"This project has received funding from the European Union's Horizon 2020 research and innovation programme for the period January 2019 until December 2022 under Grant Agreement No 824135 (SOLARNET)"

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APPROVAL CONTROL

Control	Name	Organization	Function	Date
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Revised	Markus Roth	KIS	Project Scientist	June 28th, 2019
Approved	Tirtha Som	KIS	Project Manager	June 28th, 2019
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HISTORY OF DOCUMENT CHANGES

Issue	Date	Change Description
Verison 1.0	28.06.2019	Initial Issue

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"This project has received funding from the European Union's Horizon 2020 research and innovation programme for the period January 2019 until December 2022 under Grant Agreement No 824135 (SOLARNET)"

1. Overview

The public SOLARNET website was developed under the domain www.solarnet-project.eu. On the one hand, it contains general information about the SOLARNET project for the general public, and on the other, it provides information to scientists who are interested in the results and offers of the project.

2. Structure

The main menu items of the public SOLARNET website are:

- Home
- News Room
- Consortium
- Networking
- Joint Research
- Access
- Events
- Media Center

3. Technical implementation

3.1 Frontend

Standard web techniques were used to implement the public web site. The website is based on the programming language PHP, while the content is stored in a MySQL database. The user interface was designed with the current version of Twitter Bootstrap, which means that the website is responsive, so it adapts to the size and resolution of the display device. This is particularly relevant for mobile devices: The website adapts, for example, to the size of a mobile phone display and then does not display the menu as a bar, but makes it available via a button.

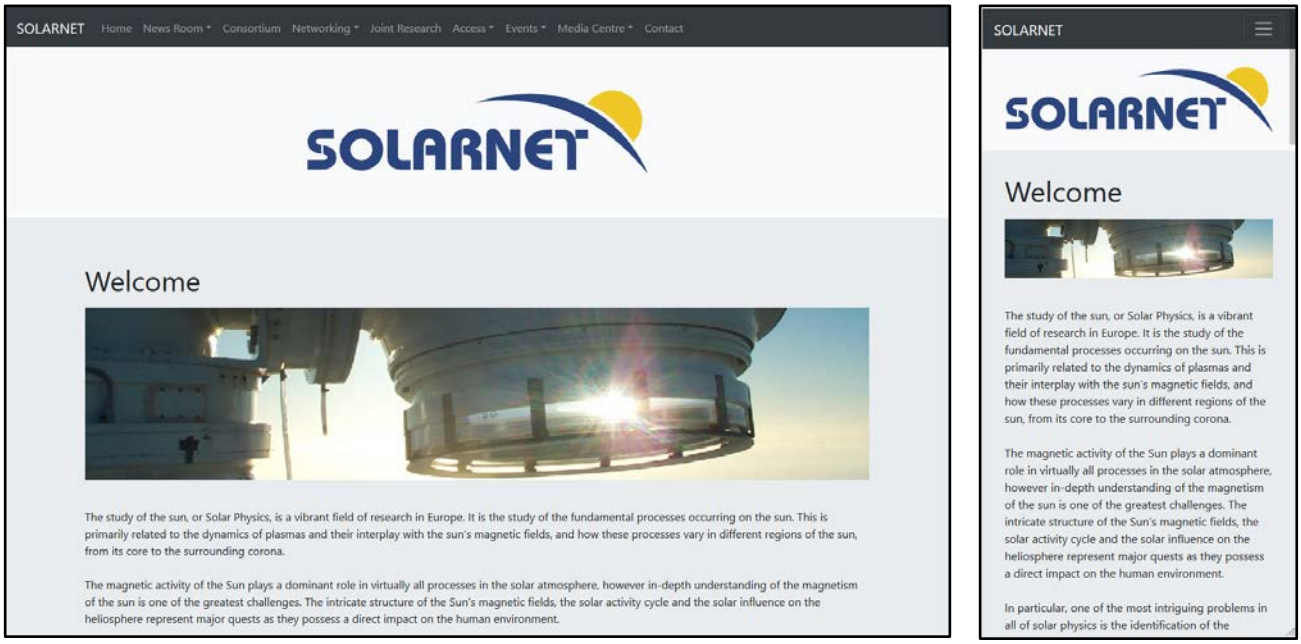

Figure 1: The SOLARNET Frontpage as displayed on a desktop computer (left) and as it is displayed on a mobile device (right).

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Using Twitter Bootstrap also allowed us to use standard predefined responsive Elements, such as Image-Sliders, Cards and Badges.

3.2 Backend

The Backend to manage and create the sites is using the same techniques as the frontend: PHP, MySQL and Twitter Bootstrap.

Implementing the public website for the SOLARNET-Project, we pursued the goal to create a reusable tool for scientific projects or scientific events. So, we aimed to combine the project website with the Science Media Platform. Scientists with a Science Media Account will be able to create a new public website for any event or project and use the backend to create a menu structure, new posts, upload photos and create forms.

The new website tool on the Science Media Platform identifies these websites with a unique Website-ID (WID), which allows the system to host multiple websites and assign specific content to them, which can be a website post or media content, such as images or videos. While the website posts are stored in a database, the media content is saved on the server in a folder, which is assigned to the unique WID.

The menu structure consists of two strings, that are stored in the database: title-string and link-string. While the title-string is used for the visible menu-items in the user-interface, the link-string is used to create the html-links associated with them. This way, each menu-item is linked to the alias of an internal post. Both strings follow the rule, that main-menu-items are divided with an "|" symbol, while submenu-items are divided with an "@" symbol.

The menu-string of the current SOLARNET website is:
Home|News Room@Scientific Highlights@Upcoming Events@Press & Public Outreach@Career/ Job opportunities@Submit News|Consortium|Networking@Mobility Programmes@Application Form@People@Students@Industry engagement|Joint Research|Access@Transnational Access and Service Programme (TAS)@Observatories@Computer cluster@Data services|Events@Conferences@Workshops@Schools@Training for Observers|Media Centre@EUSP Nuggets
(European Solar Physics Nuggets)
@Publications@Public Deliverables|Contact

The link-string of the current SOLARNET website is:
home|News-Room@Scientific-Highlights@Upcoming-Events@Press-and-Public-Outreach@Career-Job-opportunities@Submit-News|Consortium|Networking@Mobility-Programmes@application-form@People@Students@Industry-engagement|Joint-Research|Access@Transnational-Access-and-Service-Programme-TAS@Observatories@Computer-cluster@Data-services|Events@Conferences@Workshops@Schools@Training-for-Observers|Media-Centre@EUSP-Nuggets-European-Solar-Physics-Nuggets@Publications@Public-Deliverables|contact

This way it will be easy to edit the menu of the website in the backend.

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The links in the link-string can either refer to an external website, or – which will be used in most cases – to an internal alias, which has to be assigned uniquely to every website-post. The alias of a website post can be set when using the backend to create or edit a post and can be used to link to the post. In case of SOLARNET, if the alias is "example" the link to the post will be: www.solarnet-project.eu/example.

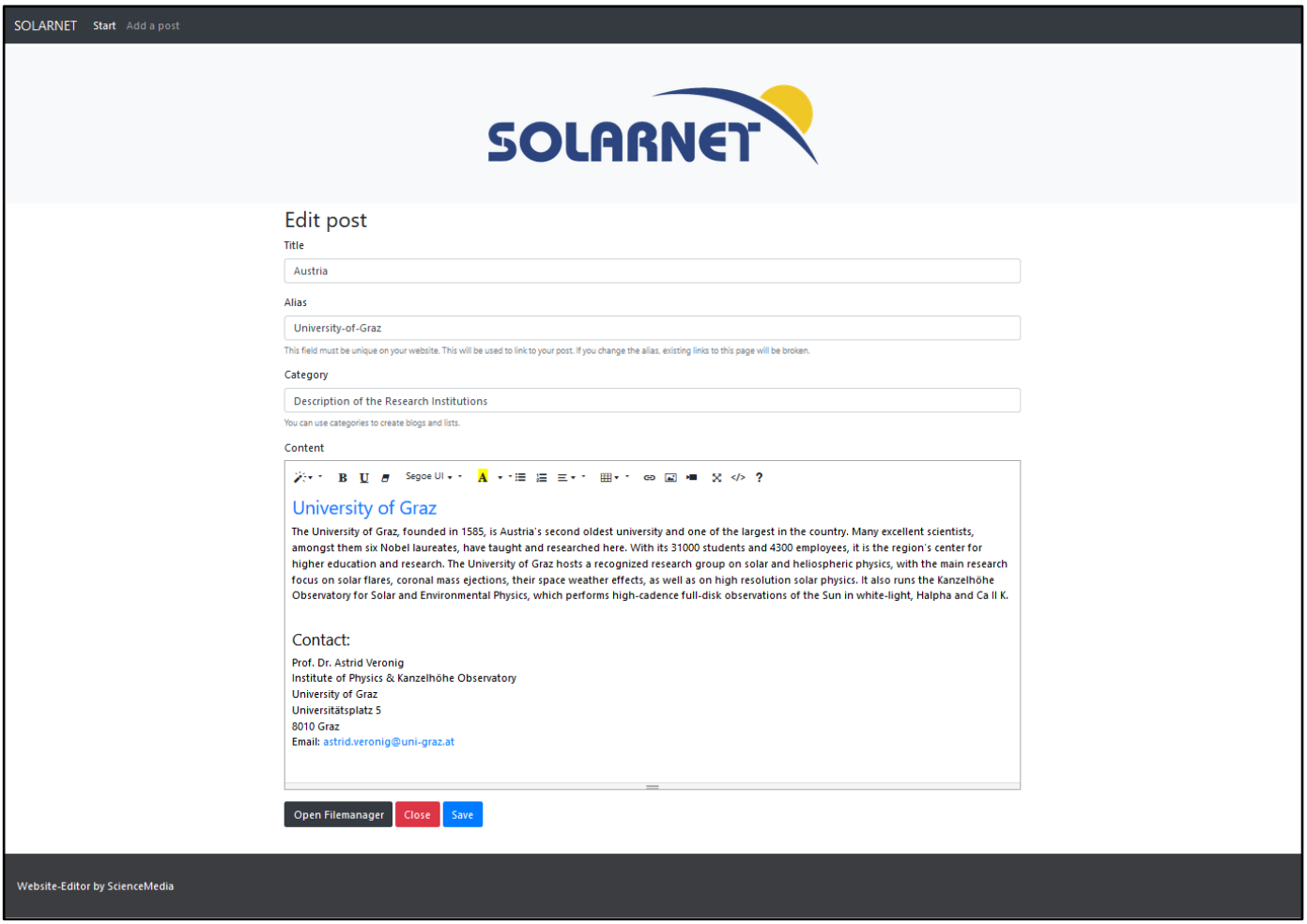

Figure 2: The Backend of the SOLARNET-Website allows easy editing of the website contents.

The Backend can be easily accessed just by adding a suffix to the website URL and it will be linked from the Science Media Platform, if the user has access rights to edit the website.

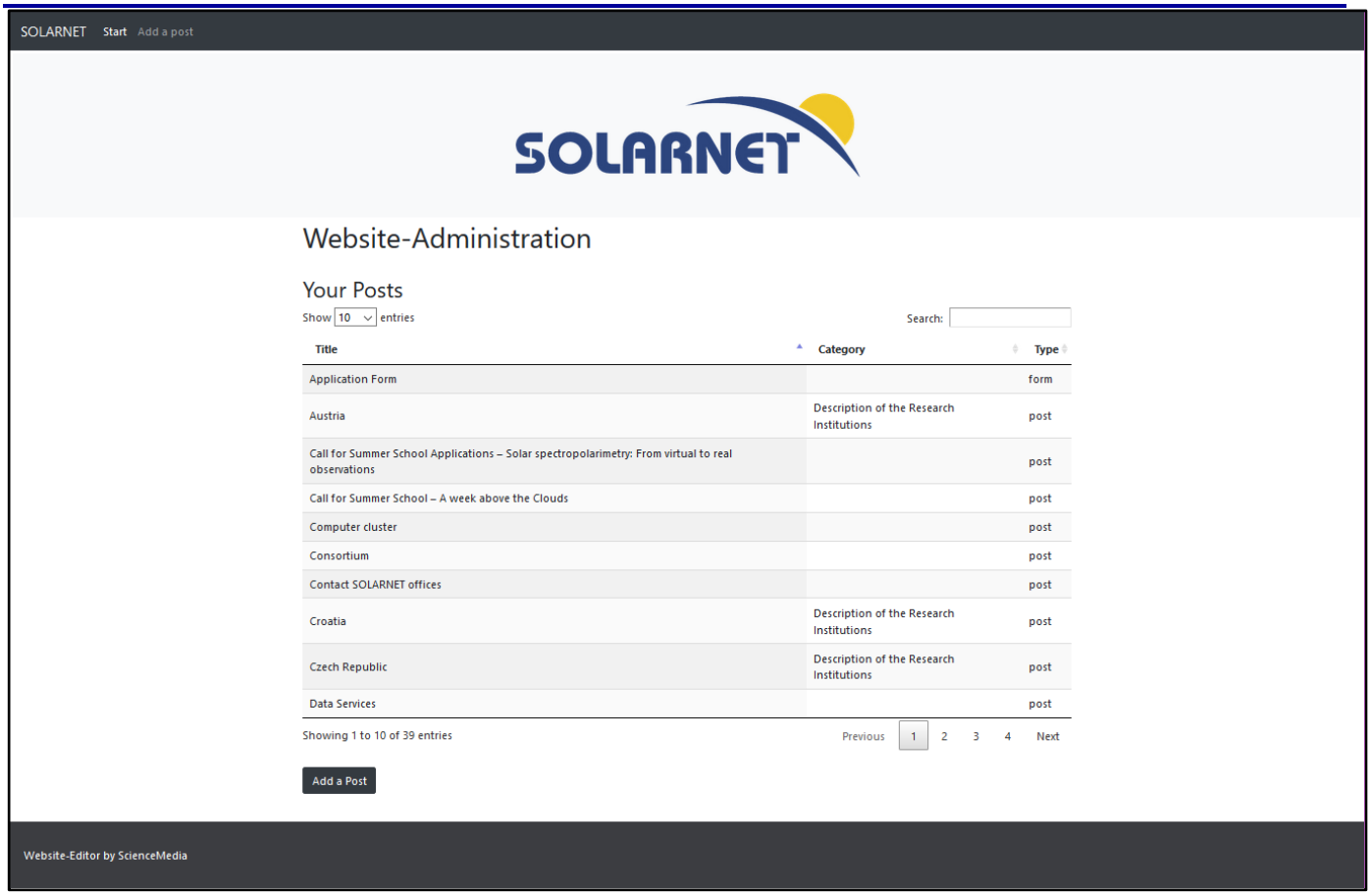

Figure 3: List of Posts with the possibility to add a new post or search for and edit already existing posts

Currently, summernote WYSIWYG editor (https://summernote.org/) is used to create and edit posts. As this editor seems to have issues when editing and then saving in HTML-Code-Mode and the implementation of a file manager is an issue, we will probably switch to another editor, like TinyMCE or Ckeditor. As a file manager to upload and edit images, media and documents, we use "Responsive File manager 9" (https://www.responsivefilemanager.com/). It allows to upload documents via drag and drop. Because the editor and the filemanager don't have interfaces allowing to connect them, the file manager has to be used with a button separate from the editor for now.

The list of current posts is implemented using jQuery Data tables (https://datatables.net/)

3.3 Integration and prospect

As the public website will be part of the Science Media Platform, the scientific work uploaded by the project members will be linkable on the website. Embedding possibilities will be available. The creator of the WID will also have the possibility to invite other project- or team-members with a Science Media Account to edit the public website of the project. The ongoing development of project management tools lead by Science Media will also help to enrich the public website, as it will be possible to integrate the information and documents stored in the project management.

3.4 Screenshots of the examplary pages on the SOLARNET website

SOLARNET

Consortium

The participants in the Solarnet Project are:

1. Kiepenheuer-Institut für Sonnenphysik (KIS) - Freiburg, Germany
2. Instituto de Astrofísica de Canarias (IAC) - LaLaguna, Spain
3. Universitetet i Oslo (UiO) - Oslo, Norway
4. Stockholms universitet (SU) - Stockholm, Sweden
5. Centre National de la Recherche Scientifique (CNRS) - Paris, France
6. Istituto Nazionale di Astrofisic (INAF) - Rom, Italy
7. Universita Roma Tor Vergata (UNITOV) - Rom, Italy
8. Universita Degli Studi di Catania (UNICT) - Catania, Italy
9. Agencia Estatal Consejo Superior de Investigaciones Científicas (CSIC-IAA) - Granada, Spain
10. Max-Planck-Gesellschaft zur Förderung der Wissenschaften eV (MPG) - Göttingen, Germany
11. Leibniz-Institut für Astrophysik Potsdam (AIP) - Potsdam, Germany
12. University of Northumbria at Newcastle (NU) - Northumbria, UK
13. University of Sheffield (USFD) - Sheffield, UK
14. University College London (UCL/MSSL) - London, UK
15. Queens University Belfast (QUB) - Belfast, UK
16. Astronomický ústav AVCR vvi (ASU) - Ondrejov, Czech Republic
17. Koninklijke Sterrenwacht van Belgie (ORB) - Brüssel, Belgium
18. Hvar Observatory, Faculty of Geodesy, University of Zagreb (HVAR) - Zagreb, Croatia
19. Astronomical Institute, Slovak Academy of Sciences (AISAS) - Tatranska-Lomnica, Slovakia
20. Università della Svizzera italiana / Istituto Ricerche Solari Locarno (USI/IRSOL) - Locarno, Switzerland
21. University of Graz (UNIGRAZ) - Graz, Austria

Figure 4: Page with the overview on the SOLARNET Consortium

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Mobility Programme for Young and Experienced Researchers

SOLARNET is pleased to announce the first call for proposals of its Mobility Programme for Young and Experienced Researchers.
Please click here to open the call
Application form

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 under Work Package 3 (WP3).

The mobility programme has been designed as an additional aspect of the training programme, 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).

This task will be supervised by the Mobility Evaluation Committee (MEC), which will evaluate and select the submitted applications. It is important to note that mobility is also aimed at private members of SOLARNET, as well as to third entities outside the consortium.

EC funds available for this activity (120 k€) will contribute towards the travel of approximately 30 early-stage researchers and about 15 senior researchers. ESRs will be supported with a minimum of 1 month to a maximum of 3 months research-stays, while for experienced researchers a maximum of 2-3 weeks stay will be granted.

Applications are welcome at any time during the execution of this project (01.01.2019- 31.12.2022), with two deadlines per year: May 31st and November 30th.
The selection of the granted proposals will be 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, so that the student has some time to organize the visit.

Applicants will be expected to send a motivation letter, a CV and a brief summary of the proposed work at the host institution (from the list below). They are encouraged to contact the host institution in advance to produce this summary in liaison with them.

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 Programme, we strongly encourage young women astronomers to apply.

The following organizations are SOLARNET Consortium members and are encouraged to act as hosts for researchers. However, within the framework of the mobility programme highly qualified researchers will also be supported if other EU and non-EU institutions are also willing to act as hosts.

List of institutions	Country
University of Graz	Austria
Hvar Observatory, Faculty of Geodesy, University of Zagreb	Croatia
Astronomical Institute of the Czech Academy of Sciences, v.v.i. (ASU)	Czech Republic
Leibniz-Institut für Sonnenphysik (KIS)	Germany
Leibniz-Institut für Astrophysik Potsdam (AIP)	Germany

Figure 5: Page describing the SOLARNET mobility programme.

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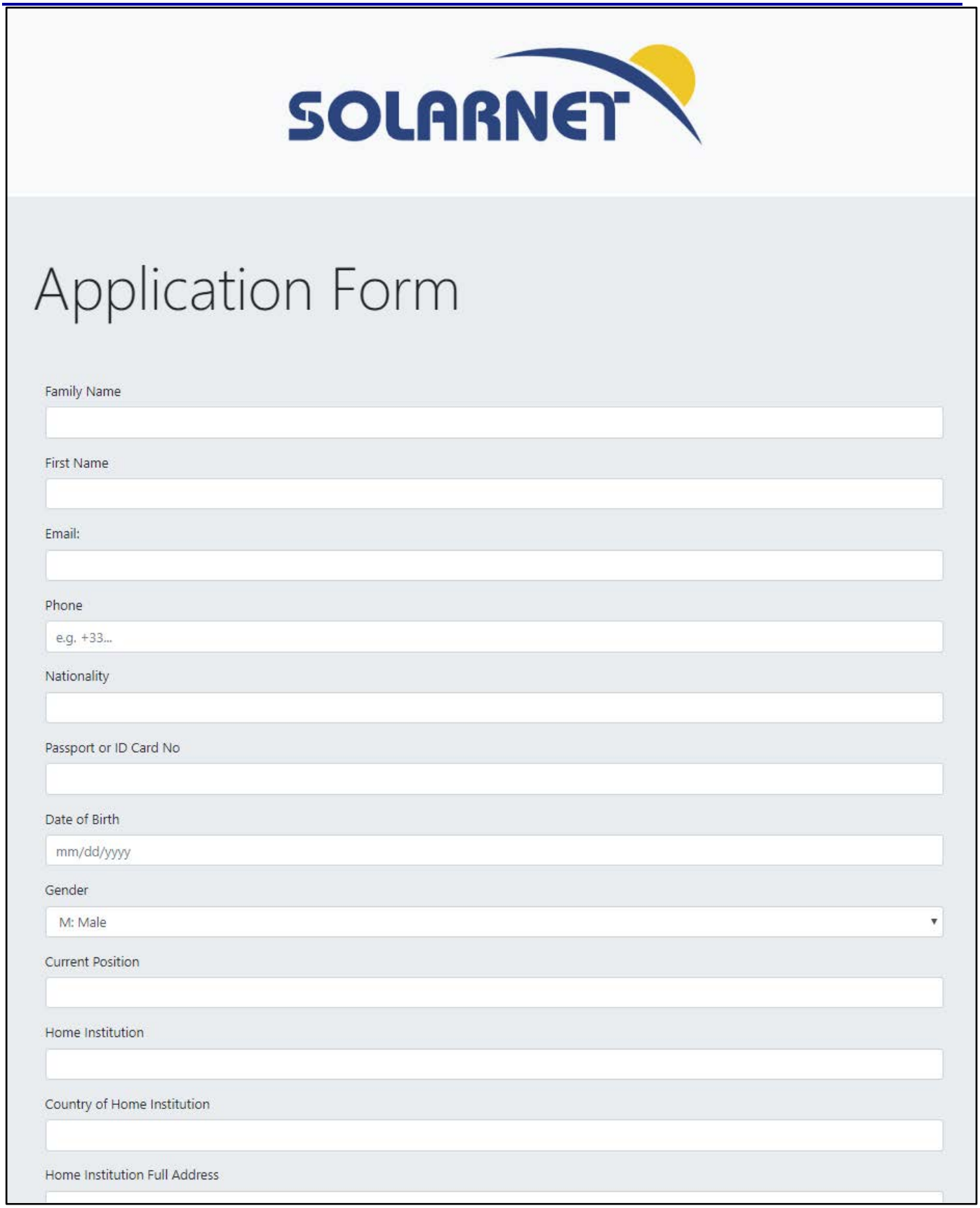

Figure 6: Exemplary form that can be created, e.g. here to apply for a call in the mobility programme.

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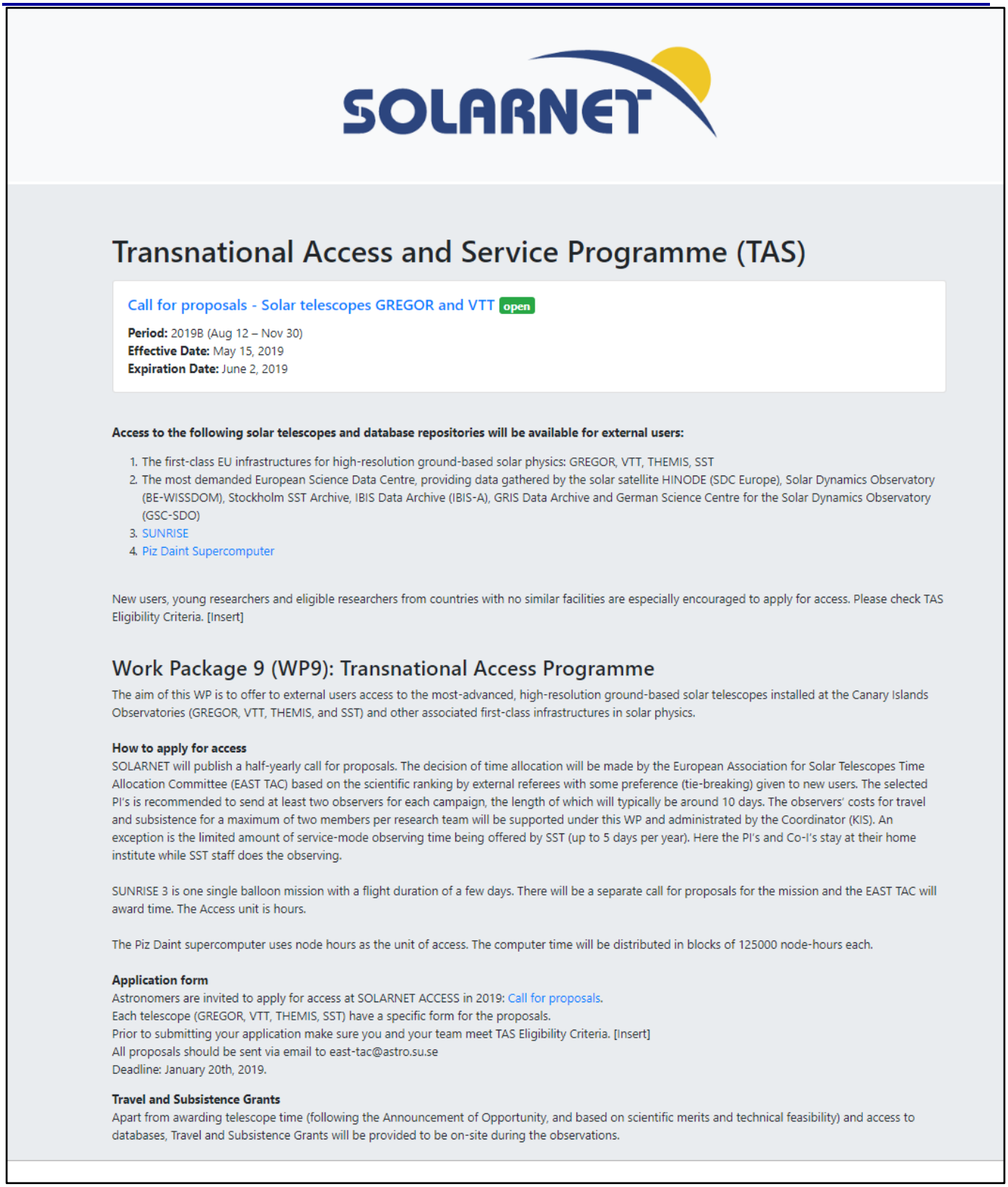

Transnational Access and Service Programme (TAS)

Call for proposals - Solar telescopes GREGOR and VTT **open**

Period: 2019B (Aug 12 – Nov 30)
Effective Date: May 15, 2019
Expiration Date: June 2, 2019

Access to the following solar telescopes and database repositories will be available for external users:

1. The first-class EU infrastructures for high-resolution ground-based solar physics: GREGOR, VTT, THEMIS, SST
2. The most demanded European Science Data Centre, providing data gathered by the solar satellite HINODE (SDC Europe), Solar Dynamics Observatory (BE-WISSDOM), Stockholm SST Archive, IBIS Data Archive (IBIS-A), GRIS Data Archive and German Science Centre for the Solar Dynamics Observatory (GSC-SDO)
3. SUNRISE
4. Piz Daint Supercomputer

New users, young researchers and eligible researchers from countries with no similar facilities are especially encouraged to apply for access. Please check TAS Eligibility Criteria. [Insert]

Work Package 9 (WP9): Transnational Access Programme

The aim of this WP is to offer to external users access to the most-advanced, high-resolution ground-based solar telescopes installed at the Canary Islands Observatories (GREGOR, VTT, THEMIS, and SST) and other associated first-class infrastructures in solar physics.

How to apply for access
SOLARNET will publish a half-yearly call for proposals. The decision of time allocation will be made by the European Association for Solar Telescopes Time Allocation Committee (EAST TAC) based on the scientific ranking by external referees with some preference (tie-breaking) given to new users. The selected PI's is recommended to send at least two observers for each campaign, the length of which will typically be around 10 days. The observers' costs for travel and subsistence for a maximum of two members per research team will be supported under this WP and administrated by the Coordinator (KIS). An exception is the limited amount of service-mode observing time being offered by SST (up to 5 days per year). Here the PI's and Co-I's stay at their home institute while SST staff does the observing.

SUNRISE 3 is one single balloon mission with a flight duration of a few days. There will be a separate call for proposals for the mission and the EAST TAC will award time. The Access unit is hours.

The Piz Daint supercomputer uses node hours as the unit of access. The computer time will be distributed in blocks of 125000 node-hours each.

Application form
Astronomers are invited to apply for access at SOLARNET ACCESS in 2019: Call for proposals.
Each telescope (GREGOR, VTT, THEMIS, SST) have a specific form for the proposals.
Prior to submitting your application make sure you and your team meet TAS Eligibility Criteria. [Insert]
All proposals should be sent via email to east-tac@astro.su.se
Deadline: January 20th, 2019.

Travel and Subsistence Grants
Apart from awarding telescope time (following the Announcement of Opportunity, and based on scientific merits and technical feasibility) and access to databases, Travel and Subsistence Grants will be provided to be on-site during the observations.

Figure 7: Page with the call for proposals to apply for observing time under the SOLARNET Access programme.

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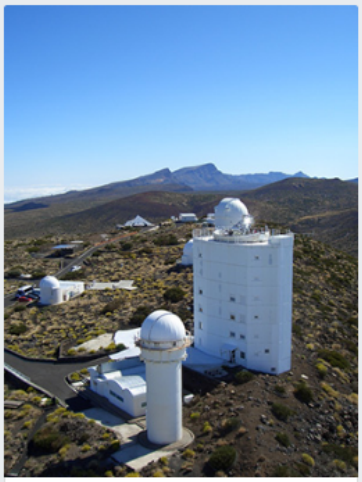
SOLARNET

Observatories



Gregor Solar Telescope

The 1.5 m solar telescope GREGOR was built at the Observatorio del Teide by a German consortium led by the Leibniz-Institut for Solar Physics (KIS), with the Leibniz-Institut für Astrophysik Potsdam, the Max-Planck-Institut für Sonnensystemforschung Lindau and the Institut für Astrophysik Göttingen (until 2008) as partners. The Instituto de Astrofísica de Canarias and the Astromomical Institute of the Academy of Sciences of the Czech Republic contributed to the telescope or the instrumentation. Since 2014 GREGOR is used for scientific observations.
GREGOR is the largest solar telescope in Europe. It is designed for observations of the solar photosphere and chromosphere in the visible and near infrared.
The Scientific Instrumentation includes BBI, GRIS, GFPI, BIC/HIFI, and ZIMPOL. GREGOR is equipped with a high-order adaptive optics system.

Swedish Solar Telescope – SST

The Swedish 1-m Solar Telescope (SST) is operated by the Institute for Solar Physics of Stockholm University and located within the Observatorio del Roque de los Muchachos of the Instituto de Astrofísica de Canarias on the island of La Palma, Spain. The SST replaced the previous 50 cm Swedish Vacuum Solar Telescope (SVST) that had been a world leading solar research instrument for more than ten years. The clear aperture of the front lens of the SST has a diameter of just under 1 meter. Located on the best known site for solar telescopes in the world, it can see details as small as 70 km on the solar surface. This requires the use of adaptive optics, that correct for the blurring caused by the Earth's atmosphere by controlling the shape of a deformable mirror ~1000 times per second. The SST is the first solar telescope that is designed for use with such a mirror.

Telescope Héliographique pour l'Etude du Magnétisme et des Instabilités Solaires - THEMIS

THEMIS is a joint operation from France (CNRS/INSU) and and Italy (INAF) national research agencies. It is located at Izaña, 2400 m, within the Teide Observatory from the Instituto de Astrofisica de Canarias, on the island of Tenerife. THEMIS stands for "Télescope Héliographique pour l'Etude du Magnétisme et des Instabilités Solaires". It is a 90 cm usefull aperture solar telescope, and currently the third larger in the world. Its specific design allows for high-accuracy spectropolarimetry of the solar surface together with monochromatic high resolution imaging.

Figure 8: Page describing the telescopes participating in the SOLARNET Access Programme.

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Figure 9: The announcement page for the upcoming schools.

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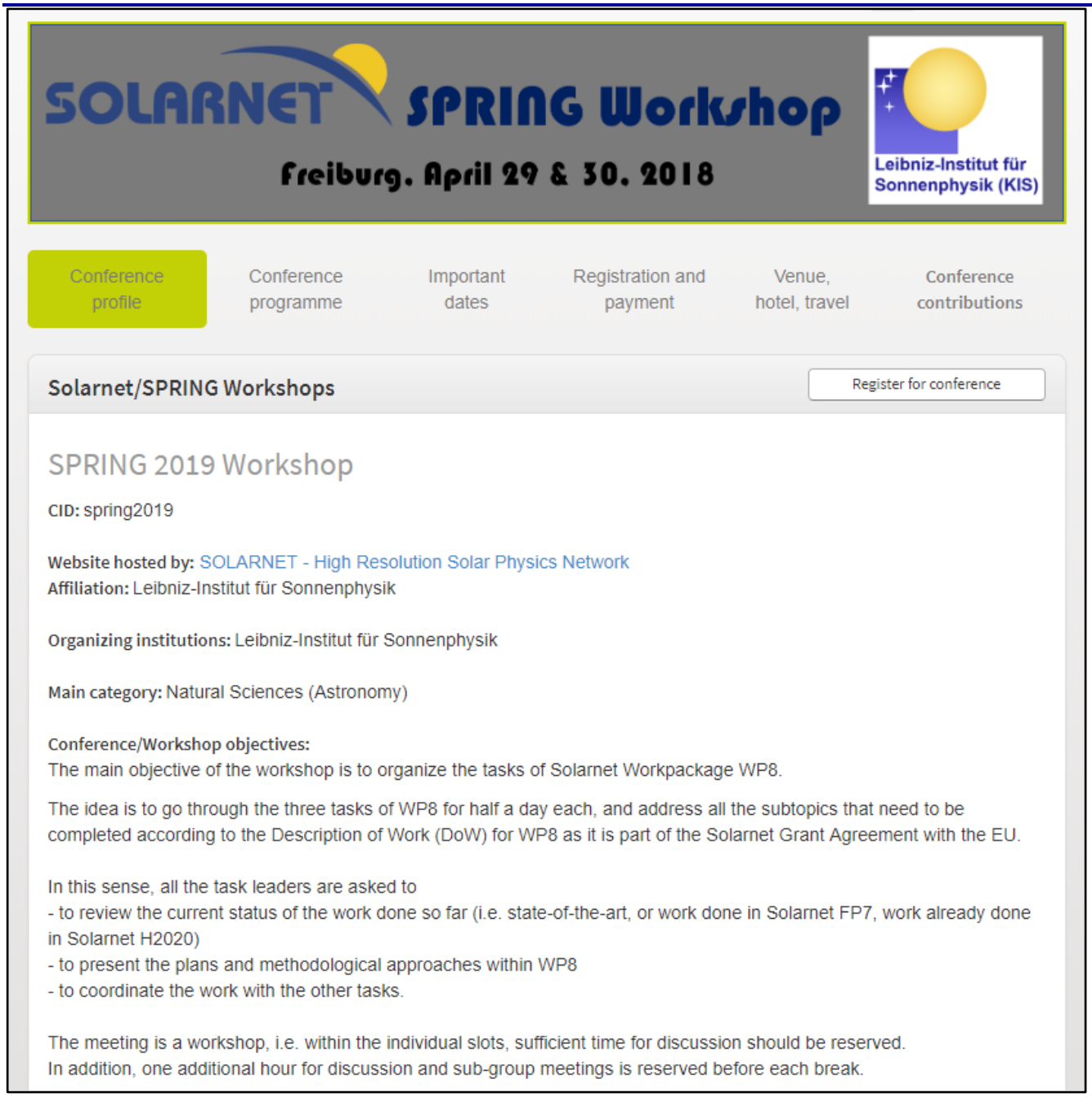

Figure 10: Exemplary webpage created for a meeting in WP8.

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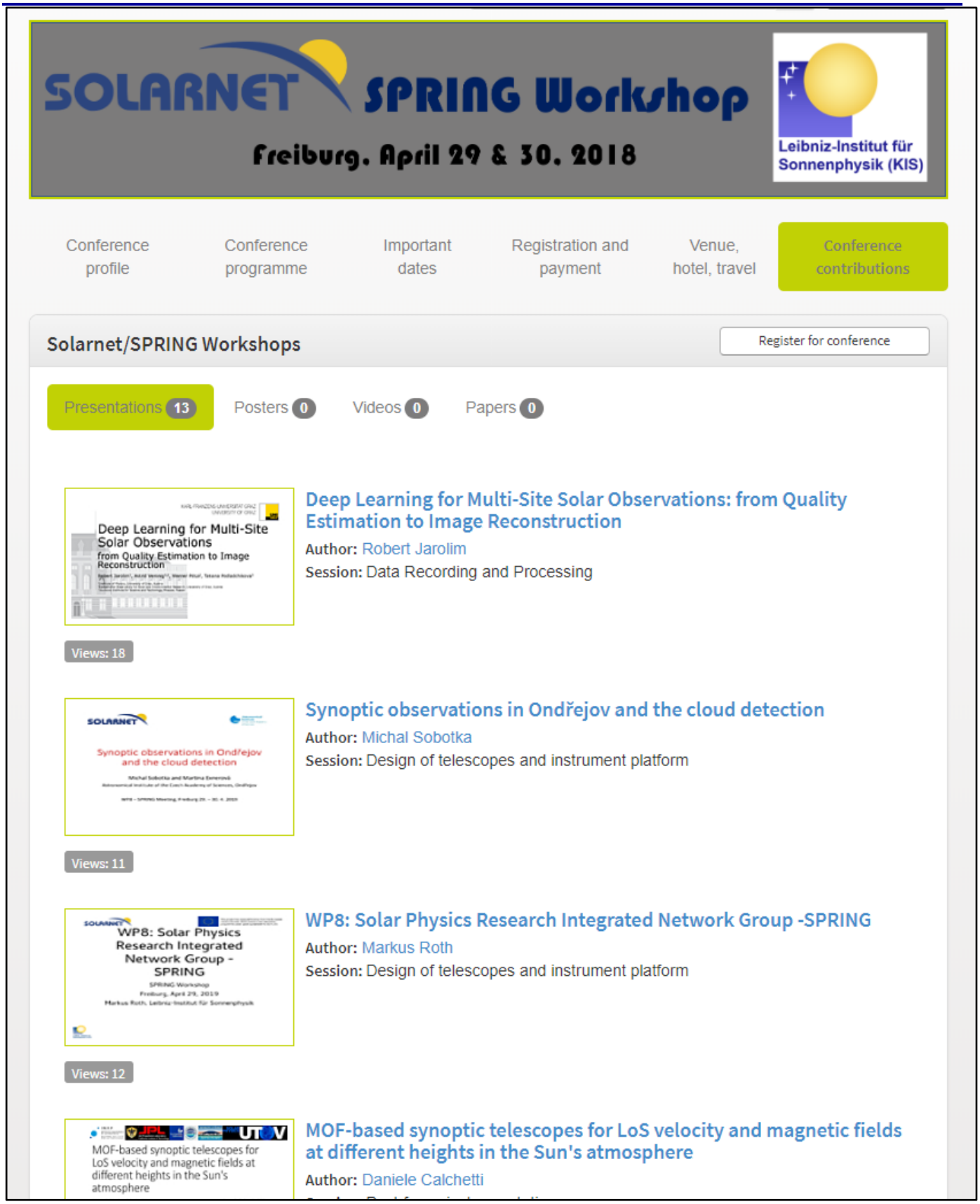

Figure 11: Collection of presentations from the WP8 Workshop.

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