

Curriculum vitae

DR. JOSÉ A. CABALLERO

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Résumé

■ Current professional situation and main duty:

- *Investigador Titular* (senior staff researcher) of the Instituto Nacional de Técnica Aeroespacial at the Centro de Astrobiología, <http://cab.inta-csic.es>
- CARMENES Instrument Astronomer, <http://carmenes.caha.es>

■ Publication summary:

- **78** refereed publications in world's leading journals in Astrophysics, including **5** letters; **33** of them (42 %) as a first or single author, and **12** of them (15 %) as a second author; **64** of them (82 %) in first quartile of impact factor
- **180** contributions to international and national meetings: **20** SPIE, **5** refereed, **54** oral (**9** invited, **27** plenary, **18** splinter), **101** poster
- **14** main technical documents for instrument design reviews and space mission validation, **5** circulars, **11** Vizier catalogues, **4** collaborations in books, **17** outreach articles
- Total citations $N_{\text{total}} = \mathbf{2665}$, first-author citations $N_{\text{1st}} = \mathbf{942}$, author-normalised citations $N_{\text{norm}} = \mathbf{729}$, entries in the Astrophysics Data System $n_{\text{ADS}} = \mathbf{204}$, age-adjusted squared-root total-research-impact index $riq = \mathbf{173}$, Hirsch index $h = \mathbf{28}$

■ University:

- (Co-)supervisor of **2** PhD, **21** MSc and **3** BSc theses, **3** traineeships
- (Co-)lecturer of **3** master, **1** graduate, **4** summer school courses, assistant lecturer of **1** graduate course
- **8** years of university academic experience at Universidad Complutense de Madrid and Universidad Autónoma de Madrid

■ Principal investigatorship:

- Projects: AYA2015-74151-JIN, AYA2011-30147-C03-03, RYC2009-04666, JCI2006-3925-2095
- Total budget: **750 216 EUR** awarded, **295 500 EUR** administered
- Employer: **1** computer engineer, **1** science postdoc

■ Awards and honours:

- Honorary Professor at the Departamento de Astrofísica y Ciencias de la Atmósfera of the Universidad Complutense de Madrid (2013-2015)
- *Sociedad Española de Astronomía* award to the best thesis in Astrophysics (2006-2007)

■ Professional services:

- Board: *Máster de Astrofísica* UCM
- Council: ESAC Science Faculty terminator

- Time allocation committees: ESO OPC, IAC CAT
 - **2** contract panels, **12** PhD thesis review panels, external referee of **6** international research project proposals, referee of **20** international publications
 - Director, chair of convenors, SOC/LOC chair/co-chair/member of **38** workshops, meetings and courses
- **Communication:**
- Collaborator of *Longitud de onda*, a programme of Radio Clásica RTVE (2016+)
 - Contributing editor of *Musica Universalis*, a section of outreach magazine *Astronomía* (2013+)
 - Founder member of **•unitedsoundsofcosmos**, a *Rock'n'Astronomy* outreach project, <http://exoterrae.eu/usc/> (2008+)
 - **11** astro-concerts; **17** popular talks; numerous interviews in television, radio, journals and newspapers; other outreach activities
- **Academic degrees:**
- *Philosophiæ doctor* (Ph.D. Astrophysics – Doctorado), Universidad de La Laguna/Instituto de Astrofísica de Canarias, Tenerife, Spain, 2006
 - *Magister scientiæ* (M.Sc. Astrophysics – Máster), Universidad de La Laguna/Instituto de Astrofísica de Canarias, Tenerife, Spain, 2003
 - *Baccalaureus scientiæ* (B.Sc. Physics/Astrophysics – Licenciatura), Universidad Complutense de Madrid, Madrid, Spain, 2000
- **Personal and contact data:**
- | | |
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1. Current and previous scientific activities

- *Investigador Titular* (senior staff researcher) of the Instituto Nacional de Técnica Aeroespacial at the Centro de Astrobiología, Madrid (*escala Científico Titular de Organismo Público de Investigación, grupo A1, nivel 26*) (Mar. 2017+)
- *Joven Investigador* (senior post-doc researcher) of the Consejo Superior de Investigaciones Científicas at the Centro de Astrobiología, Madrid (Jan. 2017–Mar. 2017)
- *Klaus Tschira Stiftung wissenschaftlicher Mitarbeiter* (post-doc researcher) at the Landessternwarte Königstuhl, Zentrum für Astronomie der Universität Heidelberg, Germany (Jan. 2016–Dec. 2016)
- *Investigador Ramón y Cajal* of the Consejo Superior de Investigaciones Científicas at the Centro de Astrobiología, Madrid (Jan. 2010–Dec. 2015)
- *Investigador Juan de la Cierva* at the Departamento de Astrofísica y Ciencias de la Atmósfera of the Universidad Complutense de Madrid, Spain (Sep. 2007–Dec. 2009)
- *Invited post-doc researcher* at the Departamento de Astrofísica y Ciencias de la Atmósfera of the Universidad Complutense de Madrid, Spain (Aug. 2007)
- *Alexander von Humboldt Stipendiat* at the Max-Planck-Institut für Astronomie, Heidelberg, Germany (Aug. 2006–Jul. 2007)
- *Invited post-doc researcher* at the Max-Planck-Institut für Astronomie, Heidelberg, Germany (May.–Jun. 2006)
- *College Based Sandwich Student* at the Particle Physics and Astronomy Research Council and Support Astronomer at the Isaac Newton Group of Telescopes at the Observatorio del Roque de Los Muchachos, La Palma, Spain (Feb.–Apr. 2006)
- *Colaborador-astrofísico residente* — Ph.D. research student and collaborator at the Instituto de Astrofísica de Canarias, Tenerife, Spain (Nov. 2005–Feb. 2006)
- *Astrofísico residente* — Ph.D. research student with a contract at the Instituto de Astrofísico de Canarias, Tenerife, Spain (Oct. 2001–Oct. 2005)
- *Becario de Formación de Personal Universitario* — Ph.D. research student with a grant at the Departamento de Astrofísica y Ciencias de la Atmósfera of the Universidad Complutense de Madrid, Spain (located at the Instituto de Astrofísica de Canarias; May.–Sep. 2001)
- *Becario externo* — Ph.D. research student with a Fundación Iberdrola grant at the Instituto de Astrofísica de Canarias (Jan.–Apr. 2001)
- *Investigador invitado* — Invited Ph.D. researcher at the Instituto de Astrofísica de Canarias, Tenerife, Spain (Nov.–Dec. 2000)
- *Colaborador* — Collaborator at the Laboratorio de Astrofísica Espacial y Física Fundamental, Madrid, Spain (Jul. 2000–Nov. 2000)
- *Becario-colaborador* — Undergraduate student/collaborator at the Departamento de Astrofísica y Ciencias de la Atmósfera of the Universidad Complutense de Madrid, Spain (academic course 1999–2000)

2. Excellence

2.1. Awards and honours

Individual:

- **Colaborador honorífico:** Honorary Collaborator at the *Departamento de Astrofísica y Ciencias de la Atmósfera* of the Universidad Complutense de Madrid (2015–2016, 2017–2018)
- **Profesor honorífico:** Honorary Professor at the *Departamento de Astrofísica y Ciencias de la Atmósfera* of the Universidad Complutense de Madrid (2013–2014, 2014–2015)
- **Premio Tesis SEA:** *Mejor Tesis Doctoral Española en Astronomía en 2006–2007*— Award of the *Sociedad Española de Astronomía* to the best Spanish PhD thesis in Astrophysics in 2006–2007 (Santander, Jul. 2008)

Group:

- *Mención de honor “Trabajos de Divulgación Científica. Prensa, Radio y Televisión”, Ciencia en Acción XVIII:* Longitud de Onda (Ermua, Oct. 2017)
- *Premio especial del jurado Prismas Casa de las Ciencias: Astronomía* magazine (A Coruña, Nov. 2016)

2.2. Positive evaluations

- Triennia (*trienios*): **3** (INTA, May 2017)
- i3 certificate (*Programa de Incentivación de la Incorporación e Intensificación de la Actividad Investigadora*) (Agencia Nacional de Evaluación y Prospectiva, May 2014)
- Extension of Ramón y Cajal fellowship (CSIC, Dec. 2013)

2.3. Competitive processes

- Científico Titular (INTA, 2016)
- Joven Investigador (MINECO, 2016)
[the sole astrophysicist and among the best 15 of CSIC]
- Klaus Tschira Stiftung Forscher (LSW, 2015)
- Investigador Ramón y Cajal (MICINN, 2009)
[99.9/100, 10th in *Física y Ciencias del Espacio*, 2nd in Astrophysics]
- Investigador Juan de la Cierva (MEC, 2006)
- Alexander von Humboldt Stipendiat (AvH-Stiftung, 2006)
- Astrofísico Residente (IAC, 2000 –7th– and 2001 –1st–)
- Formación de Profesorado Universitario (MEC, 2001)

3. Supervision

3.1. PhD theses

- Miriam Cortés Contreras: *CARMENES-UCM: scientific preparation of the sample. Multiplicity, chromospheric activity and kinematics*, Universidad Complutense de Madrid (co-supervised with Prof. D. Montes), 2012–2016 (*Beca del Programa de Formación del Personal Investigador*)
- Francisco Javier Alonso-Floriano: *La población estelar joven en los grupos cinemáticos cercanos. Caracterización de la muestra CARMENES*, Universidad Complutense de Madrid (co-supervised with Prof. D. Montes), 2011–2015 (*Beca del Programa de Formación del Profesorado Universitario*)

3.2. MSc theses

UCM: *Trabajo de Fin de Máster* at the Universidad Complutense de Madrid

ZAH: *Masterarbeiten* at the Zentrum für Astronomie der Universität Heidelberg

UCM+UAM: *Trabajo de Fin de Máster* at the “Máster Interuniversitario en Astrofísica Universidad Complutense de Madrid + Universidad Autónoma de Madrid”

1. Jorge Carro Maroto, UCM (co-supervised with Prof. D. Montes): *CARMENES target characterisation: close and wide multiplicity in M dwarfs*, 2017–[2018]
2. Francisco Javier Lázaro Barrasa, UCM (co-supervised with Prof. D. Montes & Dr. H. M. Tabernero): *Explotación científica de los espectros VIS & NIR de CARMENES: determinación de parámetros estelares (T_{eff} , $\log g$, $[\text{Fe}/\text{H}]$) de enanas M con síntesis espectral*, 2017–[2018]
3. Abel de Burgos Sierra, UCM (co-supervised with Prof. D. Montes): *Espectroscopia OSIRIS/GTC e IDS/INT de estrellas jóvenes en el cúmulo σ Orionis*, 2017–[2018]
4. José Cano González, UCM (co-supervised with Prof. D. Montes): *Explotación científica de CARMENES: control de los espectros VIS y NIR de enanas M y extracción de información sobre rotación y actividad*, 2016–2018
5. Carlos Cifuentes San Román, UCM (co-supervised with Prof. D. Montes): *Caracterización de la muestra CARMENES: actualización del catálogo de entrada con la astrometría y fotometría de Gaia DR1*, 2016–2017
6. Rodrigo González-Peinado, UCM (co-supervised with Prof. D. Montes): *Preparación y explotación científica de CARMENES: la metalicidad de las enanas M*, 2015–2016
7. Minjae Kim, ZAH (co-supervised with Prof. A. Quirrenbach): *The CARMENES input catalogue*, 2014–2015
8. Julia Marín-Yaseli de la Parra, UCM: *Definition of the mission statement for the “La Pinta” interstellar project*, 2014–2015
9. Rubén Fedriani, UCM (co-supervised with Dr. E. Solano): *Search for bright nearby M dwarfs with virtual observatory tools*, 2014–2015
10. Iván Gallardo, UCM (co-supervised with Prof. D. Montes): *CARMENES target characterization: kinematics of M dwarfs*, 2014–2015
11. Esther González Álvarez, UCM (co-supervised with Dr. J. Sanz-Forcada): *CARMENES target characterization: X-rays emission in M dwarfs*, 2013–2014
12. Gonzalo Holgado, UCM (co-supervised with Prof. D. Montes): *CARMENES target characterization: photometry of M dwarfs*, 2013–2014

13. Héctor Martínez Rodríguez, UCM (co-supervised with Prof. D. Montes): *CARMENES target characterization: mining public archives for high-resolution spectra of M dwarfs*, 2013–2014
14. Diego Hidalgo, UCM+UAM (co-supervised with Prof. D. Montes): *CARMENES target characterization: rotation periods of M dwarfs*, 2013–2014
15. Francisco J. Abellán de Paco, UCM+UAM (co-supervised with Prof. D. Montes): *Photometry of M dwarfs in the CARMENES input catalogue*, 2012–2013
16. Carlos A. Gómez González, UCM+UAM (co-supervised with Dr. L. Dinis): *Novel analysis of radial-velocity curves for the detection of super-earths and exo-earths*, 2012–2013
17. Javier Alonso-Santiago, UCM+UAM (co-supervised with Dr. M. R. Zapatero Osorio): *Búsqueda de compañeros lejanos en torno a enanas marrones frías de la vecindad solar mediante movimientos propios*, 2011–2012
18. Ricardo Dorda, UCM+UAM (co-supervised with Prof. D. Montes): *CARMENCITA: CARMENES Cool star Information and daTa Archive*, 2010–2011
19. Isaías Rojas-Peña, UCM+UAM (co-supervised with Prof. D. Montes): *Cinemática de las estrellas con exoplanetas*, 2010–2011
20. Elena Manjavacas, UCM+UAM: *Identificación de las frecuencias y modos de oscilación de estrellas variables en los cúmulos σ Orionis y NGC 6811*, 2010–2011
21. F. Javier Alonso-Floriano, UCM+UAM (co-supervised with Prof. D. Montes): *Búsqueda de estrellas con movimiento propio común en grupos cinemáticos jóvenes con Aladín*, 2009–2010

Cancelled MSc theses:

- Rafael Campillos Cano, UCM (co-supervised with Prof. D. Montes): *Espectroscopia OSIRIS/GTC e IDS/INT de estrellas jóvenes en el cúmulo σ Orionis*, 2016–2017
- José Antonio Sánchez Risco, *Trabajo de Fin de Máster* Valencian International University (co-supervised with Dr. Elisa Nespoli): *Terraformar Marte*, 2016

3.3. BSc theses

Bachelor thesis at the Zentrum für Astronomie der Universität Heidelberg:

- Martin Brinkmöller (co-supervised with Prof. A. Quirrenbach): *Activity in CARMENES spectra*, 2016

Trabajos Académicamente Dirigidos (tutored undergraduate practices) at the Grade in Physics at the Universidad Complutense de Madrid:

- Javier Alonso-Santiago (co-supervised with Prof. D. Montes): *Búsqueda de compañeros de estrellas Gliese con el Observatorio Virtual*, 2010–2011
- F. Javier Alonso-Floriano (co-supervised with Prof. D. Montes): *Búsqueda de estrellas con movimiento propio común en grupos cinemáticos jóvenes con Aladín*, 2008–2009

Unofficial oversight of BSc thesis at UCM by Carlos Moreno Jódar (supervised by Prof. E. de Castro): *Garraf Wide Pairs observed with Gaia*, 2016–[2017]

3.4. Professional traineeships

Traineeship at the European Space Astronomy Centre:

- Carlos Moreno Jódar, ESAC (co-supervised with Dr. E. Solano): *Garraf Wide Pairs observed with Gaia*, 2017
- Rubén Fedriani, ESAC (co-supervised with Dr. E. Solano): *Search for bright nearby M dwarfs with virtual observatory tools*, 2014–2015

Sesión de observación en entorno profesional 3^o ESO

- Sergio Agustí Morales, Liceo Francés de Madrid, Feb. 2018

Unofficial oversight of Astrophysics Senior Project at the Suffolk University, Boston, MA, by Drew Reilly (supervised by Dr. F. Jiménez-Esteban): Identification of unknown “green” subdwarf candidates in Tycho-2 & 2MASS catalogs using Virtual Observatory tools, 2013

4. Participation in funded research projects

4.1. Projects as a principal investigator

- AYA2015–74151–JIN “Targets with exoplanets in the MAIA M-, L- and T-dwarf Archive of Interest for Astrophysics” (*Plan Nacional de Astronomía y Astrofísica PNAYA-Ministerio de Economía y Competitividad MINECO; CAB-CSIC*)
 - Granted amount: 201 586 EUR
 - Administered budget: 65 500 EUR
 - Jan–May 2017
- AvH: Erneuter Forschungsaufenthalt in Deutschland/Renewed Research Stay in Germany “Blaue Erden bei roten Zwergen” (Alexander von Humboldt-Stiftung, Germany)
 - Short-budget AvH-sponsored visits to CARMENES institutions in Germany: IAG, LSW (HS, MPIA and TLS)
 - Mar–Dec 2015
- AYA2011–30147–C03–03: “Detección y estudio de planetas alrededor de estrellas poco masivas: contribución española a CARMENES, un espectrógrafo bicanal para el telescopio de 3.5 m de CAHA. *CARMENES-CAB: exoplanetas, enanas marrones y estrellas de baja masa*” (PNAYA-Ministerio de Ciencia e Innovación MICINN; CAB-CSIC)
 - Granted amount: 260 150 EUR
 - Administered budget: 215 000 EUR
 - Employements: 1 two-year science postdoc (Belén López-Martí), 1 nine-month computer engineer (Mauro López del Fresno)
 - Jan 2012–Jul 2015
 - Coordinated with Instituto de Astrofísica de Andalucía (coordinator) and Universidad Complutense de Madrid
- RYC2009–04666: Ramón y Cajal individual project “From superjupiters to exoearths” (MICINN; Centro de Astrobiología)
 - Granted amount: 192 480 EUR

- Administered budget: 15 000 EUR
- Jan 2010–Dec 2014 (Dec 2015)
- JCI2006–3925–2095: Juan de la Cierva individual project “Towards the imaging of exo-jupiters and exo-earths around cool stars in the solar neighbourhood” (MEC; Universidad Complutense de Madrid)
 - Granted amount: 96 000 EUR
 - Administered budget: 0 EUR
 - Sep 2007–Dec 2009

4.2. International projects as a co-investigator

- DFG Forschergruppe 2544 “Blaue Planeten bei Roten Sternen - das Forschungsprogramm des CARMENES Projekts” (Deutsche Forschungsgemeinschaft; Georg-August-Universität Göttingen, Institut für Astrophysik), 2017+
- Uni-HD Mobilität “CARMENES – A search for nearby twins of the Earth”, Verstärkung des internationalen Austausches (Universität Heidelberg; Landessternwarte Königstuhl), 2015–2016
- DAAD Hochschuldialogs Südeuropa 57062469, “Organisation of *2nd CARMENES scientific meeting and 1st CARMENES school*, Göttingen, 14–18 Oct 2013” (Deutscher Akademischer Austauschdienst; Institut für Astrophysik Göttingen)
- “*Gaia* Research for European Astronomy Training” (GREAT) infrastructure funded by a European Science Foundation programme (2010–2015) and by an FP7 Marie Curie Initial Training Network (2011–2015)
- GTC 010664100001: “Una alternativa de diseño conceptual de un espectrógrafo de resolución intermedia en el infrarrojo” (Gran Telescopio Canarias; Centro de Astrobiología), 2010
- MPG-CSIC 2009: “Design study of the High-Resolution Spectrograph”, Calar Alto (Max-Planck-Gesellschaft & Consejo Superior de Investigaciones Científicas; Zentrum für Astronomie Heidelberg), 2009

4.3. *Plan Nacional* projects as a co-investigator

- AYA2016-79425-C3-2-P “Enanas marrones y planetas aislados y como compañeros de estrellas” (PNAYA-MINECO; CAB-CSIC)
- AYA2014-54348-C3-2-R “Search for terrestrial planets around cool stars with new-technology astronomical instruments. Brown dwarfs and planets in clusters and around stars” (PNAYA-MINECO; CAB-CSIC)
- AYA2008-06423-C03-03: “Scientific Participation of Spain in the *WSO-UV* project. I” (MICINN; Universidad Complutense de Madrid)
- AYA2008-00695: “Estrellas frías de la vecindad solar. Actividad magnética, cinemática y multiplicidad” (MICINN; Universidad Complutense de Madrid)
- AYA2006-12612: “NAHUAL: un espectrógrafo échelle infrarrojo para el GTC” (*Ministerio de Educación y Ciencia* MEC; Instituto de Astrofísica de Canarias)
- AYA2005-02750: “Caracterización espectroscópica y cinemática de las estrellas frías de la vecindad solar” (MEC; Universidad Complutense de Madrid)

- AYA2005–04523: “Formación y evolución de estrellas de baja masa y objetos subestelares” (MEC; Instituto de Astrofísica de Canarias)
- AYA2001–1657: “Anisotropías del fondo cósmico de microondas, nucleosíntesis, objetos subestelares, implicaciones sobre materia oscura bariónica y no bariónica” (MEC; Instituto de Astrofísica de Canarias)

4.4. Other national projects as a co-investigator

- AYA2015–71820–REDT “Red Española de Explotación Científica de *Gaia*” (PNAYA-MINECO, Acción de Dinamización “Redes de Excelencia”; Universitat de Barcelona)
- AYA2009–08481–E: “Fase de diseño preliminar de CARMENES: un espectrógrafo échelle infrarrojo para Calar Alto” (MICINN)
- AYA2009–08488–E: “Creación de la Red Española de *Gaia*” (MICINN)
- CSD2006–70: Consolider-Ingenio 2010 programme “Primera Ciencia con GTC” (MEC; Instituto de Astrofísica de Canarias)
- AYA2005–24102–E: “Creación de la Red Temática del Observatorio Virtual Español” (MEC)
- AYA2004–21912–E: “Red Española de Planetas: subvención para reuniones de una red temática” (MEC)
- AYA2004–22113–E: “Desarrollo del diseño conceptual del espectrógrafo NAHUAL” (MEC)

4.5. Regional and institutional programmes as a co-investigator

- IAC Severo Ochoa 2012 advanced fellowship: “The IACOB project: a new era in the study of Galactic OB stars” (Instituto de Astrofísica de Canarias, PI: Sergio Simón-Díaz)
- I-LINK0867 2013–2014: “CARMENES: a radial-velocity survey for terrestrial planets in the habitables zones of M dwarfs” (Consejo Superior de Investigaciones Científicas; Instituto de Astrofísica de Andalucía)
- P2009/ESP–1496: “Ayuda para la realización de Programas de Actividades de I+D entre Grupos de Investigación de la Comunidad de Madrid *AstroMadrid*” (Comunidad de Madrid)
- S–0505/ESP/0237: “Ayuda para la realización de Programas de Actividades de I+D entre Grupos de Investigación de la Comunidad de Madrid *AstroCAM*: Red de Astrofísica de la Comunidad Autónoma de Madrid” (Comunidad de Madrid)

5. Professional service

5.1. Boards

Máster de Astrofísica, Universidad Complutense de Madrid

- *Comisión Coordinadora del Máster*, full member (2017–2018)

5.2. Councils

European Space Astronomy Centre

- ESAC science faculty: council terminator (2017–2018)

5.3. Time allocation committees

Observing Programme Committee of the European Southern Observatory (Panel C)

- P98 (May 2016): panelist
- P97 (Nov. 2015): panelist
- P96 (May 2015): panelist

Night time *Comisión de Asignación de Tiempos* of the Instituto de Astrofísica de Canarias, Panel III Stars & Planets (ESPLA)

- 2015A (Nov. 2014): *vocal 1* (member)
- 2014B (May 2014): *vocal 2* (member)
- 2014A (Nov. 2013): *vocal 3* (member)

5.4. Contract panels

- Science postdoc contracted at CAB under AYA2011–30147–C03–03 (chair, 2013)
- Computer engineer contracted at CAB under AYA2011–30147–C03–03 (chair, 2012)

Official member of **one** cancelled science postdoc contract panel at Centro de Astrobiología (2017). *Unofficial* consultant of **two** contract panels of mechanical engineers at the Landessternwarte Königstuhl (2013 –external–, 2016 –internal–)

5.5. PhD thesis review panels

1. Javier Alonso-Santiago: *Clusters with K supergiants* (Universidad d’Alacant, 2018 – secretary)
2. Miguel Ángel López García: *Caracterización de la población estelar joven en la Nebulosa Molecular de Orión B* (Universidad Complutense de Madrid, 2017 – external reviewer and full member)
3. Ricardo Dorda Laforet: *New perspectives on red supergiants: stellar properties based on large samples, empirical relations and applications* (Universidad de Alicante, 2016 – substitute member)
4. María Magdalena Hernán-Obispo: *Detección de planetas en estrellas activas y estudio de la interacción estrella-planeta: el caso de BD+20 1790* (Universidad Complutense de Madrid, 2015 – substitute member)
5. Miriam Aberasturi: *Identificación y caracterización de estrellas poco masivas y enanas marrones con el Observatorio Virtual* (Universidad Complutense de Madrid, 2015 – substitute member)
6. Paulo Alberto Mies Páez: *Linear polarization measurements of cool atmospheres* (Universidad de La Laguna, 2015 – full member)
7. Álvaro Ribas Gómez: *Protoplanetary disk evolution in nearby star-forming regions* (Universidad Autónoma de Madrid, 2015 – substitute member)
8. Patricia Cruz Gamba: *Characterization of the planet-host stars WTS-1 and WTS-2, and detection of the secondary eclipses of WASP-10b and Qatar-1b* (Universidad Autónoma de Madrid, 2015 – substitute member)

9. Fátima López-Martínez: *Restricciones a las propiedades en las magnetosferas de las estrellas T Tauri a través del estudio de líneas espectrales en el ultravioleta* (Universidad Complutense de Madrid, 2015 – full member)
10. Hugo Martín Tabernero Guzmán: *Caracterización de miembros de grupos cinemáticos estelares a partir del análisis detallado de abundancias químicas* (Universidad Complutense de Madrid, 2014 – full member)
11. Karla Peña-Ramírez: *Población y función de masa subestelar en regiones de formación estelar* (Universidad de La Laguna, 2012 – full member)
12. Raquel Martínez-Arnáiz: *Chromospheric activity and rotation of FGK stars in the solar neighbourhood: characterising exoplanetary system host stars* (Universidad Complutense de Madrid, 2012 – substitute member)

5.6. External referee of international research project proposals

- *Study Scholarships for Graduates of All Disciplines and Research Grants for Doctoral Candidates and Young Academics and Scientists* – Deutscher Akademischer Austauschdienst, DAAD España (2017)
- *Fondo Nacional de Desarrollo Científico y Tecnológico* – Ministerio de Educación de Chile (2016)
- *Conseil franco-québécois de coopération universitaire* – Fonds de recherche du Québec, Nature et technologies (2016)
- *Fondo Gemini-Comisión Nacional de Investigación Científica y Tecnológica* – Ministerio de Educación de Chile (2014)
- *Fondo para la Investigación Científica y Tecnológica, Agencia Nacional de Promoción Científica y Tecnológica* – Ministerio de Ciencia, Tecnología e Innovación Productiva de Argentina (2011)
- *Grantová agentura České republiky* – Czech Science Foundation (2010)

5.7. Referee of international publications

- Astrophysical Journal (ApJ): 2 (letters) + 4 (main journal)
- Astronomy & Astrophysics (A&A): 4
- Astronomical Journal (AJ): 3
- Monthly Notices of the Royal Astronomical Society (MNRAS): 2
- Astronomische Nachrichten (AN): 1
- Astronomical Society of the Pacific (ASP): 1 (book chapter)
- Astrobiology (AsBio): 1
- The Observatory (Obs): 1
- Advanced Space Research (ASR): 1

Declined because of conflict of interest: 4

5.8. Institutional representative

Centro de Astrobiología:

- CARMENES Consortium and Science Coordination Team (Dec. 2017+)
- Evaluation of *Máster de Astrofísica*, Universidad Complutense de Madrid, by Agencia Nacional de Evaluación de la Calidad y Acreditación (ANECA) (Jun. 2017)

6. Academic experience

6.1. Lectureships at the Universidad Autónoma de Madrid

Course 2016–2017:

- Co-lecturer of the subject *Estructura y evolución estelar (asignatura optativa de máster UAM)*; second trimester. Given course credits: 0.8

6.2. Lectureships at the Universidad Complutense de Madrid

Course 2013–2014:

- Co-lecturer of the subject *Sistema Solar y exoplanetas (asignatura optativa de máster UCM)*; second semester. Given course credits: 3.5

Course 2012–2013:

- Lecturer of the subject *Física del Sistema Solar (asignatura optativa de máster UCM+UAM)*; first semester. Given course credits: 3.0

Course 2011–2012:

- Lecturer of the subject *Física del Sistema Solar (asignatura optativa de máster UCM+UAM)*; first semester. Given course credits: 3.0

Course 2010–2011:

- Lecturer of the subject *Física del Sistema Solar (asignatura optativa de máste UCM+UAM)*; first semester. Given course credits: 3.0

Course 2009–2010:

- Assistant lecturer of the subject *Astrofísica (asignatura optativa del primer ciclo de licenciatura)*; second semester. Given course credits: 1.0

Course 2008–2009:

- Co-lecturer of the subject *Del quark al Cosmos (asignatura genérica de libre elección de licenciatura)*; first semester. Given course credits: 1.6
- Assistant lecturer of the subject *Astrofísica (asignatura optativa del primer ciclo de licenciatura)*; second semester. Given course credits: 1.0

- Member of the board of examiners of *Trabajos Académicamente Dirigidos* (tutored practices for last-year undergraduate students); second semester

Course 2007–2008:

- Associate professor of the subject *Del quark al Cosmos* (*asignatura genérica de libre elección de licenciatura*); first semester. Given course credits: 1.3

6.3. Lectureships in summer schools

- *IV Curso de Astrofísica: Grandes preguntas de la astrofísica del siglo XXI*, Universidad de Verano de Teruel, Universidad de Zaragoza (2017):
 - Exotierras habitables: de ciencia-ficción a realidad
- *Complutense Curso de Verano de El Escorial “AstroArte”*, Universidad Complutense de Madrid (2017):
 - Lecturer of “Inauguración: arte y astronomía”
 - Member in round table “Nuevos-viejos artes y astronomía. I”
 - Co-lecturer of “Música clásica y astronomía”
 - Moderator in round table “Rock y astronomía”
 - Moderator in round table “Nuevos-viejos artes y astronomía. II”
- *Complutense Curso de Verano de El Escorial “The Moon: from labs to towns”*, Universidad Complutense de Madrid (2016):
 - Member in round table “Lunar-based vs. space-based observatories”
- *AstroCAM school on “Young Stellar Objects: from cool stars to exoplanets”* (2009):
 - Professor of lab session “Searching for discs with Aladin”

6.4. Department board member

- *Consejo de Departamento de Astrofísica y Ciencias de la Atmósfera*, Universidad Complutense de Madrid (full member, 2007–2009)

7. Astronomical instrumentation

7.1. Membership in instrument and mission groups

CARMENES

- **Instrument Astronomer** (2016+), Co-Project Manager (2009–2016)
- CARMENES (Calar Alto high-Resolution search for M dwarfs with Exo-earths with Near-infrared and optical Échelle Spectrographs) is the last generation instrument for the 3.5 m Calar Alto telescope: <http://carmenes.caha.es>
- In (co-)charge of:
 - Science exploitation: CARMENES guaranteed time observations (GTO) coordination, any-time on-call astronomer; leader and participant of working packages (stellar parameters, photometric follow-up, activity, exoplanet atmospheres...)

- Science preparation: GTO input catalogue, non-CARMENES preparatory observations
- Data: observatory network, image headers, GTO server, data flow
- Management: control, coordination, communication, documentation, resources (project costs, financial and human resources), organisation of teleconferences and meetings; CAB representative
- System engineering: interfaces (hardware, software, GUI), commissioning
- Publications: edition
- Website, outreach, corporate identity

WSO-UV

- Member of the *WSO-UV* Spanish Science Working Group
- *WSO-UV (World Space Observatory-Ultraviolet)* is a 1.7-m space telescope that will operate mainly in the 102–320 nm range since 2021: <http://www.wso-uv.es>

Other science groups

- Member of the POLLUX science team and of the “Exoplanets” and “Cool stars” working groups (POLLUX is a high-resolution ultraviolet spectro-polarimeter planned for the NASA-ESA *LUVVOIR* space observatory), 2017+
- Member of the WEAVE Science Team (WEAVE is a new multi-object spectrograph at the 4.2-m William Herschel Telescope), 2011+

Past instrument and mission groups

- Member of the *Arago* definition group (proposal for an ESA M5 ultraviolet space mission), 2015–2017
- Member of the EMIR Associated Scientific Team (EMIR is a near-infrared camera-spectrograph at the GTC), 2003–2016
- Member of the CanariCam Science Team (CanariCam is a mid-infrared camera-spectrograph at the GTC), 2001–2016
- Member of the ISSIS science team, ISSIS definition group (with UCM, CSIC, IAA and SENER), ISSIS data interface group (with UCM and GMV) and of the *WSO-UV* Webpage and Ground Segment working groups, 2007–2015. ISSIS (Imaging and Slitless Spectroscopy Instrument for Surveys) was the proposed field camera unit onboard *WSO-UV*: <http://www.wso-uv.es/>, <http://www.wso-uv.es/instruments/issis>
- Coordinator of the research line “*Estrellas de baja masa, enanas marrones y exoplanetas*” of the “Red de Explotación Científica de *Gaia*” <https://gaia.am.ub.es/Twiki/bin/view/RecGaia/BajaMasa>, 2010–2015
- Advisor of the PANIC definition group (PANIC is a wide-field near-infrared camera at the 2.2-m Calar Alto Teleskop), 2007–2015
- Collaborator in working groups WG4 (Cluster stars target selection) and WG12 (Pre-main sequence star spectrum analyses) of the *Gaia*-ESO survey, 2010–2014
- Member of the *Exploring Habitable Worlds beyond our Solar System* definition group (white paper for an ESA class-L2/L3 mission; spokesperson: A. Quirrenbach), 2013

- Member of the *European Ultraviolet-Visible Observatory (EUVO)* definition group (white paper for an ESA class-L2/L3 mission; spokesperson: Ana I. Gómez de Castro), 2013
- **Project scientist**, chair of the research line “Milky Way” and Spain-China liaison of GO-IRS, GTC Optical integral field unit and multi-object Spectrograph (“GTC MOS”), a next generation instrument candidate for the 10.4 m Gran Telescopio Canarias (PIs: J. Ge, Y. P. Jing, J. Chu), 2010:
<http://www.gtc.iac.es/instruments/media/GOIRS-Resumen.pdf>,
<http://marvels.astro.ufl.edu/GO-IRS>
- Webmaster and member of several work packages and of the definition group of NAHUAL-NIRINTS, a next-generation near-infrared intermediate- and high-resolution spectrograph proposed for the 10.4 m Gran Telescopio Canarias, 2004–2010:
<http://www.ucm.es/info/Astrof/nahual>
- Collaborator in the German transit follow-up group of Pan-STARRS (Pan-STARRS is the Panoramic Survey Telescope and Rapid Response System in Hawai’i), 2006–2007
- Collaborator in Work Package 19 (ultracool dwarfs) of the *Gaia* mission, 2005–2006
- Collaborator in the campaign proposal WFCAM Transit Survey (WFCAM was the Wide Field Camera at the United Kingdom Infrared Telescope; see RoPACS), 2005–2006
- Collaborator in the LIRIS commissioning group (LIRIS is a near-infrared camera-spectrograph at the 4.2-m William Herschel Telescope), 2003

7.2. Participation in design reviews

As deputy project manager for CARMENES:

- Final Design Review: Granada, 19–20 Feb. 2013
- Preliminary Design Review: Madrid, 18–19 Jul. 2011
- Conceptual Design Review: Granada, 02 Oct. 2009

As project scientist for GTC MOS / GO-IRS:

- Conceptual Design Review: La Laguna, 28–30 Jul 2010

7.3. Observing experience

Summary of observations

- Principal investigator or co-investigator in dozens of observing proposals at 1 to 10 m-class telescopes, accepted by international time allocation committees
- Over **300** nights of on-site observational experience with **24** instruments of **12** telescopes at **four** observatories (Observatorio del Roque de los Muchachos [ORM]; La Silla Observatory [LS, Chile]; Calar Alto [CA]; Observatorio del Teide [OT])
- Commissioning of one instrument (CARMENES)

Observing modes by wavelength

- *In the optical*: wide field imaging, long-slit spectroscopy (low and intermediate resolution), fibre-fed high-resolution spectroscopy, wide field multi-fibre spectroscopy (intermediate resolution), polarisation

- *In the near infrared*: imaging, high-resolution imaging with adaptive optics and space missions, long-slit spectroscopy (low and very low resolution), fibre-fed high-resolution spectroscopy, polarisation
- *In the mid infrared*: imaging with space missions
- *In the X-rays*: imaging, low-resolution spectroscopy with space missions

Telescopes and instruments

In situ used ground telescopes and instruments:

- 4.2-m William Herschel Telescope (ORM): NAOMI+INGRID, INGRID, LIRIS, ISIS, PFCAM, AF2+WYFFOS
- 3.6-m Telescopio Nazionale Galileo (ORM): AdOpt@TNG, NICS, OIG
- 3.6-m ESO Telescope (LS): EFOSC-2
- 3.6-m New Technology Telescope (LS): SofI
- 3.5-m Calar Alto Teleskop (CA): ALFA+ Ω -Cass, Ω -2000, CARMENES
- 2.6-m Nordic Optical Telescope (ORM): ALFOSC
- 2.5-m Isaac Newton Telescope (ORM): WFC, IDS
- 2.2-m Calar Alto Teleskop (CA): MAGIC, CAFE
- 1.5-m Telescopio Carlos Sánchez (OT): CAIN-2
- 1.0-m European Space Agency Orbital Ground Station (OT): ESACCD
- 1.0-m Jacobus Kapteyn Telescope (ORM): JAG
- 0.8-m Telescopio IAC 80 (OT): CAMELOT, old CCD

Reduction and/or analysis of data obtained at the telescopes and instruments above plus:

- 10.4 m Gran Telescopio Canarias: OSIRIS (principal investigator)
- 10.0 m Keck Observatory: LRIS
- 8.4 m Large Binocular Telescope: LBC
- 8.2 m Very Large Telescope: ISAAC
- 3.6 m Canada-France-Hawai'i Telescope: CFHT-IR
- 2.2 m Calar Alto: CAFOS
- Several 0.3–0.4 m telescopes with commercial detectors

Co-investigator of accepted proposals at the telescopes and instruments above plus:

- 10.4 m Gran Telescopio Canarias: CanariCam
- 8.2 m Very Large Telescope: X-Shooter
- 3.6-m Telescopio Nazionale Galileo: HARPS-N
- 3.5-m Calar Alto Teleskop: LAICA
- 2.2-m ESO/MPG La Silla: FEROS, WFI

- 1.5-m Telescopio Carlos Sánchez: FastCam
- 1.2-m Mercator Telescope: HERMES
- 0.8-m JAST/T80: T80cam (GALANTE project)

Used space missions:

- *Hubble Space Telescope*: NICMOS (w/Coronagraph)
- *Spitzer Space Telescope*: IRAC, MIPS
- *XMM-Newton Space Telescope*: EPICS
- *Chandra Space Telescope*: HRC-I, ACIS
- *International Ultraviolet Explorer*: LWP, LWR
- *Akari, Einstein, GALEX, Hipparcos, IRAS, ROSAT, Spitzer, WISE*

8. Organisation of events

8.1. CARMENES consortium meetings

As chair, co-chair or member of organising committees:

1. Hamburg, Mar. 2018: 8th Science
2. Göttingen, Nov. 2017: 7th Science
3. Madrid, Apr. 2017: 6th Science
4. Heidelberg, Nov. 2016: 5th Science
5. Granada, Mar. 2016: 4th Science
6. Calar Alto, Oct. 2015: 5th Core Management Team
7. Madrid, Jun. 2015: 4th Core Management Team
8. Granada, Feb. 2015: 3rd Core Management Team
9. Heidelberg, Nov. 2014: 2nd Core Management Team
10. Barcelona, Oct. 2014: 3rd Science and 1st Control
11. Heidelberg, Jun. 2014: 1st Core Management Team
12. Barcelona, Feb. 2014: 5th Technical
13. Göttingen, Oct. 2013: 2nd Science and 1st School
14. Barcelona, Oct. 2013: 4th Technical
15. Heidelberg, May. 2013: 9th Consortium
16. Granada, Feb. 2013: Final Design Review
17. Madrid, Nov. 2012: 8th Consortium
18. Heidelberg, Jul. 2012: 7th Consortium
19. Heidelberg, May 2012: 6th Consortium

20. Barcelona, Feb. 2012: 3rd Technical
21. Granada, Dec. 2011: 5th Consortium
22. Göttingen, Oct. 2011: 1st Science
23. Madrid, Jul. 2011: Preliminary Design Review
24. Madrid, Apr. 2011: 2nd Technical
25. Heidelberg, Feb. 2011: 1st Technical
26. Granada, Nov. 2010: 4th Consortium
27. Heidelberg, Jun. 2010: 3rd Consortium
28. Madrid, Jan. 2010: 1st Management

8.2. 1st Euclid Substellar Object Independent Legacy Science Workshop

- Member of Local Organising Committee
- Villafranca del Castillo, Madrid & La Laguna, Tenerife, 11-12 Dec. 2017
- <http://exoterrae.eu/euclid.html>

8.3. Curso de verano El Escorial Universidad Complutense *AstroArte*

- **Director**, lecturer, moderator, veejay
- El Escorial, 26–30 Jun. 2017
- <https://astroarte.cab.inta-csic.es>

8.4. IV international Pro-Am meeting on binary and multiple stars

- Member of Science Organising Committee
- Vilanova i la Geltrù, Barcelona, 18–20 Sep. 2015
- <http://www.oagarraf.net>

8.5. “3 satellite meetings” on *Habitable planets, M dwarfs and near-infrared spectrographs* at Pathways towards habitable planets

- Chair of convenors
- Bern, Switzerland, 13–15 Jul 2015
- <http://carmenes.caha.es/ext/conferences/pathways2015/>
- <http://pathways2015.sciencesconf.org/>

8.6. Amazing science with CARMENES

- Member of Science Organising Committee
- Granada, 21–22 May 2015
- http://riastronomia.es/opencms/opencms/Workshops/R_20150210.html

8.7. Science with the optical–infrared telescopes at CAHA and ORM in the coming decade

- *De facto* chair of Local Organising Committee
- Moderator of session “Telescope operation, time assignment, data management”
- Madrid, 22–23 Mar. 2012
- http://www.riastronomia.es/opencms/opencms/Workshops/R_20120127.html

8.8. Primera reunión científica de la Red de Explotación Científica de *Gaia*

- Member of Science Organising Committee
- San Fernando, Cádiz, 17–18 Jun. 2010
- <https://gaia.am.ub.es/Twiki/bin/view/RecGaia/SanFernando>

8.9. AstroCAM school on Young Stellar Objects: from cool stars to exoplanets

- Chair of Local Organising Committee
- Co-chair of Science Organising Committee
- Host of T. Henning, R. Jayawardhana, V. Joergens and F. Anguita
- El Escorial, Madrid, 29 Jun.–03 Jul. 2009
- <http://www.astrocam.es/school09>

8.10. IAC/TNG workshop on ultra low-mass star formation and evolution

- Member of Local Organising Committee
- La Palma, 28 Jun.–01 Jul. 2005
- <http://www.iac.es/workshop/ulmsf05>

9. Other scientific activities

9.1. Invited seminars and talks

- Escuela de Ingenieros Industriales / Instituto de Investigaciones Energéticas y Aplicaciones Industriales, Universidad de Castilla-La Mancha (Ciudad Real; 2017)
- Centro de Astrobiología ESAC campus (Villafranca del Castillo; 2017, 2013, 2012)
- European Southern Observatory Headquarters (Garching-bei-München, Germany; 2016)
- University of Hertfordshire (Hatfield, UK; 2016)
- INAF – Osservatorio Astronomico di Palermo (Palermo, Italy; 2016)
- Centro de Astrofísica da Universidade do Porto (Oporto, Portugal; 2016)
- Max-Planck-Institut für Astronomie (Heidelberg, Germany; 2016, 2013, 2007, 2006)
- European Space Astronomy Centre (Villafranca del Castillo; 2016, 2012)

- Centro de Astrobiología INTA campus (Torrejón de Ardoz; 2015, 2011)
- Instituto de Astrofísica de Canarias (La Laguna; 2015, 2012, 2007, 2005, 2004, 2003)
- Mayántigo headquarters of the Isaac Newton Group of Telescopes, Nordic Optical Telescope [and Telescopio Nazionale Galileo] (Santa Cruz de la Palma; 2014, 2006)
- Facultad de Geología of the Universidad Complutense de Madrid (Madrid; 2012, 2006, 2000)
- Universidad Autónoma de Madrid (Madrid; 2012)
- Australian Astronomical Observatory (Sydney, Australia; 2011)
- Instituto de Astrofísica de Andalucía (Granada; 2010)
- Department of Physics and Astronomy, University of Missouri – St. Louis (St. Louis, MO, USA; 2010)
- Facultad de Matemáticas of the Universidad Complutense de Madrid (Madrid; 2009)
- Facultad de Ciencias of the Universidad de Alicante (Alicante; 2009)
- Facultad de Física of the Universidad Complutense de Madrid (Madrid; 2008)

Summary: **32** invited seminars and talks in **18** different research centres in **7** countries

9.2. Sojourns and secondments

Guest:

- Department of Physics and Astronomy, University of Missouri–St. Louis, hosted by Prof. Bruce Wilking (Aug. 2010)

Host:

- Prof. Adam J. Burgasser, University of California San Diego, USA (Dec. 2017, Nov. 2014)
- Mr. Minjae Kim, Landessternwarte Königstuhl Heidelberg, Germany (Jul. 2015)
- Dr. Richard L. Smart, INAF-Osservatorio Astrofisico di Torino, Italy (Jul. 2015)
- Dr. Carlos del Burgo, INAOE Puebla, Mexico & DIAS Dublin, Ireland (several since 2008)

9.3. Membership in professional societies

- Senior Member of the Sociedad Española de Astronomía

9.4. Other duties

- Coordinator of the weekly CARMENES Königstuhl meetings at MPIA+LSW, Heidelberg (2016)
- Moderator of splinter session *Enseñanza y divulgación* in XII Reunión Científica de la Sociedad Española de Astronomía (Bilbao, 18–22 Jul. 2016):
<http://sea-astronomia.es/drupal/SEA2016>
- Member in student poster contest panel in Cool Stars 19 (Uppsala, 06–10 Jul. 2016):
<http://www.cs19.com>

- Webmaster of satellite meeting “Validation and compilation of *Kepler* habitable zone candidates” in Pathways towards habitable planets (Bern, 13 Jul. 2015):
<http://carmenes.caha.es/ext/conferences/pathways2015/KHZWG.html>
- Member of the Comisión Científica de la Red de Explotación Científica de *Gaia* (2010–2014):
<http://gaia.am.ub.es/Twiki/bin/view/RecGaia/WebHome>
- Moderator of discussion session in Star and planet formation workshop (European Science Astronomy Centre, Villanueva de la Cañada, Madrid, 21 Jan. 2013):
<http://www.sciops.esa.int/index.php?project=CONF2012&page=SF2013>
- Coordinator and webmaster of the German-Spanish “CarolusV” collaboration between IAC, MPIA, CAB, UPCT and TLS (2006–2011):
<http://www.ucm.es/info/Astrof/users/cab/carolusV>
- Webmaster of the European Astronomical Society S4 symposium “From macro-to micro-stellar transits” (Lisbon, 6–7 Sep. 2010):
<http://www.ucm.es/info/carmenes/lisboa>
- Member of the *Foro de discusión de terminología astronómica en castellano* of the Sociedad Española de Astronomía (SEA forum on astronomical terminology in Spanish; 2004–2009)
- Coordinator of the monthly Planet and Star Formation group Low-Mass Meeting at the MPIA, Heidelberg (2006–2007)
- Support astronomer at the 2.5-m Isaac Newton Telescope (2006)
- Support astronomer at the 1.0-m Jacobus Kapteyn Telescope during service time observations for the Spanish astronomical community (2005)
- Observer in charge during the European monitorization of the CLOUDS international collaboration (Continuous-Longitude Observations of Ultracool DwarfS 2002 & 2003)
- Member of the Grupo de Ciencias Planetarias de Madrid:
 - Coordinator of the “ExoPlanetas” team (2008–2010)
 - “Characterisation of exoplanet host stars with Virtual Observatory tools” (2007–2010)
 - “Exoplanet atmospheres: *Darwin* and biomarkers” (in collaboration with researchers at Universidad Autónoma de Madrid and Centro de Astrobiología, Madrid) (1998–1999)
 - “Formation and geochemical evolution of supermassive telluric planets” (in collaboration with researchers at Institut d’Estudis Espacials de Catalunya, Barcelona, and Facultad de Geología of the Universidad Complutense de Madrid) (1998–1999)
 - “Ultraviolet albedo of the Jovian satellite Europa using the *International Ultraviolet Explorer*-Ultraviolet Low Dispersion Archive” (in collaboration with researchers at Johns Hopkins University/Applied Physics Laboratory, USA, and European Space Agency, VILSPA–ESAC) (1997–1998)

10. Popular science

10.1. Collaborator of Radio Clásica RTVE *Longitud de Onda* programme

- *Pedro Duque* (06 Feb 2018)
- *Más allá de Orión* (09 Jan 2018)
- *Tuba Christmas en Gijón** (18 Dec 2017)
- *Recortes y música anticabreo* (05 Dec 2017)

- *Mercurio* (07 Nov 2017)
- *Cástor y Pólux* (10 Oct 2017)
- *Final de temporada** (30 Jun 2017)
- *AstroArte* (28 Jun 2017)
- *Modelo estándar* (22 Jun 2017)
- *Urmás Sisask y otros frikis musicales* (08 Jun 2017)
- *De Hindemith a Vincenzo Galilei pasando por Glass* (25 May 2017)
- *Espanoles en el espacio* (11 May 2017)
- *A qué instrumento correspondería esa estrella* (27 Apr 2017)
- *Una odisea espacial* (30 Mar 2017)
- *Sonidos cósmicos* (16 Mar 2017)
- *¿Cómo suenan los planetas?* (02 Mar 2017)
- *Muerte térmica del Universo* (15 Feb 2017)
- *Titán* (02 Feb 2017)
- *Asteroides musicales* (19 Jan 2017)
- *Exotierras* (15 Dec 2016)
- *Júpiter sin Holst ni Mozart* (01 Dec 2016)
- *Herschel* (17 Nov 2016)
- *Interestelar* (03 Nov 2016)
- *Planetas y olé* (20 Oct 2016)
- *Música viajera* (06 Oct 2016)

10.2. Contributing edition of *Astronomía* outreach magazine

- *Musica Universalis* (Jan 2013+, monthly) [see Section A.11]
- *Avances del proyecto CARMENES* (Jan 2015–Dec 2016, monthly)

10.3. •unitedsoundsofcosmos: *Rock'n'Astronomy*

Astro-concerts:

- “*Astroconcierto de unitedsoundsofcosmos*”, Aula Magna, R. C. U. María Cristina, San Lorenzo de El Escorial, by A. Arias, J. J. Machuca, J. Codorníu and **J. A. Caballero** (28 Jun 2017)
- “*ESO OPC P98 get-together*”, Munion, Munich, by A. Arias, J. J. Machuca, S. Morente and **J. A. Caballero** (19 May 2016)
- “*Multiverso³*”, Agüere Cultural, La Laguna, by A. Arias, J. J. Machuca, J. Codorníu, C. Gracia and **J. A. Caballero** (24 Oct 2015)

- “*CARMENES musical*”, 3rd CARMENES CMT meeting, Instituto de Astrofísica de Andalucía, Granada, by **J. A. Caballero**, A. Arias, D. Guirado and A. Muñoz (10 Feb 2015)
- “*Desgranando multiversos*”, Desgranando ciencia, Parque de las Ciencias, Granada, by **J. A. Caballero**, E. Alfaro and D. Guirado with Pájaro Jack (13 Dec 2014)
- ●**unitedsoundsofcosmos**, I Encuentro internacional de administraciones para la protección cielo nocturno, Calar Alto, Almería, by A. Arias, **J. A. Caballero**, D. Fernández and J. J. Machuca (01 Dec 2011)
- *Multiverso: Rock’n’Astronomía*, Noche de los Museos, CosmoCaixa, Barcelona, by by A. Arias and **J. A. Caballero** with Lagartija Nick, and *Lírica y estrellas*: by A. Arias, **J. A. Caballero** and Prof. D. Jou (14 May 2011)
- “*Multiversos - Astronomía y Música*”, Inauguración XIX Congreso Estatal de Astronomía, Facultad de Medicina, Universidad Complutense de Madrid, Madrid, by Antonio Arias, **J. A. Caballero**, Nayra and Juano, starring *Nuestro universo improbable* by Prof. Carlos Frenk (17 Sep 2010)
- *Cena astronómico-musical “Multiversos”*, meeting of the Sociedad Española de Astronomía (16 Sep 2010), by Antonio Arias, **J. A. Caballero** and Nayra
- “*Multiversos*”, Sala El Sol, Madrid (17 Mar 2010), by Antonio Arias, Popy, Juano, Xarim and **J. A. Caballero**
- “*Multiversos*”, Despedida Año Internacional de la Astronomía, Palacio de Congresos, Granada (12 Dec. 2009), by **J. A. Caballero** and Antonio Arias with Popy, Juano, Julián, Noni and Álex (Lori Meyers), Florent & Jota (Los Planetas), starring “*El descubrimiento de la radiación cósmica de fondo y su papel en la Cosmología*” by Prof. Robert W. Wilson, Nobel laureate

Miscellanea:

- Co-author of “Bolero de Cassini-Huygens”, a song for the Cassini Grand Finale (Sep 2017)
- Co-author of “Gaia DR1”, a song for the first data release of *Gaia* (Oct 2016)
- Co-author of lyrics and manager of videoclip “Q-U-I JOint TEnerife” (Dec 2015)
- Co-author of “Villafranca/Cebreros/New Norcia/Malargüe (también brilla la materia)”, song for the ESA Estrack Soundtrack contest (Aug 2015)
- Veejay in concert *Multiverso*, Sala El Sol, Madrid, concert by A. Arias, M. López, J. J. Machuca, S. Morente, F. Muñoz, and C. Gracia (Mar 2015)
- Producer of videoclip “El ordenador simula el nacimiento de las estrellas” (Feb 2015)
- Science consultant of *Encuentro en el Multiverso*, Palacio de Congresos, Granada, 3D concert by Antonio Arias, Soleá Morente, David Fernández, J. J. Machuca, Miguel López and Pepe Ruiz (Feb 2014)
- Artificer and science consultant of Antonio Arias’ music album *Multiverso II. De la soleá de la ciencia a la física de la inmortalidad* (2013)
- Co-author of “C.A.R.M.E.N.E.S.” song (2013)
- Science consultant of Lagartija Nick’s music album *Zona de conflicto* (2011)
- Artificer and science consultant of *Multiverso* (2009), music album by Antonio Arias
- Science consultant of *El shock de Leia* (2008), music album by Lagartija Nick

10.4. Other media

Planetarium programmes:

- Science consultant of “Beyond the Sun”, RenderArea (2017+)

Documentary films:

- Musician of “Earth, Moon, Mars with Alexander Gerst”, Terra X, ZDF (2018)
- Science consultant of “Cazadores de planetas”, RenderArea (2007–2009, 2016+)

Outreach videos:

- “Exoplanetas” series, El Mundo (2017–2018)

Television:

- *La Sexta Noche*, La Sexta (2017)
- *Canal Sur Noticias*, Canal Sur (2015)
- *La 2 Noticias*, La 2 (2013)
- *La tarde en 24 h*, La 2 (2013)
- *Con-ciencia*, Canal Sur (2013a,b)
- *El Intermedio*, La Sexta (2008)

Radio:

- *A Noite É Necesaria*, Radiovoz (2017a,b)
- *24 Horas*, Radio Nacional de España (2016)
- *Entre Probetas*, Radio Exterior/Radio Nacional de España (2015)
- *Especiales*, Radio 3 (2014)
- *El Radioscopio*, Canal Sur Radio (2014)
- *Música de las Esferas*, Radio Clásica (2014)
- *Universo Paralelo*, Radio Círculo (2013)
- *La Galería*, Radio Euskadi (2013)
- *Disco Grande*, Radio 3 (2013)
- *Sobre la Mesa*, Radio Exterior/Radio Nacional de España (2012)
- *El Ojo Crítico*, Radio 3 (2009)
- Cadena Ser Andalucía (2002)

Journals and newspapers:

- El Mundo (2017a, 2017b)

- Diario de Teruel (2017)
- El País (2017a,b)
- Investigación y Ciencia (2016)
- Il Bolletino delle Stelle Doppie (2016)
- La Vanguardia – Almería (2016)
- El Observador de Estrellas Dobles (2016)
- La Vanguardia – Tenerife (2015)
- Astronomía (2012, 2007)
- Profesiones (2008)
- Tribuna Complutense (2008a, 2008b)
- El País Semanal (2005)
- El Día (2002)

10.5. Popular talks

- Estrellas en el Pirineo, Aínsa-Boltaña, Huesca, Nov 2017
- Escociencia, San Lorenzo de El Escorial, Madrid, Nov 2017
- Centro Cultural, El Escorial, Madrid, Oct 2017
- CEIP Los Cerros Chicos, San Martín de la Vega, Jun 2017
- SpaceIN, European Space Astronomy Centre, Villafranca del Castillo, Jun 2017
- 76^a Feria del libro de Madrid, Jun 2017 (round table)
- Museo Nacional del Teatro, Almagro, May 2017 (with pianist Alfonso Candelas)
- Jornadas de divulgación de la Astronomía, Sede Universitaria Ciudad de Alicante, Nov 2016
- Museo de la Ciencia y el Cosmos, La Laguna, Nov 2014
- Sede de la Agrupación Astronómica de Madrid, Feb 2014
- AstroMartos, Jaén, Aug 2013
- Sede de la Agrupación Astronómica de Madrid, Jul 2013
- Planetario de Madrid, Madrid, Nov 2009
- IES El Escorial, El Escorial, Madrid, Nov 2009
- CP Felipe II, El Escorial, Madrid, Nov 2009
- Sede de la Agrupación Astronómica de Madrid, Dec 2008
- Museo Nacional de Ciencia y Tecnología, Madrid, Mar 2006

10.6. Celebrations

Pint of Science

- Pint of Science España: Madrid, 2018

International Year of the Astronomy 2009

- Collaborator in sections *Glosario* and *Fotonoticia* for El País Digital astronomy special (<http://www.elpais.com/especial/astrologia/>), 2009
- *Concentración de telescopios en la Plaza Mayor*, Madrid, Jan 2009

World Space Week

- Guided visits to the domes of the Departamento de Astrofísica y Ciencias de la Atmósfera of the Universidad Complutense de Madrid, slide provider for public conference, interview for high-school students: 2013

Week of Science (*Semana de la Ciencia*)

- Guided visits to the UCM domes: 2007, 2008, 2009

11. General knowledge and expertise

11.1. Degrees

- **PhD:** Doctor en Física — Doctor of Philosophy *summa cum laude* at the Facultad de Física of the Universidad de La Laguna/Instituto de Astrofísica de Canarias, Spain (Mar 2006). Title: *Formation, evolution and multiplicity of brown dwarfs and giant exoplanets*. Supervisors: Prof. R. Rebolo, Dr. V. J. S. Béjar
- **MSc:** Diploma de Estudios Avanzados — Master of Science at the Universidad de La Laguna/Instituto de Astrofísica de Canarias (2003). Title: *De fuscis pusillis astris et giganteis exoplanetis*. Supervisors: Prof. R. Rebolo, Dr. V. J. S. Béjar
- **BSc:** Licenciado en Física, orientación Astrofísica, Plan 1995 — Bachelor of Science, Physics–Astrophysics, at the Universidad Complutense de Madrid (2000)

11.2. Scientific areas of expertise

- *Specialisation:* Astronomy & Astrophysics
- *A&A keywords:* astrobiology – astronomical data bases: miscellaneous – **instrumentation: spectrographs** – **stars: binaries: visual** – (**stars:**) **brown dwarfs** – stars: binaries: general – stars: fundamental parameters – **stars: late-type** – stars: low-mass – stars: luminosity function, mass function – stars: planetary systems: protoplanetary discs – stars: pre-main sequence – stars: variables: general – Galaxy: open clusters and associations – **Galaxy: open clusters and associations (individual: σ Orionis)** – Galaxy: solar neighbourhood – infrared: stars – X-rays: stars
- *UNESCO codes:* 2101.01 Binary stars – 2101.02 Clusters – 2101.10 Stars – 2101.11 Stellar evolution and HR diagram – 2101.14 Variable stars – 2101.15 X-ray sources – 2103.03 Spectroscopy – (2104 Planetology – 2106 Solar System) – 2512.01 Exobiology

11.3. Academic training

- PhD/MSc courses at the Universidad Complutense de Madrid (2000–01) — Stellar populations in galaxies, Theory of artificial satellites and space travels, Dynamics of spiral galaxies: density waves, Remote Universe, Tropical Meteorology, Atomic and nuclear spectrometry
- BSc courses at the Universidad Complutense de Madrid (1995–2000) — Compulsory subjects of Physics in general (Thermodynamics, Electromagnetism, Optics, Classical Mechanics, Nuclear and Quantum Physics...), Astrophysics (Stellar atmospheres, Stellar interiors, Interstellar medium, Galactics, Cosmology...), Mathematics, Computation, Chemistry and Statistics, and optional subjects focused on Astrophysics and its relation to other branches of Physics (Gravitation, Geophysics, Atmospheric Physics...) and Science (Biology, Neural networks...)

11.4. Schools and summer courses

- A Hitchhiker's Guide through the *Gaia* Galaxy, GAVO *Gaia* Workshop, 2016
- Taller de preparación de propuestas Marie Skłodowska Curie Innovative Training Networks (ITN) y Research and Innovation Staff Exchange (RISE), 2015
- Writing competitive ERC StG and CoG proposals, 2014
- XVI Canary Islands Winter School of Astrophysics: *Extrasolar Planets*, 2004
- Cursos de verano Universidad Complutense El Escorial — *La fábrica celular: modificando la industria de producción de la célula viva* (2000), *Nonlinearity: patterns and defects, solitons, chaos, and turbulence* (1999), *La supercomputación: aplicaciones científicas y tecnológicas* (1999), *Tendencias actuales en la teoría del caos* (1998), *Origen y predicción de terremotos* (1998), *El Sistema Solar como frontera científica* (1997), *Un puente entre el big bang y la Biología* (1997), *Astrofísica espacial: de las estrellas a los cuásares* (1996)

11.5. Software

- Operative systems: Linux, MacOS, Unix, Windows
- Virtual Observatory tools: Aladin, VOPlot, Topcat
- Data mining in astronomical catalogues and internet resources
- Astronomical software: IRAF (obsolete: MIDAS, LEOPARD, STARLINK)
- Mathematical environments: MATLAB, OCTAVE, IDL
- Websites: `html`
- Other software and programming: \LaTeX , image editors (PowerPoint, AdobePhotoshop, CorelDraw), Pascal

11.6. Languages

- Spanish: native
- English: advanced understanding, reading, and writing
- German: intermediate understanding, reading, and writing
- Romance languages (French, Italian, Portuguese, Catalan, Galician): basic/intermediate understanding and reading

12. Non-scientific activities and merits

12.1. Sports

- Currently: running, hiking, swimming
- Basketball player in local leagues in 2007–2012
- Participant in national- and regional-level running competitions: orienteering cross, marathon, duathlon, long-distance races in 1993–2005
- *Premio al mejor deportista de El Escorial* in 1993, 1994 (junior) and 1995 (senior)
- First and second places at the indoor and outdoor Comunidad de Madrid athletics high jump championships in 1993
- Carrier of the **Olympic Torch** in 1992
- Participant in regional-level sub-15 running competitions (cross, mile run) in 1988–92

12.2. Miscellanea

- First class distinction at the end of high school (1995)
- Professional qualifications: Aquatic Rescue and First Aids
- Working experience:
 - Lifeguard at large swimming pools
 - Private classes (Physics, Biophysics)
 - Other temporary jobs (restaurant business)
- Driving license B
- Greenpeace member (since 2006)
- Logo and web designer (e.g. “*A Bauhaus revisit to the Sol de Miró*”, <http://carmenes.caha.es>, <http://exoterrae.eu>)

A. List of publications

A.1. Papers in refereed journals

1. *The CARMENES search for exoplanets around M dwarfs. A low-mass planet in the temperate zone of the nearby M dwarf K2-18*, P. Sarkis, T. Henning, M. Kürster, et al. (including **J. A. Caballero**), ApJ, submitted
2. *The CARMENES search for exoplanets around M dwarfs. Large-amplitude activity-induced radial-velocity variations of fast-rotating stars in visual-channel spectra*, L. Tal-Or, M. Zechmeister, A. Reiners, et al. (including **J. A. Caballero**), A&A, submitted

2018

3. *The CARMENES search for exoplanets around M dwarfs. Photospheric parameters of target stars from high-resolution spectroscopy*, V. M. Passegger, A. Reiners, S. V. Jeffers, S. Wendevon Berg, P. Schöfer, **J. A. Caballero** et al. A&A, in press (eprint arXiv:1802.02946)
4. *The CARMENES search for exoplanets around M dwarfs. Wing asymmetries of H α , Na I D, and He I lines*, B. Fuhrmeister, S. Czesla, J. H. M. M. Schmitt, S. V. Jeffers, **J. A. Caballero** et al. A&A, in press (eprint arXiv:1801.10372)
5. *CARMENES input catalogue of M dwarfs. III. Rotation and activity from high-resolution spectroscopic observations*, S. V. Jeffers, P. Schöfer, A. Lamert, A. Reiners, D. Montes, **J. A. Caballero** et al. A&A, in press (eprint arXiv:1802.02102)
6. *The CARMENES search for exoplanets around M dwarfs. Optical and near-infrared spectroscopy of 324 stars*, A. Reiners, M. Zechmeister, **J. A. Caballero** et al. A&A, in press (eprint arXiv:1711.06576)
7. *The CARMENES search for exoplanets around M dwarfs. First visual-channel radial-velocity measurements and orbital parameter updates of seven M-dwarf planetary systems*, T. Trifonov, M. Kürster, M. Zechmeister, L. Tal-Or, **J. A. Caballero** et al. A&A, 609, A117
8. *The CARMENES search for exoplanets around M dwarfs. HD 147379 b: a nearby Neptune in an early-M dwarf's temperate zone*, A. Reiners, I. Ribas, M. Zechmeister, **J. A. Caballero** et al. A&A, 609, L5 (highlight of the week in A&A)
9. *Wide σ Orionis binaries resolved by UKIDSS*, **J. A. Caballero**, I. Novalbos, T. Tobal, F. X. Miret, 2018, AN, 339, 60
10. *SERVAL - The spectrum radial velocity analyser. High precision radial velocities and two alternative spectral indicators*, M. Zechmeister, A. Reiners, P. J. Amado, M. Azzaro, F. F. Bauer, V. J. S. Béjar, **J. A. Caballero** et al. 2018, A&A, 609, A12

2017

11. *Scheduling tool and exoplanet yield of the CARMENES survey*, A. Garcia-Piquer, J. C. Morales, I. Ribas, J. Colomé, J. Guàrdia, M. Perger, **J. A. Caballero** et al. 2017, A&A, 604, A87
12. *Ultracool dwarf benchmarks with Gaia primaries*, F. Marocco, D. J. Pinfield, N. J. Cook, M. R. Zapatero Osorio, D. Montes, **J. A. Caballero** et al. 2017, MNRAS, 470, 4885
13. *A TGAS/Gaia DR1 parallactic distance to the σ Orionis cluster*, **J. A. Caballero**, 2017, AN, 338, 229
14. *The Gaia Ultracool Dwarf Sample. I. Known L & T dwarfs and the first Gaia data release*, R. J. Smart, F. Marocco, **J. A. Caballero** et al. 2017, MNRAS, 469, 401

15. *CARMENES input catalogue of M dwarfs. II. High-resolution imaging with FastCam*, M. Cortés-Contreras, V. J. S. Béjar, **J. A. Caballero** et al. 2017, *A&A*, 597, A47
- 2016**
16. *An upper limit to the mass of a close companion candidate of σ Ori E*, **J. A. Caballero**, H. Bouy, J. Lillo-Box, 2016, *Obs*, 136, 226
- 2015**
17. *Reaching the boundary between stellar kinematic groups and very wide binaries. III. Sixteen new stars and eight new wide systems in the β Pictoris moving group*, F. J. Alonso-Floriano, **J. A. Caballero**, M. Cortés-Contreras, E. Solano & D. Montes, 2015, *A&A*, 583, A85
18. *Mid-IR imaging of the Barnard's Star with CanariCam at the GTC*, B. Gauza, V. J. S. Béjar, R. Rebolo, C. Álvarez, G. Bihain, C. M. Telesco, M. R. Zapatero Osorio, **J. A. Caballero**, C. Packham 2015, *MNRAS*, 452, 1677
19. *CARMENES input catalogue of M dwarfs. I. Low-resolution spectroscopy with CAFOS*, F. J. Alonso-Floriano, J. C. Morales, **J. A. Caballero**, D. Montes et al. 2015, *A&A*, 577, A128
20. *Orbital and physical properties of the σ Ori Aa,Ab,B triple system*, S. Simón-Díaz, **J. A. Caballero**, J. Lorenzo, J. Maíz-Apellániz, F. R. N. Schneider, I. Negueruela, R. H. Barbá, R. Dorda, A. Marco, D. Montes, A. Pellerin, J. Sánchez-Bermúdez, Á. Sódor, A. Sota 2015, *ApJ*, 799, 169
- 2014**
21. *Cool dwarfs in wide multiple systems. Paper 5: New astrometry of 54 wide pairs with M dwarfs*, M. Cortés-Contreras, **J. A. Caballero**, D. Montes 2014, *Obs*, 134, 348
22. *Spectroscopic follow-up of L- and T-type, proper motion member candidates in the Pleiades*, M. R. Zapatero Osorio, V. J. S. Béjar, E. L. Martín, M. C. Gálvez Ortiz, R. Rebolo, G. Bihain, C. A. L. Bailer-Jones, T. Henning, S. Boudreault, B. Goldman, R. Mundt, **J. A. Caballero**, P. A. Miles-Páez 2014, *A&A*, 572, A67
23. *Stellar multiplicity in the σ Orionis cluster: a review*, **J. A. Caballero** 2014, *Obs*, 134, 273
24. *Search for free-floating planetary-mass objects in the Pleiades*, M. R. Zapatero Osorio, M. C. Gálvez Ortiz, G. Bihain, C. A. L. Bailer-Jones, R. Rebolo, T. Henning, S. Boudreault, V. J. S. Béjar, B. Goldman, R. Mundt, **J. A. Caballero** 2014, *A&A*, 568, A77
25. *Search for bright nearby M dwarfs with Virtual Observatory tools*, M. Aberasturi, **J. A. Caballero**, B. Montesinos, M. C. Gálvez-Ortiz, E. Solano, E. L. Martín 2014, *AJ*, 148, 36
- 2012**
26. *Cool dwarfs in wide multiple systems. Paper 4: A common-proper-motion pair of two identical mid-M dwarfs separated by about 10000 AU*, F. M. Rica & **J. A. Caballero** 2012, *Obs*, 132, 305
27. *Stars and brown dwarfs in the σ Orionis cluster. III. OSIRIS/GTC low-resolution spectroscopy of variable sources*, **J. A. Caballero**, A. Cabrera-Lavers, D. García-Álvarez, S. Pascual 2012, *A&A*, 546, A59
28. *Cool dwarfs in wide multiple systems. Paper 3: Two common-proper-motion, late-type stars separated by over 11 arcmin*, **J. A. Caballero**, J. Genebriera, F. X. Miret, T. Tobal, J. Cairol 2012, *Obs*, 132, 252
29. *Multiverso: Rock'n'Astronomy*, **J. A. Caballero** 2012, *CAPjournal*, 12, 6
30. *Cool dwarfs in wide multiple systems. Paper 2: A distant M8.5V companion to HD 212168 AB*, **J. A. Caballero** & D. Montes 2012, *Obs*, 132, 176

31. *Identification of red high proper motion objects in Tycho-2 and 2MASS catalogues using Virtual Observatory tools*, F. M. Jiménez-Esteban, **J. A. Caballero**, R. Dorda, P. Miles, E. Solano 2012, A&A, 539, A86

32. *Cool dwarfs in wide multiple systems. Paper 1: Two mid-M dwarfs in a loosely-bound common-proper-motion pair*, **J. A. Caballero** 2012, Obs, 132, 1

2011

33. *The substellar population of σ Orionis: A deep wide survey*, V. J. S. Béjar, M. R. Zapatero Osorio, R. Rebolo, **J. A. Caballero**, D. Barrado y Navascués, E. L. Martín, R. Mundt, C. A. L. Bailer-Jones 2011, ApJ, 743, 64

34. *A third massive star component in the σ Ori AB system*, S. Simón-Díaz, **J. A. Caballero** & J. Lorenzo 2011, ApJ, 742, 55

35. *Near-infrared linear polarization of ultracool dwarfs*, M. R. Zapatero Osorio, V. J. S. Béjar, B. Goldman, **J. A. Caballero**, R. Rebolo, J. A. Acosta, A. Manchado, K. Peña Ramírez 2011, ApJ, 740, 4

36. *The substellar mass function in the central region of the open cluster Praesepe from deep LBT observations*, W. Wang, S. Boudreault, T. Henning, **J. A. Caballero**, C. A. L. Bailer-Jones 2011, A&A, 531, A164

37. *Identification of blue high proper motion objects in Tycho-2 and 2MASS catalogues using Virtual Observatory tools*, F. M. Jiménez-Esteban, **J. A. Caballero**, E. Solano 2011, A&A, 525, A29

2010

38. *The magnetically-active, low-mass, triple system WDS 19312+3607*, **J. A. Caballero**, D. Montes, A. Klutsch, J. Genebriera, F. X. Miret, T. Tobal, J. Cairol, S. Pedraz 2010c, A&A, 520, A91

39. *HRC-I/Chandra observations towards σ Orionis*, **J. A. Caballero**, J. F. Albacete-Colombo, J. López-Santiago 2010b, A&A, 521, A45

40. *Near-infrared low-resolution spectroscopy of Pleiades L-type brown dwarfs*, G. Bihain, R. Rebolo, M. R. Zapatero Osorio, V. J. S. Béjar, **J. A. Caballero** 2010, A&A, 519, A93

41. *Infrared and kinematic properties of the substellar object G 196-3B*, M. R. Zapatero Osorio, R. Rebolo, G. Bihain, V. J. S. Béjar, **J. A. Caballero**, C. Álvarez 2010, ApJ, 715, 1408

42. *Reaching the boundary between stellar kinematics groups and very wide binaries. II. α Lib + KU Lib: a common proper motion system in Castor separated by 1.0 pc*, **J. A. Caballero** 2010c, A&A, 514, A98

43. *Stars and brown dwarfs in the σ Orionis cluster. II. A proper motion study*, **J. A. Caballero** 2010b, A&A, 514, A18

44. *The occultation events of the Herbig Ae/Be star V1247 Ori*, **J. A. Caballero** 2010a, A&A, 511, L9

45. *Finding the most variable stars in the Orion Belt with the All Sky Automated Survey*, **J. A. Caballero**, M. Cornide, E. de Castro 2010a, AN, 331, 257

46. *Brown dwarfs and very low mass stars in the Praesepe open cluster: a dynamically unevolved mass function?*, S. Boudreault, C. A. L. Bailer-Jones, B. Goldman, T. Henning, **J. A. Caballero** et al. 2010, A&A, 510, A27

2009

47. *Reaching the boundary between stellar kinematics groups and very wide binaries. The Washington Double Stars with the widest angular separations*, **J. A. Caballero** 2009, *A&A*, 507, 251
48. *Candidate free-floating super-Jupiters in the young σ Orionis open cluster*, G. Bihain, R. Rebolo, M. R. Zapatero Osorio, V. J. S. Béjar, I. Villó-Pérez, A. Díaz-Sánchez, A. Pérez-Garrido, **J. A. Caballero** et al. 2009, *A&A*, 506, 1169
49. *Polarisation of very-low-mass stars and brown dwarfs. I. VLT/FORS1 observations of ultracool dwarfs*, B. Goldman, J. Pitann, M. R. Zapatero Osorio, C. A. L. Bailer-Jones, V. J. S. Béjar, **J. A. Caballero** & T. Henning 2009, *A&A*, 502, 929
50. *X-ray variability of σ Orionis young stars with ROSAT*, **J. A. Caballero**, E. de Castro, M. Cornide & J. López-Santiago 2009, *AJ*, 137, 5012

2008

51. *New deep XMM-Newton observations to the west of the σ Orionis cluster*, J. López-Santiago & **J. A. Caballero** 2008, *A&A*, 491, 961
52. *Low-resolution spectroscopy and spectral energy distributions of selected sources towards σ Orionis*, **J. A. Caballero**, L. Valdivielso, E. L. Martín, D. Montes, S. Pascual & P. G. Pérez-González 2008, *A&A*, 491, 515
53. *Chemical abundances of late-type pre-main sequence stars in the σ Orionis cluster*, J. I. González-Hernández, **J. A. Caballero**, R. Rebolo, V. J. S. Béjar, D. Barrado y Navascués, E. L. Martín & M. R. Zapatero Osorio 2008, *A&A*, 490, 1135
54. *A revisit to aggregates of early-type Hipparcos stars*, **J. A. Caballero** & L. Dinis 2008, *AN*, 329, 801
55. *Contamination by field late-M, L, and T dwarfs in deep surveys*, **J. A. Caballero**, A. J. Burgasser & R. Klement 2008, *A&A*, 488, 181
56. *CLOUDS search for variability in brown dwarf atmospheres. Infrared spectroscopic time series of L/T transition brown dwarfs*, B. Goldman, M. C. Cushing, M. S. Marley, É. Artigau, K. S. Baliyan, V. J. S. Béjar, **J. A. Caballero** et al. 2008, *A&A*, 487, 277
57. *Young stars and brown dwarfs surrounding Alnilam (ϵ Ori) and Mintaka (δ Ori)*, **J. A. Caballero** & E. Solano 2008, *A&A*, 485, 931
58. *Stars and brown dwarfs in the σ Orionis cluster: the Mayrit catalogue*, **J. A. Caballero** 2008c, *A&A*, 478, 667
59. *Dynamical parallax of σ Ori AB: mass, distance and age*, **J. A. Caballero** 2008b, *MNRAS*, 383, 750
60. *Spatial distribution of stars and brown dwarfs in σ Orionis*, **J. A. Caballero** 2008a, *MNRAS*, 383, 375
61. *New constraints on the membership of the T dwarf S Ori 70 in the σ Orionis cluster*, M. R. Zapatero Osorio, V. J. S. Béjar, G. Bihain, E. L. Martín, R. Rebolo, I. Villó-Pérez, A. Díaz-Sánchez, A. Pérez Garrido, **J. A. Caballero**, T. Henning, R. Mundt, D. Barrado y Navascués & C. A. L. Bailer-Jones 2008, *A&A*, 477, 895

2007

62. *A near-infrared/optical/X-ray survey in the centre of σ Orionis*, **J. A. Caballero** 2007d, *AN*, 328, 917
63. *Southern very low-mass stars and brown dwarfs in wide binary and multiple systems*, **J. A. Caballero** 2007c, *ApJ*, 667, 520

64. *Discs of planetary-mass objects in σ Orionis*, M. R. Zapatero Osorio, **J. A. Caballero**, V. J. S. Béjar, R. Rebolo, D. Barrado y Navascués, G. Bihain, J. Eislöffel, E. L. Martín, C. A. L. Bailer-Jones, R. Mundt, T. Forveille & H. Bouy 2007, A&A, 472, L9
65. *Albus 1: A very bright white dwarf candidate*, **J. A. Caballero** & E. Solano 2007, ApJ, 665, L151
66. *The substellar mass function in σ Orionis. II. Optical, near-infrared and IRAC/Spitzer photometry of young cluster brown dwarfs and planetary-mass objects*, **J. A. Caballero**, V. J. S. Béjar, R. Rebolo, J. Eislöffel, M. R. Zapatero Osorio, R. Mundt, D. Barrado y Navascués, C. A. L. Bailer-Jones, T. Forveille, G. Bihain & E. L. Martín 2007, A&A, 470, 903
67. *The brightest stars of the σ Orionis cluster*, **J. A. Caballero** 2007b, A&A, 466, 917
68. *The widest ultracool binary*, **J. A. Caballero** 2007a, A&A, 462, L61
(highlight of the week in A&A)

2006

69. *A search for substellar members in the Praesepe and σ Orionis clusters*, B. M. González-García, M. R. Zapatero Osorio, V. J. S. Béjar, G. Bihain, D. Barrado y Navascués, **J. A. Caballero** & M. Morales-Calderón 2006, A&A, 460, 799
70. *Are isolated planetary-mass objects really isolated?. A brown dwarf-exoplanet system candidate in the σ Orionis cluster*, **J. A. Caballero**, E. L. Martín, P. D. Dobbie & D. Barrado y Navascués 2006b, A&A, 460, 635
71. *GRB 051028: an intrinsically faint gamma-ray burst at high redshift?*, Castro-Tirado A. J., Jelínek M., Pandey S. B., McBreen S., de Jong J., Sahu D. K., Ferrero P, **Caballero J. A.** et al. 2006, A&A, 459, 763
72. *Pleiades proper motion low-mass brown dwarfs: the cluster L dwarf sequence*, G. Bihain, R. Rebolo, V. J. S. Béjar, **J. A. Caballero**, C. A. L. Bailer-Jones, R. Mundt, J. A. Acosta-Pulido & A. Manchado 2006, A&A, 458, 805
73. *S Ori J053825.4–024241: a classical T Tauri-like object at the substellar limit*, **J. A. Caballero**, E. Martín, M. R. Zapatero Osorio, V. J. S. Béjar, R. Rebolo, Ya. Pavlenko & R. Wainscoat 2006a, A&A, 445, 143

2005

74. *A search for planetary-mass objects and brown dwarfs in the Upper Scorpius association*, M. T. Costado, V. J. S. Béjar, **J. A. Caballero**, R. Rebolo, J. Acosta-Pulido & A. Manchado 2005, A&A, 443, 1021
75. *Optical linear polarization of late-M and L-type dwarfs*, M. R. Zapatero Osorio, **J. A. Caballero** & V. J. S. Béjar 2005, ApJ, 621, 445

2004

76. *Photometric variability of young brown dwarfs in the σ Orionis cluster*, **J. A. Caballero**, V. J. S. Béjar, R. Rebolo & M. R. Zapatero Osorio 2004, A&A, 424, 827

2003

77. *Photometric variability of a young, low-mass brown dwarf*, M. R. Zapatero Osorio, **J. A. Caballero**, V. J. S. Béjar & R. Rebolo 2003, A&A, 408, 663

2002

78. *A methane isolated planetary mass object in Orion*, M. R. Zapatero Osorio, V. J. S. Béjar, E. L. Martín, R. Rebolo, D. Barrado y Navascués, R. Mundt, J. Eislöffel & **J. A. Caballero** 2002, ApJ, 578, 536

A.2. Refereed contributions to international meetings

1. *Ultra low-mass star and substellar formation in σ Orionis*, **J. A. Caballero** 2005, AN, 326, 1007
2. *Brown dwarfs and very low-mass stars: variability in the Pleiades*, M. Morales-Calderón, D. Barrado y Navascués, **J. A. Caballero** & E. L. Martín 2005, AN, 326, 1057
3. *Proper motion Pleiades candidate L-type brown dwarfs*, G. Bihain, R. Rebolo, V. J. S. Béjar, **J. A. Caballero**, C. A. L. Bailer-Jones & R. Mundt 2005, AN, 326, 1065
4. *The substellar population in the young σ Orionis cluster. Spatial distribution*, V. J. S. Béjar, **J. A. Caballero**, R. Rebolo, M. R. Zapatero Osorio & D. Barrado y Navascués 2004, Ap&SS, 292, 339
5. *Clues to substellar formation: Rotation and the low-mass end of the Initial Mass Function*, M. R. Zapatero Osorio, **J. A. Caballero**, E. L. Martín, V. J. S. Béjar & R. Rebolo 2004, Ap&SS, 292, 673

A.3. SPIE Astronomical Telescopes and Instrumentation

1. *CARMENES: an overview six months after first light*, A. Quirrenbach, P. J. Amado, **J. A. Caballero** et al. 2016, SPIE, 9908, E12 (oral)
2. *CARMENES: the VIS channel spectrograph in operation*, W. Seifert, W. Xu, O. Stahl, H.-J. Hagen, M. A. Sánchez Carrasco, G. Veredas, **J. A. Caballero** et al. 2016, SPIE, 9908, E65 (poster)
3. *CARMENES: interlocks or the importance of process visualization and system diagnostics in complex astronomical instruments*, J. Helmling, K. Wagner, L. Hernández-Castaño et al. (including **J. A. Caballero**) 2016, SPIE, 9908, E6B (poster)
4. *CARMENES-NIR channel spectrograph: how to achieve the full AIV at system level of a cryo-instrument in nine months*, S. Becerril, C. Cárdenas, P. J. Amado et al. (including **J. A. Caballero**) 2016, SPIE, 9910, E0Q (oral)
5. *CARMENES: data flow*, **J. A. Caballero**, J. Guàrdia, M. López del Fresno, M. Zechmeister, E. de Juan et al. 2016, SPIE, 9910, E0E (poster)
6. *CARMENES: management of a schedule-driven project*, M. L. García-Vargas, **J. A. Caballero**, A. Pérez-Calpena et al. 2016, SPIE, 9911, E0P (oral)
7. *CARMENES: system engineering during manufacturing and AIV phases*, A. Pérez-Calpena, W. Seifert, P. J. Amado, A. Quirrenbach, M. L. García-Vargas, **J. A. Caballero** et al. 2016, SPIE, 9911, E20 (poster)
8. *CARMENES: NIR channel spectrograph cooling system AIV, thermo-mechanical performance of the instrument*, S. Becerril, E. Mirabet, J.-L. Lizon et al. (including **J. A. Caballero**) 2016, SPIE, 9912, E62 (poster)
9. *The CARMENES instrument control software suite*, J. Colomé, J. Guàrdia, H.-J. Hagen et al. (including **J. A. Caballero**) 2016, SPIE, 9913, E34 (poster)
10. *CARMENES instrument overview*, A. Quirrenbach, P. J. Amado, **J. A. Caballero**, R. Mundt, A. Reiners, I. Ribas, W. Seifert et al. 2014, SPIE, 9147, E1F (oral)
11. *CARMENES ultra-stable cooling system: very promising results*, E. Mirabet, P. Carvas, J.-L. Lizon, S. Becerril, M. Abril, R. Morales, M. A. Sánchez-Carrasco, P. J. Amado, W. Seifert, A. Quirrenbach, **J. A. Caballero**, I. Ribas, A. Reiners, S. Dreizler 2014, SPIE, 9151, E3Y (poster)

12. *CARMENES instrument control system and operational scheduler*, Á. García-Piquer, J. Guàrdia, J. Colomé, I. Ribas, L. Gesa, J. C. Morales, A. Pérez-Calpena, W. Seifert, A. Quirrenbach, P. J. Amado, **J. A. Caballero**, A. Reiners 2014, SPIE, 9152, E51 (poster)
13. *Building a fiber link for CARMENES*, J. Stürmer, O. Stahl, C. Schwab, W. Seifert, A. Quirrenbach, P. J. Amado, I. Ribas, A. Reiners, **J. A. Caballero** 2014, SPIE, 9151, E52 (poster)
14. *Characterizing U-Ne hollow cathode lamps at near-infrared wavelengths for the CARMENES survey*, L. F. Sarmiento, A. Reiners, U. Seemann, U. Lemke, J. Winkler, M. Pluto, E. W. Guenther, A. Quirrenbach, P. J. Amado, I. Ribas, **J. A. Caballero**, R. Mundt, W. Seifert 2014, SPIE, 9147, E54 (poster)
15. *CARMENES. I: instrument and survey overview*, A. Quirrenbach, P. J. Amado, W. Seifert, M. A. Sánchez Carrasco, H. Mandel, **J. A. Caballero**, R. Mundt, I. Ribas, A. Reiners et al. 2012, SPIE, 8446, E0R (oral)
16. *CARMENES. II: optical and opto-mechanical design*, W. Seifert, M. A. Sánchez Carrasco, W. Xu, M. C. Cárdenas, E. Sánchez-Blanco, S. Becerril, C. Feiz, S. Dreizler, P. Rhode, A. Quirrenbach, P. J. Amado, I. Ribas, A. Reiners, H. Mandel, **J. A. Caballero** 2012, SPIE, 8446, E33 (poster)
17. *CARMENES. III: an innovative and challenging cooling system for an ultra-stable NIR spectrograph*, S. Becerril, J.-L. Lizon, M. A. Sánchez Carrasco, E. Mirabet, P. J. Amado, W. Seifert, A. Quirrenbach, H. Mandel, **J. A. Caballero**, I. Ribas, A. Reiners, M. Abril, R. Antona, M. C. Cárdenas, R. Morales, D. Pérez, A. Ramón, E. Rodríguez, J. Herranz 2012, SPIE, 8450, E4L (poster)
18. *CARMENES. IV: instrument control software*, J. Guàrdia, J. Colomé, I. Ribas, H.-J. Hagen, R. Morales, M. Abril, D. Galadí, W. Seifert, M. A. Sánchez Carrasco, A. Quirrenbach, P. J. Amado, **J. A. Caballero**, H. Mandel 2012, SPIE, 8450, E2S (poster)
19. *CARMENES. V: non-cryogenic solutions for YJH-band NIR instruments*, P. J. Amado, R. Lenzen, M. C. Cárdenas, E. Sánchez-Blanco, S. Becerril, M. A. Sánchez Carrasco, W. Seifert, A. Quirrenbach, I. Ribas, A. Reiners H. Mandel, **J. A. Caballero** 2012, SPIE, 8450, E1U (oral)
20. *CARMENES: Calar Alto high-resolution search for M dwarfs with exo-earths with a near-infrared Echelle spectrograph*, A. Quirrenbach, P. J. Amado, H. Mandel, **J. A. Caballero**, R. Mundt, I. Ribas, A. Reiners et al. 2010, SPIE, 7735, E37 (oral)

A.4. Technical documentation

A.4.1. Gaia validation documentation

- *A sample to quality assurance Gaia's ultracool dwarf characterisation routines*, R. L. Smart, L. M. Sarro, **J. A. Caballero**, 2015 (restricted access)

A.4.2. CARMENES

Final Design Review (Feb. 2013)

- FDR-01D *Science – Sample*, I. Ribas, J. C. Morales, **J. A. Caballero**
- FDR-02A *Management – Consortium*, **J. A. Caballero**
- FDR-02E *Management – Website and outreach*, **J. A. Caballero**
- FDR-11A *Data – Image headers*, M. López del Fresno & **J. A. Caballero**

- FDR-11C *Data – Server*, M. López del Fresno & **J. A. Caballero**

Preliminary Design Review (Jun. 2011)

- PDR-04A *Management – Consortium*, **J. A. Caballero** & H. Mandel
- PDR-04B *Management – Work breakdown structure*, **J. A. Caballero**
- PDR-04E *Management – Website*, **J. A. Caballero**
- PDR-14A *Data – Exposure time calculator, pipeline and archive*, **J. A. Caballero**, J. Colomé, A. Reiners, O. Stahl
- PDR-15A *System engineering – Interfaces table*, **J. A. Caballero**

Post-conceptual Design Review (Jul. 2010)

- *CARMENES feasibility study: post-conceptual design*, H. Mandel, **J. A. Caballero** et al.

Conceptual Design Review (Sep. 2009)

- *CARMENES feasibility study: conceptual design*, H. Mandel, **J. A. Caballero**, O. Stahl et al.

(Only key documents shown)

A.4.3. GO-IRS

Conceptual Design Review (Jun 2010)

- *GO-IRS. Volume I: Introduction and science cases*, J. Ge, **J. A. Caballero**, S. Powell, B. Zhao, A. González et al.

A.5. Non-refereed contributions to meetings

A.5.1. Invited oral contributions to plenary sessions

In Astrophysics Data System

1. *(Sub-)stellar variability: from 20 M_{\odot} to 13 M_{Jup}* , **J. A. Caballero**, 2016, OEJV, 176, 50
2. *Formation, evolution and multiplicity of brown dwarfs and giant exoplanets*, **J. A. Caballero** 2010, hsa5.conf, 79
3. *From 1000 AU to 1000 pc: high proper-motion stars in the solar neighbourhood, radio sources in the sigma Orionis cluster, and new X-ray stars surrounding Alnilam*, **J. A. Caballero** 2009, mavo.proc, 3

Published on-line

1. *Binary stars: from 0.2 arcsec to 2 deg (five years later)*, **J. A. Caballero**, “IV International Meeting of Double Stars Observers”, Vilanova i la Geltrú, Barcelona, Spain, 18–20 Sep. 2015 (www.oagarraf.net)
2. *Red and brown dwarfs in the ultraviolet*, **J. A. Caballero**, “Workshop for the WSO Working Group and Spanish UV Astronomy”, Granada, 30 Jun.–01 Jul. 2014 (spanishuvastronomy.iaa.es)

3. *Brown dwarfs from telescopes at ORM and CAHA*, **J. A. Caballero**, “*Science with the optical and near-infrared telescopes at CAHA and ORM in the coming decade*”, Madrid, 22–23 Mar. 2012 (www.riastronomia.es)
4. *The bottom of the Hertzsprung-Russell diagram with Gaia*, **J. A. Caballero**, “*Spanish ICTS contributions to ESA’s Gaia mission*”, Madrid, 21 Mar. 2012 (www.riastronomia.es)
5. *Binary stars: from 0.2 arcsec to 2 deg*, **J. A. Caballero**, “*II International Meeting of Double Stars Observers*”, Sabadell, Barcelona, Spain, 23–24 Oct. 2010 (www.oagarraf.net)

Unpublished

1. *CARMENES, current status, surveys plans, and Carmencita*, **J. A. Caballero**, “*Opportunity M*” (agent), Harvard University, Boston, MA, USA, 28–31 Aug. 2016

A.5.2. Other oral contributions to plenary sessions

In Astrophysics Data System

1. *M, L and T dwarfs in the J-PLUS Survey*, **J. A. Caballero**, 2017, [edrs.conf](#), E18
2. *Carmencita, the CARMENES input catalogue of bright, nearby M dwarfs*, **J. A. Caballero**, M. Cortés-Contreras, F. J. Alonso-Floriano et al., 2016, [csss.conf](#), E148
3. *SatMeet4 – Habitable planets, M dwarfs and near-infrared spectrographs*, **J. A. Caballero**, R. K. Kopparapu, S. Mahadevan et al. 2015, [pthp.conf](#), E103
4. *Gaia limits for brown dwarf studies*, Luis M. Sarro, D. Barrado, C. Carrión, **J. A. Caballero** 2014, *MmSAI*, 85, 637
5. *CARMENES: Blue planets orbiting red dwarfs*, A. Quirrenbach, P. J. Amado, **J. A. Caballero** et al. 2013, *IEPJC*, 47, 05006
6. *Gaia and σ Orionis from 20 M_{sol} to 3 M_{Jup} : the most precise and complete IMF with a parallax determination?*, **J. A. Caballero** 2011, [sca.conf](#), 108

Published on-line

1. *Low-mass stars, brown dwarfs and exoplanets with Gaia*, **J. A. Caballero**, “*IV Reunión Científica de la Red de Explotación de Gaia*”, Barcelona, 23–25 May 2016 (gaia.am.ub.es)
2. *What can YOU do in σ Orionis?*, **J. A. Caballero**, “*Star and planet formation workshop*”, European Science Astronomy Centre, Villanueva de la Cañada, Madrid, 21 Jan 2013 (www.sciops.esa.int)
3. *Searching for common proper-motion companions in the Local Association and its young kinematic subgroups*, F. J. Alonso-Floriano, **J. A. Caballero** & D. Montes, “*Star and planet formation workshop*”, European Science Astronomy Centre, Villanueva de la Cañada, Madrid, 21 Jan 2013 (www.sciops.esa.int)
4. *σ Orionis: “Oh my God, it’s full of brown dwarfs!”*, **J. A. Caballero**, “*50 years of brown dwarfs: from theoretical prediction to astrophysical studies*”, Schloss Ringberg, Bayern, Germany, 21–24 Oct. 2012 (www.mpia.de)
5. *Estrellas de baja masa, enanas marrones y exoplanetas*, **J. A. Caballero**, “*I Reunión Científica de la Red de Explotación de Gaia*”, San Fernando, Cádiz, 17–18 Jun. 2010 (gaia.am.ub.es)

Unpublished

1. *Young low-mass stars (and brown dwarfs) in open clusters*, **J. A. Caballero**, “Meeting of the Spanish WEAVE Science Team”, XI SEA, Teruel, 08 Sep. 2014
2. *Red and brown dwarfs in the ultraviolet*, **J. A. Caballero**, “Workshop for the WSO Working Group and Spanish UV Astronomy”, Granada, 30 Jun.–01 Jul. 2014
3. *VSOP – Filler program for GTC: getting good data in bad weather conditions*, A. Cabrera-Lavers, D. García-Álvarez, **J. A. Caballero** et al. “Quinto Encuentro Consolider-Ingenio GTC”, La Laguna, 08-10 Oct. 2012
4. *σ Orionis in the ultraviolet*, **J. A. Caballero**, “Reunión del WSO-UV Science Working Group”, Madrid, 24 Nov. 2010
5. *Peculiar high proper motion objects in Tycho-2 and 2MASS catalogues*, F. Jiménez-Esteban, **J. A. Caballero**, E. Solano, “Cuarto Encuentro Consolider-Ingenio GTC”, Sos del Rey Católico, Zaragoza, 10–12 Nov. 2010
6. *Science with GO-IRS: an optical multi-object spectrograph proposed for the 10.4 m Gran Telescopio Canarias*, D. Montes, **J. A. Caballero**, J. Ge and the GO-IRS Team, “Gaia Chemo-Dynamical Survey – Survey Science”, Nice, France, 2–4 Nov. 2010
7. *Blue high proper motion objects in Tycho-2 and 2MASS catalogues*, F. Jiménez-Esteban, **J. A. Caballero**, E. Solano, “Tercer Encuentro Consolider-Ingenio GTC”, Cádiz, 21–23 Oct. 2009
8. *Earth-like planets in habitable zones around L- (and T-)type dwarfs*, D. Montes & **J. A. Caballero**, I GTC/Exoplanet and V NAHUAL workshop, Fuerteventura, 2–6 Sep. 2008
9. *Observatorio Virtual Orión. II*, **J. A. Caballero**, “Primera Escuela de la Red Temática Spanish Virtual Observatory”, Madrid, 27–28 Nov. 2006
10. *Observatorio Virtual Orión. I*, **J. A. Caballero**, “Primera Reunión de la Red Temática Spanish Virtual Observatory”, Madrid, 6–7 Apr. 2006
11. *Planetas en visión directa*, **J. A. Caballero**, “Cuarta Reunión de la Red Española de Planetas”, Madrid, 30–31 Jan. 2006
12. *Planetary-mass objects in Orion*, **J. A. Caballero** on behalf of the JOVIAN Collaboration, “Calar Alto Colloquium 2005”, Heidelberg, 27–28 Apr. 2005
13. *Near infrared spectroscopy of isolated planetary-mass objects and low-mass brown dwarfs in σ Orionis*, **J. A. Caballero**, “Second EMIR Associated Scientific Team Meeting”, Tenerife, Nov. 2004
14. *Búsqueda y caracterización de planetas jovianos aislados*, **J. A. Caballero**, “First EMIR Associated Scientific Team Meeting”, Tenerife, 2 Jul. 2004
15. *Habitable zones around L (and T?) dwarfs: detecting Earth-like planets with Nahual?*, **J. A. Caballero**, First NAHUAL meeting: A high-resolution near-infrared spectrograph for the GTC, La Gomera, 10–12 Jun. 2004
16. *Imagen de objetos de masa planetaria*, **J. A. Caballero** et al., “Primer Encuentro de la Red Española de planetas”, Madrid, 2 Mar. 2004

A.5.3. Oral contributions to splinter sessions

In Astrophysics Data System

1. *CARMENES – M Dwarfs and their Planets: First Results*, A. Quirrenbach, P. J. Amado, I. Ribas, A. Reiners, **J. A. Caballero** et al. 2017, IAUS, 328, 46

2. *Music and astronomy. II. •unitedsoundsofcosmos*, **J. A. Caballero**, A. Arias, J. J. Machuca, S. Morente, 2017, *hsa9.conf*, 715
3. *Introduction to Satellite Meeting 4: Habitable planets, M dwarfs and near-infrared spectrographs*, **J. A. Caballero**, R. K. Kopparapu, S. Mahadevan, 2015, *pthp.conf*, E42 and E70
4. *Preparation of the CARMENES input catalogue. Low-resolution spectroscopy of M dwarfs*, F. J. Alonso-Floriano, D. Montes, **J. A. Caballero** et al. 2014, *hsa8.conf*, 441
5. *The CARMENES Survey: A Search for Terrestrial Planets in the Habitable Zones of M Dwarfs*, A. Quirrenbach, P. J. Amado, **J. A. Caballero** et al. 2014, *IAUS*, 293, 177
6. *Collaborating with “professional” amateurs: low-mass stars in fragile multiple systems*, **J. A. Caballero**, J. Genebriera, T. Tobal, F. X. Miret, F. Rica, J. Cairol, N. Miret, I. Novalbos, D. Montes, A. Klutsch 2012, *hsa7.conf*, 971
7. *CARMENES. I. A radial-velocity survey for terrestrial planets in the habitable zones of M dwarfs*, P. J. Amado, A. Quirrenbach, I. Ribas, **J. A. Caballero** et al. 2012, *hsa7.conf*, 842
8. *Preliminary results on a Virtual Observatory search for companions to Luyten stars*, **J. A. Caballero**, F. X. Miret, J. Genebriera, T. Tobal, J. Cairol & D. Montes 2010, *hsa5.conf*, 379
9. *NAHUAL: A Next-Generation Near Infrared Spectrograph for the GTC*, E. L. Martín, E. Günther, C. del Burgo, F. Rodler, C. Álvarez, C. Baffa, V. J. S. Béjar, **J. A. Caballero**, R. Deshpande, P. Esparza et al. 2010, *ASPC*, 430, 181
10. *NAHUAL, a high-resolution infrared spectrograph for the Gran Telescopio Canarias*, E. L. Martín, E. Guenther, **J. A. Caballero**, D. Barrado y Navascués, R. Garrido, S. Randich & M. R. Zapatero Osorio, 2004, *ANS*, 325, 193
11. *Extrasolar Giant Planets in the σ Orionis open cluster: A progress report*, E. L. Martín, M. R. Zapatero Osorio, D. Barrado y Navascués, V. J. S. Béjar, **J. A. Caballero**, R. Rebolo, J. Eislöffel & R. Mundt, 2004, *ASPC*, 321, 193
12. *The substellar population in σ Orionis*, M. R. Zapatero Osorio, D. Barrado y Navascués, V. J. S. Béjar, R. Rebolo, **J. A. Caballero**, E. L. Martín, R. Mundt & J. Eislöffel, 2003, *IAUS*, 211, 111
13. *Direct imaging and spectroscopy of a young Jupiter-like object*, E. L. Martín, M. R. Zapatero Osorio, V. J. S. Béjar, R. Rebolo, D. Barrado y Navascués, R. Mundt, J. Eislöffel & **J. A. Caballero**, 2002, *AAS*, 200, 9202

Published in book

1. *Formación y evolución geoquímica de planetas terrestres supermasivos*, P. Llanes Estrada, S. Pozas Requejo, A. González Fairén, E. Sánchez-Beato Suárez, D. Cortés Dopazo, **J. A. Caballero** & D. Ciudad Río-Pérez, 1999, *Actas do Congresso*, p. 303 (“*II Congresso Ibérico de Geoquímica/XI Semana de Geoquímica*”, Lisboa, 14–17 Jun. 1999. Eds. Aires-Barros, Matias & Basto)

Published on-line

1. *CARMENES-Gaia synergies*, F. J. Alonso-Floriano, **J. A. Caballero**, D. Montes, M. Cortés-Contreras & A. Klutsch, “*Gaia: III Reunión Científica de la Red de Explotación de Gaia*”, Sitges, Barcelona, 23-25 Jan 2013 (www.sciops.esa.int)

Unpublished

1. *Earth-like planets in habitable zones around L- (and T-)type dwarfs*, **J. A. Caballero**, splinter session Planets of very low-mass stars and brown dwarfs, “*The 15th Cambridge Workshop on Cool Stars, Stellar Systems, and the Sun*”, University of St. Andrews, St. Andrews, Scotland, UK, 21–25 Jul. 2008. (see A. Tanner et al. 2009, AIP Conference Proceedings, 1094, 291)
2. *A brown dwarf-exoplanet system candidate in the σ Orionis cluster*, **J. A. Caballero** et al., splinter session Sub-Stellar Twins: Binarity in Brown Dwarfs, “*The 14th Cambridge Workshop on Cool Stars, Stellar Systems, and the Sun*”, Pasadena, CA, 6–10 Nov. 2006 (see Bouy & Jayawardhana 2008, ASP Conference Series, 384, 402)
3. *Discs surrounding isolated planetary-mass objects in σ Orionis*, **J. A. Caballero** on behalf of the JOVIAN Collaboration, invited speak, splinter session The Formation of Low-Mass Protostars and Proto-Brown Dwarfs, “*The 14th Cambridge Workshop on Cool Stars, Stellar Systems, and the Sun*”, Pasadena, CA, 6–10 Nov. 2006 (see Eislöffel & Steinacker 2008, ASP Conference Series, 384, 359)

A.5.4. Posters

In Astrophysics Data System

1. *Determination of rotation periods of M stars with photometric techniques*, Díez Alonso, E., Montes, D., de Cos Juez, F. J., Naves, R., García de La Cuesta, F., Herrero, E., Béjar, V. J. S., **J. A. Caballero** et al. 2017, `hsa9.conf`, 502
2. *CARMENES input catalogue of M dwarfs: High-resolution imaging with FastCam*, Cortés-Contreras, M., Béjar, V. J. S., **J. A. Caballero** et al. 2017, `hsa9.conf`, 497
3. *Carmencita, the CARMENES Cool dwarf Information and daTa Archive*, **J. A. Caballero** et al. 2017, `hsa9.conf`, 496
4. *Characterizing the CARMENES input catalogue of M dwarfs with low-resolution spectroscopy: metallicity*, Alonso-Floriano, F. J., Montes, D., Taberner, H. M., **J. A. Caballero** et al. 2017, `hsa9.conf`, 487
5. *A spectroscopic census of L dwarfs observed by Gaia*, F. Marocco, R. L. Smart, **J. A. Caballero**, D. J. Pinfield, J. C. Beamín, H. R. A. Jones, A. Cabrera-Lavers, D. García-Álvarez 2016, `csss.conf`, E139
6. *Outlier benchmark systems with Gaia primaries*, F. Marocco, D. J. Pinfield, D. Montes, M. R. Zapatero Osorio, R. L. Smart, N. J. Cook, **J. A. Caballero**, H. R. A. Jones, P. W. Lucas 2016, `csss.conf`, E138
7. *Spectroscopic characterisation of CARMENES target candidates from FEROS, CAFE and HRS high-resolution spectra*, V. M. Passegger, A. Reiners, S. V. Jeffers, S. Wende, P. Schöfer, P. J. Amado, **J. A. Caballero** et al. 2016, `csss.conf`, E109
8. *Kinematics of M dwarfs in the CARMENES input catalogue: membership in young moving groups*, D. Montes, **J. A. Caballero**, I. Gallardo, M. Cortés-Contreras, F. J. Alonso-Floriano 2016, IAUS, 314, 71
9. *Instituto de Astrofísica de Madrid: science fiction or top science?*, **J. A. Caballero** 2015, `hsa8.conf`, 943
10. *KARMENES, the K2+CARMENES alliance*, C. Rodríguez-López, G. Anglada-Escudé, P. J. Amado, A. Ofir, I. Ribas, **J. A. Caballero** et al. 2015, `hsa8.conf`, 613
11. *Preparation of the CARMENES input catalogue. High-resolution spectroscopy of M dwarfs*, D. Montes, **J. A. Caballero**, S. Jeffers et al. 2015, `hsa8.conf`, 605

12. *Preparation of the CARMENES input catalogue. Multiplicity of M dwarfs from tenths of arcsec to hundreds of arcmin*, M. Cortés-Contreras, V. J. S. Béjar, **J. A. Caballero** et al. 2015, `hsa8.conf`, 597
13. *Preparation of the CARMENES input catalogue. Mining public archives for stellar parameters and spectra of M dwarfs with master thesis students*, **J. A. Caballero**, F. J. Alonso-Floriano, D. Montes et al. 2015, `hsa8.conf`, 595
14. *Manufacturing, assembly, integration and verification of CARMENES and preparation of its input catalogue*, A. Quirrenbach, **J. A. Caballero**, P. J. Amado et al. 2015, `csss`, 18, 897
15. *Preparation of the CARMENES input catalogue. Multiplicity of M dwarfs from tenths of arcseconds to hundreds of arcminutes*, M. Cortés-Contreras, V. J. S. Béjar, **J. A. Caballero** et al. 2015, `csss`, 18, 805
16. *Preparation of the CARMENES input catalogue. Low- and high-resolution spectroscopy of M dwarfs*, F. J. Alonso-Floriano, D. Montes, **J. A. Caballero** et al. 2015, `csss`, 18, 796
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9. *Young stars and brown dwarfs in Ori OB1b (Caballero+, 2008)*, **J. A. Caballero** & E. Solano, J/A+A/485/931
10. *The Mayrit catalogue (Caballero, 2008)*, **J. A. Caballero**, J/A+A/478/667
11. *Brightest stars of sigma Orionis cluster (Caballero, 2007)*, **J. A. Caballero**, J/A+A/466/917

A.8. Book chapters

1. “*CIENCIA, y además lo entiendo!!!*”, several authors, 2017 Ed. Q. Garrido Garrido, Creative Commons
2. “*WSO-UV science*”, several authors, 2012. Ed. A. I. Gómez de Castro, Universidad Complutense de Madrid
3. “*The Imaging and Slitless spectroscopy instrument for surveys (ISSIS) for the World Space Observatory-Ultraviolet (WSO-UV)*”, several authors, 2012. Ed. A. I. Gómez de Castro, Universidad Complutense de Madrid
4. “*100 conceptos básicos de Astronomía*”, several authors, 2010. Eds. J. Alfonso Garzón, D. Galadí Enríquez, C. Morales Durán, Instituto Nacional de Técnica Aeroespacial

A.9. Outreach articles

1. *XXV años de historia de la SEA a través de sus doctores: 2006*, **J. A. Caballero** 2017, Boletín de la Sociedad Española de Astronomía, 37, p. 23 (invited contribution)
2. *AstroArte*, **J. A. Caballero** 2017, Revista Española de Física, 31, No. 3, p. 65
3. *CARMENES 2017: una odisea planetaria*, **J. A. Caballero** 2017, Astronomía, No. 212, p. 22 (front cover page)
4. *CARMENES, el detector de exotierras*, **J. A. Caballero** 2016, Investigación y Ciencia, No. 476, p. 15
5. *CARMENES – Der Exoplanetenjäger*, **J. A. Caballero** 2015, Sterne und Weltraum, No. 2015 6, p. 36 (front cover page)
6. *CARMENES: el buscador de exoplanetas de Calar Alto*, **J. A. Caballero** 2014, Astronomía, No. 185, p. 22 (front cover page)
7. *2014: una odisea espacial*, **J. A. Caballero** 2013, Boletín Informativo del Colegio Oficial de Físicos, 201, p. 4 (invited article)
8. *σ Ori: doble, cuádruple, óctuple... ¡cuatridécuple!*, **J. A. Caballero** 2013, El Observador de Estrellas Dobles, 11, p. 108 (invited back cover page)
9. *The σ Orionis Cluster: A Space Odyssey*, **J. A. Caballero** 2013, The Star Formation Newsletter, 243, p. 6 (invited review)
10. *•unitedsoundsofcosmos: rock, astronomía, poesía y vídeo-arte*, **J. A. Caballero** 2012, Astronomía, No. 161, p. 20 (dedicated front cover page)
11. *La Poesía y la Astronomía*, **J. A. Caballero** 2009, Astronomía, No. 116, p. 24 (front cover page)
12. *La Música y la Astronomía*, **J. A. Caballero** 2007, Astronomía, No. 95, p. 26 (dedicated front cover page)
13. *Planetary-mass objects in the σ Orionis cluster*, **J. A. Caballero** & V. J. S. Béjar 2005, Calar Alto Newsletter, No. 10, highlight #2
14. *Direct detection of giant exoplanets*, **J. A. Caballero** & V. J. S. Béjar 2005, The Isaac Newton Group Newsletters, No. 9, p. 8
15. *Enanas marrones y exoplanetas gigantes*, **J. A. Caballero** 2004, Revista Española de Física, Vol. 18, No. 3, p. 19

16. *Exoplanetas: la promesa de una Planetología comparada*, **J. A. Caballero** 2003, Revista de la Asociación Española para la Enseñanza de las Ciencias de la Tierra, Vol. 11, No. 3, p. 187
17. *Weather on brown dwarf stars*, **J. A. Caballero** 2002, Nordic Optical Telescope Annual Report 2002, p. 14

A.10. Book reviews

1. *Espacio140*, **J. A. Caballero** 2017, Revista Española de Física, 31, No. 4, p. 62

A.11. Contributing edition

AstronomÍA, section *Musica Universalis*

- “*Eclíptica*” (Feb. 2018)
- “★★” (Jan. 2018)
- “*18 Del*” (Dec. 2017)
- “*Solsticio*” (Nov. 2017)
- “*Arpas*” (Oct. 2017)
- “*Hexágono*” (Sep. 2017)
- “*Rosetta*” (Jul.-Aug. 2017)
- “*Planetas, estrellas, galaxias*” (Jun. 2017)
- “[*NIN*]” (May 2017)
- “*Sueño de mandarino*” (Apr. 2017)
- “*Planetas menores*” (Mar. 2017)
- “*Dylan*” (Feb. 2017)
- “λ” (Jan. 2017)
- “*Gaia DR1*” (Dec. 2016)
- “*Ilegales*” (Nov. 2016)
- “*Ismael Serrano*” (Oct. 2016)
- “*ESO OPC P98*” (Sep. 2016)
- “*Fluido rosa*” (Jun. 2016)
- “*Cien gaviotas*” (May 2016)
- “★” (Apr. 2016)
- “*Los planetas*” (Mar. 2016)
- “*En vivo desde el espacio*” (Feb. 2016)
- “*Cástor y Pólux*” (Jan. 2016)
- “*Quijote*” (Dec. 2015)
- “*Estrack Soundtrack*” (Nov. 2015)

- “*Angelo*” (Oct. 2015)
- “*Goro*” (Sep. 2015)
- “*Módulos*” (Jul.-Aug. 2015)
- “*Granada 2*” (Jun. 2015)
- “*Granada 1*” (May. 2015)
- “*UR*” (Apr. 2015)
- “*Salas*” (Mar. 2015)
- “*Galaxie 500/Mercury Rev/Luna*” (Feb. 2015)
- “*Villancicos*” (Jan. 2015)
- “*El Planeta*” (Dec. 2014)
- “*Cármenes*” (Nov. 2014)
- “*Las calabazas machacantes*” (Oct. 2014)
- “*Música Universal*” (Sep. 2014)
- “*Mercurio*” (Jul.-Aug. 2014)
- “*VLA*” (Jun. 2014)
- “*Salva Luján*” (May. 2014)
- “*Neuronium*” (Apr. 2014)
- “*Pesebre*” (Mar. 2014)
- “*Battiato*” (Feb. 2014)
- “*El Bolet Còsmic*” (Jan. 2014)
- “*Orión*” (Dec. 2013)
- “*9*” (Nov. 2013)
- “*Multiverso II*” (Oct. 2013)
- “*X-102*” (Sep. 2013)
- “*Cabesacianos*” (Jul.-Aug. 2013)
- “*Urmas Sisask*” (Jun. 2013)
- “*Jamiroquai*” (May. 2013)
- “*Euromir 95*” (Apr. 2013)
- “*Musas*” (Mar. 2013)
- “*Viajeras*” (Feb. 2013)
- “*Púlsares*” (Jan. 2013)