MARIE-LUISE STEINMEYER

https://steinmeyer-ml.github.io
ETH Zürich ◇ HIT J 31.4 ◇ Wolfgang-Pauli-Str. 27 ◇ 8093 Zürich ◇ Switzerland
msteinmeyer@phys.ethz.ch

EMPLOYMENT

Postdoctoral fellow, *Institute for Particle Physics and Astrophysics, ETH Zurich*, Switzerland *since 04/24*
Member of the Exoplanet interior group
Supervisor: Prof. Dr. Caroline Dorn

EDUCATION

Ph.D. in Planetary Science, *GLOBE institute, University of Copenhagen*, Denmark *since 10/20*
Topic: The role of pebble sublimation during the formation of rocky planets
Supervisor: Prof. Dr. Anders Johansen

M.Sc. in Physics, *Ruprecht Karl University*, Heidelberg, Germany *10/18 - 09/20*
Final grade: 1.3 - very good
Master's Thesis: Formation of planetesimals by gravitational collapse using the PENCIL-Code
Supervisors: Prof. Dr. Hubert Klahr, Prof. Dr. Anders Johansen
Thesis Grade: 1.3 - very good

B.Sc. in Physics, *Ruprecht Karl University*, Heidelberg, Germany *10/14 - 09/18*
Final grade: 1.3 - very good
Bachelor's Thesis: The Impact of Temperature Evolution on Planetesimal Formation
Supervisor: Prof. Dr. Hubert Klahr
Thesis Grade: 1.0 - very good

RESEARCH EXPERIENCE

Research Internship, *Lund Observatory*, Lund *09/19 - 01/20*
Studying gravitational collapse of dust clouds using the Pencil Code
Supervisor: Prof. Dr. Anders Johansen

Student Research Assistant, *Max Planck Institute for Astronomy*, Heidelberg *03/18 - 03/19*
Documentation and evaluation of the dust evolution model TwoPopPy
Supervisor: Prof. Dr. Hubert Klahr

Projektpraktikum (Project Internship), *Max Planck Institute for Astronomy*, Heidelberg *04/17 - 12/17*
Planetesimal formation around the ice line
Supervisor: Prof. Dr. Hubert Klahr

PUBLICATIONS

Steinmeyer, M.-L. and Johansen, A., 2024, *Vapor equilibrium models of accreting rocky planets demonstrate direct core growth by pebble accretion*, Astronomy and Astrophysics 683, doi:10.1051/0004-6361/202349052
Steinmeyer, M.-L., Woitke, P., Johansen, A., 2023, *Sublimation of refractory minerals in the gas envelopes of accreting rocky planets*, Astronomy and Astrophysics 677, doi:10.1051/0004-6361/202245636

PRESENTATIONS

ExOresund, Copenhagen, Denmark *10/23*
Invited Talk: Pebble sublimation and its (compositional) consequences

Annual Danish Astronomy Meeting, Fredericia, Denmark *06/23*

Contributed Talk: Sublimation of refractory minerals in the gas envelopes of accreting rocky planets
CELS start-up meeting, Copenhagen, Denmark *09/21*
Contributed Talk: Primordial atmosphere of a protoplanet during pebble accretion
Ringberg Workshop: Pebbles, Planetesimals and Protoplanets, Schloss Rinberg, Germany *03/20*
Contributed Talk: Gravitational Collapse of Dust Filaments
`http://www.mpia.de/homes/klahr/PPP2020.html`

POSTERS

Sublimation of refractory minerals in the gas envelopes of accreting rocky planets *04/23*
at: Protostars & Protoplanets VII *Kyoto, Japan*
The role of envelopes of rocky planets during pebble accretion *07/22*
at: Rocky Worlds II *Oxford, UK*
The role of envelopes of rocky planets during pebble accretion *05/22*
at: Exoplanets IV *Las Vegas, USA*
Evolution and Collapse of Particle Filaments *11/20*
at: Planetesimal Formation meeting *virtual*
`https://michiellambrechts.bitbucket.io/pfmeet.html`

ROLES OF RESPONSIBILITIES & OUTREACH

Astronomy on Tap, Copenhagen, Denmark *09/23*
Speaker: The where and how of planet formation
Astronomy on Tap, Copenhagen, Denmark *01/22 - 02/24*
Volunteer
GLOBE Diversity Allies Program
Steering Committee Core Member *01/21 - 02/24*
Interdisciplinary Workshop on Star and Planet Formation
Co-organizer of journal club *09/21 - 06/22*

SKILLS

Computer Skills
Word processing with Microsoft Office and LaTeX
Coding with Python (advanced) and Fortran (beginner)
Experience using the two-population dust evolution model TwoPopPy, the high-order finite-difference code for compressible (magneto-)hydrodynamics code Pencil, and the DISPATCH code framework

Languages
German (native Speaker), English (fluent), French (conversational), Danish (basic words and phrases)

REFERENCES

Prof. Dr. Anders Johansen *Globe Institute*, Copenhagen
E-Mail: anders.johansen@sund.ku.dk
Phone: +45 35 32 10 50
Dr. Peter Woitke *Institut für Weltraumforschung*, Graz
E-Mail: Peter.Woitke@oeaw.ac.at
Phone: +43 (316) 4120 320