This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

SOLARNET: High-resolution Solar Physics Network

WORK PACKAGE 3
NA2: Network activities to foster synergistic collaborations

Status report on the activities executed in WP3

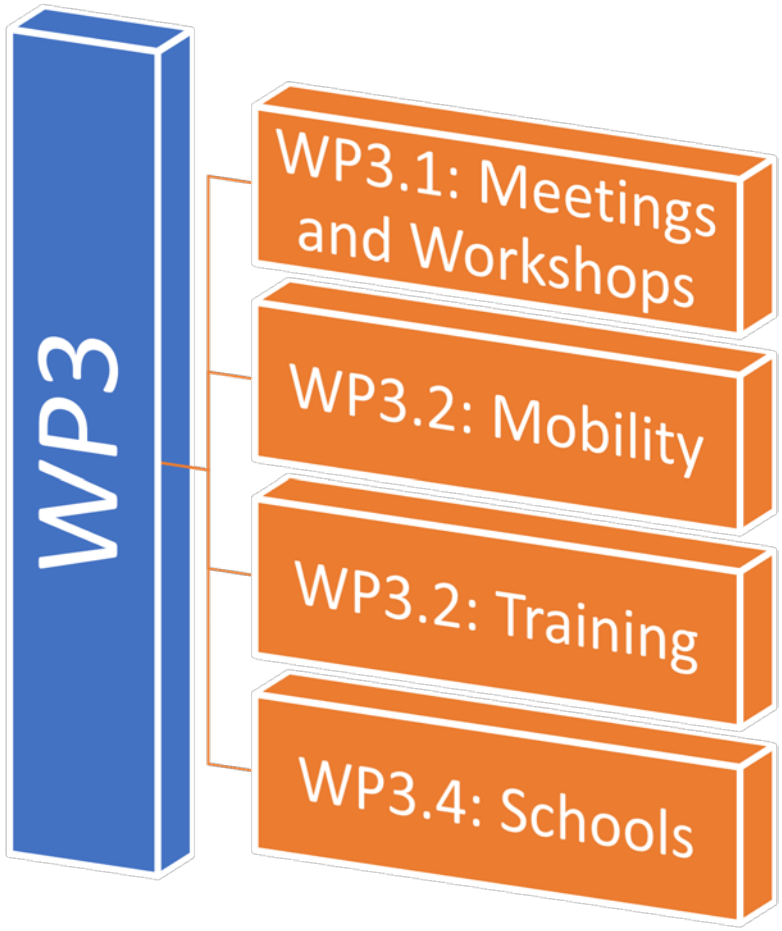
January 2020

Francesca Zuccarello

UNIVERSITÀ degli STUDI di CATANIA

DIPARTIMENTO di FISICA e ASTRONOMIA "Ettore Majorana"

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

WP3.1 Meetings

	Time	Title	Location	Org.
	Y2/Q3 **(5-9 Oct 2020)**	Sun and Society	Italy (Venice)	UToV
	Y3/Q3 **(20 -24 Sept 2021)**	The Many Scales of the Magnetic Sun	Germany (Potsdam, (Telegrafenber)	AIP
	Y4/Q3 **(Sept 2022)**	The Sun as a paradigm in astrophysics	Italy (Catania)	UNICT

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

Meeting 1
Sun and Society
Organizer: Francesco Berrilli (UToV)

Goal of the Meeting: To create and tighten links between solar science and society by involving heliophysic scientists, stakeholders and economists.

New date: **5 – 9 October 2020**

Venue: Venice International University (VIU) in the island of San Servolo (Venice)

- First Announcement on Solar News (mid December issue)
- SOLARNET budget 20 k€
- Request of support submitted to INAF, ASI, EIE, Telespazio
- Possibility to publish Proceedings of the Meeting by Springer, (free or ~11 k€ for Open Access) or by EDPS (free)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

Meeting 1
Sun and Society
5 – 9 October 2020

SOC: Members of the SOLARNET Consortium, as well as other EU and non-EU colleagues, climatologists, experts of Space Weather, economists, ….

- **Francesco Berrilli** (chair), Department of Physics, University of Rome Tor Vergata, Italy
- **Manuel Collados**, Instituto de Astrofísica de Canarias, Spain
- **Bernhard Fleck**, ESA Directorate of Science, Operations Department, c/o NASA/GSFC, USA
- **Carlo Giupponi**, Department of Economics, Ca' Foscari University of Venice, Italy
- **Margit Haberreiter**, Physikalisch-Meteorologisches Observatorium Davos / World Radiation Center, Switzerland
- **Emilia Kilpua**, Department of Physics, University of Helsinki, Finland
- **Maria Madjarska**, Max Planck Institute for Solar System Research, Germany
- **Etienne Pariat**, Observatoire de Paris-Meudon LESIA, France
- **Steven Tobias**, Department of Applied Mathematics, University of Leeds, United Kingdom
- **Francesca Zuccarello** (co-chair), Department of Physics and Astronomy, University of Catania, Italy

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

Meeting 1
Sun and Society
5 – 9 October 2020

Profile | Programme | Dates | Registration and payment | Venue/ Hotel/ Travel | Contributions | Participants

SOLARNET International Conferences

Sun and Society

Free

CID solarnet5

Hosted by SOLARNET - High Resolution Solar Physics Network

Affiliation Leibniz-Institut für Sonnenphysik

The Meeting will take place at Venice International University (VIU). VIU is something unique in the academic world, a consortium of 18 universities from all over the world with an autonomous campus on the island of San Servolo, Venice, Italy. (Further information: http://www.univiu.org/index.php)

05.10.2020 - 09.10.2020

Organizing institutions

University of Tor Vergata, Rome

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

Workshops

EC funds, per event (10 k€/Workshop), will be provided to support **organizational costs** **and** **travel expenses for invited speakers**.

The topics of Workshops will be defined during the execution of the project, in order to ensure timely recognition and reflection of newly emerging topics, enabling to address new opportunity to be shared, discussed, worked-out by the participants, both on a theoretical and observational basis.

It is foreseen to organize **up to 3 workshops** with an **average duration of 2-3 days**. The budget for each workshop is ring-fenced at **10 k€**.

The other part of this budget is used to issue travel grants for young researchers for their participation at other international meetings devoted to high-resolution solar physics.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

Workshops

SOLARNET Workshop Grant Application
Title: **The shifting paradigm of stellar convection**
Date: **March 24–27**, 2020 (60 participants)
Venue: Nordita, AlbaNova University Center

Applicant: Petri J. Kapyla
(Institut fur Astrophysik, Georg-August-Universit at Gottingen, Germany /
Computer Science Department, Aalto University, Espoo, Finland)

Support provided by WP30: 4 k€

7 Scientific Organizing Committee:

Axel Brandenburg (Nordita), Hideyuki Hotta (Chiba University, Japan), Petri Käpylä (Georg-August Universität-Göttingen / Aalto University, Finland), Markus Roth (Leibniz-Institute for Solar Physics, Freiburg).

8 Website

https://nordita.org/convection2020

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

Workshops

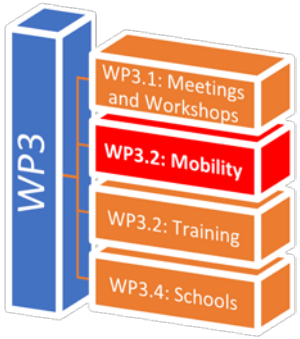
Procedure to provide funds to future Workshops:

- Periodic Calls
  - ❑ Solar News
  - ❑ SOLARNET Consortium
  - ❑ 1 Call per year

- Title
- Venue and date
- Institute organizing the event
- Contact person (e-mail, telephone number, address)
- Rational and scientific aim of the Workshop
- Preliminary Scientific Programme and preliminary list of Invited Speakers
- Scientific Organizing Committee (SOC) and Local Organizing Committee (LOC)
- Foreseen number of participants
- Presumed total cost of the Workshop and other sources of support
- Amount requested

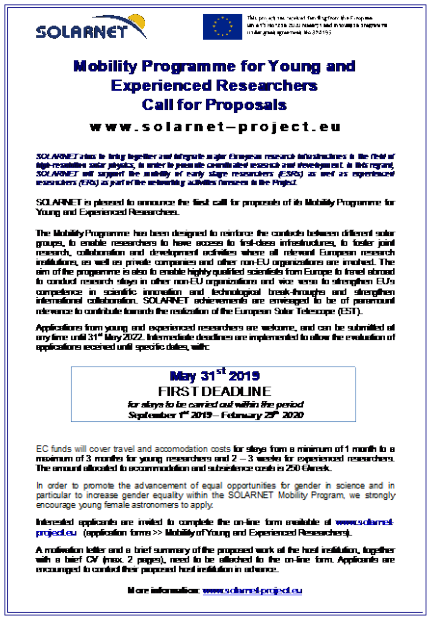
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

WP3.2: Mobility of ESRs and senior researchers (Lead: UNICT)



WP3.2 is aimed at promoting visits of **PhD students**, **young post-docs** and **senior researchers** at host institutions.

- **Periodic Calls (2 Calls per year)**
- Evaluation of the applicant's proposals by a Committee (**MEC**)
- 30 ESRs and 15 senior researchers
- **Funds** for this activity: **120 k€**



SOLARNET

Mobility Programme for Young and Experienced Researchers
Call for Proposals
www.solarnet-project.eu

SOLARNET aims to bring together and integrate major European research infrastructures in the field of high-resolution solar physics, in order to promote coordinated research and development. In this regard, SOLARNET will support the mobility of early stage researchers (ESRs) as well as experienced researchers (ERAs) as part of the networking activities foreseen in the Project.

SOLARNET is pleased to announce the first call for proposals of its Mobility Programme for Young and Experienced Researchers.

The Mobility Programme has been designed to reinforce the contacts between different solar groups, to enable researchers to have access to first-class infrastructures, to foster joint research, collaboration and development activities where all relevant European research institutions, as well as private companies and other non-EU organizations are involved. The aim of the programme is also to enable highly qualified scientists from Europe to travel abroad to conduct research stays in other non-EU organizations and vice versa to strengthen EU's competence in scientific innovation and technological break-throughs and strengthen international collaboration. SOLARNET achievements are envisaged to be of paramount relevance to contribute towards the realization of the European Solar Telescope (EST).

Applications from young and experienced researchers are welcome, and can be submitted at any time until 31st May 2022. Intermediate deadlines are implemented to allow the evaluation of applications received until specific dates, with:

May 31st 2019
FIRST DEADLINE
for stays to be carried out within the period
September 1st 2019 – February 29th 2020

EC funds will cover travel and accomodation costs for stays from a minimum of 1 month to a maximum of 3 months for young researchers and 2 – 3 weeks for experienced researchers. The amount allocated to accommodation and subsistence costs is 250 €/week.

In order to promote the advancement of equal opportunities for gender in science and in particular to increase gender equality within the SOLARNET Mobility Program, we strongly encourage young female astronomers to apply.

Interested applicants are invited to complete the on-line form available at www.solarnet-project.eu (application forms >> Mobility of Young and Experienced Researchers).

A motivation letter and a brief summary of the proposed work at the host institution, together with a brief CV (max. 2 pages), need to be attached in the on-line form. Applicants are encouraged to contact their proposed host institution in advance.

More information: www.solarnet-project.eu

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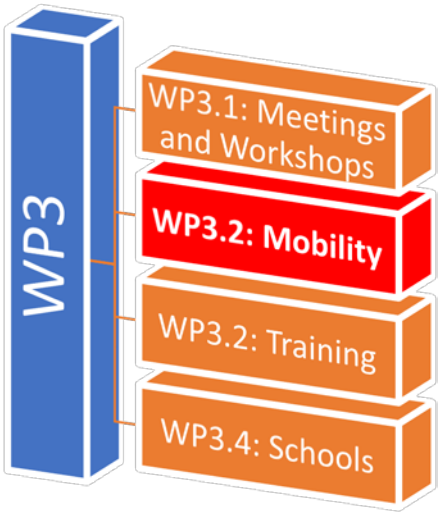
WP3.2: Mobility of ESRs and senior researchers (Lead: UNICT)

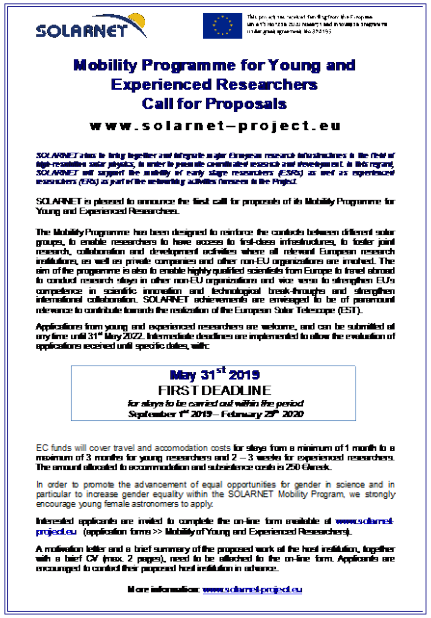


- Two deadlines per year: **May 31st and November 30th**.
- The selection of the granted proposals is announced on **June 15th and December 15th**.
- The mobility has to start, if approved, during the 6-month periods starting in **September 1st and March 1st**

- First Call: **April, 30th 2019**
- **Applications:**
  - **Young Researchers: 7**
  - **Senior Researchers: 1**

Members of the Mobility Evaluation Committee

Michele Bianda, IRSOL, Switzerland
Robertus von Fay-Siebenburgen, U. of Sheffield, UK
Peter Gomory, AISAS, Slovakia
Arnold Hanslmeier, U. of Graz, Austria
Sarah Matthews, UCL-MSSL, UK
Francesca Zuccarello, UNICT, Italy



SOLARNET

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Applications from young and experienced researchers are welcome, and can be submitted at any time until 31st May 2022. Intermediate deadlines are implemented to allow the evaluation of applications received until specific dates, with:

May 31st 2019
FIRST DEADLINE
for stays to be carried out within the period
September 1st 2019 – February 29th 2020

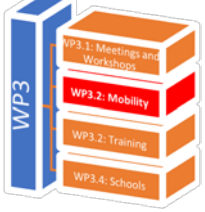
EC funds will cover travel and accomodation costs for stays from a minimum of 1 month to a maximum of 3 months for young researchers and 2 – 3 weeks for experienced researchers. The amount allocated to accommodation and subsistence costs is 250 €/week.

In order to promote the advancement of equal opportunities for gender in science and in particular to increase gender equality within the SOLARNET Mobility Program, we strongly encourage young female astronomers to apply.

Interested applicants are invited to complete the on-line form available at www.solarnet-project.eu (application forms >> Mobility of Young and Experienced Researchers).

A motivation letter and a brief summary of the proposed work of the host institution, together with a brief CV (max. 2 pages), need to be attached to the on-line form. Applicants are encouraged to contact their proposed host institution in advance.

More information: www.solarnet-project.eu



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

1st Call : Selected Researchers

Name	Nationality	University or Institution	Host Institution	Topic	Number of weeks
Theodosios Chatzistergos	Greece	INAF	MPS (Natalie Krivova)	Relationship between B and Ca II over 20 years	8
Marianna Korsos	Hungary	Eotvos Lorand University	UNICT (Francesca Zuccarello)	Flare and CME prediction	12
Philip Lindner	Germany	KIS	Stockholm University (Jamie De La Cruz Rodriguez)	Application of the STIC code to SST data (magneto-convective modes in ARs)	8
Tishtrya Mehta	UK	University of Warwick	NSO (Kiran Jain and Sushant Tripathy)	Analysis of GONG data and solar dynamo	6
Jenny Marcela Rodriguez Gomez	Colombia	Skolkovo	University of Graz (Astrid Veronig)	Solar Extreme Events and Their Space Weather Impact	12
Robertus Erdelyi	Hungary	University of Sheffield	UNICT (Francesca Zuccarello)	ML techniques to improve flare and CME forecasting using EUV image	1

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

WP3.2: Mobility of ESRs and senior researchers (Lead: UNICT)

- Second Call: **October, 15th**
- **Applications:**
  - **Young Researchers: 11**
  - **Senior Researchers: 4**

SOLARNET

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

Mobility Programme for Young and Experienced Researchers
Call for Proposals

www.solarnet-project.eu

SOLARNET aims to bring together and integrate the major European research infrastructures in the field of high-resolution solar physics, in order to promote coordinated research and development. In this regard, SOLARNET will support the mobility of early stage researchers (ESRs) as well as experienced researchers as part of the networking activities foreseen in the Project.

SOLARNET is pleased to announce the second call for proposals of its Mobility Programme for Young and Experienced Researchers.

The Mobility Programme has been designed to reinforce the contacts between different groups, to enable researchers to have access to first-class infrastructures, to foster joint research, collaboration and developmental activities where all relevant European research institutions, as well as private companies and other non-EU organizations are involved. The aim of the programme is also to enable highly qualified scientists from Europe to travel abroad to conduct research stays in other non-EU organizations and vice versa to strengthen EU's competence in scientific innovation and technological break-throughs and strengthen international collaboration. SOLARNET achievements is envisaged to be of paramount relevance to contribute towards the realization of the European Solar Telescope (EST).

Applications from young and experienced researchers are welcome, and can be submitted at any time until May 2022. Intermediate deadlines are issued to allow the evaluation of applications received until a specific date:

November 30th 2019
SECOND DEADLINE
for stays to be carried out within the period
March 1st 2020 – August 31st 2020

EC funds will cover travel and accomodation costs for stays from a minimum of 1 month to a maximum of 3 months for young researchers and 2 – 3 weeks for experienced researchers. The amount allocated to accommodation and subsistence costs is 250 €/week.

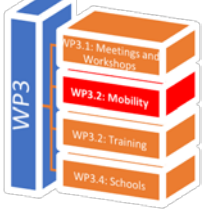
In order to promote the advancement of equal opportunities for women and men in science and in particular to increase gender equality within the SOLARNET Mobility Program, we strongly encourage young women astronomers to apply.

Interested applicants are invited to complete the on-line form available at

http://www.solarnet-project.eu/application-form

A motivation letter and a brief summary of the proposed work at the host institution, together with a brief CV, need to be attached to the on-line form. Applicants are encouraged to contact the host institution in advance.

More information: www.solarnet-project.eu



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2nd Call : Selected Researchers

Name	Nationality	University or Institution	Host Institution	Topic	Number of weeks
Eleanna Asvestari	Greece	University of Helsinki (Finland)	MPS (Germany, Dr. Thomas Wiegelmann)	Developing and employing the forecasting model EUHFORIA	6
Ryan Campbell	UK	Queen's University Belfast (UK)	IAC (Spain, Prof. Manolo Collados)	Magnetic field in the solar inter-network photosphere	5
Andrea Diercke	Germany	Leibniz Institute for Astrophysics Potsdam (Germany)	University of Graz (Austria, Dr. Astrid Veronig)	Application of deep learning techniques to extract filaments from full-disk Halpha images	5
Juan Manuel Borrero	Spain	Kiepenheuer Institut fuer Sonnenphysik (Germany)	IAC (Spain, Dr. Basilio Ruiz Cobo)	Development and testing of a new inversion code for the radiative transfer equation for polarized light	3
Mateja Dumbovic	Croatia	Faculty of Geodesy, University of Zagreb (Croatia)	The Skolkovo Institute of Science and Technology (Russia, Dr. Tatiana Podladchikova)	Lateral expansion of coronal mass ejections	3
Dominik Utz	Austria	IGAM/Institute of Physics, Karl-Franzens University Graz (Austria)	University of Sheffield (UK, Prof. Robertus Erderly))	Wave generation by footpoint motions of MBPs	3

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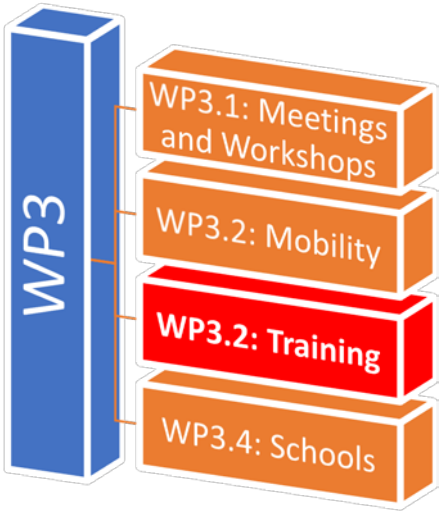
WP3.3: Training for Solar Observers — A week above the clouds (Lead: KIS)

- Short stays of **students and young postdocs** at the Observatorio del Teide **for one week each year** to learn about solar ground-based high-resolution observations.
- Allocated funds: 15k€ / year, to cover accommodation for **15 students** and 7 lecturers and to support travel for students.
- KIS provide access to the **VTT and GREGOR** telescopes for these weeks.



- The **first** Training activity took place on **5 – 9 August 2019**
  - **Lectures** on topics related to data acquisition, calibration and analysis.
  - Real observations at the telescope by **groups lead by** an **experienced observer**.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

WP3.3: Training for Solar Observers — A week above the clouds
5 – 9 August 2019 (Lead: KIS)

Scientific and Local Organizers

Dr. Nazaret Bello Gonzalez	Chair	KIS
Dr. Rolf Schlichenmaier	Co-Chair	KIS
Mr. Philip Lindner		KIS

Lecturers

Speaker	Institute/ Company
Dr. Andrés Asensio Ramos	IAC
Dr. Catherine Fischer	KIS
Dr. Christoph Kuckein	AIP
Dr. Andrew Leonard	Aperio Software Ltd., Leeds, UK
Dr. Rolf Schlichenmaier	KIS
Dr. Wolfgang Schmidt	KIS
Dr. Nikola Vitas	IAC

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

#	Name	Male / Female	Country	Position
1	Hemanth Pruthvi	M	India	Postdoc
2	Jose Ivan Campos Rozo	M	Colombia	PhD Student
3	Philip Lindner	M	Germany	PhD Student
4	Daniele Calchetti	M	Italy	PhD student
5	Robert Jarolim	M	Austria	Master's Student, Research Assistant
6	Marta García Rivas	F	Spain	PhD Student
7	Mohammed Hussin Abedalluh Talafha	M	Jordania	PhD Student
8	Murabito Mariarita	F	Italy	Post-doc
9	Antonio Jesús Dorantes Monteagudo	M	Spain	PhD Student
10	Peter Zelina	M	Slovakia	Postdoc
11	Andriy Gorobets	M	Ukraina	PhD student
12	Galina Chikunova	F	Russia	Research Intern (PhD student since November 2019)
13	Matheus Aguiar-Kriginsky Silva	M	Spain	Superior Technician for the Solar Physics Group
14	Theodosios Chatzistergos	M	Greece	Postdoc
15	Martin Benko	M	Slovakia	PhD Student

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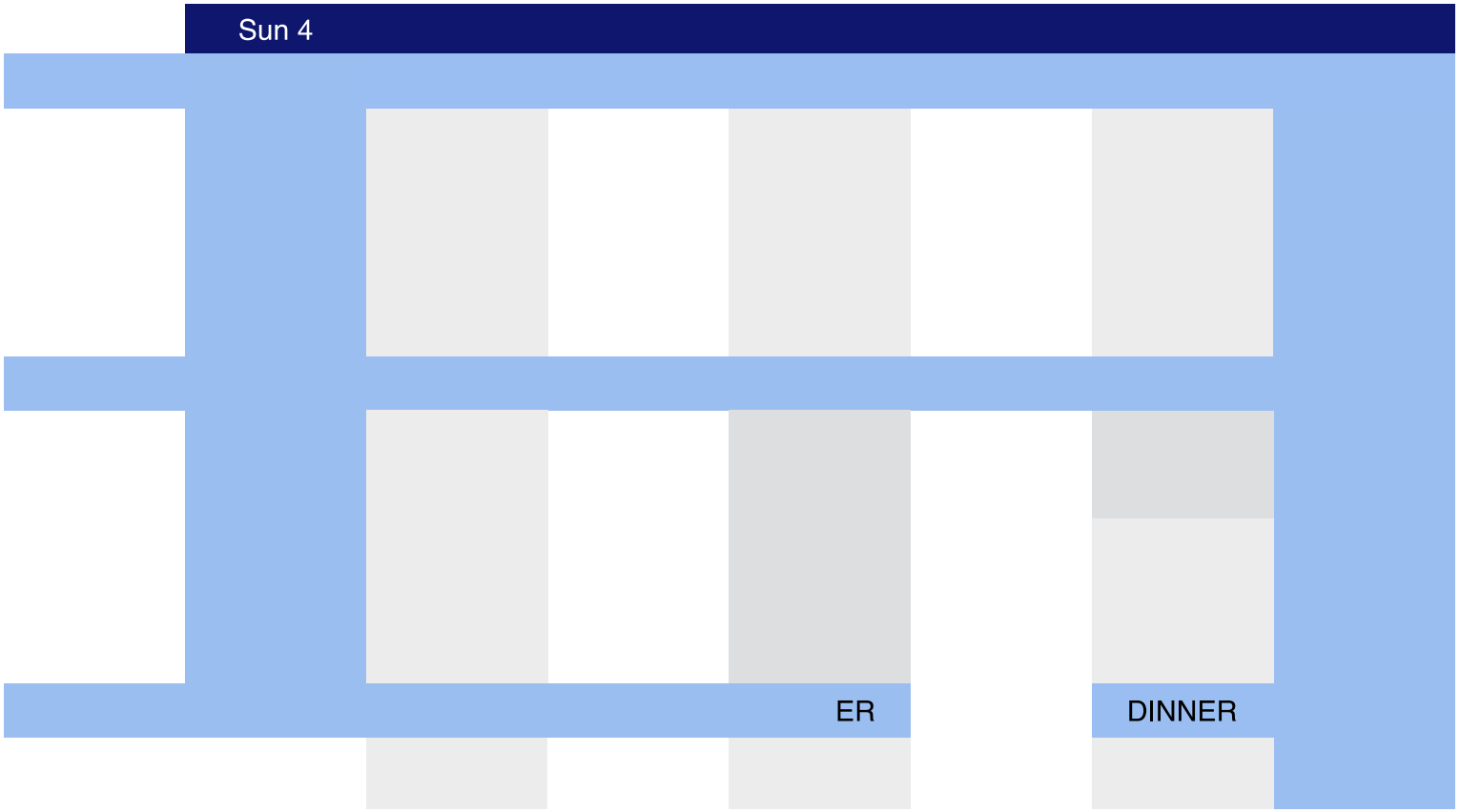
WP3.3: Training for Solar Observers — A week above the clouds
5 – 9 August 2019 (Lead: KIS)



Very positive feedbacks from the attendees !

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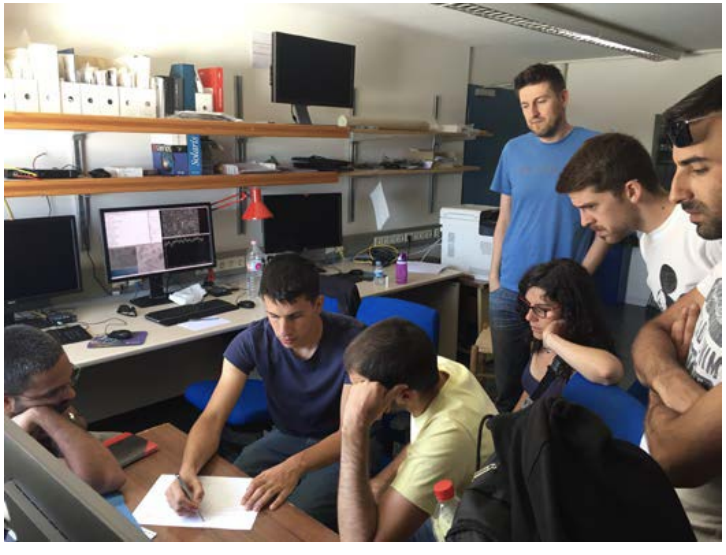
WP3.3: Training for Solar Observers — A week above the clouds
5 – 9 August 2019 (Lead: KIS)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

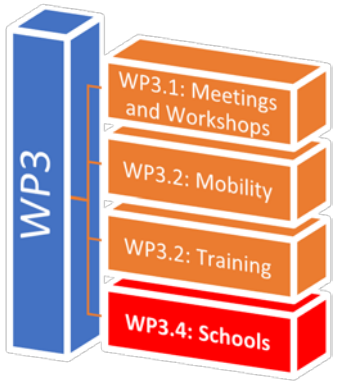
WP3.3: Summer / Winter Schools (Lead: UNICT)

- Expected number of participants in each School: ~ **25-30 ESRs**.
- EC funds, per event: (**20 k€/event**), are provided to support **organizational costs** and **travel expenses for young researchers and invited speakers**.

Time	Schools	Location	Org.
Y1/Q2 **(9 - 14 Sept 2019)**	***Solar spectropolarimetry: From real to virtual observations***	Switzerland (Lugano)	USI/IRSOL
Y2/Q1 **(23 - 27 March 2020)**	A holistic view of the solar atmosphere – combining space and ground-based observations	UK (MSSL)	MSSL/UCL
Y2/Q4 **(September 2020)**	***High-resolution solar observations***	Austria (Graz)	UNIGRAZ
Y3/Q2 **(May 2021)**	Solar corona - complex research from ground-base and space	Slovakia (Tatranska-Lomnica)	AISAS
Y4/Q2 **(May 2022)**	***Solar atmospheric dynamics - From waves to instabilities and jets***	Hungary (GSO, Gyula)	USFD

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

School n.1: Solar spectropolarimetry: From real to virtual observations (Switzerland, USI/IRSOL) Y1, Q2



- **Date: 9 – 14 September 2019**

- The School provided an introduction to modern spectropolarimetry, forward modeling, simulations, and virtual observations.
- There were practical sessions, in which the students could work on codes.
- Visits to the observing facilities at IRSOL and the supercomputer facilities at CSCS in Lugano.
- Applications: 31
- Attending students: 25 (6 females, 19 males)
- SOC: Luca Belluzzi, Michele Bianda, Rolf Krause, Maria G.C. Nestola, Renzo Ramelli, Oskar Steiner, Francesca Zuccarello

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

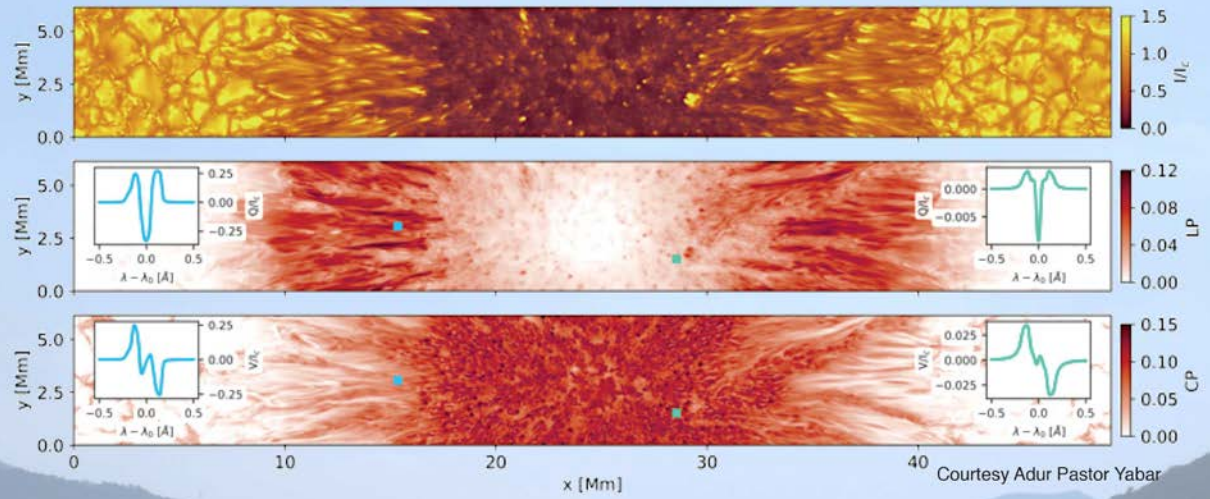
School n.1: Solar spectropolarimetry: From real to virtual observations (Switzerland, USI/IRSOL)

SOLARNET-FoMICS Summer School

Solar spectropolarimetry: From virtual to real observations

at Università della Svizzera italiana, Sept. 9-14, 2019 Lugano, Switzerland (http://solarnet-project.eu/Schools)

sponsored by SOLARNET, Grant Agreement No 824135 of the European Union's Horizon 2020 research and innovation programme and the Swiss Graduate Programme Foundations in Mathematics and Informatics for Computer Simulations in Science and Engineering (FoMICS).



Rationales: • Techniques for the production of virtual data and comparison to real observational data, photospheric and chromospheric. • Hands-on activities with spectropolarimetric radiative transfer codes and handling of simulation data. • Insights into the world of realistic numerical simulations and their limits. • Access and use of observational polarimetric data and techniques of high precision polarimetry. • Visit of the CSCS supercomputer center and the Istituto Ricerche Solari Locarno (IRSOL).

LOC & SOC: Luca Belluzzi (IRSOL), Michele Bianda (IRSOL), Mats Carlsson (RoCS), Rolf Krause (USI), Maria Nestola (USI), Renzo Ramelli (IRSOL), Oskar Steiner (IRSOL/ KIS), Francesca Zuccarello (UNICT)

Lecturers: Juan Manuel Borrero (KIS), Flavio Calvo (ISP, Uni-Stockholm) Jaime de la Cruz Rodriguez (ISP, Uni-Stockholm), Matthias Kraushaar (CSCS-ETH), Adur Pastor Yabar (KIS), Renzo Ramelli (IRSOL), Oskar Steiner (KIS/IRSOL)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

School n.1: Solar spectropolarimetry: From real to virtual observations (Switzerland, USI/IRSOL)

SOLARNET-FoMICS summer school on Solar spectropolarimetry: From virtual to real observations

Sept. 9-14, 2019, Università della Svizzera italiana (USI) and Istituto Ricerche Solari Locarno (IRSOL)

Participants

MS	Vahid	Abbasvand Azar	Astronomical Institute of the Czech Academy of Sciences	Ondřejov	Czech Rep.	azar@mail.asu.cas.cz
Dr.	Ernest	Alsina	Istituto Ricerche Solari Locarno (IRSOL)	Locarno-Monti	Switzerland	ealsina89@gmail.com
MS	Megha	Anand	Indian Institute of Astrophysics (IIA)	Bengaluru	India	amoghaphy@gmail.com
Mr.	Andrea Francesco	Battaglia	Federal Institute of Technology (ETH)	Zürich	Switzerland	andreafrancesco.battaglia@gmail.com
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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

School n.1: Solar spectropolarimetry: From real to virtual observations (Switzerland, USI/IRSOL)

Class schedule for the SOLARNET school "Solar spectropolarimetry: From virtual to real observations", Sept. 9–14, 2019 in Lugano, Switzerland

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
09:00 – 09:45	Registration & Welcome address	Numerical simulations I	Simulation data handling	Synthetic spectra NLTE, basics I	Synthetic spectra vs. obs. NLTE/PRD hands–on I	optional excursion
09:45 – 10:00		Q&B	Q&B	Q&B	Q&B	
10:00 – 10:45	Polarimetry basics I	Numerical simulations II	Simulation data handling hands–on	Synthetic spectra NLTE, basics II	Synthetic spectra vs. obs. NLTE/PRD hands–on II	
10:45 – 11:00	Q&B (Questions & break)	Q&B	Q&B	Q&B	Q&B	
11:00 – 11:45	Polarimetry basics II	Numerical simulations III hands–on visualization	Observational polarimetric data access, hands–on	Synthetic spectra NLTE/PRD basics	Synthetic spectra vs. obs. NLTE/PRD hands–on III	
11:45 – 12:00	Q&B	Q&B	Q&B	Q&B	Q&B	
12:00 – 13:30	Lunch break	Lunch break	Lunch break	Lunch break	Lunch break	
13:30 – 14:15	Polarimetry basics III	Synthetic spectra photo–sphere, hands–on III	Observational polarimetric data access, hands–on	RT–data postprocessing	CSCS supercomputing TBD	
14:15 – 14:30	Q&B	Q&B	Q&B	Q&B	Q&B	
14:30 – 15:15	Synthetic spectra photo–sphere, hands–on I	Synthetic spectra vs. obs. photosphere I	High precision polarimetry at IRSOL	RT–data postprocessing hands–on	CSCS supercomputing TBD	
15:15 – 15:45	Q&B	Q&B	Q&B	Q&B	visit of CSCS	
15:45 – 16:30	Synthetic spectra photo–sphere, hands–on II	Synthetic spectra vs. obs. photosphere II	visit of IRSOL in Locarno social dinner	suppl. skills TBD		
16:30 – 17:00	Questions	Questions		Questions		

Very positive feedbacks from the attendees !

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School n.1: Solar spectropolarimetry: From real to virtual observations (Switzerland, USI/IRSOL)

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School n.2: "A holistic view of the solar atmosphere – combining space and ground-based observations"

March 23-27, 2020

UCL – Mullard Space Science Laboratory (Dorking, UK)

A holistic view of the solar atmosphere

SOLARNET school "*A holistic view of the solar atmosphere – combining space and ground-based observations*"

March 23-27, 2020 at UCL – Mullard Space Science Laboratory (Dorking, UK)

The school "A holistic view of the solar atmosphere – combining space and ground-based observations" has for a goal to provide an introduction to the approaches and analysis methods needed to successfully combine space and ground-based observations of the solar the atmosphere from the photosphere to the corona, in order to a complete view of the underlying physical processes at work in a range of different solar phenomena.

To apply for the SOLARNET school, please send to g.valori@ucl.ac.uk no later than **February 25, 2020**

- a one-page CV
- a brief statement of interest (max. 1/2 page) indicating your field of research and why you want to participate in the school.

The SOLARNET support to students will cover bed-and-breakfast accommodation from Sunday evening to Friday morning (organized by the LOC), lunch during the school, and travel between the hotel and MSSL. No other travel or subsistence cost will be covered.
Students are expected to attend the school for the whole week, and to prepare for hands-on sessions by installing the software packages and data repositories that will be provided by the SOC in due time.

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School n.2: "A holistic view of the solar atmosphere – combining space and ground-based observations"

March 23-27, 2020

UCL – Mullard Space Science Laboratory (Dorking, UK)

Programme

A holistic view of the solar atmosphere – combining space and ground-based observations

MSSL 23rd to 27th of March, 2020

Theory and instrumentation	Hands-on session

Topic	Mon Magnetic field	Tue Optically thick	Wed Optically thin	Th Connection Science	Fr Obs. Proposal and career
9:30 – 11:00	T1 Magnetic field (GB AO)	T3 GB opt. thick Halpha	T5 Opt thin & Chianti	T7 Low-corona and Helicity	T9 Write observation proposal
	Marco Stangalini	**Malcom Druett**	**Giulio del Zanna**	**Julia Thalmann**	**David Long – Sarah Matthew**
11:30-13:00	T2 Magnetic field (SB global models)	T4 SB opt. Thick iris	T6 Opt thin & Chianti	T8 Plasma Connectivity	T10 Career and outreach
	Anthony Yeates	**Tiago Pereira**	**Giulio del Zanna**	**Allan Macneill**	**Lucie Green**
14:00-15:30	H1 Image reconstruction	H3 CRISPEX: IRIS BIFROST	H5 EIS AIA	H7 Sunpy/Heliopy	**Evaluation questionnaire**
	Peter Keys	**Tiago Pereira**	**Deb Baker** **Andy S. H. To – Ryan French**	**David Stansby**	**END**
16:00-17:30	H2 GREGOR/ SST	H4 AIA-GB alignement	H6 Image processing DEM MGN	H8 SolO coronal models	
	Lucia Klient	**Rob Rutten**	**Huw Morgan**	**Gherardo Valori**	

SOC:

- Gherardo Valori
- Sarah Matthews
- Michail Mathioudakis
- Francesca Zuccarello
- David Long
- Deborah Baker

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

School n.3: "High-resolution solar observations"
August 31 - September 4, 2020
University of Graz (University Campus) (Austria)

This School intends to provide the students an up-to-date knowledge on the following items:

a) what are high-resolution solar observations, and how to overcome atmospheric turbulence;
b) current and future instrumentation for high-resolution observations;
c) high- resolution numerical simulation, their predictions and interpretation;
d) solar granulation and convection;
e) dynamics of the photosphere;
f) complexity of photospheric/chromospheric dynamics;
g) comparison between numerical simulation and observations.

- 4 lecturers already contacted
- The School will be open to a maximum of 30 students.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

WP30 Deliverables

Number	Title	Lead	Type	Dissemination level	Due date
D3.3	First report on mobility programme	UNICT	Report	P	June 2020
D3.1	Meeting webpages and on-line proceedings (M1&M2)	UNICT	Websites	P	December 2020
D3.5	First Report on training for solar observers	KIS	R	P	December 2020
D3.7	First Report on schools	UNICT	R	P	December 2020
D3.4	Second report on mobility programme	UNICT	R	P	December 2021
D3.2	Meeting webpages and on-line proceedings (M3&M4)	UNICT	Websites	P	December 2022
D3.6	Second Report on training for solar observers	KIS	R	P	December 2022
D3.8	Second Report on schools	UNICT	R	P	December 2022

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824135.

WP30 Milestones

Number	Title	Lead	Due date
MS5	First science meeting	UNICT	June 2020 -> December 2020
MS6	First week above the clouds	KIS	June 2020
MS7	First School on spectro-polarimetry	UNICT	June 2020

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Plan for the next months

- **Collect reports** from Young and Senior Researchers selected after the 1st Mobility Call (D3.3→ June 2020)
- Young and Senior Researchers selected after the 2nd Mobility Call visit the Host Institutions
- The second SOLARNET School takes place (MMSL)
- Start organization of the 3rd SOLARNET School (UniGraz)
- Continue Organization of the first SOLARNET Meeting (UToV) (take a decision about publishing the Proceedings)
- Call for Workshop support