Job Opening: Full-Time Researcher

To study EUV brightenings detected by EUI and other instruments onboard Solar Orbiter

SOLAR PHYSICS @ ROYAL OBSERVATORY OF BELGIUM
The Royal Observatory of Belgium (ROB, http://www.observatory.be/) is a Belgian federal institute in the green outskirts of Brussels (Ukkel). The Operational Directorate "Solar physics and space weather" (https://www.sidc.be/) is an international group of about 45 members, including scientists, engineers and support staff. It offers a unique environment with space for creativity and initiative.

SOLAR ORBITER AND EUI
ROB is the Principal Investigator institute of the Extreme Ultraviolet Imager (EUI) onboard Solar Orbiter. Since its launch in 2020, Solar Orbiter has used Venus and Earth gravity assist maneuvers to reach its present orbit, with perihelion inside Mercury's orbit. In the next years, Solar Orbiter will repeat its very close passages to the Sun and will reach more and more elevated orbits, allowing the first observation ever of the Sun's poles.

Using EUI's unparalleled high resolution Extreme Ultraviolet (EUV) images of the solar corona, ROB researchers have discovered in 2020 hitherto unobserved very small EUV brightenings on the Sun, nicknamed "campfires". Within the international solar physics community, ROB's EUI team plays a leading role in campfire studies.

Some of ROB's EUI-related activities can be found at https://www.sidc.be/eui/.

DESCRIPTION OF TASKS

ROB hires a full-time scientific collaborator, who will play a central role in ROB's research on campfires. The new collaborator will be involved in the detection and characterization of EUV brightenings and the study of their properties as derived from dedicated observation by instruments such as EUI, PHI, SPICE, and AIA, using techniques such as differential emission measure, coronal stereoscopy and spectroscopy. The research will include both case studies of EUV brightenings and statistical studies of their properties. The distribution of their energies is especially interesting as it extends our knowledgebase of the contribution of coronal brightenings to coronal heating. The new collaborator will aid in producing an open catalogue of EUV brightenings, which can be consulted/employed by the solar physics community.

WE ASK
A good candidate would combine several of the following characteristics:

- Ph.D. or master degree in exact or applied sciences
- a scientific curiosity and eagerness to increase our understanding of solar physics
- autonomous researcher with a sense of initiative
- a pragmatic approach in problem solving
- team player
- extensive experience with the analysis of observations by contemporary solar telescopes in space or on the ground
- programming skills, a fast learner in computer problems/solutions
- experience with relational databases is a plus
- experience with solar physics, in particular with EUV images, spectroscopy or DEM is a plus
- experience with developing automatic detection algorithms is a plus

WE OFFER

We offer a 1-year contract, which after mutual satisfaction will be extended by 2 years, and eventually by a contract of undetermined duration, if funding is available. Salary, social security, pension scheme and working conditions are according to Belgian civil servant regulations (SW1). This includes a flexible system of working hours and the possibility to telework.

HOW TO APPLY

A complete application includes a motivation letter and a full CV in PDF format (with details of previous work & study career). Please send as soon as possible and no later than October 20, 2022, your application, expression of interest, or questions to **cis.verbeeck@oma.be**. We aim to invite pre-selected candidates for an interview in November, and to start the job in January.