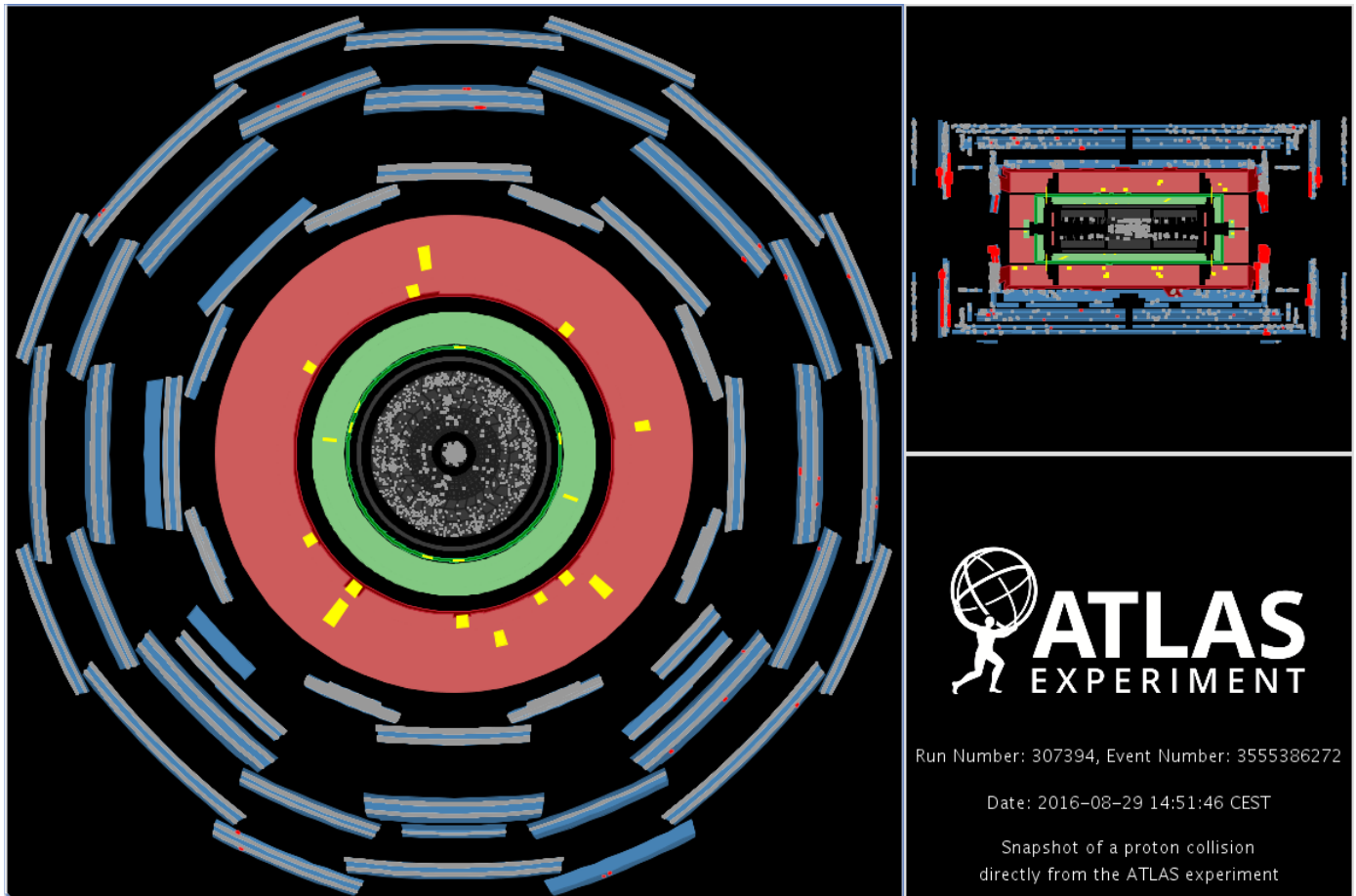




Cern and the Sun



ATLAS LIVE

CERN

The European Organization for Nuclear Research

(French: Organisation européenne pour la recherche nucléaire),

known as CERN (/ˈsɜːrn/; French pronunciation: [sɛʁn]; derived from the name "Conseil Européen pour la Recherche Nucléaire"; see History), is a European research organization that operates the largest particle physics laboratory in the world. Established in 1954, the organization is based in a northwest suburb of Geneva on the Franco–Swiss border, (46°14′3″N 6°3′19″E) and has 22 member states. Israel is the only non-European country granted full membership.



researchers elsewhere, it has historically been a major wide area network hub.

Cern Live Feed

LHC Page1		Fill: 5259		E: 0 GeV		29-08-16 16:11:26	
PROTON PHYSICS: NO BEAM							
BCT TI2: 0.00e+00		I(B1): 8.00e+08		BCT TI8: 0.00e+00		I(B2): 0.00e+00	
TED TI2 position:		DUMP		TDI P2 gaps/mm		up: 8.22 down: 6.86	
TED TI8 position:		DUMP		TDI P8 gaps/mm		up: 9.28 down: 7.04	
<div>Comments (29-Aug-2016 16:10:01)</div> <div>Access ongoing</div> <div>Beam should be back at 6h at the earliest</div> <div>Next: fill with 2220b</div>				BIS status and SMP flags		B1	B2
				Link Status of Beam Permits		true	true
				Global Beam Permit		false	false
				Setup Beam		true	true
				Beam Presence		false	false
				Moveable Devices Allowed In		false	false
				Stable Beams		false	false
AFS: 25ns_2220b_2208_1940_2036_96bpi_24inj				PM Status B1	ENABLED	PM Status B2	ENABLED



Beam intensity and Energy

Beam lifetime

Emittance (not calibrated)

Fill luminosity

Tune feedback

Orbit feedback

Losses

Luminosity

	ATLAS	ALICE	CMS	LHCb
Instantaneous	0.2	0.0	0.0	0.0
Integrated fill	0.0	0.0	0.0	0.0
Integrated/h	0.0	0.0	0.0	0.0
beta * [m]	0.0	0.0	0.0	0.0

Bunch Intensities

Cern Live





Inscription:

"O Omnipresent, the embodiment of all virtues, the creator of this cosmic universe, the king of dancers, who dances the Ananda Tandava in the twilight, I salute thee." (Source: Verse No. 56, Sivanandalahari by Sri Adi Sankara)

CERN

CERN: Official communications for CERN people

Administrative Circular No. 22B (Rev. 2) - Compensation for hours of long-term shift work

Administrative Circular No. 22B (Rev. 2) entitled "Compensation for hours of long-term shift work", approved by the Director-General followi. . . [read more](#) Mon, 22 Aug 2016 10:08:40 +0000

Administrative Circular No. 31 (Rev. 2) - International indemnity and non-resident allowance



Administrative Circular No. 31 (Rev. 2) entitled "International indemnity and non-resident allowance", approved by the Director-General follow. . . [read more](#) Mon, 22 Aug 2016 10:08:20 +0000

Staff Rules and Regulations - Modification No. 11 to the 11th edition

The following modifications to the Staff Rules and Regulations have been implemented: In the framework of the Five-Yearly Review 2015, in a. . . [read more](#) Mon, 22 Aug 2016 10:08:09 +0000

Administrative Circular No. 23 (Rev. 4) - Special working hours

Administrative Circular No. 23 (Rev. 4) entitled "Special working hours", approved by the Director-General following discussion in the Standin. . . [read more](#) Mon, 22 Aug 2016 10:08:06 +0000

Administrative Circular No. 13 (Rev. 4) - Guarantees for representatives of the personnel

Administrative Circular No. 13 (Rev. 4) entitled "Guarantees for representatives of the personnel", approved by the Director-General following. . . [read more](#) Mon, 22 Aug 2016 10:08:04 +0000

Procedure for the delivering of personal short-term visitor dosimeters

Update of the administrative procedure for delivering a personal short-term visitor dosimeter to associated members of CERN's personnel. . . [read more](#) Thu, 11 Aug 2016 16:08:33 +0000

Human Resources Department: report on the settlement of disputes and discipline

The 2015 Annual Report from the Human Resources Department concerning the settlement of disputes and discipline under Chapter VI of the Staff. . . [read more](#) Thu, 11 Aug 2016 11:08:35 +0000

Don't leave your baggage unattended

"Don't leave your baggage unattended" is a familiar request to anyone who travels by air, but it's good advice wherever you may be. . . [read more](#) Fri, 22 Jul 2016 16:07:47 +0000

Procedure for obtaining visas for Switzerland and France - Signature rights

In accordance with the Status Agreements with CERN, Switzerland and France facilitate the entry of members of the Organization's personnel o. . . [read more](#) Fri, 22 Jul 2016 16:07:41 +0000

Administrative Circular No. 11 (Rev. 4) - Categories of members of the personnel

Administrative Circular No. 11 (Rev. 4) entitled "Categories of members of the personnel", approved by the Director-General following discussi. . . [read more](#) Wed, 20 Jul 2016 17:07:38 +0000

Security affects us all!

In the hope of minimising the number of thefts of the Organization's property, which can lead to months of work going to waste on certain pr. . . [read more](#) Wed, 06 Jul 2016 15:07:17 +0000

Statement about UK referendum on the EU

Dear Colleagues, Many people have expressed their concerns about the consequences of the 23 June vote in the UK for CERN, and for the UK's r. . . [read more](#) Mon, 27 Jun 2016 15:06:03 +0000

Change of mobile network coverage in France from 29 August

The change of mobile network coverage on the French part of the CERN site will take effect on 29 August and not on 11 July as previously annou. . . [read more](#) Fri, 24 Jun 2016 11:06:13 +0000

Change to CERN Safety Rules: Abolition of Safety Code A7

As from 3 June 2016 Safety Code A7 "Road traffic at CERN" is abolished. CERN's current practice to follow French or Swiss road traffic. . . [read more](#) Wed, 22 Jun 2016 17:06:58 +0000



Director general presentation to personnel

Dear Colleagues, Many important discussions are scheduled for the upcoming Council Week (13-17 June) on topics including the Medium-Term Pla. . . [read more](#) Tue, 14 Jun 2016 11:06:57 +0000

CERN LIVE

- Bike to work safely August 19, 2016

Simon Baird As the fine weather appears and CERN fills up with summer visitors, the number of people cycling to and from CERN and around the CERN campus rises dramatically – and so does the number of accidents involving bicycles. So far this summer, there have been 10 reported accidents, all of which could have [...]

Harriet Kim Jarlett

- Closure of the flagpole car park from 1 to 5 September August 19, 2016

SMB Department Please note that, owing to the flag-raising ceremony to mark the accession of Romania to the status of CERN Member State, the flagpole car park will be inaccessible from the morning of 1 September 2016 until around 1 p.m. on 5 September 2016. Users of the car park are therefore invited to remove [...]

Harriet Kim Jarlett

- News regarding mobility at CERN August 17, 2016

SMB Department CERN Bikes CERN owns a fleet of more than 500 bikes, managed by the Mobility Centre (bdg. 6167). Members of CERN personnel (MPE and MPA) can use these free of charge during work-related activities at CERN (a security deposit is requested). Between 1st of June to 30th September anyone, except Summer Students, who [...]

Harriet Kim Jarlett

- General Purpose (office) Network Reorganisation August 15, 2016

Tony Cass for the IT Department On 27 August 2016, the IT Department's Communication Systems Group will perform a major reorganisation of CERN's General Purpose Network. This reorganisation will cause network interruptions on 27 August 2016 (and possibly 28 August 2016) and will be followed by a change to the IP addresses of connected systems that will come into [...]

Harriet Kim Jarlett

- New location of the Learning and Development group August 12, 2016

The HR-LD group would like to inform you that, owing to renovations, the service currently located on the fourth floor of Building 5 will be moving to the first floor of Building 653 for around eight months from September 2016. The HR-LD group will be moving to the first floor of Building 653 for around [...]

Harriet Kim Jarlett

- Entrepreneurship as a career path August 12, 2016

After a summer break, the CERN Entrepreneurship Meet-Ups (EM-Us) will start again on 23 August 2016. The meet-ups are open to all those who are interested in learning more about entrepreneurship, with or without a

particular project in mind. “The meet-ups are about connecting with the community, within CERN, but also beyond,” says Giovanni Porcellana, [...]



Harriet Kim Jarlett

- CERN Summer Student Webfest: 29 - 31 July 2016 July 25, 2016

It is a grassroots initiative, open to all, that aims to spark new ideas that could innovate the future of web-based education about CERN, the LHC, particle physics, humanitarian matters and health. The CERN Summer Student Webfest is a weekend of online web-based creativity modelled on the gatherings (sometimes called hackfests or hackathons) that energize many [...]

Stefania Pandolfi

- Take part in the 2017 Beamline for Schools competition! July 25, 2016

Markus Joos Pre-registration is open for the 2017 Beamline for Schools competition. For more information see [here](#).

Stefania Pandolfi

- ‘Lightning talks’ from the CERN openlab summer students July 21, 2016

Andrew Purcell On Monday 15 and Thursday 18 August, this year’s CERN openlab summer students will present their work in dedicated public ‘lighting talk’ sessions. In 5-minute presentations, each CERN openlab summer student will introduce their project, explain the technical challenges and describe the results of what they have been working on for the past few [...]

Corinne Pralavorio

- New AIDA-2020 call for breakthrough detector technologies July 20, 2016

Physicists, engineers, and industry will be interested in a new proof-of-concept fund for breakthrough projects from the general field of detector development and testing. Launched in the framework of the European project AIDA-2020, this open call will provide up to 200k€ of seed funding to support innovative and societal applications with a focus on [...]

Corinne Pralavorio



- Ghosts in the machine August 23, 2016

Christine Sutton Fred Reines, left, and Clyde Cowan, at the controls of the Savannah River experiment, which discovered the electron antineutrino in 1956. (Image: Los Alamos National Laboratory) Christine Sutton describes the pioneering 1956 experiment that proved the existence of the neutrino, and how subsequent particle-beam experiments at CERN and elsewhere contributed to unearthing a [...]

- New AIDA-2020 call for breakthrough detector technologies July 20, 2016

David Mazur Physicists, engineers, and industry will be interested in a new Proof-of-Concept fund for breakthrough projects from the general field of detector development and testing. The fund will provide up to

200k€ of seed funding to support innovative and societal applications with a focus on industry-oriented applications. The deadline for applying is October 20th [...]



- Issue 17 of Accelerating News now online July 4, 2016

The latest on CESSAMag magnets being installed at SESAME is just one of the highlights from this issue of Accelerating News (Image credit: SESAME) In this issue of Accelerating News we bring you great stories including: an interview with Professor Tommaso Valletti, the new Chief Economist of the European Commission's DG Competition; highlights from three [...]

- A new issue of the Experimental Physics Newsletter is online July 1, 2016

You can read about the restart of the LHC from the run coordinators of the LHC experiments and find more news from the other activities of the department. Examples are the completion of the first stage of the HIE-ISOLDE project with the installation of the first two superconducting modules. The results from the CLOUD that [...]

- On Track: The latest news and results for AIDA-2020 June 1, 2016

Harriet Jarlett The AIDA-2020 EU project started one year ago, in May 2015, with the aim to group together the High Energy Physics R&D community in Europe – uniting them in the goal of advancing detector technology, and building infrastructures for the future. A new newsletter "On Track" aims to serve the AIDA-2020 project as [...]

- CERN launches Physics Beyond Colliders study group May 24, 2016

We are pleased to announce the kick-off workshop of the "Physics Beyond Colliders" Study Group which has recently been set up by CERN Management. The workshop will be held at CERN, Geneva, on September 6-7, 2016. The aim of the workshop is to explore the opportunities offered by the CERN accelerator complex and infrastructure to get [...]

- The Tevatron legacy: a luminosity story May 12, 2016

Dmitri Denisov, Fermilab and Jacobo Konigsberg, University of Florida Vehicle lights create an amazing effect in this night shot of the Tevatron Main Ring. (Image credit: Fermilab) To a large extent, this was due to the hundred-fold increase in the delivered luminosity. The LHC has gathered so far approximately 1% of its expected luminosity, a [...]

- Neutrons in full flight at CERN's nTOF facility April 18, 2016

Frank Günsing and Enrico Chiaveri, n_TOF Collaboration The horizontal neutron beamline in EAR1 (left) and the vertical neutron beamline in the newly constructed EAR2. (Image: n_TOF collaboration) nTOF is CERN's neutron time-of-flight facility. Featuring two neutron beam lines and two experimental halls, nTOF is producing results that are important for nuclear astrophysics and to develop [...]

- FCC study holds annual meeting this week April 11, 2016

Harriet Jarlett The second annual meeting of the Future Circular Collider study will take place from 11-15 April 2016 in the Crowne Plaza St. Peter's Hotel, Rome, Italy. The week will bring together the leading minds in engineering and science to exchange information about the design progress and to set the goals for the coming year. Find [...]

- Accelerating News Issue 16 now available April 7, 2016

A first concept for the FCC-ee main dipoles, with an X iron yoke (blue) and two aluminium busbars (red). The dimensions are about 40 cm wide per 12 cm high (Image: CERN) In this issue of Accelerating News we bring you lots of great stories including: the first design concept for the FCC-ee main dipoles; exciting [...]

CERN: UPDATES FOR THE GENERAL PUBLIC

- Internaut Day and the World Wide Web August 23, 2016

Kathryn Coldham Tim Berners-Lee, inventor of the World Wide Web, pictured in 1994. In front of him shows a computer displaying an early version of the web. (Image: CERN) Internaut day is being celebrated around the world on 23 August to mark the invention of the World Wide Web. An "internaut" is a person who possesses a [...]

- LHC pushes limits of performance August 19, 2016

Harriet Jarlett The LHC tunnel. The machine is surpassing all performance expectations (Image: Jacques Fichet/ CERN) The Large Hadron Collider's (LHC) performance continued to surpass expectations, when this week it achieved 2220 proton bunches in each of its counter-rotating beams – the most it will achieve this year. This is not the maximum the machine [...]

- CERN featured as leader in Global Innovation Index August 15, 2016

Anaïs Rassat The Global Innovation Index 2016 (GII) report, highlights CERN's successful innovation initiatives. (Image: GII) The 9th edition of the Global Innovation Index 2016 (GII) report, launched today, highlights CERN as an example of successful, regional innovation initiatives. Over the last nine years, the GII report has established itself as a leading reference on [...]

- Roundup of ICHEP 2016 conference August 10, 2016

- MoEDAL closes in on search for magnetic particle August 10, 2016

Harriet Jarlett The MoEDAL experiment is searching for magnetic monopoles, which could, in theory, carry either a North or a South pole. (Image: Daniel Dominguez/ CERN) The Monopole & Exotics Detector at the LHC, nicknamed the MoEDAL experiment at CERN has narrowed the window of where to search for a hypothetical particle, the magnetic monopole, [...]

- Chicago sees floods of LHC data and new results at ICHEP August 5, 2016

One of the many meetings at CERN where physicists prepared to showcase results at ICHEP. (Image: Maximilien Brice/ CERN) Particle physicists are showcasing a wealth of brand new results from the Large Hadron Collider (LHC) experiments at CERN [1] at the "ICHEP 2016" [2] conference in Chicago. With a flood of new data, the experiment collaborations can [...]

- Explore LHC data on new ATLAS educational platform August 1, 2016

Katarina Anthony The "Histogram Analyser" allows to make data cuts and selections directly from the browser. (Image: ATLAS Experiment/CERN) On Friday, 29 July, the ATLAS experiment at CERN released the data from 100 trillion proton-proton collisions to the public. This is the world's first open release of 8 TeV data, which was gathered using the [...]

- The LHC takes a break before heading to new heights July 28, 2016

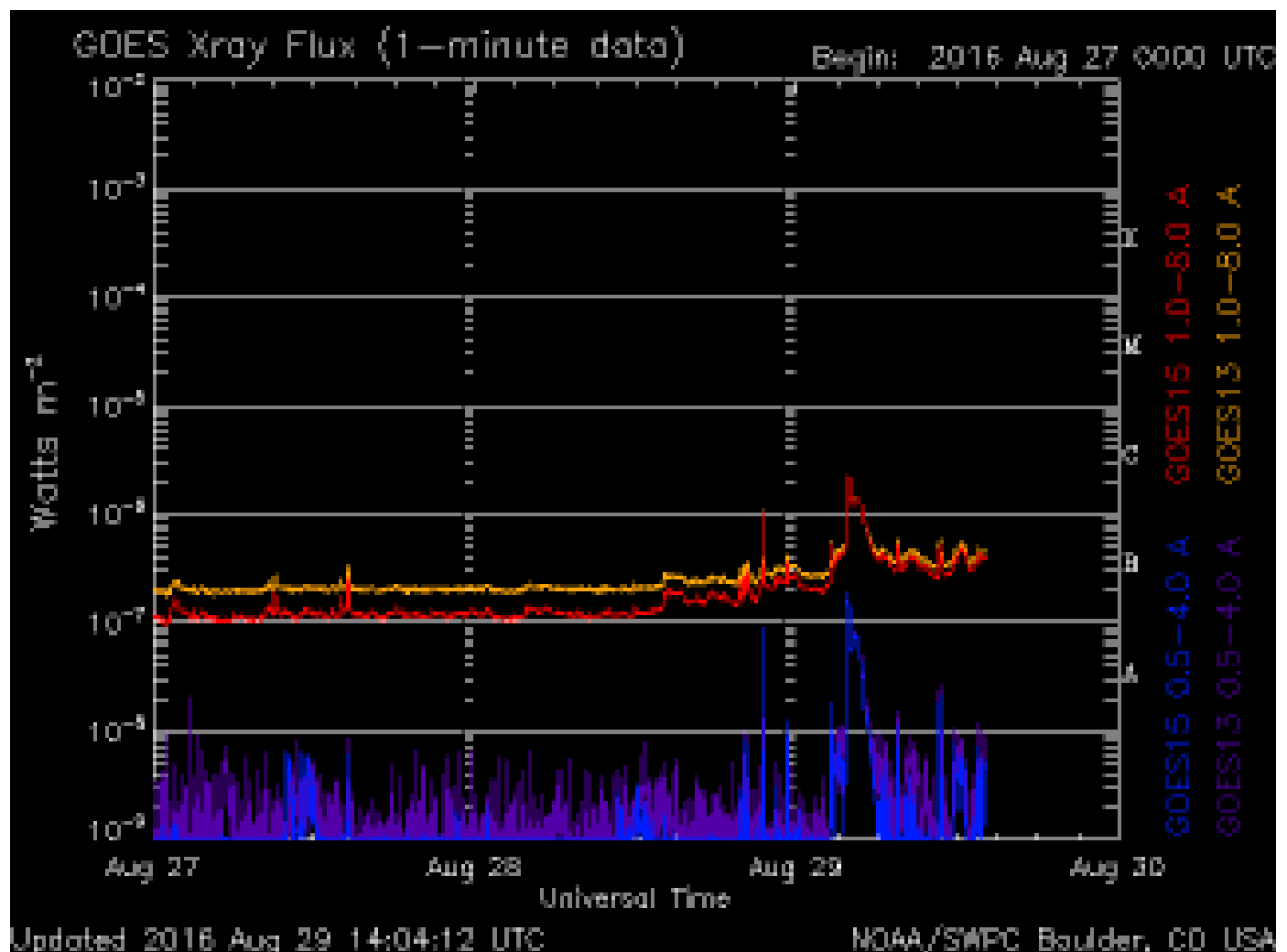
Corinne Pralavorio In the CERN Control Centre, Jan Uythoven and his colleagues perform studies to improve the operation of the LHC. (Image: Maximilien Brice/CERN) The Large Hadron Collider (LHC) has been on Olympic form recently. In just two months, the accelerator delivered almost five times as much data as in the whole of 2015, smashing [...]

- First call for proposals for the SESAME light source July 27, 2016

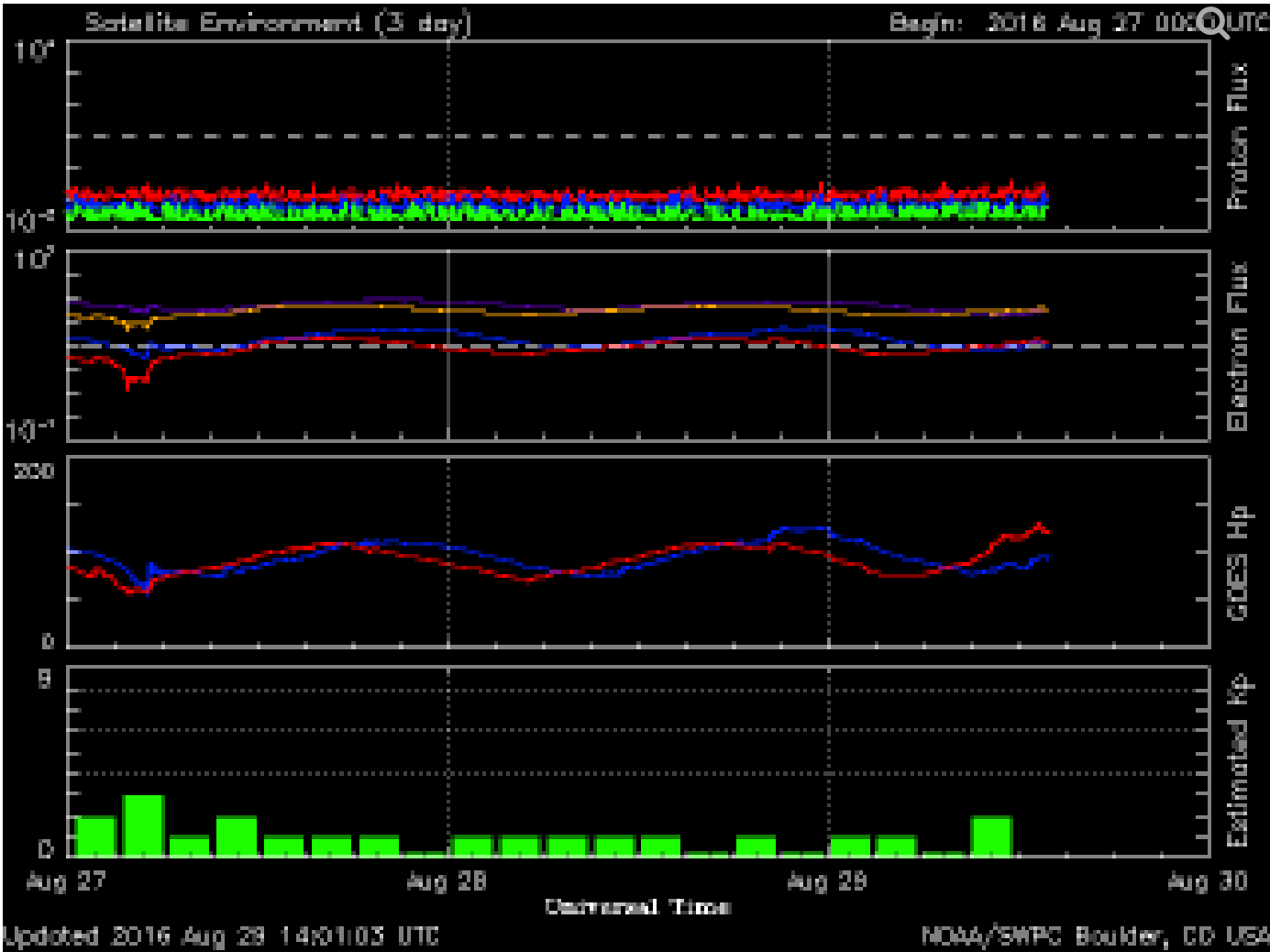
Workers building the ring at SESAME. (Image: Sophia Bennett/CERN) SESAME, the pioneering new regional laboratory for the Middle East and neighbouring countries, today publicly announced its first call for proposals for experiments. A third generation light source with a research capacity ranging from medicine to cultural heritage, SESAME's first beams will be circulating this autumn, [...]

- New furnace a step towards future collider development July 18, 2016

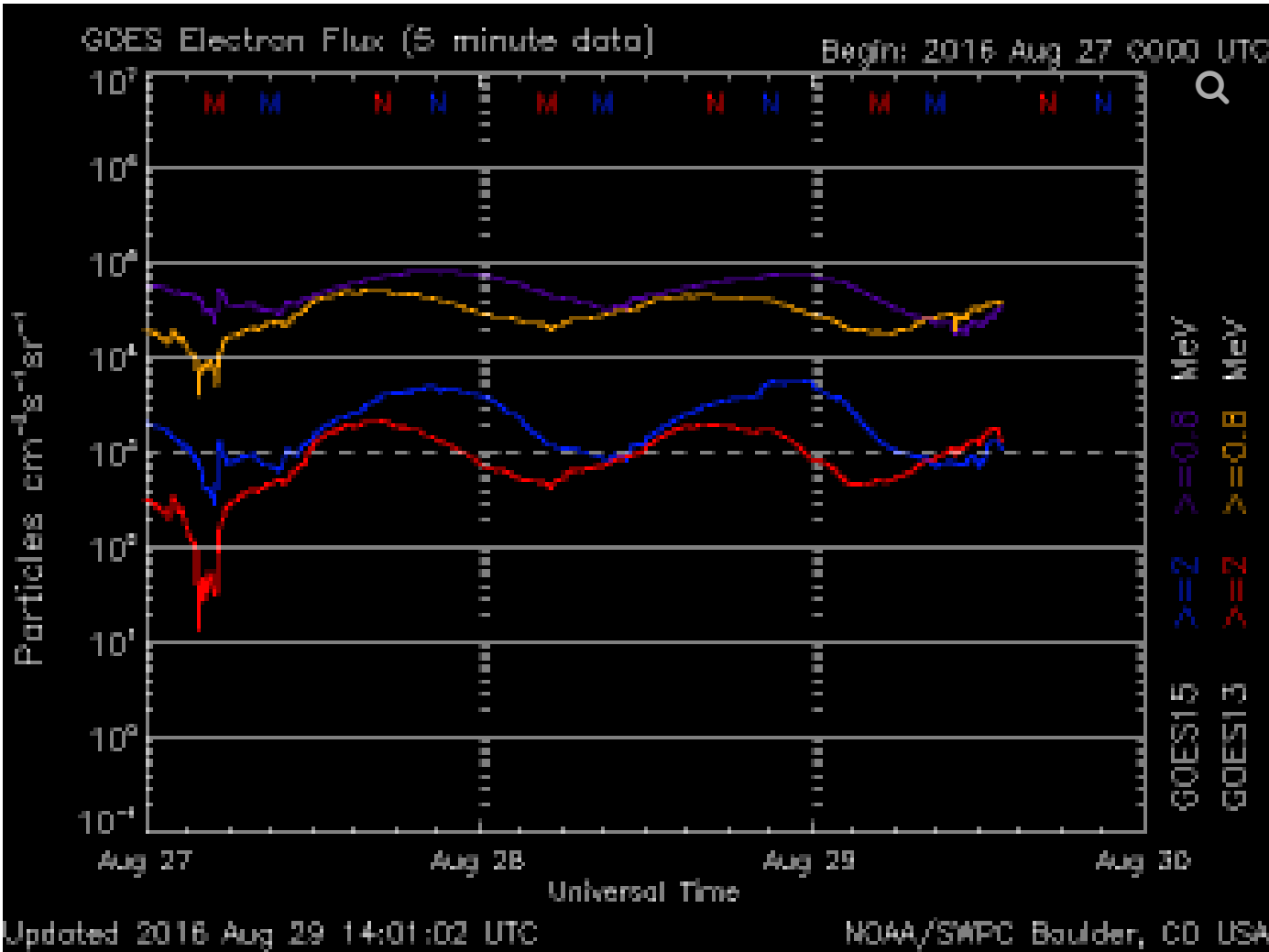
Harriet Jarlett, Panagiotis Charitos The new furnace is currently being installed and tested (Image: Friedrich Lackner/CERN) A new furnace arrived at CERN's Large Magnet Facility last month and is currently being installed and tested. The furnace completes the equipment required for the production of superconducting coils, which are needed for the High-Luminosity LHC (HL-LHC) upgrade [...]



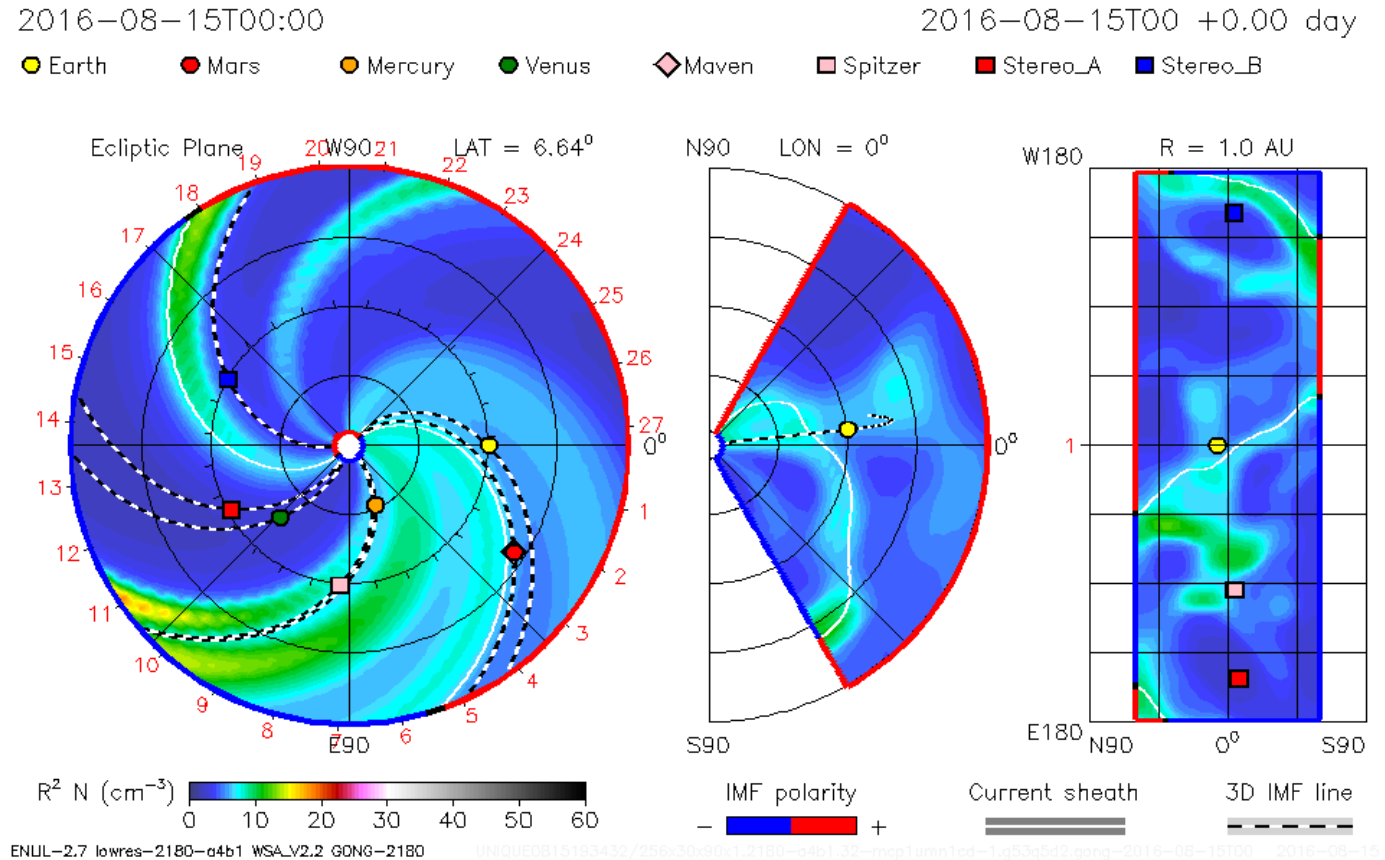
X-RAY FLUX



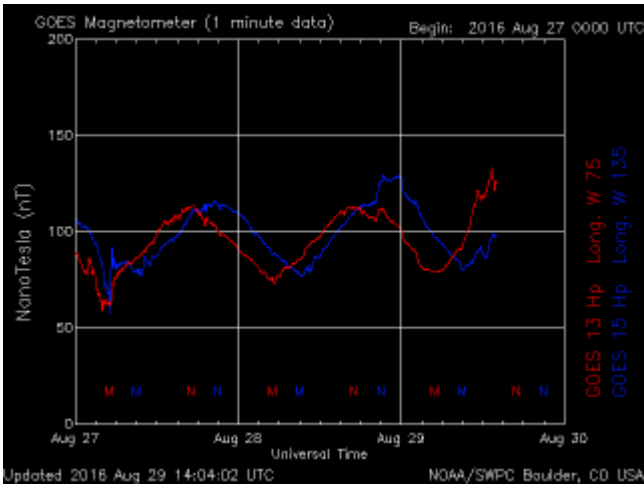
SATELLITE ENVIRONMENT



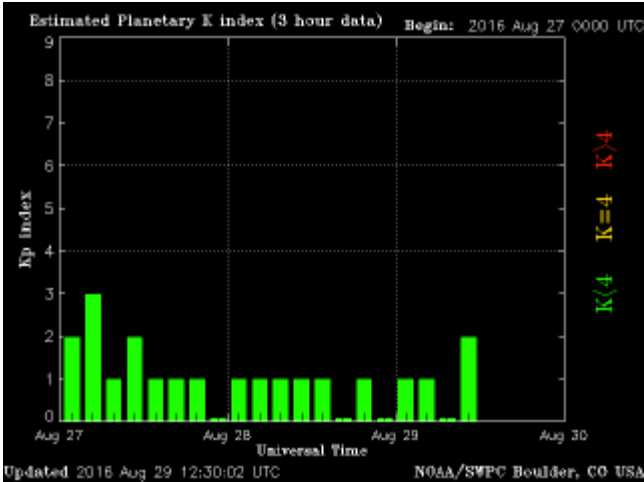
ELECTRON FLUX



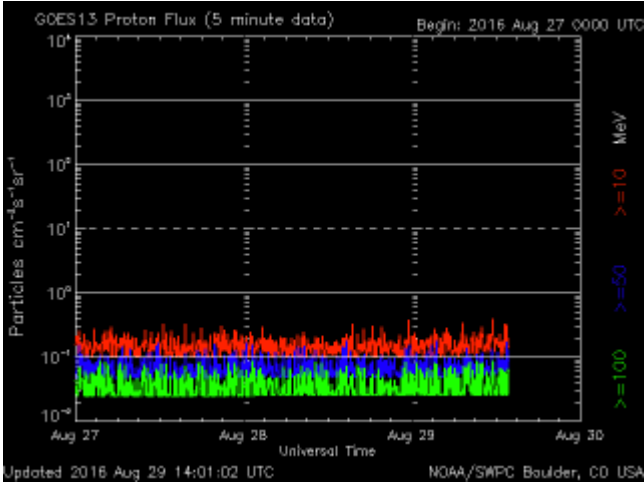
SOLAR WIND



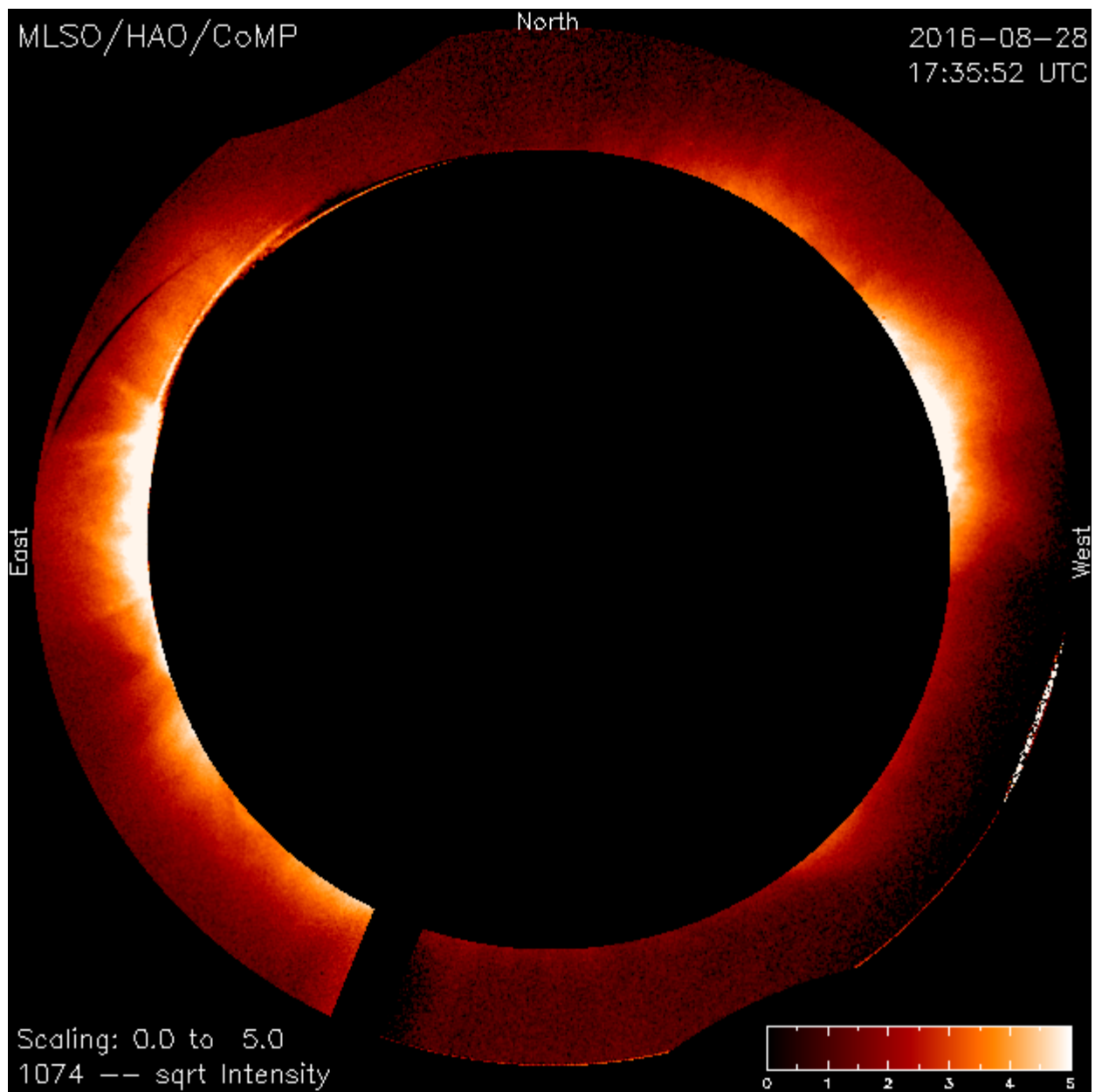
MAGNETOMETER

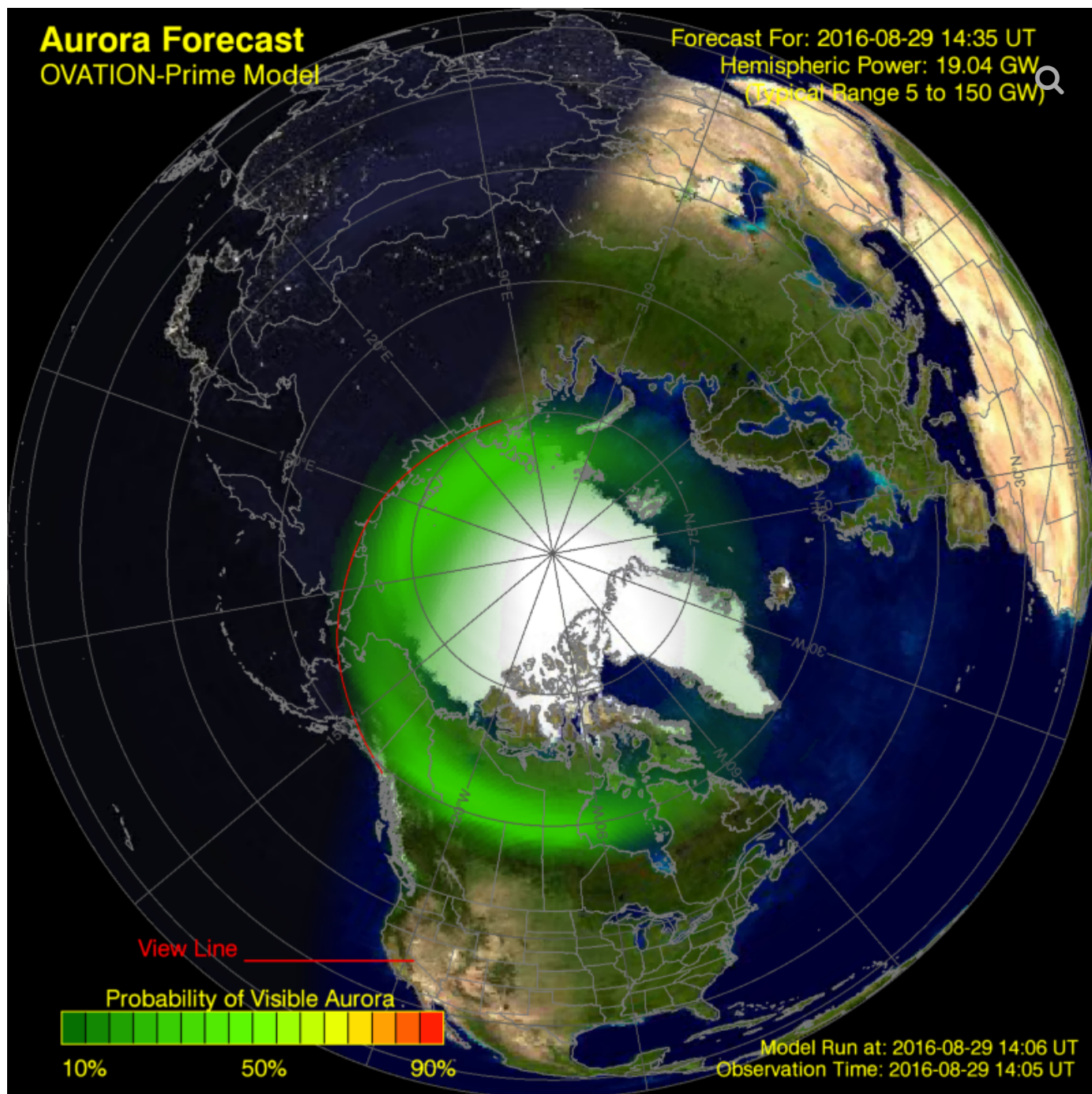


KP INDEX



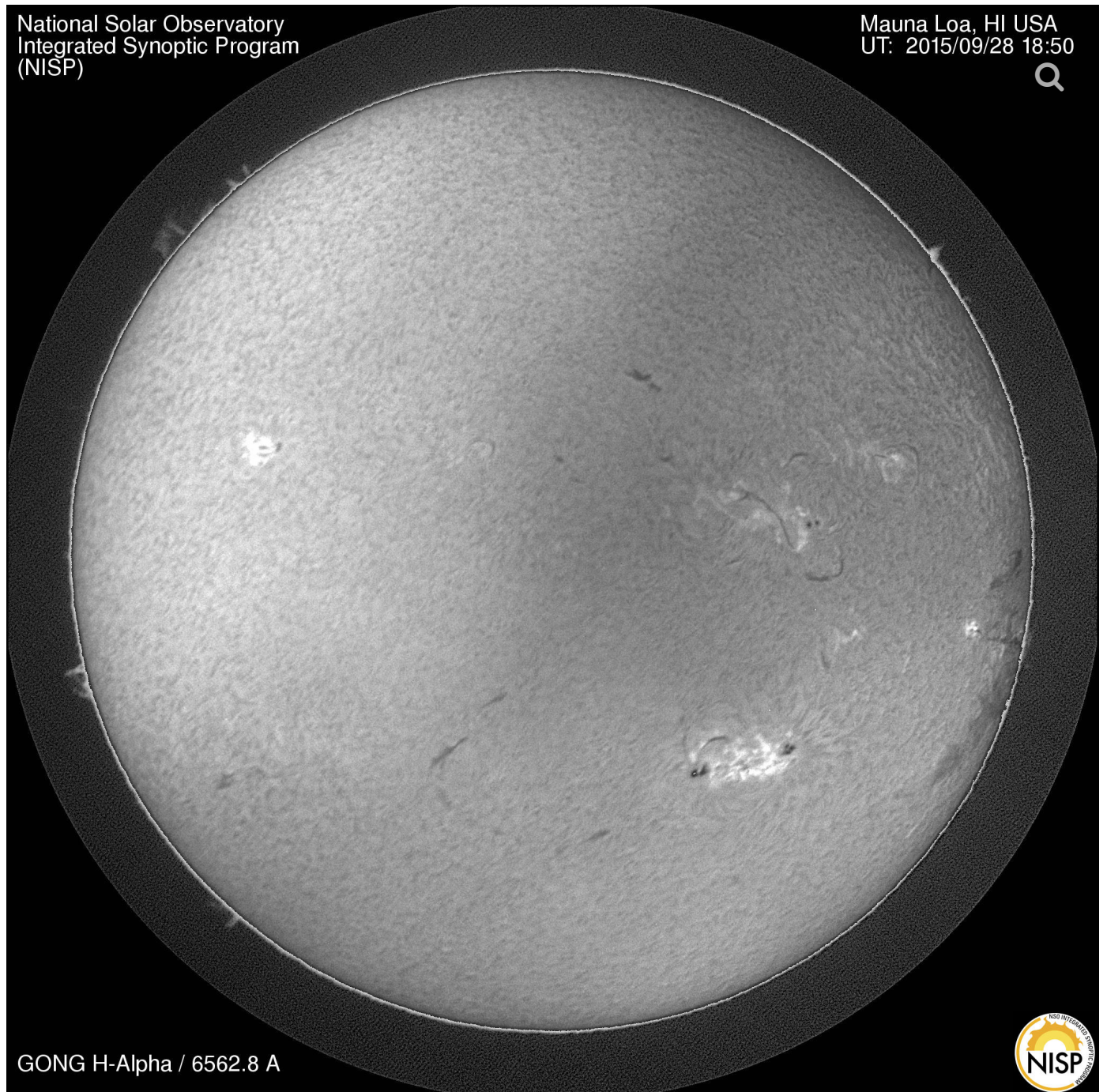
PROTON FLUX



**AURORA FORECAST**

National Solar Observatory
Integrated Synoptic Program
(NISP)

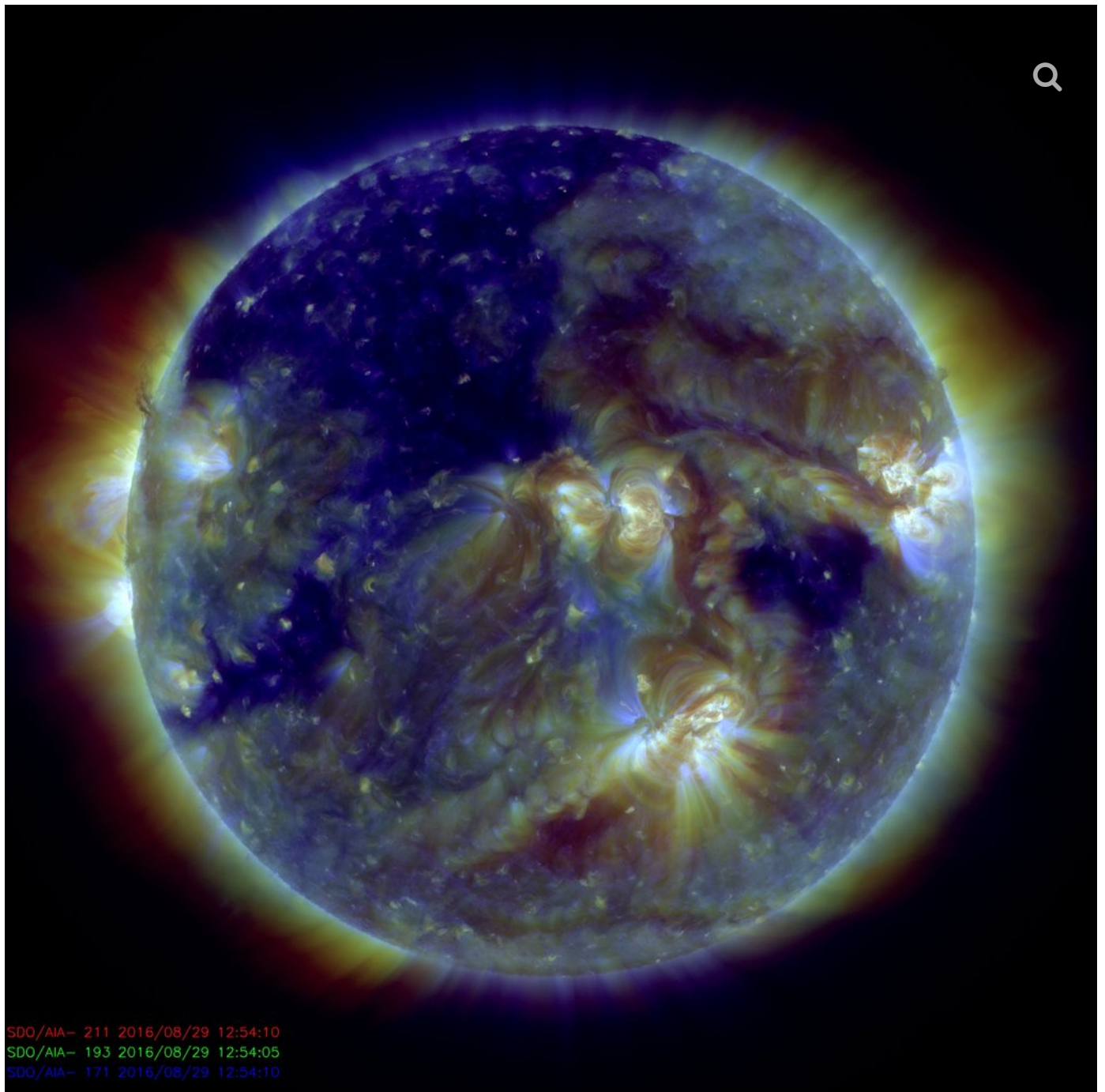
Mauna Loa, HI USA
UT: 2015/09/28 18:50



GONG H-Alpha / 6562.8 A

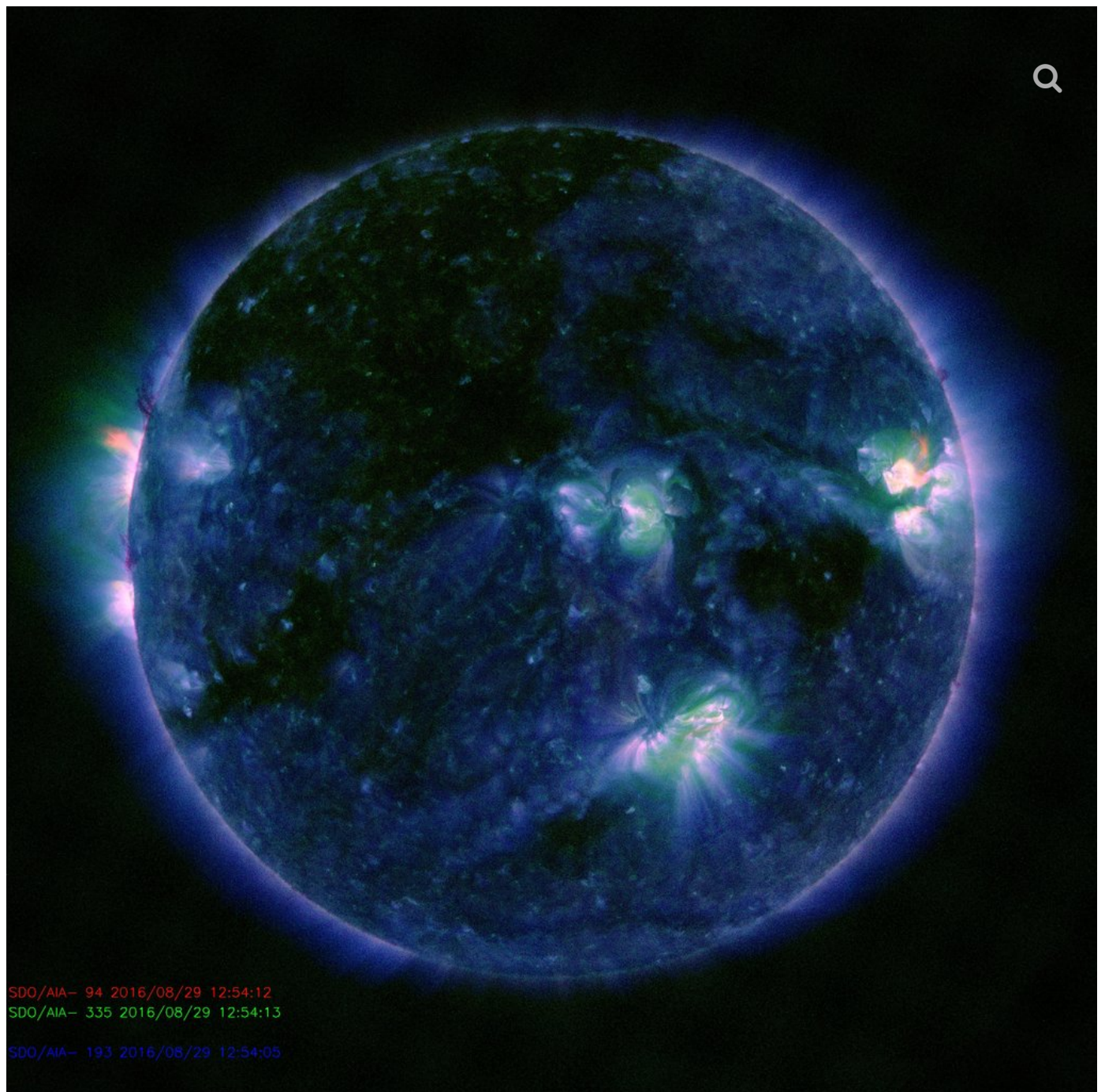


GONG H-ALPHA



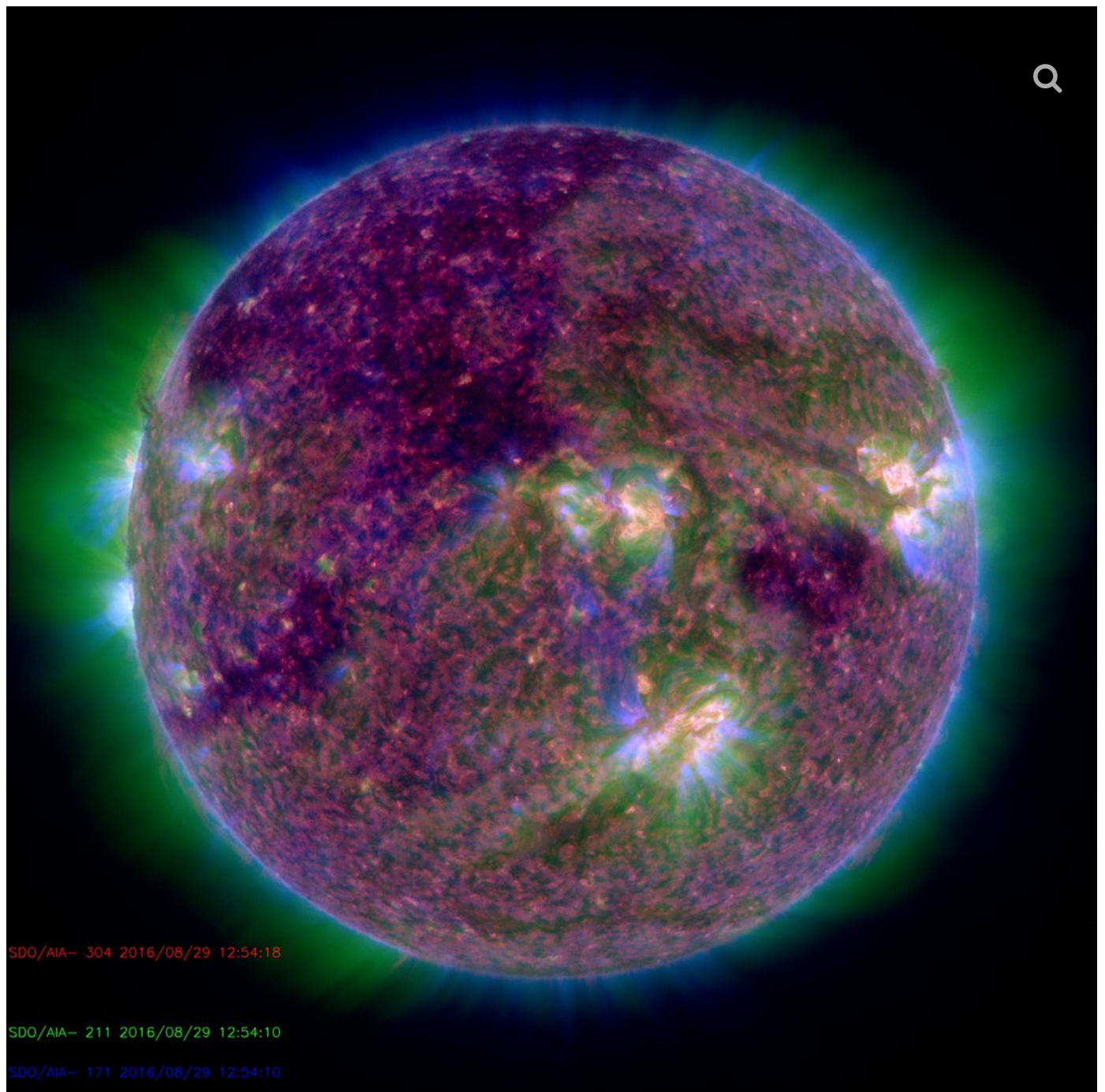
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SDO/AIA- 193 2016/08/29 12:54:05
SDO/AIA- 171 2016/08/29 12:54:10

SDO/AIA 211



SDO/AIA- 94 2016/08/29 12:54:12
SDO/AIA- 335 2016/08/29 12:54:13
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AIA 211 ANGSTROMS

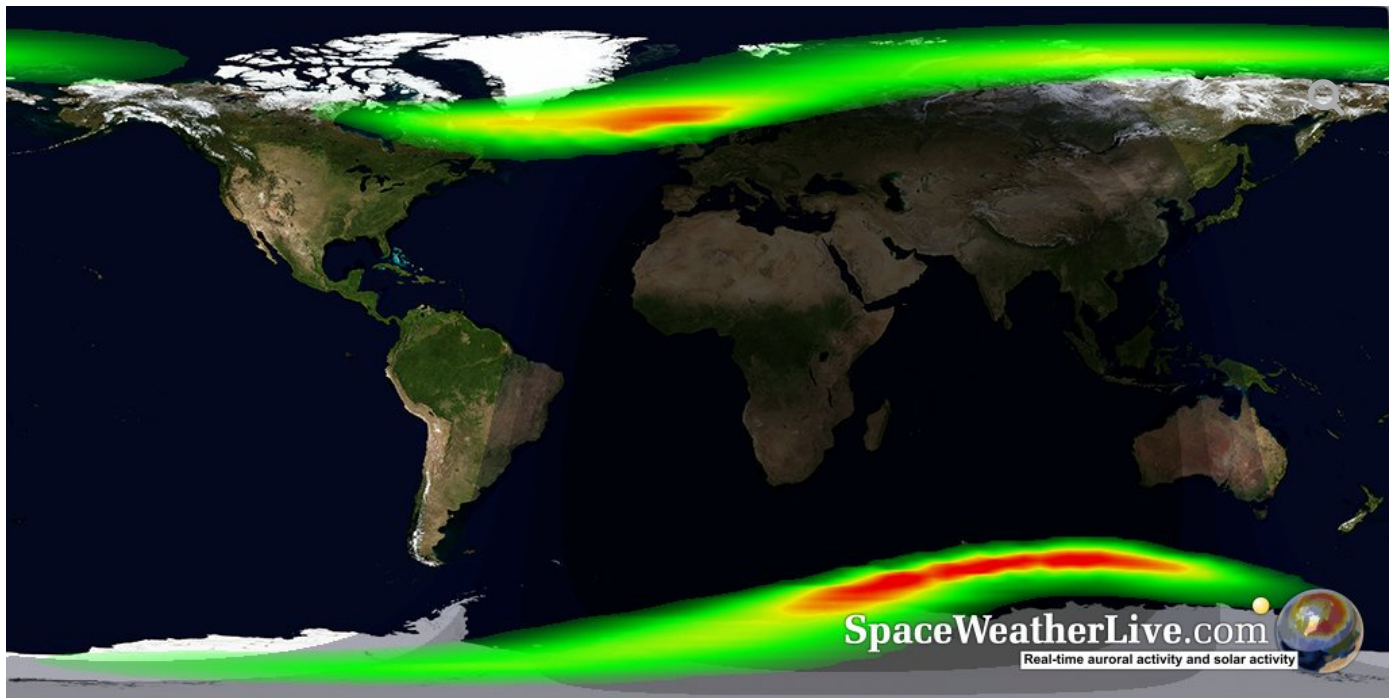


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SDO/AIA- 171 2016/08/29 12:54:10

AIA 304



AURORAL ACTIVITY