

STCE Newsletter

13 Apr 2015 - 19 Apr 2015



Published by the STCE - this issue : 23 Apr 2015. Available online at <http://www.stce.be/newsletter/>.

The Solar-Terrestrial Centre of Excellence (STCE) is a collaborative network of the Belgian Institute for Space Aeronomy, the Royal Observatory of Belgium and the Royal Meteorological Institute of Belgium.

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1. ESWW12 Medals

In 2013, a set of three medals in Space Weather have been created at the occasion of the 10th anniversary of the European Space Weather Week. These medals are becoming more and more highly valued.



The medals will be given during the next European Space Weather Week (November 23-27, 2015, Belgium, <http://www.stce.be/esww12/index.php>).

There are three medals: The Kristian Birkeland medal for scientific or technological results, the Marcel Nicolet medal for efforts to structure the space weather community and the Alexander Chizhevsky medal to reward a young researcher.

Please, find all the informations for applications at <http://www.stce.be/esww12/medals.php>
Send your documents by email only to SWmedals@oma.be. The deadline for the applications is September, 13th 2015.

Jean Lilensten, on behalf of the medal committee

2. PROBA2 Observations (13 Apr 2015 - 19 Apr 2015)

Solar Activity

Solar flare activity fluctuated between very low and low during the week.

In order to view the activity of this week in more detail, we suggest to go to the following website from which all the daily (normal and difference) movies can be accessed:

<http://proba2.oma.be/ssa>

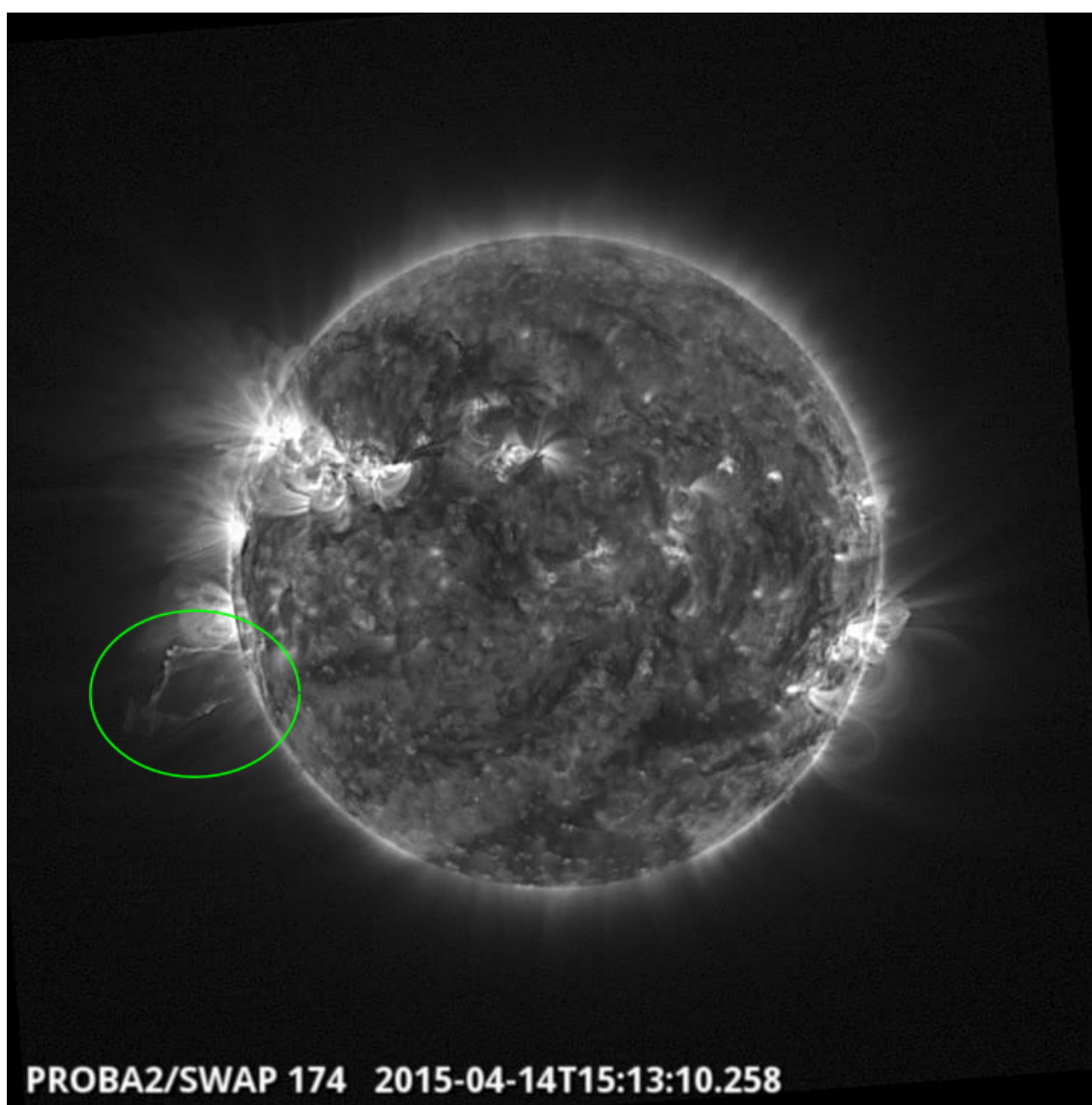
This page also lists the recorded flaring events.

A weekly overview movie can be found here (SWAP week 264).

http://proba2.oma.be/swap/data/mpg/movies/weekly_movies/weekly_movie_2015_04_13.mp4

Details about some of this week's events, can be found further below.

Tuesday Apr 14

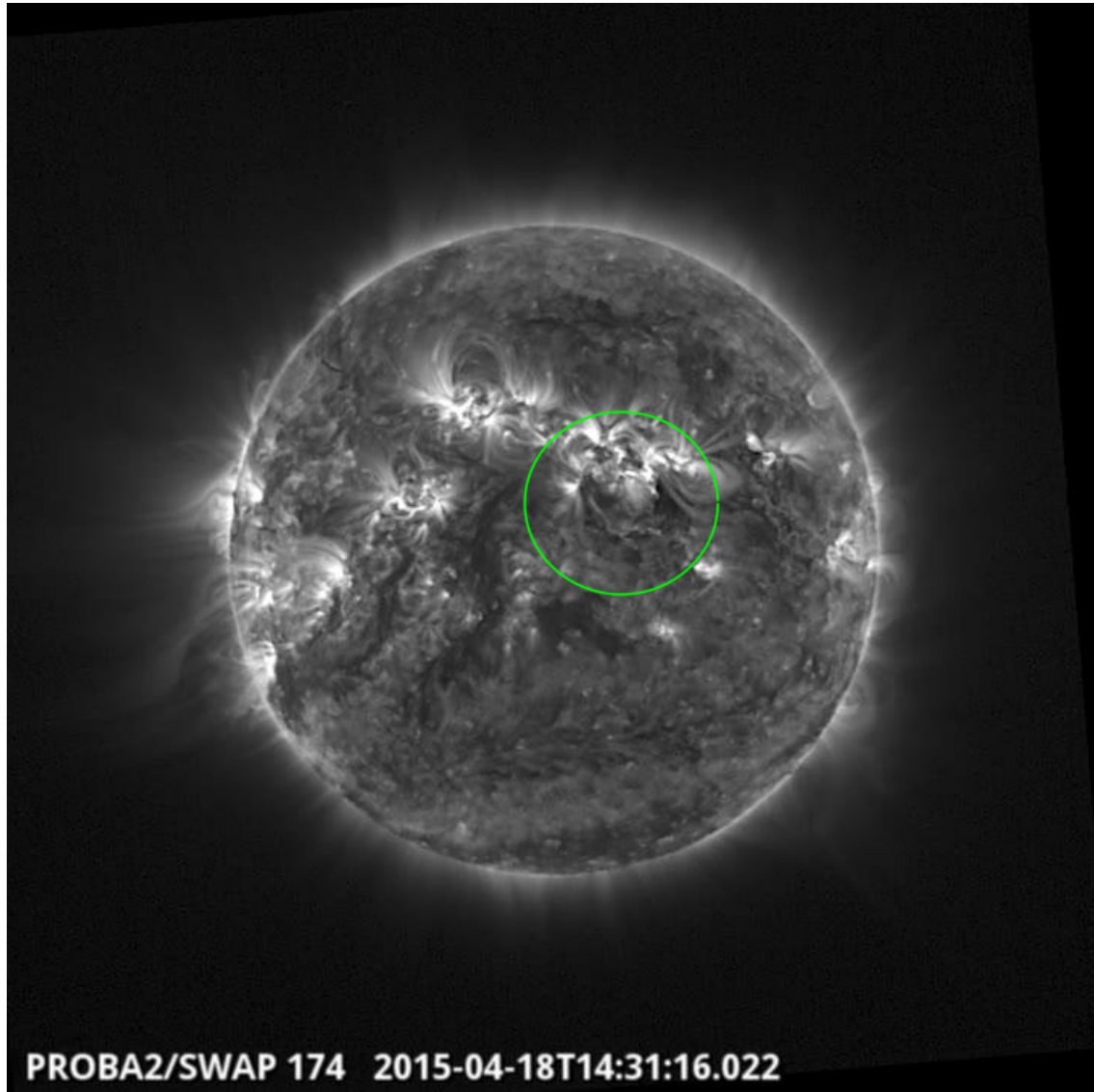


Eruption on the east limb @ 15:13 SWAP image

Find a movie of the event here (SWAP movie)

http://proba2.oma.be/swap/data/mpg/movies/20150414_swap_movie.mp4

Saturday Apr 18

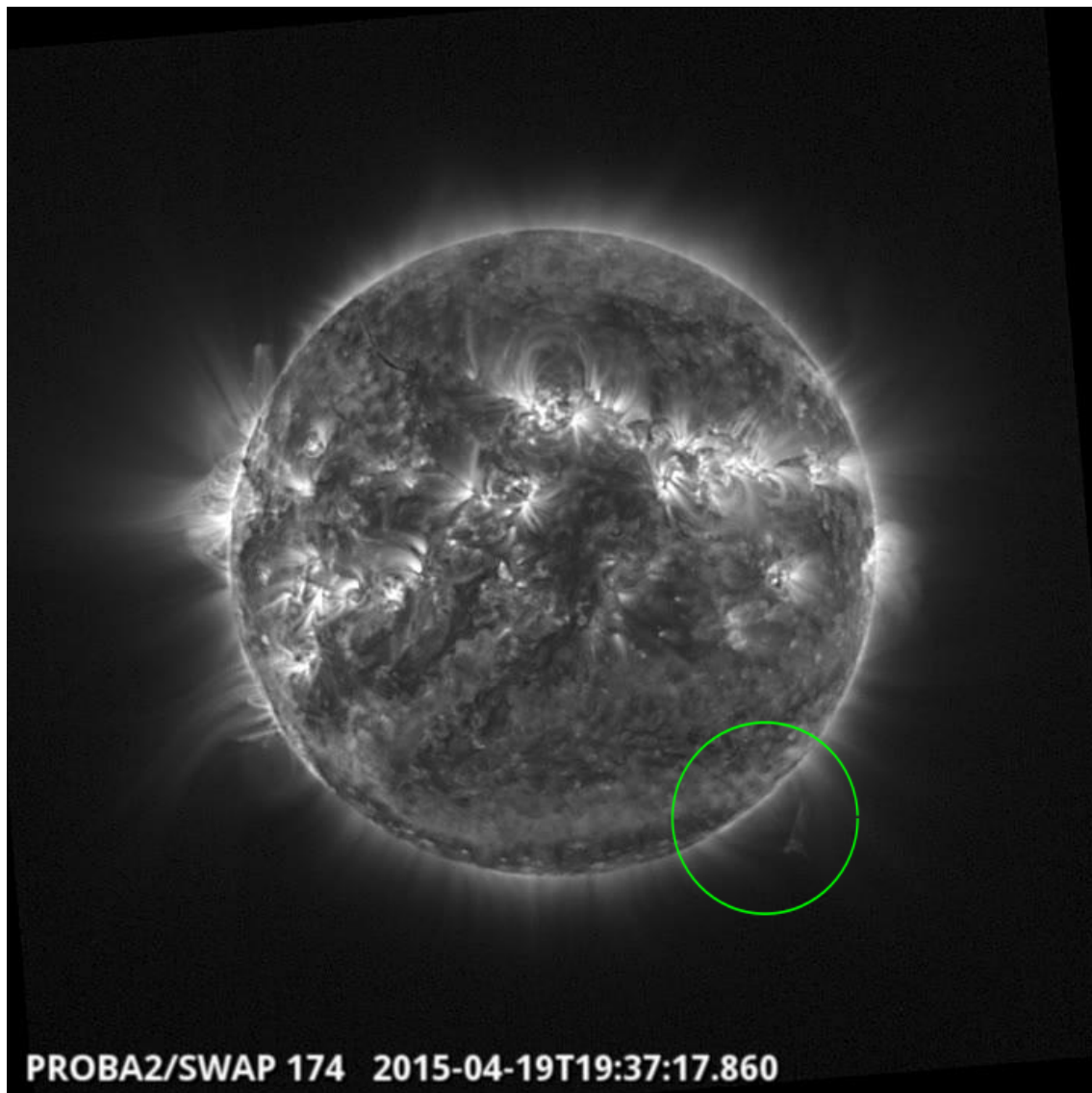


Dimming on the north west quadrant @ 14:31 SWAP image

Find a movie of the event here (SWAP movie)

http://proba2.oma.be/swap/data/mpg/movies/20150418_swap_movie.mp4

Sunday Apr 19



Eruption on the west limb @ 19:37 SWAP image

Find a movie of the event here (SWAP movie)

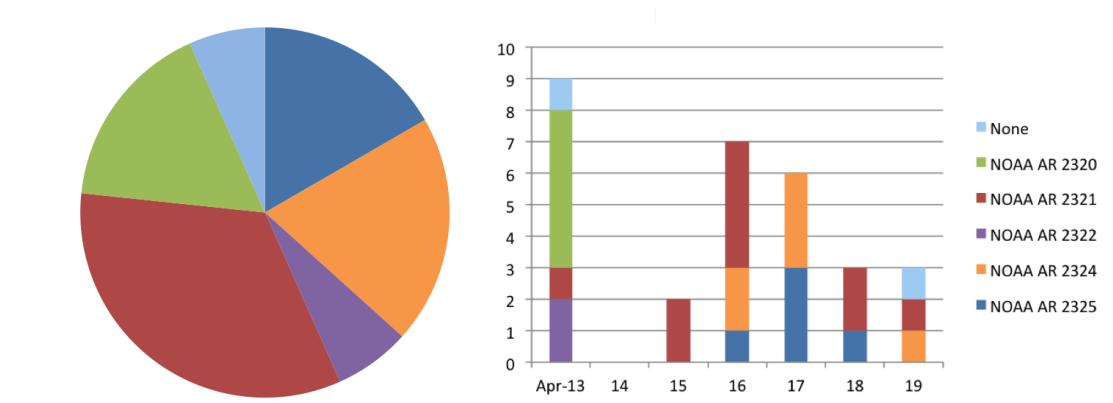
http://proba2.oma.be/swap/data/mpg/movies/20150419_swap_movie.mp4

3. Review of solar activity

Flares

During this week 30 low C-class flares were reported by the Space Weather Prediction Center based on the GOES solar x-ray data. The strongest one was the C7.8 flare, peaking at 20:23 UT on April 15. The flare originated from the complex region NOAA AR 2321 (altogether Catania sunspot groups 29, 30 and 31).

Distribution of >B flares, April 13 – 19, 2015

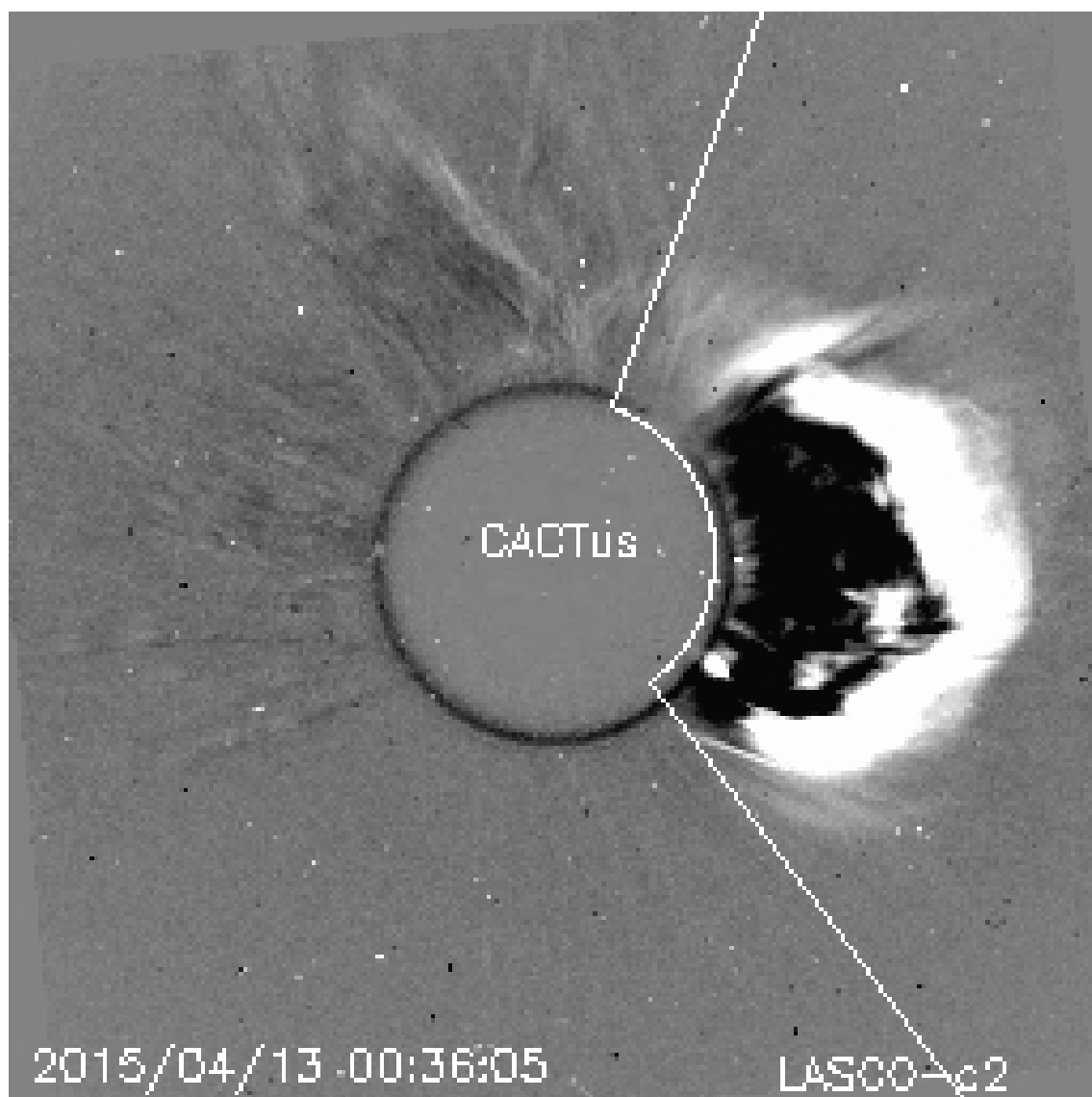


The left chart gives an overview of the total number of flares per NOAA AR region for the indicated week. *None* indicates that the flare site is not linked with one particular active region. The right chart gives an overview of the flaring activity per NOAA AR per day.

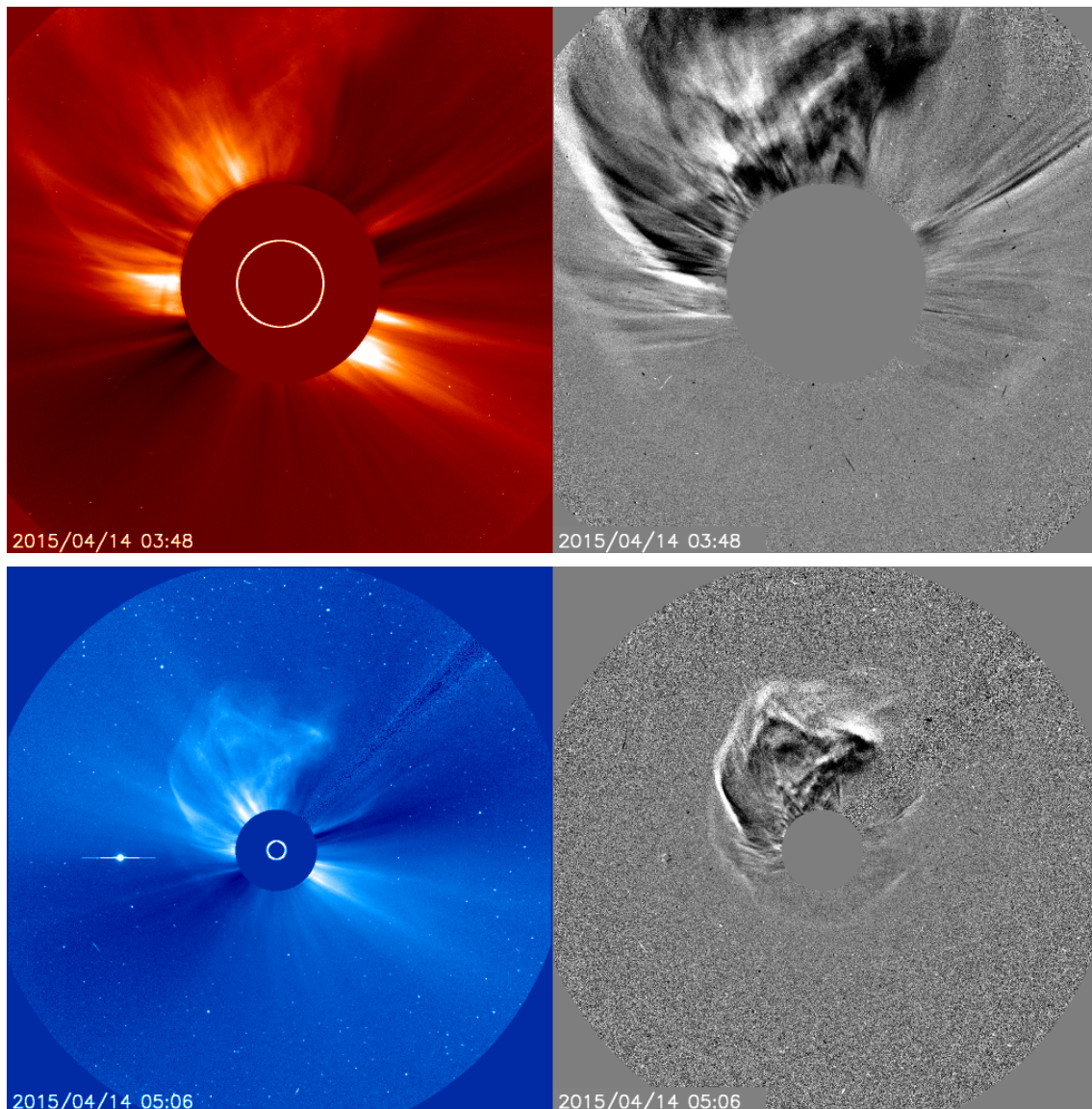
Plasma ejections

Five wide CMEs were observed this week, two of them full halo and three partial halo CMEs.

The partial halo CME, first seen in the SOHO LASCO C2 field of view, FOV at 23:48 UT on April 12 was associated with the flare and the filament eruption (from the close to the west solar limb region). The associated type II radio burst, signature of the shock wave, was reported by Culgoora Observatory. The radio burst indicated that the speed of the associated shock wave was around 1100 km/s. The CME had the angular width of about 150 degrees and the plane of the sky speed of about 630 km/s. This CME did not arrive at the Earth.



The full halo CME, first seen in the SOHO LASCO C2 FOV at 02:36 UT on April 14 had no on-disc signatures. The CME was therefore back sided and not expected to arrive to the Earth. A coronal dimming visible above the solar limb was however visible.

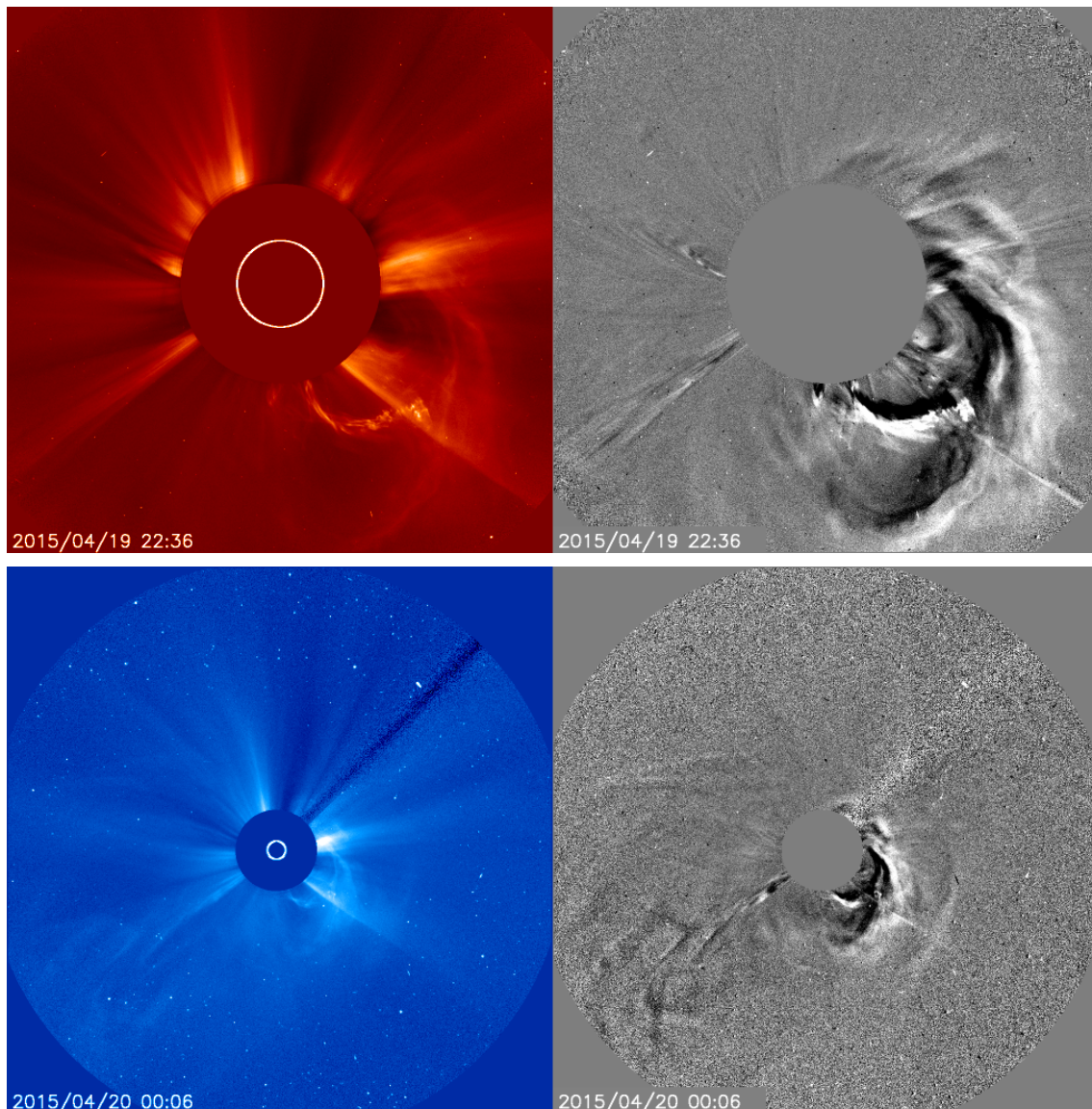


The full halo CME, visible in SOHO LASCO C2 around 15:00UT on April 18, was associated with the long duration C5.2 flare (peak at 14:19 UT) from the NOAA AR 2321 situated at that moment at N12W12. This CME was also associated with a coronal dimming, an EIT wave and a filament eruption.

A second partial halo CME was first seen in the SOHO LASCO C2 FOV at 11:12 UT on April 19. Again, there was a coronal dimming visible above the solar limb, but no visible on-disc signatures indicating that this CME was a back side event.

The fifth event was a complex partial halo first seen in the SOHO LASCO C2 FOV at 21:12 UT on April 19. CACTUS indicated an angular width of about 210 degrees and a plane of the sky speed around 500 km/s.

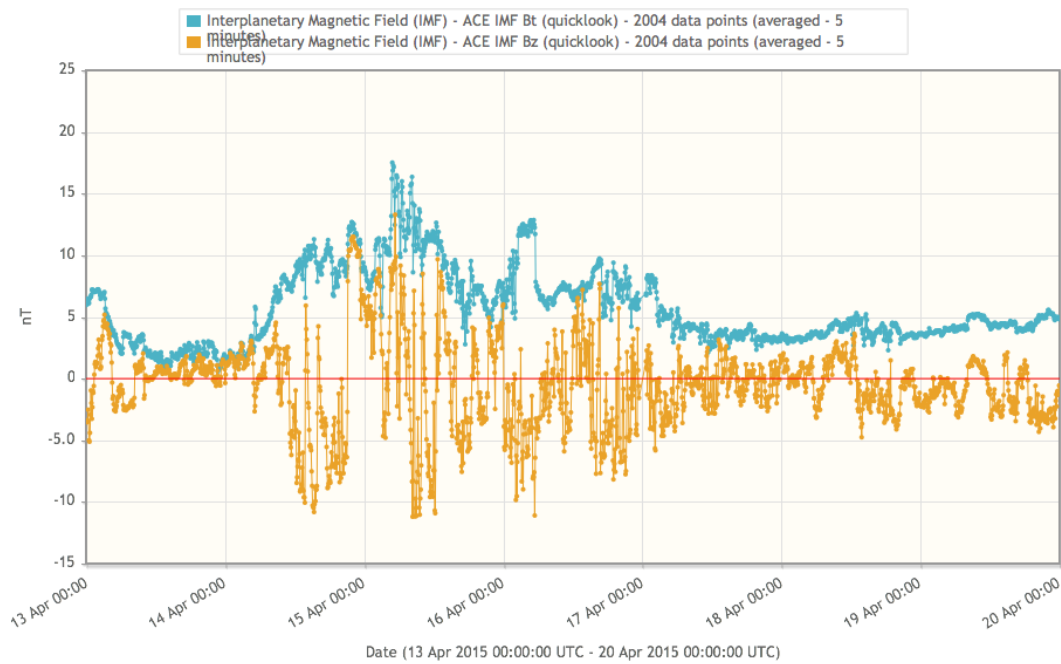
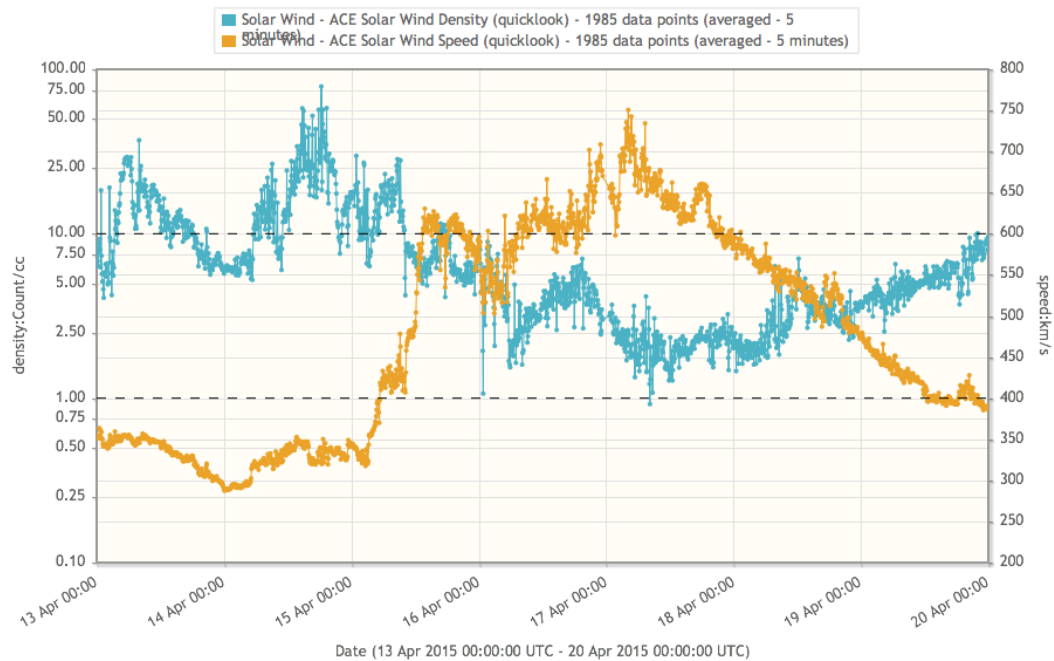
It is not completely clear if this was a single event, if the CME was back sided or possibly associated with the filament eruption situated close to the south-west solar limb. However, the bulk of the CME mass was directed southward from the Sun-Earth line.



4. Review of geomagnetic activity

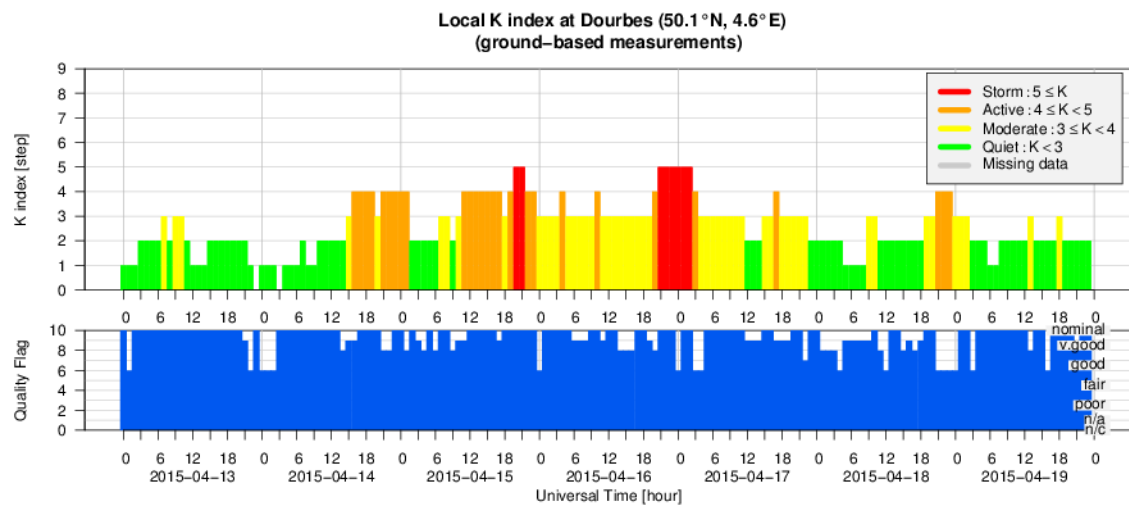
The solar wind speed was about 350 km/s during the first two days of the week.

The solar wind speed as well as the interplanetary magnetic field magnitude (IMF) and the temperature started to increase at about 05:00 UT on April 14, indicating the arrival of the fast solar wind associated with the extended southern polar coronal hole which crossed the central meridian on April 11. On the early morning of April 15 the solar wind speed started to increase rapidly and reached at the end of the day 600 km/s and around midnight April 16, its maximum speed of 780 km/s. The increase of the IMF and the fluctuations of its Bz component from the morning of April 14 until the morning of April 15, indicated arrival of the compression region in front of the fast flow. The Earth stayed inside the fast flow until the evening of April 18.



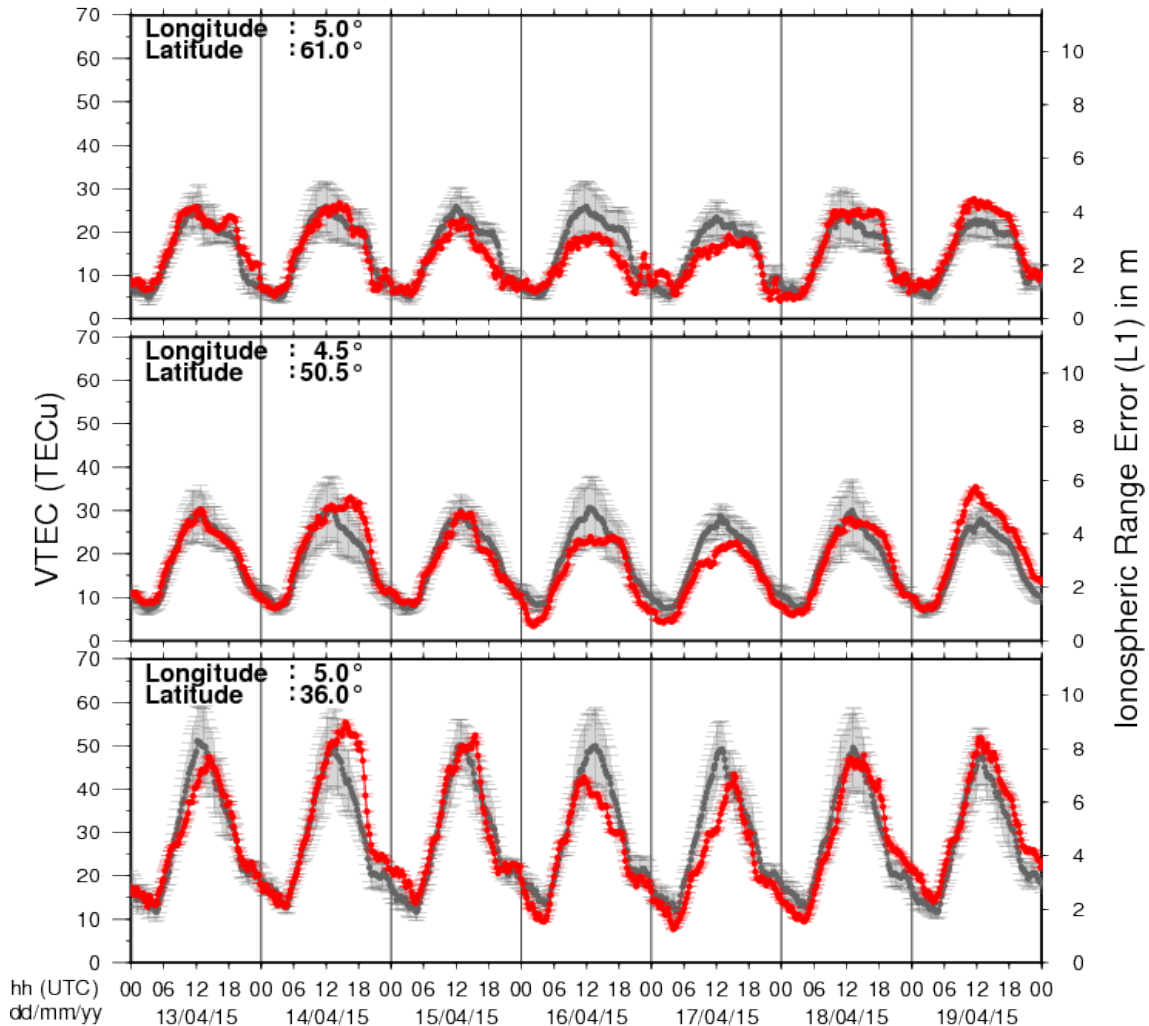
Due to the frequent intervals of a negative Bz and the high speed of the solar wind, the geomagnetic conditions were 'active' to 'minor storm' on April 15, 16 and 17 (local station at Dourbes and IZMIRAN reported K=5; NOAA reported long intervals of Kp= 5). The geomagnetic storm was at its strongest (NOAA reported Kp=6 and local stations at Dourbes and IZMIRAN reported K=5 and K=6, respectively) late April 16 and early April 17 when the solar wind speed reached the maximum value of 780 km/s.

5. Geomagnetic Observations at Dourbes (13 Apr 2015 - 19 Apr 2015)



6. Review of ionospheric activity (13 Apr 2015 - 19 Apr 2015)

VTEC Time Series



The figure shows the time evolution of the Vertical Total Electron Content (VTEC) (in red) during the last week at three locations:

- a) in the northern part of Europe (N61°, 5°E)
- b) above Brussels (N50.5°, 4.5°E)
- c) in the southern part of Europe (N36°, 5°E)

This figure also shows (in grey) the normal ionospheric behaviour expected based on the median VTEC from the 15 previous days.

The VTEC is expressed in TECu (with $\text{TECu} = 10^{16}$ electrons per square meter) and is directly related to the signal propagation delay due to the ionosphere (in figure: delay on GPS L1 frequency).

The Sun's radiation ionizes the Earth's upper atmosphere, the ionosphere, located from about 60km to 1000km above the Earth's surface. The ionization process in the ionosphere produces ions and free electrons. These electrons perturb the propagation of the GNSS (Global Navigation Satellite System) signals by inducing a so-called ionospheric delay.

See http://stce.be/newsletter/GNSS_final.pdf for some more explanations ; for detailed information, see http://gnss.be/ionosphere_tutorial.php

7. Future Events

For more details, see <http://www.spaceweather.eu/en/event/future>

VarSITI-SCOSTEP conference in Kazrin and Tel Aviv, Israel

Start : 2015-04-28 - End : 2015-05-01

At present, solar researches and study of active late-type stars achieve a significant advance thanks new observational facilities and progress of the theory. The problems of an evolution of activity at the billion year-time-scales start to be discussed. Superflares were detected on stars younger than the Sun, and the frequency of superflares occurrence was evaluated. The first hypotheses were proposed for evaluation of flare activity level and expected stellar wind fluxes at the epoch when the regular cycle on the Sun was only established. Now it is a time to discuss further directions of perspective investigations which are essential for evaluation of space factor affecting on geo- and bio-sphere in those epochs and space weather forecast.

Website:

http://www.tau.ac.il/institutes/advanced/cosmic/Conferences/2015-VarSITI_Superflares/VarSITI-2015_ISR.html

Space Weather And Plasma in Space in Kazrin and Tel Aviv, Israel

Start : 2015-05-02 - End : 2015-05-08

Science from an Operational Mission: An L5 Consortium Meeting, in London, UK

Start : 2015-05-11 - End : 2015-05-14

Objectives for the meeting include:

- * Agreeing the continuing need for an operational mission to L5
- * Confirm good science can be achieved from an operational mission
- * Discuss the instrumentation to be included within the spacecraft
- * Demonstrate to key stakeholders that there is a global interest and need for an Operational Mission to L5

Website:

<http://www.metoffice.gov.uk/conference/L5-Consortium-workshop>

UKMHD 2015 in Newcastle upon Tyne, UK

Start : 2015-05-14 - End : 2015-05-15

The annual UKMHD meetings are the premier gathering of the magnetohydrodynamics (MHD) community in the UK, held since 1978. The 2015 meeting will be hosted by the Solar Group in the Department of Mathematics and Information Sciences at Northumbria University.

The meeting brings together astrophysical, laboratory and industrial MHD research communities in the UK. It is the forum where recent progress is reported and future directions in the various aspects of MHD are discussed through invited and contributed talks, poster presentations and scheduled discussion sessions.

Invited speakers are drawn from different areas of MHD to celebrate the breadth of applications in the UK, and this year include Professor Alan Hood (University of St Andrews), Dr Andrew Hillier (DAMTP, Cambridge University), Dr Joanne Mason (Exeter University) and Dr Ken McClements (UK Atomic Energy Authority, Culham).

Website:

<https://sites.google.com/site/ukmhd2015/home>

URSI AT-RASC 2015 in Gran Canaria, Spain

Start : 2015-05-18 - End : 2015-05-22

URSI AT-RASC 2015 will be the first edition of the newly established triennial URSI Atlantic Radio Science Conference as one of the URSI Flagship Conferences. AT-RASC 2015 will have an open scientific program composed of submitted papers within the domains covered by all ten Commissions of URSI.

Website: <http://www.at-rasc.com/>

Heliospheric Imaging - A new era of space science and space weather observations in Göttingen, Germany

Start : 2015-05-19 - End : 2015-05-22

The HELCATS project (see <http://www.helcats-fp7.eu/>) is providing revolutionary new insights into solar wind structure through combining the comprehensive analysis of heliospheric imaging observations from the NASA STEREO spacecraft, in concert with associated remote-sensing and in-situ measurements, with a thorough assessment of appropriate techniques and models. The project recognises that the advent of wide-angle imaging of the inner heliosphere has revolutionised the study of transient and quasi-stationary structures in the solar wind, in particular Coronal Mass Ejections (CMEs) and Co-rotating Interaction Regions (CIRs). Prior to the development of wide-angle imaging of the inner heliosphere, signatures of such solar wind features could only be observed within a few solar radii of the Sun, and in the vicinity of a few near-Earth and interplanetary probes making in-situ measurements of the solar wind. Heliospheric imaging has, for the first time, filled that vast and crucial observational gap.

We will debate, in particular, the emotive issue of how we associate CMEs with related phenomena observed, for example, on the Sun or in-situ. How do we define (without bias and the need for assumptions such as the relationship between flares and CMEs), a standard set of 'rules', both temporal and spatial, for making such associations? Such standards are crucial when forward and backward-projecting data.

Website:

<http://www.affects-fp7.eu/helcats-meeting/>

MHD waves and instabilities in the solar atmosphere in Budapest, Hungary

Start : 2015-05-25 - End : 2015-05-29

25-27 May 2015: BUKS 2015 - MHD waves: Observational aspects from ground to space - MHD waves: Theory - where are we? - MHD instabilities

27-28 May 2015: Ruderman Honorary meeting - Theory of linear MHD waves - MHD waves instabilities - Non-linear waves in plasmas

29 May 2015: Joint BUKS/Ruderman's conferences excursion - Boat excursion to Szentendre, Visegrad and Esztergom

Website:

http://swat.group.shef.ac.uk/Conferences/BUKS_2015/index.html

Solar Influences on the Magnetosphere, Ionosphere and Atmosphere in Sunny Beach, Bulgaria

Start : 2015-06-01 - End : 2015-06-05

Check the website for more information.

Website:

<http://ws-sozopol.stil.bas.bg/>

Los Alamos Space Weather Summer School, in Los Alamos, NM, USA

Start : 2015-06-01 - End : 2015-07-24

The Space Weather Summer School at Los Alamos National Laboratory, established in 2011 under the founding Director Josef Koller, is dedicated to space weather, space science and applications. Every year we solicit applications for the Los Alamos Space Weather Summer School. This summer school

is sponsored and supported by a number of organizations at LANL. This year our top sponsors include the Los Alamos Institute of Geophysics, Planetary Physics and Signatures (IGPPS) and the Laboratory Directed Research and Development Office (LDRD). The summer school brings together top space science students with internationally recognized researchers at LANL in an educational and collaborative atmosphere.

Website:

<http://www.swx-school.lanl.gov/>

RadioSun4 Workshop & Summer School in Irkutsk, Russia

Start : 2015-06-08 - End : 2015-06-12

The RadioSun Workshop and Summer School 2015 is the fourth international academic seminar supported by the International Research Staff Exchange Scheme of the Seventh Framework Programme of the European Union (FP7-IRSES-295272-RADIOSUN). The aims of this project are to establish close research interaction and collaboration between the key EU and non-EU research groups involved in the research of the Sun in the radio band; qualitatively advance our knowledge of the physical processes operating in the solar atmosphere, the basic mechanisms responsible for its evolution and dynamics and its effect on the Earth; and provide younger researchers with extensive training in relevant research techniques and with universal transfer.

Website:

<http://www2.warwick.ac.uk/fac/sci/physics/staff/research/davidpascoe/radiosun>

Solar dynamo frontier workshop in Boulder, CO (USA)

Start : 2015-06-09 - End : 2015-06-12

The last five years have seen substantial progress in our understanding of the solar dynamo, fueled by continuing advances in observations and modeling. With the launch of NASA's Solar Dynamics Observatory (SDO) in 2010 came an unprecedented window on the evolving magnetic topology of the Sun, highlighting its intricate 3D structure and global connectivity. The Helioseismic Magnetic Imager (HMI) instrument on SDO in particular has provided potentially transformative yet enigmatic insights into the internal dynamics of the solar convection zone that underlie the dynamo. Attempts to detect subsurface convective motions from helioseismic inversions have yielded only upper limits on the large-scale convective amplitude, challenging our understanding of global solar convection. Yet, potential signatures of giant cells have been detected in photospheric Dopplergrams. Estimates of the meridional flow from HMI and complementary instruments (SOHO/MDI and GONG) have been equally tantalizing and enigmatic. Several disparate techniques, including local and global helioseismic inversions and correlation tracking of surface features, have yielded evidence of a multi-cellular meridional flow but they differ on the detailed flow structure and amplitude. This multi-cellular meridional flow has potentially profound implications for flux-transport dynamo models that previously assumed a very different structure with a single circulation cell per hemisphere.

Website:

<https://www2.hao.ucar.edu/Workshop/Solar-Dynamo-Frontiers>

National Astronomy Meeting 2015 in Llandudno, UK

Start : 2015-07-05 - End : 2015-07-09

We would like to invite you to submit contributed abstracts to the parallel session "The science of space weather: progressing our understanding" at the 2015 UK National Astronomy Meeting from 5-9 July (<http://nam2015.org>). The abstract-submission deadline is 1 April 2015. Observers, modellers, and theoreticians are all welcome. We also welcome participation from end users interested in how the science of space weather is advancing.

The science of space weather: progressing our understanding

The goal of this session is to provide an opportunity to discuss the scientific research that underpins space weather and how a new generation of operational space weather measurements could best be utilised to further progress our understanding. Specific topics are likely to include 1) gaps in our understanding of space weather and how to resolve them, 2) new space and ground-based data that

are needed, 3) new science that can be carried out with the operational space weather measurements being planned today.

This session is motivated by the fact that the UK has a strong heritage in the science of the coupled Sun-Earth system, from both an observational and theoretical perspective. This research is increasingly being applied to the area of space weather monitoring and forecasting, a topic that is now nationally recognised as an important natural hazard for the UK (highly ranked in the National Risk Register) and the subsequent opening of the Met Office Space Weather Operations Centre in 2014.

Up until now, both the research and the space weather monitoring and forecasting have utilised mainly data from instrumentation (both space- and ground-based) designed to answer pertinent scientific questions, though some operational instruments (e.g. the X-ray and particle detectors on NOAA's GOES spacecraft) are also widely exploited for scientific use. However, there is now growing interest in deploying more instruments, in space and on the ground, designed to support operational space weather services. Such operational measurements can facilitate new science, as demonstrated by the extensive research use of GOES data, but it is important that the limitations imposed by operational needs are discussed.

Website: <http://nam2015.org/>

CISM Space Weather Summer School in Boulder, CO, USA

Start : 2015-07-13 - End : 2015-07-24

The CISM Summer School is intended to give students a comprehensive immersion in the subject of space weather: what it is, what it does, and what can be done about it. Space weather is many things: beautiful when seen through the eyes of a sun-viewing telescope, fascinating when studied for its alien worlds of magnetic structures and phenomena, awesome when witnessed as a solar eruption or auroral storm, and devastating to the users of services it disrupts. Space weather links the Sun, the Earth, and the space in between in a branching chain of consequences. Weather systems on the Sun can spawn interplanetary storms of colossal size and energy that envelop the whole planet in electrical hurricanes. Such storms attack high-tech, complex, and expensive technological systems that provide much of the infrastructure that allows modern society to function.

Website:

<https://www2.hao.ucar.edu/Events/2015-CISM-Summer-School>

Loops7: Heating of the Magnetically Closed Corona in Cambridge, UK

Start : 2015-07-21 - End : 2015-07-23

The conference will review past and recent achievements, as well as future challenges in the field of solar coronal loop physics.

Website:

<http://www.damtp.cam.ac.uk/user/astro/cl7/index.html>

Heliophysics Summer Schoool 2015: Seasons in Space: Cycles of variability of Sun-Planet systems, in Boulder, CO, USA

Start : 2015-07-28 - End : 2015-08-04

Heliophysics is all of the science common to the field of the Sun-Earth connections. This fast-developing field of research covers many traditional sub-disciplines of space physics, astrophysics, and climate studies. The NASA Living with a Star program, with its focus on the basic science underlying all aspects of space weather, acts as a catalyst to bring the many research disciplines together to deepen our understanding of the system of systems formed by the Sun-Earth connection.

Website:

<http://www.heliophysics.ucar.edu/>

34th International Cosmic Ray Conference (ICRC) in The Hague, The Netherlands

Start : 2015-07-30 - End : 2015-08-06

The 34th International Cosmic Ray Conference (ICRC) will be held from July 30 to August 6, 2015, in The Hague, The Netherlands. It is an important and large conference in the field of Astroparticle Physics. The ICRC covers: cosmic-ray physics, solar and heliospheric physics, gamma-ray astronomy, neutrino astronomy, and dark matter physics.

Website: <http://icrc2015.nl>

SOLARNET III / HELAS VII: The Sun, the stars, and solar-stellar relations, in Freiburg (Germany)

Start : 2015-08-31 - End : 2015-09-04

The purpose of this conference is to discuss the latest questions and results in solar and stellar physics. Solar and stellar seismology will be one particular focus but contributions on all aspects of solar-stellar relations will be welcome. We aim to establish links and synergies between the day- and night-time fields of astrophysics.

Website:

<http://www.iac.es/congreso/solarnet-3meeting/>

1st Joint Solar Probe Plus-Solar Orbiter Workshop, in Florence (Italy)

Start : 2015-09-02 - End : 2015-09-04

The Workshop will address how the joint exploration of the corona and inner heliosphere will lead to advances in our understanding of coronal heating and solar wind acceleration, the magnetic and plasma structure of the heliosphere, and the acceleration of energetic particles at shocks and flares. The workshop will inspire research that will make use of SO and SPP observations within the context of the NASA Heliophysics Observatory System and identify key areas for preparatory research. Synergistic observations from other ground based and space based assets will also be addressed.

Website:

<http://www.solarprobeplus.org/2015/>

International Workshop and School on Solar System plasma in Mamaia, Romania

Start : 2015-09-06 - End : 2015-09-13

The International Workshop and School on solar system plasma turbulence, intermittency and multifractals (STORM 2015) focus on the quantitative experimental, theoretical and numerical investigation of turbulence, intermittency, fractal/multifractal features, waves and coherent structures interaction, criticality and non-linear cross-scale coupling. As widely documented by in-situ satellite measurements and remote or ground-based observations, turbulence, intermittency and dynamical complexity are quite ubiquitous processes observed in the dynamics of solar, planetary and interplanetary plasmas, as well as in the dynamical evolution of proxies linked to magnetospheric and ionospheric variability.

Unfolding the spatio-temporal structure of magnetic field and plasma fluctuations from experimental observations and numerical simulations provides further insight on the structure of plasma turbulence and intermittency. On the theoretical side, the understanding of such complex dynamical behavior cannot be simply surmised from the basic fluid/kinetic equations, but instead requires novel theoretical, experimental and data analysis approaches. The workshop is a forum to present and discuss latest results in these fields. The purpose of the school is to give to a young audience of Graduate, Ph.D. students, and postdoc scientists, which ideally represents the next generation of scholars in the physics of space plasmas, an overall view of both theoretical and data analysis tools apt to fully exploit unique and unprecedented observations that will be provided by future upcoming mission like Solar Orbiter and Solar Probe Plus.

Website:

<http://www.spacescience.ro/conferences/storm2015/>

RADECS-2015 in Moscow, Russia

Start : 2015-09-14 - End : 2015-09-18

The aim of RADECS conferences is to provide an annual European forum for the presentation and discussion of the latest advances in the field of radiation effects on electronic and photonic materials, devices, circuits, sensors, and systems. The scope of the conference encompasses technological processes and design techniques for producing radiation tolerant systems for space, aeronautical or terrestrial applications, as well as relevant methodologies for their characterization and qualification. The conference features a technical program, an Industrial Exhibition, and one day tutorial or "short course" on radiation effects. The technical program includes oral and poster sessions and round tables.

Website:

<http://www.radecs2015.org/>

Heliospheric physical processes for understanding Solar-Terrestrial Relations in L'Aquila, Italie

Start : 2015-09-21 - End : 2015-09-26

A good understanding of solar-terrestrial processes is fundamental to modelling the influence of solar variability on the Earth's environment and climate. To capture all the physical aspects of the solar wind-magnetosphere-ionosphere-atmosphere interaction, and also the impact of solar variability on climate, the Sun-Earth system has to be studied as a whole. The main purpose of this school is to provide graduate, PhD students and also young post-doc researchers with a global view of the main physical processes by which solar variability affects the Earth's environment. In addition, an overview of different data analysis and methods for describing solar-terrestrial relations will be given. The school will provide a mix of lectures and activities requiring students participation.

Website:

<http://www.cifs-iss.org/>

Ground-based Solar Observations in the Space Instrumentation Era in Coimbra, Portugal

Start : 2015-10-05 - End : 2015-10-09

This CSPM-2015 scientific meeting will cover various aspects of solar dynamic and magnetic phenomena which are observed over the entire electromagnetic spectrum: white-light, H α , Ca II, and radio from ground and in a variety of other wavelengths (white light, UV and EUV, and X-rays) from space. Emphasis will also be placed on instrumentation, observing techniques, and solar image processing techniques, as well as theory and modelling through detailed radiative transfer in increasingly realistic MHD models. The long-term (cyclic) evolution of solar magnetism and its consequence for the solar atmosphere, eruptive phenomena, solar irradiation variations, and space weather, will be in focus. Here, special attention will be devoted to the long-term observations made in Coimbra and also to the results of the SPRING / SOLARNET and SCOSTEP VarSITI studies. In particular, the weak solar activity during the current solar maximum will be discussed. Finally, since this meeting is organised around the 90th anniversary of performing the first spectroheliographic observations in Coimbra, a session will be specially dedicated to new solar instruments (both ground-based and space-borne) that will give access to unexplored solar atmospheric features and dynamic phenomena over the coming years.

Website:

<http://www.mat.uc.pt/~cspm2015/>

Third Remote Sensing of the Inner Heliosphere and Space Weather Applications Workshop in Morelai, Michoacan (Mexico)

Start : 2015-10-19 - End : 2015-10-23

The workshop aims to gather experts from the various fields of remote sensing observations of the inner heliosphere, including white light, EUV, and radio observation, together with modellers in order to tackle key outstanding science and space weather operational issues, establish closer working relations, and devise the best ways to move the field forward as a whole. In addition, the science learned from remote sensing observations is critical to improving our capabilities of space weather forecasting. The workshop aims to look at ways in which we can more easily and efficiently share and access the various types of data between individual groups and subcommunities and to officially launch the IPS Common

Data Format v1.0 (IPSCDFv1.0) now in use. It also aims to allow investigations into ways in which we model the inner heliosphere looking at the advantages and disadvantages of the available modelling, updates on present and future remote sensing capabilities, and investigating further the ways in which these data sets all complement each other and are necessary to gain knowledge and understanding of the fundamental physical processes that occur within the inner heliosphere. These are critical processes that are key to both Heliophysics science as well as to space weather operations and forecasting.

Website:

<http://www.sciesmex.unam.mx/workshop2015/>

SEST/MiniMax Workshop in Mexico City, Mexico

Start : 2015-10-26 - End : 2015-10-30

The workshop is to improve the scientific understanding of the origin and propagation of solar transients, and develop the prediction capacity of these transients' arrival and potential impact on the Earth. The workshop engages coordinated international activities in observation, theory and modeling, and involves scientists in both developed and developing countries, and provides an online platform for educational opportunities for students.

Website:

<http://cintli.geofisica.unam.mx/congreso/>

2015 Sun-Climate Symposium in Savannah, Georgia, USA

Start : 2015-11-10 - End : 2015-11-13

Observations of the Sun and Earth from space have revolutionized our view and understanding about impacts of solar variability and anthropogenic forcing on Earth climate. For more than three solar cycles since 1978, the total and spectral solar irradiance (TSI and SSI) and global terrestrial atmosphere/surface have been observed continuously, enabling unprecedented quality data for Sun-climate studies. The primary objective of this symposium is to convene climate scientists, solar physicists, and experimentalists together for a better understanding how Earth climate system changes and responds to solar variability.

Website: <http://lasp.colorado.edu/home/sorce/news-events/meetings/2015-sun-climate-symposium/>

41st COSPAR Scientific Assembly in Istanbul, Turkey

Start : 2016-07-30 - End : 2016-08-07

The 41st COSPAR Scientific Assembly will be held in Istanbul, Turkey from 30 July - 7 August 2016. This Assembly is open to all bona fide scientists.

Website:

<https://www.cospar-assembly.org/>

8. New documents in the European Space Weather Portal Repository

See <http://www.spaceweather.eu/en/repository>

SOLSPEC - Using SSI to understanding the effect on stratospheric ozone

Presentation given at the workshop Six Years of SOLAR/SOLSPEC mission on ISS - Achievements and prospects.

<http://www.spaceweather.eu/en/repository/show?id=580>

SOLSPEC - The Future of SSI UV Measurements with the Dual Solar Spectral Irradiance Monitor on the ESA-CAS Small-size Mission SU

Presentation given at the workshop Six Years of SOLAR/SOLSPEC mission on ISS - Achievements and prospects.

<http://www.spaceweather.eu/en/repository/show?id=581>

SOLSPEC - Impact of the solar rotational cycle on middle atmospheric ozone

Presentation given at the workshop Six Years of SOLAR/SOLSPEC mission on ISS - Achievements and prospects.

<http://www.spaceweather.eu/en/repository/show?id=583>