

INTERNATIONAL PROJECTS OF SHAMAKHY ASTROPHYSICAL OBSERVATORY

SOLSPANET FP7



This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement **FP7-PEOPLE-2010-IRSES-269299**



University of
St Andrews



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Solar and Space Weather Network of Excellence - SOLSPANET is the international research staff exchange network financed by the European Commission. The network consists of 6 European Universities and Research Institutes.

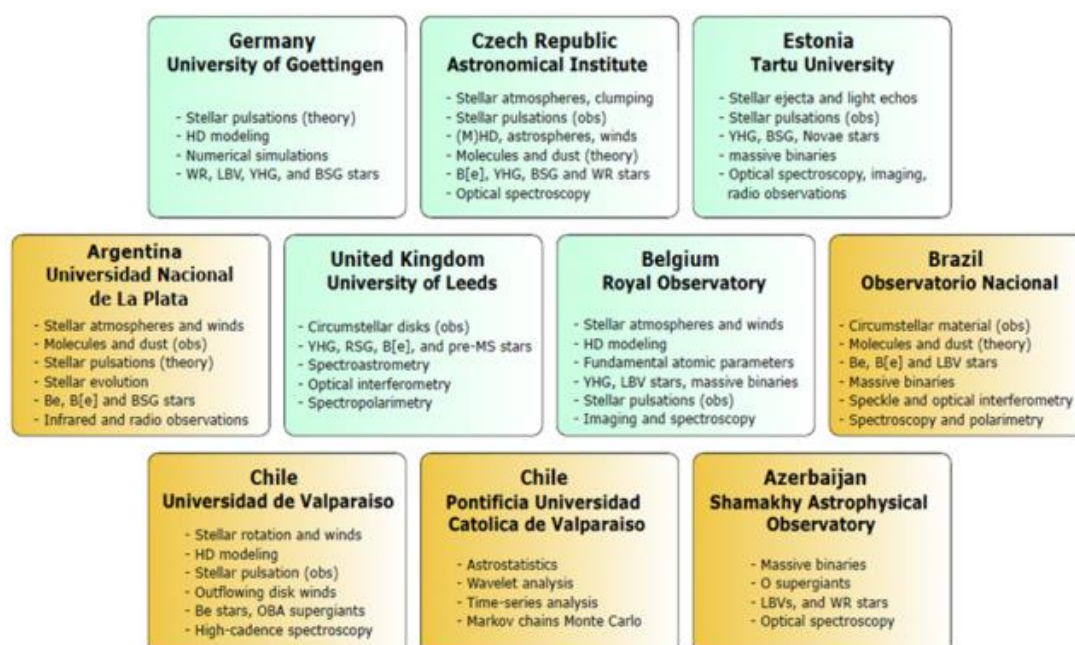
Starting date: 1st September 2011, Ending date: 31st August 2015

The mission of the SOLSPANET is to carry out the collaborative research in the domain of the solar and space weather studies. The overall goal of the project is to establish operating European network and to develop the operating knowledge base for the monitoring and forecasting of solar and space weather events. The studies are carried out via short and long term exchange visits between the participant research groups.

<http://www.solspanet.eu/about>

HORIZON 2020

In 2019 we were winner of the Marie-Sklodowska-Curie Grant Agreement No. 823734 that is financed by the European Union's Framework Programme for Research and Innovation Horizon 2020 (2014-2020). The duration of this project was from 01.01.2019 to 31.12.2022. This project carried out by astronomers from nine countries: Germany, Czech Republic, Estonia Republic, Argentina, United Kingdom, Belgium, Brazil, Chile, Azerbaijan Republic.



The main purpose of this project is spectral investigation of massive stars. They play an important role in the evolution of their host galaxies. Via strong stellar winds and supernova explosion at the end of their life, they strongly enrich the interstellar medium with chemically processed material. From this enriched with the heavy elements material forms the new generation of stars and planets. Despite the great advances in the study of massive stars, many problems still remain unresolved. Investigation of massive stars is one of important directions of modern astronomical research.

GAIA (OPTICON science alerts)

One of the space missions of the European Space Agency GAIA (Global Astrometric Interferometer for Astrophysics) was launched into Earth's orbit since 2013. Mission has an extensive research program, and currently, most of the EU research centers are engaged in analyzing GAIA observations. The main goal of the program - to determine the parallax displacement of billions of stars and construct a three-dimensional structure of the galaxy. Besides, as a result of the observations is expected to detect tens of thousands of exoplanets, transit objects, galaxies, and other unknown objects. Since 2019, Shamakhy Astrophysical Observatory named after N.Tusi, began cooperation with the OPTIKON research group of the GAIA mission. The goal of the cooperation program is to study the physical properties of unusually unknown transit objects detected by GAIA within a long period by ground-based observations.



GRANDMA (Global Rapid Advanced Network Devoted to the Multi-messenger Addicts)

The purpose to record the transient events that occur in the universe due to gravitational waves in a large part of the sky, and to observe the residual events in which they first occurred in the optical range. The observation and research of such unique physical phenomena is of great importance in astrophysics of binary populations but also for testing physics laws under extreme conditions. The combination of two neutron stars or a pair of neutron stars and black holes merger creates strong gravitational waves signal with possible electromagnetic signature of matter ejected and across the full electromagnetic spectrum.

