

Personal details

- ◆ Email: julia.bodensteiner@eso.org
- ◆ Phone: +49-89-3200-6409
- ◆ Website: www.juliabodensteiner.com
- ◆ ORCID ID [0000-0002-9552-7010](https://orcid.org/0000-0002-9552-7010)
- ◆ Languages: German (native), English (fluent), Spanish (fluent), Dutch (basics)

Academic background

- ◆ 2021-current ESO fellow, European Southern Observatory, Garching, Germany
- ◆ 2017-2021 PhD student, Institute of Astronomy, KU Leuven, Belgium
Thesis title: “*Observational imprints of binary evolution on B- and Be-star populations*”
- ◆ 2015-2017 Student job, Max-Planck Institute for Extraterrestrial Physics, Munich, Germany
- ◆ 2015-2017 M.Sc. Nuclear, Particle & Astrophysics, Technical University of Munich
Thesis title: “*Interaction between massive stars and the interstellar medium*”
- ◆ 2011-2015 B.Sc. Physics, Technical University of Munich, Germany
including two semesters ERASMUS at the Universidad Complutense de Madrid, Spain

Prizes and awards

- ◆ 2022 Springer Thesis Award
Publication of my PhD thesis as a monograph in the Springer thesis series for ‘Outstanding PhD Research’
- ◆ 2018 IAU Travel Grant
Travel grant for the meeting IAUS351 in Bologna, Italy (250 EUR)

Successful observing proposals

- ◆ 2022 8 hours at VLT/GRAVITY (PI) + over 50 hours at other VLT instruments (Co-I)
- ◆ 2021 30 hours at VLT/MUSE (PI) + 64 hours at other VLT instruments (Co-I)
183 hours at Mercator/HERMES (PI)
- ◆ 2020 52 hours at VLT/GRAVITY (Co-I) + 2 hours VLT/MUSE (Co-I)
195 hours at Mercator/HERMES + 125 hours (Co-I)
- ◆ 2019 3 hours at VLT/UVES (PI)
219 hours at Mercator/HERMES + 243 hours (Co-I)
- ◆ 2018 3 hours at VLT/MUSE and 5 hours at VLT/UVES (PI)
127 hours at Mercator/HERMES (Co-I)
- ◆ 2017 76 hours at Mercator/HERMES (Co-I)
- ◆ 2016 4 hours VLT/MUSE
2 hours APEX/LABOCA (PI)
- ◆ 2015 40 hours at MPG/ESO-2.2m telescope/FEROS (PI)
2 hours at VLT/MUSE (Co-I)

Observing experience

- ◆ 2020 KU Leuven Mercator telescope, 10 nights (remotely due to Covid-19)
- ◆ 2019 KU Leuven Mercator telescope, 20 nights
- ◆ 2018 KU Leuven Mercator telescope, 10 nights
- ◆ 2016 MPG/ESO-2.2m telescope, 12 nights
- ◆ 2015 MPG/ESO-2.2m telescope, 9 nights

Conferences and workshops

- ◆ May 2022 IAUS 361: Massive stars near and far (Ballyconnal, Ireland)
Poster: *"Near and far: a hunt for binary interaction products"*
- ◆ Oct 2021 sdOB workshop (Max-Planck Institute for Astrophysics, Garching, Germany)
Talk: *"The possible binary origin of classical Be stars and their connection to subdwarfs"*
- ◆ Jul 2021 European Week of Astronomy 2021 (virtual)
Invited talk: *"On the origin of classical Be stars and the nature of exotic Be binary systems"*
- ◆ Jul 2020 MOBSTER-1 Conference (virtual)
Contributed talk: *"On the binary origin of Be stars and the nature of exotic Be binary systems"*
- ◆ Jun 2020 European Week of Astronomy 2020 (virtual)
Contributed talk: *"Hunting for post-interaction stars: A MUSE adaptive optics view of the SMC cluster NGC 330"*
- ◆ Jun 2019 European Week of Astronomy 2019 (Lyon, France)
Contributed talk: *"Hunting for binary interaction products in the SMC cluster NGC 330 with MUSE"*
- ◆ May 2019 IAUS351: Star Clusters from the Milky Way to the Early Universe (Bologna, Italy)
Poster: *"A MUSE view of the massive star population in the SMC cluster NGC 330"*
- ◆ Nov 2018 Massive stars and supernovae (Bariloche, Argentina)
Contributed Talk: *"A MUSE adaptive optics view of the SMC cluster NGC 330"*
- ◆ Apr 2018 11th annual meeting of the VFTS collaboration (La Laguna, Spain)
Talk: *"IR nebulae around massive stars as indicators for binary interactions"*
- ◆ Jul 2017 The impact of binaries on stellar evolution (Munich, Germany)
Poster: *"Interactions between massive stars and the interstellar medium"*

Seminars

- ◆ May 2022 Stellar Group Meeting (Observatory of Geneva, Switzerland, virtual)
Talk: *"On the possible binary origin of Be stars and the nature of exotic Be binaries"*
- ◆ Nov 2021 SESTAS Meeting (Max-Planck Institute for Astrophysics, Garching, Germany)
Talk: *"Dissecting the core of the SMC cluster NGC 330 with MUSE"*
- ◆ Jul 2021 IAU Working Group on Active B Stars Talk series (virtual)
Talk: *"On the possible binary origin of classical Be stars"*
- ◆ Jul 2021 Sheffield Astronomy Seminar (University of Sheffield, UK, virtual)
Talk: *"On the binary origin of classical Be stars"*
- ◆ May 2021 SeBa and binary stellar evolution meeting (virtual)
Talk: *"On the binary origin of Be stars and the nature of exotic Be binary systems"*
- ◆ Jun 2021 Journal Club (Liverpool John Moores University, UK, virtual)
Talk: *"The young massive SMC cluster NGC 330 seen by MUSE"*

- ◆ Feb 2021 Massive Star meeting (Anton-Pannekoek Institute, The Netherlands, virtual)
Talk: “A MUSE adaptive optics view of NGC 330: Hunting for post-interaction binaries”
- ◆ Jan 2021 BigBoom meeting (University of Arizona, US, virtual)
Talk: “On the binary origin of Be stars and the nature of exotic Be binary systems”
- ◆ Jul 2020 BinCosmos meeting (Harvard University, US, virtual)
Talk: “On the binary origin of Be stars and the nature of exotic Be binary systems”
- ◆ Jul 2020 Potsdam Zoominar (Potsdam University, Germany, virtual)
Talk: “A MUSE adaptive optics view of NGC 330: Hunting for post-interaction stars”
- ◆ Jun 2020 Compact Objects Meeting (Flatiron Institute New York, US, virtual)
Talk: “Is HR 6819 a triple system containing a black hole? An alternative explanation”
- ◆ Apr 2019 Institute of Astronomy Seminar Series (KU Leuven, Belgium)
Talk: “The core of NGC 330 seen with MUSE”

Teaching and supervision

- ◆ Fall 2020 supervision of a one-year Master thesis at KU Leuven with Dr. D.M. Bowman
- ◆ Fall 2019 supervision of a ten-week research project for Master students at KU Leuven with Dr. T. Shenar
- ◆ Spring 2019 teaching assistant for the course “High Energy Astrophysics” at KU Leuven
- ◆ Fall 2018 supervision of a ten-week research project for Bachelor students at KU Leuven with Dr. M. Abdul-Masih
- ◆ Spring 2018 Supervision of a one-week project with a high-school student at KU Leuven

Organizational experience and community service

- ◆ Spring 2022 assisted organizing the ESO Summer Research Programme 2022
- ◆ Dec 2021 Selection committee for the [ESO Hypatia colloquium 2022](#)
- ◆ 2021-current scientific referee for ApJ and MNRAS
- ◆ 2019-2021 organizer of a weekly PhD meeting at the Institute of Astronomy, KU Leuven

Public outreach

- ◆ 2022 Several virtual “[Skype a Scientist](#)” sessions around the world
Co-organizer of the “[Pint of Science](#)” festival Munich, Germany
“Science Figured Out” – [2min video pitch](#)
- ◆ 2021 Video contribution to the exhibition “[To the Edge of Time](#)”, Leuven, Belgium
Virtual talk to German high-school class (12th grade)
Several virtual “[Skype a Scientist](#)” sessions around the world
- ◆ 2020 Several virtual “[Skype a Scientist](#)” sessions around the world
“Couch of Science” virtual outreach talk on [youtube](#)
- ◆ 2019 Talk in a bar in the context of the “[Pint of Science](#)” festival
2-h lecture about Stellar Clusters for the Astronomy Summer School Leuven
- ◆ 2018 Day of Sciences at KU Leuven, KU Leuven Kids University
High-school visits at the Institute of Astronomy, KU Leuven

Publication List

First Author

- 1 **Bodensteiner & Heida, Abdul-Masih, Baade, et al., 2022, Msngr, 186, 3**
Detecting Stripped Stars While Searching for Quiescent Black Holes
- 2 **Bodensteiner, Sana, Wang et al. 2021, [A&A 652, A70](#)**
MUSE observations of the young massive SMC cluster NGC 330. II. Multiplicity properties of the massive star population
- 3 **Bodensteiner, Shenar, Mahy et al., 2020, [A&A, 641, A43](#)**
Is HR 6819 a triple system containing a black hole? - An alternative explanation
- 4 **Bodensteiner, Shenar, Sana, 2020, [A&A, 641, A42](#)**
On the lack of main-sequence companions to Be stars
- 5 **Bodensteiner, Sana, Mahy et al. 2020, [A&A 634, A51](#)**
MUSE observations of the young massive SMC cluster NGC 330. I. Observations and stellar content
- 6 **Bodensteiner, Baade, Greiner, Langer 2018, [A&A 618, 110](#)**
IR nebulae around bright massive stars as indicators for binary interactions

Refereed Co-Author

- 1 Shenar, Sana, Mahy, ..., **Bodensteiner** et al. 2022, Nature Astronomy, in press
An X-ray quiet black hole born with a negligible kick in a massive binary within the Large Magellanic Cloud
- 2 Mahy, Sana, Shenar, ..., **Bodensteiner** et al. 2022, A&A, in press
Identifying quiescent compact objects in massive Galactic single-lined spectroscopic binaries
- 3 Frost, **Bodensteiner**, Rivinius et al. 2022, A&A 659, L3
HR 6819 is a binary system with no black hole – Revisiting the source with infrared interferometry and optical integral field spectroscopy
- 4 Hennicker, Kee, Shenar, **Bodensteiner**, et al. 2022, A&A 660, A17
Binary-object spectral-synthesis in 3D (BOSS-3D) - Modelling H-alpha emission in the enigmatic multiple system LB-1
- 5 Wang, Langer, Schootemeijer, ..., **Bodensteiner** et al. 2021, Nature Astronomy 6, 480
Stellar mergers as the origin of the blue main-sequence band in young star clusters
- 6 Rainot, Reggiani, Sana, **Bodensteiner**, Absil 2021, A&A 658, A198
The Carina High-Contrast Imaging Project for massive Stars (CHIPS) II. O stars in Trumpler 14
- 7 Pavlovski, Hummel, Tkachenko, ..., **Bodensteiner** et al. 2021, A&A 658, A92
Dynamical parallax, physical parameters and evolutionary status of the components of the bright eclipsing binary α Draconis
- 8 Pavlovski, Hummel, Tkachenko, ..., **Bodensteiner** et al. 2021, A&A 658, A92
Dynamical parallax, physical parameters and evolutionary status of the components of the bright eclipsing binary α Draconis
- 9 Mehner, Janssens, Agliozzo, ..., **Bodensteiner** et al. 2021, [A&A \(in press\)](#)
LBV phenomenon and binarity: The environment of HR Car

- 10 Banyard, Sana, Mahy, **Bodensteiner** et al. 2021, [A&A \(in press\)](#)
The observed multiplicity properties of B-type stars in the Galactic young open cluster NGC 6231
- 11 Gebreurs, Straumit, Tkachenko, ..., **Bodensteiner**, [A&A, 650, A151](#)
A homogeneous spectroscopic analysis of a Kepler legacy sample of dwarfs for gravity-mode asteroseismology
- 12 Janssens, Shenar, Mahy, Marchant, Sana, **Bodensteiner**, 2020, [A&A, 646, 33](#)
BAT99 126: a Wolf-Rayet multiple system in the Large Magellanic Cloud hosting a massive near-contact binary
- 13 Rainot, Sana, Reggiani, **Bodensteiner** et al. 2020, [A&A, 640, A15](#)
The Carina High-Contrast Imaging Project for massive Stars (CHIPS) I. Methodology and proof of concept on QZ Car (= HD93206)
- 14 Shenar, **Bodensteiner**, Abdul-Masih et al. 2020, [A&A, 639, L6](#)
The hidden companion in LB-1 unveiled by spectral disentangling
- 15 Langer, Schürmann, Stoll, ... , **Bodensteiner** et al. 2020, [A&A 638, A39](#)
Properties of OB star-black hole systems derived from detailed binary evolution models
- 16 Abdul-Masih, Banyard, **Bodensteiner**, 2020, [Nature 580, 7805](#)
No signature of the orbital motion of a putative 70 solar mass black hole in LB-1
- 17 Patrick, Lennon, Evans, Sana, **Bodensteiner** et al. 2020, [A&A 635, A29](#)
The Multiplicity of the Red Supergiant Population in the Young Massive Cluster NGC 330
- 18 Langer, Baade, **Bodensteiner** et al. 2020, [A&A 633, 15](#)
 γ Cas stars: Normal Be stars with disks impacted by the wind of a helium-star companion?
- 19 Kriss, Mehdipour, Kaastra, Rau, **Bodensteiner** et al. 2019, [A&A 621, 12](#)
HST/COS observations of the newly discovered obscuring outflow in NGC 3783
- 20 Gvaramadze, Kniazev, Bestenlehner, **Bodensteiner** et al. 2015, [MNRAS 454, 219](#)
The blue supergiant MN18 and its bipolar circumstellar nebula

Others

- 1 **Bodensteiner**, Knust, Schweyer, Greiner, [GCN Circular Service, No. 19375, 2016](#)
GRB 160501A: GROND observation
- 2 **Bodensteiner**, Schmidl, Greiner, [GCN Circular Service, No. 19349, 2016](#)
GRB 160425A: GROND observation
- 3 Varela, Knust, **Bodensteiner**, Greiner, [GCN Circular Service, No. 17729, 2015](#)
GRB 150423A: GROND observation