Christian Rab

Personal Information

Citizenship:	Austria
Email:	christian.rab@gmail.com

Research Experience

Aug. 2021 –	Postdoc at **LMU Munich - University Observatory Munich (USM)** Guest Scientist: MPE - Center for Astrochemical Studies Project: Thermochemistry of disk winds.
Jul. 2020 – Jul. 2021	Postdoc at **Max Planck Institute for Extraterrestrial Physics - Center for Astrochemical Studies** Project: Thermochemistry of disk winds.
May. 2017 – Jun. 2020	Postdoc at **Kapteyn Astronomical Institute - University of Groningen** Project: "Herbig Ae/Be stars: Rosetta stone for understanding the formation of planetary systems." Modelling of planet-forming and circumplanetary disks.
Oct. 2012 – Apr. 2017	PhD studies of Astronomy at the **University of Vienna**. Thesis: "Modelling of energetic processes in the circumstellar environment of young solar-like stars" Supervisor: Manuel Güdel; Thesis defense date: December 18, 2017

Professional Experience

Feb. 1999 – Jan. 2006	**Software engineer** - Dr. E. Hackhofer GesmbH, Vienna Development and maintenance of an insurance software written in C. Development and design of web applications for the Uniqa Insurance Company in an J2EE environment (Servlets, JSP, Struts, JUnit, JDBC, WebServices)
Feb. 1998 – Jan. 1999	Alternative civilian service at a nursing home for the elderly
Oct. 1997 – Jan. 1998	Software engineer - Dr. E. Hackhofer GesmbH, Vienna

Education

Oct. 2009 – May 2012	Master studies of Astronomy at the University of Vienna. Thesis: "Dust Radiative Transfer in Protoplanetary Disks with PHOENIX/3D" Supervisor: Manuel Güdel. Passed with distinction.
Mar. 2006 – Aug. 2009	Bachelor studies of Astronomy at the University of Vienna. Bachelor Thesis: "Direct Evidence for Dark Matter in Clusters of Galaxies" Supervisor: Christian Theis. Passed with distinction.
Sept. 1992 – Jun. 1997	HTL (higher technical school), St. Pölten, Austria Department: EDP and Organisation/Computer Science. Passed with merit.

Additional Training

15. Mar – 22. Mar 2015	45^{th} Saas-Fee Course - "From Protoplanetary Disks to Planet Formation" Les Diablerets, Switzerland
18. Mar – 22. Mar. 2013	The Chemical Cosmos Training School - IPAG Grenoble, France
12. Dec – 16 Dec. 2011	26^{th} Concurrent Engineering Study of the German Aerospace Center (DLR) Bremen, Germany. Continuation of the AEGIS-Mission Design (Advanced European Galaxy Imager and Spectrograph), started at the summer school Alpbach.
19. Jul. – 28. Jul 2011	Summer School Alpbach - "Star Formation across the Universe", Austria Design of a space telescope mission to study star formation in our Universe.
Jun. 2007 – Jul. 2007	Internship at the University of Vienna. Development of a Java Applet illustrating Kepler's laws of planetary motion for an E-Learning Platform.

Teaching Activities

2023 – now	Daily-Supervision of one PhD Thesis. MPE/University of Groningen
2017 – 2020	Co-Supervisor of one Master Thesis and three Bachelor Thesis. Two Bachelor projects proposed by myself. University of Groningen
2014 – 2017	Co-Supervisor of one Master Thesis and five Bachelor Thesis. University of Vienna
Oct 2013 – Jan 2016	Co-Lecturer for "Computational Concepts in Astronomy and Geosciences I" Lectures on Radiative Transfer in Astrophysics for three semesters.
Mar. 2010 – Jul. 2011	Tutor for "Introduction to Astronomy II & III" Three Semesters: correction of and feedback on exercises. Administrative tasks.

Technical Skills

Programming	Fortran, Python, IDL, Java, C, C++, MPI, OpenMP
Software development	Eclipse, Git, Subversion, JUnit
Web technologies	J2EE (JavaServer Pages, Servlets, RMI), HTML, CSS, JavaScript, XML, XSLT
Database technologies	SQL, JDBC, DB2
Operating Systems	Linux, Mac OS X, Windows

Science Community Services

March 2023	LOC, Conference: Exploring the Diversity of Extrasolar Planets; Munich, Germany
July 2022	Main Organizer of Lorentz Center Workshop: The Dynamic & Chemical Connection; Leiden, Netherlands
2020 – now	Referee for Astrophysical Journal, Astronomy&Astrophysics, Monthly Notices of the Royal Astronomical Society, Experimental Astronomy
2019 – 2020	Organizer Colloquium Kapteyn Astronomical Institute
2017 – 2019	Organizer Lunch Seminar Kapteyn Astronomical Institute
Oct. 2018	PhD Thesis Defense Committee A.J. Greenwood; University of Groningen
2018	LOC, Conference: Our Astro-Chemical History: Past, Present, and Future; Assen, Netherlands

Memberships

2018 - now	Junior Member of the International Astronomical Union (IAU)
2015 - now	Member of the Austrian Society for Astronomy and Astrophysics (OEGAA)

Successful Observing Proposals

2023 ALMA Cycle 10	Co-I: *Monitoring Post-Flare Protoplanetary Chemistry with ALMA.* Priority A, 16.9 h, PI: A. Waggoner
2023 ALMA Cycle 10	Co-I: *Hunting two planet candidates from gas and dust signatures.* Priority B, 10.2 h, PI: PI: A. E. Sierra Morales
2023 VLT/SPHERE	Co-I: *Characterizing the dust in the circumplanetary disk of CT Cha B through accurate multi-wavelength polarimetry*, 4.5 h, PI: R. van Holstein
2022 VLT/SPHERE	Co-I: *Confirmation of an embedded planet in a PDS70-like transition disk*, 2 h, PI: C. Ginski
2021 JWST Cycle 1	**Principal Investigator:** *Spectroscopy of the Circumplanetary Disk around the Young Planet-mass Companion CT Cha b.*, 4.5 h
2021 JWST Cycle 1	Co-I: *Preparing for Planets: The Impact of the Extraordinary Outburst of EX Lup on Its Circumstellar Disk*, 1.6 h, PI: P. Abraham
2021 JWST Cycle 1	Co-I: *Detecting a Young 2 Jupiter Mass Planet Embedded in the Disk of HD 163296*, 7.8 h, PI: G. Cugno
2019 ALMA Cycle 7	**Principal Investigator:** *CT Cha b: The perfect candidate to detect a circumplanetary disk.* Priority A, 12.6 h
2019 VLT/SPHERE	Co-I: *Disk Evolution Study Through Imaging of Nearby Young Stars (DESTINYS).* Priority A, 127.5 h, PI: C. Ginski
2018 ALMA Cycle 6	Co-I: *Eccentric wide hot-subdwarf binaries: Testing the circumbinary disk hypothesis.* Priority B, 4 h, PI: J. Vos
2016 ALMA Cycle 4	**Principal Investigator:** *Searching for the flow base of the disk wind in TW Hya.* Priority B, 2.3 h
2015 ALMA Cycle 3	Co-I: *Blowin' in the Wind: The Outflows of DG Tau.* Priority B, 2.0 h, PI: M. Güdel
2015 VLT/VISIR	Co-I: *Disk winds in the low accretion regime: a study of [NeII] emission in protoplanetary disks* Priority A, 26 h; PI: C. Baldovin-Saavedra
2015 VLT/UVES	Co-I: *Witnessing the Dissipation of Transition Disks.* Priority B, 9 h; PI: C. Baldovin-Saavedra

Conference & Seminar Talks

11.10.2023, Orsay	*Synthetic observables of disk winds.* Workshop - Core2disks III, **invited**
14.07.2023, Kraków	*Circumplanetary Disks (also with JWST).* Conference - EAS Session S7, **invited**
13.06.2023, Tautenburg	*From protoplanetary to planet-forming disks.* Institute's Colloquium TLS Tautenburg, **invited**
10.11.2022, Florence	*Constraining the stellar energetic particle flux of T Tauri stars.* Conference - Cosmic rays - the salt of the star formation recipe II, contributed
26.09.2022, Vienna	*Protoplanetary/Planet-forming disks - The power of spectral line observations.* Ernst Dorfi Summerschool, **invited**
23.07.2022, Athens	*Constraining Coronal Mass Ejection and the Stellar Energetic Particle Fluxes from Young Stars During the Period of Planet Formation.* Conference - COSPAR 2022 - D2.2: Connecting Solar and Stellar Coronal Mass Ejections: Lessons Learned, Challenges and Perspectives, contributed.
22.07.2022, Athens	*Observing the gas disk around the young planet-mass companion CT Cha b with JWST and ALMA.* Conference - COSPAR 2022 - E1.10: Star Formation with Spaceborne Infrared Facilities: the Era of JWST, contributed.
16.12.2021, Online	*Constraining the energetic particle flux of young stars during the period of planet formation.* Conference - AGU Fall Meeting - Cool Stars and Their Influence on (Exo)Planetary Habitability, contributed.
29.09.2021, Online	*Detecting PAHs in exoplanets and planet-forming disks with Twinkle.* Conference - Twinkle and the Next Generation of Exoplanet Scientists, lightning talk, contributed.
13.09.2021, Online	*Constraining the energetic particle flux of young stars during the period of planet formation.* Conference - Virtual Meeting of the German Astronomical Society - Zooming into the Universe, contributed
05.10.2020, Online	*Interpreting high spatial resolution line observations of planet-forming disks with gaps and rings: The case of HD 163296.* Conference - Planet Formation Witnesses and Probes: Transition Disks, contributed
09.06.2020, Online	*Observing circumplanetary disks around wide-orbit planet-mass companions.* Webinar - Star & Planet Formation, ESO, **invited**
04.11.2019, Tübingen	*Radiation thermo-chemical modelling of planet-forming and circumplanetary disks.* Astrophysikalisches Seminar - Universität Tübingen, **invited**
02.08.2019, Vienna	*Proto-planetary/ planet forming disks - Interpreting ALMA observations*, ESI workshop - Pathways from Star Formation to Habitable Planets, **invited**
28.06.2019, Lyon	*Sources of variability in star-formation: a theoretical perspective*, EWASS - Star-formation in the time domain, **invited review**
26.06.2019, Lyon	*The dust and gas structure of the HD 163296 planet-forming disk - Gas gaps or not?*, EWASS - Protoplanetary disks: the birth places of planets, contributed
25.06.2019, Lyon	*A 2D radiation thermo-chemical model for the circumstellar environment of Class I protostars.* EWASS - The physics and chemistry of Class I protostars in the ALMA era, contributed
13.09.2018, Assen	*X-rays and other high-energy ionization sources in protoplanetary disks.* Our Astro-Chemical History - Past, Present, and Future, **invited**
04.05.2018, Florence	*Modelling of high-energy ionization processes in the circumstellar environment of young solar-like stars.* Cosmic rays - the salt of the star formation recipe, contributed

Conference & Seminar Talks

23.05.2017, Nijmegen	*The chemistry of episodic accretion. 2D radiation thermo-chemical models of the post-burst phase.* Dutch Astronomy Conference 2017, contributed
02.03.2017, Geneva	*Energetic protoplanetary disk modelling.* Seminar, Geneva Observatory, **invited**
04.07.2016, Athens	*Modeling the chemistry of episodic accretion.* EWASS – Episodic accretion in star formation, contributed
07.07.2016, Athens	*Possible observational signatures of stellar high energy particles in disks around T Tauri stars.* EWASS – The Dynamics of Star and Planet Formation, contributed
08.03.2016, Edinburgh	*Possible observational signatures of stellar high energy particles in disks around T Tauri stars.* Protoplanetary Discussions, contributed
23.02.2016, Grundlsee	*Computational Astrophysics: planets, stars and galaxies.* Austrian HPC Meeting, contributed
15.12.2015, Vienna	*Modelling of Protplanetary Disks.*, Vienna Theory Lunch, **invited**
03.09.2015, Vienna	*Observational signatures of Stellar Cosmic Rays in disks around T Tauri stars.* OEGAA Meeting, contributed

Publication List

Refereed Articles

1. Portilla-Revelo, B., Kamp, I., Facchini, S., van Dishoeck, E. F., Law, C., **Rab, Ch.**, Bae, J., Benisty, M., Öberg, K., Teague, R. (2023). Constraining the gas distribution in the PDS 70 disc as a method to assess the effect of planet-disc interactions. *A&A*, 677:A76. ADS
2. **Rab, Christian**, Weber, Michael L., Picogna, Giovanni, Ercolano, Barbara, Owen, James E. (2023). **High-resolution [O I] Line Spectral Mapping of TW Hya Consistent with X-Ray-driven Photoevaporation**. *ApJ*, 955:L11. ADS
3. Picogna, Giovanni, Schäfer, Carolina, Ercolano, Barbara, **Rab, Christian**, Franz, Rafael, Gárate, Matías (2023). Observability of photoevaporation signatures in the dust continuum emission of transition discs. *MNRAS*, 523:3318-3327. ADS
4. Zhang, Yapeng, Ginski, Christian, Huang, Jane, Zurlo, Alice, Beust, Hervé, Bae, Jaehan, Benisty, Myriam, Garufi, Antonio, Hogerheijde, Michiel R., van Holstein, Rob G., Kenworthy, Matthew, Langlois, Maud, Manara, Carlo F., Pinilla, Paola, **Rab, Christian**, Ribas, Álvaro, Rosotti, Giovanni P., Williams, Jonathan (2023). Disk Evolution Study Through Imaging of Nearby Young Stars (DESTINYS): Diverse outcomes of binary-disk interactions. *A&A*, 672:A145. ADS
5. Backs, F., Poorta, J., **Rab, Ch.**, Derkink, A. R., de Koter, A., Kaper, L., Ramírez-Tannus, M. C., Kamp, I. (2023). Massive pre-main-sequence stars in M17. Modelling hydrogen and dust in MYSO disks. *A&A*, 671:A13. ADS
6. Brunn, V., Marcowith, A., Sauty, C., Padovani, M., **Rab, Ch**, Meskini, C. (2023). Ionization of inner T Tauri star discs: effects of in situ energetic particles produced by strong magnetic reconnection events. *MNRAS*, 519:5673-5688. ADS
7. Kóspál, Ágnes, Ábrahám, Péter, Diehl, Lindsey, Banzatti, Andrea, Bouwman, Jeroen, Chen, Lei, Cruz-Sáenz de Miera, Fernando, Green, Joel D., Henning, Thomas, **Rab, Christian** (2023). JWST/MIRI Spectroscopy of the Disk of the Young Eruptive Star EX Lup in Quiescence. *ApJ*, 945:L7. ADS
8. Oberg, N., Kamp, I., Cazaux, S., **Rab, Ch.**, Czoske, O. (2023). Observing circumplanetary disks with METIS. *A&A*, 670:A74. ADS
9. **Rab, Ch.**, Weber, M., Grassi, T., Ercolano, B., Picogna, G., Caselli, P., Thi, W.-F., Kamp, I., Woitke, P. (2022). **Interpreting molecular hydrogen and atomic oxygen line emission of T Tauri disks with photoevaporative disk-wind models**. *A&A*, 668:A154. ADS
10. Valegård, P. -G., Ginski, C., Dominik, C., Bae, J., Benisty, M., Birnstiel, T., Facchini, S., Garufi, A., Hogerheijde, M., van Holstein, R. G., Langlois, M., Manara, C. F., Pinilla, P., **Rab, Ch.**, Ribas, Á., Waters, L. B. F. M., Williams, J. (2022). Disk Evolution Study Through Imaging of Nearby Young Stars (DESTINYS): Scattered light detection of a possible disk wind in RY Tau. *A&A*, 668:A25. ADS
11. Weber, Michael L., Ercolano, Barbara, Picogna, Giovanni, **Rab, Christian** (2022). The interplay between forming planets and photoevaporating discs I: forbidden line diagnostics. *MNRAS*, 517:3598-3612. ADS
12. Guadarrama, Rodrigo, Vorobyov, Eduard I., **Rab, Christian**, Güdel, Manuel (2022). The effect of metallicity on the abundances of molecules in protoplanetary disks. *A&A*, 667:A28. ADS
13. Arabhavi, Aditya M., Woitke, Peter, Cazaux, Stéphanie M., Kamp, Inga, **Rab, Christian**, Thi, Wing-Fai (2022). Ices in planet-forming disks: Self-consistent ice opacities in disk models. *A&A*, 666:A139. ADS
14. Ercolano, Barbara, **Rab, Christian**, Molaverdikhani, Karan, Edwards, Billy, Preibisch, Thomas, Testi, Leonardo, Kamp, Inga, Thi, Wing-Fai (2022). Observations of PAHs in the atmospheres of discs and exoplanets. *MNRAS*, 512:430-438. ADS

15. Huang, Jane, Ginski, Christian, Benisty, Myriam, Ren, Bin, Bohn, Alexander J., Choquet, Élodie, Öberg, Karin I., Ribas, Álvaro, Bae, Jaehan, Bergin, Edwin A., Birnstiel, Til, Boehler, Yann, Facchini, Stefano, Harsono, Daniel, Hogerheijde, Michiel, Long, Feng, Manara, Carlo F., Ménard, François, Pinilla, Paola, Pinte, Christophe, **Rab, Christian**, Williams, Jonathan P., Zurlo, Alice (2022). Disk Evolution Study through Imaging of Nearby Young Stars (DESTINYS): A Panchromatic View of DO Tau's Complex Kilo-astronomical-unit Environment. *ApJ*, 930:171. ADS

16. Franz, R., Picogna, G., Ercolano, B., Casassus, S., Birnstiel, T., **Rab, Ch.**, Pérez, S. (2022). Dust entrainment in photoevaporative winds: Synthetic observations of transition disks. *A&A*, 659:A90. ADS

17. Portilla-Revelo, B., Kamp, I., **Rab, Ch.**, van Dishoeck, E. F., Keppler, M., Min, M., Muro-Arena, G. A. (2022). Self-consistent modelling of the dust component in protoplanetary and circumplanetary disks: the case of PDS 70. *A&A*, 658:A89. ADS

18. Franz, R., Ercolano, B., Casassus, S., Picogna, G., Birnstiel, T., Pérez, S., **Rab, Ch.**, Sharma, A. (2022). Dust entrainment in photoevaporative winds: Densities and imaging. *A&A*, 657:A69. ADS

19. Petit dit de la Roche, D. J. M., Oberg, N., van den Ancker, M. E., Kamp, I., van Boekel, R., Fedele, D., Ivanov, V. D., Kasper, M., Käufl, H. U., Kissler-Patig, M., Miles-Páez, P. A., Pantin, E., Quanz, S. P., **Rab, Ch.**, Siebenmorgen, R., Waters, L. B. F. M. (2021). New mid-infrared imaging constraints on companions and protoplanetary disks around six young stars. *A&A*, 648:A92. ADS

20. Ginski, C., Ménard, F., **Rab, Ch.**, Mamajek, E. E., van Holstein, R. G., Benisty, M., Manara, C. F., Asensio Torres, R., Bohn, A., Birnstiel, T., Delorme, P., Facchini, S., Garufi, A., Gratton, R., Hogerheijde, M., Huang, J., Kenworthy, M., Langlois, M., Pinilla, P., Pinte, C., Ribas, Á., Rosotti, G., Schmidt, T. O. B., van den Ancker, M., Wahhaj, Z., Waters, L. B. F. M., Williams, J., Zurlo, A. (2020). Disk Evolution Study Through Imaging of Nearby Young Stars (DESTINYS): A close low-mass companion to ET Cha. *A&A*, 642:A119. ADS

21. **Rab, Ch.**, Kamp, I., Dominik, C., Ginski, C., Muro-Arena, G. A., Thi, W.-F., Waters, L. B. F. M., Woitke, P. (2020). **Interpreting high spatial resolution line observations of planet-forming disks with gaps and rings: the case of HD 163296**. *A&A*, 642:A165. ADS

22. Oberg, N., Kamp, I., Cazaux, S., **Rab, Ch.** (2020). Photoevaporation of the Jovian circumplanetary disk. I. Explaining the orbit of Callisto and the lack of outer regular satellites. *A&A*, 638:A135. ADS

23. Kennedy, Grant M., Ginski, Christian, Kenworthy, Matthew A., Benisty, Myriam, Henning, Thomas, van Holstein, Rob G., Kral, Quentin, Ménard, François, Milli, Julien, Quiroga-Nuñez, Luis Henry, **Rab, Christian**, Stolker, Tomas, Sturm, Ardjan (2020). A low-mass stellar companion to the young variable star RZ Psc. *MNRAS*, 496:L75-L79. ADS

24. Thi, W.-F., Hocuk, S., Kamp, I., Woitke, P., **Rab, Ch.**, Cazaux, S., Caselli, P., D'Angelo, M. (2020). Warm dust surface chemistry in protoplanetary disks. Formation of phyllosilicates. *A&A*, 635:A16. ADS

25. Thi, W.-F., Hocuk, S., Kamp, I., Woitke, P., **Rab, Ch.**, Cazaux, S., Caselli, P. (2020). Warm dust surface chemistry. H_2 and HD formation. *A&A*, 634:A42. ADS

26. Thi, W.-F., Lesur, G., Woitke, P., Kamp, I., **Rab, Ch.**, Carmona, A. (2019). Radiation thermo-chemical models of protoplanetary disks. Grain and polycyclic aromatic hydrocarbon charging. *A&A*, 632:A44. ADS

27. Postel, A., Audard, M., Vorobyov, E., Dionatos, O., **Rab, C.**, Güdel, M. (2019). Infrared and sub-mm observations of outbursting young stars with Herschel and Spitzer. *A&A*, 631:A30. ADS

28. Woitke, P., Kamp, I., Antonellini, S., Anthonioz, F., Baldovin-Saveedra, C., Carmona, A., Dionatos, O., Dominik, C., Greaves, J., Güdel, M., Ilee, J. D., Liebhardt, A., Menard, F., Min, M., Pinte, C., **Rab, C.**, Rigon, L., Thi, W.-F., Thureau, N., Waters, L. B. F. M. (2019). Consistent Dust and Gas Models for Protoplanetary Disks. III. Models for Selected Objects from the FP7 DIANA Project. *PASP*, 131:064301. ADS

29. Dionatos, O., Woitke, P., Güdel, M., Degroote, P., Liebhart, A., Anthonioz, F., Antonellini, S., Baldovin-Saavedra, C., Carmona, A., Dominik, C., Greaves, J., Ilee, J. D., Kamp, I., Ménard, F., Min, M., Pinte, C., **Rab, C.**, Rigon, L., Thi, W.-F., Waters, L. B. F. M. (2019). Consistent dust and gas models for protoplanetary disks. IV. A panchromatic view of protoplanetary disks. *A&A*, 625:A66. ADS

30. White, J. A., Kóspál, Á., **Rab, C.**, Ábrahám, P., Cruz-Sáenz de Miera, F., Csengeri, T., Fehér, O., Güsten, R., Henning, T., Vorobyov, E., Audard, M., Postel, A. (2019). APEX Observations of the CO Envelope around the Young FUor-type Star V883 Ori. *ApJ*, 877:21. ADS

31. **Rab, Ch.**, Kamp, I., Ginski, C., Oberg, N., Muro-Arena, G. A., Dominik, C., Waters, L. B. F. M., Thi, W.-F., Woitke, P. (2019). **Observing the gas component of circumplanetary disks around wide-orbit planet-mass companions in the (sub)mm regime**. *A&A*, 624:A16. ADS

32. Elbakyan, Vardan G., Vorobyov, Eduard I., **Rab, Christian**, Meyer, Dominique M. -A., Güdel, Manuel, Hosokawa, Takashi, Yorke, Harold (2019). Episodic excursions of low-mass protostars on the Hertzsprung-Russell diagram. *MNRAS*, 484:146-160. ADS

33. Güdel, M., Eibensteiner, C., Dionatos, O., Audard, M., Forbrich, J., Kraus, S., **Rab, Ch.**, Schneider, Ch., Skinner, S., Vorobyov, E. (2018). ALMA detects a radial disk wind in DG Tauri. *A&A*, 620:L1. ADS

34. Pinte, C., Ménard, F., Duchêne, G., Hill, T., Dent, W. R. F., Woitke, P., Maret, S., van der Plas, G., Hales, A., Kamp, I., Thi, W.-F., de Gregorio-Monsalvo, I., **Rab, C.**, Quanz, S. P., Avenhaus, H., Carmona, A., Casassus, S. (2018). Direct mapping of the temperature and velocity gradients in discs. Imaging the vertical CO snow line around IM Lupi. *A&A*, 609:A47. ADS

35. **Rab, Ch.**, Güdel, M., Woitke, P., Kamp, I., Thi, W.-F., Min, M., Aresu, G., Meijerink, R. (2018). **X-ray radiative transfer in protoplanetary disks. The role of dust and X-ray background fields**. *A&A*, 609:A91. ADS

36. Kamp, I., Thi, W.-F., Woitke, P., **Rab, C.**, Bouma, S., Ménard, F. (2017). Consistent dust and gas models for protoplanetary disks. II. Chemical networks and rates. *A&A*, 607:A41. ADS

37. **Rab, Ch.**, Elbakyan, V., Vorobyov, E., Güdel, M., Dionatos, O., Audard, M., Kamp, I., Thi, W.-F., Woitke, P., Postel, A. (2017). **The chemistry of episodic accretion in embedded objects. 2D radiation thermo-chemical models of the post-burst phase**. *A&A*, 604:A15. ADS

38. **Rab, Ch.**, Güdel, M., Padovani, M., Kamp, I., Thi, W.-F., Woitke, P., Aresu, G. (2017). **Stellar energetic particle ionization in protoplanetary disks around T Tauri stars**. *A&A*, 603:A96. ADS

39. Greenwood, A. J., Kamp, I., Waters, L. B. F. M., Woitke, P., Thi, W.-F., **Rab, Ch.**, Aresu, G., Spaans, M. (2017). Thermochemical modelling of brown dwarf discs. *A&A*, 601:A44. ADS

40. Paunzen, Ernst, Handler, Gerald, Lendl, Monika, Baumann, Bernhard, **Rab, Christian**, Meingast, Stefan, Rode-Paunzen, Monika, Netopil, Martin, Antoci, Victoria, Zhu, Liying, Zejda, Miloslav, Božić, Hrvoje (2017). Search for variables in six Galactic open clusters. *New A*, 52:133-139. ADS

41. **Rab, Christian**, Baldovin-Saavedra, Carla, Dionatos, Odysseas, Vorobyov, Eduard, Güdel, Manuel (2016). **The Gas Disk: Evolution and Chemistry**. *Space Sci. Rev.*, 205:3-40. ADS

42. Woitke, P., Min, M., Pinte, C., Thi, W.-F., Kamp, I., **Rab, C.**, Anthonioz, F., Antonellini, S., Baldovin-Saavedra, C., Carmona, A., Dominik, C., Dionatos, O., Greaves, J., Güdel, M., Ilee, J. D., Liebhart, A., Ménard, F., Rigon, L., Waters, L. B. F. M., Aresu, G., Meijerink, R., Spaans, M. (2016). Consistent dust and gas models for protoplanetary disks. I. Disk shape, dust settling, opacities, and PAHs. *A&A*, 586:A103. ADS

43. Min, M., **Rab, Ch.**, Woitke, P., Dominik, C., Ménard, F. (2016). Multiwavelength optical properties of compact dust aggregates in protoplanetary disks. *A&A*, 585:A13. ADS

Non-refereed Articles

1. **Rab, C.**, Elbakyan, V., Vorobyov, E., Postel, A., Güdel, M., Dionatos, O., Audard, M., Kamp, I., Thi, W.-F., Woitke, P. (2020). **The chemistry of episodic accretion**. *Laboratory Astrophysics: From Observations to Interpretation*. ADS
2. **Rab, Ch.**, Muro-Arena, G. A., Kamp, I., Dominik, C., Waters, L. B. F. M., Thi, W.-F., Woitke, P. (2020). **Searching for chemical signatures of planet formation**. *IAU Symposium*. ADS
3. **Rab, C.**, Muro-Arena, G. A., Kamp, I., Dominik, C., Waters, L. B. F. M., Thi, W.-F., Woitke, P. (2020). **The gas structure of the HD 163296 planet-forming disk - gas gaps or not?**. *Laboratory Astrophysics: From Observations to Interpretation*. ADS
4. **Rab, Ch.**, Padovani, M., Güdel, M., Kamp, I., Thi, W.-F., Woitke, P. (2020). **Constraining the stellar energetic particle flux in young solar-like stars**. *IAU Symposium*. ADS
5. White, J. A., Audard, M., Ábrahám, P., Cieza, L., de Miera, F. C., Dunham, M. M., Green, J. D., Güdel, M., Grosso, N., Hales, A., Hartmann, L., Kadam, K., Kastner, J. H., Kóspál, Á., Perez, S., Postel, A., Ruiz-Rodriguez, D., **Rab, C.**, Vorobyov, E. I., Zhu, Z. (2018). Resolving the Radio Complexity of EXor and FUor-type Systems with the ngVLA. *Science with a Next Generation Very Large Array*. ADS
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