

Rinat Tagirov

POSTDOCTORAL RESEARCHER

Max Planck Institute for Solar System Research, Justus-von-Liebig-Weg 3, 37077 Göttingen, Germany

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Education

ETH Zürich

DOCTOR OF SCIENCES

- Thesis Title: Physical Understanding of Solar Irradiance in UV and Radio Wavelengths.
- Scientific Advisors: Dr. Alexander Shapiro, Prof. Dr. Werner Schmutz

Zürich, Switzerland

Sep. 2011 - Oct. 2016

Saint-Petersburg State University

SPECIALIST DIPLOMA IN ASTRONOMY

- Thesis Title: Physical Conditions in Molecular Clouds at High Redshifts.
- Scientific Advisor: Dr. Alexandre Ivanchik

Saint-Petersburg, Russia

Sep. 2006 - Jun. 2011

Skills

Science	Numerical radiative transfer, NLTE effects, Solar and stellar brightness variability modeling
Programming	Python, Fortran, Linux, LaTeX, IDL
Languages	Russian (native), English (fluent), German (basic)

Experience

Max Planck Institute for Solar System Research

POSTDOCTORAL RESEARCHER, SUN AND HELIOSPHERE DEPARTMENT

- Solar and stellar brightness variability modeling

Göttingen, Germany

Sep. 2018 — PRESENT

Imperial College London

RESEARCH ASSOCIATE, BLACKETT LABORATORY, ASTROPHYSICS GROUP

- Radiative transfer code development, solar spectrum modeling, solar irradiance variability modeling

London, UK

Oct. 2016 — Sep. 2018

Physical-Meteorological Observatory Davos

PHD STUDENT

- Radiative transfer code development, solar spectrum modeling, solar irradiance variability modeling

Davos, Switzerland

Sep. 2011 — Sep. 2016

Ioffe Physical-Technical Institute

RESEARCH ASSISTANT, THEORETICAL ASTROPHYSICS DEPARTMENT

- Physics of interstellar medium in the early Universe

Saint-Petersburg, Russia

Sep. 2010 - Jun. 2011

Teaching

Faculty of Natural Sciences

FIRST YEAR COMPUTATIONAL PROJECT SUPERVISOR (4 STUDENTS, 2 PROJECTS)

- Project #1: Modeling airplane boarding process using statistical mechanics
- Project #2: Modeling rainbow formation

Imperial College London

Mar. 2018 — June 2018

Faculty of Natural Sciences

FIRST YEAR COMPUTATIONAL PROJECT SUPERVISOR (2 STUDENTS, 1 PROJECT)

- Project: Identification and study of solar active regions using HMI/SDO images

Imperial College London

Mar. 2017 — June 2017

Department of Mechanical Engineering

PHYSICS LABORATORY PRACTICUM ASSISTANT

- Lab experiment practice instruction and supervision

ETH Zürich

Sep. 2013 — Dec. 2014

Department of Physics

PHYSICS III COURSE ASSISTANT

- Exercise classes on optics, statistical mechanics and quantum mechanics

ETH Zürich

Oct. 2012 — Feb. 2013

Publications

- 2018
- R. V. Tagirov, A. I. Shapiro, N. A. Krivova, Y. C. Unruh, K. L. Yeo and S. K. Solanki
Solar Spectral Irradiance Variations: SATIRE-S with NLTE spectra
in preparation
- T. Egorova, W. Schmutz, E. Rozanov, A. I. Shapiro, I. Usoskin, J. Beer, R. V. Tagirov and T. Peter
Revised historical solar irradiance forcing
Astronomy & Astrophysics, 615, A85
- 2017
- R. V. Tagirov, A. I. Shapiro and W. Schmutz
NESSY: NLTE spectral synthesis code for solar and stellar atmospheres
Astronomy & Astrophysics, 603, A27
- G. Thuillier, P. Zhu, A. I. Shapiro, S. Sofia, R. V. Tagirov, M. van Ruymbeke and W. Schmutz
Solar disk radius determined from observations made during eclipses by bolometric and photometric instruments on-board the PICARD satellite
Astronomy & Astrophysics, 603, A28
- J. Gröbner, S. Kazadzis, N. Kouremeti, L. Doppler, R. V. Tagirov, and A. I. Shapiro
Spectral solar variations during the eclipse of March 20th 2015 at two European sites
American Institute of Physics Conference Proceedings, 1810, 1
- 2016
- G. Cessateur, ..., R. V. Tagirov, et al.
Solar irradiance observations with PREMOS filter radiometers on the PICARD mission: In-flight performance and data release
Astronomy & Astrophysics, 588, A126
- 2015
- A. I. Shapiro, S. K. Solanki, N. A. Krivova, R. V. Tagirov and W. K. Schmutz
The role of the Fraunhofer lines in solar brightness variability
Astronomy & Astrophysics, 581, A116

Presentations

- Sun-climate group seminar of Max-Planck-Institute for Solar System Research** MPS, Göttingen, Germany
INVITED TALK Nov. 2015
Fixing Λ -Iterations in the NESSY code
- Solar Metrology: Needs and Methods** Paris, France
CONFERENCE POSTER Oct. 2014
Fast NLTE radiative transfer numerical scheme for solar spectrum modeling
- Davos Atmosphere and Cryosphere Assembly (DACA-13)** Davos, Switzerland
CONFERENCE POSTER Jul. 2013
Analysis of the solar eclipses observed with PREMOS/PICARD
- 8th European Space Weather Week** Namur, Belgium
CONFERENCE SPLINTER-SESSION TALK Nov. 2011
Analysis of the solar eclipses observed with PREMOS/PICARD

References

Dr. Alexander Shapiro

SCIENTIST, ERC RESEARCH GROUP SOLVE LEADER

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Dr. Yvonne Unruh

READER IN ASTROPHYSICS

Imperial College London

Blackett Laboratory, Astrophysics Group

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Prof. Dr. Werner Schmutz

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