

Space Weather Awareness Training Network (SWATNET)

Breakthroughs in scientific understanding and forecasting of **space weather** drivers; coronal mass ejections (CMEs), flares and Solar Energetic Particles (SEPs)

- Train a new generation of creative, entrepreneurial and innovative Early-Stage Researchers (ESRs) for variety of careers
- Develop sustainable joint doctoral degree structures in Europe
- Extend traditional academic training (e.g., industry exposure)



SWATNet has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie Grant Agreement No 955620

SPACE WEATHER



Flares

Coronal Mass Ejections (CMEs)

Solar Energetic particles (SEPs)

Formation &
Eruption

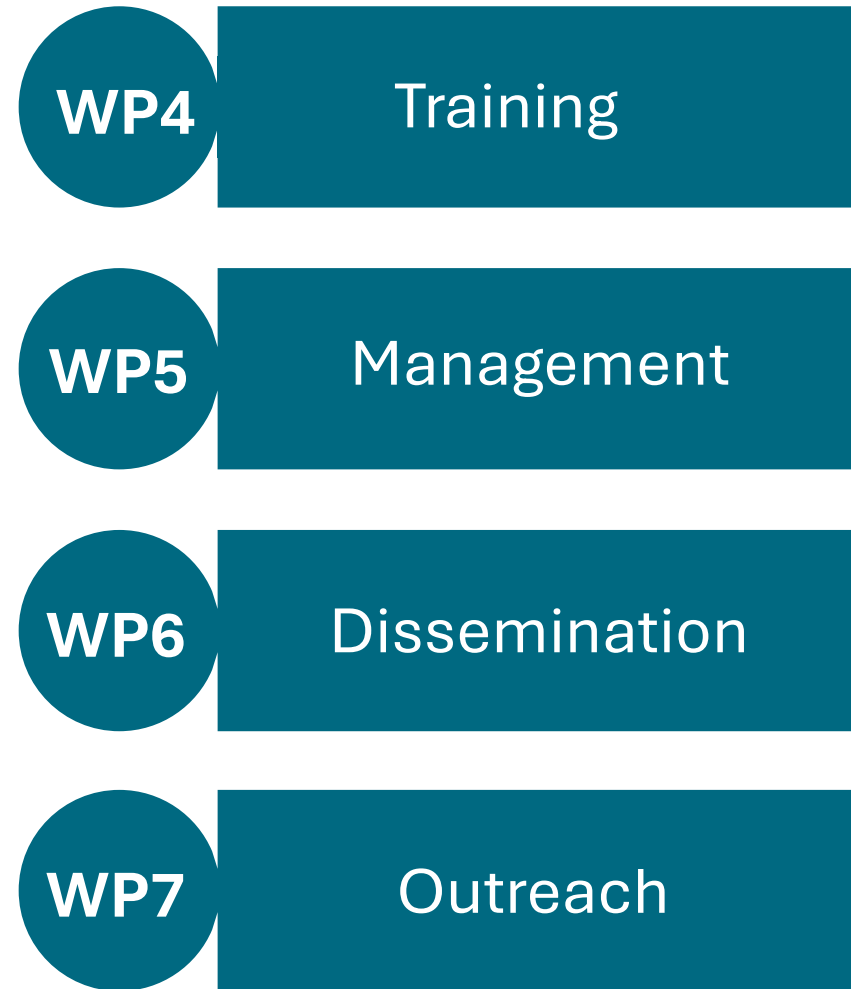
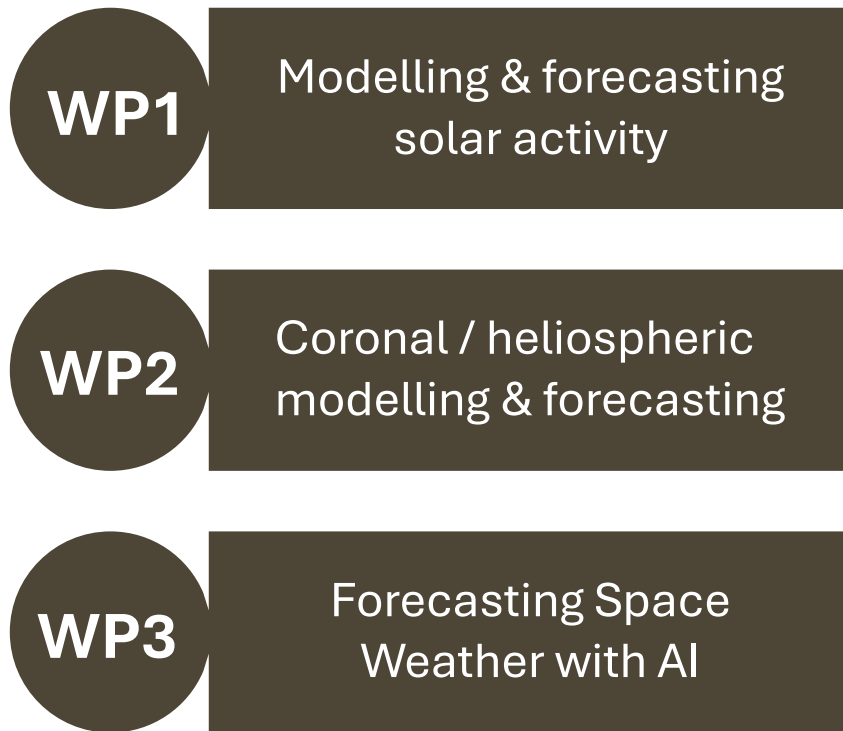
Variabilities

propagation

Impacts to

- Satellites (navigation, communication, ...)
- Commercial aircraft
- Astronauts
- Ground infrastructure

Project Workpackages (WPs)



Key Scientific Outcomes

WP1 Modelling & forecasting solar activity

WP2 Coronal / heliospheric modelling & forecasting

WP3 Forecasting Space Weather with AI

New proxies to forecast solar eruptions

New CME, SEP and coronal modelling tools

Advanced AI methods to predict flares & CMEs

Novel scientific knowledge of solar eruptions, SEPs, and coronal dynamics

SWATNet Academic Supervisors



Manolis Georgoulis

Academy of Athens (WP1 lead)



Spiros Patsourakos

University of Ioannina



Alexander Nindos

University of Ioannina



Robert Erdelyi

University of Sheffield



Kristof, Petrovay

Eötvös Loránd University



Kris Murawski

Maria Curie-Skłodowska University



Emilia Kilpua

University of Helsinki (Coordinator,
WP5 lead)



Rami Vainio

University of Turku



Stefaan Poedts

KU Leuven (WP2 lead)



Dario Del Moro

Università degli Studi di Roma Tor
Vergata (WP3 & WP4 lead)



Teresa Barata

University of Coimbra
(WP6 & WP7 lead)

SWATNet EAB and Project Manager

Meet the External Advisory Board for SWATNet



**Consuelo
Cid Tortuero**



**Michail
Mathioudakis**



**Francesca
Zuccarello**



**Michele
Piana**



**Mateja
Dumbović**



**Šimon
Mackovjak**

Advise on training activities,
research and outreach
activities

-
Participate in the Annual
Meetings and other
relevant meetings



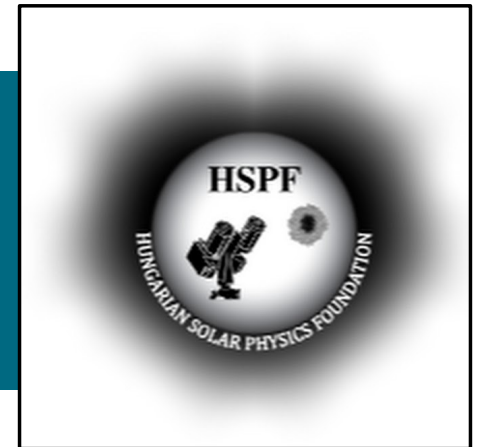
Project Manager

Anastasia Boiko / VaBo Consult

Observatory training



Each SWATNet ESR spent 1-month at
Gyula Bay Zoltan Solar Observatory
managed by SWATNet partner:
Hungarian Solar Physics Foundation (HSPF)



Robert Erdelyi
Uni. of Sheffield

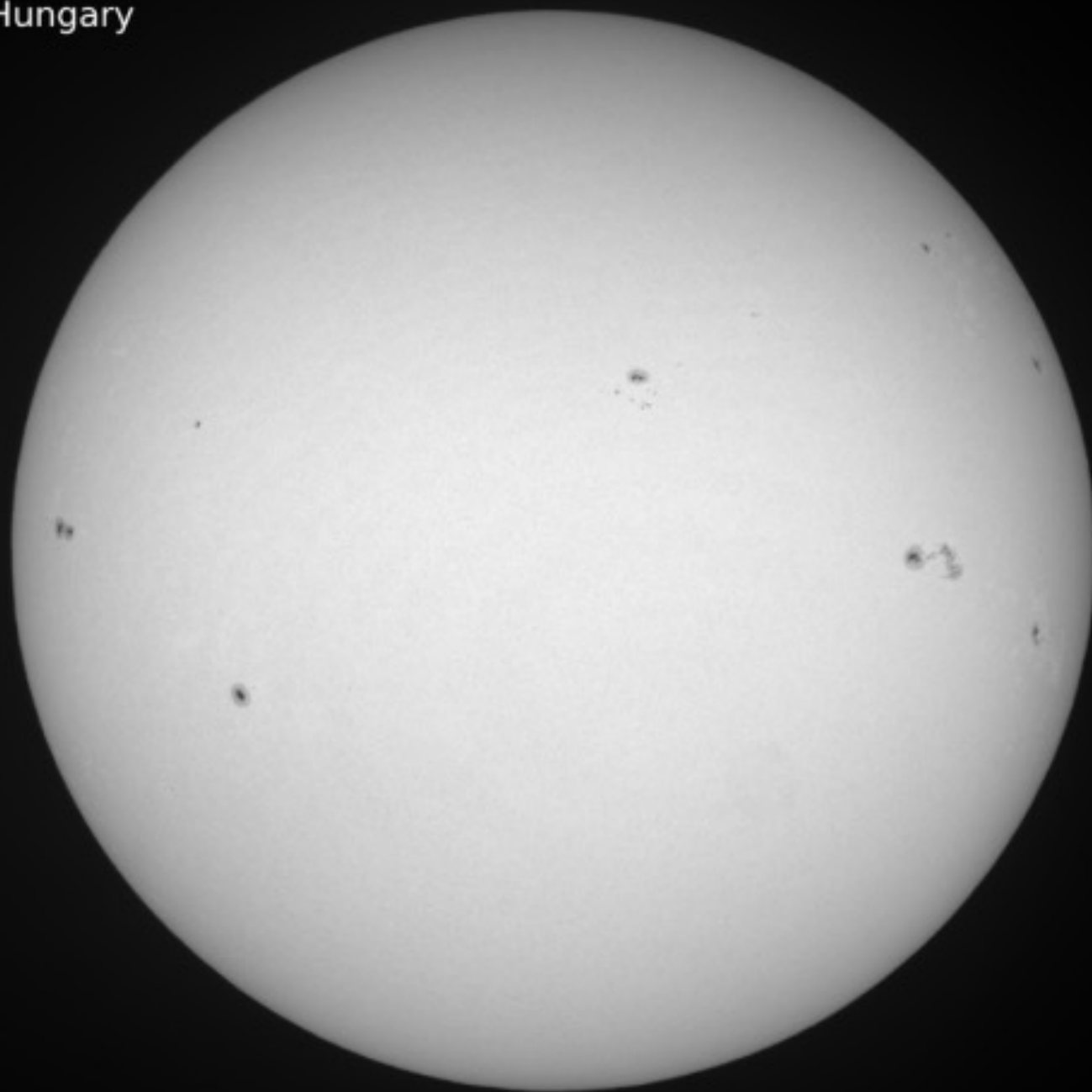


Marianna Korsos
Uni. of Sheffield



Balazs Asztalos
Eötvös Loránd Uni.

2023-07-28 05:56:40
GSO, Gyula, Hungary





SWATNet Industrial Partners

Outreach activity examples

Swatnet Open Day

European Space Weather Week 2024 (Coimbra)



Topical Discussion

European Space Weather Week 2023 (Toulouse)



European Researcher's Night

(various locations)

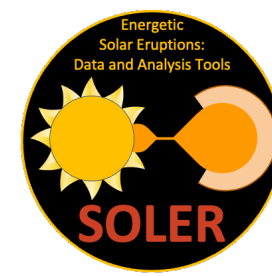


H2020 Booster Cluster with

SERPENTINE / SOLER (PI: Rami Vainio)

IDOLS (PI: Pietro Zucca)

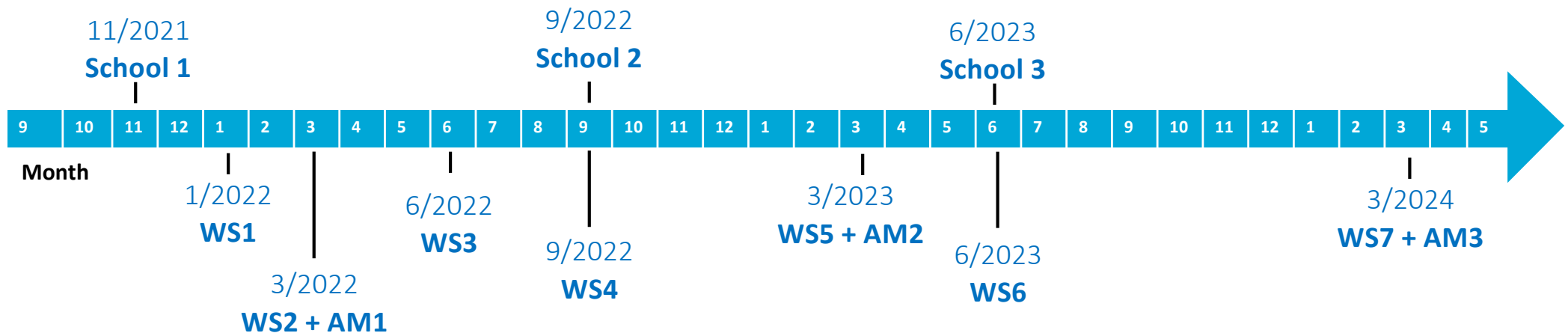
SPEARHEAD (PI: Athanasios Papaioannou)



SWATNet training program

Workshops (WS)	
WS1	Communicating Science (online)
WS2	Research Project Management (online)
WS3	Solar activity and space weather (Athens)
WS4	Communication and Outreach (Uni. Coimbra)
WS5	Mini-MBA + Annual meeting (Uni. Sheffield)
WS6	Entrepreneurialism in Space Physics (Budapest)
WS7	Career workshop + Annual meeting (Frascati)

Schools	
School 1	Introduction to Space Weather (online)
School 2	Sun-Earth interactions (Athens)
School 3	Space Weather and our Technological Society (Budapest)



AM = Annual Meeting





