Binary HD 176465, *EPJ Web of Conferences*, 160, , -
ANTONIO GARCÍA HERNÁNDEZ
- 2017 Artículo: What CoRoT tells us about ζ Scuti stars, *EPJ Web of Conferences*, 160, , -
ANTONIO GARCÍA HERNÁNDEZ
JUAN CARLOS SUÁREZ YANES
- 2017 Artículo: Multi-messenger Observations of a Binary Neutron Star Merger, *The Astrophysical Journal. Letters*, 848, 2, 1-59
SERGIO NAVAS CONCHA
- 2017 Artículo: Search for High-energy Neutrinos from Binary Neutron Star Merger GW170817 with ANTARES, IceCube, and the Pierre Auger Observatory, *The Astrophysical Journal. Letters*, 850, 2, 1-18
SERGIO NAVAS CONCHA
- 2017 Artículo: An Algorithm for the Reconstruction of Neutrino-induced Showers in the ANTARES Neutrino Telescope, *The Astronomical Journal*, 154, 6, 1-9
SERGIO NAVAS CONCHA

- 2017 Artículo: All-sky search for high-energy neutrinos from gravitational wave event GW170104 with the Antares neutrino telescope, European Physical Journal. C, Particles And Fields (Print), 77, 911, 1-7
SERGIO NAVAS CONCHA
- 2017 Artículo: The SURvey for Pulsars and Extragalactic Radio Bursts - II. New FRB discoveries and their follow-up, Monthly Notices of the Royal Astronomical Society, 475, 2, 1427-1446
SERGIO NAVAS CONCHA
- 2017 Artículo: The role of molecular gas in galaxy transition in compact groups, Astronomy & Astrophysics, 607, , 110-124
UTE LISENFELD

Libros (con ISBN)

- 2017 50 años escudriñando y descifrando el Universo. Historia reciente de la Astrofísica española.: Editorial Universidad Granada, , 2017, 978-84-338-6039-2
ESTRELLA FLORIDO NAVIO
JORGE JIMENEZ VICENTE
ALMUDENA ZURITA MUÑOZ

Capítulos de libros (con ISBN)

- 2017 Título Capítulo: El magnetismo del Universo, Título Libro: 50 años escudriñando y descifrando el Universo. Historia reciente de la Astrofísica española.: Editorial Universidad Granada, , 2017, 978-84-338-6039-2
EDUARDO BATTANER LOPEZ

Contribuciones en congresos

- 2017 Comunicación en congreso: Quantitative analysis of tremor wavefield at Mt. Etna during 2012 eruptive activity of Bocca Nuova Crater (Mt. Etna), European Geosciences Union 2017, 23/04/2017, Viena (Austria), Congreso
FRANCISCO JAVIER ALMENDROS GONZALEZ
- 2017 Comunicación en congreso: Isotopic ratios of C, O and light element abundances in AGB stars undergoing hot bottom burning, The SAGB-SN mass transition, 27/03/2017, Frascati, Italia, Congreso
CARLOS ANTONIO ABIA LADRON DE GUEVARA
- 2017 Ponencia en Congreso: On the influence of axion like particles on the AGB-SN mass transition, The AGB-Supernova Mass Transition, 27/03/2017, OAR, Moteporzio Catone, Roma, Italia, Congreso
INMACULADA DOMINGUEZ AGUILERA
- 2017 Poster en Congreso: Impact of axions on the minimum mass of Core Collapse Supernova progenitors, The 13th Patras Workshop on Axions, WIMPs and WISPs, 14/05/2017, Thessaloniki, AEGINA, GRECIA, Congreso
INMACULADA DOMINGUEZ AGUILERA
- 2017 Ponencia en Taller de trabajo: On the connection between thermonuclear supernova and progenitor metallicity, Meeting of the Carnegie Supernova Project, 10/04/2017, Cook's Branch Conservancy, Montgomery, Texas, EEUU, Taller de trabajo
INMACULADA DOMINGUEZ AGUILERA
- 2017 Ponencia en Congreso: Constraints to axion physics from Globular Clusters: an update, The 13th Patras Workshop on Axions, WIMPs and WISPs, 14/05/2017, Thessaloniki, AEGINA, GRECIA, Congreso
INMACULADA DOMINGUEZ AGUILERA
- 2017 Ponencia en Congreso: Isotopic ratios of C, O and light elements abundances in AGB stars undergoing hot bottom burning, The AGB-Supernova Mass Transition, 27/03/2017, OAR, Moteporzio Catone, Roma, Italia, Congreso
INMACULADA DOMINGUEZ AGUILERA
- 2017 Ponencia en Congreso: ANTARES highlights and KM3NET/ARCA prospects, 29th Rencontres de Blois on "Particle Physics and Cosmology", 29/05/2017, Blois (Francia), Congreso
SERGIO NAVAS CONCHA
- 2017 Sesión plenaria en Congreso: One Loop Effective Lagrangian After Matching, 52nd Rencontres de Moriond, EW Session 2017, 18/03/2017, LA THUILE (ITALIA), Congreso
JOSÉ SANTIAGO PÉREZ
- 2017 Ponencia en Congreso: Little Warm inflation, III Saha Theory Workshop: Aspects of Early Universe Cosmology, 16/01/2017, Kolkata (India), Congreso
MAR BASTERO GIL
- 2017 Comunicación en congreso: Isotopic Ratios of C, O and Light Element Abundances in AGB Stars Undergoing Hot Bottom Burning C., The AGB-Supernova Mass Transition, 27/03/2017, OAR, Moteporzio Catone, Roma, Italia, Congreso
CARLOS ANTONIO ABIA LADRON DE GUEVARA
- 2017 Sesión plenaria en Congreso: Vector Like quarks: Review, Flavour Physics at LHC run II, 21/05/2017,



BENASQUE (HUESCA), Congreso
FRANCISCO DEL ÁGUILA GIMÉNEZ