

Publications of J. Szulágyi – as of Sep 2021

Peer-reviewed Publications

FIRST- OR SECOND-AUTHORED (INCL. SUPERVISED STUDENT'S PAPERS)

1. *Szulágyi, J.*, & Garufi, A.: Observability of Forming Planets and their Circumplanetary Disks III. – Polarized Scattered Light (MNRAS 506, 73; 2021)
2. Binkert F., *Szulágyi, J.*, Birnstiel T.: First 3-D grid-based gas-dust simulations of circumstellar disks with an embedded planet (MNRAS 506, 5969; 2021)
3. Cilibrasi, M., *Szulágyi, J.*, Grimm, S., Mayer, L.: A N-body population synthesis framework for the formation of moons around Jupiter-like planets (MNRAS accepted; arXiv:2011.11513; 2021)
4. *Szulágyi, J.*, & Ercolano, B.: Spotting Forming Planets with Hydrogen Recombination Lines (ApJ 902, 126; 2020)
5. Inderbitzi, C., *Szulágyi, J.*, Cilibrasi, M., Mayer, L.: Formation of satellites in circumplanetary discs generated by disc instability (MNRAS 499, 1023; 2020)
6. *Szulágyi, J.*, Dullemond C. P., Pohl A., Quanz S. P.: Observability of Forming Planets and their Circumplanetary Disks II. – SEDs and Near-Infrared Fluxes (MNRAS 487, 124; 2019)
7. **Szulágyi, J.*, Cilibrasi, M., Mayer, L.: In situ formation of Icy Moons of Uranus and Neptune (ApJL, 868, 13; 2018)
8. Pineda, J., *Szulágyi, J.* et al.: High-Resolution ALMA Observations of HD 100546: Asymmetric Circumstellar Ring, Circumplanetary Disk Upper Limits (ApJ, 871, 48; 2019)
9. Drazkowska, J. & *Szulágyi, J.*: Dust evolution and satellitesimal formation in circumplanetary disks (ApJ, 866, 142; 2018)
10. *Cilibrasi, M., *Szulágyi, J.* et al.: Satellites Form Fast & Late: a Population Synthesis for the Galilean Moons (MNRAS, 480, 4355; 2018)
11. *Szulágyi, J.*, van der Plas, G., Meyer, M. R. et al.: Observability of Forming Planets and their Circumplanetary Disks I. – Parameter Study for ALMA (MNRAS 473, 3573; 2018)
12. *Szulágyi, J.*: Effects of the Planetary Temperature on the Circumplanetary Disk and on the Gap (ApJ, 842, 103; 2017)
13. **Szulágyi, J.*, Mayer, L., Quinn, T.: Circumplanetary disks around young giant planets: a comparison between core-accretion and disk instability (MNRAS 464, 315; 2017)
14. **Szulágyi, J.* & Mordasini, C.: Thermodynamics of Giant Planet Formation: Shocking Hot Surfaces on Circumplanetary Disks (MNRAS Letters 465, 64, 2017)
15. *Szulágyi, J.*, Masset, F., Lega, E. et al.: Circumplanetary disc or circumplanetary envelope? (MNRAS, 460, 2853; 2016)
16. *Szulágyi, J.*, Morbidelli, A., Crida, A., Masset, F.: Accretion of Jupiter-mass Planets in the Limit of Vanishing Viscosity (ApJ, 782, 65; 2014)
17. Morbidelli, A., *Szulágyi, J.*, et al.: Gap opening by giant planets in three-dimensional low-viscosity protoplanetary disks (Icarus, 232, 266; 2014)

18. *Szulágyi, J.*, Pascucci, I., Ábrahám, P., Apai, D., Bouwman, J., Moór, A.: Observational Constraints on the Stellar Radiation Field Impinging on Transitional Disk Atmospheres (ApJ, 759, 47; 2012)
19. *Szulágyi, J.*, Kovács, G., Welch, D. L.: Application of the Trend Filtering Algorithm on the MACHO Database (A&A, 500, 917; 2009)

CO-AUTHORED

20. *Benítez-Llambay, P., Masset F., Koenigsberger, G., *Szulágyi, J.*: Planet heating as a safety net against inward migration of planetary cores (Nature, 520, 63; 2015)
21. D’Orazi, V. et al.: Mapping of shadows cast on a protoplanetary disc from a close binary system (Nature Astronomy, 172; 2018)
22. Gaurufi et al.: Evolution of protoplanetary disks from their taxonomy in scattered light: spirals, rings, cavities, and shadows (A&A, 620, 94; 2018)
23. Perez, S., Dunhill, A., Casassus, S., Roman, P., *Szulágyi, J.*: et al.: Planet Formation Signposts: Observability of Circumplanetary Disks via Gas Kinematics (ApJ Letters, 811, 5; 2015)
24. Chauvin, G. et al.: Discovery of a warm, dusty giant planet around HIP65426 (A&A, 605L, 9; 2017)
25. Cugno, G. et al.: A search for accreting young companions embedded in circumstellar disks: High-contrast H α imaging with VLT/SPHERE (A&A, 622, 156; 2019)
26. Avenhaus, H. et al.: Exploring Dust around HD 142527 down to 0."025 (4 au) Using SPHERE/ZIMPOL (AJ, 154, 33; 2017)
27. Pohl, A. et al.: New constraints on the disk characteristics and companion candidates around T Cha with VLT/SPHERE (A&A, 605, 34; 2017)
28. Pohl, A. et al.: The circumstellar disk HD 169142: gas, dust and planets acting in concert? (ApJ, 850, 52; 2017)
29. Sissa, E. et al.: New disk discovered with VLT/SPHERE around the M star GSC 07396-00759 (A&A Letters, 613L, 6; 2018)
30. Schmid, H. M. et al.: SPHERE / ZIMPOL observations of the symbiotic system R Aqr. I. Imaging of the stellar binary and the innermost jet clouds (A&A, 602, 53; 2017)
31. Engler, N. et al.: The HIP 79977 debris disk in polarized light (A&A 607, 90; 2017)
32. Mékarnia, D. et al.: Transiting planet candidates with ASTEP400 at Dome C, Antarctica (MNRAS, 463, 45; 2016)
33. Lega, E., Morbidelli, A., Bitsch, B., Crida, A., *Szulágyi, J.*: Outwards migration for planets in stellar irradiated 3D discs (MNRAS, 452, 1717; 2015)
34. Moór, A. et al.: Unveiling new members in five nearby young moving groups (MNRAS, 435, 1376; 2013)
35. Abe, L. et al.: The secondary eclipses of WASP-19b as seen by the ASTEP 400 telescope from Antarctica (A&A, 553, 49; 2013)
36. Moór, A. et al.: A Resolved Debris Disk around the Candidate Planet-hosting Star HD 95086 (ApJ, 775, 51; 2013)
37. Lagrange A. M., et al.: Post conjunction detection of β Pictoris b with VLT/SPHERE (A&A 621, 8; 2018)

38. Nayakshin, S., Dipierro, G., *Szulágyi, J.*: ALMA observations require slower Core Accretion runaway growth (MNRAS, 488, 12; 2019)
39. Olofsson, J. et al.: Dust production in the debris disk around HR 4796 A (A&A 630, 142; 2019)
40. Musso Barucci, A. et al.: Detection of $H\alpha$ emission from PZ Tel B using SPHERE/ZIMPOL (A&A 631, 84; 2019)
41. Hunziker, S. et al.: RefPlanets: Search for reflected light from extra-solar planets with SPHERE / ZIMPOL (A&A, 634, 69; 2019)
42. Keppler et al.: A gap, shadows, spirals, streamers: SPHERE observations of binary-disk interactions in GG Tau A (A&A 639 62; 2020)
43. Gratton, R. et al.: Searching for the near infrared counterpart of Proxima c using multi-epoch high contrast SPHERE data at VLT (A&A 638, 120; 2020)
44. Bodenan, J-D., Surville, C., *Szulágyi, J.*, et al.: Can chondrules be produced by the interaction of Jupiter with the protosolar disk? (ApJ 901, 60; 2020)
45. Asensio-Torres, R. et al.: Perturbors: SPHERE detection limits to planetary-mass companions in protoplanetary disks (A&A accepted, arXiv:2103.05377; 2021)

Under Review

1. *Szulágyi, J.*, Binkert, F., Surville, C.: Meridional Circulation of Dust and Gas in the Circumstellar Disk: Delivery of Solids onto the Circumplanetary Region (ApJ submitted; arXiv:2103.12128)
2. LIFE Collaboration: Large Interferometer For Exoplanets (LIFE): I. Improved exoplanet detection yield estimates for a large mid-infrared space-interferometer mission (A&A submitted; arXiv:2101.07500)

White Papers & Conference Proceedings

1. Disk Dynamics Collaboration et al.: Visualizing the Kinematics of Planet Formation (PASA submitted, arXiv200904345D; 2020)
2. Lyra, W. et al.: Planet formation – The case for large efforts on the computational side (Astro2020: Decadal Survey on Astronomy and Astrophysics, BAAS, 51, 129; 2019)
3. Bhattacharya, A. et al.: Masses and Distances of Planetary Microlens Systems with High Angular Resolution Imaging (Astro2020: Decadal Survey on Astronomy and Astrophysics, BAAS, 51, 520; 2019)
4. Garufi, A. et al. : Three Years of SPHERE: The Latest View of the Morphology and Evolution of Protoplanetary Discs (ESO Messenger, 169, 32; 2017)
5. Crouzet, N., Guillot, T., Mékarnia, D., *Szulágyi, J.*, et al.: ASTEP South: a first photometric analysis (IAU Symposium, 288, 226; 2013)
6. Rivet, J.-P. et al.: Time domain astronomy from Dome C: results from ASTEP (IAU Symposium, 288, 218; 2013)
7. Abe, L. et al.: Two years of polar winter observations with the ASTEP400 telescope (Ground-based and Airborne Telescopes IV. Proceedings of the SPIE, 8444, 84445I; 2012)

* items marked with asterisk resulted in press releases, more information:

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