# Curriculum Vitae

Moritz Meyer zu Westram

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Address: Belpstrasse 21, 3007 Bern
Born: 30. April 1999

## Education

- PhD in Physics with special qualification in Astronomy, University of Bern — Sep. 2023 - today
- Master of Science in Theoretical Physics, University of Bern — Sep. 2021 - June 2023
  - Thesis: "Exomoon Simulations of Toroidal Exospheres", supervised by Dr. Apurva V. Oza (JPL, Caltech & Space Institute, University of Bern), Dr. André Galli (Space Institute, University of Bern), and Prof. Dr. Uwe-Jens Wiese (Institute for Theoretical Physics, University of Bern)
  - with Latin honors *insigni cum laude*
- Bachelor of Science in Physics, University of Bern — Sep. 2018 - Nov. 2021
  - with Minor Mathematics
  - with Minor Astronomy
  - Thesis: "Metrics in the Space of Keplerian Orbit Elements", supervised by Dr. Alessandro Vananti (Astronomical Institute, University of Bern) and Prof. Dr. Thomas Schildknecht (Astronomical Institute, University of Bern)
  - with Latin honors *magna cum laude*
- German A-levels (Abitur), Gymnasium Melle — Aug. 2016 - June 2018
  - Scholastic termpaper on the effects of ground level ozone on plastics.
  - Participation at the *Jugend Forscht* contest (initiative to encourage young people in STEM supported by the Federal government) with a work on establishing alternative methods for air purification.

## Work Experience

- Research Assistant, Astronomical Institute, University of Bern — Aug. 2020 - today
  - Being responsible for the Swiss Optical Ground Station and Geodynamics Observatory Zimmerwald's night operation once a week.
  - Acquiring photometrical images and light curve measurements for the identification of unresolved space objects.
- Scientific Assistant, Physics Institute, Univeristy of Bern — Sep. 2022 - June 2023
  - Teaching assistant, practicum and exercise sessions in physics for undergraduate human medicine students.

# Research

### Publications

3. A.V. Oza et al. incl. **M. Meyer zu Westram**, 2024, "Volcanic Volatiles Venting at Hot Saturns by Tidally-Heated Exomoons", *in prep.*

2. **M. Meyer zu Westram**, A.V.Oza, and A. Galli., 2023, "Exomoon Phase Curves: Toroidal Exosphere Simulations of Exo-Ios Orbiting 8 Exoplanets in Alkali Spectroscopy", in *Journal of Geophysical Research: Planets.*

1. A. Vananti, **M. Meyer zu Westram**, and T. Schildknecht, 2023, "Metrics on space of closed orbits for near-Earth objects identification", in *Celestial Mechanics and Dynamical Astronomy.*

### Conference Proceedings

3. M. Meyer zu Westram. "Exo-Io Simulations of Toroidal Exospheres". EGU General Assembly, Vienna, Austria (April 2023).

2. A.V. Oza. "Extrasolar Volcanism as a Source for the Tidally-Evaporating Super-Io Candidate 55 Cancri-e". 44th COSPAR Scientific Assembly, Athens, Greece (July 2022).

1. A.V. Oza, A. Gebek, J.V. Seidel, J. Hoeijmakers, A. Unni; S. Thirupathi; C. Schmidt, A. Baker; K. de Kleer, R. Lopes, R.E. Johnson; Exo-Io Collaboration. "Transient Sodium and Potassium Clouds at Candidate Exomoon Systems". AASTCS9, Exoplanets 4, id. 208.02. BAAS, Vol. 54, No. 5 e-id 2022n5i208p02 (June 2022).

# Skills

### Languages

- German (mother tongue)
- English (proficient)

### Programming, Scripting & Others

- Python (proficient)
- C (basic)
- LaTeX (proficient)

# Reference & Recommendation Contacts

- Prof. Uwe-Jens Wiese, University of Bern, Institute for Theoretical Physics
  Email address: `wiese@itp.unibe.ch`
  Website: `http://www.wiese.itp.unibe.ch/`
- PD Dr. Galli, University of Bern, Space Research & Planetary Sciences
  Email address: `andre.galli@unibe.ch`
- Dr. Apurva V. Oza, Jet Propulsion Laboratory/California Institute of Technology
  Email address: `apurva.v.oza@jpl.caltech.edu`
  Website: `https://www.apurvaoza.com/`