

# DR. CAROLINA VON ESSEN

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## RESEARCH INTERESTS AND EXPERIENCE

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**Dynamical masses, KOINet.** In 2013 I built and since then lead an international network of ground-based telescopes organized to carry out the photometric follow-up of Kepler planets showing Transit Timing Variations. The main goal of the network is to determine their masses. For more info, see [koinet.astro.physik.uni-goettingen.de](http://koinet.astro.physik.uni-goettingen.de).

**Exoplanet atmospheres.** My contribution to the field accounts, among others, with the in-detail modelling of the exo-atmospheric absorption features, the first discovery of aluminium oxide in an ultra Hot Jupiter, and the first detection of atmospheric Roche lobe overflow.

## APPOINTMENTS

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**Stellar Astrophysics Centre, Physics and Astronomy Dept.** 2018.04 - 2022.03  
*Assistant Professor* *Aarhus University, Denmark*

**Physics and Astronomy Dept.** 2019.02 - 2020.01  
*Assistant Professor* *Vilnius University, Lithuania*

**Stellar Astrophysics Centre, Physics and Astronomy Dept.** 2014.08 - 2018.03  
*Post doctoral researcher* *Aarhus University, Denmark*

**Institute for Astrophysics Göttingen** 2013.11 - 2014.05  
*Post doctoral researcher* *Göttingen University, Germany*

## EDUCATION

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**Hamburger Sternwarte** 2010.10 - 2013.10  
*PhD in Astrophysics* *Hamburg University, Germany*

Supervisor: Prof. Dr. J.H.M.M. Schmitt.

Title: Transiting systems: Characterizing the exoplanets and their host stars.

**Faculty of Astronomical and Geophysical Sciences** 2003.03 - 2010.08  
*Master in Astronomy* *University of La Plata, Argentina*

Supervisors: Prof. Dr. Pablo Mauas, Prof. Dr. Sergio Cellone.

Title: Construction and characterization of a 40 cm telescope to study exoplanets.

## ALLOCATED FUNDING

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Grant	Year	Involvement	Value
Deutsche Forschungsgemeinschaft, Germany	2014	PI	196 050 Euro
Instrument center for Danish Astrophysics, DK	2015	PI	19 000 Euro
NSF Research Grants, USA	2016	collaborator	540 000 Euro
FCAGLP, Univ. of La Plata, Argentina	2016	PI, PhD funding	62 000 Euro
NASA Workshops, and Conferences, USA	2018	co-I, project development	61 000 Euro
<b>Total allocated funding</b>			<b>878 050 Euro</b>

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## PUBLICATIONS (AS OF OCTOBER, 2019)

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- Total number of peer-reviewed publications: 63.
- Number of first- and second-author peer-reviewed publications: 22.
- Total number of citations (from NASA ADS): 3246.
- H index: 19.

## LEADERSHIP

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*2014 - to date*

- Principal Investigator and main manager of KOINet. The main tasks are to produce timing predictions from TTV analysis, to write and submit proposals to several telescopes, to coordinate the network and the communication between members, to lead scientific papers and to train human resources to develop a full photo-dynamical analysis of the timing variations.
- Principal Investigator for the development of two holographic diffusers to be used at the 2.5 m Nordic Optical Telescope to boost the precision of photometric data. These are available to the whole astronomical community.
- Sub-chair of the Coordinated Activity 1, TESS Data for Asteroseismology group. I am responsible for the verification of TESS timestamps. For this, I am leading the development of PICTURE, a portable absolute time instrument for ground-based observatories, and leading a simultaneous TESS/ground-based follow-up of suitable targets to check TESS's internal clock.
- Organizing member of the seminars at the Stellar Astrophysics Centre, Aarhus University, since 2015 to date.

*2017*

- Board member of *Kvinder i fysik* (women in physics), that connects female researchers in physics, coordinates meetings and mentors young, female scientists.

*2010 - 2013*

- Students representative at Hamburger Sternwarte for the Graduiertenkolleg 1351, *Extrasolar Planets and their host stars*, a DFG funded project between Hamburger and Göttingen Universities. My tasks were to take care of student interests, to communicate to the board all ongoing issues related to students, and to attend two-yearly meetings with the DFG board as long as my PhD lasted. I earned the position through students vote.

*2008 - 2010*

- Dean's Directive Council at the Faculty of Astronomical and Geophysical Sciences, full and alternate member. Once a month the representatives of different areas meet with the dean to discuss, vote and solve all matters related to the function of the faculty. In particular, I was assigned to the Commission for Transference of products to private companies, and the Commission of Interpretations, Regulations and Finances. During my studies, I was also a member of the Office of Student Activities.

## AWARDS

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**Hamburger Sternwarte**  
*Stipend*

*2010.10 - 2012.06*  
*Hamburg University, Germany*

- Transit Beobachtungen Extrasolare Planeten, Graduiertenkolleg 1351.

- Polarization of potential planetary host stars, Graduiertenkolleg 1351.

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**REFEREEING AND SERVICE**

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*Current*

- Referee for the American Astronomical Society Journals.
- Referee for the New Astronomy Journal.
- Referee for the Observing Programmes Office, European Southern Observatory.
- Referee for the Canada-France-Hawaii Telescope.
- Member of the Gender Committee at the Department for Physics and Astronomy, Aarhus University.
- Member of the Working Group 5 of MW-GAIA: Impact, Inclusiveness and Outreach.

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**GRANTED OBSERVING TIME**

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- ~180 nights on several telescopes around the world in the framework of KOINet's multi-national collaboration. PI.
- >400 hours as PI, >200 hours as Co-I.
- Successful observing programs at the worlds largest telescopes (GEMINI North and South, Very Large Telescope, Gran Telescopio Canarias, Large Binocular Telescope).
- Long term proposals at the Nordic Optical Telescope, plus granted technical time to develop two engineered diffusers.

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**COLLABORATIONS**

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*Current*

- I am the PI of the *Kepler Object of Interest Network*. Its main scientific goal is to characterize planetary masses using the Transit Timing Variation method. I organized the network of already existing telescopes to follow-up dynamically interesting planetary systems firstly discovered by the Kepler Space telescope. It is composed by ~50 researchers world wide, and about 20 telescopes.
- I am PI of two long term proposal (3 years) granted at the 2.5 m Nordic Optical Telescope to carry out exoplanet studies, in collaboration with Prof. Sven Wedemeyer, Institute of Theoretical Astrophysics Oslo, Norway.
- I am sub-chair of the Data for Asteroseismology group, that coordinates the *Transiting Exoplanet Survey Satellite*, TESS, expected to find planets orbiting around bright stars. I am in charge of keeping TESS internal clock on time, by coordinating telescopes around the world to simultaneously observe celestial events from TESS and Earth.
- I am member of the Atmospheric Characterization Working Group, TESS.
- I am a member of the Gaia team. Gaia's main goal is to chart a three-dimensional map of the Milky Way, revealing the composition, formation and evolution of the Galaxy. I am searching for transiting planets in Gaia's photometry.
- I am a member of the Microlensing Network for the Detection of Small Terrestrial Exoplanets, MiNDSTEp, based in Copenhagen (PI: Uffe Graae). This is the largest European effort that monitors microlensing events to study the population of planets down to Earth mass and even below in the Milky Way.

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**PUBLIC OUTREACH AND MEDIA**

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*2019*

- Timing verification of TESS.

<https://casleo.conicet.gov.ar/4213-2/>

- Potassium found in a hot Jupiter.

<https://www.aip.de/en/news/science/chemical-element-potassium-detected-in-an-exoplanet-atmosphere>

<https://www.pnn.de/wissenschaft/astronomie-raetsel-der-astrophysik-geloest/25026020.html>

- Students study exoplanets.

<https://www.mn.uio.no/astro/om/aktuelt/aktuelle-saker/2019/horten-vgs-til-la-palma.html>

2018

- Organizing member of Astronomy on Tap, Denmark.

<https://astronomyontap.org/locations/aarhus-denmark/>

- Aluminium oxide found in an Ultra Hot Jupiter.

<http://www.iac.es/divulgacion.php?op1=16&id=1471&lang=en>

- Nordic Optical Telescope upgraded for planet hunting.

<http://sac.au.dk/currently/aticle/artikel/nordic-optical-telescope-upgraded-for-planet-hunting/>

- SAC helps NASA set the clock on recently launched TESS telescope.

[https://dg.dk/en/2018/07/10/astronomers-from-sac-help-nasa-set-the-clock-on-launched-tess-telescope/?utm\\_source=DNRF+Newsletter&utm\\_campaign=ce622c8ab7-EMAIL\\_CAMPAIGN\\_2018\\_07\\_11\\_12\\_57&utm\\_medium=email&utm\\_term=0\\_b2cf253bc6-ce622c8ab7-29388797](https://dg.dk/en/2018/07/10/astronomers-from-sac-help-nasa-set-the-clock-on-launched-tess-telescope/?utm_source=DNRF+Newsletter&utm_campaign=ce622c8ab7-EMAIL_CAMPAIGN_2018_07_11_12_57&utm_medium=email&utm_term=0_b2cf253bc6-ce622c8ab7-29388797)

2017

- *Extrasolar planets: a window of hope for mankind*. Author on outreach article about exoplanetary science at magazine “Life without borders”, Colombia.

[https://issuu.com/gestiondeproyectos/docs/revista\\_vida\\_sin\\_fronteras](https://issuu.com/gestiondeproyectos/docs/revista_vida_sin_fronteras)

2016

- Woman-Tech, interview to inspire females pursue their careers in STEM.

<https://womantech.es/mujeres/carolina-von-essen>

- Public talk on exoplanets, the search for life, and what we can do with current technologies to find Earth analogues, La Plata, Argentina.

- Characterization of exoplanet atmospheres using ground-based observations, National University of Buenos Aires, Argentina.

<http://www.uba.ar/noticia/15494>

2015

- Images of first Argentinian geostationary satellite obtained by C. von Essen from the ground.

<http://www.ciudadnueva.org.ar/areas-tematicas/ciencia/imagenes-del-satelite-tomadas-con-el-telescopio-jorge-sahade-de-casleo>

2011 - 2013

- Guiding visits to general public at Hamburger Sternwarte observatory during the Museum and the Open House events.

2011

- Portrait of C. von Essen in Spiegel Online.

<http://www.spiegel.de/karriere/berufsleben/carpe-noctem-freunde-der-nacht-a-757129-2.html>

2005 - 2007

- Sign-language training to include deafs into the astronomical outreach.

<http://pdf.diariohoy.net/2007/05/06/pdf/14-c.pdf>

<http://pdf.diariohoy.net/2007/05/06/pdf/>

## CONFERENCES AND TALKS, LAST FOUR YEARS

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### Invited talks

- 2018.09. First AIO evidences in the atmosphere of an ultra Hot Jupiter, Leibnitz Institute for Astrophysics Potsdam, Germany.
- 2016.07. KOINet: Transit timing variations using a network of middle-sized telescopes, Exoplanets I Conference. Davos, Switzerland.
- 2016.03. Characterization of exoplanet atmospheres using ground-based observations, National University of Buenos Aires, Argentina.

### Conference organizing

- 2018.07. 4th TESS Data for Asteroseismology workshop, Aarhus University, Denmark.

## COMMUNICATION SKILLS

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SPANISH	native
ENGLISH	fluent
GERMAN	fluent (B1, B2, and C1 levels approved)
DANISH	intermediate (B1-level approved, currently at danish module 4)
ITALIAN	basic

# DR. CAROLINA VON ESSEN – PUBLICATION LIST

## List information

- Total number of peer-reviewed publications: 63.
- Number of first- and second-author peer-reviewed publications: 22.
- Total number of citations (from NASA ADS, November 2019): 3358.
- H index: 19.
- Publications are divided into “Refereed Journals”, “Refereed Proceedings”, and “Telegrams”.
- For each publication its link to the SAO/NASA Astrophysics Data System (ADS) is given.
- Journal details are formatted as: Year, Journal, Volume, First page, or Year, Journal, Article number, Number of pages (this format is used for A&A).
- Journal abbreviations used throughout the list:
  - A&A: Astronomy and Astrophysics.
  - MNRAS: Monthly Notices of the Royal Astronomical Society.
  - RAA: Research in Astronomy and Astrophysics.
  - NewA: New Astronomy.
  - IBVS: Information Bulletin on Variable Stars.
  - BAAA: Boletín de la Asociación Argentina de Astronomía.
  - IAUS: International Astronomical Union Symposium.
  - CBET: Central Bureau for Astronomical Telegrams.

## Recently submitted or under development

- a* **von Essen, C.**, Mallonn, M., Albrecht, S., Khalafinejad, S., Nugroho, S. K., Hjorth, M., Lund, M. N., Collet, R., Mikolaitis, S., Keles, E., “Sodium and H $\alpha$  detected in the upper atmosphere of WASP-74b, and no evidence of TiO/VO”, submitted to A&A, March 2019. Currently accepted after revisions.
- b* G. R. I. Moyano Loyola, **von Essen, C.**, Agertz, O., Church, R. P. “Dynamical masses of star clusters containing primordial binary systems”, submitted to MNRAS, August 2018. First referee round being addressed.
- c* S. Hermansen, **von Essen, C.**, Mallonn, M., Kjeldsen, H, “A far UV to near IR transmission spectrum of the ultra hot Jupiter WASP-76b reveals an extended, Rayleigh scattering dominated atmosphere”. Under development.

## Refereed Journals

1. Keles, E., Mallonn, M., **von Essen, C.**, Carroll, T. A., Alexoudi, X., Pino, L., Ilyin, I., Poppenhäger, K., Kitzmann, D., Nascimbeni, V., Turner, J. D., Strassmeier, K. G., “The potassium absorption on HD189733b and HD209458b”, 2019, MNRAS, 489, 37.  
<https://ui.adsabs.harvard.edu/abs/2019MNRAS.489L..37K/>
2. Mallonn, M., Juvan-Beaulieu, I., Sedaghati, E., Ohlert, J. M., **von Essen, C.**, Lendl, M., Oshagh, M., Poppenhaeger, K., “Twenty-four New Transit Timings of the Mini-Neptune GJ1214 B”, 2019, RNAAS, 3, 123.  
<https://ui.adsabs.harvard.edu/abs/2019RNAAS...3..123M/>

3. Li, S. S. et al., (**von Essen, C.** among 104 co-authors), “OGLE-2017-BLG-1186: first application of asteroseismology and Gaussian processes to microlensing”, 2019, MNRAS, 488, 3308.  
<https://ui.adsabs.harvard.edu/abs/2019MNRAS.488.3308L/>
4. **von Essen, C.**, Wedemeyer, S., Sosa, M. S., Miculán, R., Hjorth, M., Parkash, V., Freudenthal, J., Mallonn, M., Zibecchi, L., Cellone, S., Torres, A. F., “Indications for transit timing variations in the exo-Neptune HAT-P-26b”, 2019, A&A, 628, 116.  
<https://ui.adsabs.harvard.edu/abs/2019A%26A...628A.116V/>
5. **von Essen, C.**, Stefansson, G., Mallonn, M., Pursimo, T., Djupvik, A. A., Mahadevan, S., Kjeldsen, H., Freudenthal, J., Dreizler, S., “First Light of Engineered Diffusers at the Nordic Optical Telescope Reveal Time Variability in the Optical Eclipse Depth of WASP-12b”, 2019, A&A, 628, 115.  
<https://ui.adsabs.harvard.edu/abs/2019A%26A...628A.115V/>
6. Freudenthal, J., **von Essen, C.**, Ofir, A., Dreizler, S., Agol, E., Wedemeyer, S., Morris, B. M., Becker, A. C., Deeg, H. J., Hoyer, S., Mallonn, M., Poppenhaeger, K., Herrero, E., Ribas, I., Boumis, P., Liakos, A., “Kepler Object of Interest Network. III. Kepler-82f: a new non-transiting 21  $M_{Earth}$  planet from photodynamical modelling”, 2019, A&A, 628, 108.  
<https://ui.adsabs.harvard.edu/abs/2019A%26A...628A.108F/>
7. Southworth, J. et al. (**von Essen, C.** among 28 co-authors), “Transit timing variations in the WASP-4 planetary system”, submitted to MNRAS. Accepted: 12.09.2019.  
<https://ui.adsabs.harvard.edu/abs/2019arXiv190708269S/>
8. Zang, W. et al., (**von Essen, C.** among 93 co-authors), “Spitzer Microlensing parallax reveals two isolated stars in the Galactic bulge”,  
<https://ui.adsabs.harvard.edu/abs/2019arXiv190411204Z>
9. Mallonn, M., Köhler, J., Alexoudi, X., **von Essen, C.**, Granzer, T., Poppenhaeger, K., Strassmeier, K. G., “Low albedos of hot to ultra-hot Jupiters in the optical to near-infrared transition regime”, 2019, A&A, 624, 62.  
<https://ui.adsabs.harvard.edu/abs/2019A%26A...624A..62M>
10. Sosa, M., **von Essen, C.**, Cellone, S., Andruchow, I., “Dual-Beam Optical Linear Polarimetry from the Southern Skies. Characterization of CASPOL for high precision polarimetry”, accepted at SPIE.  
<http://adsabs.harvard.edu/abs/2019arXiv190301475S>
11. Gaia Collaboration, Eyler, L. et al. (**von Essen, C.** among 455 co-authors), “Gaia Data Release 2. Variable stars in the colour-absolute magnitude diagram”, 2019, A&A, 623, 110.  
<http://adsabs.harvard.edu/abs/2019A%26A...623A.110G>
12. Mallonn, M., **von Essen, C.**, (and 33 co-authors), “Ephemeris refinement of 21 hot Jupiter exoplanets with high timing uncertainties”, 2019, A&A, 622, 81.  
<http://adsabs.harvard.edu/abs/2019A%26A...622A..81M>
13. **von Essen, C.**, Mallonn, M., Welbanks, L., Madhusudhan, N., Pinhas, A., Bouy, H., Weis Hansen, P., “An optical transmission spectrum of the ultra-hot Jupiter WASP-33 b. First indication of aluminum oxide in an exoplanet”, A&A, 622, 71.  
<http://adsabs.harvard.edu/abs/2019A%26A...622A..71V>
14. G. Maciejewski, M. Fernández, F. Aceituno, S. Martín Ruiz, J. Ohlert, D. Dimitrov, K. Szyszka, **C. von Essen** et al., “Planet-star interactions with precise timing I. The refined orbital decay rate for WASP-12b, and initial constraints for HAT-P-23b, KELT-1b, KELT-16b, WASP-33b, and WASP-103b.”, 2018, AcA, 68, 371.  
<http://adsabs.harvard.edu/abs/2018AcA...68..371M>
15. Alexoudi, X., Mallonn, M., **von Essen, C.**, Turner, J. D., Keles, E., Southworth, J., Mancini, L., Granzer, T., Denker, C., Dineva, E., Strassmeier, K. G., “Deciphering the atmosphere of HAT-P-12b: solving discrepant results”, 2018, A&A, 620, 142.  
<http://adsabs.harvard.edu/abs/2018A%26A...620A.142A>

16. Kempton, Eliza M.-R. et al. (**von Essen, C.** among 41 co-authors), “A Framework for Prioritizing the TESS Planetary Candidates Most Amenable to Atmospheric Characterization”, 2018, PASP, 130, 4401.  
<http://adsabs.harvard.edu/abs/2018PASP...130k4401K>
17. Khalafinejad, S., Salz, Mi. Cubillos, P. E., Zhou, G., **von Essen, C.** et al., “The atmosphere of WASP-17b: Optical high-resolution transmission spectroscopy”, 2018, A&A, 618, 98.  
<http://adsabs.harvard.edu/abs/2018A%26A...618A..98K>
18. Freudenthal, J., **von Essen, C.**, Dreizler, S. et al. (17 co-authors), “Kepler Object of Interest Network II. Photodynamical modelling of Kepler-9 over 8 years of transit observations”, 2018, A&A, 618, 41.  
<http://adsabs.harvard.edu/abs/2018A%26A...618A..41F>
19. Gaia Collaboration, Mignard, F. et al. (**von Essen, C.** among 451 co-authors), “Gaia Data Release 2. The celestial reference frame (Gaia-CRF2)”, 2018, A&A, 616, 14.  
<http://adsabs.harvard.edu/abs/2018A%26A...616A..14G>
20. Gaia Collaboration, Spoto, F. et al. (**von Essen, C.** among 451 co-authors), “Gaia Data Release 2. Observations of solar system objects”, 2018, A&A, 616, 13.  
<http://adsabs.harvard.edu/abs/2018A%26A...616A..13G>
21. Gaia Collaboration, Helmi, A. et al. (**von Essen, C.** among 451 co-authors), “Gaia Data Release 2. Kinematics of globular clusters and dwarf galaxies around the Milky Way”, 2018, A&A, 616, 12.  
<http://adsabs.harvard.edu/abs/2018A%26A...616A..12G>
22. Gaia Collaboration, Katz, D. et al. (**von Essen, C.** among 451 co-authors), “Gaia Data Release 2: Mapping the Milky Way disc kinematics”, 2018, A&A, 616, 11.  
<http://adsabs.harvard.edu/abs/2018A%26A...616A..11G>
23. Gaia Collaboration, Babusiaux, C. et al. (**von Essen, C.** among 451 co-authors), “Gaia Data Release 2. Observational Hertzsprung-Russell diagrams”, 2018, A&A, 616, 10.  
<http://adsabs.harvard.edu/abs/2018A%26A...616A..10G>
24. Gaia Collaboration, Brown, A. G. A. et al. (**von Essen, C.** among 451 co-authors), “Gaia Data Release 2. Summary of the contents and survey properties”, 2018, A&A, 616, 1.  
<http://adsabs.harvard.edu/abs/2018A%26A...616A..1G>
25. **von Essen, C.** et al. (38 co-authors). “Kepler Object of Interest Network. I. First results combining ground- and space-based observations of Kepler systems with transit timing variations”, 2018, A&A, 615, 79.  
<http://adsabs.harvard.edu/abs/2018A%26A...615A..79V>
26. Mallonn, M., Herrero, E., Juvan, I. G., **von Essen, C.**, Rosich, A., Ribas, I., Granzer, T., Alexoudi, X., Strassmeier, K. G., “GJ 1214: Rotation period, starspots, and uncertainty on the optical slope of the transmission spectrum”, 2018, arXiv.  
<http://adsabs.harvard.edu/abs/2018A%26A...614A..35M>
27. Udalski, A. et al. (**von Essen, C.** among 56 co-authors), “OGLE-2017-BLG-1434Lb: Eighth  $q < 1 * 10^{-4}$  Mass-Ratio Microlens Planet Confirms Turnover in Planet Mass-Ratio Function”, 2018, AcA, 68, 1.  
<http://adsabs.harvard.edu/abs/2018AcA....68....1U>
28. Evans, D. F. (**von Essen, C.** among 34 co-authors), “High-resolution Imaging of Transiting Extrasolar Planetary systems (HITEP). II. Lucky Imaging results from 2015 and 2016”, 2018, A&A, 610, 20.  
<http://adsabs.harvard.edu/abs/2018A%26A...610A..20E>
29. Ryu, Y.-H. et al. (**von Essen, C.** among 118 co-authors), “OGLE-2016-BLG-1190Lb: The First Spitzer Bulge Planet Lies Near the Planet/Brown-dwarf Boundary”, 2018, AJ, 155, 40.  
<http://adsabs.harvard.edu/abs/2018AJ....155...40R>



30. Sosa, M. S., **von Essen, C.**, Cellone, S., Andruchow, I., “Impact of seeing and host galaxy into the analysis of photo-polarimetric microvariability in blazars. Case study of the nearby blazars 1ES 1959+650 and HB89 2201+044”, 2017, A&A, 607, 49.  
<http://adsabs.harvard.edu/abs/2017A%26A...607A..49S>
31. Moyano, M., Almeida, L. A., **von Essen, C.**, Jablonski, F., Pereira, M. G., “Multi-band characterization of the hot Jupiters: WASP-5b, WASP-44b, and WASP-46b”, 2017, MNRAS, 471, 650.  
<http://adsabs.harvard.edu/abs/2017MNRAS.471..650M>
32. **von Essen, C.**, Cellone, S., Mallonn, M., Albrecht, S., Miculán, R., Müller, H. M., “Testing connections between exo-atmospheres and their host stars. GEMINI-N/GMOS ground-based transmission spectrum of Qatar-1b”, 2017, A&A, 603, 20.  
<http://adsabs.harvard.edu/abs/2017A%26A...603A..20V>
33. Khalafinejad, S. **von Essen, C.**, Hoeijmakers, H. J., Zhou, G., Klocova, T., Schmitt, J. H. M. M., Dreizler, S., Lopez-Morales, M., Husser, T.-O., Schmidt, T. O. B., Collet, R., “Exoplanetary atmospheric sodium revealed by the orbital motion. Narrow-band transmission spectroscopy of HD 189733b with UVES”, 2017, A&A, 598, 131.  
<http://adsabs.harvard.edu/abs/2017A%26A...598A.131K>
34. Mallonn, M., Bernt, I., Herrero, E., Hoyer, S., Kirk, J., Wheatley, P. J., Seeliger, M., Mackebrandt, F., **von Essen, C.**, Strassmeier, K. G., et al., “Broad-band spectrophotometry of HAT-P-32 b: search for a scattering signature in the planetary spectrum”, 2016, MNRAS, 463, 604.  
<http://adsabs.harvard.edu/abs/2016MNRAS.463..604M>
35. Figuera Jaimés, R. et al. (**von Essen, C.** among 41 co-authors), “Many new variable stars discovered in the core of the globular cluster NGC 6715 (M54) with EMCCD observations”, 2016, A&A, 592, 120.  
<http://adsabs.harvard.edu/abs/2016A%26A...592A.120F>
36. **von Essen, C.**, Cellone, S., Mallonn, M., Tingley, B., Marcussen, M., “Modelling systematics of ground-based transit photometry I. Implications on transit timing variations”, 2016, arXiv.  
<http://adsabs.harvard.edu/abs/2016arXiv160703680V>
37. Zhu, W. et al. (**von Essen, C.** among 86 co-authors), “Mass Measurements of Isolated Objects from Space-based Microlensing”, 2016, ApJ, 825, 60.  
<http://adsabs.harvard.edu/abs/2016ApJ...825...60Z>
38. Poleski, R. et al. (**von Essen, C.** among 90 co-authors), “The Spitzer Microlensing Program as a Probe for Globular Cluster Planets. Analysis of OGLE-2015-BLG-0448”, 2016, ApJ, 823, 63.  
<http://adsabs.harvard.edu/abs/2016ApJ...823...63P>
39. Evans, D. M. et al. (**von Essen, C.** among 35 co-authors), “High-resolution Imaging of Transiting Extrasolar Planetary systems (HITEP). I. Lucky imaging observations of 101 systems in the southern hemisphere”, 2016, A&A, 589, 58.  
<http://adsabs.harvard.edu/abs/2016A%26A...589A..58E>
40. Southworth, J. et al. (**von Essen, C.** among 47 co-authors), “High-precision photometry by telescope defocussing - VIII. WASP-22, WASP-41, WASP-42 and WASP-55”, 2016, MNRAS, 457, 420.  
<http://adsabs.harvard.edu/abs/2016MNRAS.457.4205S>
41. Bozza, V. et al. (**von Essen, C.** among 108 co-authors), “Spitzer Observations of OGLE-2015-BLG-1212 Reveal a New Path toward Breaking Strong Microlens Degeneracies”, 2016, ApJ, 820, 79.  
<http://adsabs.harvard.edu/abs/2016ApJ...820...79B>
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