

Mag. Dr. Tanja Amerstorfer

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Professional Experience

- 03/2023–02/2026 **PI**, FWF-project [P36093-N27] “Improving solar storm modeling with machine learning”, Austrian Space Weather Office, GeoSphere Austria.
- 12/2022–present **Research and Development Scientist**, Austrian Space Weather Office, GeoSphere Austria.
- 08/2022–11/2022 **Research Associate**, ESA-SSA P3-SWE-IV.2 “Use of L5 Data in CME Propagation Models”, PI C. Perry (RAL, UK), Space Research Institute, Austrian Academy of Sciences.
- 12/2021–07/2022 **Research Associate**, FWF-project [P31659-N27] “Enhanced lead time for geomagnetic storms”, PI C. Moestl, Space Research Institute, Austrian Academy of Sciences.
- 07/2018–08/2021 **PI**, FWF-project [P31265-N27] “Predicting solar storm arrivals at Earth”, Space Research Institute, Austrian Academy of Sciences.
- 12/2017–03/2018 **PostDoc**, FWF-project [P24247-N27] “Modeling of non-thermal processes in upper atmospheres exposed to the young Sun”, PI H. Lichtenegger, Space Research Institute, Austrian Academy of Sciences.
- 12/2014–11/2017 **PostDoc**, FWF-project [P26174-N27] “The evolution of solar storms in the inner heliosphere”, PI C. Moestl, Space Research Institute, Austrian Academy of Sciences.
- 08/2013–07/2015 **Young Researcher Fellow of the University Graz council board**, “The Role of the Magnetic Field within Solar Storms”, Space Research Institute, Austrian Academy of Sciences.
- 03/2011–11/2014 **Dissertation**, “Evolution of Interplanetary Coronal Mass Ejections and their Heliospheric Imprints”, within EU-FP7 project 263252 (*Coronal Mass Ejections and Solar Energetic Particles*), supervisor: Assoz. Univ.-Prof. Mag. Dr. Astrid Veronig.
- 10/2009–12/2010 **Diploma thesis**, “Propagation Directions and Kinematics of Coronal Mass Ejections in the Heliosphere”, within FWF project P20145 (*Magnetic clouds and their solar sources*), supervisor: Assoz. Univ.-Prof. Mag. Dr. Astrid Veronig.

Research Interests

Coronal mass ejections, interplanetary propagation.

Magnetic clouds, interior structure and evolution.

Space weather, forecasting and analysis of possible geoeffective events.

Academic Achievements

Publications and Presentations

- Publications **44 peer reviewed scientific articles in international journals**, 6 as first author.
- Poster presentations **80 poster presentations**, 20 as first author.
- Oral presentations **60 oral presentations**, 14 as first author.
- Number of citations **1789**, (total).
- h-index: **23**, (source: SAO/NASA Astrophysics Data System, Jan 2023).

Invited Talks

- EGU General Assembly 2017 **in Session ST4.2**, “*CME prediction: present and future perspectives*”, Vienna, Austria.
- AGU Fall Meeting 2021 **in Session SH006**, “*HI-based CME Modeling and the Influence of the Drag-force on the CME Frontal Shape*”, New Orleans, USA.

Awards

- 2013–2015 **Young Researcher Fellowship**, of the University Graz council board.

Community Service

- Referee for international journals **Solar Physics; Astrophysical Journal; Journal of Atmospheric and Solar-Terrestrial Physics; Journal of Space Weather and Space Climate; AGU Space Weather.**
- Reviewer for funding agencies **NASA Heliophysics Supporting Research program.**
- Observing Scientist **for VarSITI**, *Variability of the Sun and Its Terrestrial Impact*, ISEST/MiniMax24 campaign.
- Student judge **at AGU 2015 and EGU 2016-2019.**
- (Co-)convener at EGU20, EGU21, EGU22, and EGU23 **Sessions ST4.1 and ST4.3**, “*Space weather prediction of solar wind transients in the heliosphere*”.
- COSPAR-iSWAT **Team-lead of action team H2-03**, “*CME model evaluation through synthetic observations*”.

Memberships

- EGU **member**, since 2015.

Student Supervision

- supervision **PhD Student**, M. Bauer, Austrian Space Weather Office. GeoSphere Austria
- supervision **PhD Student**, J. Hinterreiter, Space Research Institute Graz.
- supervision **two master’s students**, Space Research Institute Graz.
- supervision **two student trainees**, Space Research Institute Graz.

Research Grants and Projects as PI

- Stand-alone project, Austrian Science Fund **2023–2026**, “*Improving solar storm modeling with machine learning*”. Funding budget: €403k
- ESA Subcontractor; cooperation with RAL **2020–2023**, “*Use of L5 data in CME propagation models*”. Funding budget: €36k
- Stand-alone project, Austrian Science Fund **2018–2021**, “*Predicting solar storm arrivals at Earth*”. Funding budget: €385k
- Grant of the University Graz council board **2013–2014**, “*The Role of the Magnetic Field within Solar Storms*”. Funding budget: €24k

Scientific Repositories

- ELEvoHI code github.com/tamerstorfer/ELEvoHI.git.
- Derivation of magnetic flux rope diameter <https://doi.org/10.6084/m9.figshare.7599104.v2>.