

Felipe de Oliveira Alves - List of publications

Publications as first author in peer-reviewed journals (citation count retrieved from ADS)

1. *A Case of Simultaneous Star and Planet Formation*
Alves, F. O., Cleeves, L. I, Girart, J. M, Zhu, Z., Franco, G. A. P., Zurlo, A., Caselli, P.
2020, *ApJ Letters*, 904, L6. (16 citations)
2. *Gas flow and accretion via spiral streamers and circumstellar disks in a young binary protostar*
Alves, F. O., Caselli, P., Girart, J. M., Segura-Cox, D., Franco, G. A. P.; Schimiedeke, A., Zhao, B.
2019, *Science*, 366, 90. (33 citations)
3. *Magnetic field in a young circumbinary disk*
Alves, F. O., Girart, J. M., Padovani, M., Galli, D., Franco, G. A. P., Caselli, P., Vlemmings, W. H. T., Zhang, Q., Wiesemeyer, H.
2018, *A&A*, 616, A56 (45 citations)
4. *Molecular outflow launched beyond the disk edge*
Alves, F. O., Girart, J. M., Caselli, P., Franco, G. A. P.; Zhao, B.; Vlemmings, W. H. T.; Evans, M. G.; Ricci, L.
2017 *A&A (Letters)*, 603, L3 (39 citations)
5. *On the radiation driven alignment of dust grains: Detection of the polarization hole in a starless core*
Alves, F. O., Frau, P.; Girart, J. M.; Franco, G. A. P.; Santos, F. P.; Wiesemeyer, H.
2015 *A&A*, 574, C4² (9 citations)
6. *On the radiation driven alignment of dust grains: Detection of the polarization hole in a starless core*
Alves, F. O., Frau, P.; Girart, J. M.; Franco, G. A. P.; Santos, F. P.; Wiesemeyer, H.
2014 *A&A (Letters)*, 569, L1 (63 citations)
7. *The magnetic field of IRAS 16293-2422 as traced by shock-induced H₂O masers*
Alves, F. O., Vlemmings, W. H. T., Girart, J. M., Torrelles, J. M.
2012 *A&A*, 542A, 14A (16 citations)
8. *Infrared and optical polarimetry around the low-mass star-forming region NGC 1333 IRAS 4A*
Alves, F. O., Acosta-Pulido, J. A., Girart, J. M., Franco, G. A. P., López, R.
2011 *AJ*, 142, 33 (19 citations)
9. *The magnetic field in the NGC 2024 FIR 5 dense core*
Alves, F. O., Girart, J. M., Lai, S.-P., Rao, R., Zhang, Q.
2011 *ApJ*, 726, 63 (18 citations)
10. *Optical polarimetry toward the Pipe nebula: revealing the importance of the magnetic field*
Alves, F. O., Franco, G. A. P., Girart, J. M.
2008 *A&A (Letters)*, 486, L13 (96 citations)
11. *An accurate determination of the distance to the Pipe Nebula*
Alves, F. O., Franco, G. A. P.
2007 *A&A*, 470, 597 (50 citations)
12. *The infrared void in the Lupus dark clouds revisited: a polarimetric approach*
Alves, F. O., Franco, G. A. P.
2006 *MNRAS*, 366, 238 (9 citations)

²Corrigendum

Publications as co-author in peer-reviewed journals

1. *Are Massive Dense Clumps Truly Subvirial? A New Analysis Using Gould Belt Ammonia Data*
Singh, A., Matzner, C. D., Friesen, R. K., et al. (including **Alves, F. O.**)
2021 ApJ, 922, 87 (*GAS collaboration*)
2. *Near-IR Observations of the Young Star [BHB2007]-1: A Substellar Companion Opening the Gap in the Disk*
Zurlo, A., Garufi, A., Pérez, S., **Alves, F. O.**, et al.
2021 ApJ, 912, 64
3. *FAUST. II. Discovery of a Secondary Outflow in IRAS 15398-3359: Variability in Outflow Direction during the Earliest Stage of Star Formation?*
Okoda, Y., Oya, Y., Francis, L., et al. (including **Alves, F. O.**)
2021 ApJ, 910, 11 (*FAUST collaboration*)
4. *Magnetized filamentary gas flows feeding the young embedded cluster in Serpens South*
Pillai, T. G. S., Clemens, D. P., Reissl, S. et al. (including **Alves, F. O.**)
2020 *Nature Astronomy*, 4, 1195.
5. *FAUST I. The hot corino at the heart of the prototypical Class I protostar L1551 IRS5*
Bianchi, E., Chandler, C., Ceccarelli, C., et al. (including **Alves, F. O.**)
2020 MNRAS Letters, 498, L87 (*FAUST collaboration*)
6. *Ubiquitous NH₃ supersonic component in L1688 coherent cores*
Choudhury, S., Pineda, J. E., Caselli, P., et al. (including **Alves, F. O.**)
2020 A&A, 640, L6. (*GAS collaboration*)
7. *Seeds of Life in Space (SOLIS). VI. Chemical evolution of sulfuretted species along the outflows driven by the low-mass protostellar binary NGC 1333-IRAS4A*
Taquet, V., Codella, C., De Simone, M., et al. (including **Alves, F. O.**)
2020 A&A, 637, A63 (*SOLIS collaboration*)
8. *Relative alignment between dense molecular cores and ambient magnetic field: the synergy of numerical models and observations*
Chen, C.-Y., Behrens, E. A., Washington, J. E., et al. (including **Alves, F. O.**)
2020 MNRAS, 494, 1971 (*GAS collaboration*)
9. *Seeds of Life in Space (SOLIS). VII. Discovery of a cold dense methanol blob toward the L1521F VeLLO system*
Favre, C., Vastel, C., Jimenez-Serra, I., et al. (including **Alves, F. O.**)
2020 A&A, 635, A189 (*SOLIS collaboration*)
10. *Polarized emission by aligned grains in the Mie regime: Application to protoplanetary disks observed by ALMA*
Guillet, V., Girart, J. M., Maury, A. J. et al. (including **Alves, F. O.**)
2020 A&A, 634, L15
11. *Magnetic properties of the protostellar core IRAS 15398-3359*
Redaelli, E., **Alves, F. O.**, Santos, F. P. et al.
2019 A&A, 631, A154
12. *Droplets. I. Pressure-dominated Coherent Structures in L1688 and B18*
Chen, H. H.-H., Pineda, J. E., Goodman, A. A., et al. (including **Alves, F. O.**)
2019 ApJ, 877, 93 (*GAS collaboration*)
13. *ALMA reveals the magnetic field evolution in the high-mass star forming complex G9.62+0.19*
Dall'Olio, D., Vlemmings, W. H. T., Persson, M. V. et al. (including **Alves, F. O.**), et al.
2019 A&A, 626, A36

14. *The Green Bank Ammonia Survey: A Virial Analysis of Gould Belt Clouds in Data Release 1*
Kerr, R., Kirk, H., Di Francesco, J., et al. (including **Alves, F. O.**)
2019 ApJ, 874, 147 (*GAS collaboration*)
15. *Molecular line emission in NGC 4945, imaged with ALMA*
Henkel, C., Mühle, S., Bendo, G., et al. (incl. **Alves, F. O.**)
2018 A&A, 615, A155
16. *SOLIS IV. Hydrocarbons in the OMC-2 FIR4 Region, a Probe of Energetic Particle Irradiation of the Region*
Favre, C., Ceccarelli, C., López-Sepulcre, A., et al. (including **Alves, F. O.**)
2018 ApJ, 859, 136 (*SOLIS collaboration*)
17. *Seeds of Life in Space (SOLIS). III. Zooming Into the Methanol Peak of the Prestellar Core L1544*
Punanova, A., Caselli, P., Feng, S., et al. (including **Alves, F. O.**)
2018 ApJ, 855, 112 (*SOLIS collaboration*)
18. *The Green Bank Ammonia Survey: Unveiling the Dynamics of the Barnard 59 Star-forming Clump*
Redaelli, E., **Alves, F. O.**, Caselli, P., et al.
2017 ApJ, 850, 202 (*GAS collaboration*)
19. *Seeds Of Life In Space (SOLIS): The Organic Composition Diversity at 300-1000 au Scale in Solar-type Star-forming Regions*
Ceccarelli, C., Caselli, P., Fontani, F., et al. (including **Alves, F. O.**)
2017 ApJ, 850, 176 (*SOLIS collaboration*)
20. *The Green Bank Ammonia Survey: Observations of Hierarchical Dense Gas Structures in Cepheus-L1251*
Keown, J., Di Francesco, J., Kirk, H., et al. (including **Alves, F. O.**)
2017 ApJ, 850, 3 (*GAS collaboration*)
21. *The Green Bank Ammonia Survey: Dense Cores under Pressure in Orion A*
Kirk, H., Friesen, R. K., Pineda, J. E., et al. (including **Alves, F. O.**)
2017 ApJ, 846, 144 (*GAS collaboration*)
22. *Seeds of Life in Space (SOLIS). II. Formamide in protostellar shocks: Evidence for gas-phase formation*
Codella, C., Ceccarelli, C., Caselli, P., et al. (including **Alves, F. O.**)
2017 A&A, 605, L3 (*SOLIS collaboration*)
23. *Seeds of Life in Space (SOLIS). I. Carbon-chain growth in the Solar-type protocluster OMC2-FIR4*
Fontani, F., Ceccarelli, C., Favre, C., et al. (including **Alves, F. O.**)
2017 A&A, 605, A57 (*SOLIS collaboration*)
24. *The Green Bank Ammonia Survey: First Results of NH₃ Mapping of the Gould Belt*
Friesen, R. K., Pineda, J. E., co-PIs, et al. (including **Alves, F. O.**)
2017 ApJ, 843, 63 (*GAS collaboration*)
25. *A correlation between chemistry, polarization, and dust properties in the Pipe nebula starless core FeSt 1-457*
Juárez, C., Girart, J. M., Frau, P., et al. (incl. **Alves, F. O.**)
2017 A&A, 597, A74
26. *Magnetic field morphology in nearby molecular clouds as revealed by starlight and submillimetre polarization*
Soler, J. D.; **Alves, F. O.**; Boulanger, F. et al.
2016 A&A, 596, A93
27. *The 2014 ALMA Long Baseline Campaign: An Overview*
ALMA Partnership (including **Alves, F. O.**)
2015 ApJ, 808, 1A

28. *Tracing the Magnetic Field Morphology of the Lupus I Molecular Cloud*
Franco, G. A. P., **Alves, F. O.**
2015 ApJ, 807, 5F
29. *Formation of dense structures induced by filament collisions. Correlation of density, kinematics, and magnetic field in the Pipe nebula*
Frau, P., Girart, J. M., **Alves, F. O.**, et al.
2015 A&A, 574, 6F
30. *Young starless cores embedded in the magnetically dominated Pipe nebula II. Extended dataset*
Frau, P., Girart, J. M., Beltran, M. T., et al. (incl. **Alves, F. O.**)
2012 ApJ **759**, 3
31. *Young starless cores embedded in the magnetically dominated Pipe nebula*
Frau, P., Girart, J. M., Beltran, M. T., et al. (incl. **Alves, F. O.**)
2010 ApJ, 723, 1665
32. *Detailed interstellar polarimetric properties of the Pipe nebula at core scales*
Franco, G. A. P., **Alves, F. O.**, Girart, J. M.
2010 ApJ, 723, 146

Review paper

The role of magnetic fields in formation of protostar and disk and driving outflows

Tsukamoto, Y., Commerçon, B., Maury, A., **Alves, F. O.**, Machida, M., Cox, E., Sakai, N., Zhao, B. and Ray, T.

Accepted for presentation in the *Protostars and Planet VII* conference (2023, Kyoto, Japan) and to become a review chapter in the *Protostars and Planet VII* book series (the manuscript is now in review)

Press releases and media coverage

- *Gas flow and accretion via spiral streamers and circumstellar disks in a young binary protostar*

Alves, F. O., Caselli, P., Girart, J. M., Segura-Cox, D., Franco, G. A. P., Schmiedeke, A., Zhao, B.
2019 *Science*, vol. 366, pg. 90-93

Press releases from the *European Southern Observatory (ESO)*, *Max Planck Institute for Extraterrestrial Physics (MPE)*, *Institut de Ciències de l'Espai (ICE)* and *Institut d'Estudis Espacials de Catalunya (IEEC)*.

Media coverage by *CNN*, *El País*, *El Español*, *RAI*, *Bild*, *Fox*, *Globo*, *Seeker* (science outreach YouTube channel with 5M subscribers), *Pesquisa FAPESP* magazine, etc.

- *A Case of Simultaneous Star and Planet Formation*

Alves, F. O., Cleeves, L. I., Girart, J. M., Zhu, Z., Franco, G. A. P., Zurlo, A., Caselli, P.
2020 *The Astrophysical Journal Letters*, vol. 904, L6

Press releases from the MPE, ICE and IEEC.

Media coverage by *Pesquisa FAPESP* and *NewScientist* magazines.

- *Molecular outflow launched beyond the disk edge*

Alves, F. O., Girart, J. M., Caselli, P., Franco, G. A. P., Zhao, B., Vlemmings, W. H. T., Evans, M. G., Ricci, L.

2017 *Astronomy & Astrophysics (Letters)*, vol. 603, pg. L3

Press releases from MPE, ICE and *Astronomy & Astrophysics (A&A)* journal.

Media coverage by *Revista FAPEMIG* magazine

Publications as first author in conference proceedings

1. *The Emergent Low-Mass Cluster B59: How to Beat Magnetic Fields*
Alves, F. O., Franco, G., Girart, J. M., Frau, P., Wiesemeyer, H. 2015
Conference: Revolution in Astronomy with ALMA: The Third Year (Tokyo, Japan, 2014). Pg. 237
2. *The magnetic field of IRAS 16293-2422 as traced by shock-induced H₂O masers*
Alves, F. O., Vlemmings, W. H. T., Girart, J. M., Torrelles, J. M. 2012
Conference: Cosmic Masers - from OH to H0 (Cape Town, South Africa, 2012). Pg. 74
3. *Infrared and Optical Polarimetry around the Low-mass Star-forming Region NGC 1333 IRAS 4A*
Alves, F. O., Acosta-Pulido, J. A., Girart, J. M., Franco, G. A. P., López, R., 2012
Conference: Magnetic Fields in the Universe III (Zakopane, Poland, 2011). Pg 101
4. *The Magnetic Structure of the Pipe Nebula as Revealed by Optical Polarimetry*
Alves, F. O., Franco, G. A. P, Girart, J. M., 2011
Conference: Astronomical Polarimetry 2008 (La Malbaie, Canada, 2008). Pg. 152
5. *The magnetic field structure in the multi-source magnetized core NGC 2024 FIR 5*
Alves, F. O., Girart, J. M., Lai, S.-P., et al. 2009
Conference: Cosmic Magnetic Fields (Tenerife, Spain, 2008). Pg. 53
6. *A geometria do campo magnético na região da nuvem Lupus 1*
Alves, F. O., & Franco, G. A. P., 2003
Conference: Annual Meeting of the Brazilian Astronomical Society (São Pedro, Brazil, 2003). Pg. 37

Meaning of journal acronyms and their latest available impact factor

ApJ = The Astrophysical Journal (5.745)

ApJ Letters = The Astrophysical Journal Letters (8.198)

AJ = The Astronomical Journal (5.838)

A&A = Astronomy & Astrophysics (5.6363)

MNRAS = Monthly Notices of the Royal Astronomical Society (5.356)

Science = Science Magazine (41.845)