



SIDC/RWC & URSIgram - Contents

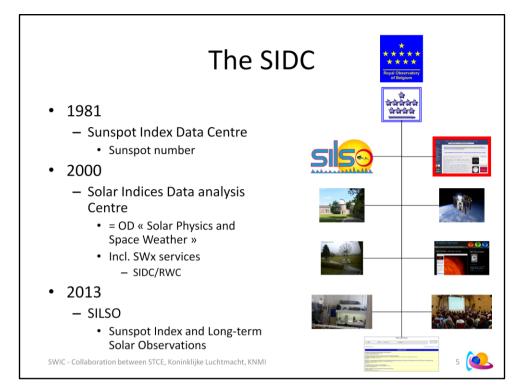
- SIDC/RWC
- URSIgram
 - Overview features
- SWx alerts
- Exercises

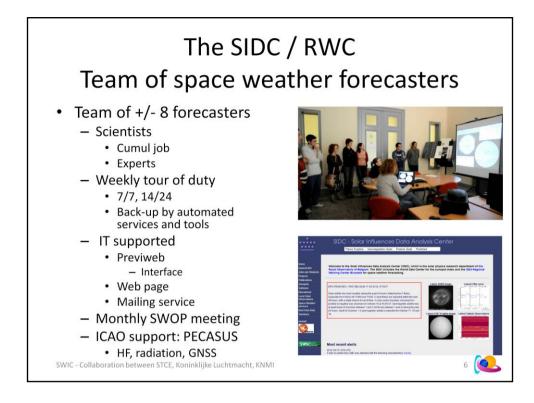


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International Space Environment Service

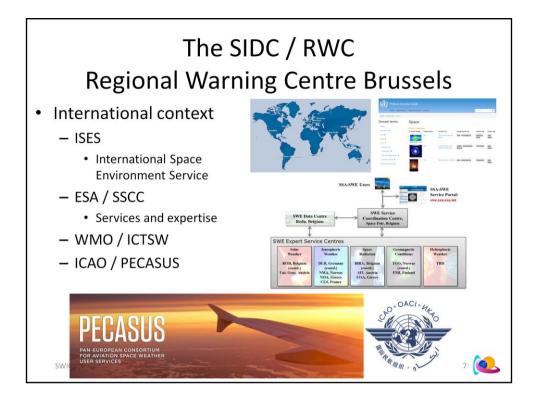
ISES (International Space Environment Services): international network

• ROB/SIDC is RWC (Regional Warning centre) since 2000

endorsement by national government

• Services delivered to SWE network developed under ESA SSA (Space Situational Awareness) program (cfr. presentation by MK). Expert Group coordinating the Expert Service Centre "Solar Weather"

ICAO: International Civil Aviation Organization PECASUS: Pan European Consortium for Aviation Space weather User Services



International Space Environment Service http://www.spaceweather.org/

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WMO: WMO: ICTWS: 4-year \rightarrow plan for consolidation of SWx services in WMO. ICTSW: Interprogramme Coordination Team on Space Weather WMO: World Meteorological Organization

Weekly SIDC SWx briefing



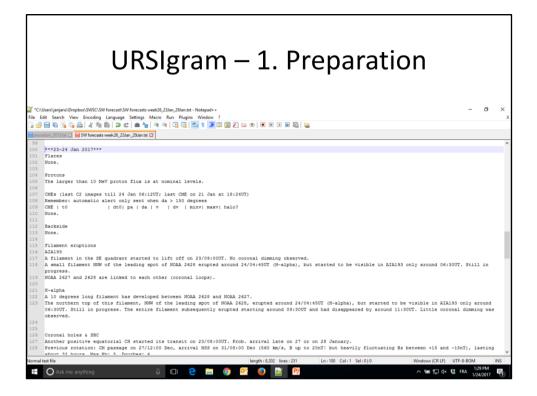
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Product: documentation at http://www.sidc.be/products/bul	STCE Newsletter	
SIDC Weekly bulletin on Solar and Geomagnetic activity		
MEEK 839 from 2017 Jan 23 SOLAR ACTIVITY	23 Jan 2017 - 29 Jan 2017	
Solar activity was very low to low, with a single C-class flare produced by spotless active region MOAA 2627 near the west limb on 28 January (C2 flare peaking at 21:09UT). A new region, NOAA 2629, developed quickly on 24 January and was responsible for most of the B-class flaring on 24-24 January. The other regions were mostly quiet and decaying. No earth-directed coronal mass ejections (CMEs) were observed in available coronagraphic imagery. The greater than 10MeV proton flux was at nominal levels. A small positive equatorial coronal hole (CB) started its transit of the central meridian on 23 January, and an engevice trans-equatorial CH was transiting the central meridian (CM) by the end of the period.	Published by the STCE - this issue: 3 Feb 2017. It http://www.take.be/hereaktedr/. The State-Terrestrial Center of Excellanian Collaborative relaxed of the Belgian Instit Aeronomy, the Royal Observatory of Belgian Meteorological Institute of Belgian	(STCE) is ute for Spi
Solar wind conditions near Earth were determined by the high speed stream (HSS) from	Content	Page
the small positive coronal hole (CH). The co-rotating interaction region (CIR) that	1. STCE Workshop "Geomagnetic storms and solar eruptions: from Sun to Earth"	2
receded it, drove a small shock on 26 January at 07:12UT. The proper HSS arrived a ew hours later around 13:45UT of the same day, with solar wind speed gradually	2. The STCE meets	6
ncreasing from an initial 375 km/s up to values near 670 km/s around 06UT on 27	3. PROBA2 Observations (23 Jan 2017 - 29 Jan 2017)	6
anuary. Bz oscillated wildly between -12 nT and +13 nT, preventing the development	Review of solar and geomagnetic activity	10
f a strong geomagnetic disturbance. As a result, only active geomagnetic conditions ere observed on 26 and 27 January, while the rest of the week was at guiet levels	5. The International Sunspot Number	12
where observed on 20 and 27 January, while the rest of the week was at quiet revers	6. Geomagnetic Observations at Dourbes (23 Jan 2017 - 29 Jan 2017)	13
DAILY INDICES	7. Review of ionospheric activity (23 Jan 2017 - 29 Jan 2017)	14
DATE DATE BC EISW 10CM AL BWG M X DATE (1// 057 040 2) (1// 057 044 066 B10 0 0 2017 Jan 24 055 044 046 025 005 B10 0 0 2017 Jan 25 044 046 055 005 B1.4 0 0 2017 Jan 25 053 039 083 012 B1.1 0 0 2017 Jan 27 03 029 083 012 B1.1 0 0 2017 Jan 27 03 029 080 021 A8.1 0 0 2017 Jan 28 /// 029 079 010 A8.5 0 0 2017 Jan 28 // 029 079 010 A8.3 0 0	SIDC Space Weather briefing	
# RC : Sunspot index (Wolf Number) from Catania Observatory (Italy)	23 January - 29 January 2017	
# EISN : Estimated International Sunspot Number # 10cm : 10.7 cm radioflux (DRAO, Canada)	Jan Janssens	
	A second s	
Ak : Ak Index Wingst (Germany) BKG : Background GOES X-ray level (NOAA, USA)	SIDC forecaster team	

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vare guide I Solar			forecast for >10 MeV protons when a medium or stronger SEP storm risk is expected following detection of a >=M1 fare or a Ground Level Enhancement (GLE) Forecast, solar events, daily solar and geomagnetic indices, solar regions: data	Encoded data	stronger SEP radiation risk	BIRA-IASB)					
vare guide I Solar rvations e Weather ces Time Data nars	Geoalert RWC-Belgium	xut geo	torecast for -10 MeV protons when a medium or stronger SEP storm risk is expected following detection of a >=M1 flare or a Ground Level Enhancement (GLE) Forecast, solar events, daily solar and geomagnetic indices, solar events, daily	Encoded data (ISES)	stronger SEP radiation risk daily	BIRA-IASB) SIDC (RWC-Belgium)					

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From https://www.merriam-webster.com/dictionary/ursigram URSIgram: **Origin and Etymology of** *ursigram*

International Scientific Vocabulary

- ⇒ *ursi* (from French Union Radiophonique Scientifique Internationale, organization which inaugurated the broadcast in 1930) + -gram
- ⇒ http://www.spaceweather.org/ISES/code/code.html

URSIgram – 2. Previwe	b / Flares
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	Mostly qui	et flaring con	ditions are e	pected, with	a small cha	ance on an is	olated C-clas	event.									
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Forecast for 2017-01-24: 82 8 Forecast for 2017-01-25: 80 8 Forecast for 2017-01-25: 78 8 Links • Latest 10.7cm measurement • SWPC radio flux measurements (old SWPC site: NO NEW SITE EQUIVALENT) • Radio bursts Humain • NOAA SWPC event lists: today, yesterday, archive, ROB-hosted searchable flare arch • Culgoorn Latest Radio burst • Learmonth spectrographs	10cm-Flux ⁹ ⁹ ⁹ ⁹ ⁹ ⁹ ⁹ ⁹
Finish forecast List of form errors • </td <td>▶ へ See 12 d+ 13 FRA 100 FM 1/24/2017 戦</td>	▶ へ See 12 d+ 13 FRA 100 FM 1/24/2017 戦

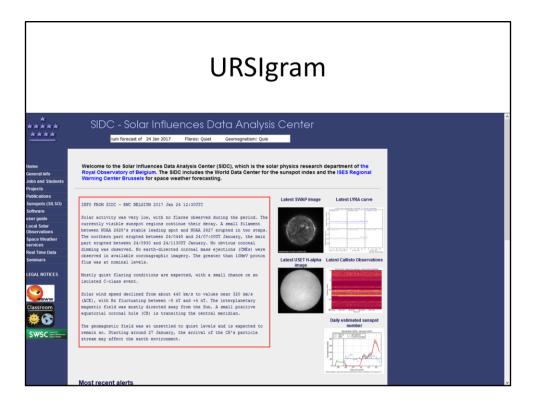
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SIDC UBSIGRAM 70124 SIDC SOLAB RULETIN 24 Jan 2017, 1228UT SIDC FORECRIT (whis from 1230UT, 24 Jan 2017 until 26 Jan 2017) SOLAB FLARES : Quiet conditions (<50% probability of C-class flares) GUIDANDETINE : Quiet (Ac20 and Ke4) PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 003 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 003 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 003 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 003 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 003 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 003 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 003 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 003 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 003 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 003 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 003 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 003 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 003 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 003 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 003 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 003 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 030 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 030 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 030 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 030 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 030 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 030 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 030 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 030 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 030 PREDICTIONS FOR 24 Jan 2017 100H FLUX: 080 / AP: 030 PREDICTIONS FOR 24 Jan 240/FLUX: 080 / AP: 030 PREDICTIONS FOR 24 Jan 240/FLUX: 080 / AP: 030 PREDICTIONS FOR 24 Jan 240 / AP: 040 / AP:					mall in	C-class flares) observed during the e thair decay. A m book 2627 expeed and 24/07:00UT /1300UT January. N ed coconal mass phic imagery. The	24 Jan 2017 until 2: 50% probability of 4) FLUX: 082 / AP: 002 FLUX: 080 / AP: 003 FLUX: 078 / AP: 005 FLUX: 078 / AP: 005 FLUX: 078 / AP: 005 ON, with no flares pot regions continu a leading spot and 34 del Abueen 24/0945 and 24/0445 weak 24/093 and 24 del No earth-direct wailable cornegrag at nominal levels.	TTN 24 Jan 2017, 1 anid from 1290T; 2 Quiet conditions (Quiet (A20 and K- Quiet 24 Jan 2017 10CM 1 25 Jan 2017 10CM 1 25 Jan 2017 10CM 1 ctivity was very 1 ctivity was very 1 ncti visbile sung NCM 2012 to 1 ncti visbile sung NCM 2012 to 1 ncti visbile sung NCM 2012 to 1 ctivity was very 1 ctivity was very 1 ctivity was observed and the support of the was eV proton flux was	SIDC SOLAR BULLE SIDC FORCAST (W SOLAR FLARES : GECMALGNER FLARES : PREDICTIONS FOR PREDICTIONS FOR PREDICTIONS FOR COMMENT: Solar a period. The our flamman be her period. The our flamman be her period. Unter solar obvious coronal greater than 10%
Mostly quiet flaring conditions are expected, with a small chance on an isolated C-class event. Solar wind speed declined from about 440 km/s to values near 320 km/s (ACE), with Bs fluctuating between -5 nT and +4 nT. The interplanetary magnetic field was notly directed away from the Sun. A small positive equatorial coronal hole (CD) is transling the central meridian. The geomagnetic field was a tunerticle of quiet levels and is expected to remain so. Starting around 27 January, the arrival of the CM's particle stream may affect the east heavitodent. TODAY'S ESTIMATED ISN : 043, BASED CN 09 STATIONS.					to	es near 320 km/s he interplanetary A small positive 1 meridian. s and is expected	at 440 km/s to value -5 nT and +4 nT. TI away from the Sun. ansiting the central tled to quiet level: ary, the arrival of mment.	event. declined from abou- luctuating between as mostly directed al hole (CH) is tru- field was at unset ing around 27 Janua t the earth environ	isolated C-class Solar wind speed (ACE), with Bz f magnetic field w equatorial coron The geomagnetic remain so. Start stream may affec

Especially to see if the IT is working properly, lay-out, one final check,...

Notice already additional information such as calculated Ap.

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	AND GEOMAGNETIC ACTIVITY from the	
SIDC URSIGRAM 40417 SIDC SOLAR BULLETIN 17 Apr	2014, 1304UT	in the
SIDC FORECAST (valid from 1	230UT, 17 Apr 2014 until 19 Apr 2014)	DISORIENTED BEWILDERED URS Igram
	ass flares expected, probability >=50%)	
GEOMAGNETISM : Quiet (A< SOLAR PROTONS : Quiet	20 and K<4)	
	L4 10CM FLUX: 180 / AP: 013 L4 10CM FLUX: 184 / AP: 007	
	14 10CM FLUX: 184 / AP: 007	
		IOAA ARs 2035,2036, and 2037 (Catania numbers 24, 25, and 26 respectively) maintain the beta test flare of the past 24 hours was the M1.0 flare peaking at 19:59 UT vesterday in the NOAA AR
Catania number 24). The fla		a weak coronal dimming, but the associated CME was narrow and is not expected to arrive at t
arth.		
We expect further flaring act Catania number vet) that ves	ivity on the C-level, especially in the NO/ terday appeared from behind the east s	0AA ARs 2035 and 2037 (Catania numbers 24 and 26 respectively) as well as in the NOAA AR 204 solar limb, with a good chance for an M-class event.
Since yesterday evening the I	Earth is situated inside a solar wind struc	cture with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It may
a weak ICME or the compress	sion region on the flank of an ICME that	inture with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It mi missed the Earth. The solar origin of this structure is not clear. The north-south magnetic field
a weak ICME or the compress component Bz was not stron IMF magnitude is around 8 n	sion region on the flank of an ICME that g, so no significant geomagnetic disturba T.	
a weak ICME or the compress component Bz was not stron IMF magnitude is around 8 n	sion region on the flank of an ICME that g, so no significant geomagnetic disturba T.	cture with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It may
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a weak ICME or the compress component Bz was not stronj MF magnitude is around 8 n We expect quiet to unsettled FODAY'S ESTIMATED ISN	sion region on the flank of an ICME that g, so no significant geomagnetic disturba T.	 the elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It m: missed the Earth. The solar origin of this structure is not clear. The north-south magnetic field ance resulted (K index stayed below 4). Currently the solar wind speed is around 380 km/s and
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DC FORECAST (valid from 1230UT, 17 Apr 2014 until 19 Apr 2014) DLAR FLARES : Active (M-class flares expected, probability >=50%) EDMAGNETISM - Quiet (A<20 and K<4) DLAR PROTONS : Quiet REDICTIONS FOR 17 Apr 2014 10CM FLUX: 180 / AP: 013 REDICTIONS FOR 17 Apr 2014 10CM FLUX: 180 / AP: 007 REDICTIONS FOR 19 Apr 2014 10CM FLUX: 188 / AP: 000 MOMENT: Eleven sunspot groups were reported by NOAA today. NOAA ARS 2035,2035, and 2037,(Catania num arman configuration of the photospheric magnetic field. The strongest flare of the past 24 hours was stroked by NOAA today. NOAA ARS 2035,2035, and 2037,(Catania num arman configuration of the photospheric magnetic field. The strongest flare of the past 24 hours was stroked by NOAA today. NOAA ARS 2035,2035, and 2037,(Catania num arman configuration of the photospheric magnetic field. The strongest flare of the past 24 hours was stroked by NOAA today. NOAA ARS 2035, and 2037,(Catania num arman configuration of the photospheric magnetic field. The strongest flare of the past 24 hours was stroked by the expect quire flare was associated with an EIT wave and a weak coronal dimming, but the associated are opect further flaring activity on the C-level, especially in the NOAA ARS 2035 and 2037, (Catania numbers 24 atania number yet) that yesterday appeared from behind the east solar limb, with a good chance for an M-class Ince yesterday evening the Earth is situated inside a solar wind structure with an elevated interplanetary magnet weak (LME or the compression region on the flark of an ICME that missed the Earth. The solar origin of this str momonent Bz was not strong, so on significant geomagnetic conditions, with active geomagnetic conditions (K = DDAYS ESTIMATED ISN - 145. BASED ON 17 STATIONS 9999 DLAR INDICES FOR 16 Apr 2014 IOLE NUMBER CATANIA : /// DLAR INDICES FOR 16 Apr 2014 IOLE NUMBER CATANIA : 184	🖉 🔜 Finding your way
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SIDC URSIGRAM 40417 SIDC SOLAR BULLETIN 17 Apr 2014, 1304UT SIDC FORECAST (valid from 1230UT, 17 Apr 2014 until 19 Apr 2014) SOLAR FLARES : Active (M-class flares expected, probability >=50%) GEOMAGNETISM : Quiet (A<20 and K<4) SOLAR PROTONS : Quiet PREDICTIONS FOR 17 Apr 2014 10CM FLUX: 180 / AP: 013 PREDICTIONS FOR 17 Apr 2014 10CM FLUX: 180 / AP: 013 PREDICTIONS FOR 18 Apr 2014 10CM FLUX: 184 / AP: 007 PREDICTIONS FOR 19 Apr 2014 10CM FLUX: 184 / AP: 007 PREDICTIONS FOR 19 Apr 2014 10CM FLUX: 188 / AP: 005 COMMENT: Eleven sunspot groups were reported by NOAA today. NOAA ARs 2035, 2036, and 2037 (Catania numbers 24, 25, and 26 respectively) maintain the be gamma configuration of the photospheric magnetic field. The strongest flare of the past 24 hours was the MLD flare pasking at 19:59 UT yesterday in the NOAA AR (Catania number 24]. The flare was associated with an EIT wave and a weak coronal dimming, but the associated CME was narrow and is not expected to arrive at atth. We expect further flaring activity on the C-level, especially in the NOAA ARs 2035 and 2037 (Catania numbers 24 and 26 respectively) as well as in the NOAA AR 20 Catania number yet) that yesterday appeared from behind the east solar limb, with a good chance for an M-class event. Since yesterday evening the Earth is situated inside a solar wind structure with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It n a weak (CME or the compression region on the flark of an ICME that missed the Earth. The solar origin of this structure is not clear. The north-south magnetic field NMF magnitude is around 8 nT. We expect quiet to unsettled (K index up to 3) geomagnetic conditions, with active geomagnetic conditions (K = 4) possible, but unlikely. TODAY'S ESTIMATED ISN : 145, BASED ON 17 STATIONS. 99999 SOLAR INDICES FOR 16 Apr 2014 WOLF RUMMER CATANIA : /// MOLF RUMMER CATANIA : /// SIGM ALDAY : 124 AK CHAMBON LA FORET : 012 AK WINGST : 004 STIMATED DAP : 004	DID C USIGRAM 40417 DID C SOLAR BULLETIN 17 Apr 2014, 1304UT DID C SOLAR BULLETIN 17 Apr 2014, 1304UT DID C FORECAST (valid from 1230UT, 17 Apr 2014 until 19 Apr 2014) DUAR FLARES: Active (M-Case filters expected, probability >= 50%) EOMAGNETISM : Quiet (Ac20 and K<4) OLAR PROTONS : Quiet REDICTIONS FOR 13 Apr 2014 10CM FLUX: 180 / AP: 013 REDICTIONS FOR 13 Apr 2014 10CM FLUX: 187 / AP: 007 REDICTIONS FOR 19 Apr 2014 10CM FLUX: 188 / AP: 005 DOMMENT: Eleven sunspot groups were reported by NOAA today. NOAA ARS 2035,2036, and 2037 (Catania numbers 24, 25, and 26 respectively) maintain the betty atman configuration of the photospheric magnetic field. The strongest fine of the past 24 hours was the M1.0 flare peaking at 19:59 UT yesterday in the NOAA ARS 2035 and 2037 (Catania numbers 24, 25, and 26 respectively) maintain the betty atman configuration of the photospheric magnetic field. The strongest fine of the past 24 hours was the M1.0 flare peaking at 19:59 UT yesterday in the NOAA ARS 2035 and 2037 (Catania numbers 24, 24 and 26 respectively) as well as in the NOAA ARS 204 atania number 24). The flare was associated with an EIT wave and a weak coronal dimming, but the associated CME was narrow and is not expected to arrive at the deve peet further flaring activity on the C-level, especially in the NOAA ARS 2035 and 2037 (Catania numbers 24 and 26 respectively) as well as in the NOAA ARS 204 atania number vell that yesterday appeared from behind the east solar limb, with a good chance for an M-Class event. Ince yesterday evening the Earth is situated inside a solar wind structure with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It mu weak ICME or the compression region on the flark of an ICME that missed the Earth. The solar origin of this structure is not clear. The north-south magnetic field MF magnitude is around AB nf. We expect quiet to unsettled (K index up to 3) geomagnetic conditions, with active geomagnetic conditions (K = 4) possible, but unlikely		AND GEOMAGNETIC ACTIVITY from the SIDC #	CONFUSED	Finding your way
SIDC FORCUS (Valuation 12300); 17 April 2014 ulticit 19 April 2014) SIDC FORCUS (Valuation 12300); 17 April 2014 ulticit 19 April 2014) OBSOLAR FLARES: Active (M-class flares expected, probability>=50%) GEOMAGNETISM: Cluitet (A<20 and K<4)	DUC FORCEAST (valid monin 1250); J. J. Apr. 2014 dimiti 9 Apr. 2014) DUDAR FLARES: Active (M-class flares expected, probability >=50%) EOMAGNETISM : Quiet (Ac20 and K<4)		2014, 1304UT	UNCLEAR	in the
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SOLAR PROTONS : Quiet PREDICTIONS FOR 17 Apr 2014 10CM FLUX: 180 / AP: 013 PREDICTIONS FOR 18 Apr 2014 10CM FLUX: 184 / AP: 007 PREDICTIONS FOR 19 Apr 2014 10CM FLUX: 184 / AP: 005 COMMENT: Eleven surspot groups were reported by NOAA today. NOAA ARS 2035,2036, and 2037 (Catania numbers 24, 25, and 26 respectively) maintain the be gamma configuration of the photospheric magnetic field. The strongest flare of the past 24 hours was the M1.0 flare peaking at 19:59 UT yesterday in the NOAA A fatth, number 24). The flare was associated with an EIT wave and a weak coronal dimming, but the associated CMe was narrow and is not expected to arrive at farth. We expect further flaring activity on the C-level, especially in the NOAA ARS 2035 and 2037 (Catania numbers 24 and 26 respectively) as well as in the NOAA AR 20 Catania number yet) that yesterday appared from behind the east solar limb, with a good chance for an M-Class event. Since yesterday evening the Earth is situated inside a solar wind structure with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It m a weak ICME or the compression region on the flark of an ICME that missed the Earth. The solar origin of this structure is not clear. The north-south magnetic field component Bz was not strong, so no significant geomagnetic conditions, with active geomagnetic conditions (K = 4) possible, but unlikely. TODAY'S ESTIMATED ISN SOLAR INDICES FOR 16 Apr 2014 WOLF NUMBER CATANIA (// IOCM SOLAR FLUX) 184 AK CHAMBON LA FORET 102 AK WINGST 1004	OLAR PROTONS : Quiet REDICTIONS FOR 17 Apr 2014 10CM FLUX: 180 / AP: 013 REDICTIONS FOR 18 Apr 2014 10CM FLUX: 188 / AP: 007 REDICTIONS FOR 19 Apr 2014 10CM FLUX: 188 / AP: 007 REDICTIONS FOR 19 Apr 2014 10CM FLUX: 188 / AP: 007 REDICTIONS FOR 17 Apr 2014 10CM FLUX: 188 / AP: 007 REDICTIONS FOR 17 Apr 2014 10CM FLUX: 188 / AP: 007 REDICTIONS FOR 17 Apr 2014 10CM FLUX: 188 / AP: 007 REDICTIONS FOR 17 Apr 2014 10CM FLUX: 188 / AP: 007 REDICTIONS FOR 17 Apr 2014 10CM FLUX: 188 / AP: 007 REDICTIONS FOR 17 Apr 2014 10CM FLUX: 188 / AP: 007 REDICTIONS FOR 17 Apr 2014 10CM FLUX: 188 / AP: 007 REDICTIONS FOR 17 Apr 2014 10CM FLUX: 188 / AP: 007 REDICTIONS FOR 17 Apr 2014 10CM FLUX: 188 / AP: 007 REDICTIONS FOR 17 Apr 2014 10CM FLUX: 188 / AP: 007 REDICTIONS FOR 16 Apr 2014 10 Apr 204 ABR 2035 and 2037 (Catania numbers 24, and 26 respectively) as well as in the NOAA AR 204 REDICTIONS FOR 16 Apr 2014 10 AP: 10 ABR 2014 UP to 10 T). It mi We expect quiet to unsettled (K index up to 3) geomagnetic conditions, with active geomagnetic conditions (K = 4) possible, but unlikely. DDAYS ESTIMATED ISN : 145, BASED ON 17 STATIONS.			and the second s	
PREDICTIONS FOR 19 Apr 2014 10CM FLUX: 188 / AP: 005 COMMENT: Eleven sunspot groups were reported by NOAA today. NOAA ARS 2035,2036, and 2037 (Catania numbers 24, 25, and 26 respectively) maintain the be gamma configuration of the photospheric magnetic field. The strongest flare of the past 24 hours was the M1.0 flare peaking at 19:59 UT yesterday in the NOAA ARS Catania number 24]. The flare was associated with an EIT wave and a weak coronal dimming, but the associated CME was narrow and is not expected to arrive at Earth. We expect further flaring activity on the C-level, especially in the NOAA ARS 2035 and 2037 (Catania numbers 24 and 26 respectively) as well as in the NOAA AR2 0 Catania number yet) that yesterday appeared from behind the east solar limb, with a good chance for an M-class event. Since yesterday evening the Earth is situated inside a solar wind structure with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It is awak ICME for the compression region on the flank of an ICME that missed the Earth. The solar origin of this structure is not clear. The north-south magnetic field component Bz was not strong, so no significant geomagnetic conditions, with active geomagnetic conditions (K = 4) possible, but unlikely. TODAY'S ESTIMATED ISN : 145, BASED ON 17 STATIONS. 99999 SOLAR INDICES FOR 16 Apr 2014 WOLF NUMBER CATANIA : /// WOLF NUMBER CATANIA : /// MOLF NUMBER CATANIA : /// STIMATED ISN : 145, BASED ON 17 STATIONS. 99999 SOLAR INDICES FOR 16 Apr 2014 WOLF NUMBER CATANIA : 184 AC CHAMBON LA FORET : 012 A WINGST : 004 ESTIMATED AP	REDICTIONS FOR 18 Åpr 2014 10CM FLUX: 184 / AP: 007 REDICTIONS FOR 19 Apr 2014 10CM FLUX: 188 / AP: 005 OMMENT: Eleven sunspot groups were reported by NOAA today. NOAA ARS 2035,2036, and 2037 (Catania numbers 24, 25, and 26 respectively) maintain the bett amma configuration of the photospheric magnetic field. The strongest flare of the past 24 hours was the M1.0 flare peaking at 19:59 UT yesterday in the NOAA AR Zatania number 24). The flare was associated with an EIT wave and a weak coronal dimming, but the associated CME was narrow and is not expected to arrive at t ath. <i>Ve</i> expect further flaring activity on the C-level, especially in the NOAA ARS 2035 and 2037 (Catania numbers 24 and 26 respectively) as well as in the NOAA AR 204 zatania number velt) that yesterday appeared from behind the east solar limb, with a good chance for an M-class event. Ince yesterday evening the Earth is situated inside a solar wind structure with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It m weak ICME or the compression region on the flank of an ICME that missed the Earth. The solar origin of this structure is not clear. The north-south magnetic field mopmoent Bz was not strong, so no significant geomagnetic conditions, with active geomagnetic conditions (K = 4) possible, but unlikely. ODAY'S ESTIMATED ISN : 145, BASED ON 17 STATIONS. 9999 OLAR INDICES FOR 16 Apr 2014 /// OLF NUMBER CATANIA : /// OUT SOLAR FLUX : 184 K CHAMBON LA FORET : 012 K WINST : 004 STIMATED ISN : 139, BASED ON 29 STATIONS. OTICEABLE EVENTS SUMMARY AY BEGIN MAX END LOC XRAY OP 10CM Catania/NOAA RADIO_BURST_TYPES 6 1954 1959 2004 S14E09 ML0 1 N 24/2035 II/2	SOLAR PROTONS : Quiet (A<.	20 and K<4)		
gamma configuration of the "photospheric magnetic field. The strongest flare of the past 24 hours was the M1.0 flare peaking at 19:59 UT yesterday in the NOAA AR 20 (Catania number 24). The flare was associated with an EIT wave and a weak coronal dimming, but the associated CME was narrow and is not expected to arrive at Earth. We expect further flaring activity on the C-level, especially in the NOAA ARS 2035 and 2037 (Catania numbers 24 and 26 respectively) as well as in the NOAA AR 20 Catania number yet) that yesterday appeared from behind the east solar limb, with a good chance for an M-class event. Since yesterday evening the Earth is situated inside a solar wind structure with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It m a weak (CME or the compression region on the flark of an ICME that missed the Earth. The solar origin of this structure is not clear. The north-south magnetic field component Bz was not strong, so no significant geomagnetic disturbance resulted (kindex stayed below 4). Currently the solar wind speed is around 380 km/s and IMF magnitude is around 8 nT. We expect quiet to unsettled (kindex up to 3) geomagnetic conditions, with active geomagnetic conditions (K = 4) possible, but unlikely. TODAY'S ESTIMATED ISN : 145, BASED ON 17 STATIONS. 99999 SOLAR INDICES FOR 16 Apr 2014 WOLF NUMBER CATANIA : /// IOCM SOLAR FLUX : 184 AK CHAMBON LA FORET : 012 AK WINGST : 004 ESTIMATED AP : 004	REDICTIONS FOR 19 Apr 2014 10CM FLUX: 188 / AP: 005 OMMENT: Eleven sunspot groups were reported by NOAA today. NOAA ARS 2035,2036, and 2037 (Catania numbers 24, 25, and 26 respectively) maintain the bett amma configuration of the photospheric magnetic field. The strongest flare of the past 24 hours was the M1.0 flare peaking at 19:59 UT yesterday in the NOAA ARS 2035,2036, and 2037 (Catania numbers 24, 25, and 26 respectively) maintain the bett arth. Ve expect further flaring activity on the C-level, especially in the NOAA ARS 2035 and 2037 (Catania numbers 24 and 26 respectively) as well as in the NOAA AR 204 atania number yet) that yesterday appeared from behind the east solar limb, with a good chance for an M-class event. ince yesterday evening the Earth is situated inside a solar wind structure with an elevated interplanetary magnetic field magnitude (occasionally up to 10 n1). Itm weak ICME or the compression region on the flank of an ICME that missed the Earth. The solar origin of this structure is not clear. The north-south magnetic field magnitude (occasionally up to 10 n1). Itm weak ICME or is around 8 n7. We expect quie to unsettled (K index up to 3) geomagnetic conditions, with active geomagnetic conditions (K = 4) possible, but unlikely. ODAY'S ESTIMATED ISN : 145, BASED ON 17 STATIONS. 9999 OLAR INDICES FOR 16 Apr 2014 OUT SOLAR FLUX : 139, BASED ON 29 STATIONS. 9999 OLAR INDICES FOR 16 Apr 2014 OUT SOLAR FLUX : 139, BASED ON 29 STATIONS. 9016 STIMATED ISN : 139, BASED ON 29 STATIONS. 0017CEABLE EV	PREDICTIONS FOR 17 Apr 201	4 10CM FLUX: 180 / AP: 013		
COMMENT: Eleven sunspot groups were reported by NOAA today. NOAA ARS 2035,2036, and 2037 (Catania numbers 24, 25, and 26 respectively) maintain the be gamma configuration of the photospheric magnetic field. The strongest flare of the past 24 hours was the M1.0 flare peaking at 19:59 UT yesterday in the NOAA A (Catania number 24). The flare was associated with an EIT wave and a weak coronal dimming, but the associated CME was narrow and is not expected to arrive at Earth. The sociated CME was narrow and is not expected to arrive at Catania number 24). The flare was associated from behind the east solar limb, with a good chance for an M-Class event. Since yesterday evening the Earth is situated inside a solar wind structure with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It m a weak (CME or the compression region on the flank of an ICME that missed the Earth. The solar origin of this structure is not clear. The north-south magnetic field component Bz was not strong, so no significant geomagnetic clusture actualed (ki index stayed below 4). Currently the solar wind swed is around 8 nT. We expect quiet to unsettled (k index up to 3) geomagnetic conditions, with active geomagnetic conditions (K = 4) possible, but unlikely. TODAY'S ESTIMATED ISN : 145, BASED ON 17 STATIONS. 99999 SOLAR INDICES FOR 16 Apr 2014 WOLF NUMBER CATANIA : /// MOLF RUIX : 1184 AK CHAMBON LA FORET : 012 AK WINGST :: 004	OMMENT: Eleven sunspot groups were reported by NOAA today. NOAA ARs 2035,2036, and 2037 (Catania numbers 24, 25, and 26 respectively) maintain the bett amma configuration of the photospheric magnetic field. The strongest flare of the past 24 hours was the M1.0 flare peaking at 19:59 UT yesterday in the NOAA AR 204 atania number 24). The flare was associated with an EIT wave and a weak coronal dimming, but the associated CME was narrow and is not expected to arrive at the atania number yet). The flare was associated with an EIT wave and a weak coronal dimming, but the associated CME was narrow and is not expected to arrive at the atania number yet). That yesterday appeared from behind the east solar limb, with a good channe for an M-class event. ince yesterday evening the Earth is situated inside a solar wind structure with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It mi weak ICME or the compression region on the flank of an ICME that missed the Earth. The solar origin of this structure is not clear. The north-south magnetic field mognitude (s or so is ginificant geomagnetic disturbance resulted (kindex aved below 4). Currently the solar wind is not as not strong. so no significant geomagnetic disturbance resulted (kindex aved below 4). Currently the solar wind is not as not strong. So no significant geomagnetic conditions, with active geomagnetic conditions (K = 4) possible, but unlikely. ODAY'S ESTIMATED ISN : 145, BASED ON 17 STATIONS. 9999 OLAR INDICES FOR 16 Apr 2014 /// VOLF SUMMERC ATANIA :/// STIMATED ISN : 139, BASED ON 29 STATIONS. OTICEABLE EVENTS SUMMARY : 139, BASED ON 29 STATIONS. OTICEABLE EVENTS SUMMARY <td></td> <td></td> <td></td> <td></td>				
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	ND GEOMAGNETIC ACTIVITY from the SIDC	#	CONFUSE LOSI	- Find	ling your way
# SIDC URSIGRAM 40417 SIDC SOLAR BULLETIN 17 Apr 2		#	UNCLEAR PERPLEXED		in the IRSIgram
SIDC FORECAST (valid from 123	0UT, 17 Apr 2014 until 19 Apr 2014)		DISORIENTED BEWILDER	RED	insigram
	s flares expected, probability >=50%)		Contraction and and	369	
GEOMAGNETISM : Quiet (A<20) and K<4)				
SOLAR PROTONS : Quiet					
PREDICTIONS FOR 17 Apr 2014	10CM FLUX: 180 / AP: 013				
PREDICTIONS FOR 18 Apr 2014	10CM FLUX: 184 / AP: 007				
PREDICTIONS FOR 19 Apr 2014	10CM FLUX: 188 / AP: 005				
arth. We expect further flaring activi	was associated with an EIT wave and a weak ty on the C-level, especially in the NOAA ARs rday appeared from behind the east solar lin	2035 and 2037 (0	Catania numbers 24 and 26		
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Earth. We expect further flaring activit Catania number yet) that yeste Since yesterday evening the Ea weak ICME or the compressic component By and a trong. MF magnitude is around 5 nT. We expect quiet to unsettled (I rODAY'S ESTIMATED ISN 99999 SOLAR INDICES FOR 16 Apr 201 WOLF NUMBER CATANIA LOCM SOLAR FLUX	ty on the C-level, especially in the NOAA ARs rday appeared from behind the east solar lin rth is situated inside a solar wind structure w in region on the flank of an ICME that misses so no significant geomagnetic disturbance er K index up to 3) geomagnetic conditions, with : 145, BASED ON 17 STATIONS.	; 2035 and 2037 (nb, with a good ch yith an elevated in t the Earth. The so soulted (K index st	Catania numbers 24 and 26 lance for an M-class event. terplanetary magnetic field lar origin of this structure is ayed below 4). Currently th	respectively) as v I magnitude (occa s not clear. The n e solar wind spee ble, but unlikely.	vell as in the NOAA AR 204 sionally up to 10 nT). It ma orth-south magnetic field
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Earth. We expect further flaring activi Catania number yet) that yeste Since yesterday evening the Ea weak ICME of the compression IME magnitude is around 8 n. We expect quiet to unsettled (I TODAY'S ESTIMATED ISN 99999 SOLAR INDICES FOR 16 Apr 201 WOLF NUMBER CATANIA 10CM SOLAR FLUX AK CHAMBON LA FORET AK WINGST	ty on the C-level, especially in the NOAA ARs rday appeared from behind the east solar lin rth is situated inside a solar wind structure w no region on the flank of an LOME that misses so no significant geomagnetic disturbance re K index up to 3) geomagnetic conditions, with : 145, BASED ON 17 STATIONS. 4 :/// : 184 : 012 :004	; 2035 and 2037 (nb, with a good ch yith an elevated in t the Earth. The so soulted (K index st	Catania numbers 24 and 26 iance for an M-class event. terplanetary magnetic field lar origin of this structure is ayed below 4). Currently th etic conditions (K = 4) possil	respectively) as v I magnitude (occa s not clear. The n e solar wind spee ble, but unlikely.	vell as in the NOAA AR 204 sionally up to 10 nT). It ma orth-south magnetic field
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	D GEOMAGNETIC ACTIVITY from the SID	
SIDC URSIGRAM 40417 SIDC SOLAR BULLETIN 17 Apr 201	14, 1304UT	in the
SIDC FORECAST (valid from 1230)	UT 17 Apr 2014 until 19 Apr 2014)	DISORIENTED BEWILDERED URSIgram
SOLAR FLARES : Active (M-class f	flares expected, probability >=50%)	
GEOMAGNETISM : Quiet (A<20 a	and K<4)	
SOLAR PROTONS : Quiet		
PREDICTIONS FOR 17 Apr 2014		
PREDICTIONS FOR 18 Apr 2014		
PREDICTIONS FOR 19 Apr 2014 1	10CM FLUX: 188 / AP: 005	
(Catania number 24). The flare w Earth.		eak coronal dimming, but the associated CME was narrow and is not expected to arrive at I
Catania number yet) that yester	lay appeared from behind the east solar	ARs 2035 and 2037 (Catania numbers 24 and 26 respectively) as well as in the NOAA AR 20 limb, with a good chance for an M-class event.
Catania number yet) that yesterd Since yesterday evening the Eart a weak ICME or the compression component Bz was not strong, so IMF magnitude is around 8 nT.	lay appeared from behind the east solar h is situated inside a solar wind structur region on the flank of an ICME that mis no significant geomagnetic disturbance	
Catania number yet) that yesterd Since yesterday evening the Eart a weak ICME or the compression component Bz was not strong, so IMF magnitude is around 8 nT.	lay appeared from behind the east solar h is situated inside a solar wind structur region on the flank of an ICME that mis no significant geomagnetic disturbance	I limb, with a good chance for an M-class event. e with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It msed the Earth. The solar origin of this structure is not clear. The north-south magnetic field eresulted (K index stayed below 4). Currently the solar wind speed is around 380 km/s and with active geomagnetic conditions (K = 4) possible, but unlikely.
Catania number yet) that yesterc Since yesterday evening the Eart a weak ICME or the compression component Bz was not strong, sc IMF magnitude is around 8 nT. We expect quiet to unsettled (K i TODAY'S ESTIMATED ISN	lay appeared from behind the east solar h is situated inside a solar wind structur region on the flank of an ICME that mis no significant geomagnetic disturbance index up to 3) geomagnetic conditions, : 145, BASED ON 17 STATIONS.	I limb, with a good chance for an M-class event. e with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It msed the Earth. The solar origin of this structure is not clear. The north-south magnetic field eresulted (K index stayed below 4). Currently the solar wind speed is around 380 km/s and with active geomagnetic conditions (K = 4) possible, but unlikely.
Catania number yet) that yesterc Since yesterday evening the Eart a weak ICME or the compression component Bz was not strong, sc IMF magnitude is around 8 nT. We expect quiet to unsettled (K i TODAY'S ESTIMATED ISN 99999	lay appeared from behind the east solar h is situated inside a solar wind structur region on the flank of an ICME that mis no significant geomagnetic disturbance index up to 3) geomagnetic conditions, : 145, BASED ON 17 STATIONS.	I limb, with a good chance for an M-class event. e with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It msed the Earth. The solar origin of this structure is not clear. The north-south magnetic field eresulted (K index stayed below 4). Currently the solar wind speed is around 380 km/s and with active geomagnetic conditions (K = 4) possible, but unlikely.
Catania number yet) that yesterc Since yesterday evening the Eart a weak ICME or the compression component Bz was not strong, sc IMF magnitude is avound 6 nT. We expect quiet to unsettled (K i TODAY'S ESTIMATED ISN 99999 SOLAR INDICES FOR 16 Apr 2014	lay appeared from behind the east solar h is situated inside a solar wind structur region on the flank of an ICME that mis no significant geomagnetic disturbance index up to 3) geomagnetic conditions, : 145, BASED ON 17 STATIONS. :/// : 184	I limb, with a good chance for an M-class event. e with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It msed the Earth. The solar origin of this structure is not clear. The north-south magnetic field eresulted (K index stayed below 4). Currently the solar wind speed is around 380 km/s and with active geomagnetic conditions (K = 4) possible, but unlikely.
Catania number yet) that yesterc Since yesterday evening the Eart a weak ICME or the compression component Bz was not strong, sc IMF magnitude is around 8 nT. We expect quiet to unsettled (K i TODAY'S ESTIMATED ISN 99999 SOLAR INDICES FOR 16 Apr 2014 WOLF NUMBER CATANIA 10CM SOLAR FLUX AK CHAMBON LA FORET	lay appeared from behind the east solar h is situated inside a solar wind structur region on the flank of an ICME that mis no significant geomagnetic disturbance index up to 3) geomagnetic conditions, v : 145, BASED ON 17 STATIONS. :/// : 184 : 012	r limb, with a good chance for an M-class event. e with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It m sed the Earth. The solar origin of this structure is not clear. The north-south magnetic field e resulted (K index stayed below 4). Currently the solar wind speed is around 380 km/s and
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Catania number yet) that yesterd Since yesterday evening the Eart a weak ICME or the compression Component Bz was not strong, sc IMF magnitude is avound 6 nT. We expect quiet to unsettled (K i TODAY'S ESTIMATED ISN 99999 SOLAR INDICES FOR 16 Apr 2014 WOLF NUMBER CATANIA 10CM SOLAR FLUX AK CHAMBON LA FORET AK WINGST ESTIMATED AP	lay appeared from behind the east solar h is situated inside a solar wind structur region on the flank of an ICME that mis no significant geomagnetic disturbance index up to 3) geomagnetic conditions, t : 145, BASED ON 17 STATIONS. :/// : 144 : 012 : 004 : 004	(limb, with a good chance for an M-class event. e with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It mesel the Earth. The solar origin of this structure is not clear. The north-south magnetic field resulted (Kindex stayed below 4). Currently the solar wind speed is around 380 km/s and with active geomagnetic conditions (K = 4) possible, but unlikely. Active region classification Active region classification Actives region classification
Catania number yet) that yestero Since yesterday evening the Eart a weak ICME or the compression component Bz was not strong, so IMF magnitude is around 8 nT. We expect quiet to unsettled (K i TODAY'S ESTIMATED ISN 99999 SOLAR INDICES FOR 16 Apr 2014 WOLF NUMBER CATANIA 10CM SOLAR FLUX AK CHAMBON LA FORET AK WINGST	lay appeared from behind the east solar h is gituated inside a solar wind structure region on the flank of an ICME that mis o no significant geomagnetic disturbance index up to 3) geomagnetic conditions, : 145, BASED ON 17 STATIONS. :/// : 184 : 012 : 004	(limb, with a good chance for an M-class event. e with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It mesel the Earth. The solar origin of this structure is not clear. The north-south magnetic field resulted (Kindex stayed below 4). Currently the solar wind speed is around 380 km/s and with active geomagnetic conditions (K = 4) possible, but unlikely. Active region classification Active region classification Actives region classification
Catania number yet) that yesterd Since yesterday evening the Eart a weak ICME or the compression Component Bz was not strong, sc IMF magnitude is avound 6 nT. We expect quiet to unsettled (K i TODAY'S ESTIMATED ISN 99999 SOLAR INDICES FOR 16 Apr 2014 WOLF NUMBER CATANIA 10CM SOLAR FLUX AK CHAMBON LA FORET AK WINGST ESTIMATED AP	lay appeared from behind the east solar his situated inside a solar wind structur region on the flank of an ICME that mis no significant geomagnetic disturbance index up to 3) geomagnetic conditions, : 145, BASED ON 17 STATIONS. :/// : 184 : 012 : 004 : 139, BASED ON 29 STATIONS.	I limb, with a good chance for an M-class event. e with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It msed the Earth. The solar origin of this structure is not clear. The north-south magnetic field eresulted (K index stayed below 4). Currently the solar wind speed is around 380 km/s and with active geomagnetic conditions (K = 4) possible, but unlikely.

	AND GEOMAGNETIC ACTIVITY from t		CONFUSED LOST	🔜 Finding your way
SIDC URSIGRAM 40417 SIDC SOLAR BULLETIN 17 Apr	2014, 1304UT		UNCLEAR PERPLEXED	in the
SIDC FORECAST (valid from 1	230UT, 17 Apr 2014 until 19 Apr 2014	4)	DISORIENTED	URSIgram
SOLAR FLARES : Active (M-cl	ass flares expected, probability >=50%	%)	a short the all and	- 3m
GEOMAGNETISM : Quiet (A<	20 and K<4)			
SOLAR PROTONS : Quiet				
PREDICTIONS FOR 17 Apr 20	14 10CM FLUX: 180 / AP: 013			
	14 10CM FLUX: 184 / AP: 007			
PREDICTIONS FOR 19 Apr 201	14 10CM FLUX: 188 / AP: 005			
COMMENT: Eleven sunspot g gamma configuration of the	roups were reported by NOAA today.	. NOAA ARs 2035,20 Ingest flare of the p	J36, and 2037 (Catania numbers 24 ast 24 hours was the M1 0 flare pe	4, 25, and 26 respectively) maintain the bet aking at 19:59 UT vesterday in the NOAA AF
(Catania number 24). The flai	re was associated with an EIT wave an	nd a weak coronal d	limming, but the associated CME w	as narrow and is not expected to arrive at t
Earth.				
We expect further flaring act Catania number yet) that yes	ivity on the C-level, especially in the N terday appeared from behind the eas	VOAA ARs 2035 and st solar limb with a	2037 (Catania numbers 24 and 26 good chance for an M-class event	respectively) as well as in the NOAA AR 204
eatama namber yety that yes	terady appeared non-sening the cas	it solur lints, with a	Bood chance for an in class event.	
Since yesterday evening the	Earth is situated inside a solar wind st	ructure with an ele	vated interplanetary magnetic field	d magnitude (occasionally up to 10 nT). It m
				is not clear. The north-south magnetic field ie solar wind speed is around 380 km/s and
IMF magnitude is around 8 n	T.	in ballee resulted (K)	index stayed below 4). Currently th	ie solal wind speed is alound 560 kings and
nvir magnituue is di oullu o li	(K index up to 3) geomagnetic condit	tions, with active ge	eomagnetic conditions (K = 4) possi	ble, but unlikely.
	(Kindex up to 5) geomagnetic conditi			
We expect quiet to unsettled				
	: 145, BASED ON 17 STATIONS.			
We expect quiet to unsettled TODAY'S ESTIMATED ISN 99999	: 145, BASED ON 17 STATIONS.			
We expect quiet to unsettled TODAY'S ESTIMATED ISN 99999 SOLAR INDICES FOR 16 Apr 2	: 145, BASED ON 17 STATIONS.	L	407	
We expect quiet to unsettled TODAY'S ESTIMATED ISN 99999 SOLAR INDICES FOR 16 Apr 2 WOLE NUMBER CATANIA	: 145, BASED ON 17 STATIONS.		10.7cm	Radio llux
We expect quiet to unsettled TODAY'S ESTIMATED ISN 99999 SOLAR INDICES FOR 16 Apr 2 WOLE NUMBER CATANIA 10CM SOLAR FLUX	: 145, BASED ON 17 STATIONS.		10.7cm .	Radio flux
We expect quiet to unsettled TODAY'S ESTIMATED ISN 99999 SOLAR INDICES FOR 16 Apr 2 WOLE NUMBER CATANIA	: 145, BASED ON 17 STATIONS.		10.7cm .	Radio flux
We expect quiet to unsettled TODAY'S ESTIMATED ISN 99999 SOLAR INDICES FOR 16 Apr 2 WOLF NUMBER CATANIA 10CM SOLAR FLUX AK CHAMBON LA FORET	: 145, BASED ON 17 STATIONS.		10.7cm :	Radio flux
We expect quiet to unsettled TODAY'S ESTIMATED ISN 99999 SOLAR INDICES FOR 16 Apr 2 WOLE NUMBER CATANIA 10CM SOLAR FLUX AK CHAMBON LA FORET AK WINGST	: 145, BASED ON 17 STATIONS.		10.7cm :	Radio flux
We expect quiet to unsettled TODAY'S ESTIMATED ISN 99999 SOLAR INDICES FOR 16 Apr 2 WOLE FNIMMER CATANIA IOCM SOLAR FILV AK CHAMBON LA FORET AK WINGST ESTIMATED AP	: 145, BASED ON 17 STATIONS. 014 		10.7cm 3	Radio flux

SIDC FORECAST (valid from 1230UT, 17 Apr 2014 until 19 Apr 2014) SIDC FORECAST (valid from 1230UT, 17 Apr 2014 until 19 Apr 2014) SOLAR FLARES : Active (M-class flares expected, probability >=50%) GEOMAGNETISM :-Ouiet (Ac20, and K<4) SOLAR PROTONS : Ouiet PREDICTIONS FOR 17 Apr 2014 10CM FLUX: 180 / AP: 013 PREDICTIONS FOR 19 Apr 2014 10CM FLUX: 184 / AP: 007 PREDICTIONS FOR 19 Apr 2014 10CM FLUX: 188 / AP: 005 COMMENT: Eleven sunspot groups were reported by NOAA today. NOAA ARS 2035,2036, and 2037 (Catania numbers 24, 25, and 26 respectively) maintain the beta gamma configuration of the photospheric magnetic field. The strongest flare of the past 24 hours was the M1.01 flare peaking at 19:59 UT yesterday in the NOAA ARS Catania number 24). The flare was associated with an EIT wave and a weak coronal dimming, but the associated CME was narrow and is not expected to arrive at th Earth. Since yesterday evening the Earth is situated inside a solar wind structure with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It may a weak ICME or the compression region on the flark of an ICME that missed the Earth. The solar origin of this structure is not clear. The north-south magnetic field component Bz was not strong, so no significant geomagnetic disturbance resulted (K index stayed below 4). Currently the solar wind speed is around 380 km/s and t MF magnitude is around 8 nT. We expect quiet to unsettled (K index up to 3) geomagnetic conditions, with active geomagnetic conditions (K = 4) possible, but unlikely. TODAY'S ESTIMATED ISN : :145, BASED ON 17 STATIONS.		AND GEOMAGNETIC ACTIVITY from the SIDC #	CONTIGED LOST	Finding your way in the
SIDC FORECAST (value) as flare expected, probability >=50%) GEOMAGNETISK -Cuive (M-Cass flare expected, probability >=50%) GEOMAGNETISK -Cuive (A-Cass flare expected) REDICTIONS FOR 19 Apr 2014 10CM FLUX: 180 / AP: 003 COMMENT: Eleven suspot groups were reported by NOAA today. NOAA ARs 2035,2036, and 2037 (Catania numbers 24, 25, and 26 respectively) maintain the beta gamma configuration of the photospheric magnetic field. The strongest flare of the past 24 hours was the M1.0 flare peaking at 19:59 UT yesterday in the NOAA AR (Catania number 24). The flare was associated with an EIT wave and a weak coronal dimming, but the associated CME was narrow and is not expected to arrive at the tarth. We expect further flaring activity on the C-level, especially in the NOAA ARs 2035 and 2037 (Catania numbers 24 and 26 respectively) as well as in the NOAA AR 2043: Catania number yet) that yesterday appeared from behind the east solar limb, with a good chance numbers 24 and 26 respectively) as well as in the NOAA AR 2043: Catania number yet) that yesterday appeared from behind the east solar limb, with a good chance numbers 24 and 26 respectively) as well as in the NOAA AR 2043: Catania number yet) that yesterday appeared from behind the east solar limb, with a good chance numbers 24 and 26 respectively) as well as in the NOAA AR 2043: Catania number yet) that yesterday appeared from behind the east solar limb, with a good chance numbers 24 and 26 respectively) as well as in the NOAA AR 2043: Catania number yet) that yesterday appeared from behind the east solar limb, with a good chance numbers 24 and 26 respectively) as well as in t		,	PERFLUE	I.B.S.Jazam
GECMAGENETISM Ouiset (Ac-20, and K<4) SOLAR PROTONS : Quiet PREDICTIONS FOR 17 Apr 2014 10CM FLUX: 180 / AP: 013 PREDICTIONS FOR 18 Apr 2014 10CM FLUX: 184 / AP: 005 COMMENT: Eleven sunspot groups were reported by NOAA today. NOAA ARs 2035, 2036, and 2037 (Catania numbers 24, 25, and 26 respectively) maintain the beta gamma configuration of the photospheric magnetic field. The strongest flare of the past 24 hours was the M1.0 flare paaking at 19:59 UT yesterday in the NOAA AR (Catania number 24). The flare was associated with an EIT wave and a weak coronal dimming, but the associated CME was narrow and is not expected to arrive at the Earth. We expect further flaring activity on the C-level, especially in the NOAA ARs 2035 and 2037 (Catania numbers 24 and 26 respectively) as well as in the NOAA AR 2042 Catania number yet) that yesterday appeared from behind the east solar limb, with a good chance for an M-class event. Since yesterday evening the Earth is situated inside a solar wind structure with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It magnetic field component Bz was not strong, so no significant geomagnetic disturbance resulted (K index stayed below 4). Currently the solar wind speed is around 380 km/s and t MF magnitude is around 8 nf. We expect quiet to unsettled (K index up to 3) geomagnetic conditions, with active geomagnetic conditions (K = 4) possible, but unlikely.	SIDC FORECAST (valid from 12	30UT, 17 Apr 2014 until 19 Apr 2014)	DISORIENTED BEWILDERED	
SOLAR PROTONS : Quiet PREDICTIONS FOR 17 Apr 2014 10CM FLUX: 180 / AP: 013 PREDICTIONS FOR 17 Apr 2014 10CM FLUX: 180 / AP: 007 PREDICTIONS FOR 19 Apr 2014 10CM FLUX: 184 / AP: 007 PREDICTIONS FOR 19 Apr 2014 10CM FLUX: 188 / AP: 005 COMMENT: Eleven sunspot groups were reported by NOAA today. NOAA ARs 2035,2036, and 2037 (Catania numbers 24, 25, and 26 respectively) maintain the beta gamma configuration of the photospheric magnetic field. The strongest flare of the past 24 hours was the M1.0 flare peaking at 19:59 UT yesterday in the NOAA AR (Catania number 24). The flare was associated with an EIT wave and a weak coronal dimming, but the associated CME was narrow and is not expected to arrive at th Earth. We expect further flaring activity on the C-level, especially in the NOAA ARs 2035 and 2037 (Catania numbers 24 and 26 respectively) as well as in the NOAA AR 204: Catania number yet) that yesterday appeared from behind the east solar limb, with a good chance for an M-class event. Since yesterday evening the Earth is situated inside a solar wind structure with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It ma a weak ICME or the compression region on the flark of an ICME that missed the Earth. The solar origin of this structure is not clear. The north-south magnetic field IMF magnitude is around 8 nT. We expect quiet to unsettled (K index up to 3) geomagnetic conditions, with active geomagnetic conditions (K = 4) possible, but unlikely.			Martin Reality of the	
PREDICTIONS FOR 17 Apr 2014 10CM FLUX: 180 / AP: 013 PREDICTIONS FOR 17 Apr 2014 10CM FLUX: 180 / AP: 013 PREDICTIONS FOR 19 Apr 2014 10CM FLUX: 184 / AP: 007 PREDICTIONS FOR 19 Apr 2014 10CM FLUX: 188 / AP: 005 COMMENT: Eleven sunsot groups were reported by NOAA today. NOAA ARs 2035, 2036, and 2037 (Catania numbers 24, 25, and 26 respectively) maintain the beta gamma configuration of the photospheric magnetic field. The strongest flare of the past 24 hours was the M1.0 flare peaking at 19:59 UT yesterday in the NOAA ARS (Catania number 24). The flare was associated with an EIT wave and a weak coronal dimming, but the associated CME was narrow and is not expected to arrive at th Earth. We expect further flaring activity on the C-level, especially in the NOAA ARs 2035 and 2037 (Catania numbers 24 and 26 respectively) as well as in the NOAA ARS 2043; Catania number yet) that yesterday appeared from behind the east solar limb, with a good chance for an M-class event. Since yesterday evening the Earth is situated inside a solar wind structure with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It magnetic field or the compression region on the flank of an ICME that missed the Earth. The solar origin of this structure is not clear. The north-south magnetic field component Bz was not strong, so no significant geomagnetic disturbance resulted (K index stayed below 4). Currently the solar wind speed is around 380 km/s and t IMF magnitude is around 8 n. We expect quiet to unsettled (K index up to 3) geomagnetic conditions, with active geomagnetic conditions (K = 4) possible, but unlikely.		20 and K<4)		
PREDICTIONS FOR 18 Apr 2014 10CM FLUX: 184 / AP: 007 PREDICTIONS FOR 19 Apr 2014 10CM FLUX: 188 / AP: 005 COMMENT: Eleven sunspot groups were reported by NOAA today. NOAA ARs 2035,2036, and 2037 (Catania numbers 24, 25, and 26 respectively) maintain the beta gamma configuration of the photospheric magnetic field. The strongest flare of the past 24 hours was the M1.0 flare peaking at 19:59 UT yesterday in the NOAA AR (Catania number 24). The flare was associated with an EIT wave and a weak coronal dimming, but the associated CME was narrow and is not expected to arrive at the Earth. We expect further flaring activity on the C-level, especially in the NOAA ARs 2035 and 2037 (Catania numbers 24 and 26 respectively) as well as in the NOAA AR 2042: Catania number yet) that yesterday appeared from behind the east solar limb, with a good chance for an M-class event. Since yesterday evening the Earth is situated inside a solar wind structure with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It ma a weak ICME or the compression region on the flank of an ICME that missed the Earth. The solar origin of this structure is not clear. The north-south magnetic field component Bz was not strong, so no significant geomagnetic disturbance resulted (K index stayed below 4). Currently the solar wind speed is around 380 km/s and t IMF magnitude is around 8 n. We expect quiet to unsettled (K index up to 3) geomagnetic conditions, with active geomagnetic conditions (K = 4) possible, but unlikely.	SOLAR PROTONS : Quiet			
PREDICTIONS FOR 19 Åpr 2014 10CM FLUX: 188 / AP: 005 COMMENT: Eleven sunspot groups were reported by NOAA today. NOAA ARs 2035,2036, and 2037 (Catania numbers 24, 25, and 26 respectively) maintain the beta gamma configuration of the photospheric magnetic field. The strongest flare of the past 24 hours was the M1.0 flare peaking at 19:59 UT yesterday in the NOAA AR (Catania number 24). The flare was associated with an EIT wave and a weak coronal dimming, but the associated CME was narrow and is not expected to arrive at th Earth. We expect further flaring activity on the C-level, especially in the NOAA ARs 2035 and 2037 (Catania numbers 24 and 26 respectively) as well as in the NOAA AR 2042 Catania number yel) that yesterday appeared from behind the east solar limb, with a good chance for an M-class event. Since yesterday evening the Earth is situated inside a solar wind structure with an elevated interplanetary magnetic field magnitude (occasionally up to 10 nT). It ma a weak ICME or the compression region on the flank of an ICME that missed the Earth. The solar origin of this structure is not clear. The north-south magnetic field IMF magnitude is around 8 nT. We expect quiet to unsettled (K index up to 3) geomagnetic conditions, with active geomagnetic conditions (K = 4) possible, but unlikely.	PREDICTIONS FOR 17 Apr 201	4 10CM FLUX: 180 / AP: 013		
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SOLAR INDICES FOR 16 Apr 2014	a weak ICME or the compress component Bz was not strong IMF magnitude is around 8 nT We expect quiet to unsettled TODAY'S ESTIMATED ISN 99999	ion region on the flank of an ICME that missed the so no significant geomagnetic disturbance result (K index up to 3) geomagnetic conditions, with ac : 145, BASED ON 17 STATIONS.	Earth. The solar origin of this Structure is not ed (K index stayed below 4). Currently the sol. ive geomagnetic conditions (K = 4) possible, b	clear. The north-south magnetic field ar wind speed is around 380 km/s and t out unlikely.
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WOLF NUMBER CATANIA :/// 10CM SOLAR FLUX : 184 AK CHAMBON LA FORET : 012	a weak ICME or the compress component Bx was not strong IMF magnitude is around 8 nT We expect quiet to unsettled TODAY'S ESTIMATED ISN 99999 SOLAR INDICES FOR 16 Apr 20 WOLF NUMBER CATANIA 10CM SOLAR FLUX AK CHAMBON LA FORET	ion region on the flank of an ICME that missed the so no significant geomagnetic disturbance result (K index up to 3) geomagnetic conditions, with ac : 145, BASED ON 17 STATIONS. 14 : 114 : 1184 : 012	Earth. The solar origin of this Structure is not ed (K index stayed below 4). Currently the sol. ive geomagnetic conditions (K = 4) possible, b	clear. The north-south magnetic field ar wind speed is around 380 km/s and i out unlikely.
WOLF NUMBER CATANIA :/// 10CM SOLAR FLUX :184 AK CHAMBON LA FORET :012 AK WINGST :004	a weak ICME or the compress component Bx was not strong IMF magnitude is around 8 nT We expect quiet to unsettled TODAY'S ESTIMATED ISN 99999 SOLAR INDICES FOR 16 Apr 20 WOLF NUMBER CATANIA VOLF NUMBER CATANIA AK CHAMBON LA FORET AK WINGST	ion region on the flank of an ICME that missed th so no significant geomagnetic disturbance result (K index up to 3) geomagnetic conditions, with ac : 145, BASED ON 17 STATIONS. 14 :/// : 184 : 012 : 004	Earth. The solar origin of this Structure is not ed (K index stayed below 4). Currently the sol. ive geomagnetic conditions (K = 4) possible, b	clear. The north-south magnetic field ar wind speed is around 380 km/s and i out unlikely.
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	# ND GEOMAGNETIC ACTIVITY from the SIDC #	CONFIL	🚽 Finding your way
iDC URSIGRAM 40417 IDC SOLAR BULLETIN 17 Apr 2	# 014, 1304UT	# Checker Brance	in the URSIgram
	0UT, 17 Apr 2014 until 19 Apr 2014)	DISORIENTED	ans syrum
GLAR FLARES : Active (M-class GEOMAGNETISM : Quiet (A<20	s flares expected, probability >=50%) and K<4)		
OLAR PROTONS : Quiet			
REDICTIONS FOR 17 Apr 2014	10CM FLUX: 180 / AP: 013		
REDICTIONS FOR 18 Apr 2014			
REDICTIONS FOR 19 Apr 2014	10CM FLUX: 188 / AP: 005		
Catania number yet) that yeste ince yesterday evening the Ea weak ICME or the compressio	ty on the C-level, especially in the NOAA ARs 20 rday appeared from behind the east solar limb, rth is situated inside a solar wind structure with n region on the flank of an ICME that missed th so no significant geomagnetic disturbance resul	, with a good chance for an M-class event. n an elevated interplanetary magnetic field may the Earth. The solar origin of this structure is not	gnitude (occasionally up to 10 nT). It ma clear. The north-south magnetic field
MF magnitude is around 8 nT.			
Ve expect quiet to unsettled ()	(index up to 3) geomagnetic conditions, with ac	ctive geomagnetic conditions (K = 4) possible.	but unlikely.
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iolar Indices for 16 Apr 201	4		
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SOLAR INDICES FOR 16 Apr 201 NOLF NUMBER CATANIA LOCM SOLAR FLUX AK CHAMBON LA FORET	:/// : 184 : 012	CME A J	ICME
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OLAR INDICES FOR 16 Apr 201 WOLF NUMBER CATANIA LOCM SOLAR FLUX KK CHAMBON LA FORET KK WINGST ESTIMATED AP	:/// : 184 : 012 : 004 : 004 : 139, BASED ON 29 STATIONS.	CME & J	<u>CME</u>

:Issued: 2014 Apr 17 1325 UTC :Product: documentation at http://www.sidc.be/products/tot # DAILY BULLETIN ON SOLAR AND GEOMAGNETIC ACTIVITY from the SIDC	# #
SIDC URSIGRAM 40417 SIDC SOLAR BULLETIN 17 Apr 2014, 1304UT	"" Finding your way in the URSIgram
SIDC FORECAST (valid from 1230UT, 17 Apr 2014 until 19 Apr 2014) SOLAR FLARES : Active (M-class flares expected, probability >=50%) GEOMAGNETISM : Quiet (A<20 and K<4)	OISORIENTED HE WILDERED
SOLAR PROTONS : Quiet PREDICTIONS FOR 17 Apr 2014 10CM FLUX: 180 AP: 013 PREDICTIONS FOR 18 Apr 2014 10CM FLUX: 184 AP: 007 PREDICTIONS FOR 19 Apr 2014 10CM FLUX: 188 AP: 005	
COMMENT: Eleven sunspot groups were reported by NOAA today. NOAA AR gamma configuration of the photospheric magnetic field. The strongest flare	rs 2035,2036, and 2037 (Catania numbers 24, 25, and 26 respectively) maintain the beta- e of the past 24 hours was the M1.0 flare peaking at 19:59 UT yesterday in the NOAA AR 20 coronal dimming, but the associated CME was narrow and is not expected to arrive at the
	2035 and 2037 (Catania numbers 24 and 26 respectively) as well as in the NOAA AR 2042 ($b_{\rm p}$ with a good chance for an M-class event.
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We expect quiet to unsettled (K index up to 3) geomagnetic conditions, with	active geomagnetic conditions (K = 4) possible, but unlikely.
TODAY'S ESTIMATED ISN : 145, BASED ON 17 STATIONS. 99999	
SOLAR INDICES FOR 16 Apr 2014 WOLF NUMBER CATANIA :/// TOCM SOLAB E LILX : 184 AK CHAMBON LA FORET : 012	Geomagnetic activity
AK WINGST : 004 FSTIMATED AP : 004	
ESTIMATED ISN : 139, BASED ON 29 STATIONS.	
NOTICEABLE EVENTS SUMMARY DAY BEGIN MAX END LOC XRAY OP 10CM Catania/NOAA RADIO_BUI 16 1954 1959 2004 \$14E09 M1.0 1N 24/2035 II/2 END	RST_TYPES

SIDC/RWC & URSIgram - Contents

- SIDC/RWC
- URSIgram
 - Overview features
- SWx alerts
- Exercises



Fast alerts: automatic detection by SIDC software

Flare > M5 SIDC in GOES X-ray

:Issued: 2016 Jul 24 0516 UTC :Product: documentation at http://www.sidc.be/products/flaremail # # Large flare alerts from the SIDC (RWC-Belgium), detected in GOES # X'ray data class M5.5 solar X-ray flare occurred on 2016/07/23 with peak time 05:31UT - Solar Influences Data analysis Center - RWC Belgium Royal Observatory of Belgium F Fax : 32 (0) 2 373 0 224 Tel.: 32 (0) 2 373 0 491 F for more information, see http://www.sidc.be. Please do not reply f directly to this mersage, but send comments and suggestions to # f indiceta/base.be'. If you are unable to use that address, use # 'rwidinden@spd.as.org' instead. For ununiscript, visit http://idd.be/srgistration/unsub.php # legal notices: legal notices: legal notices: legal notices: legal notices: logal not

Halo CME (width > 150°) CACTus in SOHO/LASCO

:Issued: 2016 Nov 05 1349 UTC :Product: documentation at http://www.sidc.be/products/cactus # HALO CME ALERTS from the SIDC (RWC-Belgium), generated by CACTUS # * A halo or partial-halo CME was detected with the following characteristics:

t0 | dt0| pa | da | v | dv | minv| maxv 005|2016/11/05 04:24| 03 | 338| 178| 0297| 0048| 0200| 0452

Details can be found here: http://www.sidc.oma.be/cactus/out/latestCMEs.html

- 90: cnset time, earliest indication of liftoff du0; duration of liftoff (hours) ps: principal angle, counterclochuise from North (degrees) ds: angular width of the OME (degrees), r: median velocity (lus) dry: variation (1 sigma) of velocity over the width of the OME mindr: lower velocity detected within the OME maxdry: highers velocity detected within the OME

This message is sent whenever a CME wider than 150 degrees is detected by cactus

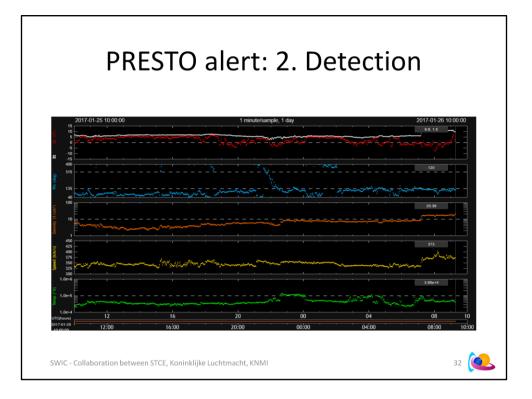


PRESTO alert: 1. Criteria					
🔯 Google A 🛛 🕲 GOES X-ra 📄 Space We 🛛 🥸 GOES Ma 🚺 K-index N 🛛 STEREO -	Scie 🖹 🍾 Real Time 🛛 🚺 latest_102 🛛 🚺 latest_102.	STCE - Newsle 🚖 Previ 🗙 + 👘 🗙			
(idc.be/previweb/presto	C Q Search	☆ 🖻 🛡 🖡 🚔 🚍			
더 L1 positive					
www mail Send presto alert When to send a presto immediately? During a state offer as X flare accurred					
Ouring or just after an X-flare occurred. In case of a proton event. When K > 5. When a halo CME or a strong Westward directed CME occurred. Try find a related flare. In case you observe a shock in the solar wind speed. In case you observe enhanced solar wind conditions which will likely O Ask me anything		-			

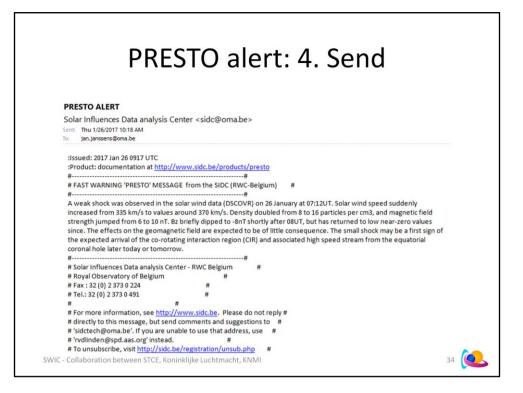
A shock is considered to have the following criteria, calculated using a 10 min average before and after the shock:

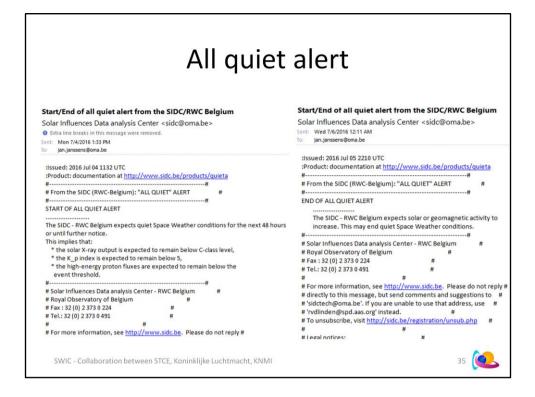
- A 20+ % increase in B, N (density), and T
- A 20+ km/s increase in V (speed)

From: Interplanetary shock database (S. Nikbakhsh, PhD thesis) https://helda.helsinki.fi/bitstream/handle/10138/45227/Thesis.pdf



PRESTO alert:	3. Composi	ition
📅 Google A 🧕 🕲 GOES X-ra 👘 Space We 😻 GOES Ma 🚺 K-index N STEREO - Scie	🍾 Real Time 🚺 latest_102 🚺 latest_102 STCE - Newsle	≟ Previ × + − Ø ×
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📙 Spaceweather_Now & 🛞 SWSC_Manuscript Ma 🥥 Royal Observatory of 📗 Solaemon Welcome P 📗	Space Weather Now! 📥 Previmaster pages 🚔 Previmaster pages 🗾	Google Agenda 🚺 STCE - Home 🛛 👋
Forecast Weekly Presto Cactus All quiet CME arrival Monthly bulletin Quat Links UTC time: 9:15:39 Presto alert A weak shock was observed in the solar wind data (DSCOVR) on 26 January Increased from 335 km/s to values around 370 km/s. Density doubled from strength jumped from 6 to 10 0 II, Bz ptiefly dipped to - SnT shortly after 08U since. The effects on the geomagnetic field are expected to be of little conse the expected arrival of the co-rotating interaction region (CIR) and associate hole later today or tomorrow.	at 07:12UT. Solar wind speed suddenly 8 to 16 particles per cm3, and magnetic field T, but has returned to low near-zero values quence. The small shock may be a first sign of	
📲 🔘 Ask me anything 🛛 🖓 🗇 🤮 📮 🍥 💁	 Image: Image: Ima	^ ‱ 및 ⊄× 🐯 FRA 10:15 AM





This message is of the fast alert type. It is sent when quiet Space Weather conditions are expected for the next 48 hours or until further notice. This implies that:

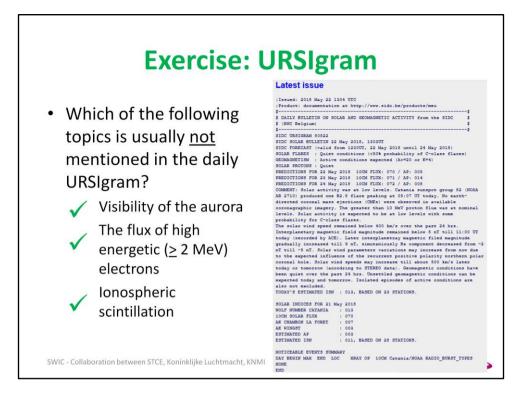
- * the solar X-ray output is expected to remain below C-class level,
- * the K_p index is expected to remain below 5,
- * the high-energy proton fluxes are expected to remain below the event threshold.

All quiet alerts are send by the SWx forecaster, both to begin and to end the period.

The all quiet period is seldomly send during the solar cycle maximum, as new groups may quickly develop on disk or may round the east limb, or there may be filaments on disk that may result in flare/proton events.

The all quiet alert is also seldomly send during the ascending and declining phase as in view of the persistent high speed streams from coronal holes, as well as transients in the solar wind.

The criteria for the all quiet alerts are under debate.





SIDC URSIGRAM 30515 SIDC SOLAR BULLETIN 15 May 2013, 1205UT SIDC FORECAST (valid from 1230UT, 15 May 2013 until 17 May 2013) SOLAR FLARES : Major flares expected (X-class flares expected, probability >=50%) GEOMAGNETISM : Active conditions expected (A>=20 or K=4) SOLAR PROTONS : Proton event expected (10 pfu at >10 MeV) PREDICTIONS FOR 15 May 2013 10CM FLUX: 150 / AP: 017 PREDICTIONS FOR 16 May 2013 10CM FLUX: 152 / AP: 014 PREDICTIONS FOR 17 May 2013 10CM FLUX: 153 / AP: 011

COMMENT:A class X1.2 solar flare occurred today with peak time 01:48 UT, from NOAA AR 1748 which has a beta-gamma-delta magnetic configuration. It was associated with radio bursts and an increase of GOES proton flux levels, now at 5 protons/cm2-s-sr, the threshold of 10 protons/cm2-s-sr will likely be reached soon (at >=10 MeV). The increases in proton flux likely come from the CME driven shock. If the strong flares from this AR continue, the proton increases will likely be more abrupt when the magnetic connection between the flare site and the Earth is better (i.e. when the AR is in the western hemisphere). A CME was associated with the event, a shock and glancing blow can probably be expected at the Earth late on May 16 (CME speed 1700 km/s in LASCO C2).

Geomagnetic conditions are quiet, but ACE data shows a disturbance starting this morning, with currently magnetic intensity close to 15 nT (northwards, so no geomagnetic effect). There is not enough data yet to discern clearly its cause, but it is likely related to the CME on May 12 (and possibly those from the two previous days related to X-flares from NOAA AR 1748). Geomagnetic conditions are expected to be unsettled to active, with possible isolated minor storm periods.

TODAY'S ESTIMATED ISN : 099, BASED ON 11 STATIONS.

 SOLAR INDICES FOR 14 May 2013

 WOLF NUMBER CATANIA
 : 176

 10CM SOLAR FLUX
 : 148

 AK CHAMBON LA FORET
 : 012

 AK WINGST
 : 009

 ESTIMATED AP
 : 008

 ESTIMATED ISN
 : 102, BASED ON 14 STATIONS.

 NOTICEABLE EVENTS SUMMARY

 DAY BEGIN MAX END
 LOC
 XRAY
 OP
 10CM
 RADIO BURST TYPES
 Catania NOAA NOTE

 15
 0125
 0148
 0158
 N12E64
 X1.2
 2N
 IV/2II/1
 1748

 END
 LOC
 XRAY
 OP
 10CM
 RADIO BURST TYPES
 Catania NOAA NOTE

Setting

- You have received the above URSIgram. It is now 18:00UT on 15 May 2013. You have to brief the SWx operational personnel.
- <u>Questions Part 1 of 2: Reading-Comprehension questions</u>
 - Was the X1.2 flare: a) a strong flare (which class)? b) a long duration event (LDE)?
 - What kind of radio burst (SRB) is type «IV/2II/1»?
 - 'Active geomagnetic conditions' correspond to which NOAA scale?
 - ' protons/cm2-s-sr ': This is the unit for which parameter? What is the short notation for this unit?
 - Despite the relatively strong magnetic field strength of 15 nT, no strong geomagnetic effects were recorded from this CME. Why?
 - 'Beta-Gamma-Delta ': What's the name of the corresponding active region classification scheme? What is the simplest type possible?
 - For the geomagnetic prediction of 15 May, why is A >= 20 while Ap=17?
 - What is being evaluated under the column « OP »?

SWIC - Collaboration between STCE, Koninklijke Luchtmacht, KNMI



Setting

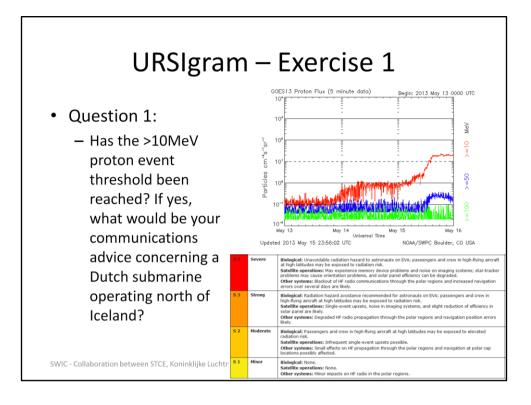
 You have received the above URSIgram. It is now 18:00UT on 15 May 2013. You have to brief the SWx operational personnel.

<u>Questions – Part 2 of 2: SWx impact questions</u>

- Has the >10MeV proton event threshold been reached? If yes, what would be your communications advice concerning a Dutch fregate operating north of Iceland?
- You received a report from Gilze-Rijen Air Base (The Netherlands) about HF radio communication problems around 01:45UT. Do you think they were related to the X1.2 flare?
- With the LASCO/C2 data now fully available, do you agree (part of) the CME is headed for Earth? Why (not)?
- Was the X1.2 event a Tenflare? Do you think the 10.7 cm radio flux of 20:00UT will be affected?
- « ... possible isolated minor storm periods. » Do you expect important satellite communications problems?

SWIC - Collaboration between STCE, Koninklijke Luchtmacht, KNMI

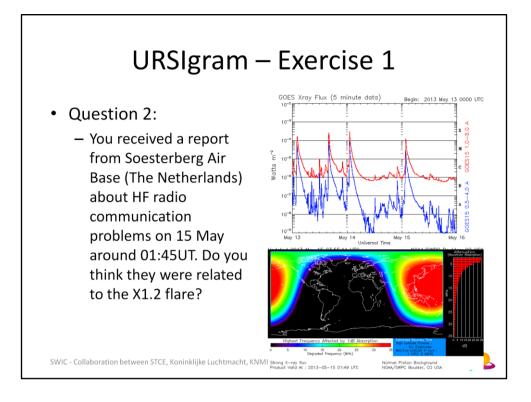




Real-time: https://www.swpc.noaa.gov/products/goes-proton-flux

Nowcast e.g. COMESEP: http://www.comesep.eu/alert/ Nowcast e.g. D-RAP: https://www.swpc.noaa.gov/products/d-region-absorption-predictions-d-rap

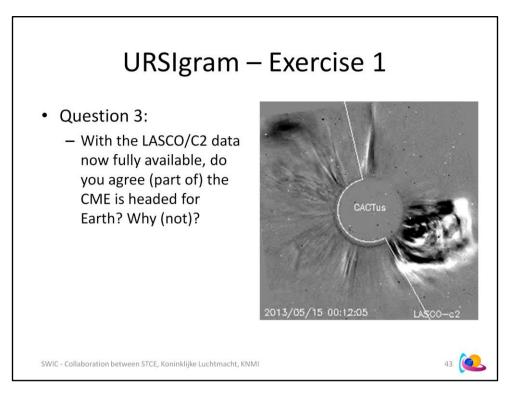
Archive at ftp://ftp.swpc.noaa.gov/pub/warehouse/



Real-time: https://www.swpc.noaa.gov/products/goes-x-ray-flux

Nowcast e.g. D-RAP: https://www.swpc.noaa.gov/products/d-region-absorption-predictions-d-rap

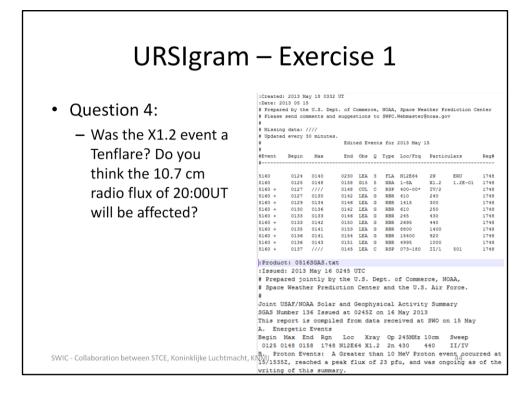
Archive at ftp://ftp.swpc.noaa.gov/pub/warehouse/



Real-time data at http://www.sidc.oma.be/cactus/out/latestCMEs.html

Archive at http://sidc.oma.be/cactus/catalog.php

Movie of this event at http://sidc.oma.be/cactus/catalog/LASCO/2_5_0/2013/05/CME0079/CME.html



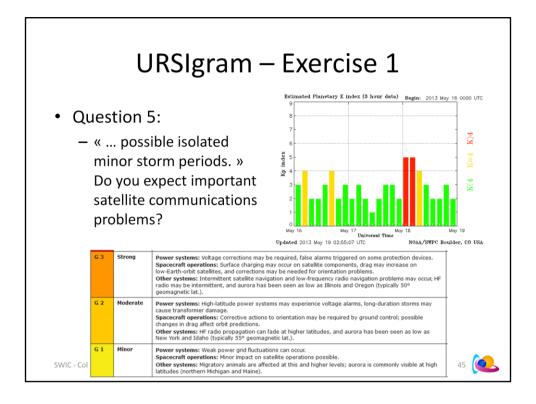
Real-time at https://www.swpc.noaa.gov/products/solar-and-geophysical-event-reports

Summary at https://www.swpc.noaa.gov/products/solar-and-geophysical-activity-summary

Archive at ftp://ftp.swpc.noaa.gov/pub/warehouse/

The daily values for the 10.7cm radio flux can be found at Penticton: http://www.spaceweather.ca/solarflux/sx-4a-en.php SWPC/NOAA: ftp://ftp.swpc.noaa.gov/pub/lists/radio/rad.txt

For 14 & 15	May, the P	enticton values	were as fol	lows:		
Date	Time Ju	ulian day Ca	rr. Rot. Ob	served F	lux Adjusted Flu	ıx URSI Flux
2013-05-14	17:00:00	2456427.197	2136.996	148.1	151.4	136.2
2013-05-14	20:00:00	2456427.322	2137.001	147.9	151.1	136.0
2013-05-14	23:00:00	2456427.447	2137.005	147.8	151.0	135.9
2013-05-15	17:00:00	2456428.197	2137.033	141.8	144.9	130.4
2013-05-15	20:00:00	2456428.322	2137.037	145.6	148.8	133.9
2013-05-15	23:00:00	2456428.447	2137.042	148.7	152.0	136.8



Real-time:	
NOAA Kp:	https://www.swpc.noaa.gov/products/planetary-k-index
Dourbes K:	http://ionosphere.meteo.be/geomagnetism/ground_K_dourbes
Dst:	http://wdc.kugi.kyoto-u.ac.jp/dst_realtime/presentmonth/index.html
DSCOVR:	https://www.swpc.noaa.gov/products/real-time-solar-wind
TEC:	http://swaciweb.dlr.de/data-and-products/public/tec/tec-eu/?L=1

Archive at ftp://ftp.swpc.noaa.gov/pub/warehouse/

SIDC LIBSIGRAM 50623 SIDC SOLAR BULLETIN 23 Jun 2015, 1242UT SIDC FORECAST (valid from 1230UT, 23 Jun 2015 until 25 Jun 2015) SOLAR FLARES : M-class flares expected (probability >=50%) GEOMAGNETISM : Major magstorm expected (A>=50 or K>=6) SOLAR PROTONS : Proton event in progress (>10 MeV) PREDICTIONS FOR 23 Jun 2015 10CM FLUX: 135 / AP: 038 PREDICTIONS FOR 24 Jun 2015 10CM FLUX: 130 / AP: 038 PREDICTIONS FOR 25 Jun 2015 10CM FLUX: 125 / AP: 018 COMMENT: NOAA active region 2371 produced an M6.5 flare, peaking at 18:23 UT on June 22. An associated full halo CME erupted, with first measurement in LASCO C2 at 18:36 UT on June 22 and has a projected speed around 1000 km/s . A few filament eruptions were recorded in the Northwest quadrant, first a small one around 22:00 UT and then an extended one starting near 4:24 UT. Coronagraphic data indicate the occurrence of (mainly westward) CMEs, but incomplete data currently prohibit full analysis. Proton levels have descended from the peak of 1070 pfu (19UT), despite some smaller peaks and are around 30 pfu at the moment. NOAA AR 2367 is now close to the West limb and could, in case of further eruptions, elevate the proton levels again. The proton levels might also be enhanced at the expected June 22 CME arrival. Flares at the M-level are expected, with some chance (15%) for a flare at the X-level. A shock arrived to the ACE spacecraft at 18:01 UT on June 22, marking the expected arrival of the June 21 CME. The interplanetary magnetic field (IMF) magnitude jumped to 42 nT, with long periods of negative Bz down to -39 nT. Solar wind speeds reached values between 600 and 780 km/s. The IMF magnitude has declined to a current value of 12 nT. Minor to severe geomagnetic conditions were recorded, with severe levels between 18 and 21 UT (on June 22) and between 3 and 6 UT (on June 23). The local K at Dourbes reached K=8 at 22 UT (on June 22). A decline to unsettled levels is expected for the coming hours. Further minor to major storm levels are expected, following the expected arrival of June 22 CME around 12:00 UT on June 24. TODAY'S ESTIMATED ISN : 042, BASED ON 14 STATIONS. SOLAR INDICES FOR 22 Jun 2015 WOLF NUMBER CATANIA : 083

 WOLF NUMBER CATANIA
 :083

 10CM SOLAR FLUX
 :135

 AK CHAMBON LA FORET
 :108

 AK WINGST
 :///

 ESTIMATED AP
 :073

 ESTIMATED ISN
 :047, BASED ON 23 STATIONS.

NOTICEABLE EVENTS SUMMARY DAY BEGIN MAX END LOC XRAY OP 10CM Catania/NOAA RADIO_BURST_TYPES 22 1739 1823 1851 N12W08 M6.5 2B 1000 92/2371 II/1 END

<u>Setting</u>

You have received the above URSIgram (23 June 2015 – 12:42UT). You have to brief the SWx operational personnel.

Questions

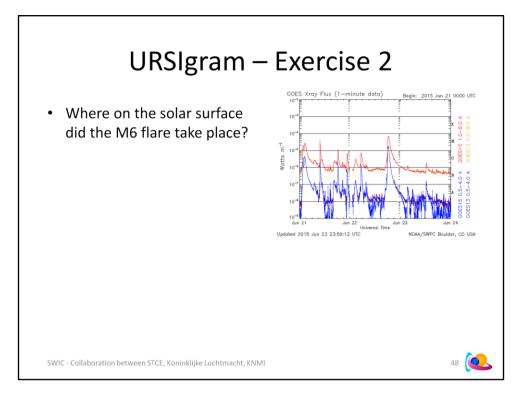
- Where on the solar surface did the M6 flare take place?

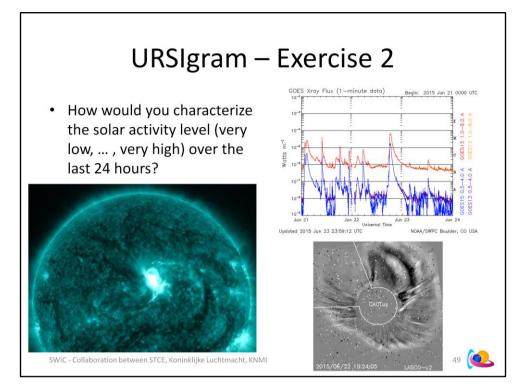
- How would you characterize the solar activity level (very low, ..., very high) over the last 24 hours?
- Did the M6 flare affect the daily 10.7cm radio flux of 22 June?
- A proton event is in progress.
 - Do you (still) expect a GLE?
 - What would you recommend concerning arctic polar flights?
- In terms of Dst, how strong would you expect this event to be (Quiet, ..., Extreme)?

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- Based on the description of the geomagnetic storm:
- Would you expect major satellite problems from deep di-electric charging?

swic-conab.Would.yousexpect.degradation.of GNSS applications (WAAS,...)?





TODAY'S ESTIMATED ISN : 042, BASED ON 14 STATIONS.

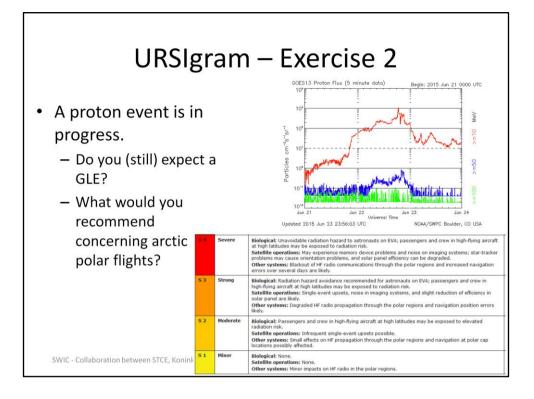
Did the M6 flare affect the • daily 10.7cm radio flux of 22 June?

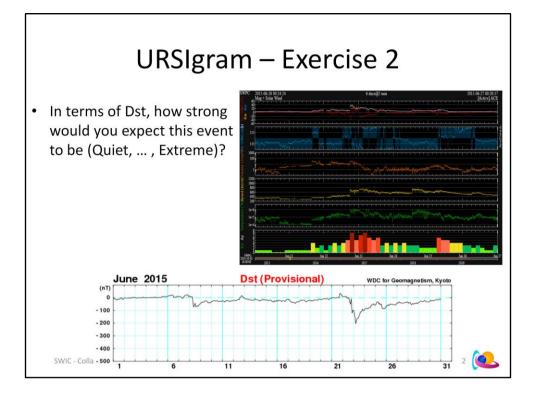
SOLAR INDICES FOR 22 Jun 2015 WOLF NUMBER CATANIA :083 WOLF NUMBER CATANIA : 083 10CM SOLAR FLUX : 135 AK CHAMBON LA FORET : 108 AK WINGST :/// ESTIMATED AP : 073 ESTIMATED ISN : 047, BASEI : /// : 073 : 047, BASED ON 23 STATIONS.

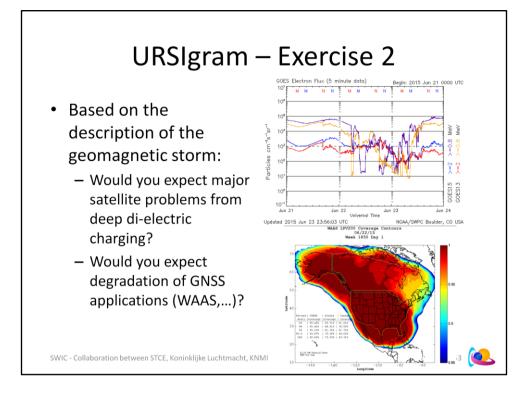
NOTICEABLE EVENTS SUMMARY DAY BEGIN MAX_END_LOC___XRAY OP_10CM Catania/NOAA RADIO_BURST_TYPES 22 1739 1823 1851 N12W08 M6.5 2B 1000 92/2371 II/1

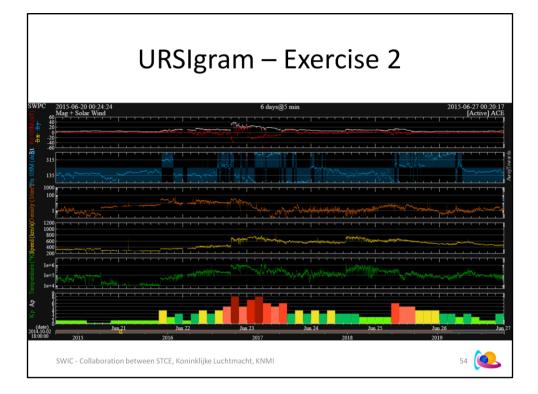
50 🧿

	Date	Time	Julian day	Carrington rotation	Observed Flux	Adjusted Flux	URSI Flux
	2015-06-20	17:00:00	2457194.197	2165.117	134.4	138.8	124.9
	2015-06-20	20:00:00	2457194.322	2165.121	135.4	139.8	125.8
	2015-06-20	23:00:00	2457194.447	2165.126	134.0	138.4	124.5
	2015-06-21	17:00:00	2457195.197	2165.153	133.0	137.4	123.6
	2015-06-21	20:00:00	2457195.322	2165.158	131.7	136.0	122.4
	2015-06-21	23:00:00	2457195.447	2165.163	128.6	132.8	119.5
	2015-06-22	17:00:00	2457196.197	2165.190	130.1	134.3	120.9
	2015-06-22	20:00:00	2457196.322	2165.195	246.9	255.0	229.5
	2015-06-22	23:00:00	2457196.447	2165.199	127.2	131.3	118.2
	2015-06-23	17:00:00	2457197.197	2165.227	116.5	120.3	108.3
	2015-06-23	20:00:00	2457197.322	2165.231	116.1	119.9	107.9
oration betw	2015-06-23	23:00:00	2457197.447	2165.236	116.6	120.4	108.4









SIDC/RWC & URSIgram - Summary

- SIDC/RWC
- Overview contents of the URSIgram
- SWx alerts issued by the SIDC
- Exercises



