

SPACE WEATHER PORTALS

monitoring and forecasting made easy



David.Berghmans@gmail.com

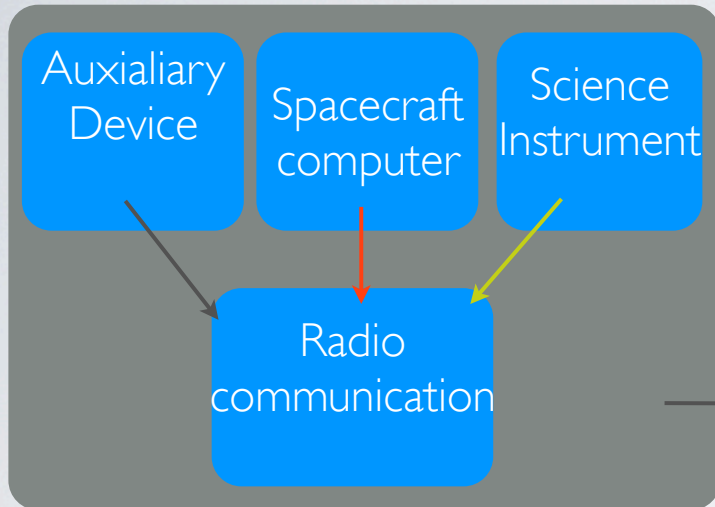
Royal Observatory of Belgium

<http://sidc.be>, <http://proba2.sidc.be>

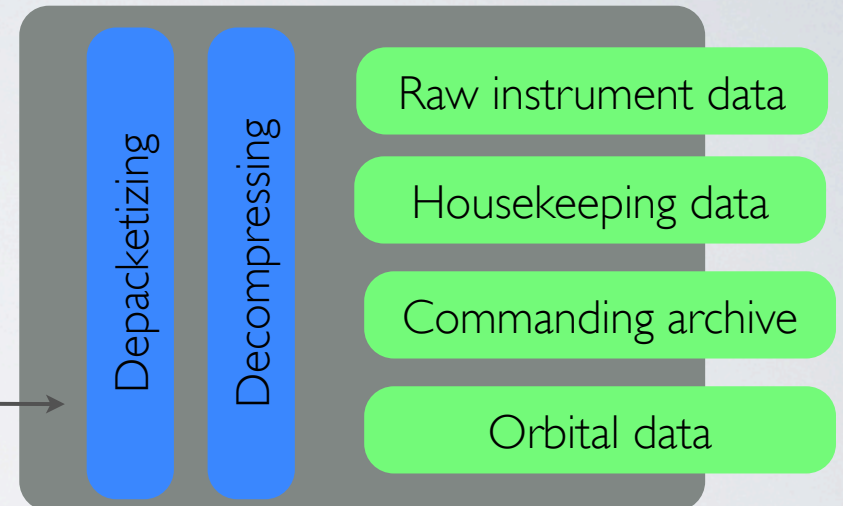


HOW DOES SPACE WEATHER DATA GET ONLINE?

Spacecraft



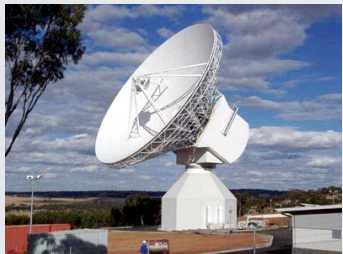
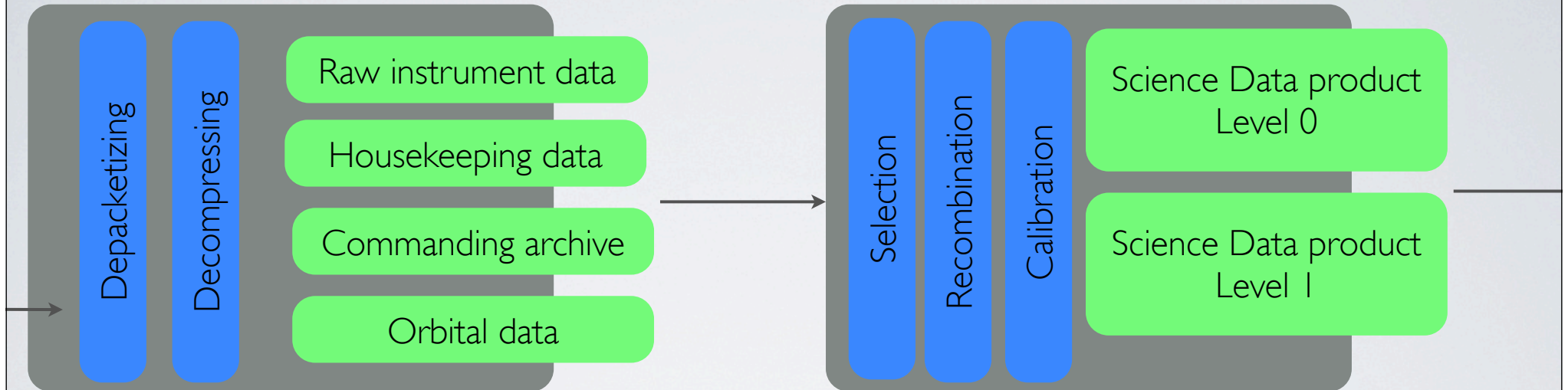
Mission Operations Center



HOW DOES SPACE WEATHER DATA GET ONLINE?

Mission Operations Center

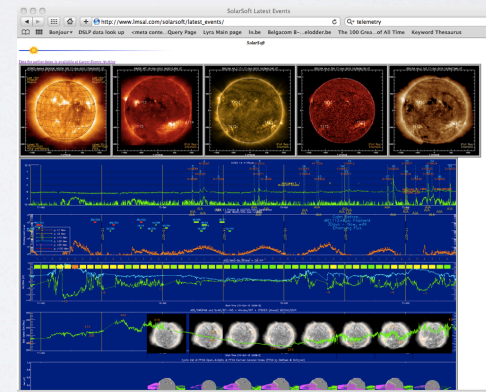
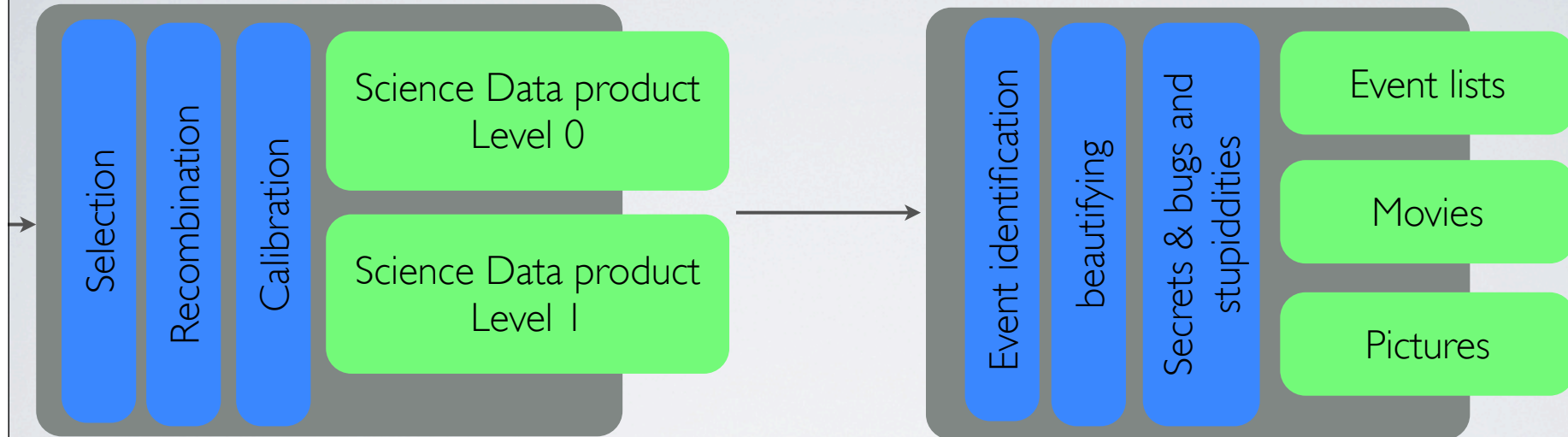
Science Operations Center



HOW DOES SPACE WEATHER DATA GET ONLINE?

Science Operations Center

Space Weather Website



<http://proba2.sidc.be/Presentations/ICTP>

Go directly to
ACE



Space Weather Portals

http://proba2.sidc.be/Presentations/ICTP/

Bonjour DSLP data look up <meta conte...Query Page Lyra Main page In.be

Space Weather Portals

Prediction Centers

- NOAA Space Weather Prediction Center (Boulder) <http://www.swpc.noaa.gov/>
- SIDC-Royal Observatory of Belgium (Brussels) <http://sidc.be/LatestSWData/LatestSWData.php>
- IPS Radio and Space Services http://www.ips.gov.au/Space_Weather
- more ... [The International Space Environment Service](#)

Overview of the Sun

- Solar Monitor <http://www.solarmonitor.org/>
- Global Halpha network <http://www.bbso.njit.edu/Research/Halpha/>
- SDAC latest images <http://umbra.nascom.nasa.gov/images/latest.html>

Events

- Solarsoft Latest Events http://www.lmsal.com/solarsoft/latest_events/
- SOTERIA online Solar Event Catalogue <http://soteria-event.uni-graz.at/>
- CACTUS, Computer Aided CME recognition <http://sidc.be/cactus>

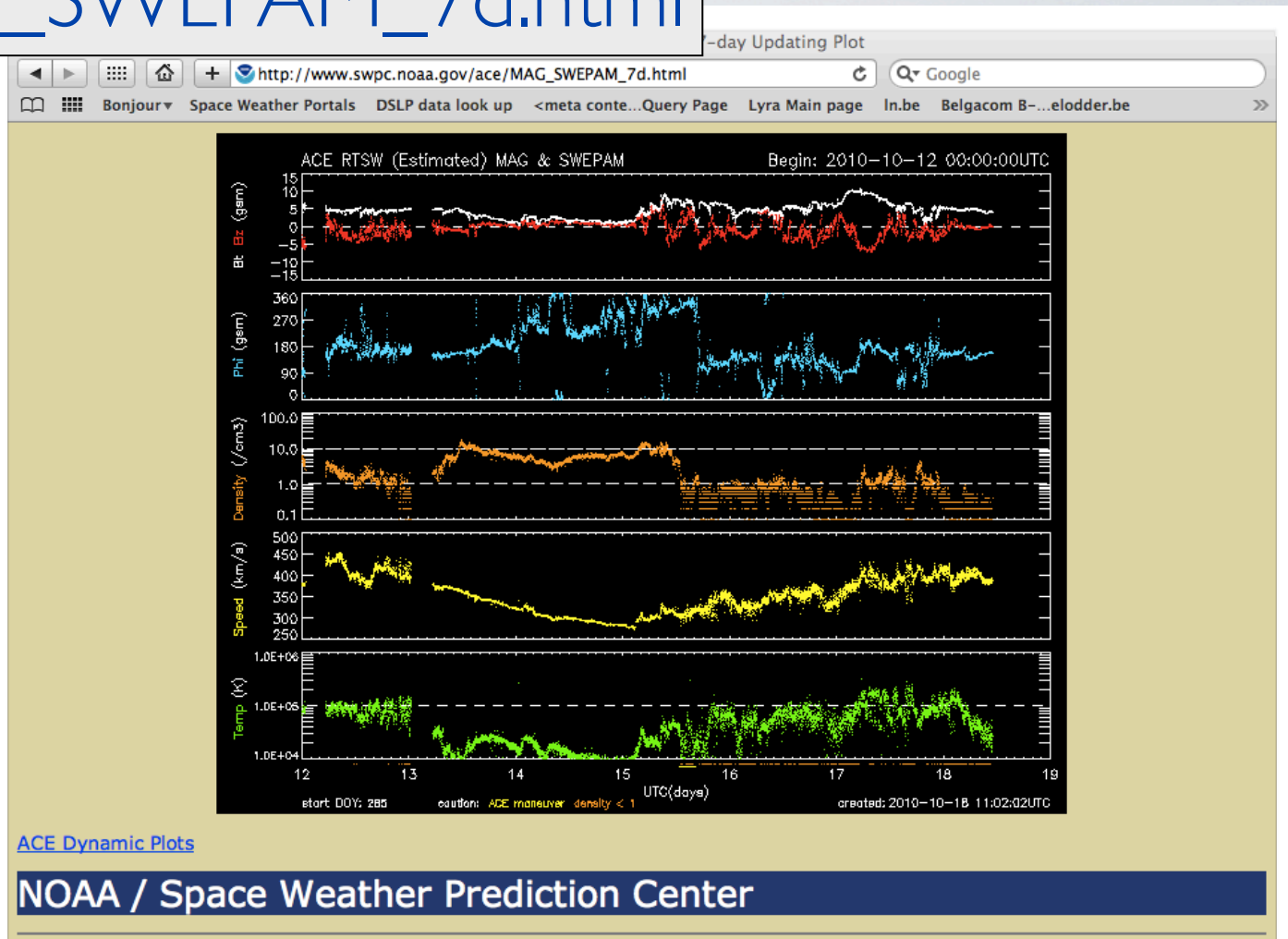
Special data sets

- The Sun Today (SDO) <http://sdowww.lmsal.com/suntoday>
- Flare monitoring through GOES Xray flux http://www.swpc.noaa.gov/rt_plots/xray_5m.html
- Coronal hole maps from SOLIS (National Solar Observatory) http://solis.nso.edu/vsm_fulldisk3.html
- ACE solar wind measurements http://www.swpc.noaa.gov/ace/MAG_SWEPAM_3d.html
- STEREO images http://stereo-ssc.nascom.nasa.gov/beam/beam_secchi.shtml
- SWAP latest movie http://proba2.oma.be/swap/data/mpg/movies/latest_swap_movie.mp4

Presentation files

- Logistics of Space (Weather) Data [[Keynote file](#)], [[PDF](#)]
- Space Weather Portals [[Keynote file](#)], [[PDF](#)]

http://www.spwpc.noaa.gov/.../ace/MAG_SWEPAM_7d.html



Is the Bz component of the solar wind negative? How fast is the wind speed?

Space Weather Topics:
[Space Weather Now](#), [Today's Space Wx](#), [Data and Products](#), [About Us](#),
[Workshop](#), [Education/Outreach](#), [Disclaimer](#), [Customer Services](#), [Contact Us](#)

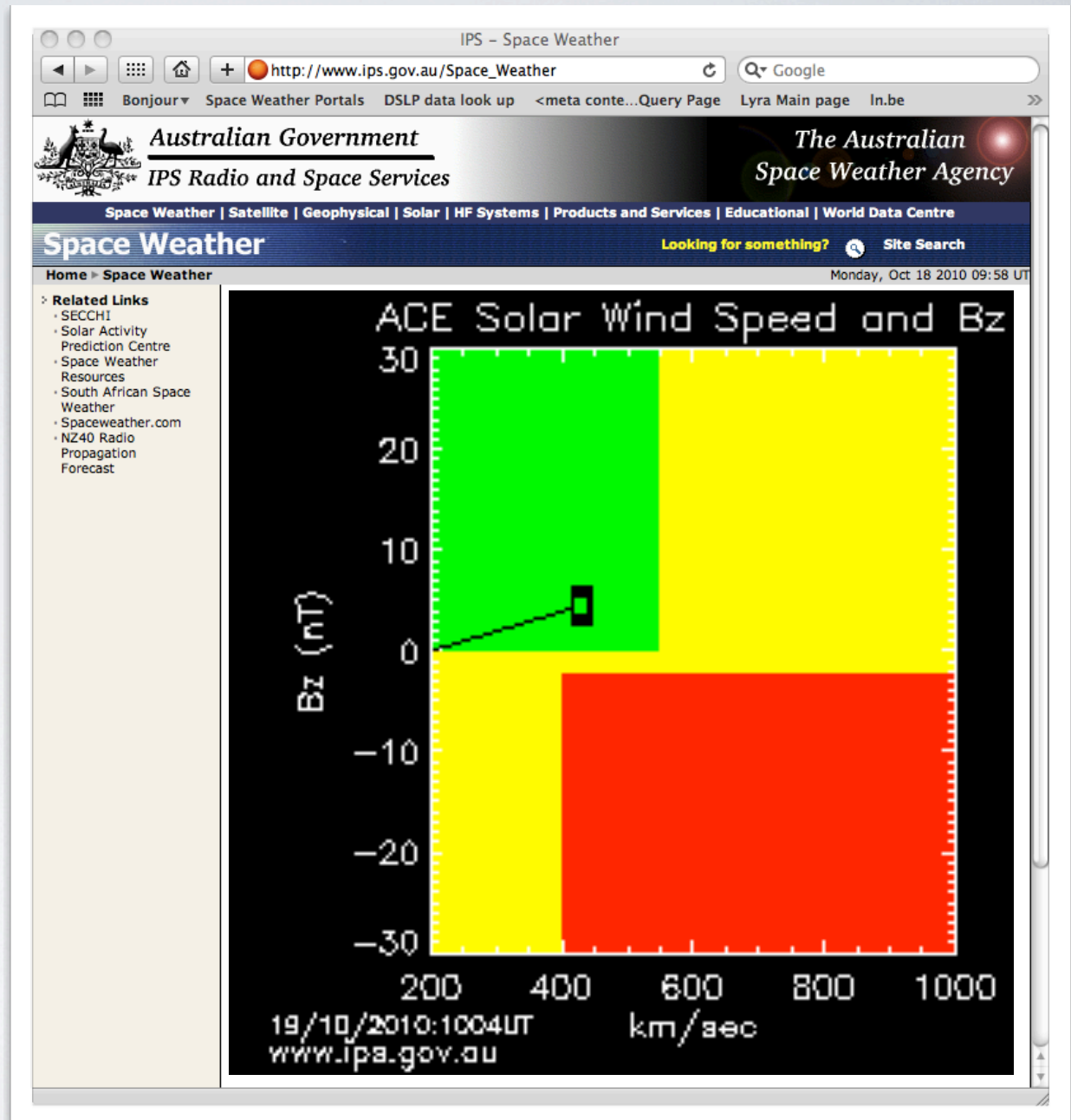
<http://www.ips.gov.au/>

Australia
IPS radio and space services

http://www.ips.gov.au/Space_Weather

Check solar
wind speed

What means
the red area?"



<http://sidc.be>

Brussels (Belgium)
SIDC- Royal Observatory of Belgium



<http://sidc.be/>

SIDC - Solar Influences Data Center

http://sidc.be/index.php

SOTERIA events catalogue

Bonjour DSLP data look up <meta conte...Query Page Lyra Main page In.be

SIDC - Solar Influences Data Analysis Center

Protons: Quiet Predicted 10CM Flux: 087 Predicted AP index: 0

Welcome to the Solar Influences Data Analysis Center (SIDC), which is the solar physics research department of the Royal Observatory of Belgium. The SIDC includes the World Data Center for the sunspot index and the ISES Regional Warning Center Brussels for space weather forecasting.

PRESTO FROM SIDC - RWC BELGIUM Sun Oct 17 2010, 1157 UT

An M2.9 flare occurred in the evening of Oct 16. No CME was associated with the event. The geomagnetic disturbances reached active levels on a planetary index the last 2 years. The Earth passed the shock leading the CME which left the Sun on Oct 16. The magnetic ACE data shows some turbulence. Oct 18, few days with unsettled geomagnetic conditions are possible as consequence of the passage of a fast solar wind emanating from a thin, west-east oriented

Latest SWAP image

Latest LYRA cu

Latest USET H-alpha image

STEREO Ahead H 1

2010-08-01 17:29:01

esww7

CESR

Sep 17, 2010 : ... release

Aug 17, 2010 : ... release

Jun 11, 2010 : SIREN ... English/Ned/Fra

May 04, 2010 : SWAP & ... 2 Guest Investigator Program

Apr 20, 2010 : SDO - First Light

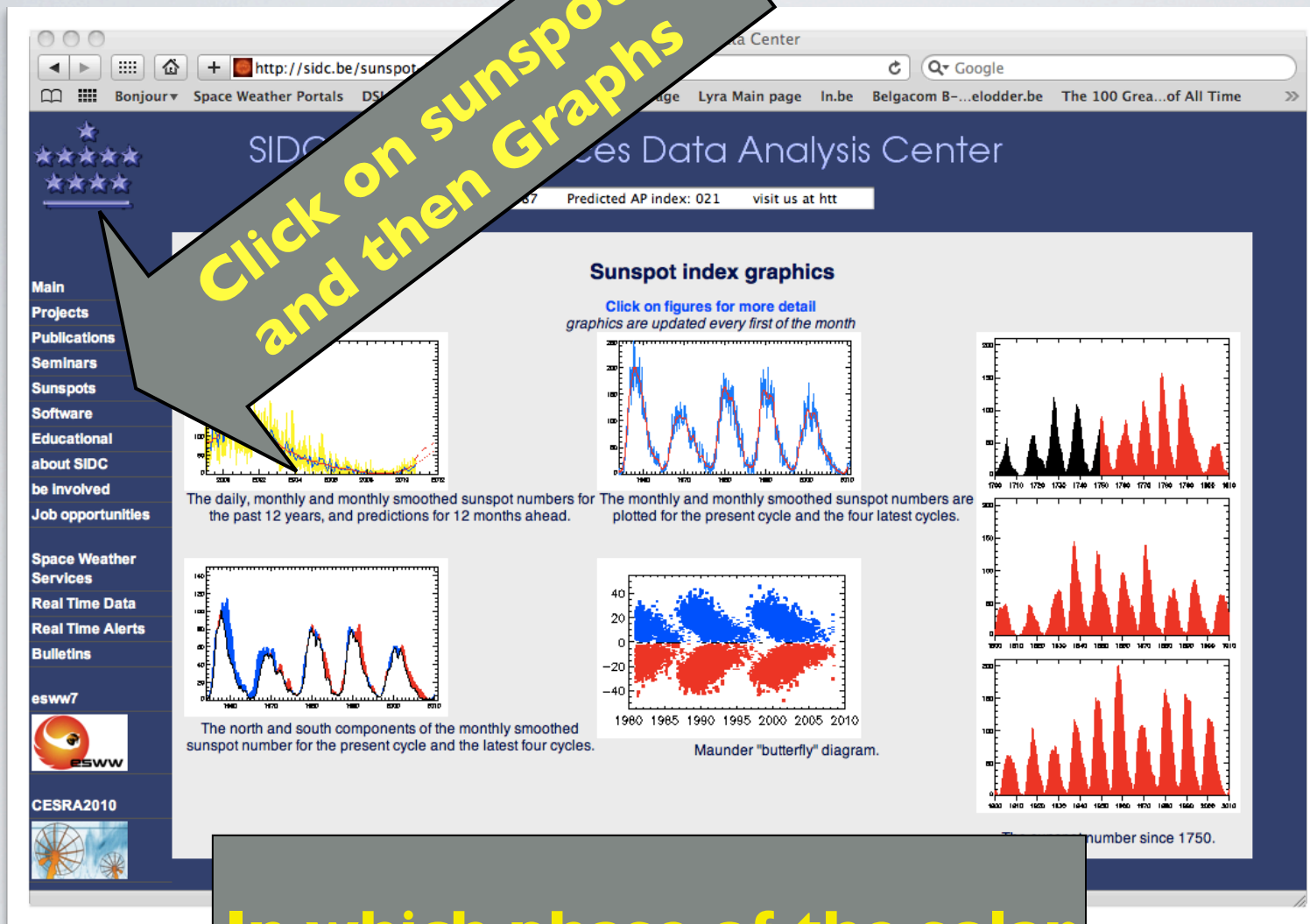
[click here for all SIDC news items](#)

Recent news?

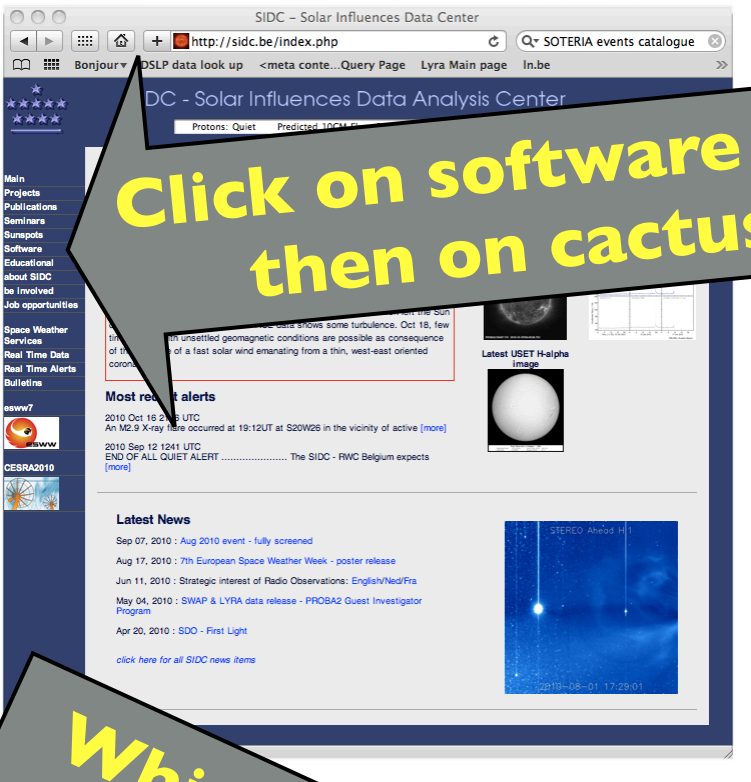
What was the highlight of last week?

How old are the last SWAP & USET

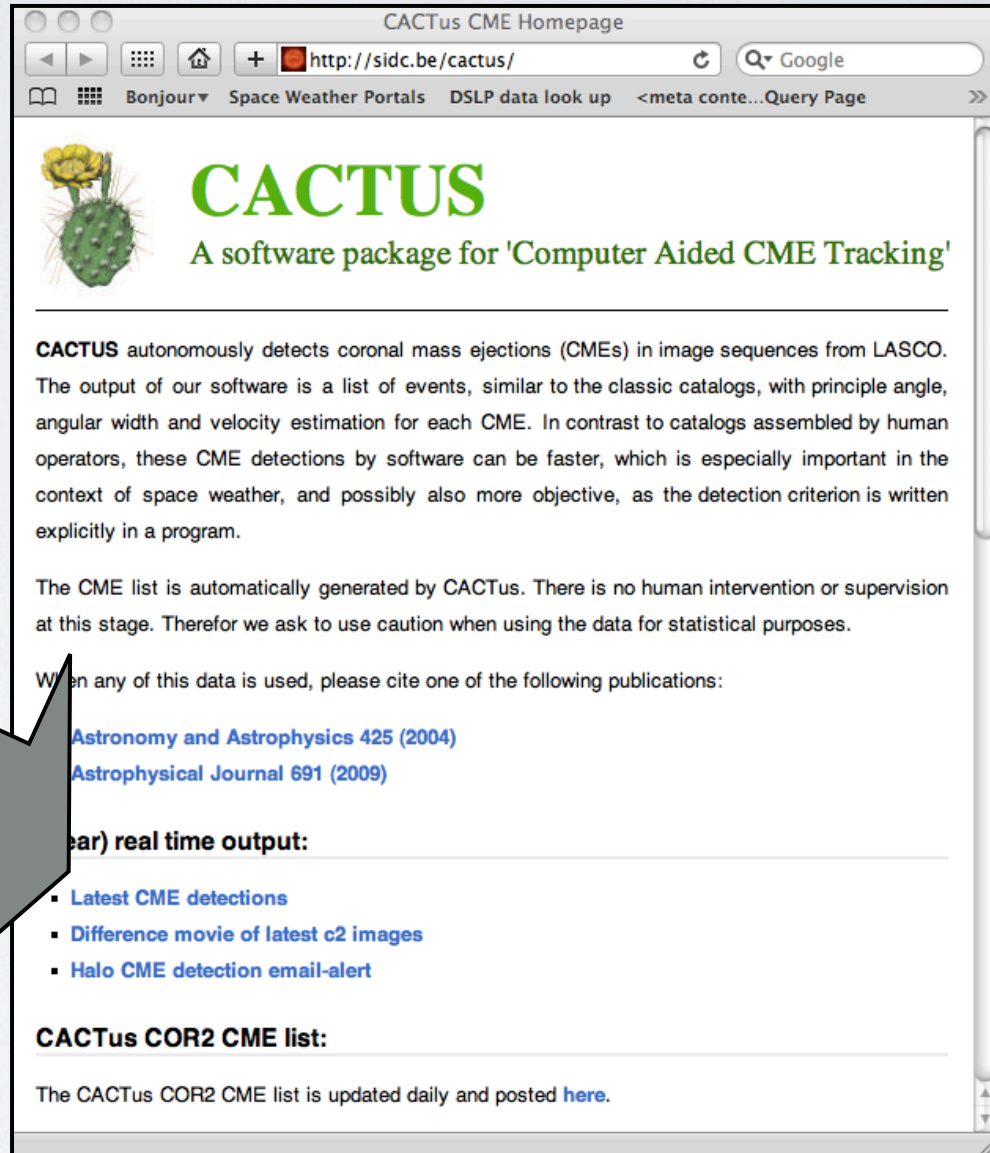
Click on sunspots
and then Graphs



In which phase of the solar
cycle are we?



Click on software and then on cactus



Which was the biggest CME recently?

<http://sidc.be/cactus>



CACTUS

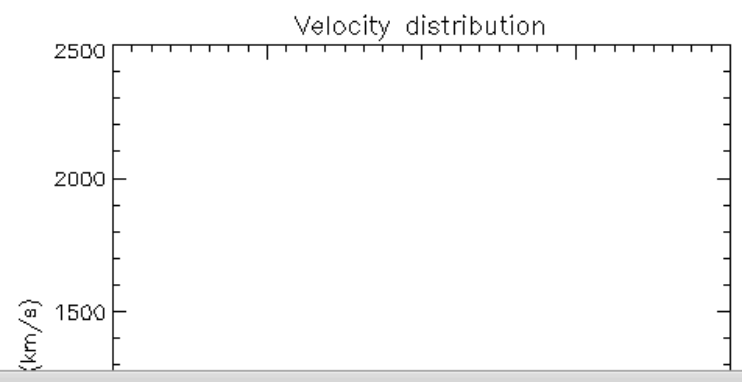
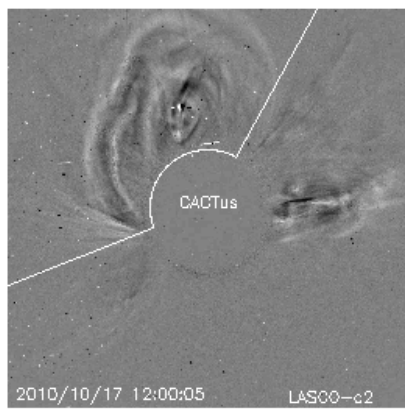
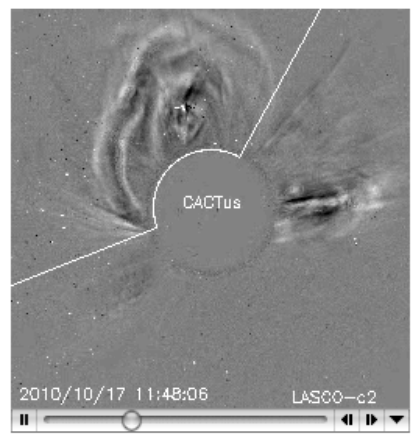
A software package for 'Computer Aided CME Tracking'

Details and graphs for CME0021

# CME	t0	dt0	pa	da	v	dv	minv	maxv	halo?
0021	2010/10/17 09:24	06	041	140	0230	0091	0136	0425	II

CME Movie :: [Download](#) ::

Sample Image



<http://www.ises-spaceweather.org/>



Find a Regional Warning Center near your home

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

Solar Monitor
(Trinity College Dublin)

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

Compare magnetogram of AR 11112 of Oct 13 with Oct 15

www.SolarMonitor.org

20101018

SOHO Movies

Active Regions

11112
11113
11115
11116
11114

MDI Mag 20101018 08:05

MDI Cont 20101018 08:46

GHN H α 20101015 12:22

SWAP 174Å 20101018 06:47

AIA 193Å 20101018 09:35

XRT 20101017 06:08

More Instruments =>

Summary: Activity Level -- LOW -- 2 C-class flares in past two days

Welcome to SolarMonitor, hosted at the Solar Physics Group, Trinity College Dublin and at NASA Goddard Space Flight Center's Solar Data Analysis Center (SDAC). These pages contain near-realtime and archived information on active regions and solar activity. For information on our new SolarMonitor IDL Data Object (SOLMON), check out the SOLMON Tutorial. Check out News for other updates.

Home
Forecast
Search
News
Credits

GOES
X-rays
Protons
Electrons

ACE
Plasma
B Field

SDO/EVE
3 Day
6 Hour

Events
HEK
SolarSoft
SWPC

MM
MeiD

IDL
SOLMON
Object

GONG+ MDI GHN EIT Hinode STEREO SWAP FullDisk
Mag / Cont / Far Mag / Cont H α 304 / 171 / 195 / 284 XRT A / B 174 Slideshow

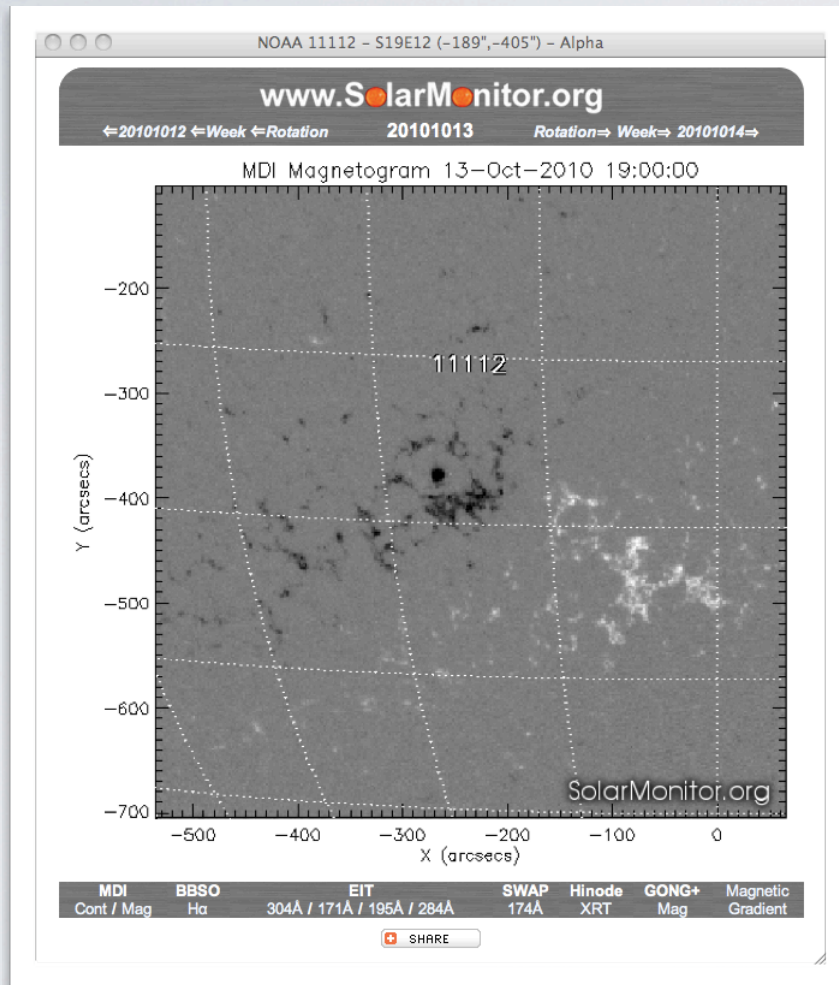
Today's NOAA Active Regions						
Number	Location	Hale	McIntosh	Area	NSpots	Events
11112	S20W50 (694°, -385°)	$\beta\gamma/\beta\gamma$	Eal/Dsl	0180/0120	16/16	/C1.7(08:52) C1.8(17:30)
11113	N18E17 (-268°, 211°)	α/α	Hsx/Hsx	0160/0130	02/01	-
11115	S28E32 (-451°, -522°)	α/α	Hsx/Hsx	0140/0170	01/01	-
11116	N22W20 (306°, 277°)	$\beta/-$	Bxo/---	0020/---	02/--	-
11114	S21W87 (897°, -347°)	/	/	/	/	-

Events not associated with currently named NOAA regions: None

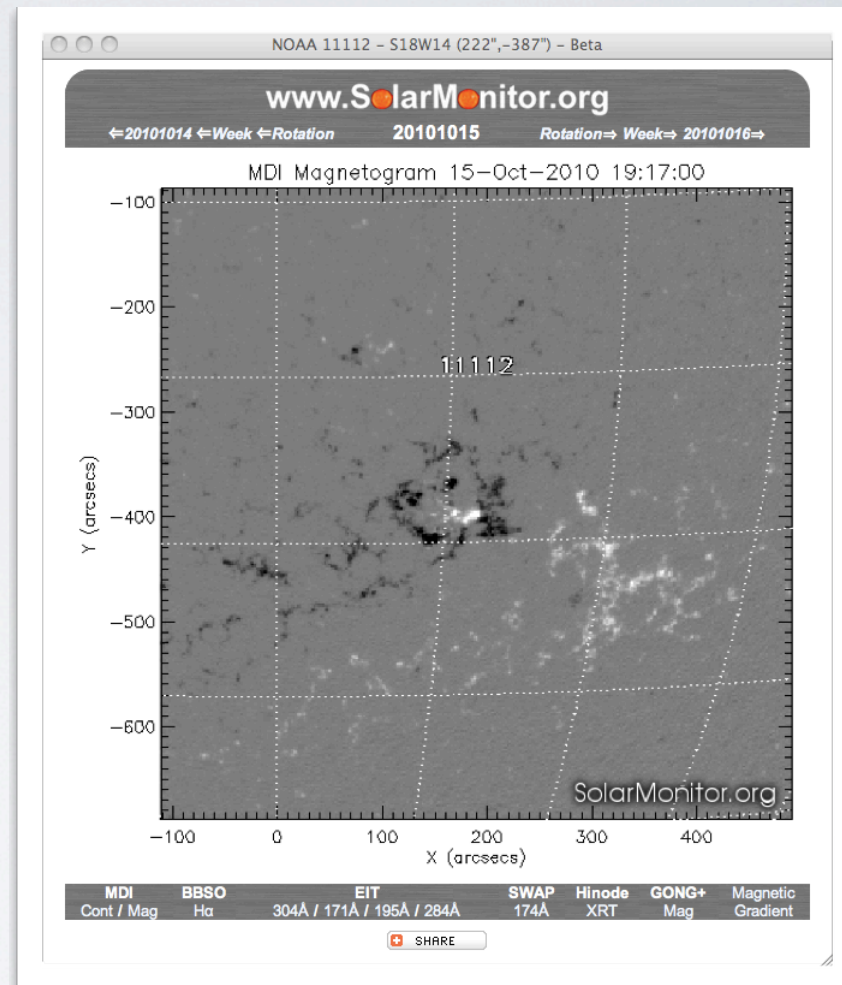
Note: The tabulated data are based on the most recent NOAA/USAF Active Region Summary issued on 18-Oct-2010 00:30 UT, the values to the right of the forward slashes representing yesterdays values or events. Regions with no data in above property fields have decayed and exhibit no spots. The region positions are valid on 18-Oct-2010 09:30 UT.

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

Last Wednesday



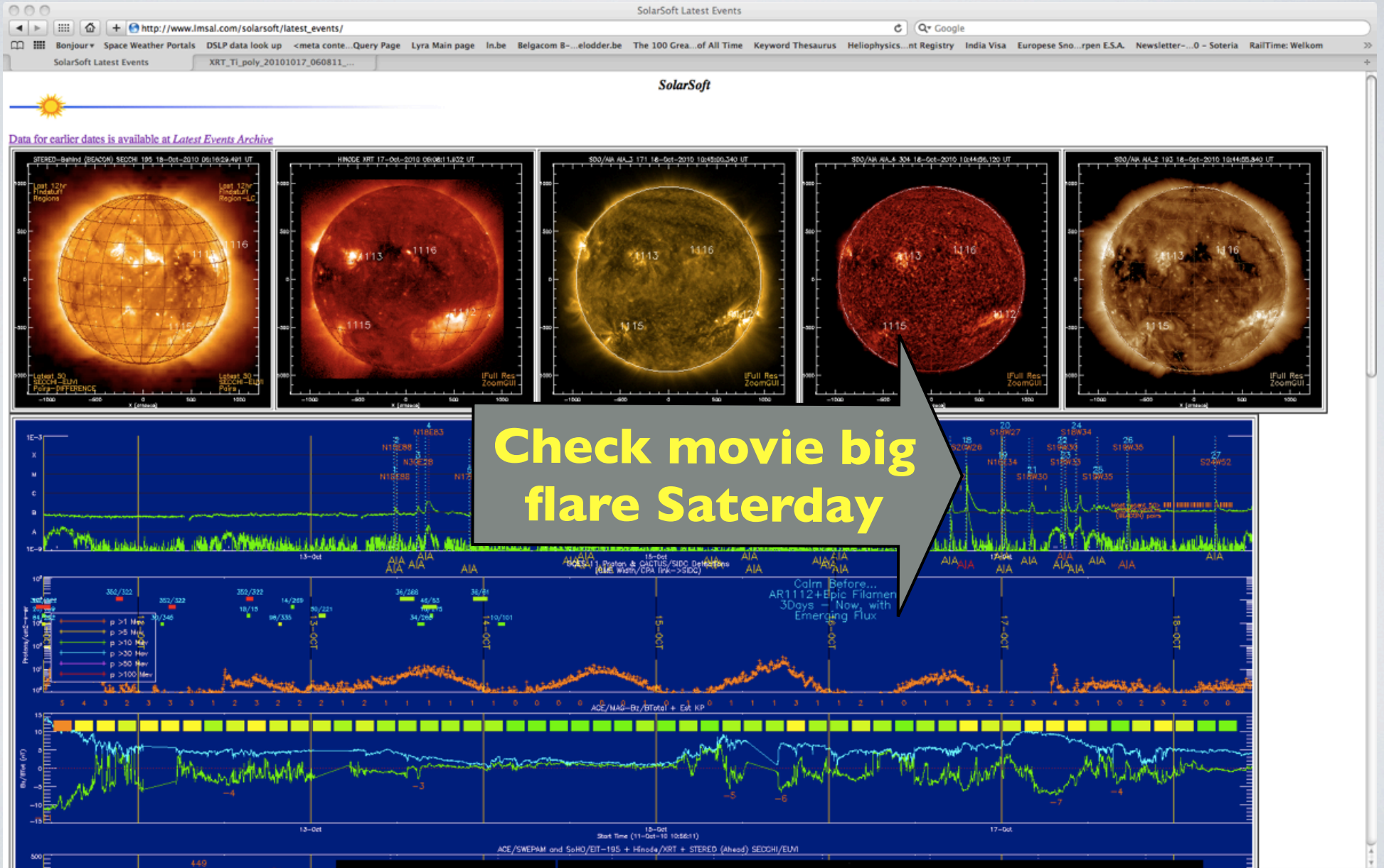
Last Friday



http://www.lmsal.com/solarsoft/latest_events/

Solarsoft Latest Events Page

http://www.imsal.com/solarsoft/latest_events/



<http://soteria-event.uni-graz.at/>

SOTERIA events database

<http://soteria-event.uni-graz.at/>

Look for SSN for
your birth month

Is this solar
min or max?

Soteria Solar Event Catalogue

http://soteria-event.uni-graz.at/

Bonjour Space Weather Portals DSLP data look up <meta conte...Query Page Lyra Main page In.be Belgacom B-...elodder.be

Soteria Solar Event Catalogue XRT_Ti_poly_20101017_060811_...

SOTERIA

SOLAR-TERRRESTRIAL INVESTIGATIONS AND ARCHIVES

SOTERIA ONLINE SOLAR EVENT CATALOGUE

WELCOME TO THE SOTERIA ONLINE SOLAR EVENT CATALOGUE. THIS SERVICE PROVIDES ONLINE ACCESS TO SOLAR EVENT CATALOGUES MAINTAINED BY MEMBERS OF THE SOTERIA CONSORTIUM. FOR DETAILS ABOUT THE SOTERIA PROJECT GO TO [HTTP://SOTERIA-SPACE.EU](http://soteria-space.eu). THE CURRENTLY AVAILABLE CATALOGUES INCLUDE CME EVENTS, H-ALPHA FLARE LISTS AND SOLAR ACTIVITY INDICES. FOR AN OVERVIEW OF ALL CATALOGUES LOOK [HERE](#). THIS SERVICE WAS DEVELOPED IN COLLABORATION WITH THE FP7 PROJECT [HELIO](#) AND IS FUNDED BY THE EUROPEAN COMMISSION UNDER THE 7TH FRAMEWORK PROGRAMME.

START QUERYING A CATALOGUE OR GO TO **DETAILS** FOR MORE INFORMATION ON EVENT CATALOGUES, PROVIDERS, AND DOCUMENTATION.

SELECT A CATALOGUE AND CLICK NEXT

Kanzelhoehe Flare list

DETAILS
[ALL CATALOGUES](#)
[TECHNICAL DETAILS AND HELP](#)
[ACKNOWLEDGEMENTS](#)

SITE MAINTAINED BY UNIV. GRAZ
[CONTACT](#)

<http://sdowww.lmsal.com/suntoday.html>

The Sun Today

<http://sdownwww.lmsal.com/suntoday.html>

Explore

The Sun Today

www.lmsal.com/suntoday.html?suntoday_date=2010-10-18

DSLP data look up < meta conte... Query Page Lyra Main page In.be Belgacom B-... elodder.be The 100 Grea... of All Time Keyword Thesaurus Heliophysics... nt Registry

IMAGING ASSEMBLY

HEK PUBLICATIONS | RELATED LINKS | HEK HOME | Recent Reported Events

ATIONS DATA TEAM SITE

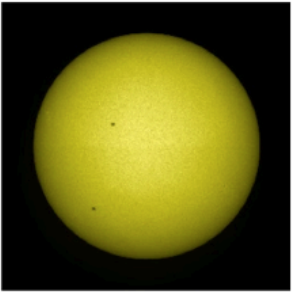
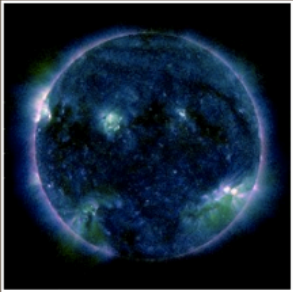
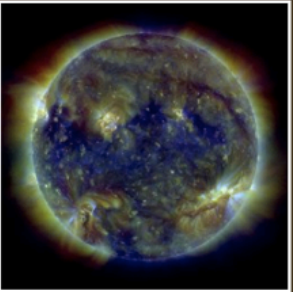
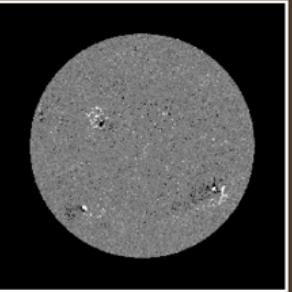
2010-10-18

own were taken at about 18-Oct-10 10:54:41 J130 UT

"What's this?"

When were those images taken?

Image Channels

			
4500: [1K] [4K] 1600: [1K] [4K] [PFSS] 1700: [1K] [4K] [PFSS] 304: [1K] [4K] [PFSS] 304 211 171: [1K] [4K] [PFSS]	094 335 193: [1K] [4K] [PFSS] 094: [1K] [4K] [PFSS] 335: [1K] [4K] [PFSS] 193: [1K] [4K] [PFSS] 131: [1K] [4K] [PFSS]	211 193 171: [1K] [4K] [PFSS] 211: [1K] [4K] [PFSS] 193: [1K] [4K] [PFSS] 171: [1K] [4K] [PFSS]	HMI B(los): [1K] [4K] [PFSS] B(los) 171: [1K] [4K] [PFSS]


NOTE: Mouse over wavelengths to change preview pictures.

FITS (Right click and select "Save/Download Link..."): [4500](#), [1700](#), [1600](#), [335](#), [304](#), [211](#), [193](#), [171](#), [131](#), [94](#), [Blos](#)

Events

0:00

Disk Carrington Map



about / contacts

Search results (export)

1.AR
2.AR
3.AR
4.AR
5.AR
6.AR
7.AR
8.AR
9.AIA Flare
10.AR
11.AR
12.AR
13.AR
14.AR

ISolSearch (v1.1)

Welcome to ISolSearch -- a window into the Heliophysics Events Knowledgebase (HEK). ISolSearch and HEK are designed to guide heliophysics researchers to relevant solar data, and primarily to that acquired by the Solar Dynamics Observatory (SDO) with the Atmospheric Imaging Assembly (AIA) and the Helioseismic and Magnetic Imager (HMI).

- [Users Guide](#)
- [QuickTime HEK User Video](#)
- [SolarSoft IDL](#)
- [AIA Documentation](#)

other links...

- [Heliophysics Events Knowledge Base](#)

YOUR TURN

Find out what happened around April 3-5 2010. You might want to Google on “Galaxy 15”

Nothing spectacular happened on Oct 13. Is this correct? What was the biggest flare? What was the widest CME?

**Read the online space weather tabloid:
<http://spaceweather.com>**