STCE Newsletter

5 Nov 2012 - 11 Nov 2012

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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.

Final Editor : Petra Vanlommel
Contact : R. Van der Linden, General Coordinator STCE,
Ringlaan - 3 - Avenue Circulaire, 1180 Brussels,
Belgium

1. Press release: Solar eclipse visible from Australia and from space - 14 november, 06:38 lokale tijd (13 november, 21:38 Belgische tijd)

Because of the solar eclipse visible from Australia, we sent the following message to the press.
Naar aanleiding van de zonsverduistering zichtbaar vanuit Australië, hebben we onderstaand bericht naar de pers gestuurd.
Suite à la éclipse solaire en Australie, nous avons envoyé le note ci-dessous à la presse.

Observations from space and from Australia are coordinated by Belgian scientists.

At 6:38 on November 14 local time (21:38 on November 13 Belgian time) astronomers and sky watchers of all kinds were treated to a total solar eclipse in Australia. For scientists who study the sun, a total solar eclipse is a unique chance to observe the solar atmosphere, or the solar corona, in all its glory. Under normal circumstances the light coming from the corona is too faint to see because of the blinding effect of the solar disk. During a total solar eclipse the moon blocks the bright light from the surface of the sun, leaving the corona visible.

Scientists plan to compare visible light images of the Australian eclipse with images taken in space in extreme ultraviolet light. The SWAP telescope, made in Belgium and carried onboard the ESA satellite PROBA2, was one of several instruments used for this. At the same time as observers in Australia watched the eclipse, PROBA2's orbit in space gave the satellite a clear view of the sun, allowing astronomers to obtain extreme ultraviolet images that can be used to match features seen during the eclipse to their source regions on the sun itself.

A Belgian scientist, Dr. Anik De Groof, travelled to Australia to track the eclipse from the ground.
"SWAP is able to observe the inner corona right down to the solar surface," she said. "Other instruments, called coronagraphs, mimic a solar eclipse by blocking out the sun with an occulting disc. Such instruments can reveal the corona in visible light, but only at a significant height above the solar surface. Only during a total solar eclipse like the one in Australia we can obtain observations that can be directly compared with the extreme ultraviolet images we get from space-based instruments like SWAP. With observations of the corona in visible light from a small army of solar observers on the ground in Australia and observations in extreme ultraviolet light from SWAP we can help answer some fundamental questions about the heating and structure of the corona and the origins of the solar wind."

Waarnemingen vanuit de ruimte en vanuit Australië worden gecoördineerd door Belgische wetenschappers.

Een totale zonsverduistering was zichtbaar in Australië op 14 november, 06:38 lokale tijd (13 november, 21:38 Belgische tijd). Voor wetenschappers en zonnewaarnemers is een totale zonsverduistering een unieke kans om de zonneatmosfeer of zonnecorona in al haar pracht en glorie waar te nemen. Tijdens een totale zonsverduistering blokkeert de maan het felle zonlicht en blijft enkel het zwakkere licht van de zonneatmosfeer zichtbaar.

Wetenschappers willen de beelden van de zonnecorona gemaakt vanuit Australië vergelijken met beelden in het extreem ultraviolet licht die gemaakt zijn vanuit de ruimte. Hiervoor werd SWAP ingezet, een instrument van Belgische makelij aan boord van de ESA-satelliet PROBA2. Terwijl zonnewaarnemers in Australië de zonnecorona van op de grond in zichtbaar licht zagen, cirkelde PROBA2 boven hun hoofden in de ruimte en observeerde de zonnecorona en het zonneoppervlak in extreem ultraviolet licht.

Een Belgische wetenschapper, Dr. Anik De Groof, reisde af naar Australië om de waarnemingen van op de aarde van dichtbij te volgen: 'SWAP is in staat om de corona in het extreem ultraviolet in

beeld te brengen, zowel dichtbij het zonneoppervlak als ver daarbuiten. Coronografen kunnen een zonsverduistering nabootsen door een plaatje voor de zon te houden, maar je kan hiermee niet het stuk van de corona dichtbij het zonneoppervlak observeren. Dit is enkel mogelijk tijdens een echte zonsverduistering. De zonsverduistering in Australië was onze kans: we hebben nu waarnemingen van de corona dicht bij het zonneoppervlak, enerzijds gemaakt in het EUV vanuit de ruimte met ons eigen instrument, en anderzijds gemaakt in het zichtbaar licht van op de aarde door een heel leger zonnewaarnemers. We hopen zo antwoorden te vinden op fundamentele vragen over de structuur van de corona en waarom deze zo heet is.'

Des observations acquises simultanément depuis l'espace et l'Australie ont été coordonnées par une équipe de scientifiques belges.

Une éclipse solaire totale a eu lieu en Australie ce 14 novembre à 06:38, heure locale (le 13 novembre 21:38, heure belge). Un tel évènement revêt toujours un grand intérêt pour les astronomes s'intéressant au soleil, car il s'agit d'une opportunité exceptionnelle d'observer l'atmosphère de l'astre, ou couronne solaire, dans sa totalité et toute sa splendeur. En effet, au cours d'une éclipse totale, la lune cache intégralement le disque solaire qui constitue en temps normal la source d'émission lumineuse dominante du soleil. L'éclipse révèle ainsi la couronne, nettement plus ténue que la lumière visible du disque.

À l'occasion de cette éclipse, les scientifiques souhaitaient comparer les images obtenues en Australie avec celle acquises depuis l'espace dans le domaine de l'extrême ultraviolet (EUV). L'un des instruments utilisés à cet effet est le télescope SWAP, construit en Belgique et volant à bord du satellite PROBA2 de l'ESA. Tandis que les astronomes présents en Australie pouvaient admirer la couronne solaire dans le domaine visible, SWAP évoluait au-dessus de leurs têtes et acquérait des images de cette même couronne dans le domaine de l'EUV.

"SWAP est capable de réaliser des observations de la couronne solaire dans le domaine de l'EUV jusqu'à la surface du soleil", explique le Dr. Anik De Groof, une scientifique belge envoyée en Australie pour suivre la campagne d'observation au sol. "D'autres instruments, appelés coronographes, peuvent simuler des éclipses en masquant la lumière émise par le disque solaire à l'aide d'un disque occulteur. De tels instruments permettent d'observer la couronne à tout moment dans le domaine de la lumière visible, mais seulement à une certaine distance au-dessus de la surface solaire, qu'ils sont obligés de cacher. Les observations en lumière visible à proximité de la surface sont seulement possibles lors d'éclipses totales telles que celle-ci. À présent, nous disposons d'observations de la couronne jusqu'à la surface du soleil, d'une part dans le domaine EUV grâce à notre télescope SWAP, et d'autre part dans le visible grâce à une véritable armée d'astronomes observant le phénomène depuis la surface de la Terre. Ces observations nous aideront dans l'investigation de certaines questions fondamentales en physique solaire qui restent sans réponse à l'heure actuelle, telles que celles concernant le chauffage et la structure de la couronne, ainsi que l'origine du vent solaire."

Meer - Plus - More http://proba2.oma.be/news/solar_eclipse_20121113
With the blog of Dr. Anik De Groof with some fantastic pictures.

2. Review of solar activity (5 Nov 2012 - 11 Nov 2012)

Flares

Solar activity was low to moderate during the week, with two M class flares which occurred on the East limb on Nov. 8, 0223 UT peak time (M1.7) and on Nov. 11, 0233 UT peak time (M1).

Plasma eruptions and increased proton flux

Two CMEs occurred on Nov. 8: a CME related to the M1.7 flare of Nov. 8, and a backsided halo CME, which took place on Nov. 8, 1112 UT (LASCO observations). This second event is the most likely candidate for a mild proton activity.The proton flux (>10 MeV) slightly rose above background level from Nov. 8, 1500 UT, until late Nov. 11, without crossing the event threshold.
Two halo or semi-halo CMEs occurred on Nov. 9 and Nov. 10 in the vicinity of NOAA AR 1608. The first one was linked to a filament eruption and was observed by LASCO at 1536 UT. The second event was linked to a C2 flare (0504 UT peak time) in NOAA AR 1608, and was visible in COR2 A at 0539 UT. Both events are Earth-directed and therefore possibly geoeffective.

3. Review of geomagnetic activity (5 Nov 2012 - 11 Nov 2012)

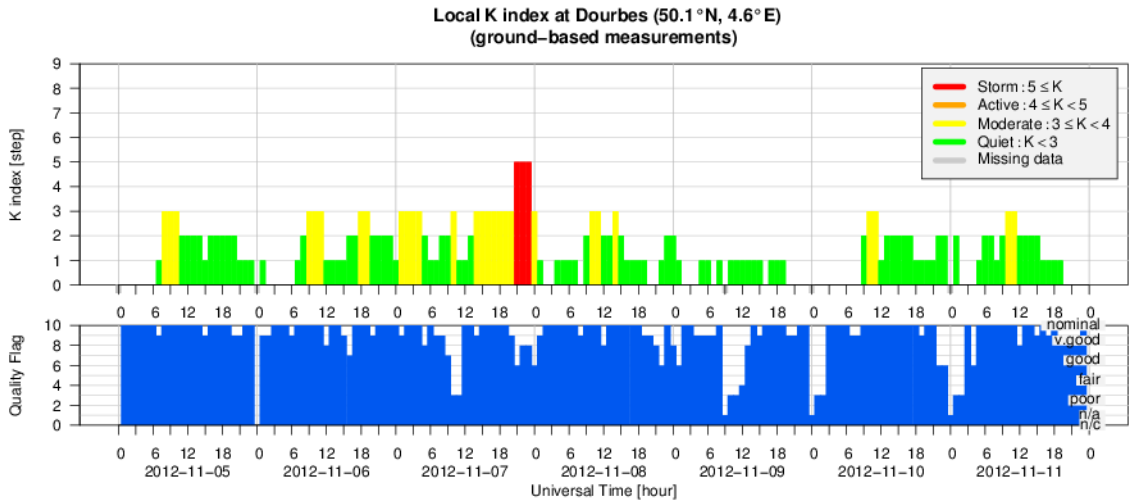
Geomagnetic activity was very low during the week, with only a short period of active conditions (Kp=4) at planetary levels on Nov. 7 from 18 to 21 UT.

4. Noticeable Solar Events (5 Nov 2012 - 11 Nov 2012)

DAY	BEGIN	MAX	END	LOC	XRAY	OP	10CM	TYPE	Cat	NOAA	NOTE
8	0208	0223	0255	N13E89	M1.7		0	III/3 V/2 II/3		1611	Limb event
11	0211	0233	0252	N15E89	M1.0		0	III/2 II/1		1614	Limb event

LOC: approximate heliographic location
XRAY: X-ray flare class
OP: optical flare class
10CM: peak 10 cm radio flux
TYPE: radio burst type
Cat: Catania sunspot group number
NOAA: NOAA active region number

5. Geomagnetic Observations at Dourbes (5 Nov 2012 - 11 Nov 2012)



6. New documents in the European Space Weather Portal Repository

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

SWWT Topical Working Groups 2011 Annual Report

http://www.spaceweather.eu/en/repository/show?id=298

Solar Orbiter 5 Workshop - Poster S1: Synthetic SO/PHI data for Helioseismology

Poster for the Session 1: Solar Magnetism and the Solar Cycle
http://www.spaceweather.eu/en/repository/show?id=299

Solar Orbiter 5 Workshop - Poster S1: SIGMA - a project of a new space mission to measure the magnetic field in the solar corona

Poster for the Session 1: Solar Magnetism and the Solar Cycle
http://www.spaceweather.eu/en/repository/show?id=300

Solar Orbiter 5 Workshop - Poster S1: Software simulator for SO/PHI: SOPHISM

Poster for the Session 1: Solar Magnetism and the Solar Cycle
http://www.spaceweather.eu/en/repository/show?id=301

Solar Orbiter 5 Workshop - Poster S2: SPICE EUV Spectrometer for the Solar Orbiter

Poster for the Session 2: Processes of slow/steady energy release in the solar atmosphere
http://www.spaceweather.eu/en/repository/show?id=302

Solar Orbiter 5 Workshop - Poster S2: Comparison between UV Observations and Numerical Modeling of Quiescent Streamers

http://www.spaceweather.eu/en/repository/show?id=303

Solar Orbiter 5 Workshop - Poster S2: What variability of the solar irradiance would Solar Orbiter observe?

Poster for the Session 2: Processes of slow/steady energy release in the solar atmosphere
http://www.spaceweather.eu/en/repository/show?id=304

Solar Orbiter 5 Workshop - Poster S2: Case study of frequency cut-off related to solar interplanetary Type III bursts

Poster for the Session 2: Processes of slow/steady energy release in the solar atmosphere
http://www.spaceweather.eu/en/repository/show?id=305

Solar Orbiter 5 Workshop - Poster S2: H and He lines emitted by cool coronal loops and prominences

Poster for the Session 2: Processes of slow/steady energy release in the solar atmosphere
http://www.spaceweather.eu/en/repository/show?id=306

Solar Orbiter 5 Workshop - Poster S2: Proton energetics in the solar wind: Helios reloaded

Poster for the Session 2: Processes of slow/steady energy release in the solar atmosphere
http://www.spaceweather.eu/en/repository/show?id=307

Solar Orbiter 5 Workshop - Poster S2: Solar wind manifestations in the variations of Jovian auroral emissions

Poster for the Session 2: Processes of slow/steady energy release in the solar atmosphere
http://www.spaceweather.eu/en/repository/show?id=308

Solar Orbiter 5 Workshop - Poster S2: Properties of Coronal Helium: Results from the HECOR Coronagraph onboard Herschel

Poster for the Session 2: Processes of slow/steady energy release in the solar atmosphere
http://www.spaceweather.eu/en/repository/show?id=309

Solar Orbiter 5 Workshop - Poster S2: Coronal He: Probing capabilities of METIS Coronal Spectrograph

Poster for the Session 2: Processes of slow/steady energy release in the solar atmosphere
http://www.spaceweather.eu/en/repository/show?id=310

Solar Orbiter 5 Workshop - Poster S3: Broad angular spread of energetic particles during the November 3, 2011 SEP event

Poster for the Session 3: Eruptive processes in the solar atmosphere and their manifestations in the heliosphere
http://www.spaceweather.eu/en/repository/show?id=311

Solar Orbiter 5 Workshop - Poster S3: SoFAST: Automated Flare Detection with the PROBA2/SWAP EUV Imager

Poster for the Session 3: Eruptive processes in the solar atmosphere and their manifestations in the heliosphere
http://www.spaceweather.eu/en/repository/show?id=312

Solar Orbiter 5 Workshop - Poster S3: EPT/HET for Solar Orbiter

Poster for the Session 3: Eruptive processes in the solar atmosphere and their manifestations in the heliosphere
http://www.spaceweather.eu/en/repository/show?id=313

Solar Orbiter 5 Workshop - Poster S3: 3D reconstruction of a CME based on spectroscopic and coronagraphic data

Poster for the Session 3: Eruptive processes in the solar atmosphere and their manifestations in the heliosphere
http://www.spaceweather.eu/en/repository/show?id=314

Solar Orbiter 5 Workshop - Poster S3: Type III radio bursts and the X-ray connection

Poster for the Session 3: Eruptive processes in the solar atmosphere and their manifestations in the heliosphere
http://www.spaceweather.eu/en/repository/show?id=315

Solar Orbiter 5 Workshop - Poster S3: Estimating flare acceleration region characteristics from simultaneous X-ray and Radio obs

Poster for the Session 3: Eruptive processes in the solar atmosphere and their manifestations in the heliosphere
http://www.spaceweather.eu/en/repository/show?id=316

Solar Orbiter 5 Workshop - Poster S3: Suprathermal electron production during magnetic reconnection in situ observations

Poster for the Session 3: Eruptive processes in the solar atmosphere and their manifestations in the heliosphere
http://www.spaceweather.eu/en/repository/show?id=317

Solar Orbiter 5 Workshop - Poster S3: Electron acceleration during a failed eruption of a filament

Poster for the Session 3: Eruptive processes in the solar atmosphere and their manifestations in the heliosphere
http://www.spaceweather.eu/en/repository/show?id=318

Solar Orbiter 5 Workshop - Poster S3: Alternating twist in an erupting prominence

Poster for the Session 3: Eruptive processes in the solar atmosphere and their manifestations in the heliosphere
http://www.spaceweather.eu/en/repository/show?id=319

Solar Orbiter 5 Workshop - Poster S3: Spatially resolved polarization of hard X-rays from solar flares

Poster for the Session 3: Eruptive processes in the solar atmosphere and their manifestations in the heliosphere
http://www.spaceweather.eu/en/repository/show?id=320

Solar Orbiter 5 Workshop - Poster S3: The SWA-EAS electron spectrometer

Poster for the Session 3: Eruptive processes in the solar atmosphere and their manifestations in the heliosphere
http://www.spaceweather.eu/en/repository/show?id=321

Solar Orbiter 5 Workshop - Poster S3: Measurements of the magnetic drag force acting on small scale plasma blobs

Poster for the Session 3: Eruptive processes in the solar atmosphere and their manifestations in the heliosphere

http://www.spaceweather.eu/en/repository/show?id=322

Solar Orbiter 5 Workshop - Poster S3: The suprathermal ion spectrograph for the solar orbiter spacecraft

Poster for the Session 3: Eruptive processes in the solar atmosphere and their manifestations in the heliosphere
http://www.spaceweather.eu/en/repository/show?id=323

Solar Orbiter 5 Workshop - Poster S3: Wave amplitudes in the solar wind at 1AU - Implcations for energetic particle transport

Poster for the Session 3: Eruptive processes in the solar atmosphere and their manifestations in the heliosphere
http://www.spaceweather.eu/en/repository/show?id=324

Solar Orbiter 5 Workshop - Poster S3: Multi-spacecraft analysis and modeling of a solar eruption on August 14, 2010

Poster for the Session 3: Eruptive processes in the solar atmosphere and their manifestations in the heliosphere
http://www.spaceweather.eu/en/repository/show?id=325

Solar Orbiter 5 Workshop - Poster S3: The source regions of SEP events detected by widely spaced spacecraft

Poster for the Session 3: Eruptive processes in the solar atmosphere and their manifestations in the heliosphere
http://www.spaceweather.eu/en/repository/show?id=326

Solar Orbiter 5 Workshop - Poster S3: Solar energetic particle 3He-rich events observed by Stereo-A

Poster for the Session 3: Eruptive processes in the solar atmosphere and their manifestations in the heliosphere
http://www.spaceweather.eu/en/repository/show?id=327

Solar Orbiter 5 Workshop - Poster S3: The origins and heliospheric evolution of CMEs on 7 and 14 August 2010 from same source

Poster for the Session 3: Eruptive processes in the solar atmosphere and their manifestations in the heliosphere
http://www.spaceweather.eu/en/repository/show?id=328

Solar Orbiter 5 Workshop - Poster S4: Predicted SPICE spectra of representative solar features

Poster for the Session 4: Data assimilation, visualization and analysis
http://www.spaceweather.eu/en/repository/show?id=329

Solar Orbiter 5 Workshop - Poster S4: The CDPP in the Solar Orbiter era: data dissemination, analysis software, connection MEDOC

Poster for the Session 4: Data assimilation, visualization and analysis
http://www.spaceweather.eu/en/repository/show?id=330

Solar Orbiter 5 Workshop - Poster S4: Instrument Control Unit for EPD

Poster for the Session 4: Data assimilation, visualization and analysis
http://www.spaceweather.eu/en/repository/show?id=331

Solar Orbiter 5 Workshop - Poster S4: Langmuir waves in the heliosphere - Solar Orbiter RPW-TDS instrument

Poster for the Session 4: Data assimilation, visualization and analysis
http://www.spaceweather.eu/en/repository/show?id=332

Solar Orbiter 5 Workshop - Poster S4: Quenching in BGO scintillating crystal of the Solar Orbiter High-Energy Telescope

Poster for the Session 4: Data assimilation, visualization and analysis
http://www.spaceweather.eu/en/repository/show?id=333

Solar Orbiter 5 Workshop - Poster S4: Compatibilityof AC and DC magnetic field measurements in preparation for SO and SP+: LL

Poster for the Session 4: Data assimilation, visualization and analysis
http://www.spaceweather.eu/en/repository/show?id=334

Solar Orbiter 5 Workshop - Poster S4: Solar physics data analysis using SunPy: A walk through eCallisto dynamic radio spectra

Poster for the Session 4: Data assimilation, visualization and analysis
http://www.spaceweather.eu/en/repository/show?id=335

ESWW8 - Advances in GIC Research and Effects Mitigation: A Report from a Workshop at European Space Weather Week 2011

A one-day session and workshop was held on the subject of Geomagnetically Induced Currents (GIC) in electrical power networks at the 8th European Space Weather Week, in Namur, Belgium, on 30th November 2011. We describe the questions that were posed at the workshop and summarise the outcomes of the discussions. Among the conclusions reached were the need for improved Sun to Earth numerical models and the need for continued national and international support for space weather monitoring missions and ground networks of instruments. It was also concluded that there was much scope for improved national and international responses to space weather warnings and the need for collaboration between scientists, industry and governments to achieve this. 1.
http://www.spaceweather.eu/en/repository/show?id=336

Solar Orbiter 5 Workshop - Session 1: Recent observations of the solar magnetic fields with Hinode, Sunrine and SDO

Talk in the session Solar Magnetism and the Solar Cycle
http://www.spaceweather.eu/en/repository/show?id=337

7. Future Events

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

Solar ALMA workshop in Glasgow (UK)

Start : 2013-01-14 - End : 2013-01-17
The Atacama Large Millimeter/submillimeter Array (ALMA), an international partnership of Europe, North America and East Asia in cooperation with the Republic of Chile, is the largest astronomical project in existence.
The workshop aims to bring together the ALMA-minded solar community to discuss solar observational issues with ALMA, solar science and planned observations with ALMA, and the planning of solar ALMA observations.
Th workshop is hosted by Astronomy & Astrophysics Group, and will take place in School of Physics and Astronomy, University of Glasgow, Room 323, Kelvin Building.

Website:
http://www.astro.gla.ac.uk/~eduard/solarALMA/

Understanding the Dynamics of the Sun using Helioseismology and MHD Simulations in NASA Ames Research Center, CA (USA)

Start : 2013-02-04 - End : 2013-02-08
Helioseismology provides tools for imaging structures and mass flows below the solar surface, and is becoming an essential technique for understanding the dynamics of solar activities and developing physics-based forecasts of the solar cycle, emerging active regions and energy release events. A better understanding is needed to unravel the effects of the complex interactions of solar oscillations with the turbulent magnetized plasma on global and local helioseismology diagnostics. These effects are particularly challenging in regions of strong magnetic fields. Numerical simulations of solar MHD waves and turbulent dynamics give important insights into the complicated wave and turbulence physics, and provide synthetic data for verification and validation of helioseismology methods and results.
The goals of this workshop are to discuss and stimulate further development of helioseismology methods, solar interior models, and realistic numerical simulations. These goals are particularly important for analysis of the continuous data flow from the Solar Dynamics Observatory, development and verification of helioseismology methods, and for theoretical interpretation of observations and inversion results.
Website:
http://sun.stanford.edu/LWS2013/

AFFECTS User Workshop in Brussels, Belgium

Start : 2013-02-28 - End : 2013-02-28
On February 28th, 2013 the AFFECTS team organises an international user workshop at the Royal Observatory of Belgium in Brussels.
At the workshop there will be a demonstration of all AFFECTS space weather products:
* Near real time dimming and EIT wave detection
* 3D CME analysis tool
* Coronal analysis tool
* CME & solar wind arrival and impact forecast tool
* Flare, CME , geomagnetic, auroral, ionospheric forecasts & alerts
* Forecast of perturbed TEC
* Solar activity and space weather timelines viewer
To register, please send an e-mail incl. your full name, institution, e-mail and (institutional) address to .
DÃ¶rte Dannemann
Website:
http://www.affects-fp7.eu/news-events/user-ws/

European Geosciences Union General Assembly 2013 in Vienna, Austria

Start : 2013-04-07 - End : 2013-04-12
The EGU General Assembly 2013 will bring together geoscientists from all over the world into one meeting covering all disciplines of the Earth, Planetary and Space Sciences. Especially for young scientists, it is the aim of the EGU to provide a forum where they can present their work and discuss their ideas with experts in all fields of geosciences. The EGU is looking forward to cordially welcoming you in Vienna.
Website:
http://www.egu2013.eu/home.html

Causes and Consequences of the Extended Solar Minimum Between Solar Cycles 23 and 24 (4CESM) in Key Largo, FL (USA)

Start : 2013-04-08 - End : 2013-04-12
The most recent solar minimum, solar cycle 23-24 minimum, was unusually long (266 spotless days in 2008, the most since 1913), and the magnetic field at the solar poles was approximately 40% weaker than

the last cycle; and unusually complex (the solar wind was characterized by a warped heliospheric current sheet, HCS, and fast-wind streams at low latitudes: the fast-wind threads the ecliptic more commonly in 2008 than 1996.) This complexity resulted in many effects observed from Sun to Earth, with many observations indicating unusual conditions on the Sun, in the heliosphere , and in the magnetosphere , ionosphere , and upper atmosphere of the Earth.
This remarkable set of conditions provide the scientific community with an exceptional opportunity to assess the nature and structure of a very quiet Sun, and an upper atmosphere relatively devoid of solar influences, helping to provide a better understanding of the relative roles of solar activity and internal variability in the dynamics of the Earth's upper atmosphere and ionosphere . Such an understanding requires a multidisciplinary approach.
The main goal of the conference is to bring together the solar, heliospheric, magnetospheric, upper atmosphere, and ionospheric communities to debate and discuss interdisciplinary work and reach a better understanding of the nature and structure of a very quiet Sun, and of an upper atmosphere relatively devoid of solar influences, and in doing so, to help clarify the role of solar activity in the dynamics and variability of the Earth's upper atmosphere and ionosphere relative to the internal variations.
Website:
http://chapman.agu.org/solarminimum/

NSO Workshop #27: 50 Years of the Seismology of the Sun and Stars in Sunspot, NM (USA)

Start : 2013-05-06 - End : 2013-05-10
In the last 50 years, helioseismology has made significant contributions to the knowledge of the Sun's interior physics and has led the way to asteroseismology. We have now reached an era where more sophisticated questions are being asked to understand the subtle properties of the Sun and other stars due to the synoptic and high-resolution observations available from BISON, GONG and space missions such as SOHO , SDO, CoRot and Kepler.
On this occasion, a workshop on the theme of '50 years of the seismology of the Sun and stars' is being organized to reflect the progress that has been made as well as to focus on future goals. We plan to bring together helio- and asteroseismologists, theorists and observers in a journey that will take us from the interior of the Sun and its magnetism towards the structure of distant stars and activity cycles.
Website:
http://www.nso.edu/workshops/2013

ILWS Science Workshop in Irkutsk, Russia

Start : 2013-06-23 - End : 2013-06-29
The 2013 ILWS Science Workshop will take place June 23-29, 2013 in Irkutsk, Russia and will be hosted by the Institute of Solar-Terrestrial Physics of the Russian Academy of Sciences
Website:
http://en.iszf.irk.ru/ILWS_2013

Space weather summer school in Alpbach, Austria

Start : 2013-07-16 - End : 2013-07-25
The Summer School Alpbach enjoys 36 years of tradition in providing in-depth teaching on different topics of space science & technology, featuring lectures and concentrated working sessions on mission studies in self-organised working groups. 60 young highly qualified European science and engineering students converge annually for stimulating 10 days of work in the Austrian Alps. 4 teams compete to design a space mission judged by a jury of experts. Students learn how to approach the design of a satellite mission and explore new and startling ideas supported by experts. The Summer School 2013 will focus on Space Weather .
The purpose of the Summer School is to foster the practical application of knowledge derived from lectures, to develop organisational and team-work skills and to encourage creativity. Teams will compete to design the best project, judged by an independent jury. The teams themselves are responsible for the selection of the subject of the project and for the team structure and working methods.

Website:
http://www.summerschoolalpbach.at/

7th International Workshop on Solar Polarization in Kunming, China

Start : 2013-09-09 - End : 2013-09-14
We gain information about the universe through analysis of the spectra from celestial objects. However, while the intensity spectrum represents a scalar quantity but electromagnetic radiation occurs in the form of transverse waves, the polarized spectrum provides us with a 4-vector, the Stokes vector. The increased amount of information space opens new windows to the universe, in particular for the exploration of magnetic fields. It is well recognized that the magnetic field is a primary agent responsible for structuring and the source of all variability on intermediate time scales, which manifests itself in all forms of solar and stellar activity.
It is therefore not surprising that every year there are many scientific meetings organized with the objective of studying the role of magnetic fields in cosmic objects. What is largely missing in these meetings is however an in-depth investigation of the fundamental aspects of how magnetic fields can be determined by the means of spectro-polarimetry, our main gateway to cosmic magnetism. The primary aim of our series of Workshops is to address these fundamental aspects, with less emphasis on the morphological and physical properties of cosmic magnetic fields.
Website: http://spw7.ynao.ac.cn/

40th COSPAR Scientific Assembly in Moscow, Russia

Start : 2014-08-02 - End : 2014-08-10
The 40th COSPAR Scientific Assembly will be held in Moscow, Russia from 2 - 10 August 2014. This Assembly is open to all bona fide scientists.
Website:
http://www.cospar-assembly.org/