



Alejandro Sánchez de Miguel

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Summary of CV

This section describes briefly a summary of your career in science, academic and research; the main scientific and technological achievements and goals in your line of research in the medium -and long- term. It also includes other important aspects or peculiarities.

Alejandro(ASM) is one of the pioneers on the field of the night-time remote sensing. The methods of intercalibration and validation developed by Alejandro have been crucial to the improvement on the satellite analysis as well the better understanding of the physical methods involved on the process(like the nature of the diffuse lights on night time images). On these regard is important to high light the intercalibration method based on physically related proxies like energy consumption on street lighting to intercalibrate the Defense Meteorological Satellite Program (DMSP) and validation of the Visible Infrared Imaging Radiometer Suite (VIIRS). The principal contribution of ASM has been the data reduction pipeline and all the analysis of the scientific potential of multispectral imagine at night. Specifically, the astronaut photographs of the earth at night from ten International Space Station(ISS), currently been extended to new satellites like the Chinese JinLin-1 and Sustainable Development Goals Satellite-1 and ESA NEOMI project "Nightwatch". On the applications side, ASM work has allowed new ways of estimation the light exposure of humans and ecosystems in colour by the use of ISS images o several fields like: Breast, prostate and colon cancer, environmental impacts on bats, moths and seabirds(on process). Has contributed to new standards and police documents like the 5 lighting principles of sustainable lighting(IDA-EIS) and the "Light pollution reduction measures in Europe" prepared by the Ministry of the Environment of the Czech Republic. ASM has been also very active on the citizen science field, first as leader of the "Cities at Night" project but also on many others night NIXNOX, Daedalus, Historical Fireballs, NightUp Casteldefels, AZOTEA, Street Spectra, etc. ASM is present regularly on Spanish and international media (TV, radio and press), but also on face to face activities with the public like school visits and research as his participation on the PIIISA project, the development of a lesson plan for "Cities at Night", on the science week and science fair of Madrid. ASM has several collaborations with the private sector, first as founder and partner of the Strat-up "SaveStars Consulting S.L.", but also as advisor of other companies such as Alba Orbital(UK) and Aistech Space(Spain). His studies have been used by several public institutions and are part of several policy documents, as example the Sindic de Greuges(court of accounts) of Valencia used his "Ranking de la Contaminación Lumínica" to audit Valencia's community street lighting and the government of Spain have repeatedly used his work comparing the Spanish street light versus the rest of Europe. As researcher on the Environmental and Sustainability Institute of the University of Exeter, he has gain a lot of experience on interdisciplinary research, merging the astrophysical methods to the geophysics and environmental studies. Even if the light pollution activities where existed on the Complutense University before the arrival of ASM, it is his impulse what with the help of Jaime Zamorano and Jesús Gallego, what make this group on of the most renown's on the field worldwide. Under his supervision more than 14 young researchers have been introduced on the light pollution activities(9 TAD,2 TFG, 2TFM,2PHD), but also 2 highs school students where awarded be the INTA research awarded, and 2 vocational training students have participated on the development of satellite processing images. He has made 78 verified reviews and participate on the review board of the Journal Remote Sensing. His thesis was selected by the International Astronomical Union. He made a predoctoral stay at the Institute for Space Sciences of the Freie Universität Berlin and a postdoctoral stay at the



CEGEP of Sherbrooke (Quebec, Canada). In 2016 he was offered a one year contract at the Astrophysics institute of Andalusia (CSIC) with the ORISON EU project launched to carry out a feasibility and design study of an astronomically-oriented balloon. He was postdoc with the EMISSI@N project at the the University of Exeter. Currently is postdoc with a Marie Curie/UNA4CAREER grant at Universidad Complutense de Madrid. Also serves as scientific director of the Stars4all foundation. He received an IDA Dark Sky Defender award for his leadership role in “Cities at Night” and his paper "Artificially lit surface of Earth at night increasing in radiance and extent" was selected as one of the TOP 100 highest impact in all disciplines of the world on the Altmetric index 2018.



General quality indicators of scientific research

This section describes briefly the main quality indicators of scientific production (periods of research activity, experience in supervising doctoral theses, total citations, articles in journals of the first quartile, H index...). It also includes other important aspects or peculiarities.

Alejandro Sánchez de Miguel (ASM), an acclaimed interdisciplinary scientist, has made substantial contributions to Earth observation and light pollution studies since his first publication in 2003. His innovative application of astrophysical techniques to remote sensing, initiated in 1997, has significantly impacted environmental assessments of light pollution. With his Ph.D. earned in 2015, ASM's extensive publication record highlights his key role in this research field.

ASM's landmark work involves stabilizing global light pollution trends and clarifying uncertainties within them. His critical contributions include calibrating the New World sky brightness dataset and identifying the nature of diffuse light in data from platforms like DMSP, VIIRS, and ISS. This work is pivotal for ground-based sky brightness observations and several epidemiological studies using ISS data. Importantly, ASM developed a Calibration pipeline for the ISS dataset, equating it to a new satellite at no extra cost, covering data from 2003 onwards. He has published in leading journals like Science Advances, Remote Sensing of Environment, and JQSRT.

As a science communicator and citizen science advocate, ASM founded SaveStars Consulting S.L. (SSCSL) and contributed to a H2020 program feasibility study for a stratospheric observatory. His research includes analyzing nocturnal multispectral satellite images for studying light pollution and establishing image analysis procedures.

ASM's "Cities at Night" project, part of his citizen science leadership, earned him the Dark Sky Defender award in 2014. He has led projects like Daedalus and R-ALAN MAP Europe, attracting external funding, including a grant for the EMISSI@N project at the University of Exeter and a Marie Curie H2020 Co-Fund fellowship. Currently, he heads the PLAN-B project at Complutense University of Madrid, focusing on light and noise pollution's impact on biodiversity.

ASM's career is marked by global mobility and collaboration, with work in Berlin, Canada, Spain, the UK, and partnerships with NASA, Wuhan University, and CBAS in China. He has served on various boards, including Darksky International and ASAAF-UCM, and co-coordinates the Red Española de Estudios de Contaminación Lumínica.

ASM's leadership extends to founding SSCSL, advising on light pollution, and directing the Stars4All foundation. He mentors doctoral research, nurturing emerging talents. ASM has spoken at international conferences, including events during the Czech and Spanish EU presidencies focused on light pollution. He contributed to a science policy manifesto during the Spanish presidency event in Granada and participated in COP25, showcasing satellite imaging for CO2 emission estimation. His work is often referenced in policy documents and identified as a research priority by the European Commission. Under his guidance, SSCSL received an accésit from the European Space Agency's Copernicus Spain award.



Alejandro Sánchez de Miguel

Surname(s): **Sánchez de Miguel**
Name: **Alejandro**
ORCID: **0000-0002-5007-3799**
ScopusID: **55749952600**
ResearcherID: **M-1964-2017**
Contact aut. region/reg.: **Community of Madrid**
Personal web page: **<https://asanchezdemiguel.com/>**

Current professional situation

Employing entity: Universidad Complutense de Madrid **Type of entity:** University

Department: Astrofísica y CC. de la Atmosfera, Facultad de Ciencias Físicas

Professional category: Postdoc UNA4CAREER/Marie Curie

Start date: 15/11/2021

Type of contract: Grant-assisted student (pre or post-doctoral, others)

Primary (UNESCO code): 210399 - Other

Secondary (UNESCO code): 250616 - Remoto sensing (geology); 540300 - Human geography

Tertiary (UNESCO code): 220917 - Photography; 220918 - Photometry; 220920 - Radiometry

Identify key words: Space r&d; Instrumentations and detectors for experiments in physics, astrophysics, etc; Pollution control; Remote sensing; Science communication; Cartography; Human geography

Employing entity: University of Exeter **Type of entity:** University

Department: Environment and Sustainability Institute

Professional category: Associated

Leadership and management (Y/N): No

Start date: 01/08/2021

Type of contract: Honorífico

Dedication regime: Full time

Primary (UNESCO code): 219900 - Other astronomical specialities

Secondary (UNESCO code): 250616 - Remoto sensing (geology)

Tertiary (UNESCO code): 250900 - Meteorology

Identify key words: Astronomy and astrophysics; Space r&d; Aerospace industry; Sustainable development

Employing entity: Instituto de Astrofísica de Andalucía **Type of entity:** State agency

Professional category: Advisor

Start date: 01/01/2021

Type of contract: Colaborador externo

Performed tasks: Asesor de la Oficina de Calidad del Cielo del IAA-CSIC

Employing entity: Fundación Stars4all **Type of entity:** Foundation

Professional category: Scientific director

Start date: 01/01/2020

Employing entity: SaveStars Consulting S.L.
Professional category: Scientific director
Start date: 01/09/2016

Previous positions and activities

	Employing entity	Professional category	Start date
1	International Darkky Association	Member of the board of directors	01/01/2017
2	Universidad Complutense de Madrid	Colaborador honorifico	01/09/2016
3	University of Exeter	Postdoc	01/08/2017
4	Instituto de Astrofísica de Andalucía	Doctor Vinculado	03/06/2020
5	Instituto de Astrofísica de Andalucía	Postdoc	01/05/2016
6	CEGEP de Sherbrooke	Visiting Researcher	01/03/2015
7	Universidad Complutense de Madrid	Becario FPU	01/08/2009
8	Agrupación Astronómica de Madrid	Delegado para el Año internacional de la Astronomía	01/02/2008
9	Agrupación Astronómica de Madrid	Vocal de Actividades	01/02/2007
10	Universidad Complutense de Madrid	Becario de Colaboración del Año internacional de la Astronomía.	06/11/2008
11	Asociación Astronomica Astrohenares	Delegado para el Año internacional de la Astronomía	01/02/2008
12	Ideotur	Monitor de Astronomía	01/07/2009
13	Asociación de Astrónomos Aficionados - UCM	Relaciones institucionales	10/12/2003
14	Asociación de Astrónomos Aficionados - UCM	Presidente	10/12/2002
15	Asociación de Astrónomos Aficionados - UCM	Presidente	10/12/2000
16	Asociación de Astrónomos Aficionados - UCM	Tesorero	10/12/1999
17	Asociación de Astrónomos Aficionados - UCM	Vocal	10/12/1998

- 1** **Employing entity:** International Darkky Association
Type of entity: Associations and Groups
Professional category: Member of the board of directors
Start-End date: 01/01/2017 - 31/12/2022
Duration: 6 years
- 2** **Employing entity:** Universidad Complutense de Madrid
Professional category: Colaborador honorifico
Start-End date: 01/09/2016 - 14/11/2021
- 3** **Employing entity:** University of Exeter
Professional category: Postdoc
Start-End date: 01/08/2017 - 30/07/2021
- 4** **Employing entity:** Instituto de Astrofísica de Andalucía
Type of entity: State agency
Professional category: Doctor Vinculado



- Start-End date:** 03/06/2020 - 31/12/2020 **Duration:** 6 months
- 5** **Employing entity:** Instituto de Astrofísica de Andalucía **Type of entity:** State agency
Professional category: Postdoc
Start-End date: 01/05/2016 - 31/07/2017
- 6** **Employing entity:** CEGEP de Sherbrooke **Type of entity:** University Centres and Structures and Associated Bodies
Professional category: Visiting Researcher
Start-End date: 01/03/2015 - 20/11/2015
- 7** **Employing entity:** Universidad Complutense de Madrid **Type of entity:** University
Professional category: Becario FPU
Start-End date: 01/08/2009 - 07/07/2015
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Dedication regime: Full time
Primary (UNESCO code): 219900 - Other astronomical specialities
Secondary (UNESCO code): 259900 - Other Earth, Space or Environmental specialities (specify)
Performed tasks: Four years on reseach of Star forming galaxies, manteniente of the Fireball station of the UCM Observatory, two years of research on Light pollution.
- 8** **Employing entity:** Agrupación Astronómica de Madrid **Type of entity:** Associations and Groups
Professional category: Delegado para el Año internacional de la Astronomía
Start-End date: 01/02/2008 - 01/02/2010 **Duration:** 2 years
- 9** **Employing entity:** Agrupación Astronómica de Madrid **Type of entity:** Associations and Groups
Professional category: Vocal de Actividades
Start-End date: 01/02/2007 - 01/02/2010 **Duration:** 3 years
- 10** **Employing entity:** Universidad Complutense de Madrid **Type of entity:** University
Department: Dep. Astrofísica y CC.d e la Atmósfera, CC. Físicas
Professional category: Becario de Colaboración del Año internacional de la Astronomía.
Start-End date: 06/11/2008 - 31/12/2009 **Duration:** 1 year - 2 months
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Area of leadership and/or management activity: University
- 11** **Employing entity:** Asociación Astronomica Astrohenares **Type of entity:** Associations and Groups
Professional category: Delegado para el Año internacional de la Astronomía
Start-End date: 01/02/2008 - 31/12/2009 **Duration:** 1 year - 9 months
- 12** **Employing entity:** Ideotur **Type of entity:** Business
Professional category: Monitor de Astronomía **Leadership and management (Y/N):** No
Start-End date: 01/07/2009 - 30/07/2009 **Duration:** 1 month
Type of contract: Temporary employment contract



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|-----------|---|---|
| 13 | Employing entity: Asociación de Astrónomos Aficionados - UCM
Professional category: Relaciones institucionales
Start-End date: 10/12/2003 - 10/12/2004 | Type of entity: Associations and Groups
Duration: 1 year |
| 14 | Employing entity: Asociación de Astrónomos Aficionados - UCM
Professional category: Presidente
Start-End date: 10/12/2002 - 10/12/2003 | Type of entity: Associations and Groups
Duration: 1 year |
| 15 | Employing entity: Asociación de Astrónomos Aficionados - UCM
Professional category: Presidente
Start-End date: 10/12/2000 - 10/12/2001 | Type of entity: Associations and Groups
Duration: 1 year |
| 16 | Employing entity: Asociación de Astrónomos Aficionados - UCM
Professional category: Tesorero
Start-End date: 10/12/1999 - 10/12/2000 | Type of entity: Associations and Groups
Duration: 1 year |
| 17 | Employing entity: Asociación de Astrónomos Aficionados - UCM
Professional category: Vocal
Start-End date: 10/12/1998 - 10/12/1999 | Type of entity: Associations and Groups
Duration: 1 year |



Education

University education

1st and 2nd cycle studies and pre-Bologna degrees

- 1 University degree:** Higher degree
Name of qualification: Grado en CC. Físicas
Degree awarding entity: Universidad Complutense de Madrid **Type of entity:** University
Date of qualification: 04/07/2013
Average mark: Pass
- 2 University degree:** Higher degree
Name of qualification: Master Interuniversitario de Astrofísica UAM-UCM
Degree awarding entity: Universidad Complutense de Madrid **Type of entity:** University
Date of qualification: 20/11/2008
Average mark: Excellent
Standardised degree: Yes

Doctorates

Doctorate programme: Programa Oficial de Doctorado en Astrofísica
Degree awarding entity: Universidad Complutense de Madrid **Type of entity:** University
Date of degree: 07/07/2015

Specialised, lifelong, technical, professional and refresher training (other than formal academic and healthcare studies)

- 1 Training title:** Taller pipelile OSIRIS
Awarding entity: Grantecan, S.A. **Type of entity:** Business
End date: 21/01/2013 **Duration in hours:** 5 hours
- 2 Training title:** TALLER DE CONSTRUCCIÓN DE TELESCOPIOS: cuatro siglos de arte y ciencia
City awarding entity: Sigüenza, Community of Madrid, Spain
Awarding entity: Universidad de Alcalá **Type of entity:** University
End date: 16/07/2007 **Duration in hours:** 30 hours
- 3 Type of training:** Course
Training title: HISTORIA DE LA ASTRONOMÍA: de la arqueoastronomía a la era espacial
City awarding entity: Sigüenza, Castile-La Mancha, Spain
Awarding entity: Universidad de Alcalá **Type of entity:** University
End date: 17/07/2006 **Duration in hours:** 30 hours



- 4** **Type of training:** Course
Training title: ASTRONOMÍA OBSERVACIONAL: de las ondas radio a los rayos gamma
City awarding entity: Sigüenza, Castile-La Mancha, Spain
Awarding entity: Universidad de Alcalá **Type of entity:** University
End date: 25/07/2005 **Duration in hours:** 30 hours
- 5** **Type of training:** Course
Training title: ¿CÓMO SE FORMAN LAS ESTRELLAS?
Awarding entity: Universidad de Alcalá **Type of entity:** University
Training manager: Asunción Fuente Juan
End date: 19/07/2004 **Duration in hours:** 30 hours
- 6** **Training title:** LOS AGUJEROS NEGROS: motores de actividad galáctica
Awarding entity: Universidad de Alcalá **Type of entity:** University
End date: 21/07/2003 **Duration in hours:** 30 hours

Attended advanced, improvement and innovative teacher training and new technology courses and seminars focused on improving teaching

- 1** **Title of course/seminar:** Introduction to NASA's "Black Marble" Night Lights Data
Organising entity: NASA **Type of entity:** State agency
Duration in hours: 1 hour
Start-End date: 03/12/2020 - 03/12/2020
- 2** **Title of course/seminar:** AstroMaster 2015 Advanced Timelapse Imaging & Processing Landscape Astrophotography
Goals of the course/seminar: Advanced Timelapse Imaging & Processing
Organising entity: AstroLaPalma TWAN **Type of entity:** Business
Duration in hours: 60 hours
Start-End date: 03/10/2015 - 08/10/2015
- 3** **Title of course/seminar:** Curso de Monitor de Tiempo Libre
Organising entity: Grupo Joven **Type of entity:** Escuela de tiempo libre
Duration in hours: 300 hours
Start-End date: 10/10/1998 - 10/06/1999

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
English	C2	C1	C1	C1	B2



Teaching experience

General teaching experience

- 1** **Name of the course:** Estadística y análisis de datos
University degree: Grado en Física
Start date: 13/02/2023 **End date:** 06/07/2023
Entity: Universidad Complutense de Madrid **Type of entity:** University
- 2** **Name of the course:** Estrellas frías y objetos subestelares
University degree: Master en Astrofísica
Start date: 13/02/2023 **End date:** 21/05/2023
Entity: Universidad Complutense de Madrid **Type of entity:** University
Faculty, institute or centre: Facultad de CC. Físicas
- 3** **Type of teaching:** Official teaching
Name of the course: Astronomía Observacional
Type of teaching: Laboratory work
Type of subject: Optional
University degree: Grado en Física
Course given: 4º
Start date: 01/10/2012 **End date:** 15/02/2013
Entity: Universidad Complutense de Madrid **Type of entity:** University
Faculty, institute or centre: CC. Físicas
Department: Dep. Astrofísica y CC.d e la Atmósfera
- 4** **Type of teaching:** Official teaching
Name of the course: Laboratorio de Física General
Type of programme: Bachelor's degree **Type of teaching:** Laboratory work
Type of subject: Obligatory
University degree: Grado en Física
Course given: 1º
Start date: 03/10/2011 **End date:** 22/02/2012
Entity: Universidad Complutense de Madrid **Type of entity:** University
Faculty, institute or centre: CC. Físicas
Department: Dep. Astrofísica y CC.d e la Atmósfera
City of entity: Madrid, Community of Madrid, Spain
Subject language: Spanish
- 5** **Name of the course:** Astrofísica
University degree: Grado en Física
Start date: 01/10/2011 **End date:** 15/02/2012
Entity: Universidad Complutense de Madrid **Type of entity:** University
Faculty, institute or centre: CC. Físicas



Experience supervising doctoral thesis and/or final year projects

- 1 Project title:** Analysis of the frequency of superbolides on the last 2000 years
Type of project: End of course project
Entity: Universidad Complutense de Madrid **Type of entity:** University
Student: María Elisa Rocha Bouzo
Obtained qualification: 9.3
Date of reading: 06/06/2023
- 2 Project title:** Estudio de la contaminación lumínica a través de imágenes desde satélite
Entity: Universidad Complutense de Madrid **Type of entity:** University
Student: M^a Ángeles López Calluela
Date of reading: 02/10/2012

Student tutorials

- 1 Name of the programme:** Master
Entity: FUNDACION DE LA COMUNIDAD VALENCIANA UNIVERSIDAD INTERNACIONAL DE VALENCIA
Frequency of the activity: 1
- 2 Name of the programme:** Master student
Entity: Universidad Complutense de Madrid **Type of entity:** University
City of entity: Macao
Frequency of the activity: 1
Number of tutored students: 1
- 3 Name of the programme:** Premios Escolar de Investigación
Entity: Universidad Complutense de Madrid **Type of entity:** University
Frequency of the activity: 1

Courses and seminars given

- 1 Type of event:** Workshop
Name of the event: Astroturismo como recurso medioambiental y turístico
Organising entity: Universidad Internacional de Andalucía **Type of entity:** University
Hours of teaching: 2,5
Teaching date: 08/10/2020
- 2 Type of event:** Workshop
Name of the event: Astroturismo como recurso medioambiental y turístico
Organising entity: Junta de Andalucía **Type of entity:** Centro de Capacitación y Experimentación Forestal de Cazorra
Hours of teaching: 4
Teaching date: 06/10/2018



- 3** **Name of the event:** LA BÓVEDA CELESTE COMO RECURSO CIENTÍFICO, CULTURAL, MEDIOAMBIENTAL Y TURÍSTICO
Organising entity: Universidad Internacional Menéndez Pelayo
Type of entity: University
Teaching date: 18/09/2017
- 4** **Type of event:** Workshop
Name of the event: El Lado Oscuro de la Luz:Contaminación Lumínica
Organising entity: Centro de Profesores y Recursos Región de Murcia
Type of entity: University Centres and Structures and Associated Bodies
Hours of teaching: 2
Teaching date: 13/03/2014
- 5** **Type of event:** Workshop
Name of the event: Astronomía, Calidad del Cielo nocturno y turismo astronómico
Organising entity: Fundación General de la Universidad de Malaga
Type of entity: University Centres and Structures and Associated Bodies
Hours of teaching: 2
Teaching date: 04/07/2013
- 6** **Type of event:** Summer course
Name of the event: Programa Campus Científicos de Verano 2011
Organising entity: Universidad Complutense de Madrid
Type of entity: University
Hours of teaching: 10
Teaching date: 03/07/2011
Type of participation: Practices
- 7** **Type of event:** Seminar
Name of the event: Curso de Formación para Profesores de la CAM para el Eclipse Anular
City organizing entity: Madrid, Community of Madrid, Spain
Organising entity: Asociación de Astrónomos Aficionados - UCM
Type of entity: Associations and Groups
Aims of the course: Formación en observación segura de Eclipses.
Target group profile: Profesores de Primaria y Secundaria
Hours of teaching: 8
Teaching language: Spanish
Teaching date: 20/09/2005
Type of participation: Participatory - others



Scientific and technological experience

Scientific or technological activities

R&D projects funded through competitive calls of public or private entities

1 Name of the project: Plan-B

Type of project: Basic research (including archaeological digs, etc)

Geographical area: European Union

Degree of contribution: Researcher

Entity where project took place: Universidad Complutense de Madrid

Type of entity: University

City of entity: Madrid, Community of Madrid, Spain

Name principal investigator (PI, Co-PI...): Geert Van Hoorick; Dan-Eric Nilsson; Mike Wood; Alejandro Sánchez de Miguel; Karolina Zielinska-Dabkowska; Reinhard Klenke; Francisco Sanz; Tomasz Hoppe; Nicholas Beresford; Penelope Vounatsou

Nº of researchers: 9

Funding entity or bodies:

CENTRO DE ACUSTICA APLICADA Y EVALUACION NO DESTRUCTIVA

Type of entity: Associations and Groups

Type of participation: Principal investigator

Name of the programme: HORIZON Europe

Start-End date: 01/01/2024 - 27/11/2026

Duration: 3 years

Total amount: 100.000 €

Sub-project amount: 100.000 €

Dedication regime: Full time

2 Name of the project: EMISS@IN

Type of project: Basic research (including archaeological digs, etc)

Geographical area: Global

Degree of contribution: Scientific coordinator

Entity where project took place: University of Exeter

Type of entity: University

City of entity: Penryn, Cornwall and Isles of Scilly, United Kingdom

Name principal investigator (PI, Co-PI...): Kevin J. Gaston; Jon Bennie; Alejandro Sanchez de Miguel

Nº of researchers: 5

Nª people/year: 5

Funding entity or bodies:

Natural Environment Research Council

Type of entity: Public Research Body

City funding entity: United Kingdom

Type of participation: Principal investigator

Name of the programme: EMISS@N

Code according to the funding entity: NE/P01156X/1

Start-End date: 01/08/2017 - 31/07/2020

Total amount: 502.366 €

Dedication regime: Full time

Applicant's contribution: Co-IP Fondos en libras. £450,721

http://gotw.nerc.ac.uk/list_full.asp?pcode=NE%2FP01156X%2F1&cookieConsent=A



- 3** **Name of the project:** Red española de estudios sobre la contaminación lumínica
Entity where project took place: Universidad Complutense de Madrid **Type of entity:** University
Name principal investigator (PI, Co-PI....): Jesus Gallego Maestro; Alejandro Sánchez de Miguel
Type of participation: Team member
Code according to the funding entity: AYA2015-71542-REDT
Start-End date: 01/12/2015 - 30/11/2017
Total amount: 30.000 €
- 4** **Name of the project:** ORISON
Degree of contribution: Researcher
Entity where project took place: Instituto de Astrofísica de Andalucía **Type of entity:** State agency
Name principal investigator (PI, Co-PI....): Jose Luis Ortiz Moreno; Alejandro Sánchez de Miguel
Type of participation: Team member
Code according to the funding entity: H2020-INFRA-SUPP-2015-2
Start-End date: 16/04/2016 - 31/07/2017
Total amount: 606.198 €
Dedication regime: Full time
- 5** **Name of the project:** Proyecto Daedalus
Degree of contribution: Scientific coordinator
Entity where project took place: AstroInnova **Type of entity:** ONG
Name principal investigator (PI, Co-PI....): Alejandro Sánchez de Miguel; Fernando Ortuño Guerrero
Nº of researchers: 4
Type of participation: Principal investigator
Start-End date: 01/07/2010 - 01/01/2016
- 6** **Name of the project:** Astrofísica Extragaláctica de precisión: Preparando la Explotación científica de MEGARA@GTC
Entity where project took place: Universidad Complutense de Madrid **Type of entity:** University
Name principal investigator (PI, Co-PI....): Armando Gil de Paz; Alejandro Sánchez de Miguel
Type of participation: Team member
Start-End date: 01/01/2014 - 31/12/2015
Total amount: 549.340 €
Applicant's contribution: Equipo de investigación
- 7** **Name of the project:** Estudio de la Formación de las Galaxias masivas: Proyecto de Explotación de la Exploración Cosmológica SHRDS, Un ESO/GTC LARGE Program
Entity where project took place: Universidad Complutense de Madrid
Name principal investigator (PI, Co-PI....): Pablo G. Pérez-González; Alejandro Sánchez de Miguel
Type of participation: Team member
Code according to the funding entity: AYA2012-31277
Start-End date: 01/01/2013 - 31/12/2015
Total amount: 352.170 €
Applicant's contribution: Equipo de investigación



- 8** **Name of the project:** Hacia la explotación científica de Megara
Entity where project took place: Universidad Complutense de Madrid **Type of entity:** University
Name principal investigator (PI, Co-PI....): Jesús Gallego Maestro; Alejandro Sánchez de Miguel
Type of participation: Team member
Code according to the funding entity: AYA2012-30717
Start-End date: 01/01/2013 - 31/12/2014
- 9** **Name of the project:** Red Española de Estudios sobre la Contaminación Lumínica
Entity where project took place: Universidad Complutense de Madrid **Type of entity:** University
Name principal investigator (PI, Co-PI....): Jaime Zamorano Calvo; Alejandro Sánchez de Miguel
Nº of researchers: 14
Code according to the funding entity: AYA2011-15808-E
Start-End date: 14/12/2012 - 31/12/2014
Total amount: 8.400 €
- 10** **Name of the project:** "Exploraciones de galaxias multi-longitud de onda: estrellas, polvo y gas a diferentes desplazamientos al rojo"
Name principal investigator (PI, Co-PI....): Jesús Gallego Maestro; Alejandro Sánchez de Miguel
Code according to the funding entity: AYA2009-10368
Start-End date: 01/01/2010 - 21/12/2013
Total amount: 628.000 €
- 11** **Name of the project:** NightWatch
Entity where project took place: European Space Agency **Type of entity:** Agency
Name principal investigator (PI, Co-PI....): Christopher Kyba; Hector Linares; Angela Abascal Imizcoz; Alejandro Sanchez de Miguel; Alexandre Simoneau; Brian Espey; Eleanor Stokes; Franz Hölker; Kai Pong Tong; Ken Walczak; Martin Aubé; Miguel Román; Monika Kuffer; Pascal Dupuis; Tobias Degen; Tobias Storch
Nº of researchers: 16
Type of participation: Team member
Name of the programme: NEOMI
Start date: 01/11/2022
Total amount: 250.000 €
- 12** **Name of the project:** Super-Resolution for Nighttime Lights
Degree of contribution: Researcher
Entity where project took place: Goddard Space Flight Center, NASA **Type of entity:** State agency
Name principal investigator (PI, Co-PI....): Virginia Kalb; Ranjay Shrestha; Eleanor Stokes; Zhuosen Wang; Srijia Chakraborty; Alejandro Sánchez de Miguel
Nº of researchers: 5
Type of participation: Team member
Start date: 01/11/2022
Total amount: 38.500 €
- 13** **Name of the project:** RALAN MAP Europe
Entity where project took place: Universidad Complutense de Madrid **Type of entity:** University
City of entity: Madrid, Community of Madrid, Spain



Name principal investigator (PI, Co-PI....): Sánchez de Miguel
Nº of researchers: 1
Start date: 15/11/2021
Total amount: 173.000 €

R&D non-competitive contracts, agreements or projects with public or private entities

1 Name of the project: SaveStars Consulting S.L. (Several contrats)

Degree of contribution: Scientific coordinator

Nº of researchers: 1

Start date: 02/02/2016

Total amount: 70.000 €

2 Name of the project: Cities at Night

Degree of contribution: Coordinator of total project, network or consortium

Name principal investigator (PI, Co-PI....): Alejandro Sanchez de Miguel; Jaime Zamorano; Jesus Gallego; Christofer C.M. Kyba; Kevin J. Gaston; Martin Aube

Nº of researchers: 20

Funding entity or bodies:

Stars4all

Type of entity: Foundation

Celfosc

Type of entity: Associations and Groups

Sociedad Espanola de Astronom'ia

Type of entity: Associations and Groups

Savestars. S.L.

Type of entity: Company

F. Sanchez de Miguel

Type of entity: Private

Start date: 01/07/2014

Total amount: 100.000 €

Results

Industrial and intellectual property

Title registered industrial property: pyISS

Inventors/authors/obtainers: Alejandro Sánchez de Miguel; Sergio Pascual

Nº of application: M-002012/2023

Country of inscription: Spain, Community of Madrid

Date of register: 15/03/2023

Conferral date: 16/03/2023



Technological results derived from specialized and transfer activities, not included in previous sections

1 **Description:** Desarrollo de un instrumento para la grabación de meteoros en la estratosfera: Daedalos 12

Name of the principal Investigator (PI): Alejandro Sánchez de Miguel

Degree of contribution: Scientific coordinator

New techniques or equipment: Yes

Spin-off R&D companies: No

Results for improvement of products: Yes

Standardisation, calibration: No

Expert technologist: Yes

Collaboration agreements: No

Collaborating entity or bodies:

Universidad Complutense de Madrid

Type of entity: University

City collaborating entity: Madrid, Community of Madrid, Spain

Asociación Astroinnova

Type of entity: Associations and Groups

Start date: 13/12/2012

Duration: 1 year

Relevant results: Detección pionera de meteoros desde la estratosfera desde globo no tripulado. Coste muy inferior al de otros sistemas de detección.

Identify key words: Meteoroid

2 **Description:** Software de reducción automática (RAPAF) del Proyecto PARTNeR-ASAAF-UCM

Primary (UNESCO code): 210000 - Astronomy & Astrophysics

Secondary (UNESCO code): 210500 - Radio-astronomy

Name of the principal Investigator (PI): Alejandro Sánchez de Miguel

Degree of contribution: Coordinator of total project, network or consortium

New techniques or equipment: Yes

Spin-off R&D companies: No

Results for improvement of products: Yes

Standardisation, calibration: No

Expert technologist: Yes

Collaboration agreements: No

Geographical area: National

Collaborating entity or bodies:

Asociación de Astrónomos Aficionados -UCM

Type of entity: Associations and Groups

City collaborating entity: Madrid, Community of Madrid, Spain

Target entity or bodies:

Asociación de Astrónomos Aficionados - UCM

Start date: 2001

Relevant results: Software de reducción automática para observaciones radioastronómicas con el Radiotelescopio del Proyecto PARTNeR.



- 2** Alejandro Sánchez de Miguel; Jaime Zamorano; Martin Aubé; Jonathan Bennie; Jesús Gallego; Francisco Ocaña; Donald R Pettit; William L Stefanov; Kevin J Gaston. Colour remote sensing of the impact of artificial light at night (II): Calibration of DSLR-based images from the International Space Station. Remote Sensing of Environment. Elsevier, 01/10/2021.

Type of production: Scientific paper

Format: Journal

Position of signature: 1

Total no. authors: 9

Corresponding author: Yes

Impact source: JCR

Category: Science Edition - ENVIRONMENTAL SCIENCES

Impact index in year of publication: 13.5

Journal in the top 25%: Yes

Position of publication: 11

No. of journals in the cat.: 275

Impact source: JCR

Category: Science Edition - IMAGING SCIENCE & PHOTOGRAPHIC TECHNOLOGY

Impact index in year of publication:

Journal in the top 25%: Yes

Position of publication: 2

No. of journals in the cat.: 28

Impact source: JCR

Category: Science Edition - REMOTE SENSING

Impact index in year of publication:

Journal in the top 25%: Yes

Position of publication: 2

No. of journals in the cat.: 34

Source of citations: WOS

Citations: 26

Source of citations: SCOPUS

Citations: 22

Source of citations: Google Scholar

Citations: 23

Relevant results: This work presents the calibration pipeline of the DSLR cameras on board the ISS but also the calibration methods for any DSLR camera for light pollution monitoring. It shows how the ISS data (even the low-resolution one) is superior to a regular satellite like VIIRS. ASM conceived the research, and the code and wrote the initial draft. FWCI 2,66

Relevant publication: Yes

- 3** Alejandro Sánchez de Miguel; Bennie,Jonathan; Rosenfeld,Emma; Dzurjak,Simon; Gaston,Kevin J. First Estimation of Global Trends in Nocturnal Power Emissions Reveals Acceleration of Light Pollution. Remote Sensing. 13 - 16, pp. 3311. MDPI, 21/08/2021.

Type of production: Scientific paper

Format: Journal

Position of signature: 1

Total no. authors: 5

Corresponding author: Yes

Impact source: SCOPUS

Category: GEOSCIENCES, MULTIDISCIPLINARY

Impact index in year of publication: 2021

Journal in the top 25%: Yes

Position of publication: 30

No. of journals in the cat.: 202

Impact source: SCOPUS

Category: IMAGING SCIENCE & PHOTOGRAPHIC TECHNOLOGY

Impact index in year of publication: 2021

Journal in the top 25%: Yes

Position of publication: 6

No. of journals in the cat.: 28

Source of citations: WOS

Citations: 42

Source of citations: SCOPUS

Citations: 52

Source of citations: Google Scholar

Citations: 84

Relevant results: This paper has been a breakthrough in several ways. It has presented the full evolution of the light pollution changes all over the world with the best intercalibration techniques available, but also has showed the limitations of these datasets to trace the light pollution because it's panchromatic nature and the speed of the LED transition. It has been the most viewed article of the journal on 2022 and still on the top10 (5) most viewed of

the last 24 months. And was highlighted as first contribution to the Dark and Quiet Skies for Science and Society II, Implementing the recommendations. United Nations Office for Outer Space Affairs. It was selected as Editors choice. It has been cited on 6 policy documents. FWCI 6,15.

Relevant publication: Yes

- 4** M Bustamante-Calabria; Alejandro Sánchez de Miguel; Susana Martín-Ruiz; Jose-Luis Ortiz; JM Vílchez; Alicia Pelegrina; Antonio García; Jaime Zamorano; Jonathan Bennie; Kevin J Gaston. Effects of the COVID-19 lockdown on urban light emissions: ground and satellite comparison. Remote Sensing. MDPI, 13/01/2021.

Type of production: Scientific paper

Format: Journal

Position of signature: 2

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Total no. authors: 10

Corresponding author: No

Source of citations: WOS

Citations: 29

Source of citations: SCOPUS

Citations: 31

Source of citations: Google Scholar

Citations: 49

Relevant publication: Yes

- 5** Alejandro Sanchez de Miguel; Christopher CM Kyba; Jaime Zamorano; Jesús Gallego; Kevin J Gaston. The nature of the diffuse light near cities detected in nighttime satellite imagery. Scientific Reports. 10 - 1, pp. 1 - 16. Nature Publishing Group, 08/05/2020.

Type of production: Scientific paper

Format: Journal

Position of signature: 1

Corresponding author: Yes

Total no. authors: 5

Citations: 45

Source of citations: WOS

Source of citations: SCOPUS

Citations: 51

Source of citations: Google Scholar

Citations: 72

Relevant results: This work ended a debate about the nature of the diffuse light detected on the DMSP, VIIRS and ISS data. It presented the potential of nighttime remote sensing to directly detect the diffused light by the atmosphere. Part of this research was previously included in a press release of the International Astronomical Union in 2015. ASM conceived all the research, did all the calculations and figures of the article. Cited on 4 policy documents. FWCI 2,18.

Relevant publication: Yes

- 6** Noan Levin; Christopher C.M. Kyba; Qingling Zhang; Alejandro Sánchez de Miguel; Miguel O. Román; Xi Li; Boris A. Portnov; Andrew L. Molthan; Andreas Jechow; Steven D. Miller; Zhuosen Wang; Ranjay M. Shrestha; Christopher D. Elvidge. Remote sensing of night lights: A review and an outlook for the future. Remote Sensing of Environment. 237 - 111443, Elsevier, 01/02/2020.

Type of production: Scientific paper

Format: Journal

Position of signature: 4

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Total no. authors: 13

Corresponding author: No

Source of citations: WOS

Citations: 367

Source of citations: SCOPUS

Citations: 417

Source of citations: Google Scholar

Citations: 487

Relevant results: This work is an invited review article for the 50 anniversaries of the leading Remote sensing journal. It includes an intensive compilation of all research made on nighttime remote sensing on the last 50 years. It did include a lot of pioneer research not published previously on peer review articles. ASM was in charge of the section about all experiments of nighttime remote sensing experiments from the International Space Station and



Space Shuttle and also some of the perspectives. ASM participated on 9 of the 27 figures of the article. It is cited in 8 policy documents.

Relevant publication: Yes

- 7** Alejandro Sánchez de Miguel; Christopher CM Kyba; Martin Aubé; Jaime Zamorano; Nicolas Cardiel; Carlos Tapia; Jon Bennie; Kevin J Gaston. Colour remote sensing of the impact of artificial light at night (I): The potential of the International Space Station and other DSLR-based platforms. Remote Sensing of Environment. 224, pp. 92 - 103. ELSEVIER, 11/02/2019.

Type of production: Scientific paper

Format: Journal

Position of signature: 1

Corresponding author: Yes

Total no. authors: 8

Category: ENVIRONMENTAL SCIENCES

Impact source: ISI

Journal in the top 25%: Yes

Impact index in year of publication: 13.85

No. of journals in the cat.: 279

Position of publication: 10

Impact source: ISI

Category: IMAGING SCIENCE & PHOTOGRAPHIC TECHNOLOGY

Impact index in year of publication:

Journal in the top 25%: Yes

Position of publication: 2

No. of journals in the cat.: 28

Impact source: ISI

Category: REMOTE SENSING

Impact index in year of publication:

Journal in the top 25%: Yes

Position of publication: 2

No. of journals in the cat.: 34

Source of citations: WOS

Citations: 80

Source of citations: SCOPUS

Citations: 80

Source of citations: Google Scholar

Citations: 106

Relevant results: This article showed how the images taken by Astronauts from the international space station but also all cameras are suitable to estimate several variables relevant to trace the environmental impact of the light pollution. It included a working example for the city of Milan. Part of this research was previously included on a press release of the International Astronomical Union in 2015. ASM conceived all the research, did all the calculations and figures of the article.

Relevant publication: Yes

- 8** Ariadna Garcia-Saenz; Alejandro Sánchez De Miguel; Ana Espinosa; Antonia Valentin; Núria Aragonés; Javier Llorca; Pilar Amiano; Vicente Martin Sánchez; Marcela Guevara; Rocío Capelo. Evaluating the association between artificial light-at-night exposure and breast and prostate cancer risk in Spain (MCC-Spain study). Environmental health perspectives. 26 - 4, pp. 047011. National Institute of Environmental Health Sciences (NIEHS), 2018.

Type of production: Scientific paper

Format: Journal

Position of signature: 2

Corresponding author: No

Total no. authors: 10

Category: ENVIRONMENTAL SCIENCES

Impact source: SCIE

Journal in the top 25%: Yes

Impact index in year of publication: 11.035

No. of journals in the cat.: 279

Position of publication: 25

Impact source: SCIE

Category: PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH

Impact index in year of publication:

Journal in the top 25%: Yes

Position of publication: 14

No. of journals in the cat.: 210

Impact source: SCIE

Category: TOXICOLOGY

Impact index in year of publication:

Journal in the top 25%: Yes

**Position of publication:** 3**No. of journals in the cat.:** 94**Source of citations:** WOS**Citations:** 116**Source of citations:** SCOPUS**Citations:** 125**Source of citations:** Google Scholar**Citations:** 207

Relevant results: This work was the first epidemiological study that did show a relationship between the exposure to blue light from satellite data and increased risk of prostate and breast cancer. It was a breakthrough as before all epidemiological studies used colour blind sat data that cannot guarantee a mechanistic relationship between the light exposure and the cancer physiology. ASM did the satellite image processing and advised on the physical light properties and co-conceived the research. Cited on 6 policy documents. FWCi 7,51.

Relevant publication: Yes

- 9** Christopher CM Kyba; Theres Kuester; Alejandro Sánchez de Miguel; Kimberly Baugh; Andreas Jechow; Franz Hölker; Jonathan Bennie; Christopher D Elvidge; Kevin J Gaston; Luis Guanter. Artificially lit surface of Earth at night increasing in radiance and extent. *Science advances*. 3 - 11, pp. e1701528 - e1701528. American Association for the Advancement of Science, 2017.

Type of production: Scientific paper**Format:** Journal**Position of signature:** 3**Total no. authors:** 10**Corresponding author:** No**Impact source:** SCIE**Category:** MULTIDISCIPLINARY SCIENCES**Impact index in year of publication:** 14.98**Journal in the top 25%:** Yes**Position of publication:** 7**No. of journals in the cat.:** 74**Source of citations:** WOS**Citations:** 523**Source of citations:** SCOPUS**Citations:** 490**Source of citations:** Google Scholar**Citations:** 749

Relevant results: This work showed the first estimation of the world's light pollution growth using the SNPP VIIRS/DNB. It did change the public perception that LEDs were reducing light pollution. It was a breakthrough, as it was an experimental proof of the rebound effects of the LEDs. ASM contributed by the independent validation of the results and some of the key figures of the paper showing the limitations of the methods that indicated that the 2.2% growth of the light pollution only could be a lower limit. It had an extensive media coverage that gave it an Altmetric score of 2817, being selected on the TOP 100 papers of 2018 on all disciplines, TOP5 on Physical sciences and TOP1 on Physical Sciences of Spain. It is cited at least on 20 policy documents.

Relevant publication: Yes

- 10** A Sánchez de Miguel; M Aubé; J Zamorano; M Kocifaj; J Roby; C Tapia. Sky Quality Meter measurements in a colour-changing world. *Monthly Notices of the Royal Astronomical Society*. 467 - 3, pp. 2966 - 2979. Oxford University Press, 2017.

Type of production: Scientific paper**Format:** Journal**Corresponding author:** Yes**Impact source:** SCIE**Category:** ASTRONOMY & ASTROPHYSICS**Impact index in year of publication:** 5.235**Journal in the top 25%:** Yes**Position of publication:** 17**No. of journals in the cat.:** 69**Source of citations:** WOS**Citations:** 85**Source of citations:** SCOPUS**Citations:** 87**Source of citations:** Google Scholar**Citations:** 123

Relevant results: This paper is a critical review of the impact of the change of the spectral power distribution of the most popular streetlights (High pressure sodium lights) to LEDs on the readings of the most popular measuring device (Sky Quality Meter). It was a breakthrough, showing how this device was clearly incapable of tracing that



transition and showing the need of other methods to do so. ASM conceived the research and made all calculations and figures of the article.

Relevant publication: Yes

- 11** Alejandro Sánchez deMiguel; Jaime Zamorano; José Gómez Castaño; Sergio Pascual. Evolution of the energy consumed by street lighting in Spain estimated with DMSP-OLS data. Journal of Quantitative Spectroscopy and Radiative Transfer. 139, pp. 109 - 117. Pergamon, 2014.

Type of production: Scientific paper

Format: Journal

Position of signature: 1

Total no. authors: 4

Corresponding author: Yes

Impact source: JCR

Category: Science Edition - SPECTROSCOPY

Impact index in year of publication:

Journal in the top 25%: No

Position of publication: 19

No. of journals in the cat.: 41

Impact source: JRC

Category: Science Edition - OPTICS

Impact index in year of publication:

Journal in the top 25%: No

Position of publication: 59

No. of journals in the cat.: 100

Source of citations: WOS

Citations: 58

Source of citations: SCOPUS

Citations: 65

Source of citations: GoogleScholar

Citations: 87

Relevant results: This paper and the research that was conducted on it were key to discovering how the street lighting energy consumption of the country of Spain where wrong by 83% and that compromises were completely impossible to fulfill. ASM conceived the research and did the writing of the manuscript and the figures as well the data analysis. FWCI 3,25 Cited on 2 policy documents.

Relevant publication: Yes

- 12** Kevin J. Gaston; Alejandro Sánchez de Miguel. Environmental Impacts of Artificial Light at Night. Annual Review of Environment and Resources. 15/10/2022.

Type of production: Review

Format: Scientific and technical document or report

Position of signature: 2

Total no. authors: 2

Corresponding author: No

Impact source: JCR

Category: Social Sciences Edition - ENVIRONMENTAL STUDIES

Impact index in year of publication: 16.4

Journal in the top 25%: Yes

Position of publication: 36

No. of journals in the cat.: 179

Impact source: JCR

Category: Science Edition - ENVIRONMENTAL SCIENCES

Impact index in year of publication:

Journal in the top 25%: Yes

Position of publication: 41

No. of journals in the cat.: 334

Source of citations: WOS

Citations: 21

Source of citations: SCOPUS

Citations: 22

Source of citations: Google Scholar

Citations: 36

Relevant publication: Yes

- 13** Alejandro Sánchez de Miguel; Francisco Ocaña; C.E. Tapia Ayuga; J.M. Madiedo; J. Zamorano; J. Izquierdo; M.A. Gómez Sánchez-Tirado; F. Ortuño; D. Mayo; R. Raya; A. Conde; P. Leon. THE 2016 QUADRANTIDS BALLOON-BORNE MISSION OVER SPAIN: FULL HD AND COLOUR VIDEORECORDING.LPSC. LPSC, 21/01/2016.



Type of production: Scientific-technical report
Corresponding author: Yes
Relevant publication: Yes

Format: Scientific and technical document or report

- 14** Hector Linares; Eduard Masana; Salvador J. Ribas; Manuel García-Gil; Martin Aubé; Alejandro Sánchez de Miguel; Alexandre Simoneau. Assessing light pollution in vast areas: zenith sky brightness maps of Catalonia. *Journal of Quantitative Spectroscopy and Radiative Transfer*. 309, Elsevier, 05/05/2023.

Type of production: Scientific paper
Corresponding author: No

Format: Journal

- 15** Josep Manel Carrasco; Nicolas Cardiel; Eduard Masana; Jaime Zamorano; Sergio Pascual; Alejandro Sánchez de Miguel; Rafael González; Jaime Izquierdo. Photometric Catalogue for Space and Ground Night-Time Remote-Sensing Calibration: RGB Synthetic Photometry from Gaia DR3 Spectrophotometry. *Remote Sensing*. 15 - 7, pp. 1767. MDPI, 25/03/2023.

Type of production: Scientific paper
Corresponding author: No

Format: Journal

- 16** Gorka Muñoz-Gil; Alexandre Dauphin; Federica A. Beduini; Alejandro Sánchez de Miguel. Citizen Science to Assess Light Pollution with Mobile Phones. *Remote Sensing*. 14 - 19, 06/10/2022.

Type of production: Scientific paper
Corresponding author: No

Format: Journal

- 17** Cox; Sánchez de Miguel; Bennie; Dzurjak; Gaston. Majority of artificially lit Earth surface associated with the non-urban population. *Science of The Total Environment*. 841, pp. 156782. 01/10/2022.

Type of production: Scientific paper
Corresponding author: No

Format: Journal

- 18** Christopher CM Kyba; Martin Aubé; Salvador Bará; Andrea Bertolo; Constantinos A Bouroussis; Stefano Cavazzani; Brian R Espey; Fabio Falchi; Geza Gyuk; Andreas Jechow; Miroslav Kocifaj; Zoltán Kolláth; Héctor Lamphar; Noam Levin; Shengjie Liu; Steven D Miller; Sergio Ortolani; Chun Shing Jason Pun; Salvador José Ribas; Thomas Ruhtz; Alejandro Sánchez de Miguel; Mathias Schneider; Ranjay Man Shrestha; Alexandre Simoneau; Chu Wing So; Tobias Storch; Kai Pong Tong; Milagros Tuñón; Diane Turnshek; Ken Walczak; Jun Wang; Zhuosen Wang; Jianglong Zhang. Multiple angle observations would benefit visible band remote sensing using night lights. *Journal of Geophysical Research: Atmospheres*. 127 - 12, 27/06/2022.

Type of production: Scientific paper
Corresponding author: No

Format: Scientific and technical document or report

- 19** Natalia Rybnikova; Alejandro Sánchez de Miguel; Sviatoslav Rybnikov; Anna Brook. A New Approach to Identify On-Ground Lamp Types from Night-Time ISS Images. *Remote Sensing*. MDPI, 11/11/2021.

Type of production: Scientific paper
Corresponding author: No

Format: Journal

- 20** Kevin J Gaston; Simone Ackermann; Jonathan Bennie; Daniel TC Cox; Benjamin B Phillips; Alejandro Sánchez de Miguel; Dirk Sanders. Pervasiveness of biological impacts of artificial light at night. *Integrative and Comparative Biology*. 61 - 3, pp. 1098 - 1110. Oxford University Press, 01/09/2021.

Type of production: Scientific paper
Corresponding author: No

Format: Journal

- 21** Nicolás Cardiel; Jaime Zamorano; Josep Manel Carrasco; Eduard Masana; Salvador Bará; Rafael González; Jaime Izquierdo; Sergio Pascual; Alejandro Sánchez de Miguel. RGB photometric calibration of 15 million Gaia stars. *Monthly Notices of the Royal Astronomical Society*. 507 - 1, pp. 318 - 329. Oxford University Press, 23/07/2021.

Type of production: Scientific paper

Format: Journal



Corresponding author: No

- 22** Christopher CM Kyba; Martin Aubé; Salvador Bará; Andrea Bertolo; Constantinos A Bouroussis; Stefano Cavazzani; Brian R Espey; Fabio Falchi; Geza Gyuk; Andreas Jechow; Miroslav Kocifaj; Zoltán Kolláth; Héctor Lamphar; Noam Levin; Shengjie Liu; Steven D Miller; Sergio Ortolani; Chun Shing Jason Pun; Salvador José Ribas; Thomas Ruhtz; Alejandro Sánchez de Miguel; Matthias Schneider; Ranjay Man Shrestha; Alexandre Simoneau; Chu Wing So; Tobias Storch; Kai Pong Tong; Diane Turnshek; Ken Walczak; Jun Wang; Zhuosen Wang; Jianglong Zhang. The benefit of multiple angle observations for visible band remote sensing using night lights. Earth and Space Science Open Archive ESSOAr. American Geophysical Union, 20/07/2021.
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 23** José Robles; Jaime Zamorano; Sergio Pascual; Alejandro Sánchez de Miguel; Jesús Gallego; Kevin J. Gaston. Evolution of Brightness and Color of the Night Sky in Madrid. Remote Sensing. MDPI, 14/04/2021.
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 24** Nicolás Cardiel; Jaime Zamorano; Salvador Bará; Alejandro Sánchez de Miguel; Cristina Cabello; Jesús Gallego; Lucía García; Rafael González; Jaime Izquierdo; Sergio Pascual; José Robles; Ainhoa Sánchez; Carlos Tapia. Synthetic RGB photometry of bright stars: definition of the standard photometric system and UCM library of spectrophotometric spectra. Monthly Notices of the Royal Astronomical Society. Oxford University Press, 10/04/2021.
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 25** Ariadna Garcia-Saenz; de Miguel, Alejandro Sánchez. Association Between Outdoor Light-at-night Exposure and Colorectal Cancer in Spain. Epidemiology. 31 - 5, pp. 718 - 727. Wolters Kluwer, 01/09/2020.
Type of production: Scientific paper
Corresponding author: No
- 26** Daniel TC Cox; Alejandro Sánchez de Miguel; Simon A Dzurjak; Jonathan Bennie; Kevin J Gaston. National Scale Spatial Variation in Artificial Light at Night. Remote Sensing. 12 - 10, pp. 1591. MDPI, 16/05/2020.
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 27** Kevin J. Gaston; Alejandro Sánchez de Miguel; Salvador Bará; Martin Aubé; Nicolás Cardiel; Carlos E. Tapia; Jaime Zamorano. Evaluating Human Photoreceptor Inputs from Night-Time Lights Using RGB Imaging Photometry. Journal of Imaging. 4 - 5, pp. 49. mdpj, 16/04/2019.
Type of production: Scientific paper
Corresponding author: Yes
- 28** Julie Pauwels; I Le Viol; C Azam; N Valet; J-F Julien; Y Bas; C Lemarchand; A Sanchez de Miguel; C Kerbiriou. Accounting for artificial light impact on bat activity for a biodiversity-friendly urban planning. Landscape and Urban Planning. 183, pp. 12 - 25. Elsevier, 01/03/2019.
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 29** Salvador Bará; Ángel Rodríguez-Arós; Marcos Pérez; Borja Tosar; Raul C Lima; Alejandro Sánchez de Miguel; Jaime Zamorano. Estimating the relative contribution of streetlights, vehicles and residential lighting to the urban night sky brightness. Lighting Research & Technology. SAGE, 28/10/2018.
Type of production: Scientific paper **Format:** Journal



- 30** Jaime Zamorano; Cristóbal García; Carlos Tapia; Alejandro Sánchez de Miguel; Sergio Pascual; Jesús Gallego. STARS4ALL Night Sky Brightness Photometer. International Journal of Sustainable Lighting. 18, pp. 49 - 54. 2017.
Type of production: Scientific paper **Format:** Journal
- 31** Ramón Estrada-García; Manuel García-Gil; L Acosta; S Barja; Alejandro Sanchez-de-Miguel; J Zamorano. Statistical modelling and satellite monitoring of upward light from public lighting. Lighting Research & Technology. 48 - 7, pp. 810 - 822. SAGE Publications Sage UK: London, England, 2016.
Type of production: Scientific paper **Format:** Journal
- 32** Jaime Zamorano; A Sánchez de Miguel; Francisco Ocaña; Berenice Pila-Diez; J Gómez Castaño; Sergio Pascual; Carlos Tapia; Jesús Gallego; Alberto Fernández; Miguel Nievas. Testing sky brightness models against radial dependency: A dense two dimensional survey around the city of Madrid, Spain. Journal of Quantitative Spectroscopy and Radiative Transfer. 181, pp. 52 - 66. Pergamon, 2016.
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 10 **Corresponding author:** No
- 33** M Aubert; M Kocifaj; J Zamorano; HA Solano Lamphar; A Sánchez de Miguel. The spectral amplification effect of clouds to the night sky radiance in Madrid. Journal of Quantitative Spectroscopy and Radiative Transfer. 181, pp. 11 - 23. Pergamon, 2016.
Type of production: Scientific paper **Format:** Journal
Position of signature: 5
Total no. authors: 5
- 34** Alejandro Sánchez de Miguel; José Gómez Castaño; Jaime Zamorano Calvo; Daniel Lombraña. Georreferenciación colaborativa de imágenes nocturnas tomadas desde la ISS para estudios de consumo energético y contaminación lumínica. Universitat de Girona. Servei de Sistemes d'Informació Geogràfica i Teledetecció, 2015.
Type of production: Scientific paper **Format:** Journal
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Relevant results: En este Trabajo Académicamente Dirigido or el prof. J Zamorano se exploraron las posibilidades de las cámaras webcam para su uso en Astronomía. En particular se estudiaron las características de las cámaras disponibles, se adaptaron cámaras para larga exposición, se valoraron las capacidades del software disponible y se realizaron observaciones. [ABSTRACT] The main objective of this Trainee Project supervised by prof. J. Zamorano was to explore the use of cheap webcams for Astronomy. The main characteristics of the available cameras were studied, a camera was adapted for long exposure, a critical analysis of the software was performed and some observations are reported.
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Works submitted to national or international conferences

- 1** **Title of the work:** Current multispectral night data sources from the orbit: The international Space Station and other sources
Name of the conference: Meeting on Light Pollution: Challenges and Responses for Monitoring it
Corresponding author: Yes
City of event: Granada, Andalusia, Spain
Date of event: 14/11/2023
Organising entity: Ministerio de Ciencia e Innovación
Type of entity: Government
Alejandro Sánchez de Miguel.
- 2** **Title of the work:** SDGSAT-1, JL1, ISS: Intercalibration process and first mosaic
Name of the conference: 8TH INTERNATIONAL CONFERENCE ON ARTIFICIAL LIGHT AT NIGHT
Type of event: Conference
Type of participation: Participatory - oral communication
Corresponding author: Yes
City of event: Calgary, Canada
Date of event: 10/08/2023
End date: 13/08/2023
Organising entity: University of Calgary
Type of entity: University
City organizing entity: Calgary,
Alejandro Sánchez de Miguel,; Xi Li; Jesus Gallego; Jaime Zamorano; Miquel Serra-Ricart. "SDGSAT-1, JL1, ISS: Intercalibration process and first mosaic".
- 3** **Title of the work:** Mapping the Invisibles: Global Urban Inequalities through Night Lights
Name of the conference: 2023 Joint Urban Remote Sensing Event (JURSE)
Corresponding author: No



City of event: Heraklion Crete, Greece

Date of event: 17/05/2023

Organising entity: IEEE

Type of entity: Associations and Groups

City organizing entity: Heraklion Crete, Greece

Miguel O Roman; Angela Abascal; Christopher Kyba; Franz Hölker; Monika Kuffer; Hector Linares Arroyo; Ken Walczak; Alejandro Sánchez De Miguel; Tobias Degen.

- 4** **Title of the work:** Nocturnal satellite data availability and their limitations
Name of the conference: International workshop Light Pollution 2022
Type of event: Workshop **Geographical area:** European Union
Type of participation: Participatory - invited/keynote **Reasons for participation:** Upon invitation talk
City of event: Brno, Czech Republic
Date of event: 26/10/2022
End date: 26/10/2022
Organising entity: Ministry of Environment, Czech Government
With external admission assessment committee: Yes
Available on-line at: <https://www.mzp.cz/en/light_pollution_workshop_2022>.

- 5** **Title of the work:** Citizen Science with the TESS Photometer Network
Name of the conference: Astronomical Society of the Pacific Conference Series
Date of event: 01/07/2022
Sergio Pascual; Jaime Zamorano; Esteban González; Carlos Tapia; Rafael González; Cristobal García; Lucía García; Ainhoa Sánchez-Penim; Jaime Izquierdo; Óscar; Alejandro Sánchez de Miguel; Jesús Gallego.

- 6** **Title of the work:** Current multispectral night data sources from the orbit: The international Space Station and other sources
Name of the conference: 1st European Workshop on Artificial Nighttime Light Remote Sensing
Type of participation: Participatory - invited/keynote talk
City of event: Noordwijk, Holland
Date of event: 01/04/2022
End date: 30/03/2022
Organising entity: European Space Agency

- 7** **Title of the work:** Global Trends on ALAN
Name of the conference: Dark and Quiet Skies for Science and Society II, Implementing the recommendations
City of event: Santa Cruz de La Plama, Canary Islands, Spain
Date of event: 03/10/2021
End date: 04/10/2021
Organising entity: United Nations Office for Outer Space Affairs (UNOOSA) **Type of entity:** UN
City organizing entity: Spain
"Global Trends on ALAN".

- 8** **Title of the work:** The global light pollution growth: how to measure it and implications
Name of the conference: VII International Symposium SRUK/CERU
Type of event: Conference
Type of participation: Participatory - invited/keynote talk
City of event: Liverpool, United Kingdom
Date of event: 28/06/2019



End date: 30/06/2019

Organising entity: Sociedad de Científicos Españoles en Reino Unido (CERU)

- 9** **Title of the work:** Tracking color change of the night: Use of CCDs, DSLRs and Phones and DMSP, VIIRS, ISS and CubeSats to track color change of the night
Name of the conference: Light Pollution: Theory, Modelling and Measurements 2019
City of event: Zselic Valley Leisure Farm, Hungary
Date of event: 25/06/2019
End date: 28/06/2019
Organising entity: Cegep de Sherbrooke
City organizing entity: Canada
- 10** **Title of the work:** Balloon-borne video observations of Geminids 2016
Name of the conference: International Meteor Conference
Corresponding author: No
City of event: Pezinok-Modra, 2018, Slovakia
Date of event: 30/08/2018
End date: 02/09/2018
Organising entity: International Meteor Organization
Francisco Ocaña; Alejandro Sánchez de Miguel. "Proceedings of the IMC, Pezinok-Modra, 2018".
- 11** **Title of the work:** Night Sky Brightness monitoring in Spain
Name of the conference: Reunión Científica de la Sociedad Española de Astronomía
Corresponding author: No
City of event: Salamanca, Castile and León, Spain
Date of event: 16/07/2018
End date: 18/07/2018
Organising entity: Sociedad Española de Astronomía
Jaime Zamorano; Carlos Tapia; Sergio Pascual; Cristóbal García; Rafael González; Esteban González; Oscar Corcho; Lucía García; Jesús Gallego; Alejandro Sánchez de Miguel; Enrique Solano; J. Manuel Alacid. "Night Sky Brightness monitoring in Spain".
- 12** **Title of the work:** NixNox project: places to stargaze
Name of the conference: Reunion científica de la Sociedad Española de Astronomía
Corresponding author: No
City of event: Salamanca,
Date of event: 16/07/2018
End date: 18/07/2018
Type of contribution: Scientific book or monograph
Jaime Zamorano; L Garc{\'i}a; Francisco Oca{\'n}al; A S{\'a}nchez de Miguel; C Tapia; M Nievas; J Gallego; E Alfaro. "Highlights on Spanish Astrophysics X, Proceedings of the XIII Scientific Meeting of the Spanish Astronomical Society held on July 16-20, 2018, in Salamanca, Spain, ISBN 978-84-09-09331-1. B. Montesinos, A. Asensio Ramos, F. Buitrago, R. Sch{\'o}del, E. Villaver, S. P{\'e}rez-Hoyos, I. Ord{\'o}ez-Etxebarria (eds.) p. 665-665". pp. 665 - 665. 2019.
- 13** **Title of the work:** Low cost multi-purpose balloon-borne platform for wide-field imaging and video observation
Name of the conference: SPIE Astronomical Telescopes + Instrumentation 2016 (SPIE)
Type of participation: Participatory - oral communication
Corresponding author: No
City of event: Edinburgh, United Kingdom
Date of event: 25/07/2016



End date: 30/07/2016

Organising entity: SPIE

Type of entity: Associations and Groups

Ocaña, Francisco; Sánchez de Miguel, Alejandro; Conde, Aitor; Daedalus Team. Available on-line at: <10.5281/zenodo.59213>.

- 14** **Title of the work:** ISS images for Observatory protection
Name of the conference: XXIX IAU General Assembly
Type of participation: Participatory - oral communication
Corresponding author: Yes
City of event: Honolulu, United States of America
Date of event: 03/08/2015
End date: 14/08/2015
Organising entity: International Astronomical Union **Type of entity:** Associations and Groups
Sanchez de Miguel,Alejandro; Zamorano,Jaime; Gallego,Jesús; Aubé,Martin.
- 15** **Title of the work:** Absolute Calibration of the ISS: Measuring colours and radiance from the ISS
Name of the conference: ALAN 2014: Artificial Light at Night (ALAN) Conference
Corresponding author: Yes
City of event: Leicester, Leicestershire, Rutland and Northamptonshire, United Kingdom
Date of event: 02/09/2014
End date: 04/09/2014
Organising entity: Loss of the Night Network COST
Alejandro Sánchez de Miguel.
- 16** **Title of the work:** Estimating all-sky night brightness maps from finite sets of SQM measurements
Name of the conference: XI Scientific Meeting of the Spanish Astronomical Society
City of event: Teruel, Aragon, Spain
Date of event: 02/09/2014
End date: 08/09/2014
Organising entity: Sociedad Española de Astronomía **Type of entity:** Associations and Groups
Victor Tilve; J. Ling; S. Bará; A. Sánchez de Miguel; M. Nievas; J. Zamorano.
- 17** **Title of the work:** Midiendo la contaminación lumínica: de arriba abajo y de abajo arriba
Name of the conference: XI Scientific Meeting of the Spanish Astronomical Society
City of event: Teruel, Aragon, Spain
Date of event: 02/09/2014
End date: 08/09/2014
Organising entity: Sociedad Española de Astronomía
- 18** **Title of the work:** Understanding the Upward Angular Distribution of Sky Glow"
Name of the conference: ALAN 2014: Artificial Light at Night (ALAN) Conference
City of event: Leicester, Leicestershire, Rutland and Northamptonshire, United Kingdom
Date of event: 02/09/2014
End date: 04/09/2014
CCM Kyba; P.A. Cinzano; B. Espey; F. Falchi; A. Sánchez de Miguel; C. Walker; J. Zamorano.
- 19** **Title of the work:** NIXNOX project: Sites in Spain where citizens can enjoy dark starry skies
Name of the conference: 13th European Symposium for the Protection of the Night Sky
City of event: Pamplona, Foral Community of Navarre, Spain
Date of event: 12/09/2013



End date: 14/09/2013

Organising entity: PLANETARIO DE PAMPLONA, S.A.

J. Zamorano; A. Sánchez de Miguel; J. Gómez-Castaño; F. Ocaña; J. Gallego; B. Pila; M. Nievas; C. Tapia; A. Fernández; S. Pascual.

- 20** **Title of the work:** Temporal evolution of light pollution sources using ISS images and others: Madrid
Name of the conference: 13th European Symposium for the Protection of the Night Sky
City of event: Pamplona, Foral Community of Navarre, Spain
Date of event: 12/09/2013
End date: 14/09/2013
Organising entity: Planetarium of Pamplona **Type of entity:** Planetario
City organizing entity: Pamplona, Foral Community of Navarre, Spain
- 21** **Title of the work:** Evolution of the energy consumed by street lighting in Spain estimated with DMSP-OLS data
Name of the conference: Light Pollution: Theory, Modelling, and Measurements
Type of participation: Participatory - oral communication
City of event: Smolenice, Slovakia
Date of event: 15/04/2013
End date: 18/04/2013
Organising entity: Slovak Academy of Sciences
Alejandro Sánchez de Miguel; Jaime Zamorano; José Gomez Castaño; Sergio Pascual.
- 22** **Title of the work:** Night Sky Brightness and Light Pollution in Comunidad de Madrid
Name of the conference: Light Pollution : Theory, Modelling, and Measurements
City of event: Smolenice, Slovak Republic, Slovakia
Date of event: 15/04/2013
Organising entity: Slovak Academy of Sciences **Type of entity:** R&D Centre
City organizing entity: Bratislava, Slovakia
Jaime Zamorano Calvo; Alejandro Sánchez de Miguel; José Gómez Castaño; Francisco Ocaña González; Jesús Gallego Maestro; Berenice Pila Díez; Miguel Nievas Rosillo; Carlos Tapia Ayuga; Alberto Fernández Domínguez; Sergio Pascual Ramírez.
- 23** **Title of the work:** Contaminación Lumínica en España 2012: Light Pollution in Spain 2012
Name of the conference: Reunion científica de la Sociedad Española de Astronomía.
Type of participation: 'Participatory - poster
Date of event: 10/07/2012
Alejandro Sánchez de Miguel; Jaime Zamorano Calvo; José Gómez Cast. 2012. Available on-line at: <<http://eprints.ucm.es/15970/>>.
- 24** **Title of the work:** Aplicación de los Sistemas de Información Geográfica en Astronomía
Name of the conference: Aplicación de los Sistemas de Información Geográfica en Astronomía
Type of participation: 'Participatory - poster
City of event: Girona, Spain
Date of event: 2012
José Gómez Castaño; Javier Mejuto González; Gracia Rodríguez Caderot; Alejandro Sánchez de Miguel; Jaime Zamorano Calvo. "VI JORNADAS DE SIG LIBRE, Universitat de Girona. Servei de Sistemes d'Informació Geogràfica i Teledetecció". 2012.



- 25** **Title of the work:** Descubrimiento arqueoastronómico en el Cerrillo blanco
Name of the conference: XX Congreso Estatal de Astronomía
Geographical area: National
Type of participation: 'Participatory - poster
City of event: Gandia, Valencian Community, Spain
Date of event: 2012
Organising entity: Asociación Astronómica de la Safor.
Estela Fernandez Valenzuela; Alejandro Sánchez de Miguel. Available on-line at:
<<http://eprints.ucm.es/17305/>>.
- 26** **Title of the work:** Large Meteoroids Belonging to the Alpha-Capricornid Meteoroid Stream
Name of the conference: Lunar and Planetary Institute Science Conference ..., 2012
Type of participation: 'Participatory - poster
City of event: Texas, United States of America
Date of event: 2012
J Zamorano; JM Madiedo; JM Trigo-Rodriguez; J Izquierdo; F Ocaña; A Sánchez de Miguel; FM Toscano. 2012.
- 27** **Title of the work:** Orbit and Radiant of a Sporadic Fireball Imaged by the Spanish Meteor Network
Name of the conference: Lunar and Planetary Institute Science Conference ..., 2012
Type of participation: 'Participatory - poster
City of event: Texas, United States of America
Date of event: 2012
J Alonso-Azcárate; JM Madiedo; JM Trigo-Rodriguez; J Zamorano; J Izquierdo; F Ocaña; A Sánchez de Miguel; J Lacruz; FM Toscano. 2012.
- 28** **Title of the work:** Spectrophotometric study in the near-ir of a sample of MIPS selected galaxies at $z \sim 2$
Name of the conference: "Fourth Science with the GTC Meeting (2011)"
Geographical area: Non EU International
Type of participation: 'Participatory - poster
City of event: Santa Cruz de La Palma, Canary Islands, Spain
Date of event: 16/11/2011
End date: 18/11/2011
Organising entity: Proyecto Gran Telescopio Canarias
Type of entity: Telescopio
Alejandro Sánchez de Miguel; Jesús Gallego; Pablo G. Pérez González; Nicolás Cardiel; Jaime Zamorano; Rafael Guzmán; Anthony González Nicolás Gruel. "Revista Mexicana de Astronomía & Astrofísica, Conference Series, en prensa". En: Revista Mexicana de Astronomía & Astrofísica, Conference Series, en prensa.
- 29** **Title of the work:** Zernike power spectra of urban light-polluted cloudless night skies
Name of the conference: AOTP'2014: II International Conference on Applications in Optics and Photonics
City of event: Aveiro, Portugal
Date of event: 26/05/2011
End date: 30/05/2011
S. Bará; M. Nievas; A. Sánchez de Miguel; J. Zamorano.
- 30** **Title of the work:** El año internacional de la Astronomía en la Universidad Complutense de Madrid
Name of the conference: Reunión científica de la Sociedad Española de Astronomía
Type of event: Conference
Geographical area: National
Type of participation: 'Participatory - poster



City of event: Madrid, Community of Madrid, Spain

Date of event: 13/10/2010

End date: 17/10/2010

Organising entity: Sociedad Española de Astronomía

J. Zamorano; D. Montes; M. Hernán-Obispo; A. Sánchez de Miguel. "Highlights of Spanish Astrophysics VI, en prensa". Available on-line at: <<http://adsabs.harvard.edu/abs/2011hsa6.conf..863Z>>.

31 Title of the work: Contaminación Lumínica en España: Evolución histórica y panorama actual

Name of the conference: Reunión científica de la Sociedad Española de Astronomía

Geographical area: National

Type of participation: 'Participatory - poster

City of event: Madrid, Community of Madrid, Spain

Date of event: 13/10/2010

End date: 17/10/2010

Organising entity: Sociedad Española de Astronomía

A. Sánchez de Miguel; J. Zamorano; B. Pila-Díez; A. Gonzalez-Pérez J. Rubio-Jiménez. "Highlights of Spanish Astrophysics VI, en prensa". 2013. Available on-line at: <<http://eprints.ucm.es/12284/>>.

32 Title of the work: Estudio espectroscópico en infrarrojo cercano de una muestra de galaxias con la formación estelar activa a $z=0.8$,

Name of the conference: Reunión científica de la Sociedad Española de Astronomía

City of event: Madrid, Community of Madrid, Spain

Date of event: 13/09/2010

End date: 17/09/2010

Organising entity: Sociedad Española de Astronomía

Type of entity: Associations and Groups

A. Sánchez de Miguel; J. Gallego; J. Zamorano; V. Villar; P.G. Pérez-González G. Barro. "Highlights of Spanish Astrophysics VI, en prensa". Available on-line at: <<http://adsabs.harvard.edu/abs/2011hsa6.conf..328S>>.

33 Title of the work: Estudio piloto de galaxias con formación estelar a $z=2$

Name of the conference: Reunión científica de la Sociedad Española de Astronomía

Type of participation: 'Participatory - poster

City of event: Madrid, Community of Madrid, Spain

Date of event: 13/09/2010

End date: 17/09/2010

Organising entity: Sociedad Española de Astronomía

Type of entity: Associations and Groups

J. Gallego; A. Sánchez de Miguel; P. G. Pérez-Gonzalez N. Cardiel. "Highlights of Spanish Astrophysics VI, en prensa". 2013. Available on-line at: <<http://adsabs.harvard.edu/abs/2011hsa6.conf..381G>>.

34 Title of the work: Retransmisiones desde el Observatorio UCM

Name of the conference: VIII Reunión Científica de la Sociedad Española de Astronomía

City of event: Madrid, Community of Madrid, Spain

Date of event: 2010

Organising entity: Sociedad Española de Astronomía

Type of entity: Associations and Groups

David Montes; Alejandro Sánchez de Miguel; Jaime Zamorano; Jesús Gallego. Available on-line at: <http://pendientedemigracion.ucm.es/info/Astrof/users/dmg/papers/SEAVIII-Retransmisiones_fv.pdf>.



- 35** **Title of the work:** Towards other earths. Perspectives and limitations in the ELT era
Name of the conference: ESO-CAUP workshop
City of event: Porto, Portugal
Date of event: 19/10/2009
End date: 23/10/2009
- 36** **Title of the work:** Estimating the Age of Exoplanet's Host Stars by their Membership in Moving Groups and Young Associations
Name of the conference: Pathways Towards Habitable Planets
City of event: Barcelona, Community of Madrid, Spain
Date of event: 14/09/2009
End date: 18/09/2009
D Montes; JA Caballero; CJ Fernández-Rodríguez; LJ Alloza; S Bertrán de Lis; A Garrido-Rubio; R Greciano; JE Herranz-Luque; I Juárez-Martínez; E Manjavacas; F Ocaña; B Pila-Díez; A Sánchez de Miguel; CE Tapia-Ayuga. 430, San Francisco: Astronomical Society of the Pacific, p.507, 2010. Available on-line at: <<http://adsabs.harvard.edu/abs/2010ASPC..430..507M>>.
- 37** **Title of the work:** Pathways towards habitable planets
City of event: Barcelona,
Date of event: 14/09/2009
End date: 18/09/2009
- 38** **Title of the work:** Light pollution in Spain. An european perspective
Name of the conference: Reunión científica de la Sociedad Española de Astronomía
Type of event: Conference
Type of participation: 'Participatory - poster
Geographical area: National
Reasons for participation: Review before acceptance
City of event: Santander,
Date of event: 07/07/2008
End date: 11/07/2008
Organising entity: Sociedad Española de Astronomía
Type of entity: Associations and Groups
Publication in conference proceedings: Yes
A. Sánchez de Miguel; J. Zamorano Calvo. "Highlights of Spanish Astrophysics V, en prensa". Available on-line at: <http://link.springer.com/chapter/10.1007/978-3-642-11250-8_164>. ISBN 978-3-642-11249-2
- 39** **Title of the work:** GUAIX: The UCM Group of Extragalactic Astrophysics and Astronomical Instrumentation
Name of the conference: Reunión científica de la Sociedad Española de Astronomía
Geographical area: National
Type of participation: 'Participatory - poster
City of event: Santander, Community of Madrid, Spain
Date of event: 07/07/2008
End date: 11/07/2008
Organising entity: Sociedad Española de Astronomía
Type of entity: Associations and Groups
Gallego, J.; Cardiel, N.; Zamorano, J.; Gorgas, J.; Castillo-Morales, A.; Eliche-Moral, M. C.; Gil de Paz, A.; Pascual, S.; Pérez-González, P. G.; Guzmán, R.; Barro, G.; Díaz, C.; Espino, N.; Izquierdo, J.; Mármol-Queraltó, E.; Muñoz-Mateos, J. C.; Rodríguez, L.; Sánchez de Miguel, A.; Toloba, E.; Villar, V.; Abelleira, M."Highlights of Spanish Astrophysics V, Astrophysics and Space Science Proceedings., Springer-Verlag Berlin Heidelberg". ., 2007. ISBN 978-3-642-11249-2



- 40** **Title of the work:** Actividades de la UCM por el AIA-IYA 2009
Name of the conference: III Reunión Nacional AIA-IYA 2009
Type of event: Workshop
City of event: Granada, Community of Madrid, Spain
Date of event: 14/01/2008
End date: 15/01/2008
Organising entity: Instituto de Astrofísica de Andalucía
Type of entity: State agency
Publication in conference proceedings: Yes
Jaime Zamorano y Alejandro Sánchez de Miguel.
"http://www.astronomia2009.es/multimedia/IIIReunion/JaimeZamorano.ppt".
- 41** **Title of the work:** Difusión de la astronomía española en internet: estado y posibilidades para el IYA2009
Name of the conference: I Reunión Nacional AIA-IYA 2009
Type of event: Workshop
City of event: Granada, Andalusia, Spain
Date of event: 14/01/2008
End date: 15/01/2008
Organising entity: Instituto Astrofísica de Andalucia
Alejandro Sánchez de Miguel. "http://www.iaa.es/IYA09/index.php/es/reuniones_y_congresos/i_reunion_nacional_aia_iya2009/presentaciones". 2014.
- 42** **Title of the work:** Differential photometric study of the european light emission to the space.
Name of the conference: Conferencia STARLIGHT: A common heritage proceedings, UNESCO 2008
Geographical area: Non EU International
Type of participation: Participatory - oral communication
City of event: La Palma, Canary Islands, Spain
Date of event: 19/04/2007
End date: 20/04/2007
Organising entity: UNESCO
Publication in conference proceedings: Yes
With external admission assessment committee: Yes
A. Sánchez de Miguel. "STARLIGHT: A common heritage proceedings, UNESCO 2008,pags. 379- 383 , DL. TF836 2008 IAC". Available on-line at: <http://eprints.ucm.es/15121/>.
- 43** **Title of the work:** ISS nocturnal images as a scientific tool against Light Pollution: Flux calibration and colors
Name of the conference: X Reunión Científica de la Sociedad Española de Astronomía (SEA)
City of event: Valencia, España,
Date of event: 2007
Alejandro Sánchez de Miguel; Jaime Zamorano Calvo. "Highlights of Spanish Astrophysics VII(in press)". 2007.
- 44** **Title of the work:** "El Eclipse Perfecto"
Name of the conference: XVII Congreso Estatal de Astronomía
Geographical area: National
Type of participation: Participatory - oral communication
City of event: Santander,
Date of event: 06/12/2006
End date: 10/12/2006
Organising entity: Agrupacion Astronomica de Cantabria
Type of entity: Associations and Groups



City organizing entity: Santander, Cantabria, Spain
A. Sánchez de Miguel, J. Izquierdo. "No procede". 06/2010.

- 45 Title of the work:** The ASAAF-UCM Proyect with PARTNeR
Name of the conference: Primer Encuentro de la Radioastronomía Esp
Type of participation: 'Participatory - poster
City of event: Valencia, Community of Madrid, Spain
Date of event: 09/05/2006
End date: 11/05/2006
Organising entity: Universitat de València **Type of entity:** University
Publication in conference proceedings: Yes
A. Sánchez de Miguel; C. Diaz; B. Pila Diez. "Conference proceedings – Primer Encuentro de la Radioastronomía Española 2006(2007)",. 09/2011. ISBN 978-84-370-6754-4
- 46 Title of the work:** A Fireball Produced by a Meteoroid Belonging to the Delta Aquilids Stream
R Nieto; JM Madiedo; JL Ortiz; AJ Castro-Tirado; JM Trigo-Rodríguez; J Zamorano; J Izquierdo; F Ocaña; A Sánchez de Miguel; S Pastor; JA de los Reyes. 1719, pp. 1071. 2013.
- 47 Title of the work:** Chelyabinsk and other February superfireballs
Type of contribution: Scientific book or monograph
S Zamora; A Sánchez de Miguel; F Ocaña. "Highlights on Spanish Astrophysics IX, Proceedings of the XII Scientific Meeting of the Spanish Astronomical Society held on July 18-22, 2016, in Bilbao, Spain, ISBN 978-84-606-8760-3. S. Arribas, A. Alonso-Herrero, F. Figueras, C. Hernández-Monteagudo, A. Sánchez-Lavega, S. Pérez-Hoyos (eds.), 2017, p. 578-578". pp. 578 - 578. 2017.
- 48 Title of the work:** Estimating all-sky night brightness maps from finite sets of SQM measurements
Type of contribution: Scientific book or monograph
V Tilve Rúa; JF Ling; S Bará; A Sánchez de Miguel; M Nievas; J Zamorano. "Highlights of Spanish Astrophysics VIII". pp. 874 - 874. 2015.
- 49 Title of the work:** First results of the spatial and temporal variation of the night sky brightness in the surroundings of Valencia
Type of contribution: Scientific book or monograph
Enric Marco; A Morales Rubio; Jaime Zamorano; A Sánchez de Miguel. "Highlights on Spanish Astrophysics IX, Proceedings of the XII Scientific Meeting of the Spanish Astronomical Society held on July 18-22, 2016, in Bilbao, Spain, ISBN 978-84-606-8760-3. S. Arribas, A. Alonso-Herrero, F. Figueras, C. Hernández-Monteagudo, A. Sánchez-Lavega, S. Pérez-Hoyos (eds.), 2017, p. 785-785". pp. 785 - 785. 2017.
- 50 Title of the work:** Historical Superbolides
Type of contribution: Scientific book or monograph
A Sánchez de Miguel; S Zamora; F Ocaña; C Tapia; A de Burgos; G Herráiz; M Petrova. "Highlights of Spanish Astrophysics VIII". pp. 658 - 658. 2015.
- 51 Title of the work:** Light pollution from the ground, the air and the space
Type of contribution: Scientific book or monograph
A Sánchez de Miguel; J Zamorano; J Gómez Castaño; M Aubé; S Bará; J Gallego; CCM Kyba; D Lombrá; M Nievas; S Pascual; others. "Highlights of Spanish Astrophysics VIII". pp. 872 - 872. 2015.



- 52** **Title of the work:** NIXNOX project: Dark skies of Spain
Name of the conference: XI Scientific Meeting of the Spanish Astronomical Society
City of event: Teruel, Aragon, Spain
Organising entity: Sociedad Española de Astronomía
Type of entity: Associations and Groups
J. Zamorano; A. Sánchez de Miguel; Emilio Alfaro.
- 53** **Title of the work:** ORISON, A Stratospheric Project
Type of contribution: Scientific book or monograph
P Maier; JL Ortiz; A Sanchez de Miguel; JJ Lopez-Moreno; K Schindler; F Graf; J Wolf; T Müller; R Duffard; L Berenguer Poblet; others. "European Planetary Science Congress". 11, 2017.
- 54** **Title of the work:** Preliminary Spectroscopic and Dynamical Analysis of an Earth-Grazer Fireball Observed on December 24, 2014
Type of contribution: Scientific book or monograph
A Moreno; JM Madiedo; J Zamorano; R Goncalves; F Esparteros; JM Trigo-Rodríguez; JL Ortiz; J Lacruz; J Aceituno; E De Guindos; others. "Lunar and Planetary Science Conference". 47, pp. 1088 - 1088. 2016.
- 55** **Title of the work:** STARS4ALL, a Light Pollution Awareness project
Type of contribution: Scientific book or monograph
J Zamorano; C García; R González; C Tapia; A Sánchez de Miguel; S Pascual; E González; J Gallego; P Picazo; J Izquierdo; others. "Highlights on Spanish Astrophysics IX, Proceedings of the XII Scientific Meeting of the Spanish Astronomical Society held on July 18-22, 2016, in Bilbao, Spain, ISBN 978-84-606-8760-3. S. Arribas, A. Alonso-Herrero, F. Figueras, C. Hernández-Monteagudo, A. Sánchez-Lavega, S. Pérez-Hoyos (eds.), 2017, p. 780-783". pp. 780 - 783. 2017.
- 56** **Title of the work:** The 2011 Giacobinid Outburst: Meteoroid Flux Determination and Orbital Data by Using Video Imagery from the Spanish Fireball Network
Name of the conference: Lunar and Planetary Institute Science Conference ..., 2012
Type of participation: 'Participatory - poster
JM Trigo-Rodríguez; JM Madiedo; J Cortés; J Dergham; P Pujols; JL Ortiz; AJ Castro-Tirado; J Alonso-Azcárate; J Zamorano; J Izquierdo; F Ocaña; A Sánchez de Miguel; M Tapia; FJ Martín-Torres; J Lacruz; D Rodríguez; F Pruneda; A Oliva; J Pastor-Erades.
- 57** **Title of the work:** The 2016 Quadrantids Balloon-Borne Mission Over Spain: Full HD and Colour Videorecording
Type of contribution: Scientific book or monograph
A Sánchez de Miguel; F Ocaña; CE Tapia Ayuga; JM Madiedo; J Zamorano; J Izquierdo; MA Gómez Sánchez-Tirado; F Ortuno; D Mayo; R Raya; others. "Lunar and Planetary Science Conference". 47, pp. 2637 - 2637. 2016.
- 58** **Title of the work:** UCM Meteor and Fireball Research group: Results 2012--2014
Type of contribution: Scientific book or monograph
F Ocaña; A Sánchez de Miguel; J Zamorano; J Izquierdo; S Pascual; MF Palos; S Orde; G Rodríguez-Coira; S Zamora; C Lorenzo; others. "Highlights of Spanish Astrophysics VIII". pp. 656 - 656. 2015.



Works submitted to national or international seminars, workshops and/or courses

- 1** **Title of the work:** Ciencia Ciudadana- "Cities at Night"
Name of the event: Jornada de Excelencia y Calidad, hacia nuevos modelos de evaluación
City of event: Paterna, Valencian Community, Spain
Date of event: 05/10/2023
End date: 05/10/2023
Organising entity: Instituto de Agroquímica y Tecnología de Alimentos **Type of entity:** State agency
- 2** **Title of the work:** Light Pollution Studies at Universidad Complutense de Madrid
Name of the event: COST Action Loss of the Night. Intercomparison Meeting
City of event: Madrid, Community of Madrid, Spain
Date of event: 25/07/2014
End date: 27/07/2014
Organising entity: Dep. Astrofísica y CC. de la Atmósfera UCM **Type of entity:** University Department
City organizing entity: Madrid, Community of Madrid, Spain
J. Zamorano; A. Sánchez de Miguel.
- 3** **Title of the work:** Contaminación Lumínica y consumo eléctrico: el alumbrado exterior en España y Europa
Name of the event: CONTAMINACIÓN LUMÍNICA: EL LADO OSCURO DE LA LUZ.
City of event: Murcia, Community of Madrid, Spain
Date of event: 15/04/2011
End date: 15/04/2011
Organising entity: Universidad de Murcia **Type of entity:** University
Available on-line at: <<http://tv.um.es/video?id=23931&cod=a1>>.
- 4** **Title of the work:** Estudio fotométrico diferencial de la emisión luminosa al espacio por parte de los países de Europa occidental
Name of the event: 2º Workshop ASTROCAM: Jóvenes Astrofísicos de la Comunidad de Madrid
Date of event: 19/07/2007
End date: 21/07/2007
Organising entity: Universidad Europea de Madrid **Type of entity:** University
Alejandro Sánchez de Miguel.
- 5** **Title of the work:** Experiencias en el PARTNeR-ASA AF-UCM
Name of the event: 2º Workshop ASTROCAM: Jóvenes Astrofísicos de la Comunidad de Madrid
Date of event: 19/07/2007
End date: 21/07/2007
Organising entity: Universidad Europea de Madrid **Type of entity:** University
Cristina Díaz López; Alejandro Sánchez de Miguel.
- 6** **Title of the work:** Técnicas de observación, localización y consejos de Observación
Name of the event: V Cursos de Astrofísica en Sigüenza
Type of event: Course
Reasons for participation: Upon invitation
City of event: Sigüenza, Castile-La Mancha, Spain
Date of event: 16/07/2007



End date: 20/07/2007

Organising entity: Universidad de Alcalá

Type of entity: University

Science Outreach activities

- 1 Title of the work:** Cities at Night
Name of the event: Noche de los investigadores
Type of event: Fairs and exhibitions
City of event: Granada, Andalusia, Spain
Date of event: 29/10/2018
Organising entity: Instituto de Astrofísica de Andalucía -CSIC
Type of entity: R&D Centre
- 2 Title of the work:** Cities at night - Neue Nachtlandkarte der Erde
Name of the event: Radio interview
Type of event: Media interviews
City of event: Madrid, Community of Madrid, Spain
Date of event: 12/01/2015
Organising entity: BR2
City organizing entity: Madrid, Spain
Stephanie Eichler; Alejandro Alejandro Sánchez de Miguel. (Spain): Available on-line at: <<http://www.br.de/radio/bayern2/wissen/iq-wissenschaft-und-forschung/hirtod-lichtverschmutzung-arzneimittel-100.html>>.
- 3 Title of the work:** Space Station Sharper Images of Earth at Night Crowdsourced For Science
Name of the event: Interview
Type of event: Media interviews
City of event: United States of America
Date of event: 14/08/2014
Organising entity: National Aeronautics and Space Administration (NASA)
(United States of America): Available on-line at:
<http://www.nasa.gov/mission_pages/station/research/news/crowdsourcing_night_images/#.VWYwCend_eR>.
- 4 Title of the work:** Un atlas de imágenes nocturnas de la Tierra
Type of event: Media interviews
Geographical area: National
City of event: Spain
Date of event: 11/07/2014
En: El Mundo. (Spain): Unidad Editorial Internet, S.L., 11/07/2014. Available on-line at:
<<http://www.elmundo.es/ciencia/2014/07/11/53bd2ab222601db2118b458c.html>>. ISSN 1576-6969
- 5 Title of the work:** Q& A with Alejandro Sanchez
Date of event: 2014
En: NIGHTSCAPE. (United States of America): Available on-line at:
<http://www.darksky.org/assets/documents/Nightscape/IDA_April2015_LowRes.pdf>.
- 6 Title of the work:** España a Ras de Cielo
Name of the event: Entrevista
Type of event: Media interviews
City of event: Madrid, Community of Madrid, Spain
Date of event: 22/10/2013
Organising entity: ENTE PUBLICO RADIO TELEVISION ESPAÑOLA, S.A.



Available on-line at:

<<http://www.rtve.es/alcanta/videos/espana-a-ras-de-cielo/espana-ras-cielo-espana-noche/2053534/>>.

7 Title of the work: Meteoritos en España: así cayó el bólido que iluminó Madrid en julio de 2012

Name of the event: Entrevista

Type of event: Media interviews

Reasons for participation: Upon invitation

City of event: Madrid, Community of Madrid, Spain

Date of event: 18/02/2013

Organising entity: Diario El Mundo

Type of entity: Business

Available on-line at: <<http://www.elmundo.es/elmundo/2013/02/18/ciencia/1361195803.html>>.

8 Title of the work: Para Todos La 2 - Debate: Contaminación lumínica

Type of event: Media interviews

City of event: Barcelona, Community of Madrid, Spain

Date of event: 21/12/2012

Organising entity: ENTE PUBLICO RADIO TELEVISION ESPAÑOLA, S.A.

City organizing entity: Barcelona, Community of Madrid, Spain

Available on-line at: <<http://www.rtve.es/alcanta/videos/para-todos-la-2/para-todos-2-debate-contaminacion-luminica/1532916/>>.

9 Title of the work: Por el derecho a ver las estrellas

Name of the event: Informativo

Type of event: Media interviews

City of event: Madrid, Community of Madrid, Spain

Date of event: 17/12/2012

Organising entity: ANTENA 3 TELEVISION

Available on-line at: <http://www.antena3.com/especiales/noticias/ciencia/hazte-eco/-informativo/derecho-ver-estrellas_2012121400226.html>.

10 Title of the work: Se acercan las famosas 'lágrimas de San Lorenzo'

Name of the event: Entrevista

Type of event: Media interviews

City of event: Madrid, Community of Madrid, Spain

Date of event: 11/08/2012

Organising entity: ENTE PUBLICO RADIO TELEVISION ESPAÑOLA, S.A.

Available on-line at: <<http://www.rtve.es/noticias/20120808/perseidas/555322.shtml>>.

11 Title of the work: La observación del cielo nocturno

Name of the event: Sobre la mesa - La observación del cielo nocturno

Type of event: Media interviews

Date of event: 24/07/2012

Organising entity: RADIO NACIONAL DE ESPAÑA, S.A.

Available on-line at: <<http://www.rtve.es/alcanta/audios/sobre-la-mesa/sobre-mesa-observacion-del-cielo-nocturno-24-07-12/1489520/>>.

12 Title of the work: Sobre la mesa - Campus científicos de verano para acercar la Universidad a los estudiantes de Bachillerato

Type of event: Media interviews

Date of event: 30/05/2012

Organising entity: RADIO NACIONAL DE ESPAÑA, S.A.



Available on-line at: <<http://www.rtve.es/alicarta/audios/sobre-la-mesa/sobre-mesa-campus-cientificos-verano-para-acercar-universidad-estudiantes-bachillerato-30-05-12/1423759/>>.

- 13** **Title of the work:** Expedición UCM: Eclipse total Australia 2012
Name of the event: Expedición UCM
Type of event: Expedición Científica/Retransmisión
City of event: Australia
Date of event: 2012
Alejandro Sánchez de Miguel; Jaime Izquierdo; Jaime Zamorano Calvo. (Australia): Available on-line at: <<http://eclipseucm.blogspot.com.es/>>.
- 14** **Title of the work:** Informe Semanal: La factura energética
Type of event: Media interviews
City of event: Madrid, Community of Madrid, Spain
Date of event: 12/03/2011
Organising entity: TELEVISION ESPAÑOLA, S.A.
Available on-line at:
<<http://www.rtve.es/alicarta/videos/informe-semanal/informe-semanal-factura-energetica/1043697/>>.
- 15** **Title of the work:** El alumbrado público español es el de mayor gasto eléctrico de Europa
Type of event: Media interviews
Date of event: 04/03/2011
Organising entity: Fundación Eroski **Type of entity:** Foundation
Available on-line at: <http://www.consumer.es/web/es/medio_ambiente/2011/03/04/199322.php>.
- 16** **Title of the work:** El alumbrado público español es el de mayor gasto de Europa
Type of event: Media interviews
Reasons for participation: Upon invitation
Date of event: 03/03/2011
Organising entity: AGENCIA EFE, S.A.
Available on-line at: <<http://www.elmundo.es/elmundo/2011/03/03/economia/1299179578.html>>.
- 17** **Title of the work:** Contaminación lumínica en España
Type of event: Media interviews
Date of event: 03/12/2010
Organising entity: Fundación EROSKI
Available on-line at:
<http://www.consumer.es/web/es/medio_ambiente/energia_y_ciencia/2010/12/02/197418.php>.
- 18** **Title of the work:** De Europa al cielo: Un paseo por la luna De la Noche de los investigadores 2010
Name of the event: Noche de los investigadores
Type of event: Fairs and exhibitions
City of event: Madrid, Community of Madrid, Spain
Date of event: 24/09/2010
Organising entity: Universidad Complutense de Madrid **Type of entity:** University
Available on-line at: <<http://www.madrimasd.org/lanochedelosinvestigadores2010/2010/06/de-europa-al-cielo-un-paseo-por-la-luna/>>.



- 19** **Title of the work:** Expedición UCM: Eclipse total Isla de Pascua 2010
Name of the event: Expedición UCM
Type of event: Expedición científica/retransmisión
City of event: Chile
Date of event: 2010
Miquel Serra Ricart; Jesús Gallego Maestro; Juan Carlos Casado; Jaime Zamorano; Alejandro Sánchez de Miguel; Jaime Izquierdo. Available on-line at: <<http://eclipseucm.blogspot.com.es/>>.
- 20** **Title of the work:** "España gasta 450 millones de euros en alumbrado público, casi el doble que Alemania"
Type of event: Media interviews
Date of event: 26/09/2009
Organising entity: Fundación EROSKI
Available on-line at:
<http://www.consumer.es/web/es/medio_ambiente/energia_y_ciencia/2009/09/26/188242.php>.
- 21** **Title of the work:** Informe semanal - Hijos de las estrellas
Name of the event: Informativo
Type of event: Media interviews
City of event: Borobia, Community of Madrid, Spain
Date of event: 15/08/2009
Organising entity: TELEVISION ESPAÑOLA, S.A.
Available on-line at:
<<http://www.rtve.es/alacarta/videos/informe-semanal/informe-semanal-hijos-estrellas/567531/>>.
- 22** **Title of the work:** Observación astronómica Ruta Quetzal 2009
Name of the event: Ruta Quetzal BBVA
Type of event: Fairs and exhibitions
City of event: Lozoya, Community of Madrid, Spain
Date of event: 17/07/2009
Organising entity: MINISTERIO DE ASUNTOS EXTERIORES
- 23** **Title of the work:** Expedición UCM: Eclipse total China 2008
Name of the event: Expedición UCM
Type of event: Expedición científica/retransmisión
City of event: China
Date of event: 2008
Organising entity: Departamento de Física de la Tierra, Astronomía y Astrofísica II (UCM) **Type of entity:** University Department
Alejandro Sánchez de Miguel; Jaime Izquierdo; Jaime Zamorano.
- 24** **Title of the work:** Expedición UCM: Eclipse total Libia 2006
Name of the event: Expedición UCM
Type of event: Expedición científica/retransmisión
City of event: Libya
Date of event: 2006
Organising entity: Departamento de Física de la Tierra, Astronomía y Astrofísica II (UCM) **Type of entity:** University Department
City organizing entity: Madrid, Community of Madrid, Spain
Jaime Zamorano Calvo; Jaime Izquierdo; Jesús Gallego Maestro; Alejandro Sánchez de Miguel. "CD. Expedición UCM Libia". Available on-line at: <<http://eclipseucm.blogspot.com.es/>>.



- 25** **Title of the work:** Retransmisión del Eclipse Anular de Sol 2005
Name of the event: Eclipse Anular 2005
Type of event: Retransmisiones
City of event: Madrid, Community of Madrid, Spain
Date of event: 03/10/2005
Organising entity: Departamento de Física de la Tierra, Astronomía y Astrofísica II (UCM) **Type of entity:** University Department
City organizing entity: Madrid, Community of Madrid, Spain
Alejandro Sánchez de Miguel; David Montes; Jaime Zamorano; Jesús Gallego Maestro.
- 26** **Title of the work:** Todo lo que quiso saber de los Agujeros negros y nadie le explicó
Name of the event: Astronómico Astromartos 2005
Type of event: Conferences given
City of event: Martos, Community of Madrid, Spain
Date of event: 02/08/2005
Organising entity: Asociación AstroMartos **Type of entity:** Associations and Groups
- 27** **Title of the work:** Taller de Astronomía: “Preparando el próximo Eclipse Anular”, “Buscando OBNIs (Objetos Brillantes no identificados)” y “El Sol en una caja”
Name of the event: VI Feria Madrid por la Ciencia
Type of event: Fairs and exhibitions
Reasons for participation: Upon invitation
City of event: Madrid, Community of Madrid, Spain
Date of event: 2005
Organising entity: Comunidad de Madrid **Type of entity:** Gobierno Autonomico
City organizing entity: Madrid,
EUGENIA GONZÁLEZ DE LA ROCHA DE LA ROCHA; ROSA MECHA; JAVIER MEJUTO GONZÁLEZ; SERGIO VELASCO MUÑOZ; ALEJANDRO SÁNCHEZ DE MIGUEL. "Buscando OBNI (objetos brillantes no identificados); Electricidad y magnetismo, la unión que permite la levitación; Cartografía magnética cerebral; Einstein y el movimiento browniano. ¿Quieres contar moléculas?". Available on-line at: <http://www.madrimasd.org/cienciaysociedad/feria/publicaciones/Feria6/3/Univ_Complutense.pdf>.
- 28** **Title of the work:** Retransmisión Transito de Venus 2004
Name of the event: Retransmisión Transito de Venus
Type of event: Retransmisiones
City of event: Madrid, Community of Madrid, Spain
Date of event: 04/06/2004
Organising entity: Departamento de Física de la Tierra, Astronomía y Astrofísica II (UCM) **Type of entity:** University Department
City organizing entity: Madrid, Community of Madrid, Spain
Alejandro Sánchez de Miguel; David Montes; Jesús Gallego; Jaime Zamorano.
- 29** **Title of the work:** Como hacer un espectrografo visual (y otras curiosidades)
Name of the event: Astrored Starparty
Type of event: Conferences given
City of event: Borobia, Castile and León, Spain
Date of event: 17/08/2002
- 30** **Title of the work:** Contaminación lumínica
Name of the event: Campus Pary14
Type of event: Conferences given
City of event: Valencia, Community of Madrid, Spain



Organising entity: ASOCIACION E3 FUTURA
City organizing entity: Valencia, Community of Madrid, Spain
Alejandro Sánchez de Miguel.

- 31 Title of the work:** Observaciones Solares
Name of the event: Programa de Campus Científicos de Verano 2011
City of event: Madrid, Community of Madrid, Spain
Organising entity: Universidad Complutense de Madrid **Type of entity:** University
Available on-line at:
<<http://www.campusmoncloa.es/es/noticias/nuevo-blog-de-los-campus-cientificos-de-verano-2011/117/>>.

R&D management and participation in scientific committees

Scientific, technical and/or assessment committees

- 1 Committee title:** Comisión Pro-AM
Primary (UNESCO code): 210000 - Astronomy & Astrophysics
Affiliation entity: Sociedad Española de Astronomía
Start-End date: 2009 - 2011
- 2 Committee title:** Sustainability Comission
Affiliation entity: Sociedad Española de Astronomía
Start date: 01/10/2020
- 3 Committee title:** Scientific commite
Affiliation entity: Stars4all fundation
Start date: 2018

Organization of R&D activities

- 1 Title of the activity:** 1st European Workshop on Artificial Nighttime Light Remote Sensing
Type of activity: Workshop
Convening entity: Europeam Space Agency **Type of entity:** Space Agency
City convening entity: Noordwijk, Holland
Start-End date: 30/03/2022 - 01/04/2022
- 2 Title of the activity:** COST Action Loss of the Night. Intercomparison Meeting
Type of activity: technical **Geographical area:** European Union
City convening entity: Madrid, Community of Madrid, Spain
Start-End date: 23/07/2014 - 25/07/2014 **Duration:** 3 days
- 3 Title of the activity:** VII Reunión científica de la Sociedad Española de Astronomía
Type of activity: Congreso **Geographical area:** National
Convening entity: Sociedad Española de Astronomía **Type of entity:** Associations and Groups
City convening entity: Madrid, Community of Madrid, Spain
Type of participation: Organiser
Start date: 2010 **Duration:** 5 days



- 4** **Title of the activity:** XIX Congreso Estatal de Astronomía
Type of activity: Congreso **Geographical area:** National
City of event: Madrid, Community of Madrid, Spain
Convening entity: Asociación de Astrónomos Aficionados - UCM
City convening entity: Madrid, Community of Madrid, Spain
Type of participation: Miembro del comité científico asesor
Nº assistants: 300
Start date: 2010 **Duration:** 3 days
- 5** **Title of the activity:** Congreso SEA, Colaboración ProAM
Type of activity: Congreso **Geographical area:** National
Convening entity: Sociedad Española de Astronomía **Type of entity:** Associations and Groups
City convening entity: Córdoba, Andalusia, Spain
Type of participation: Miembro del Comité científico Asesor
Nº assistants: 150
Start date: 2009
- 6** **Title of the activity:** 4as Jornadas Astronómicas de Madrid
Type of activity: Jornadas **Geographical area:** Regional
Convening entity: Agrupación Astronómica de Madrid **Type of entity:** Associations and Groups
City convening entity: Coslada, Community of Madrid, Spain
Type of participation: Organiser
Start date: 2008
- 7** **Title of the activity:** 3as Jornadas Astronómicas de Madrid
Type of activity: Jornadas **Type of entity:** Associations and Groups
Convening entity: Asociación de Astrónomos Aficionados -UCM
City convening entity: Madrid, Community of Madrid, Spain
Type of participation: Organiser
Nº assistants: 150
Start date: 2006
- 8** **Title of the activity:** 2as Jornadas Astronómicas de Madrid
Type of activity: Jornadas Regionales **Geographical area:** Regional
Convening entity: Asociación de Astrónomos Aficionados - UCM **Type of entity:** Associations and Groups
City convening entity: Madrid, Community of Madrid, Spain
Type of participation: Chairman
Nº assistants: 150
Start date: 2003
- 9** **Title of the activity:** 1as Jornadas Astronómicas de Madrid
Type of activity: Congreso regional **Geographical area:** Regional
Convening entity: Asociación de Astrónomos Aficionados - UCM
City convening entity: Madrid, Community of Madrid, Spain
Type of participation: Chairman
Nº assistants: 150



Start date: 2001

R&D management

- 1 Name of the activity:** Cities at Night
Type of management: Programme management
Performed tasks: Coordination
Entity: Fundación Stars4all/SaveStars Consulting S.L./Universidda Complutense de Madrid
Start date: 07/07/2014
- 2 Name of the activity:** Miembro de Junta de Facultad
Type of management: Management of body
Performed tasks: Representación de estudiantes
Entity: Facultad de Ciencias Físicas
Start date: 01/04/2003
Access system: By vote among several candidates
Type of entity: University
Duration: 5 years

National and international forums and committees

- 1 Name of the forum:** Meeting on Light Pollution: Challenges and Responses for Monitoring it
Professional category: President of the Advisory Comitee
Organising entity: Ministerio de Ciencia e Innovación
Type of entity: Ministry
City organizing entity: Granada, Community of Madrid, Spain
Start-End date: 14/11/2023 - 15/11/2023
- 2 Name of the forum:** Comité internacional
Professional category: Cochair
Organising entity: International Dark Sky Association
Type of entity: Associations and Groups
City organizing entity: Tucson, Arizona, US, United States of America
Start-End date: 01/04/2021 - 31/12/2022

Other achievements

Stays in public or private R&D centres

Entity: Freie Universität Berlin
Type of entity: University
Faculty, institute or centre: Institute for Space Sciences
City of entity: Berlin, Berlin, Germany
Start-End date: 01/10/2013 - 31/12/2013
Goals of the stay: Guest



Obtained grants and scholarships

- 1** **Name of the grant:** STSM title: Multiband photometric study of light pollution in Berlin
City awarding entity: Berlin, Berlin, Germany
Identify key words: Astronomy; Remote sensing
Aims: Pre-doctoral
Awarding entity: Council of the European Union **Type of entity:** State agency
Amount of the grant: 3.400 €
Conferral date: 16/09/2013 **Duration:** 3 months
End date: 20/12/2013
Entity where activity was carried out: Freie Universität Berlin Department of Earth Sciences Institute for Space Sciences
- 2** **Name of the grant:** Formación del Profesorado Universitario
City awarding entity: Madrid, Community of Madrid, Spain
Aims: Pre-doctoral
Awarding entity: Ministerio de Ciencia e Innovación. **Type of entity:** Ministerio Investigación
Conferral date: 01/08/2009 **Duration:** 4 years
End date: 01/08/2013
Entity where activity was carried out: Dep. Astrofísica y CC. de la Atmósfera
- 3** **Name of the grant:** BECA-COLABORACIÓN
Aims: Colaboración AIA-IYA 2009
Awarding entity: Ministerio de Educación, Política Social y Deporte **Type of entity:** State agency
Amount of the grant: 2.700 €
Conferral date: 06/11/2008 **Duration:** 1 year
Entity where activity was carried out: Departamento de Física de la Tierra, Astronomía y Astrofísica II (UCM)
Faculty, institute or centre: CC. Físicas

Scientific societies and professional associations

- 1** **Name of the society:** Real Sociedad Española de Física
City affiliation entity: Spain
Start-End date: 2005 - 2007
- 2** **Name of the society:** American Association for the Advancement of Science
City affiliation entity: United States of America
Start-End date: 2000 - 2004
- 3** **Name of the society:** Astroinnova
Start date: 2012
- 4** **Name of the society:** International DarkSky Association
Start date: 2012



- 5** **Name of the society:** Celfosc
Start date: 2010

- 6** **Name of the society:** Astrohenares
City affiliation entity: Community of Madrid, Spain
Start date: 2008

- 7** **Name of the society:** Sociedad Española de Astronomía
City affiliation entity: Spain
Start date: 2008

- 8** **Name of the society:** Grupo de Protección del Cielo
Start date: 2001

- 9** **Name of the society:** Asociación de Astrónomos Aficionados - UCM
Affiliation entity: Universidad Complutense de Madrid **Type of entity:** University
City affiliation entity: Madrid, Community of Madrid, Spain
Professional category: Socio de Honor
Nº of members: 700
Start date: 1998

- 10** **Name of the society:** Agrupación Astronómica de Madrid
City affiliation entity: Community of Madrid, Spain
Nº of members: 500
Start date: 1997

Co-operation networks

- 1** **Name of the network:** Loss of the Night Network
Identification of the network: ESSEM COST Action ES1204
Start date: 30/09/2014

- 2** **Name of the network:** LoNNe
Identification of the network: ESSEM COST Action ES1204
Start date: 2012 **Duration:** 4 years

- 3** **Name of the network:** All-wavelength Extended Groth strip International Survey(AEGIS)

- 4** **Name of the network:** Astrid

- 5** **Name of the network:** AstroMadrid



6 Name of the network: RED ESPAÑOLA DE ESTUDIOS SOBRE LA CONTAMINACION LUMINICA

7 Name of the network: Red de Investigación sobre Bóolidos y Meteoritos (SPMN)

8 Name of the network: Stas4all

Prizes, mentions and distinctions

1 Description: IDA Montly Star

Awarding entity: International Dark Sky Association

City awarding entity: United States of America

Conferral date: 01/11/2021

2 Description: TOP100 most Downloaded

Awarding entity: Scientific Reports

Conferral date: 31/03/2021

3 Description: TOP 100

Awarding entity: Altmetric

Conferral date: 29/11/2018

Type of entity: CIBER

4 Description: Dark Sky defender

Awarding entity: International Dark Sky Association **Type of entity:** Associations and Groups

City awarding entity: Leicester, United Kingdom

Conferral date: 05/09/2014

Recognition linked: <http://www.darksky.org/night-sky-conservation/annual-awards>

5 Description: Honor membership

Awarding entity: Asociación de Astronomos Aficionados de la Universidad Complutense de Madrid

City awarding entity: Madrid, Community of Madrid, Spain

Conferral date: 2010

6 Description: Premio Escolar: Investigación

Awarding entity: Instituto Nacional de Técnica

Aeroespacial

Conferral date: 2009

Type of entity: State agency



Obtained accreditations/recognitions

- 1** **Description:** R3
Accrediting entity: Agencia Estatal de Investigación **Type of entity:** State agency
Date of recognition: 11/10/2023
- 2** **Description:** PROFESOR/A AYUDANTE DOCTOR/A
Accrediting entity: Agencia Nacional de Evaluación **Type of entity:** Agencia de la Calidad y Acreditación
Date of recognition: 22/07/2020
- 3** **Description:** PROFESOR/A CONTRATADO/A DOCTOR/A
Accrediting entity: Agencia Nacional de Evaluación **Type of entity:** Agencia de la Calidad y Acreditación
Date of recognition: 22/07/2020
- 4** **Description:** PROFESOR/A DE UNIVERSIDAD PRIVADA
Accrediting entity: Agencia Nacional de Evaluación **Type of entity:** Agencia de la Calidad y Acreditación
Date of recognition: 22/07/2020