

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

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