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STELLAR
Scientific and Technological Excellence by Leveraging LOFAR Advancements in Radio Astronomy

INSTITUTE OF ASTRONOMY
NATIONAL ASTRONOMICAL OBSERVATORY

STELLAR : a EU twinning project on LOFAR data analysis and knowledge transfer

A. Antonova(1) , K. Kozarev(1), A. Avramova-Boncheva(1), R. Miteva(1), M. Dechev(1), P. Zucca(2), E. Carley(3), S. Maloney(3), P. Petkov(4)
Affiliations: (1) Institute of Astronomy and National Astronomical Observatory, Bulgarian Academy of Sciences, Bulgaria; (2) ASTRON, the Netherlands; (3) DIAS, Ireland; (4) Technical University of Sofia, Bulgaria

Abstract: The Scientific and Technological Excellence by Leveraging LOFAR Advancements in Radio Astronomy (STELLAR) is a project of mutual collaboration and know-how transfer in the field of radio astronomy, solar physics and space weather using the LOFAR instrument and data. Two institutions from Bulgaria, benefit from technical and scientific know-how exchange from world-leading RA institutions - ASTRON (the Netherlands) and DIAS (Ireland) via series of training hands-on sessions, workshops, seminars and project-focused schools for both students and senior staff. The poster presents the activities so far and future plans. All results, links to videos and outreach activities are hosted at a dedicated web-site. The STELLAR project is funded by the European Union's Horizon 2020 research and innovation programme under grant agreement No 952439. It is coordinated by the Institute of Astronomy, Bulgarian Academy of Sciences.

General Information:

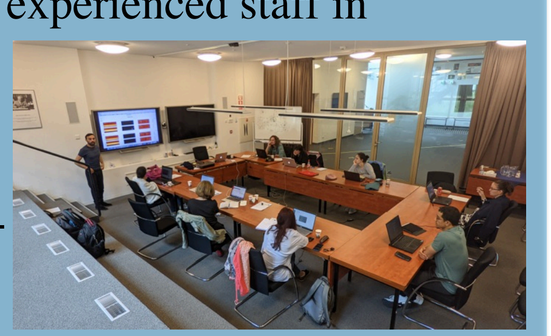
- **Call: H2020-WIDESPREAD-2018-2020, Twinning topic**
- **EU Grant: 899 877 EUR**
- **Duration: 36 months**
- **Start Date: 01 September, 2020**

STELLAR Consortium Members:

- **IANAO (https://astro.bas.bg/)**
- **TUS (http://www.tu-sofia.bg/)**
- **ASTRON (https://www.astron.nl/)**
- **DIAS (https://www.dias.ie/)**

STELLAR objectives:

- To **transfer** scientific and technical **knowledge and capacity in radio astronomy** from the highly experienced staff in ASTRON and DIAS to IANAO and TUS staff by means of versatile training activities;
- To expand the research potential of the local **solar and space weather scientists** through a combination of target training activities and research discussions and collaborations using LOFAR observations;
- To provide an opportunity for IANAO and TUS scientific and engineering personnel to build the necessary expertise and technical **capabilities required for the building and operation of a Bulgarian LOFAR station**

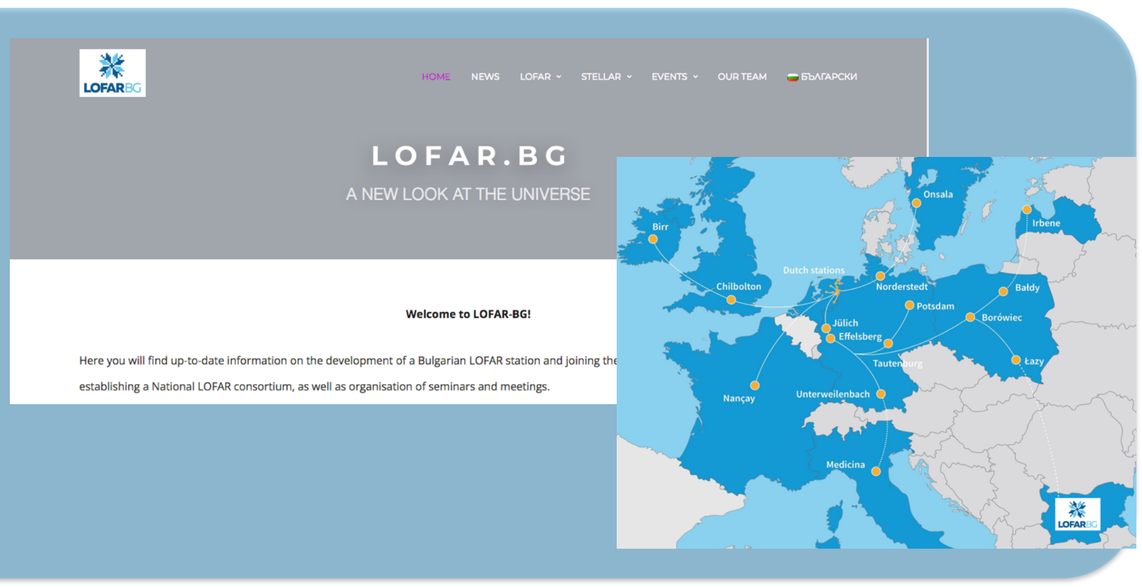


Highlights Period 1:

Online courses freely available at https://stellar-h2020.eu/ :
ASTRON Training I on RF Technology and RF Development I;
Space Weather Training I - Introduction to Space Weather at DIAS;
ASTRON Training I on RF Technology and RF Development;
ASTRON Training II on Phased Array Digital Signal Processing.
Online seminars also freely available at https://stellar-h2020.eu/
Other activities:
LOFAR Data School
Staff Visits to ASTRON (LOFAR Operations and Science, Data reduction)
Staff Visit I and II to DIAS (Space Weather Data Analysis)

Synergistic Activity: the LOFAR-BG Project (https://lofar.bg/)

- The consortium at present: IANAO, TU, SU, SHU
- Included in the Bulgarian National Roadmap for Science Infrastructures (Ministry of Education and Science of Bulgaria)
- Received funding for building and maintaining LOFAR station
- Site selected (close to the Rozhen Observatory), RF checked and approved



ASTRON

DIAS
Institiúid Ard-Léinn Dublin Institute for Bhaile Átha Cliath Advanced Studies