

Dr. Elena Manjavacas

Space Telescope Science Institute
3700 San Martin Dr Baltimore, 21218, USA.
✉ emanjavacas@stsci.edu
<https://elenamanjavacas.com>

Curriculum Vitae

Current position

- Oct. 2020 - **ESA/AURA Astronomer**, Baltimore, MD, USA.
Present
- Sep. 2021 - **Associate Research Scientist** in the Center for Astrophysical Sciences in the Zanvyl Krieger School of Arts
Present at John Hopkins University.

Past positions

- Jan. 2019 - **Staff Astronomer at W. M. Keck Observatory**, Kamuela, Hawaii, USA.
Oct. 2020
- Sep. 2016 - **Postdoctoral Research Associate** at Steward Observatory. University of Arizona. Tucson. USA.
Jan. 2019
- June 2015 - **EMIR Postdoctoral fellow** at Instituto de Astrofísica de Canarias, San Cristóbal de La Laguna, Tenerife,
July 2016 Spain.
- Feb. 2015 - **Postdoc fellow** at Max-Planck-Institut für Astronomie. Heidelberg, Germany.
May 2015

Education

- 2011-2015 **PhD student at Max-Planck-Institut für Astronomie. Heidelberg, Germany.**
Subject: *Physical Properties of Brown Dwarfs*.
Supervisors: Prof. T. Henning, Dr. B. Goldman and Dr. S. Reffert.
- 2010-2011 **Master in Astrophysics.** Universidad Complutense de Madrid & Universidad Autónoma de Madrid. Spain.
- 2005-2010 **Degree in Physics.** Universidad Complutense de Madrid. Spain.

Scholarships and Rewards

- 2022 **NASA Agency Honor Award** for outstanding contribution in designing, building, testing, launching, commissioning and operating JWST.
- 2022 **Ramón y Cajal Fellowship 2021, Spain (rejected).**
- 2022 **Citizen of Honor of Castilla-La Mancha, Spain.**
- 2011- 2015 **IMPRS PhD fellowship, Heidelberg, Germany.**
- 2010-2011 **Trainee at ESAC, European Space Agency Center** (Villanueva de la Cañada, Madrid).
Subject: *Analysis of gravitational microlensing events using OSIRIS on board Rosetta*.
Supervisors: Dr. M. Kueppers and Dr. Börn Grieger.
- July - Sept. **Instituto de Astrofísica de Canarias (IAC) Summer Research Scholarship.**
2010 Subject: *Mode-Identification of the pulsating stars in the cluster NGC 6811*.
Supervisor: Dr. Orlagh Creevey. and Dr. Brandon Tingley.
- 2009-2010 **Scholarship from the Spanish Government (Ministerio de Ciencia e Innovación) to collaborate with Física de la Tierra, Astronomía y Astrofísica department.** Universidad Complutense de Madrid.
Subject: *Construcción de una estación de detección de Bóolidos en la Universidad Complutense de Madrid*.
Supervisor: Dr. Jaime Zamorano.
- 2005-2010 **Annual scholarship from the Spanish Government (Ministerio de Ciencia e Innovación) to complete the Degree on Physics and the Master on Astrophysics** at Universidad Complutense de Madrid, 2005-2011.

June - Aug. 2003 **Prize to participate in Ruta Quetzal BBVA 2003:** *Rumbo a las Montañas del Parayso*. Historical and Cultural Exchange between Spain and Latinamerica. Program developed in the Dominican Republic and Puerto Rico with young adults of other 30 contries. Endorse by UNESCO, sponsored by BBVA with the academic program directed by Universidad Complutense de Madrid.

Referee of international publications

2014 **Nature:** 1 manuscript
2017 **ApJ:** 1 manuscript
2020 **Nature:** 1 manuscript

Teaching experience

2012 Lab assistant for *Wavefront analysis with a Shack-Hartmann sensor*, University of Heidelberg, during 6 months.
2010-2011 Teaching assistant during 4 months for the subject *Mathematical Analysis* in the Physics Faculty, Universidad Complutense de Madrid.
2005-2010 Mathematics, Physics and Chemistry teacher.

Accepted proposals

2021 0.75 night awarded at ESO/FORS2: *Searching for clouds in brown dwarfs via linear polarimetry*.
2020 1 night awarded at Keck 1/LRIS: *Searching for clouds in brown dwarfs via linear polarimetry*.
2020 1 night awarded at Keck 1/MOSFIRE: *Searching brown dwarfs around white dwarfs*.
2019 0.5 night awarded at Keck 1/MOSFIRE: *Weather on an Exoplanet Analog with MOSFIRE*.
2019 1 night awarded at Keck 1/OSIRIS: *Brown Dwarf Binaries on the Praesepe Cluster*.
2016 12.5h awarded at VLT/XSHOOTER: *Robust test of low-gravity indicators in spectra of brown dwarf members of open clusters*.
2016 10h awarded at GTC/CIRCE: *Brown dwarf variability with GTC*.
2014 5 nights awarded at CAHA/CAFOS: *Polarization of young brown dwarfs*.
2013 17.5 h awarded in VLT/ISAAC: *Extending the young brown dwarf ISAAC spectral library*.
2011-2013 3 Accepted proposals in CAHA/OMEGA2000. *Measuring Brown Dwarf Parallaxes*.

Grants

Oct. 2021 Space Telescope Science Institute Discretionary Director Funds - *Validating the first technique to find Variable Brown Dwarfs:* **Elena Manjavacas (PI)**, Daniella C. Bardalez Gagliuffi, Rebecca Oppenheimer, Jacqueline Faherty, Kelle Cruz, Emily Rice. Amount awarded: \$43,000.
Aug. 2018 Astrophysics Data Program (ADAP) 2018 - *Binaries or variables? Disentangling the signatures of blended-light atmospheres:* Daniella C. Bardalez Gagliuffi (PI), **Elena Manjavacas**, Rebecca Oppenheimer, Jacqueline Faherty, Kelle Cruz, Emily Rice. Amount awarded: \$196,849.

Observing experience

2022 **Participation on the commissioning of the James Webb Space Telescope (about 400 hr).**
2019-2020 **85 nights supported on Keck 1, HIRES, MOSFIRE, and LRIS.**
2016 24 nights in La Palma/GTC, Spain, **EMIR MOS spectrograph commissioning.**
2015 6 nights at La Silla, Chile, 2.2 m telescope/WFI, imaging.
2014 4 nights at CAHA, Spain, 2.2 m telescope/CAFOS, polarimetry.
2013 12 nights at La Silla, 2.2 m telescope/FEROS optical spectrograph & GROND optical and near infrared imager, Chile

- 2011 2 nights at CAHA, Spain. 2.2 m telescope/CAFOS, optical imaging.
2010 8 nights at IAC 80/optical imaging. Observatorio de El Teide, Tenerife, Spain.

Press releases

- June 2021 *Astronomers Probe Layer-Cake Structure Of Brown Dwarf's Atmosphere*. Press Releases in the Hubble Site and W. M. Keck Observatory.
May 2019 *Mapping Clouds on a Distant World*. AAS NOVA. Research highlights from the journals of the American Astronomical Society.
July 2017 *Polarized light from a brown dwarf: where lies the dust at play?* Press release of the Calar Alto Observatory.

Panel Activity

- October 2021 Evaluation of Space Telescope Science Institute Discretionary Director Funds Evaluation of Proposals.
March 2020 Member of ADAP NASA panel *Stellar Astrophysics and Exoplanets*
April & Oct 2019 Internal Team Keck Time Allocation Committee.
August 2018 Member of ADAP NASA panel *Stellar Astrophysics and Exoplanets*

Computer Skills

- Languages IDL, Python, Matlab and MIDAS. Latex.
Packages IRAF
VO Topcat, Aladin, VOSA
Platforms Unix, Linux and Windows
Photometry Optical & near infrared: IAC80/Observatorio de El Teide, CAFOS/Calar Alto, OMEGA2000/Calar Alto, GTC/EMIR
Spectroscopy Optical & near infrared: VLT/X-Shooter, VLT/ISAAC, GTC/EMIR, **HST/WFC3 G141**.

Languages

- Spanish **Mother Tongue**
English **Advanced**
German **Advanced**

Conference and seminar organization

- Jan. 2019 - Organizer of Science Talks at W. M. Keck Observatory.
Oct. 2020
Sep. 2017 - Organizer of the weekly **Origins Seminar** at the Steward Observatory and Lunar and Planetary Laboratory
Jan. 2019 (University of Arizona).
Sep. 2010 *IX Scientific Meeting of the Spanish Astronomical Society (SEA)*, Madrid. **LOC member**.

Selected leadership experience

- 2021-Present Founder and coordinator of the Mentoring Program for Female Astronomers at the *Spanish Society of Astronomy (SEA)*.
2021-Present Member of the Comision of Women and Astronomy at the *Spanish Society of Astronomy (SEA)*.
2019-Present Member of the *American Astronomical Society (AAS)*.
2021-Present Member of *ECUSA: Españoles Científicos en USA*.
2008-2010 Student's representative in the Faculty of Physics at Universidad Complutense de Madrid.

- 2007-2008 Vice-president of ASAAF-UCM Astronomical Amateur Organization at Universidad Complutense de Madrid.
- 2006-2007 Secretary of ASAAF-UCM Astronomical Amateur Society at Universidad Complutense de Madrid.

Selected Refereed Publications

1. **Manjavacas, E.**; Miles-Paez, P. A.; Karalidi, T.; Vos, J. M.; Galloway, M. L.; Girard, J. H. *Time-resolved Optical Polarization Monitoring of the Most Variable Brown Dwarf*, 2023, AJ, 165, 181M.
2. **Manjavacas, E.**; Karalidi, Theodora; Tan, Xianyu; Vos, Johanna M.; Biller, Beth A.; Lew, Ben W. P. *Tracing the Top-of-the-atmosphere and Vertical Cloud Structure of a fast-rotating late T-dwarf*, 2022, AJ, 164, 65M.
3. **Manjavacas, E.**; Karalidi, Theodora ; Vos, Johanna M. ; Biller, Beth A. ; Lew, Ben W. P. *Revealing the Vertical Cloud Structure of a Young Low-mass Brown Dwarf, an Analog to the β -Pictoris b Directly Imaged Exoplanet, through Keck I/MOSFIRE Spectrophotometric Variability*, 2021, AJ, 162, 179M.
4. **Manjavacas, E.**; Lodieu, N.; Béjar, V. J. S.; Zapatero-Osorio, M.R.; Steve B.; Bonnefoy, M. *Spectral library of age-benchmark low-mass stars and brown dwarfs*, 2020, MNRAS, 491, 5925.
5. **Manjavacas, E.**; Apai, D.; Lew, B. W. P.; Zhou, Y.; Schneider, G.; Burgasser, A. J.; Karalidi, T.; Miles-Páez, P. A.; Lowrance, P. J.; Cowan, N.; Bedin, L. R.; Marley, M. S.; Metchev, S.; Radigan, J. *Cloud Atlas: Rotational Spectral Modulations and Potential Sulfide Clouds in the Planetary-mass, Late T-type Companion Ross 458C*, 2019b, ApJ, 875L, 15.
6. **Manjavacas, E.**; Apai, D.; Zhou, Y.; Lew, B. W. P.; Schneider, G.; Metchev, S.; Miles-Páez, P. A.; Radigan, J.; Marley, M. S.; Cowan, N.; Karalidi, T.; Burgasser, A. J.; Bedin, L. R.; Lowrance, P. J.; Kauffmann, P. *Cloud Atlas: Hubble Space Telescope Infrared Spectral Library of Brown Dwarfs, Planetary-mass companions, and Hot Jupiters*, 2019a, AJ, 157, 101.
7. **Manjavacas, E.**; Apai, D.; Zhou, Yifan; Karalidi, T.; Lew, B. W. P.; Schneider, G.; Cowan, N.; Metchev, S.; Miles-Páez, P. A.; Burgasser, A. J.; Radigan, J.; Bedin, Luigi R.; Lowrance, P. J.; Marley, M. S. *Cloud Atlas: Discovery of Rotational Spectral Modulation in a low-mass, L-Type Brown Dwarf Companion to a Star*, 2018, AJ, 155, 11.
8. **Manjavacas, E.**; Miles-Páez, P. A.; Zapatero-Osorio, M. R.; Goldman, B.; Buenzli, E.; Pallé, E.; Henning, T., 2017, MNRAS, 468, 3024. *Polarization of young brown dwarfs*.
9. **Manjavacas, E.**; Goldman, B; Alcalá, J. M.; Bonnefoy, M.; Zapatero-Osorio, M. R.; Homeier, D.; Béjar, V. J. S.; Smart, R. L.; Allard F.; Henning, T.; 2016, MNRAS, 455, 1341. *Hunting for brown dwarf binaries and testing atmospheric models using X-Shooter spectra*.
10. **Manjavacas, E.**; Bonnefoy, M.; Goldman, B.; Chauvin, G.; Rojo, P. et al. 2014, 564, 55, A&A. *New constraints on the formation and settling of dust in the atmosphere of young M and L dwarfs*.
11. **Manjavacas, E.**; Goldman, B.; Reffert, S.; Henning, T. 2013, 560, 52 A&A. *Parallaxes of cool brown dwarfs*.
12. Oliveros-Gómez, N; **Manjavacas, E**; Ashraf, A; Bardalez Gagliuffi, D.; Vos, J; Faherty, J; Karalidi, T; Apai, D. *Informed systematic method to identify variable mid and late-T dwarfs*, 2022, ApJ, 939, 72.
13. S. Petrus, M. Bonnefoy; G. Chauvin; C. Babusiaux; P. Delorme; A.-M. Lagrange; N. Florent; A. Bayo; M. Janson; B. Biller; **E. Manjavacas**; G.-D. Marleau; T. Kopytova. *A new take on the low-mass brown dwarf companions on wide-orbits in Upper-Scorpius*, 2020. A&A, 633A, 124.
14. Miles-Páez, P. A.; Metchev, S.; Apai, D.; Zhou, Y.; **Manjavacas, E.**; Karalidi, T.; Lew, B. W. P.; Burgasser, A. J.; Bedin, L. R.; Cowan, N.; Lowrance, P. J.; Marley, M. S.; Radigan, J.; Schneider, G. *Cloud Atlas: Variability in and out of the Water Band in the Planetary-mass HD 203030B Points to Cloud Sedimentation in Low-gravity L Dwarfs*, 2019, ApJ, 883, 181.
15. Y. Zhou, D. Apai, S. Metchev, B. W. P. Lew, G. Schneider, M. S. Marley, T. Karalidi, **E. Manjavacas**, L. R. Bedin, N. B. Cowan, P. A. Miles-Páez, P. J. Lowrance, J. Radigan, A. J. Burgasser. *Cloud Atlas: High-contrast Time-resolved Observations of Planetary-mass Companions*, 2019, AJ, 157, 128.
16. Vos, J. M.; Biller, B. A.; Bonavita, M.; Eriksson, S.; Liu, M. C.; Best, W. M. J.; Metchev, S.; Radigan, J.; Allers, K. N.; Janson, M.; Buenzli, E.; Dupuy, T. J.; Bonnefoy, M.; **Manjavacas, E.**; Brandner, W.; Crossfield, I.; Deacon, N.; Henning, T.; Homeier, D.; Kopytova, T.; Schlieder, J. *A search for variability in exoplanet analogues and low-gravity brown dwarfs*, 2019, MNRAS, 483, 480.

17. Zapatero Osorio, M. R.; Béjar, V. J. S.; Lodieu, N.; **Manjavacas, E.** *Confirming the least massive members of the Pleiades star cluster*, 2018, MNRAS, 475, 139.
18. Y. Zhou, D. Apai, S. Metchev, B. W. P. Lew, G. Schneider, M. S. Marley, T. Karalidi, **E. Manjavacas**, L. R. Bedin, N. B. Cowan, P. A. Miles-Páez, P. J. Lowrance, J. Radigan, A. J. Burgasser. *Cloud Atlas: Rotational Modulations in the L/T Transition Brown Dwarf Companion HN Peg B*, 2018, AJ, 155, 132.
19. Biller, B.; Vos, J.; Buenzli, E.; Allers, K.; Bonnefoy, M.; Charnay, B.; Bézard, B.; Allard, F.; Homeier, D. ; Bonavita, M.; Brandner, W.; Crossfield, I.; Dupuy, T.; Henning, T.; Kopytova, T.; Liu, M. C.; **Manjavacas, E.**; Schlieder, J. *Simultaneous, Multi-Wavelength Variability Characterization of the Free-Floating Planetary Mass Object PSO J318.5-22*, 2017. Accepted for publication in ApJ.
20. Zapatero Osorio, M. R.; Béjar, V. J. S.; Lodieu, N.; **Manjavacas, E.** *Confirming the least massive members of the Pleiades star cluster*, 2017. Accepted for publication in MNRAS.
21. Marks, M.; Martín, E. L.; Béjar, V. J. S.; Lodieu, N.; Kroupa, P.; **Manjavacas, E.**; Thies, I.; Rebolo López, R.; Velasco, S.. *A testable prediction to distinguish between peripheral and star-like formation*, 2017, A&A, 605, 11.
22. F. Garzón; N. Castro; M. Insausti; **E. Manjavacas**; M. Miluzio; Peter Hammersley; N. Cardiel; S. Pascual; C. González-Fernández; J. Molgó; M. Barreto; P. Fernández; E. Joven; P. López; A. Mato; H. Moreno; M. Núñez; J. Patrón; J. Rosich; N. Vega. *EMIR at the GTC: results on the commissioning at the telescope*. SPIE digital library: <http://dx.doi.org/10.1117/12.2232885>.
23. Biller, B. A.; Vos, J.; Buenzli, E.; Baxter, C.; Crossfield, I. J. M.; Allers, K.; Liu, M. C.; Bonnefoy, M.; Deacon, N.; Brandner, W.; Schlieder, J. E.; Dupuy, T.; Kopytova, T. G.; **Manjavacas, E.**; Allard, F.; Homeier, D.; Henning, T.; 2015, ApJ Letters, 813, 23. *Variability in a Young, L/T Transition Planetary Mass Object*.
24. Kopytova, T. G.; Crossfield, I. J. M.; Deacon, N. R.; Brandner, W.; Bayo, A.; Buenzli, E.; Schlieder, J. E.; **Manjavacas, E.**; Biller, B. A.; Kopon, D.; 2014, ApJ, 797, 3. *Deep z-band observations of the coolest Y dwarf*.

Invited talks

- Scheduled **Invited Talk at Durham University (UK)**. *NIRSpec Onboard the James Webb Space Telescope: Revolutionizing Space-based Instrumentation and Astronomy*.
 June 2023
- Jan 2023 **Keynote Invited Talk at Cloud 2 Conference at Rindberg Castle, Tegernsee (Germany)**. *Clouds in Brown Dwarfs*.
- June 2022 **Invited Talk at IPAG/IRAM Grenoble (France)**. *The atmospheric structures of Cool Dwarfs*.
- March 2020 **Invited Talk at Space Telescope Science Institute (Baltimore, USA)**. *Past, Present and Future of Brown Dwarf Atmospheres*
- December 2019 **Invited Talk at Gemini North Observatory (Hilo, Hawaii, USA)**. *Hubble Space Telescope Infrared Spectral Library of Brown Dwarfs, Planetary-mass companions, and Hot Jupiters*

Selected Oral contributions to international conferences

- July 2022 *Cool Stars 21*. **Contributed Talk**. *Searching for Clouds in the most Variable Brown Dwarf via Linear Polarimetry*
- June 2021 *Summer AAS Meeting*. **Contributed Talk**. *Revealing the Vertical Cloud Structure of a Young Low-mass Brown Dwarf, an Analog to the β -Pictoris b Directly Imaged Exoplanet, through Keck I/MOSFIRE Spectrophotometric Variability*
- October 2019 *BDEXOCON 2019*. Newark, Delaware, US. **Contributed Talk**. *Hubble Space Telescope Infrared Spectral Library of Brown Dwarfs, Planetary-mass companions, and Hot Jupiters*
- July 2018 *Conference of the Spanish Astronomical Society, SEA*. Salamanca (Spain). **Contributed Talk**. *Hubble Space Telescope Infrared Spectral Library of Brown Dwarfs, Planetary-mass companions, and Hot Jupiters*

- October 2017 *BDEXOCON 2017*. Delaware (US). **Contributed Talk** *Cloud Atlas: Discovery of Rotational Spectral Modulation in a low-mass, L-Type Brown Dwarf Companion to a Star*
- June 2016 *Cool Stars 19 Conference*. Uppsala (Sweden). **Contributed Talk**. *Polarization of young brown dwarfs*.
- July 2015 *From super-Earths to Brown Dwarfs: Who's who?*. Paris (France). **Contributed Talk**. *Hunting brown dwarf binaries and testing atmospheric models using X-Shooter spectra*
- September 2014 *Meeting of the Spanish Astronomical Society (SEA)*, Teruel, Spain. **Contributed Talk**. *Hunting brown dwarf binaries using X-Shooter spectra*
- March 2014 *Gaia and the Unseen The Brown Dwarf Question*. Torino (Italy). **Contributed Talk**. *New constrains on the formation and settling of dust in the atmosphere of young M and L dwarfs*.
- October 2012 *50 years of Brown Dwarfs*, Ringberg Castle (Germany). **Contributed Talk**: *Towards a complete brown dwarf binary fraction including spectroscopic binaries*.

Selected poster contributions to international conferences

- August 2019 *Cloud Atlas: Rotational Spectral Modulations and Potential Sulfide Clouds in the Planetary-mass, Late T-type Companion Ross 458C*. Exoclines V. Oxford (UK).
- July 2018 *Cloud Atlas: Discovery of Rotational Spectral Modulation in a low-mass, L-Type Brown Dwarf Companion to a Star*. Conference of the Spanish Astronomical Society, SEA. Salamanca (Spain).
- June 2014 *Hunting brown dwarf binaries and testing atmospheric models using X-Shooter spectra*. *Cool Stars 18 Meeting*. Flagstaff (USA).
- July 2013 *New constrains on the formation and settling of dust in the atmosphere of young M and L dwarfs*. *Protostars and Planets VI*. Heidelberg (Germany).
- May 2013 *Parallaxes of cool brown dwarfs. Brown dwarfs come to Age*. Fuerteventura (Spain).
- July 2012 *Frequencies and oscillation modes of variable stars in σ -orionis and NGC 6811*. *Meeting of the Spanish Astronomical Society (SEA)*. Valencia (Spain).

Outreach publications

1. **E. Manjavacas**. *Calendarios Islámico y Hebreo (Islamic and Hebrew calendar)*. Neomenia. Numero 30. ISBN: 1887-4258. 2009.
2. **E. Manjavacas**. *¿Cuál es la magnitud mínima de un objeto celeste para que se vea a simple vista desde la Tierra?* El País: Las científicas responden.

Outreach activity

- 7 Oct. 21 *Lanzando the James Webb Space Telescope*. Museo de Ciencias de Castilla-La Mancha, Spain.
- 29 Oct. 19 *Searching For New Worlds*. Public Library Kona, Big Island, US
- 12 Feb. 19 *New Updates on the Search for New Worlds*. Outreach Talk for the West Hawaii Astronomy Group. Kamuela, Big Island, US
- 5 Nov. 18 *Buscando Nuevos Mundos*. First Public Talk at Steward Observatory *en Español*.
- 2006-2010 Organizer on ~ 10 Star Parties as a member of *ASAAF-UCM*, Astronomical Amateur Society at Universidad Complutense de Madrid
- July 2009 Astronomy Summer Course in Mota del Cuervo (Cuenca), Spain
- Oct. 2008 *Astronomía en la Comunidad de Madrid*. IV Jornadas Astronómicas de la Comunidad de Madrid, Madrid (Spain)
- Nov. 2006 *III Jornadas Astronómicas de la Comunidad de Madrid*, Madrid (Spain). **LOC member**

Major Scientific Collaborations

1. **Daniella C. Bardalez Gagliuffi (AMNH), Rebecca Oppenheimer (AMNH), Jacqueline Faherty (AMNH), Kelle Cruz (AMNH), Emily Rice (AMNH).** In this collaborations, we aim at building spectral indices to find variable candidates with spectral types between L2-T8, using archival data from different ground-telescopes, and HST/WFC3 + G141 spectra.
2. **Nicolas Lodieu (IAC), Victor Béjar (IAC) , Maria Rosa Zapatero-Osorio (IAC), Steve Boudreault (MPS), Mickael Bonnefoy (CNRS).** In this collaborations, we aim at building a spectral library of age-benchmark low-mass stars and brown dwarfs that serve as templates for brown dwarf dating in the future.
3. **Daniel Apai (Steward Observatory); Ben Lew (LPL, Steward Observatory), Yifan Zhou (UT Austin), Glenn Schneider (Steward Observatory), Adam Burgasser (UCSC), Theodora Karalidi (UCF), Paulo A. Miles-Páez (ESO), Patrick Lowrance (IPAC), Nicolas Cowan (McGill), Luigi R. Bedin (INAF), Mark Marley (NASA AMES), Stan Metchev (UWO), Jacqueline Radigan (UVU).** This collaboration involves the study of brown dwarf variability using HST/WFC3 + G141 grism, within the *Cloud Atlas* Treasury project, led by Prof. Daniel Apai.
4. **Beth Biller (University of Edinburgh), Johanna Vos (AMNH), Katelyn Allers (Bucknell University), Mickael Bonnefoy (CNRS), Mariangela Bonavita (University of Edinburgh), Wolfgang Brandner (MPIA), Ian Crossfield (MIT), Trent Dupuy (Gemini North), Thomas Henning (MPIA).** This collaboration involves the study of spectro-photometric variability of brown dwarfs and planetary-mass objects using Spitzer, HST/WFC3, and other ground-based telescopes.

Selected Press Interviews

- 23 March 2022 Interview for *Radio Televisión Española: Españoles en el Exterior: Una española en la NASA.*
- 11 Feb. 2022 Interview for *Radio 5 Radio Nacional de España: Científicas españolas: "Todavía hay obstáculos para ascender"*
- 1 Nov. 2021 Interview for *Noticias Canal Castilla-La Mancha*
- 31 Aug. 2021 Interview for *La Tribuna de Cuenca: De Mota al Cielo*
- 25 Aug. 2021 Interview for *El País: La niña que soñó con las estrellas mientras vendimiaba*
- 20 Oct. 2021 Interview *El Digital Castilla-La Mancha: De Castilla-La Mancha al cielo: la niña que soñaba con las estrellas y ahora trabaja para la NASA*

References

Marco Sirianni

Supervisor at Space Telescope Science Institute
Space Telescope Science Institute
3700 San Martin Dr.
+1 (410) 338 2439
marco.sirianni@esa.int

Randy Campbell

Supervisor at W. M. Keck Observatory
W. M. Keck Observatory
65-1120 Mamalahoa Hwy, Kamuela, USA
+1 (808) 881-3867
randyc@keck.hawaii.edu

Prof. Daniel Apai

Supervisor at Steward Observatory
Steward Observatory, University of Arizona
933 N. Cherry Avenue, Tucson, USA
+1 (520) 621-6534
apai@email.arizona.edu

Dr. Francisco Garzón

P. I. EMIR imager and spectrograph
Instituto de Astrofísica de Canarias
C/ Vía Láctea, s/n, 38205, Tenerife, Spain
(+34) 922 605 5275
fgl@iac.es