

# Javier Zaragoza Cardiel

Astrophysicist



## Contact

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Date of birth:  
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Date of PhD:  
13/02/2015

## Languages

Spanish native  
English fluent

## References

Available on request

## Education

- 2015 **Ph.D.** in Astrophysics University of La Laguna, Spain  
Ph.D. Thesis: *Kinematics of interacting galaxies*.  
Supervisors: John E. Beckman & Kambiz Fathi.
- 2011 **M.Sc** in Astrophysics University of La Laguna, Spain  
Master's Thesis: *The kinematic of galaxy interactions applied to its evolution*.  
Supervisors: John E. Beckman, Joan Font & Begoña García Lorenzo.
- 2010 **Bachelor** in Physics University of Murcia, Spain

## Experience

- 2019-present **INAOE** Puebla, Mexico  
*Cátedra CONACYT*
  - CONACYT Research Fellow commissioned in INAOE to research on millimeter astronomy using the Large Millimeter Telescope at *Volcán Sierra Negra*, Puebla.
- 2018-2019 **INAOE** Puebla, Mexico  
*CONACYT Postdoc*
  - Postdoctoral research assistant working on the CONACyT project led by Itziar Aretxaga entitled "Deep panoramic surveys at 1.1/1.4/2.1mm with the new polarimetric camera TolTEC".
- 2015-2017 **Instituto de Astronomía-UNAM** Mexico City, Mexico  
*DGAPA postdoc*
  - DGAPA Postdoctoral Fellowship, program of the National Autonomous University of Mexico (UNAM) for independent research for 2 years supervised by Margarita Rosado.

## Observational experience

- 2019-present **Millimeter**  
*Observer at millimeter telescopes*
  - Part of the scientific operation group of the Large Millimeter Telescope (Sierra Negra, Puebla, México).
- 2010-present **Optical**  
*Observer at optical telescopes*
  - Observer at the William Herschel Telescope (*Roque de los Muchachos* Observatory, La Palma, Spain), the 2.1m telescope at the *Observatorio Astronómico Nacional* (San Pedro Mártir, Baja California, Mexico), and the 2.1m telescope at the *Observatorio Astrofísico Guillermo Haro* (Cananea, Sonora, Mexico).

## Contribution to international meetings & conferences

- Aug 2022 **IAU Symposium 373: Resolving the Rise and Fall of Star Formation in Galaxies.** Online, Busan, South Korea.  
**E-Talk:** *Measuring stellar feedback in galaxy disks.*
- May 2022 **Meeting VII: Science with GTC.** Online  
Invited **Talk:** *Measuring gas and energy flows in galaxies.*
- May 2021 **Multi-object Spectroscopy for Statistical Measures of Galaxy Evolution.** Online  
**Poster:** *How much stellar feedback regulates galaxy growth?*
- Aug 2019 **Guillermo Haro Workshop: The Formation and Evolution of Super Star Clusters: Theory and Observations** Tonantzintla, Mexico  
**Talk:** *Detection of self-regulated star formation in disk galaxies*
- Jun 2019 **Feedback and Its Role in Galaxy Formation** Spetses, Greece  
**Poster:** *Detection of self-regulated star formation in disk galaxies*
- Sep 2018 **Guillermo Haro Workshop: Synergy between the GTC and GTM/LMT** Tonantzintla, Mexico  
**Talk:** *Stellar feedback: When, Where, and How?*
- Jul 2018 **The Laws of Star Formation: From the Cosmic Dawn to the Present Universe** Cambridge, United Kingdom  
**Poster:** *Resolved gas properties with the TolTEC millimeter-wavelength camera*
- Apr 2017 **Multi-Scale Star Formation** Morelia, Mexico  
Contributed **talk:** *Star formation in interacting galaxies*
- Aug 2016 **CLOUDY: Emission lines in Astrophysics, from gaseous nebulae to quasars** Mexico City, Mexico  
Contributed **talk:** *Star formation in interacting galaxies*
- Jun 2015 **EWASS 2015: Symposium 6 The Formation and Destruction of Molecular Clouds** Tenerife, Spain  
Contributed **talk:** *Evidence for the non-destruction of the most massive molecular clouds even after the birth of massive star clusters*
- Jun 2015 **EWASS 2015: Special Session 3 3D view on interacting and post-interacting galaxies from clusters to voids** Tenerife, Spain  
Contributed **talk:** *Gravity Binding and Pressure Bounding of HII Regions and Molecular Clouds in Interacting Galaxies*
- Jul 2014 **IAUS 309: Galaxies in 3D across the Universe** Vienna, Austria  
**Poster:** *Enhanced star formation characteristics in interacting galaxies*
- Mar 2014 **3D2014: Gas and stars in galaxies: A multi-wavelength 3D perspective** Garching, Germany  
Highlight **talk & poster:** *Condition for star formation triggering in interacting galaxies*
- Oct 2013 **Physical processes in the ISM** Garching, Germany  
Contributed **talk:** *Two regimes of star formation*
- Aug 2012 **IAUS 292: Molecular Gas, Dust, and Star Formation in Galaxies** Beijing, China  
**Poster:** *Gas Flows and Star Formation in the Interacting Galaxy System Arp 270*

- Jul 2012 **EWASS 2012, Special Session: Morphology and Kinematics of Interacting galaxies** Rome, Italy  
Contributed **talk**: *Physical and kinematic properties of HII regions in the Arp 270 system*
- Apr 2012 **Interacting Galaxies and Binary Quasars: A Cosmic Rendezvous** Trieste, Italy  
Contributed **talk**: *The Internal Kinematics of the Interacting Galaxies Arp 270 determined from Fabry-Perot Spectroscopy in H $\alpha$*

## Contribution to national meetings & conferences

- Oct 2021 **XXVIII National Congress of Astronomy** Tijuana, Mexico  
Contributed **talk**: *Star formation triggering in the Arp 240 system of interacting galaxies*
- Oct 2020 **LXIII National Congress of Physics** Morelia, Mexico  
Invited **talk**: *Measuring the role of stellar feedback in the regulation of galaxy growth*
- Dec 2019 **II Extragalactic meeting in Mexico** Morelia, Mexico  
Contributed **talk**: *Self-regulation of star formation in galaxy discs*
- Oct 2018 **XXVII National Congress of Astronomy** Puebla, Mexico  
Contributed **talk**: *Measuring the Stellar Feedback in Galaxies*
- Sep 2016 **I Extragalactic meeting in Mexico** Morelia, Mexico  
Contributed **talk**: *Internal kinematics of ionized and molecular gas in LIRGs*

## Talks at Research Institutions

- Apr 2023 **Instituto de Astronomía-UNAM** Mexico City, Mexico  
Seminar at the Extragalactic Astronomy and Cosmology Department of the Institute of Astronomy-UNAM: *Tracing galaxy evolution through stellar populations and metallicity.*
- Jan 2023 **IPARCOS-UCM** Madrid, Spain  
Colloquia at the Inst. of Particle and Cosmos Physics group (UCM): *Tracing galaxy evolution through stellar populations and metallicity.*
- Sep 2022 **INAOE** Tonantzintla, Mexico  
Seminar at INAOE: *Nebular abundance gradient in the Cartwheel galaxy.*
- Oct 2018 **Instituto de Radioastronomía y Astrofísica-UNAM** Morelia, Mexico  
Colloquia at the Institute of Radioastronomy and Astrophysics-UNAM: *Resolved star formation and stellar feedback in galaxies.*
- May 2017 **East Tennessee State University** Johnson City, USA  
Seminar at the Physics & Astronomy Department of the East Tennessee State University: *Star formation in nearby extreme environments.*
- Feb 2017 **Instituto de Astronomía-UNAM** Mexico City, Mexico  
Seminar at the Extragalactic Astronomy and Cosmology Department of the Institute of Astronomy-UNAM: *Star formation in galaxy pairs: from UV to the IR.*
- Mar 2016 **Instituto de Astronomía-UNAM** Ensenada, Mexico  
Seminar at the Institute of Astronomy-UNAM, Ensenada : *Kinematics of star forming regions in interacting galaxies.*

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|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| Nov 2015 | <b>INAOE</b>                                                                                                                                                                                   | Tonantzintla, Mexico |
|          | Seminar at INAOE: <i>Kinematics of star forming regions in interacting galaxies.</i>                                                                                                           |                      |
| Oct 2015 | <b>Instituto de Astronomía-UNAM</b>                                                                                                                                                            | Mexico City, Mexico  |
|          | Colloquia at the Institute of Astronomy-UNAM: <i>Kinematics and star formation in interacting galaxies.</i>                                                                                    |                      |
| May 2015 | <b>Swinburne University of Technology</b>                                                                                                                                                      | Melbourne, Australia |
|          | Seminar at Swinburne University of Technology for the Galaxies group: <i>Dynamics of merging galaxies: key steps in the evolution of galaxies.</i>                                             |                      |
| Sep 2014 | <b>Max Planck Institute for Radio Astronomy</b>                                                                                                                                                | Bonn, Germany        |
|          | Seminar at the Millimeter and Submillimeter Astronomy group: <i>Two physical regimes of star formation in the Antennae galaxies as seen by ALMA and <math>\text{GH}\alpha\text{FS}</math>.</i> |                      |

## Teaching

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|--------------|-------------------------------------------------------------------------|---------------------|
| 2022-present | <b>Eliana Isabella Vargas Sánchez, INAOE</b>                            | Student supervision |
|              | Supervision of master student at INAOE.                                 |                     |
| 2021-present | <b>Daniela Espitia Mosquera, INAOE</b>                                  | Student supervision |
|              | Co-supervision of master student at INAOE.                              |                     |
| 2020-present | <b>Luis Enrique Garduño Puga, INAOE</b>                                 | Student supervision |
|              | Co-supervision of Ph.D. student at INAOE.                               |                     |
| 2020         | <b>Interstellar Medium Physics, INAOE</b>                               | Course              |
|              | Master course at the Astrophysics Department at INAOE.                  |                     |
| 2019-present | <b>Fundamental Astronomy, INAOE</b>                                     | Course              |
|              | Propaedeutic course in the Astrophysics Department at INAOE.            |                     |
| 2017         | <b>Selected Topics of Astronomy, UNAM</b>                               | Course              |
|              | Course from the <i>Diplomado</i> in Physics of Science Faculty at UNAM. |                     |

## Outreach Talks

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| Dec 2022 | <b>Noche de las estrellas, UNAM</b>                                                                                                  | Puebla, Mexico  |
|          | Outreach talk at <i>Noche de las estrellas</i> , called: <i>Transformaciones galácticas.</i>                                         |                 |
| Apr 2022 | <b>Martes de Ciencia INAOE</b>                                                                                                       | Online          |
|          | Online public talk as part of the <i>Martes de Ciencia con el INAOE</i> programme, about galaxy formation and evolution.             |                 |
| May 2020 | <b>Astro ABC INAOE</b>                                                                                                               | Online          |
|          | Online public lectures as part of the Astro ABC INAOE course. Lectures were about galaxy formation and evolution.                    |                 |
| Sep 2019 | <b>Instituto Universitario de Puebla A.C.</b>                                                                                        | Atlixco, Mexico |
|          | Public talk at <i>Instituto Universitario de Puebla A.C.</i> for secondary students, called: <i>La nota roja de las galaxias.</i>    |                 |
| Mar 2019 | <b>Bar Karuzo</b>                                                                                                                    | Puebla, Mexico  |
|          | Public talk at <i>Bar Karuzo</i> as part of the Science in the pub programme, called: <i>La vida secreta de las galaxias.</i>        |                 |
| Feb 2019 | <b>Universidad Iberoamericana de Puebla</b>                                                                                          | Puebla, Mexico  |
|          | Public talk at <i>Universidad Iberoamericana de Puebla</i> for engineering students, called: <i>La vida secreta de las galaxias.</i> |                 |

- Sep 2018 **Guillermo Haro 2018 Workshop, INAOE** Cholula, Mexico  
Public talk at *Museo Regional de Cholula* as a part of the Guillermo Haro 2018 Workshop, called: *La vida oculta de las galaxias*.
- Dec 2017 **La fiesta de las Ciencias y las Humanidades, UNAM** Mexico City, Mexico  
Outreach talk at *Universum, UNAM*, called: *La vida oculta y terrorífica de las galaxias*.
- Aug 2017 **Centro Clavius, Universidad Iberoamericana** Mexico City, Mexico  
Outreach talk at *Centro Clavius, Universidad Iberoamericana*, called: *La vida oculta y terrorífica de las galaxias*.
- Dec 2016 **Noche de las estrellas, UNAM** Mexico City, Mexico  
Outreach talk at *Noche de las estrellas, UNAM*, called: *Formación estelar a lo bestia*.

## Computer skills

- Operating systems: Linux-UNIX & Windows.
- Programming languages: Python, IDL, Fortran.
- Expert in datacubes analysis (optical & radio).
- Expert user of High-Performance Computing.
- Advanced user of  $\text{\LaTeX}$  for scientific work.

## Other skills and activities

- 2023-2025 **Project Grant** CONACYT Frontier Science 2023  
Frontier Science 2023 CONACYT Grant of 780KMXN (40K€). PI: Javier Zaragoza-Cardiel.
- 2022-2023 **GUC member** GTC Users Committee  
Mexican member of the GTC Users Committee (GUC).
- 2021-present **SMF member** Sociedad Mexicana de Física  
*Sociedad Mexicana de Física* member since 2021.
- 2020-present **IAU Junior Member** IAU  
International Astronomical Union Junior Member since 2020.
- 2019-present **Referee/Reviewer** UNAM  
Referee of PAPIIT projects from UNAM.
- 2017-present **Referee/Reviewer** CONACYT  
Referee of PhD and postdocs candidates and projects of CONACYT national and international fellowships.
- 2017-2026 **Member of Mexico's National System of Researchers** Level I
- 2015-present **Referee/Reviewer** MNRAS, PASP  
Referee for Monthly Notices of the Royal Astronomical Society since 2015, for Publications of the Astronomical Society of the Pacific since 2019.

## Articles in peer-review journals

- Garduño, L. E., **J. Zaragoza-Cardiel**, M. A. Lara-López, I. A. Zinchenko, M. Zerbo, M. E. De Rossi, J. Fritz, S. Dib, L. S. Pilyugin, M. Sánchez-Cruces, V. Heesen, S. P. O’Sullivan, O. López-Cruz, M. Valerdi, and M. Rosado (submitted). “Metal-THINGS: a panchromatic analysis of the local scaling relationships of the dwarf irregular galaxy NGC 1569”. In: *submitted to MNRAS*.
- Comerón, S., I. Trujillo, M. Cappellari, F. Buitrago, L. E. Garduño, **J. Zaragoza-Cardiel**, I. A. Zinchenko, M. A. Lara-López, A. Ferré-Mateu, and S. Dib (Mar. 2023). “The massive relic galaxy NGC 1277 is dark matter deficient. From dynamical models of integral-field stellar kinematics out to five effective radii”. In: *Submitted to A&A*, arXiv:2303.11360, arXiv:2303.11360. DOI: 10.48550/arXiv.2303.11360. arXiv: 2303.11360 [astro-ph.GA].
- Fernández-Arenas, D., E. Carrasco, R. Terlevich, E. Terlevich, R. Amorin, F. Bresolin, R. Chávez, A. L. González-Morán, D. Rosa-González, Y. D. Mayya, O. Vega, **J. Zaragoza-Cardiel**, J. Méndez-Abreu, R. Izazaga-Pérez, A. Gil de Paz, J. Gallego, J. Iglesias-Páramo, M. L. García-Vargas, P. Gómez-Alvarez, A. Castillo-Morales, N. Cardiel, S. Pascual, and A. Pérez-Calpena (Mar. 2023). “Spatially resolved properties of the ionized gas in the H II galaxy J084220+115000”. In: 519.3, pp. 4221–4240. DOI: 10.1093/mnras/stac3309. arXiv: 2211.06021 [astro-ph.GA].
- Lara-López, M. A., L. S. Pilyugin, J. Zaragoza-Cardiel, I. A. Zinchenko, O. López-Cruz, S. P. O’Sullivan, M. E. De Rossi, S. Dib, L. E. Garduño, M. Rosado, M. Sánchez-Cruces, and M. Valerdi (Jan. 2023). “Metal-THINGS: Association and optical characterization of supernova remnants with H I holes in NGC 6946”. In: 669, A25, A25. DOI: 10.1051/0004-6361/202245068. arXiv: 2210.11878 [astro-ph.GA].
- Mayya, Y. D., J. A. Alzate, L. Lomeli-Núñez, **J. Zaragoza-Cardiel**, V. M. A. Gómez-González, S. Silich, D. Fernández-Arenas, O. Vega, P. A. Ovando, L. H. Rodríguez, D. Rosa-González, A. Luna, M. Zamora-Avilés, and F. Rosales-Ortega (June 2023). “The stellar population responsible for a kiloparsec-size superbubble seen in the JWST ‘phantom’ images of NGC 628”. In: 521.4, pp. 5492–5507. DOI: 10.1093/mnras/stad636. arXiv: 2302.12704 [astro-ph.GA].
- Mayya, Y. D., A. Plat, V. M. A. Gómez-González, **J. Zaragoza-Cardiel**, S. Charlot, and G. Bruzual (Mar. 2023). “Detection of He<sup>++</sup> ion in the star-forming ring of the Cartwheel using MUSE data and ionizing mechanisms”. In: 519.4, pp. 5492–5513. DOI: 10.1093/mnras/stad017. arXiv: 2301.03073 [astro-ph.GA].
- J. Zaragoza-Cardiel**, V. M. A. Gómez-González, D. Mayya, and G. Ramos-Larios (Aug. 2022). “Nebular abundance gradient in the Cartwheel galaxy using MUSE data”. In: *MNRAS* 514.2, pp. 1689–1705. DOI: 10.1093/mnras/stac1423. arXiv: 2205.09150 [astro-ph.GA].
- Gómez-González, V. M. A., Y. D. Mayya, J. A. Toalá, S. J. Arthur, **J. Zaragoza-Cardiel**, and M. A. Guerrero (Jan. 2021). “Wolf-Rayet stars in the Anten-

- nae unveiled by MUSE”. In: *MNRAS* 500.2, pp. 2076–2095. DOI: 10.1093/mnras/staa3304. arXiv: 2010.09781 [astro-ph.GA].
- Mayya, Y. D., E. Carrasco, V. M. A. Gómez-González, **J. Zaragoza-Cardiel**, A. Gil de Paz, P. A. Ovando, M. Sánchez-Cruces, L. Lomeli-Núñez, L. Rodríguez-Merino, D. Rosa-González, S. Silich, G. Tenorio-Tagle, G. Bruzual, S. Charlot, R. Terlevich, E. Terlevich, O. Vega, J. Gallego, J. Iglesias-Páramo, A. Castillo-Morales, M. L. García-Vargas, P. Gómez-Alvarez, S. Pascual, and A. Pérez-Calpena (Oct. 2020). “MEGARA-IFU detection of extended He II  $\lambda 4686$  nebular emission in the central region of NGC 1569 and its ionization budget”. In: *MNRAS* 498.1, pp. 1496–1514. DOI: 10.1093/mnras/staa2335. arXiv: 2008.00320 [astro-ph.GA].
- Zaragoza-Cardiel, J.**, J. Fritz, I. Aretxaga, Y. D. Mayya, D. Rosa-González, J. E. Beckman, G. Bruzual, and S. Charlot (Nov. 2020). “A quantitative demonstration that stellar feedback locally regulates galaxy growth”. In: *MNRAS* 499.1, pp. 1172–1187. DOI: 10.1093/mnras/staa2906. arXiv: 2009.08992 [astro-ph.GA].
- Zaragoza-Cardiel, J.**, J. Fritz, I. Aretxaga, D. Mayya, D. Rosa-González, J. E. Beckman, G. Bruzual, S. Charlot, and L. Lomeli-Núñez (July 2019). “Detection of the self-regulation of star formation in galaxy discs”. In: *MNRAS* 487.1, pp. L61–L66. DOI: 10.1093/mnras/1/s1z093. arXiv: 1906.01641 [astro-ph.GA].
- Zaragoza-Cardiel, J.**, B. J. Smith, M. Rosado, J. E. Beckman, T. Bitsakis, A. Camps-Fariña, J. Font, and I. S. Cox (Feb. 2018). “Stellar Population Synthesis of Star-forming Clumps in Galaxy Pairs and Non-interacting Spiral Galaxies”. In: *ApJS* 234.2, 35, p. 35. DOI: 10.3847/1538-4365/aaa255. arXiv: 1712.05408 [astro-ph.GA].
- Camps-Fariña, A., **J. Zaragoza-Cardiel**, J. E. Beckman, J. Font, P. F. Velázquez, A. Rodríguez-González, and M. Rosado (July 2017). “Physical properties of superbubbles in the Antennae galaxies”. In: *MNRAS* 468.4, pp. 4134–4142. DOI: 10.1093/mnras/stx551. arXiv: 1703.02902 [astro-ph.GA].
- Zaragoza-Cardiel, J.**, J. Beckman, J. Font, M. Rosado, A. Camps-Fariña, and A. Borlaff (Mar. 2017). “Kinematics of the ionized and molecular gas in nearby luminous infrared interacting galaxies”. In: *MNRAS* 465.3, pp. 3461–3474. DOI: 10.1093/mnras/stw2963. arXiv: 1611.03863 [astro-ph.GA].
- Camps-Fariña, A., J. E. Beckman, J. Font, A. Borlaff, **J. Zaragoza-Cardiel**, and P. Amram (Sept. 2016). “Three supernova shells around a young M33 star cluster”. In: *MNRAS* 461.1, pp. L87–L91. DOI: 10.1093/mnras/1/s1w106. arXiv: 1605.06403 [astro-ph.GA].
- Smith, B. J., **J. Zaragoza-Cardiel**, C. Struck, S. Olmsted, and K. Jones (Mar. 2016). “A Comparative Study of Knots of Star Formation in Interacting versus Spiral Galaxies”. In: *AJ* 151.3, 63, p. 63. DOI: 10.3847/0004-6256/151/3/63. arXiv: 1601.02664 [astro-ph.GA].
- Camps-Fariña, A., **J. Zaragoza-Cardiel**, J. E. Beckman, J. Font, B. García-Lorenzo, S. Erroz-Ferrer, and P. Amram (Mar. 2015). “BUBBLY: a method for detecting and characterizing interstellar bubbles using Fabry-Perot spec-

- troscopy”. In: *MNRAS* 447.4, pp. 3840–3848. DOI: 10.1093/mnras/stu2623. arXiv: 1412.3378 [astro-ph.IM].
- Zaragoza-Cardiel, J.**, J. E. Beckman, J. Font, B. Garcia-Lorenzo, A. Camps-Fariña, K. Fathi, P. A. James, S. Erroz-Ferrer, J. Barrera-Ballesteros, and M. Cisternas (Aug. 2015). “Comparative internal kinematics of the H II regions in interacting and isolated galaxies: implications for massive star formation modes”. In: *MNRAS* 451.2, pp. 1307–1330. DOI: 10.1093/mnras/stv1024. arXiv: 1505.01497 [astro-ph.GA].
- Font, J., J. E. Beckman, **J. Zaragoza-Cardiel**, K. Fathi, B. Epinat, and P. Amram (Oct. 2014). “The ratio of pattern speeds in double-barred galaxies.” In: *MNRAS* 444, pp. L85–L89. DOI: 10.1093/mnras/1/slu120. arXiv: 1408.4274 [astro-ph.GA].
- Zaragoza-Cardiel, J.**, J. Font, J. E. Beckman, B. Garcia-Lorenzo, S. Erroz-Ferrer, and L. Gutiérrez (Dec. 2014). “Two physical regimes for the giant H II regions and giant molecular clouds in the Antennae galaxies”. In: *MNRAS* 445.2, pp. 1412–1423. DOI: 10.1093/mnras/stu1847. arXiv: 1409.1251 [astro-ph.GA].
- Zaragoza-Cardiel, J.**, J. Font-Serra, J. E. Beckman, J. Blasco-Herrera, B. Garcia-Lorenzo, A. Camps, O. Gonzalez-Martin, C. Ramos Almeida, N. Loiseau, and L. Gutiérrez (June 2013). “Kinematics of Arp 270: gas flows, nuclear activity and two regimes of star formation”. In: *MNRAS* 432.2, pp. 998–1009. DOI: 10.1093/mnras/stt527. arXiv: 1303.5020 [astro-ph.CO].

## Conference proceedings

- McCrackan, M., Z. Ma, N. S. DeNigris, C. Ryan, K. Souccar, G. W. Wilson, I. Aretxaga, A. Bij, L. Fissel, J. E. Golec, R. Guterthuth, D. Lee, G. Novak, F. Thiel, S. Walker, and **Javier Zaragoza-Cardiel** (Aug. 2022). “The TolTEC camera: the citlali data reduction pipeline engine”. In: *Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series*. Vol. 12189. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series, 121891H. DOI: 10.1117/12.2629095.
- Ma, Z., M. McCrackan, N. S. DeNigris, K. Souccar, G. W. Wilson, P. Horton, D. Lee, P. Mauskopf, G. Novak, I. Rodríguez-Montoya, and **J. Zaragoza-Cardiel** (Dec. 2020). “The TolTEC data analysis pipeline and software stack”. In: *Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series*. Vol. 11452. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series, 114522O. DOI: 10.1117/12.2560735.
- Zaragoza-Cardiel, J.**, J. Beckman, J. Font, A. Camps-Fariña, B. Garcia-Lorenzo, and A. Serrano-Borlaff (Mar. 2017). “Evidence for the non-destruction of the Most Massive Molecular Clouds even after they have given Birth to Massive Star Clusters”. In: *Formation, Evolution, and Survival of Massive Star Clusters*. Ed. by Charbonnel, C. and A. Nota. Vol. 316, pp. 135–136. DOI: 10.1017/S1743921315008959.

- Zaragoza-Cardiel, J.**, J. Beckman, J. Font, A. Camps-Fariña, B. Garcia-Lorenzo, and A. Serrano-Borlaff (Jan. 2016). “Gravity Binding and Pressure Bounding of Hii regions and Molecular Clouds in Interacting Galaxies”. In: *From Interstellar Clouds to Star-Forming Galaxies: Universal Processes?* Ed. by Jablonka, P., P. André, and F. van der Tak. Vol. 315, E84. DOI: 10.1017/S1743921316008474.
- Camps-Fariña, A., J. Beckman, **J. Zaragoza-Cardiel**, J. Font, and K. Fathi (Feb. 2015). “Fabry-Perot spectroscopy: a powerful method for detecting superbubbles in galaxy discs”. In: *Galaxies in 3D across the Universe*. Ed. by Ziegler, B. L., F. Combes, H. Dannerbauer, and M. Verdugo. Vol. 309, pp. 303–303. DOI: 10.1017/S1743921314009995.
- Camps-Fariña, A., J. Beckman, **J. Zaragoza-Cardiel**, J. Font, K. Fathi, P. F. Velázquez, and A. Rodríguez-González (Feb. 2015). “Kinematic properties of superbubbles in the Antennae, M83 and Arp 270”. In: *Galaxies in 3D across the Universe*. Ed. by Ziegler, B. L., F. Combes, H. Dannerbauer, and M. Verdugo. Vol. 309, pp. 304–304. DOI: 10.1017/S174392131401000X.
- Zaragoza-Cardiel, J.**, J. E. Beckman, J. Font, A. Camps-Fariña, B. Garcia-Lorenzo, and S. Erroz-Ferrer (Feb. 2015). “Star formation enhancement characteristics in interacting galaxies”. In: *Galaxies in 3D across the Universe*. Ed. by Ziegler, B. L., F. Combes, H. Dannerbauer, and M. Verdugo. Vol. 309, pp. 354–354. DOI: 10.1017/S174392131401045X.
- Font, J., J. E. Beckman, **J. Zaragoza**, B. Garcia-Lorenzo, and L. Gutiérrez (Oct. 2013). “Mapping the H $\alpha$  Emission Line from Interacting Galaxies with GH $\alpha$ FaS: The Case of ARP 271”. In: *Galaxy Mergers in an Evolving Universe*. Ed. by Sun, W.-H., C. K. Xu, N. Z. Scoville, and D. B. Sanders. Vol. 477. Astronomical Society of the Pacific Conference Series, p. 275.