RESUME

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Current Address (Office)

National Radio Astronomy Observatory
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Professional Appointments

Apr. 2023 – present North American ALMA Regional Center Deputy Manager/NRAO Scientist, NRAO, Charlottesville, USA.

Mar. 2021 – Mar. 2023 Array Performance Group Manager, JAO/NRAO, Santiago, Chile.

Jan. 2016 – Mar. 2023 REU Chile Program Manager , JAO/NRAO, Santiago, Chile.
Jan. 2011 – Feb. 2021 ALMA Operations Astronomer, JAO/NRAO, Santiago, Chile.
Oct. 2008 – Dec. 2010 ALMA Commissioning Scientist, JAO/NRAO, Santiago, Chile.
Oct. 2006 – Oct. 2008 ALMA Postdoctoral Research Fellow at the North American ALMA Science Center, NRAO, Charlottesville, USA.

Education

Sept. 2003 – Sept. 2006 *PhD in Astronomy* – University College London, UK.

Mar. 1998 - Dec. 2002 — *Bachelors Degree* in Astronomy – Facultad de Ciencias Físicas y Matemáticas of the Universidad de Chile - Santiago, Chile.

Course Certificates

Sept. 2021 *Foundations of Management* - Google & Coursera.
Aug 2020 *Fundamentals of Project Planning and Management* - Darden School of Business, University of Virginia & Coursera).
Jan/Feb 2019 *Introduction to Systems Engineering* - The University of New South Wales & Coursera.

Honours and Awards

Nov. 2017 *AVONNI Prize for Innovation* - Ministry of Culture, Government of Chile.
Jan. 2002 *GEMINI PhD studentship* - Particle Physics and Astronomy Research Council (UK) & Fundacion Andes (Chile).

Research Interests

87 refereed publications (**H-index: 36**) on Formation of Planetary System, Protoplanetary and Debris disks, Episodic Accretion in Young Stars

Observational Techniques

Radio-, submm- and mm- interferometry, Single Dish, Near-infrared Imaging Polarimetry, High-Resolution Optical Spectroscopy, Wide-field photometry, ALMA Solar Observing, ALMA Array Calibration, Astrometry.

Programming & Data Reduction

CASA, ALMA Observing Tool, Python, AIPS, AIPS++, DIFMAP, GILDAS, Perl, PDL, IDL, C++, IRAF, STARLINK software

Languages

Spanish & **Portuguese** (mother tongue, fluent), **English** (fluent), **French** (fluent), **German** (beginner)

Personal Interests

- Tai Chi, Qi Gong, football (soccer), cycling, hiking, golf
- Bossa nova, singing, literature, cooking
- Travel, world music

FUNDING GRANTS

Adjunct Researcher - Jan 2022 — Dec 2025 : Millennium Nucleus on Young Exoplanets and their Moons: Research grant from the Chilean Government to establish a 3-year working group on Planets and Moons formations (PI Peréz U. de Santiago - *A.Hales Adjunct Researcher*). Estimated amount **800 000 USD** for 3 years to hire postdocs, PhD students, conferences, equipment, etc. Grant based mainly at U. de Santiago and U. de Diego Portales. Potentially renewable for other 3 years.

Co-I - Jan 2014 – Jan 2015 : Development Upgrades of the Atacama Large Millimeter/submillimeter Array (ALMA) – Advanced Solar Observing Techniques: PI T. Bastian (70 065 USD).

Co-I - Sept 2011 — Sept 2014 : ICM Millennium Nucleus: Research grant from the Chilean Government to establish a 3-year working group on Protoplanetary Disks Studies with ALMA (PI Casassus U. de Chile - *A.Hales Associate Researcher*). Estimated amount **1 500 000 USD** for 6 years to hire postdocs, PhD students, conferences, equipment, etc. Grant based mainly at U. de Chile and U. de Valparaiso.

Co-I - 2012 — 2015 : eMerlin Legacy Program – PEBBLES (Planet Earth Building Blocks - a Legacy eMERLIN Survey): PI J. Greaves.

Co-I - 2009— 2011 : Proposal for an ISSI International Team Project - Submillimeter Solar Flare Observations: PI S. Krucker & Hugh Hudson.

PROFESSIONAL ACTIVITIES & SERVICE:

2012 - present: Agencia Nacional de Investigación y Desarrollo (ANID) Physics and Astronomy Grant Selection Committee, ANID, Chile.

2016 - now : Peer-review referee for *Astronomy and Astrophysics, The Astrophysical Journal* and *Monthly Notices of the Royal Astronomical Society*.

Dec 2021: NAASC Telescope Diagnostic and NAASC/SRDP Scientist Selection Committee, NRAO, USA. Panel member..

Dec 2020: *Five years after HL Tau: a new era in planet formation* Conference - Primary Organizer (SOC/LOC) - Santiago, Chile (Virtual due to COVID19).

May 2016: *Planet formation in the era of ALMA* Conference - Primary Organizer (SOC/LOC) - Santiago, Chile.

Feb 2015: NRAO Scientist Selection Committee, NRAO, USA. Panel member.

July 2014: NASA XRP Proposal Review Panel, Maryland USA. Panel member.

January 2014: ALMA Science Archive Content Manager Selection Committee, JAO, Chile.

Dec 2013 – January 2014: *ASTROPOL 2014* Conference - SOC - Grenoble, France (May 2014).

June 2-7 2013: *IAU 299 Exploring the Formation and Evolution of Planetary Systems* - SOC - Victoria, Canada.

March 2013 : *First Chilean School in Planetary Formation* - Scientific and Local Organizing Committee - U. de Chile, Santiago, Chile

OUTREACH ACTIVITIES

Oct. 2008-present Several outreach activities for ALMA, some higlights and recent activities include:

- Mar 2024: Outreach talk on Life in the Universe, Astronomy of Tap event, Charlottesville.
- **Jan-Oct 2022: Scientific consultant for an astronomy book for children published by Catalunyan Publisher Zahori Books titled 'Lost Landscapes of the Solar System**
- **Nov 2021: I published an astronomy book for children (64 pages), featuring the advancements made by astronomers to quantify the factors in the Drake Equation. Over 1000 books have been sold in the past year**
- Dec 2021: Presentation at Puerto de Ideas, presentatation of my book 'Estamos solos en el Universo?'
- Sept 2021: Discussion table at festival Ars Electronica
- Mar 2021: Capsule for Semana de la Astronomia: https://www.youtube.com/watch?v=5wM3d2ij8Mc
- Feb 2021: ALMA Sounds talk for Northeast Wisconsin Technical College
- Feb 2021: Talk to Second graders at Pine Street School (NYC)
- Oct 2020: Presentation at "Mil años de cielos", Museo Nacional de Arte de Cataluña (MNAC), Barcelona.
- Sept 2020: Interview with Turkish Press about Phosphine in Venus
- Sept 2020: Presentation at Manfred Olson Planetarium of the University de Wisconsin
- Jul 2020: Science Talk at Universidad de La Frontera
- Jul 2020: Podcast for 'Hijo de las estrellas'
- Jun 2020: **Talk at TEDx Event in Villa Urquina, Argentina (https://www.ted.com/talks/antonio_hales_sociedades_planetarias_dec_2020)**
- Nov 2019: Shooting for netflix show: intervention on ALMA Sounds
- Nov 2019: Outreach Talk in Toconao
- **Jun 2016: Creation of ALMA Soundbank, highlighted in SONAR+D Music and technology Festival, Barcelona. The outreach video has been viewed by over 3.3 million viewers.**
- **Mar 2013: ALMA Inaugural Moment with his excellency the President of Chile .**
- Dec 2013: Co-author on book on Chilean painter: 'Roberto Matta and the Universe'.
- March 2013: Organizing the First Chilean Summer School on Planet Formation (U. de Chile/ICM/ALMA.
- Numerous Outreach talks: **TEDx Buenos Aires (2012)**, Chilean Universities, San Pedro de Atacama Museum, Local Schools (at least 3-4 per year).
- Interviews with world-wide journalists: e.g. CNN Chile, TV Globo Brasil, TVN Chile, BBC UK, Radio RCN Colombia, China Radio Internacional.

OBSERVING PROPOSALS & EXPERIENCE:

Aug. 2023 ALMA: Characterizing the protoplanetary disks around young massive stars, 6.7 hours (B- Rank, co-I Hales)

Aug. 2022 ALMA: 100 disks in Ophiuchus at 0.05" - 0.10" (7 - 14 au resolution) in Band-8, 5.7 hours (A- Rank, co-I Hales)

Aug. 2022 ALMA: High-frequecy polarization observations of IXPE blazars , 36 hours (B- Rank, co-I Hales)

Aug. 2021 ALMA: Dust evolution in the protoplanetary disk population of Ophiuchus, 10 hours (C- Rank, co-I Hales)

Aug. 2019 ALMA: Mapping mass outflows in an EXor Ourburst, 5 hours (B- Rank, PI Hales)

Aug. 2018 ALMA: Testing the Cometary Origin Scenario in a Young, Gas-bearing, Beta Pictoris Analogue 9 hours (B- Rank, PI Hales)

Aug. 2017 ALMA: A complete study of FU/EX Or objects. 6 hours (C- Rank, PI Hales)

Aug. 2016 ALMA: Detecting the kinematical signature of accreting protoplanets with ALMA long baselines. 9 hours (A-rank , co-PI Hales).

Aug. 2016 ALMA: Twin disks in FU Ori: Episodic accretion via binary interactions? 6 hours (A-rank, co-PI Hales).

Aug. 2016 ALMA: ALMA-GAIA Reference Frame Link, 18 hours (A-rank, co-PI Hales)

Aug. 2016 ALMA: Measuring vertical settling and radial drift of dust: A survey of young edge-on disks, 7 hours (co-PI Hales)

Aug. 2016 VLA: Probing the dense core and the snowline in the outbursting FUOr V883 Ori, 4 hours (co-PI Hales)

Aug. 2015 ALMA: Disk/Envelope of the Burst Source EX Lup, 1 hours (co-PI Hales).

July 2015 APEX : A CN Survey in Protoplanetary disks, 24 hours (co-PI Hales).

May 2015 eVLA: Dust radial segregation in the TW Hydrae disk, 0.8 hours (PI Hales).

Dec 2014 APEX : A CO Survey in Debris Disks, 37.5 hours (PI Matra).

Apr 2014 ALMA: Characterizing the disk surrounding IM Lupi, 2h (PI Pinte).

Apr 2014 ALMA: Imaging the debris disk around HD 95086, 4.5h (PI Booth).

July 2013 APEX : LABOCA Imaging of the disk around HD98922, 3.3 hours (PI Hales).

April 2013 IRAM 30m: Evolution of dusty debris around young Solar analogues , 5.2 hours (PI: Greaves).

June/July 2012 VLT/NACO Imaging Polarimtery of the dust ring around HD 142527, 6 hours (PI: Hales).

June/July 2012 ALMA Cycle 0 Observations of the unique extrasolar planetary and debris disk system HD 8799, 5.7 hours (PI: Jordán)

Apr/May 2012 ALMA Cycle 0 Observations of the young protoplanetary disk around HD 142527, 7.7 hours (PI: Casassus)

Apr. 2009 A GBT view of the Vega Debris Disk at 3 mm, GBT, 32 hours (PI: Wilner).

Aug. 2008 Super-sized dust and exo-earth formation, GBT, 8 hours (PI: Greaves).

June 2008 A CO Survey in Planet-Forming Disks: Characterizing the Gas Content in the Epoch of Planet Formation, Atacama Sub-millimeter Telescope, 27 hours (PIs: Casassus & Hales).

Oct. 2006 - Dec. 2007 2 months of Science support at the ALMA Test Facility, performing Holography, Optical Pointing, Radiometric Pointing, and Dynamic Interferometry.

Oct. 2007 100m Green Bank Telescope ('The 1 cm continua of HAeBe stars, 1 night, PI: Hales, A).

Jun. 2007 VLT/NACO ('Near-IR Imaging Polarimetry of the disk around HD169142', 1 night, PI: Hales, A).

Oct. 2006 - Feb. 2007 Green Bank Telescope NH_3 observations ('The Class 0 source Barnard 1c, 1 night, PI: Matthews, B).

Nov. 2003 - 2005 2.5m Isaac Newton Telescope, La Palma, Spain (22 nights, IPHAS survey; PI: Drew J.).

Jul. - Aug. 2005 Commissioning and Demo-science runs of the bench-mounted High-Resolution Optical Spectrograph for Gemini South (bHROS, Chile; 15 nights, Project Scientist: Barlow, M.J.).

CONFERENCES ATTENDED

(last 10 years)

Mar 2024 *Dust Devils in the Sonoran Desert*, Tucson, USA, Poster Contribution.
Sept 2023 *Exoplanets: Atmospheres to Architectures*, Washington DC, USA, Poster Contribution.
Apr 2023 *Protostars and Planets VII*, Kyoto, Japan, Poster Contribution.
Sept 2022 *Debris discs: At Home and Abroad*, Jena, Germany, Oral Contribution.
Dec 2020 *Five years after HL Tau: a new era in planet formation*, Santiago, Chile, Poster Contribution.
September 2019 *UX Ori type Stars*, Saint-Petersburg, Russia, Oral Contribution.
May 2019 *New Horizons*, Victoria, Cánada , Poster Contribution.
June 2018 *Astronomical Frontiers* , Portland, USA, Oral Contribution.
October 2017 *ALMA Long Baselines*, Kyoto, Japan, Poster Contribution.
Sept. 2016 *5 years of ALMA*, Palm Springs, USA, 2 poster contributions.
May 2016 *Resolving planet formation in the era of ALMA and extreme AO*, Santiago, Chile, Primary Organizer and Poster Contribution (SOC/LOC).
March 2016 *SOCHIAS General Meeting*, Universidad de Antofagasta, Antofagasta, Chile, Invited talk.
July 2015 *Disc Dynamics and Planet Formation*, Cyprus, Poster Contribution
July 2014 *Planet Formation across the HR diagram*, Cambridge, United Kingdom, Poster Contribution
May 2014 *Astronomical Polarimetry*, Grenoble, France, SOC Member and Poster Contribution
March 2014 *HAeBe stars: The Missing link in Star Formation*, ESO, Santiago, Chile, Poster Contribution
June 2013 *IAU299: The Formation and Evolution of Planetary Systems*, Victoria, Canada, SOC Member, Discussion panel and Poster Contribution
May 2013 *NRAO Rocks 2013*, Big Island, Hawaii, USA, Poster Contribution
September 2012 *Planet Formation and Evolution*, Munchen, Germany, Poster Contribution
May 2012 *Revealing Evolution of Protoplanetary Disks in the ALMA Era*, Kyoto, Japan, Poster Contribution

ASTRONOMICAL SCHOOLS

3$^{\mathrm{rd}}$-7$^{\mathrm{th}}$ November 2014 *Advanced School in Planet Formation*, Universidad de Chile, Chile.
June 13 $^{\mathrm{th}}$- June 20$^{\mathrm{th}}$ 2006 *Tenth Summer Synthesis Imaging Workshop* - NRAO, Socorro, USA.
January 14 $^{\mathrm{th}}$- January 16$^{\mathrm{th}}$ 2002 *Interferometry week* - European Southern Observatory (ESO), Santiago, Chile.

STUDENT MENTORING

Mar-Aug 2024 : Daniel Padilla, B.Sc. Summer Project, NM Tech - *High resolution imaging of FU Orionis*.

Jun/Aug 2022 : Ava Nederlander, B.Sc. Summer Project, Stony Brook University - *An Outburst in Decline: The environment of L1251 VLA 6*.

Jun/Aug 2021 : Makoto Johnstone, B.Sc. Summer Project, Middlebury College - *Band 6 observations of CARMA-7*.

Jan/Feb 2020 : Silvio Ulloa, B.Sc. Summer Project, Universidad de Chile - *The Gas-rich Debris Disk around HD110058*.

Jan/Feb 2019 : Camilo Gonzalez, B.Sc. Summer Project, Universidad de Chile - *ALMA Observations of Young Eruptive Stars*.

Jan/Feb 2018 : Sebastian Filipini, B.Sc. Summer Project, Universidad Andres Bello - *ALMA Self-calibration of Disks in the Ophiucus Star Forming Region*.

Jan/Feb 2017 : Michel Maluenda, B.Sc. Summer Project, UC del Norte - *Studying Calibrator Variability with ALMA*.

TALKS & SEMINARS

ALMA Observations of the gas-rich HD 110058 Debris Disk, *Debris Disks Conference*, Friedrich Schiller University Jena, Germany, September 2022

ALMA Studies of Young Eruptive Stars, *Colloquium*, Department of Physics & Astronomy at California State University Northridge (CSUN), November 2020

Invited TEDx Talk: 'Planetary Societies', TEDx Villa Urquiza, Ciudad Autonoma de Buenos Aires, Argentina, June 2020

ALMA Studies of Young Eruptive Stars, *UX Ori type Stars Workshop*, Saint-Petersburg, Russia, October 2019

Unveiling Episodic Accretion with ALMA, Joint ALMA Office, Santiago, August 2019

ALMA Studies of Young Eruptive Stars, National Radio Astronomy Observatory, Charlottesville, April 2019 (NRAO/UVa Colloquium)

ALMA: Recent Scientific Highlights and Future, Universidad de Valparaiso, Valparaiso, Chile, December 2018

Astronomical Frontiers in the next Decade, Portland, USA, Contributed Talk, June, 2018.

Colloquium: ALMA Science and Engineering, Facultad de Ciencias Físicas y Matemáticas of the Universidad de Chile - Santiago, Chile, October 2016.

Invited Talk: ALMA Cycle 4, SOCHIAS, Universidad de Antofagasta, Antofagasta, Chile, March 2016.

Colloquium: Studying Planetary Formation with ALMA, Physics Department, Universidad Federico Santa Maria, Valparaiso, Chile, October 2014.

Closing Review Panel, IAU 299 Exploring the Formation and Evolution of Planetary Systems - Victoria, Canada.

Invited Keynote Talk at Feria de la Industria Creativa, Región de Los Ríos, Universidad Austral de Chile, December 2012

Invited TEDx Talk: 'Exploring our origins with ALMA', TEDx Universidad Tecnica Nacional, Buenos Aires, Argentina, April 2012

Solar Observations with ALMA, International Space Science Institute, Bern, Switzerland, November 2009 (Sub-millimeter Solar Flare Observations, Oral Contribution)

Frequency of Galactic mid-IR excesses Around A-stars, IAU General Assembly, Rio de Janeiro, Brasil, August 2009 (Oral Contribution)

Surveying Planetary Formation with ALMA, Torun Centre for Astronomy, Torun, Poland, August 2008 (*Extrasolar planets in multi-body systems: theory and observations*, Contributing Speaker)

Observing Planetary Systems with ALMA, European Southern Observatory, Garching, Germany, September 2007 (ALMA Surveys meeting, Oral Contribution)

Protoplanetary Disks Around A-stars, European Southern Observatory, Santiago, Chile, March 2007 (Observing Planetary Systems conference, Oral Contribution)

Probing Planet Formation, National Radio Astronomy Observatory, Charlottesville, February 2007 (NRAO/UVa Colloquium)

The Environments of Planetary Formation, University College London, UK, November 2005 (Astrobiology and Planetary Exploration meetings)

PUBLICATIONS IN REFEREED JOURNALS

[87] **Discovery of an accretion streamer and a slow wide-angle outflow around FU Orionis**
Hales, A.; Gupta, A.; Ruiz-Gonzalez, D.; Williams, J.; Pérez, S. et al., 2024, Accepted to ApJ

[86] **An Outbursting Protostar: The Environment of L1251 VLA 6**
Nederlander, A.; Plunkett, A.; **Hales, A.**, Kóspál, A.; White, J.; Johnstone, M.; Kun, M; Ábrahám, PéterP.; Hughes, A., 2024, ApJ, 964, 49N

[85] **Observing the Sun with the Atacama Large Millimeter/Submillimeter Array (ALMA): Polarization Observations at 3 mm**
Shimojo, M.; Bastian, T.; Kameno, S. and **Hales, A.** , 2024, SoPh, 299, 20S

[83] **Radio-continuum decrements associated to shadowing from the central warp in transition disc DoAr 44**
Arce-Tord, C.; Casassus, S.; Dent, W.; Pérez, S.; Cárcamo, M.; Weber, P.; Engler, N.; Cieza, L.; **Hales, A.**; Zurlo, A. and Marino, S., 2023, MNRAS, 526 ,2077A

[82] **ALMA High-frequency Long Baseline Campaign in 2021: Highest Angular Resolution Submillimeter Wave Images for the Carbon-rich Star R Lep**
Asaki, Y., Maud, L.; Francke, H. et al., , 2023, ApJ, 958, 86A

[81] **Resolving the binary components of the outbursting protostar HBC 494 with ALMA**
Nogueira, P.; Zurlo, A.; Pérez, S.; González-Ruilova, C.; Cieza, L.; **Hales, A.** Bhowmik, T. et al., 2023, MNRAS, 523, 4970N;

[80] **Spirals and Clumps in V960 Mon: Signs of Planet Formation via Gravitational Instability around an FU Ori Star?**
Weber, P.; Pérez, S.; Zurlo, A.; Miley, J.; **Hales, A.**; Cieza, L.; Principe, D. et al., 2023, ApJ, 952L, 17W

[79] **Primordial or Secondary? Testing Models of Debris Disk Gas with ALMA**
Cataldi, G; Aikawa, Y.; Iwasaki, K; Marino, S.; Brandeker, A.; **Hales, A.**; Henning, T.; Higuchi, A. et al., 2023, ApJ, 951, 111C

[78] **The clumpy structure of ϵ Eridani's debris disc revisited by ALMA**
Booth, M.; Pearce, T. D.; Krivov, A.; Wyatt, M.; Dent, W..; **Hales, A.** Lestrade, JF.; Cruz-Sáenz de Miera, F.; Faramaz, V..; Lohne, T.; Chavez-Dagostino, M.,2023,MNRAS, 521, 6180B

[77] **X-Ray Polarization Observations of BL Lacertae**
Middei, R.;Liodakis, I.; Perri, M. et al., 2023, ApJ, 942L, 10M

[76] **ALMA Observations of the HD 110058 debris disk**
Hales, A.; Marino, S.; Sheehan, P.; Ulloa, S.; Perez, S.; Matra, L.; Kral, Q.; Wyatt, M.; Dent, W. and Carpenter, J.; 2022, ApJ, 940, 161H

[75] **Discovery of a brown dwarf with quasi-spherical mass-loss**
Ruiz-Rodríguez, D..; Cieza, L. A.; Casassus, S.; Almendros-Abad, V.; Jofré, P.; Muzic, K.; Pena Ramirez, K.; Batalla-Falcon, G.; Dunham, M. ; Gonzalez-Ruilova, C.; **Hales, A.;** Humphreys, E.; Nogueira, P. H.; Paladini, C.; Tobin, J.; Williams, J. P.; Zurlo, A., 2022, ApJ, 938, 54R

[74] **The Doppler Flip in HD 100546 as a Disk Eruption: The Elephant in the Room of Kinematic Protoplanet Searches**
Casassus, S.; Cárcamo, M.; **Hales, A.**; Weber, P.; Dent, B., 2022, ApJ, 933L

[73] **High-resolution ALMA observations of V4046 Sgr: a circumbinary disc with a thin ring**
Martinez-Brunner, R., Casassus, S., Pérez, S. **Hales, A.** Weber, P., and 6 more, 2022, MNRAS, 510, 1248

[72] **Millimeter-sized Dust Grains Surviving the Water-sublimating Temperature in the Inner 10 au of the FU Ori Disk**
Liu, H. B.; Tsai, A.; Chen, W. P.; Liu, Jin Z.; Zhang, X.; Ma, S.; Elbakyan, V.; Green, J. D.; **Hales, A. S.**; and 5 more, 2021, ApJ, 923, 270

[71] **Probing protoplanetary disk evolution in the Chamaeleon II region**
Villenave, M.; Ménard, F.; Dent, W. R. F. and 13 more, 2021, A&A, 653A 46V

[70] **Detailed Characterization of HR 8799's Debris Disk with ALMA in Band 7**
Faramaz, Virginie; Marino, Sebastian; Booth, Mark and 8 more, 2021, AJ, 161,271F

[69] **The Ophiuchus DIsc Survey Employing ALMA (ODISEA) - III. The evolution of substructures in massive discs at 3-5 au resolution**
Cieza, L. A.; González-Ruilova, C.; **Hales, A. S.** and 15 more, 2021, MNRAS, 501, 2934C

[68] **ALMA observations of the early stages of substellar formation in the Lupus 1 and 3 molecular clouds**
Santamaría-Miranda, A.; de Gregorio-Monsalvo, I.; Plunkett, A. L. and 10 more, 2021, A&A, 646A, 10S

[67] **ALMA and VLA Observations of EX Lupi in its Quiescent State**
White, J.; Kóspál, Á.; Hughes, A. G.; Abrahám, P.; Akimkin, V.; Banzatti, A.; Chen, L.; Cruz-Sáenz de Miera, F.; Dutrey, A.; Flock, M.; Guilloteau, S.; **Hales, A. S.**; Henning, T.; Kadam, K.; Semenov, D.; Sicilia-Aguilar, A.; Teague, R.; Vorobyov, E. I., 2020, ApJ, 904, 37W

[66] **A Tale of Two Transition Disks: ALMA long-baseline observations of ISO-Oph 2 reveal two closely packed non-axisymmetric rings and a $\sim$2 au cavity**
González-Ruilova, Camilo; Cieza, Lucas A.; **Hales, Antonio S** . and 12 more, 2020, arXiv, 201003650G

[65] **ALMA Observations of Young Eruptive Stars: Continuum Disk Sizes and Molecular Outflows**
Hales, A. S.; Pérez, S.; Gonzalez-Ruilova, C.; Cieza, L. A.; Williams, J. P.; Sheehan, P. D.; López, C.; Casassus, S.; Principe, D. A.; Zurlo, A., 2020, ApJ, 900, 7H

[64] **Dust Populations in the Iconic Vega Planetary System Resolved by ALMA**
Matra, L.; Dent, W. R. F.; Wilner, D. J.; Marino, S.; Wyatt, M. C.; Marshall, J. P.; Su, K. Y. L.; Chavez, M.; **Hales, A.**; Hughes, A. M.; Greaves, J. S.; Corder, S. A., 2020, ApJ, 898, 146M

[63] **The Ophiuchus DIsc Survey Employing ALMA (ODISEA) - II. The effect of stellar multiplicity on disc properties**
Zurlo, A.; Cieza, L. A.; Pérez, S.; Christiaens, V.; Williams, J. P.; Guidi, G.; Cánovas, H.; Casassus, S.; **Hales, A.**; Principe, D. A.; Ruíz-Rodríguez, D., 2020, MNRAS, 496, 5089Z

[62] **Resolving the FU Orionis System with ALMA: Interacting Twin Disks?**
Pérez, S; **Hales, A.**; Liu, H. B.; Zhu, Z.; Casassus, S.; Williams, J.; Zurlo, A.; Cuello, N.; Cieza, L.; Principe, D., 2020, ApJ, 889, 59

[61] **ALMA and NACO observations towards the young exoring transit system J1407 (V1400 Cen)**
Kenworthy, M. A.; Klaassen, P. D.; Min, M.; van der Marel, N.; Bohn, A. J.; Kama, M.; Triaud, **A.; Hales**, A.; Monkiewicz, J.; Scott, E.; Mamajek, E. E., 2020, A&A, 633A, 115K

[60] **The Ophiuchus DIsk Survey Employing ALMA (ODISEA): Disk Dust Mass Distributions across Protostellar Evolutionary Classes**
Williams, J. P.; Cieza, L.; **Hales, A.**; Ansdell, M.; Ruiz-Rodriguez, D.; Casassus, S.; Pérez, S..; Zurlo, A. 2019, ApJL, 875, L9

[59] **Long baseline observations of HD100546 with ALMA**
Pérez, S.; Casassus, S.; **Hales, A.**; Marino, S.; Cheetham, A.; Zurlo, A.; Cieza, L.; Dong, R.; Alarcón, F.; Benítez-Llambay, P.; Fomalont, E. 2020, ApJ, 889L, 24P

[58] **Modeling the Spatial Distribution and Origin of CO Gas in Debris Disks**
Hales, A.; Gorti, U.; Carpenter, J. M.; Hughes, M.; Flaherty, K.. 2019, ApJ, 878, 113

[57] **Dust Unveils the Formation of a Mini-Neptune Planet in a Protoplanetary Ring**
Pérez, S.; Casassus, S.; Baruteau, C.; Dong, R.; **Hales, A.**; Cieza, L. 2019, AJ, 158

[56] **Diagnosing 0.1-10 au scale morphology of the FU Ori disk using ALMA and VLTI/GRAVITY**
Liu, H. B.; Mérand, A.; Green, J. D.; Pérez, S.; **Hales, A.**; Yang, Y-L; Dunham, M.; Hasegawa, Y.; Henning, T.; Galván-Madrid, R.; Kóspál, A.; Takami, M.; Vorobyov, E. I.; Zhu, Z. 2019, ApJ, 884, 97L

[55] **From scattered-light to millimeter emission: A comprehensive view of the Gyr-old system of HD 202628 and its eccentric debris ring**
Faramaz, V.; Krist, J.; Stapelfeldt, K. R.; Bryden, G.; Mamajek, E. E.; Matra, L.; Booth, M.; Flaherty, K.; **Hales, A.**; Hughes, A. M.; Bayo, A.; Casassus, S.; Cuadra, J.; Olofsson, J.; Su, K. Y. L.; Wilner, D. J. 2019AJ, 158, 162F

[54] **Deep ALMA search for CO gas in the HD 95086 debris disc**
Booth, M.; Matra, L.; Su, K. Y. L.; Kral, Q.; **Hales, A.**; Dent, W. R. F.; Hughes, A. M.; MacGregor, M. A.; Lohne, T.; Wilner, D. J., 2019, MNRAS, 482, 3443B

[53] **Solar Polar Brightening and Radius at 100 and 230 GHz Observed by ALMA**
Selhorst, C.; Simoes, P.; Brajsa, R. ; Valio, A.; Giménez de Castro, G.; Costa, J.; Menezes, F.; Rozelot, J.P.; **Hales, A.**; Iwai, K.; White, S., 2019, ApJ, 871, 45S

[52] **Is there really a debris disc around ζ Reticuli?**
Faramaz, V.; Bryden, G.; Stapelfeldt, K. R.; Booth, M.; Bayo, A.; Beust, H.; Casassus, S.; Cuadra, J.; **Hales, A.**; Hughes, A. M.; and 3 coauthors, 2018, MNRAS, 481, 44F

[51] **Submillimetre dust polarisation and opacity in the HD163296 protoplanetary ring system**
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[50] **The Ophiuchus DIsc Survey Employing ALMA (ODISEA) - I : project description and continuum images at 28 au resolution**
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