

## Периоды сильной активности 2005 г.

### January 2005

1 – N-feature of type II at LEAR spectrum; See Chains

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**!!! 15 - 20 - A series of powerful events!!!**  
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++15 - At least two fully Earth directed CMEs were launched during the day. The first one was associated with a long duration M8 event in region 10720 after 06h UTC. The second significant CME was launched during the the X2 long duration event in region 10720 late in the day.  
++00:43 UT: Impulsive X1.2 flare without a CME, no dimming; See Events!  
++06:38 UT: M8.6/SF LDE, halo CME, global CW, dimmings; See Events!!  
++14:23 UT: M3.2/SF LDE from another region; halo CME, global CW, dimmings;

See Events!!

++23:02 UT: X2.6/1F LDE;halo CME, global CW, dimmings; See Events!!  
++ Spectacular ionospheric structures at our spectrum!!

++17 - A large and fast full halo CME was observed after the X3 event in region 10720 during the UTC morning.  
++ 08-10 UT: multiple X3.8/2F LDE, double NW halo CME, double CW, dimmings; See Events!!

**!!Oscillation of SW streamer after a CME!!**

++ Spectacular ionospheric structures at our spectrum!!

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>17 - Very large FD  
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++19 - A full halo CME was observed after the X1 event in region 10720 during the morning.

++08:22 UT: X1.3/2N flare, halo, dimmings, CW, See Events!!  
0812.1-0817.9 II G,HARM

++20 - A full halo CME was observed after the X7 event in region 10720 at 07h UT.

++07:01 UT: X7.1/2B LDE, halo, PROTONS,GLE,strong snow; See Events!!

22 - FD, geomagnetic storm Dst-135 nT

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### April-May 2005

April 26: A partial halo CME was observed early in the day, most of the observed material was distributed rather symmetrically off the southern limbs. The absence of activity in the central southern hemisphere late on April 25 and early on April 26 indicates that the source of this CME was back-sided.

April 30: A faint full halo CME was observed in LASCO C3 images beginning at 17:18 UTC. No obvious frontside activity was observed during the hours before this, and the source was likely back-sided.

May 1: A brighter full halo CME was observed in LASCO C3 images beginning at 01:42 UTC. Considerable large scale reshaping of the corona to the south of region 10756 was observed late on April 30 and early on May 1. However, since

I couldn't observe any significant eruptive event or a disappearing filament during the relevant time frame, it is at this time uncertain if the CME was backsided (with the same source as the CME observed on April 30) or had its origin near region 10756.

May 2: A full halo CME was observed in LASCO C3 images beginning at 06:18 UTC. There was no significant activity on the visible disk during the hours just before this observation and the origin of the CME was likely backsided, possibly with the same origin as the CMEs observed on April 30 and May 1. A large and bright CME was observed over most of the eastern limb late in the day and early on May 3.

+2 May: 19 UT: spectacular eruption on E limb at EIT; disturbances along the limb;

development of a large post-eruption arcade during next day; Events

+5 May: : 20 UT: spectacular eruption on E limb at EIT;

++6 May: 16-17 UT - spectacular SE eruption, 4-line dimmings, halo CME; See Events!

А вокруг этого события - чисто импульсные вспышки без CME.  
8d: Dst=-126 nT

До 8 мая: несколько LDE, CME и сильная геомагнитная буря.

11 May: 19:30 UT - A slow full halo CME was observed after an M flare in region 10758

during the evening.

!!Subfield observation at 195 A with 1-min cadence!!

+++13 May: A bright and fast CME aimed directly at Earth was first observed in LASCO C2 images at 17:22 and in C3 at 17:42 UTC and was associated with the major M8 proton flare in region 10759. The propagation of the shock wave on and near the solar surface was extremely impressive in EIT 195 images.

Large long-duration 4-line dimmings.

Dm-max flare without an impulsive phase.

Delayed protons. 15d: Dst=-257 nT

See Events!!!!

15 May: M3 flare in region 10763 late on May 15 was associated with a potentially geoeffective CME.

17 May: A very faint and slow full halo CME was observed after the M1.8 flare in region 10763 early in the day. This CME could reach Earth early on May 20.

+++26 May: A full halo CME was observed after a filament eruption in region 10767 during the early afternoon. This CME will likely reach Earth on May 29. Further material was added later in the day after the C8 long duration event in region 10767.

=== Filament eruption, S halo CME, Outstanding propagating dimming at 304 A.!!!

See Events!!! 30d: FD, Dst=-119 nT

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## June 2005

1 - A number of impulsive soft X-ray flares

3 - eruptive solar events of 03/0411 UTC (M1/CME) and 03/2355 UTC (C6/Type II/Type IV).

~11 UT: E partial halo CME

!! 8 - >08 UT: SW partial, very slow halo CME; no EIT data;

!! На нашем спектре хорошее резкое усиление шумовой бури.  
At least a partial halo CME was observed in LASCO C3 images during the late afternoon and early evening. The ejected material was first observed over the southwest limb and was likely related to a filament eruption to the north of region 10772.

++12 - Region 10775 decayed after the long duration events.  
Flares: C3.5 very long duration event peaking at 02:36 and  
C3.0 long duration event peaking at 16:09 UTC.  
Two large W CMEs, No EIT data, See SXI

++14 - A full halo CME was observed in LASCO images after a long duration C4 event in region 10775 during the morning (07 UT). With no available LASCO images covering the C7 long duration event later in the day (16 UT), it is uncertain if there was another full halo CME then. No EIT data, See SXI  
!! Very similar to double LDEs of 12 June!!

+07 UT: drifting CONT at our spectrum; pulsations (type III-like features)!

+16 - ~08 UT: континуум (дрейфующий?) тонкоструктурный на нашем спектре (как 14-ого)!!

22:20 UT: M4 W-лимбовая протонная вспышка со слабым радио; No EIT data

25: A full halo CME was observed in LASCO C3 images beginning at 08:42 UTC. While quite a bit of coronal activity was observed in the central southeast quadrant during the first half of the day, the timing of the CME makes it likely that the source of the CME was backsided.

26: A symmetric full halo CME was observed in LASCO C3 images beginning at 08:18 UTC. No relevant activity was observed on the visible disk during the hours before this observation, thus the source of the CME was most likely backsided.

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## July 2005

### 5-14 July - Enhanced activity from AR 786

++5 July - A faint, possibly full halo, CME was observed beginning at 16:18 UTC in LASCO C3 images when material was first observed over the southeast limb.  
++ 15UT: large SE eruption, 4-line dimmings; See events!

++7 July - A filament eruption which started at approximately 11h UTC just south of region 10786 was the likely source of a full halo CME observed in LASCO C3 images beginning at 14:42 UTC. Another full halo CME was observed in LASCO C3 images beginning at 18:18 UTC. Its source was likely the M4.9 flare in region 10786. The CME was not very impressive.  
++ 11 and 16 UT: Two large eruptions with a 5-hour intervals, dimmings; See Events!!  
+ Intense noise storm at our spectrum!

8 July: The C1 long duration event in region 10786 during the afternoon was apparently associated with (at least) a very faint partial halo CME.

This CME was observed in LASCO C3 images during the evening and early on July 9.

16-19 UT: Not too large N/center eruption; See Event!

++9 July: +10 UT: NW eruption, dimmings See Event!!

++12:30 UT: south dark feature at 304 A and propagating feature at 195 A;

The M2 event in region 10786 produced a full halo CME.  
This CME was first observed in LASCO C3 images at 23:18 UTC.

++20-23 UT: Global N eruption: first, NE-limb filament and then large eruption at whole N half of the disk; See Event!!!  
На одних и тех же кадрах LASCO медленный CME от эруптивного волокна  
и гораздо более быстрый CME от центральной вспышки.  
На EIT - соответствующие димминги; 4-line dimmings

+10 July - Several on-disk and W near-limb eruptions  
FD~3%, Dst=-73 nT

+ 11 July - A number of W near-limb eruptions

++12 July - The M1 long duration event in region 10786 during the afternoon was associated with a faint full halo CME. While parts of this CME were visible over the northwest limb at 17:42 UTC, it wasn't until 3 hours later that this developed into a full halo CME when much fainter extensions became visible over the east limb in LASCO C3 images. See Events!!  
A number of W near-limb eruptions  
Another FD, Dst=-62 nT

++13 July - A large, wide and fast full halo CME was observed during the afternoon and early evening in LASCO C3 images after the M5 long duration event in region 10786. Two eruptions at 12 and 14 UT; See Events!  
++Pulsations(?) at our noise storm spectrum!

++14 July - A number of W-limb eruptions  
Two our intense W-limb eruptions with large CMEs and interesting radio!!  
++06-07 UT: M9.1 flare, structured continuum; See Events!!  
++10:20 UT: X1.2 flare, fragmented type III and perhaps type III bursts;  
++ A burst with intermediate drift between type II and III bursts  
See Events!!  
RHESSI observations:  
[http://sprg.ssl.berkeley.edu/~tohban/nuggets/?page=article&article\\_id=5](http://sprg.ssl.berkeley.edu/~tohban/nuggets/?page=article&article_id=5)

15 July - A number of W-limb eruptions

+ 15-16 - A huge prominence eruption over NE limb at 304 and 195 A

++16 July - A number of W-limb eruptions  
++07:15 UT: Clear type II burst at our spectrum  
!!FD~7%

17 July - An impressive full halo CME was observed in LASCO C3 images starting at 12:18 UTC. Its source was in region 10786 well behind the northwest limb. A minor increase in proton levels was observed as well after this event.  
12 UT: halo CME, backside?  
!!FD~7%

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Very high CME backside and E-limb activity

21 July - No fewer than eight coronal mass ejections (CMEs) have exploded away from the sun since July 22nd

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21 July- 03 UT: large NE halo backside CME

22 July- 23 UT: large S halo backside CME

++24 July - 11 UT: Large backside (SE-limb) CME  
Visible at 195 A.  
14 UT: Large backside (E-limb) CME  
Visible at 195 A.  
22 UT: Large backside (SE-limb) CME

+25 July - 11 UT: Large backside (E-limb) CME  
Visible at 195 A.

+26 July - 09 UT: Large backside E-limb CME  
Visible at 195 A.

++27 July - 04:50 UT: M3.7 flare, impressive E-limb eruption; See Events!!

+28 July - 00:30 UT: M1 flare  
+06:30 UT: Clear type II burst at our spectrum  
22 UT: SF/M4.8 flare

++30 July - 05:19 UT 1N/C9.4 flare and large CME followed by  
06:30 UT: 2B/X1.3 flare and large and wide full halo CME;  
4-line dimmings; See Events!!  
++Type II burst at our spectrum; See Events!!

31 July - 05-06 UT: impressive SE-limb eruption; See Events!!  
12:24 UT: M1.1 flare

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**August 2005**

++1 - 12:21 UT: impulsive C5.8 flare without a CME; 195 A EIT observations;  
See Events!  
13:51 UT: 1F/M1.0 LDE flare from another region with a large CME;  
304 A EIT observations; See Events!

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**2-4 Aug 2005 - A series of impulsive flares with SE eruptions  
and very homologous dimmings**  
**Эруптирует одна и та же структура, быстро восстанавливается и снова  
эруптирует**  
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++2 - **A number of sufficiently intense soft X-ray impulsive flares**  
07:30 UT: SE eruption with C2.9 impulsive flare; See Events!!  
12:30 UT: SE eruption with C8.7 impulsive flare, narrow CME; See  
Events!!  
18:30 UT: SE eruption with M4.2 impulsive flare, narrow CME; See  
Events!!  
20:20 UT: eruption from central region with C6.7 impulsive flare;  
See Events!!

++3 - 05 UT: SE eruption with M3.4 impulsive flare and narrow CME; See  
Events!!  
14 UT: one more SE eruption with C9.3 impulsive flare without CME  
; See Events!!

++4 - 06 UT: significant SE eruption; SF/C8.4 flare; See Events!!

++5 August: A filament eruption (?) across the central meridian in the northern hemisphere was triggered by the C2 LDE in region 10792 during the morning. At least a partial halo CME was observed after this event.

++07 UT: C2.6 LDE, central eruption; halo CME, large 4-line dimmings; See Events!!

6 - *FD and geomagnetic storm*

++7 - 04 UT: **Эрупция северного/центрального волокна**. Большие димминги, ПЭ аркада

See Events!

13 UT: **большая NW прилиббовая эрупция, 4-line dimmings**; See Events!!

20 - A faint full halo CME was observed in LASCO C3 images beginning at 18:45 UTC. There was no associated frontside activity so this CME likely had a back-sided source.

++22 - ++ 01:33 UT: M2.6 LDE; W eruption, halo CME,

корональная волна на диске и, возможно, над лимбом;

Новый димминг (транзиентная КД) в 4-ех линиях рядом с долгоживущей

КД;

See Events!

++17:27 UT: еще одна аналогичная 1N/M5.6 LDE flare, halo CME,

корональная волна на диске и, возможно, над лимбом;

диммингов почти нет; See Events!

++23 - ++14:44UT: M2.7 LDE, W-limb eruption; large CME;

корональная волна на диске огибает КД; See Events!!

++24 - Large FD~5% and geostorm Dst~-213 nT

++25 - 04:40 UT - E-limb M6.4 impulsive flare, CME, over-limb dimmings; See Events!!

**Четкое отклонение коронального луча (и 24-ого тоже)**

A very fast and wide full halo CME was observed after the major M6 event in region 10803. This CME was not as dense as we often observe and it was difficult to track the expansion front over the western limbs.

++28 - 10:28 UT - E36 SF/M1.6 impulsive flare, 4-line dimmings; See Events

Мощная группа III типа и медленно дрейфующий континуум на нашем спектре

29 - A large full halo CME was observed from a source behind the southwest limb

++31 - 10 UT: C2 LDE, CME, central dimmings; See Events!!

22 UT: strong halo CME (backside?), нет файлов EIT между 15:30 и 22:30;

See Events

Мощная буря Dst~-173 nT, от эрупции 28d ?

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**September 2005**

++1 - 22:30 UT: central eruption, dimmings, CW; See Events!

+2 - 11:30 UT: central eruption, dimmings; See Events!

3 - At 03:42 UTC on September 3 another large, full halo CME was observed in LASCO images. The source was about 3-4 days behind the southeast limb. This back-sided region has produced several large CMEs over the last week. **EIT bakeout**

4 - 15 UT: NW and NE CME was observed over the west limbs following a long duration C2 event in region 10803. **EIT bakeout**

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**Very high activity. At least 10 X-class flares, quasi-impulsive and LDE**  
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+5 - 09:30 UT: SE-limb event; one more C2 LDE, large SE CME, **EIT bakeout**  
++Our spectrum: IIIGG followed by CONT with type II-like bands

6 - 22 UT: SE-limb event; M1.4 LDE, large SE CME, **EIT bakeout**  
23 Ut: NW/W CME

++7 - 17:40 UT: E-limb **3B/X1.7 LDE**; **EIT bakeout**

++8 - 21:06 UT: 2B/**X5.4 LDE**; **EIT bakeout**  
**Без метровой компоненты**

++9 - 03:30 UT: **X1**  
09:59 UT: **X3.6 Без метровой компоненты**  
20:04 UT: **2B/X6.2 LDE**, , SE halo CME; **EIT bakeout**

+10 - 16:43 UT: **X1.1**  
22:11 UT: **X2.1 LDE**, SE halo CME; **EIT bakeout**

+11 - 13:12 UT: M3.0 LDE, SE halo CME; **EIT bakeout**  
**Dst~-124 nT, FD~10%**

+12 - 09:03 UT: 2F/M6.3; **EIT bakeout** ; weak CME  
**Без метровой компоненты**

++13 - 19:27 and 20:05 UT: central 2B/X1.5, **impulse + LDE**,  
A large, fast full halo CME; **EIT bakeout**, **Метры слабые**;  
23:22 UT: 1B/X1.7, quasi-impulsive; **EIT bakeout**

++14 - 10:38 UT: central M4.6, quasi-impulsive, without CME; **EIT bakeout**  
**Метры слабые**;

++15 - 08:38 UT: 2N/X1.1, not LDE, almost without CME; **EIT bakeout**  
**Метры слабые**;

+16 - 01:49 UT: 1B/M4.4, not LDE, almost without CME; **EIT bakeout**  
**Метры слабые**;  
17:48 UT: SF/M1.3, **Метры слабые**;  
19:36 UT: 1F/M3.5, **Метры слабые**;

++17 - 06:05 UT: 2N/M9.8, not LDE, almost without CME; EIT bakeout  
Метры слабые;