☑ Fact-Checked Science

EVIDENCE REVIEW · S0 NEWS, 26 OCTOBER 2026

S0 News, October 26, 2026: no paper shows a galactic reversal flipping Earth's field

On October 26, 2026, S0 News said a paper from the end of last year showed that "the galactic magnetic reversal at the current sheet local to the solar system" [1 00:01:27–00:01:30] is "exactly how the Earth disaster cycle works" [1 00:01:32–00:01:34], and that "the top scientists" now say what the show said five years ago [1 00:03:18]. That paper, by a group in Tbilisi, offers an interstellar influence on Earth's dynamo as a hypothesis, matched to the reversal record by an input switched in step with the record itself [2 Abstract][2 Fig. 3]; neither of the episode's two Rikitake links names a galactic source [3 Summary][4 Abstract]. Our paper checks cover the four links; this page checks the frame, the closing claim and the Sun [1 00:00:29–00:00:39].

By Fact-Checked Science · Published October 26, 2026

OUR ANALYSIS marks our own reasoning and calculations, and the verdicts are our assessment. Everything else comes from the numbered sources. For the episode [1], times are positions in the video; for the papers, Abstract, Summary or Conclusions names the part we used, § a section, p. a page and Fig. a figure; NOAA's times are UTC.

A hypothesis with a built-in match, read as proof; and a quiet Sun that still flared

OUR ASSESSMENT

0

Our analysis: mentions of a current sheet, a galactic reversal, the heliosphere or a disaster cycle in the eight pages of the December 2025 paper behind the episode's frame, which mentions the galaxy once [2 p. 97].

14 flares

Our analysis: in GOES-18's flare list for the 24 hours before the upload, five of them C-class, the largest a C1.9 at 08:38 UTC, 3 h 13 min before it; none reached class M [26].

42 million years

Our analysis: the Cretaceous Normal Superchron, 83–125 million years ago, passed without a single reversal, in a record with "no well-defined characteristic time interval between geomagnetic reversals" [13 §1].

THE EPISODE'S CLAIMS

OVERSTATED

A paper says that's exactly how

The presenter, of a "super release at the end of last year" [1 00:01:22–00:01:24], "5 years after we first said it had to be the galactic magnetic reversal at the current sheet local to the solar system" [1 00:01:24–00:01:30]: "A paper comes out saying that's exactly how the Earth disaster cycle works. The magnetic reversals." [1 00:01:32–00:01:37]

The "super release" is a December 2025 paper by a group at Tbilisi State University [2]. It adds an outside current to Rikitake's toy dynamo to test "the hypothesis that the geodynamo is influenced by the weak interstellar magnetic fields found in the Local Interstellar Cloud" [2 Abstract], matches the reversal record by switching that current "in accordance with the real geomagnetic reversal data" [2 pp. 97–98], and calls the idea "an interesting question for future research" [2 p. 99]. It never mentions a current sheet, a galactic reversal or a disaster cycle. Same paper, same verdict as our video check's "A 2025 model of pole flips". See section 2.

UNSUPPORTED

Galactic field controls Earth

"The local galactic magnetism controls what's happening here on Earth and throughout the solar system." [1 00:01:37–00:01:43]

In simulations of the core, reversals happen on their own [11 Abstract][12 Abstract], and the record keeps no clock: none at all for 42 million years in the Cretaceous [13 §1]. Earth orbits deep inside the heliosphere, whose edge the two Voyagers crossed at about 120 times Earth's distance from the Sun [18 Abstract]. The field beyond it measured 0.464 nT [19 Abstract], against 22,071 nT at Earth's weakest point [22 p. 13]. Our video check found at stop 14 that "Nothing like a wave that periodically sweeps through solar systems has been observed"; none of the papers here shows one. See section 3.

MISREAD

Top scientists now say it

"Most importantly, the way we imagined it 5 years ago is what the top scientists are saying today. This is the way the Earth disaster cycle truly works." [1 00:03:13–00:03:23]

The authors of the newest paper the episode cited say otherwise: Jánosi and Herein's model reverses "without the need to impose reversal events externally", and they add that "the scope of such Rikitake-like conceptual models is quite restrictive" [3 §5]. The student abstract names no outside source [4 Abstract]; only the December 2025 paper proposes one, as a hypothesis with a built-in match [2 Fig. 3][2 p. 99]. None of them mentions a disaster cycle. See section 2.

PARTLY TRUE

No solar flares; a quiet star

"We're starting with the last 24 hours on our star and we find no solar flares. … It's a quiet star up there." [1 00:00:29–00:00:39]

Quiet, yes: NOAA's Space Weather Prediction Center called activity "low", with no M-class flare and a quiet geomagnetic field [23][24]. But GOES-18 logged 14 flares in the 24 hours before the upload, five of class C, the largest a C1.9 three hours before it, and the last forecast discussion before the episode named "a C1.5/Sf at 25/1942 UTC" [26][23]. See section 4.

1 · THE EPISODE

Four links, and a galactic reversal that "just grew up"

The episode of October 26, 2026, ran 4 minutes 18 seconds [1] and linked four items: a study of Estonia's growing season [7], a university release on a combined supernova dataset [8], a derivation of Rikitake's dynamo from the core's equations [3] and a student abstract on disk dynamos [4]. Its top story was a fifth, unlinked paper, "this super release at the end of last year" [1 00:01:22–00:01:24], and it promised "the sweet 16 party for a new horizon of disaster cycle science. Galactic magnetic reversal just grew up." [1 00:00:21–00:00:26]

In the episode's words

Quoted from the automatically generated transcript. "JGI" is its rendering of GJI, the *Geophysical Journal International*, "Rickotaki's" of Rikitake's, "umbal" of umbral and "a,000" of a thousand; "taurus sheet" is probably torus sheet, and "enduring" probably during. The presenter's "Sunday, October 26th" [1 00:00:14] was a Monday.

> *"But our top story today stems from this super release at the end of last year. 5 years after we first said it had to be the galactic magnetic reversal at the current sheet local to the solar system. A paper comes out saying that's exactly how the Earth disaster cycle works. The magnetic reversals. The local galactic magnetism controls what's happening here on Earth and throughout the solar system."*
>
> S0 News [1 00:01:19–00:01:43]

> *"The current is driven by the local magnetic fields from the center of the galaxy to the sun and to us. The core is the star player in Earth's field. But we've got a whole set team and production crew. The galactic core, its magnetic jet taurus sheet system, and the magnetic reversals it brings through the galactic plane are the movie director."*
>
> S0 News [1 00:02:19–00:02:39]

> *"With this new science, they have shown how taking such a local environmental magnetic reversal can begin its work on the heliosphere magnetic field around the whole solar system, slowly impacting each of the items inside the planets. … Most importantly, the way we imagined it 5 years ago is what the top scientists are saying today. This is the way the Earth disaster cycle truly works."*
>
> S0 News [1 00:02:45–00:03:23]

The paper behind the frame, the four links and the promotion

The December 2025 paper behind the frame

WHAT IT IS

An article in *Journals of Georgian Geophysical Society*, published December 23, 2025, by Oleg Kharshiladze and three colleagues at Tbilisi State University and its Nodia Institute of Geophysics [2]. The journal's website describes no peer-review process, its first author is on the journal's editorial team, and the article's record gives December 23, 2025 for both submission and publication [2]. The episode did not link it; our video check rated an earlier claim about it in "A 2025 model of pole flips".

WHAT THE AUTHORS CLAIM

Driven by "an external current whose sign changes are synchronized with real paleomagnetic data", their modified Rikitake model "successfully reproduces the timing of the geomagnetic reversals, supporting the hypothesis of external control of the geodynamo" [2 Abstract].

WHAT THE EPISODE SAID

"A paper comes out saying that's exactly how the Earth disaster cycle works. The magnetic reversals." [1 00:01:32–00:01:37]

Our video check rated "A 2025 model of pole flips" Overstated: the match was built in. This page rates the new framing, "A paper says that's exactly how", Overstated too (section 2), with the same label and verdict as our check of the student abstract, which re-ran the model and found it follows a made-up record just as well.

Rikitake's dynamo, derived from the core's equations

WHAT IT IS

A peer-reviewed, open-access article in the *Geophysical Journal International* by Dániel Jánosi and Mátyás Herein, of the HUN-REN Institute of Earth Physics and Space Science and Eötvös Loránd University in Hungary, published September 29, 2026 [3].

WHAT THE AUTHORS CLAIM

"the first explicit derivation of the Rikitake dynamo as a direct approximation of mean-field magnetohydrodynamics (MHD)", a model "capable of producing irregular oscillations and spontaneous polarity reversals" [3 Summary].

WHAT THE EPISODE SAID

"Today we've got this. I only check JGI once a month. So I'm a bit late here. I know. The only problem with Rickotaki's modeling has been the oversimplification. But when it's able to reproduce reality like they did here, maybe the energetic signature of the universe is a simple word just written in messy cursive." [1 00:01:43–00:02:02]

In our check of Jánosi and Herein (2026): "It reproduces reality" Overstated; "Shown acting on the heliosphere" Misread; "Derived from mean-field MHD" True; "Earth-like chron lengths" Partly true. With the authors' own estimates for Earth's core it gives no Earth-like reversals; it reverses only with a forcing at least thousands of times weaker, though the authors note that reversing solutions are "in fact possible, just for different c values" [3 §3.1]. Nothing in it comes from outside the core [3 §5]. The paper came out 27 days before the episode, so "a bit late" is fair.

Toy disk dynamos with an outside current

WHAT IT IS

A one-page abstract of a student talk given on July 15, 2026, at a minisymposium of Tbilisi State University's I. Vekua Institute of Applied Mathematics, by Luka Kezua and Luka Tsulukidze, supervised by Oleg Kharshiladze, who chaired the session [4][5]. The two students are co-authors of the December 2025 paper [2]. Not peer reviewed.

WHAT THE AUTHORS CLAIM

"In both models we've managed to control reversals using additional external current", in Bullard's one-disk and Rikitake's two-disk dynamos; and Bullard's, which does not reverse by itself, reversed when they added a time delay [4 Abstract].

WHAT THE EPISODE SAID

"And as if that wasn't enough, they tried the extra step of modeling the electric current change of enduring the outside system reversal. And the Earth started having magnetic pole flips. It even worked in the much simpler Bullard model, which I'm not ignoring either." [1 00:02:02–00:02:17]

In our check of Kezua and Tsulukidze (2026): "A paper says that's exactly how" Overstated; "Outside reversal flipped poles" Overstated; "It worked in the Bullard model" Misleading; "Shown acting on the heliosphere" Misread; "Outside current steers the model" True. The abstract names no galactic or interstellar source [4 Abstract].

Estonia's growing season, 1965–2025

WHAT IT IS

A peer-reviewed article in the *International Journal of Climatology* by Triin Saue, published online October 24, 2026: daily mean temperatures at 15 Estonian stations, with two definitions of the thermal growing season [7 Abstract].

WHAT THE AUTHOR CLAIMS

"Across Estonia, GSL increased by 4.3 days decade^{-1} on average, driven mainly by earlier SOS", where GSL is the season's length and SOS its start [7 Abstract].

WHAT THE EPISODE SAID

"First up, if you can't recall the last time the country of Estonia made a major stink about global warming, it's probably because they quietly care very less than most people seem to." [1 00:00:44–00:00:53]; "Food production is surging like it is in northern Russia and Canada." [1 00:00:53–00:00:57]; "there growing season has extended by an average of a week which may not sound like much but to see it in just a century is absolutely wild" [1 00:00:57–00:01:05]

In our check of Saue (2026): "Estonia quietly cares less" Context; "Food production is surging" Misleading; "A week longer in a century" Misread; "Season longer, mostly in spring" True; "Definitions differ year to year" True. That check found the season three to four weeks longer since 1965, mostly from earlier springs; the paper's average trend, 4.3 days a decade over 1965–2025, is about six times the episode's "a week" in "a century" (our arithmetic) [7 Abstract].

The largest consistent supernova sample, and dark energy

WHAT IT IS

A preprint on arXiv, not peer reviewed, by Ryan Camilleri and colleagues, combining the Pantheon+ and DES-SN5YR samples into 2,884 likely type Ia supernovae; the episode linked the University of Queensland's release on it [9][8].

WHAT THE AUTHORS CLAIM

With the cosmic microwave background and baryon acoustic oscillations, "frequentist analyses yield a preference over Flat-ΛCDM at a significance of 3.3σ (3.1σ)", while "The Bayesian evidence indicates only weak preference for time evolving dark energy" [9 Abstract].

WHAT THE EPISODE SAID

"They're once again scratching their heads because it's looking like dark energy is changing over time. This is what happens when you don't get a foundational rule of the cosmos correct. You have to keep changing it." [1 00:01:10–00:01:19]

In our check of Camilleri et al. (2026): "Dark energy changing over time" Unconfirmed; "A wrong rule, kept changing" Misleading; "Largest consistent SN sample" True; "A 3.3σ hint, weak by Bayes" True; "Supernovae alone: no change" True. The release itself speaks of "hints of time variation in dark energy" [8].

The promotion: an e-magazine

WHAT IT IS

The Observer Review, the presenter's own monthly e-magazine, sold by subscription at "$5.99 / month" and "written by Ben Davidson and contributors", by its product page [10]. Not used as evidence, and not rated here.

WHAT THE EPISODE SAID

"Folks, Observer Review is our e magazine and it's one of the best ways to go from being informed to really knowing your stuff. Not only do you get all the issues we've ever put out when you join, we're talking over a,000 pages of science for $6, but there are three new mini books inside your library as well. I wrote these for you guys for the Observer Review, and you're not going to see those in print or anywhere else." [1 00:03:23–00:03:46]

WHAT IS DISCLOSED

The presenter calls it "our e magazine" and says he wrote its three new mini books ("I wrote these"); the video's description opens with "Get our E-Magazine:" and the link [1].

Not rated.

The four paper pages rate what the episode said about each link; this page rates the episode's own statements: its frame, its closing claim and the Sun. The episode's claim about the December 2025 paper is rated here, with the verdict our video check gave an earlier claim about it.

2 · THE FRAME

A hypothesis with a built-in match, read as proof of a galactic cause

The episode presented the December paper as saying "that's exactly how the Earth disaster cycle works" [1 00:01:32–00:01:34], and closed by saying "the top scientists" now agree [1 00:03:18]. Here is what the papers say themselves.

In the papers' words

The December 2025 paper drives its model with an outside current; the GJI paper and its authors' earlier one have none; the student abstract adds one without naming a source.

> *"This modification incorporates the hypothesis that the geodynamo is influenced by the weak interstellar magnetic fields found in the Local Interstellar Cloud."*
>
> Kharshiladze et al. (2025) [2 Abstract]

> *"The Earth and the Solar System are constantly moving through the galaxy, where many types of magnetic fields are encountered. It is possible that the external magnetic field acting on our system is the interstellar magnetic field found within the Local Interstellar Cloud."*
>
> Kharshiladze et al. (2025) [2 p. 97]

> *"The system is driven by a external current (rectangular signal) whose polarity is dictated by the real reversal record, potentially mimicking the effect of the interstellar magnetic field."*
>
> Kharshiladze et al. (2025), on their Fig. 3 [2 Fig. 3]

> *"This hypothesis that the geodynamo may be controlled by the Local Interstellar Cloud's magnetic fields opens up an interesting question for future research, that needs further theoretical analysis and numerical investigation."*
>
> Kharshiladze et al. (2025) [2 p. 99]

> *"we emphasize that the Rikitake system is a highly oversimplified dynamo model, thus these results cannot be compared to, and are not meant to give any conclusion about, the paleomagnetic observations"*
>
> Herein, Kuslits and Jánosi (2026) [6 Conclusions]

> *"In both models we've managed to control reversals using additional external current."*
>
> Kezua and Tsulukidze (2026) [4 Abstract]

OUR ANALYSIS

"A paper says that's exactly how": Overstated

The paper does propose what the episode says it does, an outside driver for Earth's reversals, so the claim has a basis [2 Abstract]. But its authors offer it as a hypothesis, "an interesting question for future research" [2 p. 99], and they accept the dynamo in the core as "the generally accepted theory for the generation of the Earth's magnetic field" [2 p. 94]. Their match with the record was built in: the outside current's polarity "is dictated by the real reversal record" [2 Fig. 3], and our check of the student abstract found the model follows a made-up record just as well. The current sheet, the galactic reversal and the disaster cycle are the episode's additions; the paper mentions the galaxy once, in the sentence quoted above, and none of the three [2 p. 97]. Our video check rated an earlier claim about the same paper Overstated, in "A 2025 model of pole flips": same paper, same verdict.

OUR ANALYSIS

"Top scientists now say it": Misread

The closing line rests on "this new science" [1 00:02:45], and the new science says something else. The authors of the newest paper it cited, Jánosi and Herein, derive a Rikitake model whose reversals are "spontaneous" [3 Summary] and come "without the need to impose reversal events externally" [3 §5]. With their own estimates for Earth's core it gives no Earth-like reversals, our check of their paper found; it reverses only with a forcing at least thousands of times weaker [3 §3.1], though its time scales are "not inconsistent with the shorter end of observed geomagnetic chron durations" [3 §5]. They add that "the scope of such Rikitake-like conceptual models is quite restrictive" [3 §5], and in an earlier paper they wrote that their results "are not meant to give any conclusion about, the paleomagnetic observations" and that the geodynamo's long-term evolution "is intrinsically governed by the thermal history of the core" [6 Conclusions]. The student abstract names no outside source [4 Abstract]. Only the December paper proposes one, in conditional terms and with a built-in match [2 p. 99]. None of them mentions a disaster cycle, and no study we found says a galactic reversal drives Earth's (section 3).

The heliosphere sentence, rated on the paper pages

"With this new science, they have shown how taking such a local environmental magnetic reversal can begin its work on the heliosphere magnetic field …" [1 00:02:45–00:02:53] is rated Misread, as "Shown acting on the heliosphere", on our check of the GJI paper and on our check of the student abstract. Neither Tbilisi item models a galactic reversal, the heliosphere or the planets. Their only outside influence is a current imposed on the disks [4 Abstract], which the 2025 paper says stands for "an external magnetic field", and, to match the record, switches in step with the record itself [2 Abstract][2 pp. 97–98]. The GJI paper, as our check of it found, never mentions the heliosphere [3].

OUR ANALYSIS

What is real in the picture

Rikitake's two-disk dynamo does reverse on its own, and Bullard's single disk does not [2 p. 95][4 Abstract]. The core does make Earth's field: "The core is the star player in Earth's field," as the presenter said [1 00:02:25–00:02:28], and Landeau and colleagues' review agrees [14 Abstract]. And the Galaxy's field has the parts he named: near the centre, "poloidal fields" and probably "toroidal fields"; in the halo, "large-scale toroidal fields with reversed directions above and below the Galactic plane" [17 Abstract]. What our video check found no sign of, at stop 14, is a wave that "periodically sweeps through solar systems", and nothing here shows such a field reaching Earth's core.

The paper behind the frame offers a hypothesis and matched the record by feeding the record in; the episode's linked papers name no galactic source.

3 · WHAT DRIVES REVERSALS

The core reverses itself, and the mantle can pace it; the galaxy's field stops at the heliopause

The episode said "The local galactic magnetism controls what's happening here on Earth and throughout the solar system" [1 00:01:37–00:01:43], a current driven "from the center of the galaxy to the sun and to us" [1 00:02:23–00:02:25]. Here is what research says about where reversals come from, and how far the galaxy's field reaches.

REVERSALS, RECENTLY

About 5 per Myr

"The 5 Myr average reversal frequency has fluctuated about ~5 events per million years since about 25 Ma" [13 §5].

THE LONGEST WAIT

OUR ANALYSIS

42 million years

No reversal in "the 83–125 Ma Cretaceous Normal Polarity Superchron"; superchrons last "typically … 25–40 Myr" [13 §1].

BETWEEN REVERSALS

No clock

"there is no well-defined characteristic time interval between geomagnetic reversals" [13 §1]; reversals "are not predictable and are certainly not periodic in nature" [15].

In the researchers' words

On the core's own reversals, on what can pace them, and on the edge of the Sun's heliosphere.

> *"A three-dimensional, self-consistent numerical model of the geodynamo is described, that maintains a magnetic field for over 40,000 years. The model, which incorporates a finitely conducting inner core, undergoes several polarity excursions and then, near the end of the simulation, a successful reversal of the dipole moment."*
>
> Glatzmaier and Roberts (1995) [11 Abstract]

> *"Eight different patterns of heat flux from the core to the mantle are imposed over the core–mantle boundary. Spontaneous magnetic dipole reversals and excursions occur in seven of these cases"*
>
> Glatzmaier et al. (1999) [12 Abstract]

> *"a decrease in core heat flux relative to present-day of ~30% can account for the Cretaceous Normal Polarity and Kiaman Reverse Polarity Superchrons"*
>
> Olson and Amit (2015) [13 Abstract]

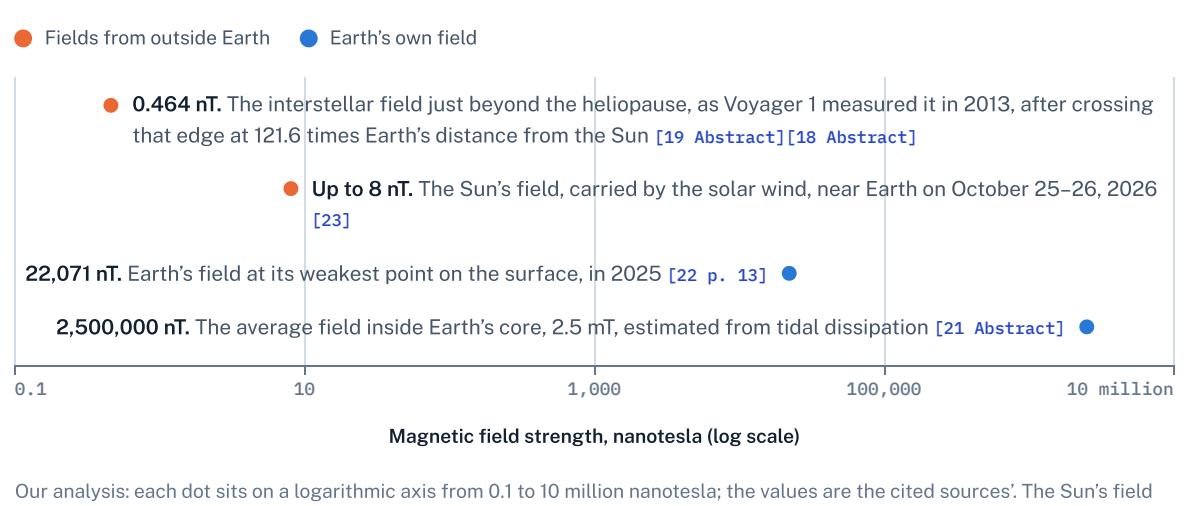
> *"Earth's magnetic field is generated by fluid motions in the outer core. … Convection, possibly aided by the exsolution of light elements, remains the mechanism most likely to have sustained the geodynamo."*
>
> Landeau et al. (2022) [14 Abstract]

> *"The heliopause is a boundary that separates the heliosheath (which contains magnetic fields and plasmas that originate in the Sun) from the interstellar medium (which contains magnetic fields and particles of stellar/interstellar origin)."*
>
> Burlaga et al. (2019) [18 Abstract]

> *"we show that during the passage, the heliosphere shrinks to a scale of 0.22 au, smaller than the Earth's orbit around the Sun. This would have put the Earth in direct contact with the dense interstellar medium for a period of time"*
>
> Opher et al. (2024), on a cold, dense cloud 2–3 million years ago [20 Abstract]

Magnetic fields from the galaxy to Earth's core

OUR ANALYSIS



0.464 nT. The interstellar field just beyond the heliopause, as Voyager 1 measured it in 2013, after crossing that edge at 121.6 times Earth's distance from the Sun [19 Abstract][18 Abstract]

Up to 8 nT. The Sun's field, carried by the solar wind, near Earth on October 25–26, 2026 [23]

22,071 nT. Earth's field at its weakest point on the surface, in 2025 [22 p. 13]

2,500,000 nT. The average field inside Earth's core, 2.5 mT, estimated from tidal dissipation [21 Abstract]

Our analysis: each dot sits on a logarithmic axis from 0.1 to 10 million nanotesla; the values are the cited sources'. The Sun's field near Earth is about 1/2,800 of the weakest field at Earth's surface and about 1/310,000 of the field in the core; Voyager 1's value is the field it met just past the heliopause, which its authors call "probably not the 'undisturbed' local interstellar magnetic field" [19 §1].

OUR ANALYSIS

"Galactic field controls Earth": Unsupported

Three things would have to hold, and we found evidence for none. First, there would have to be evidence that reversals respond to an outside trigger; in simulations of the core they arise without one. A self-consistent model reversed on its own [11 Abstract], and the heat flow out of the core, which the mantle sets, can pace how often reversals come [12 Abstract]; a drop of about 30% in that heat flow can account for the superchrons [13 Abstract]. Second, a cycle driven from outside would leave a rhythm in the record. It has none: about five reversals per million years lately [13 §5], and none at all for 42 million years in the Cretaceous (our arithmetic) [13 §1]. Third, the galaxy's field would have to reach Earth. Earth orbits at 1 au, deep inside the heliosphere, whose edge the Voyagers crossed at 121.6 and about 119 au [18 Abstract]; the field just beyond it was 0.464 nT [19 Abstract]. A study that does let the interstellar medium reach Earth needs a cold, dense cloud to shrink the heliosphere to 0.22 au, possibly 2–3 million years ago, and it is about radiation and climate, not reversals [20 Abstract]. The outside field near Earth is the Sun's, at most 8 nT on October 25–26, and it switched direction without moving Earth's: for nearly two hours, 02:45–04:30 UTC on the 26th, it pointed into the sector toward the Sun [23], while Earth's own field, about 2,800 times stronger even at its weakest, stayed as it was [22 p. 13]. Not strictly disproven, so Unsupported, as on stop 14 of our video check.

Rated before, on our video check

Stop 14 found the only galactic current sheet in the literature to be a 1978 speculation by Alfvén and Carlqvist [16], and nothing observed that sweeps periodically through solar systems: Unsupported, as is the chain's first link, a galactic current sheet on a regular cycle. Extra x8 found the solar system's "changes" spread over two decades, with separate causes (Misleading), and note n15 that the "nova energy" study had a supernova disturbing the galaxy's field, not the reverse (Misread).

Reversals start in Earth's core and keep no rhythm; the galaxy's field lies beyond the heliopause, about 120 times farther from the Sun than Earth.

4 · THE SUN

Quiet, but not flare-free: 14 flares in the 24 hours before the upload

"We're starting with the last 24 hours on our star and we find no solar flares. The plasma filaments remain stable. Minor surges through the corona. No significant umbal cores under the bright spots. It's a quiet star up there." [1 00:00:29–00:00:39]

In the Space Weather Prediction Center's words

From its twice-daily Forecast Discussion; times are UTC, and the episode went up at 11:51 on October 26.

> *"Solar activity was at very low levels in the past 24h, with few B-class flares from the only numbered Region 4560 (N13W77, Fao/beta-gamma)."*
>
> October 25, 1230 UTC [23]

> *"Solar activity was at low levels. Region 4560 (N13W84, Fao/beta) produced the strongest flare of the period, a C1.5/Sf at 25/1942 UTC."*
>
> October 26, 0030 UTC, the last before the episode [23]

> *"The strongest flare was a C1.9 at 26/0838 UTC from Region 4561. This flare presented secondary peaks during its decay phase, including a C1.0/Sf at 26/0933 UTC associated with a CME first seeing at CCOR-1 images at 26/0945 UTC."*
>
> October 26, 1230 UTC, 38 minutes after the episode [23]

LARGEST FLARE, 24 HOURS BEFORE THE UPLOAD

OUR ANALYSIS

C1.9

At 08:38 UTC on October 26, from Region 4561 [25], 3 h 13 min before the upload; in those 24 hours the flux stayed at C level for 43 minutes in all, and no flare reached class M [26].

FLARES, SAME 24 HOURS

OUR ANALYSIS

14

In GOES-18's list, 9 of class B and 5 of class C [26]; the Center's edited events list 15, adding the C1.0 in the C1.9's decay [25][23].

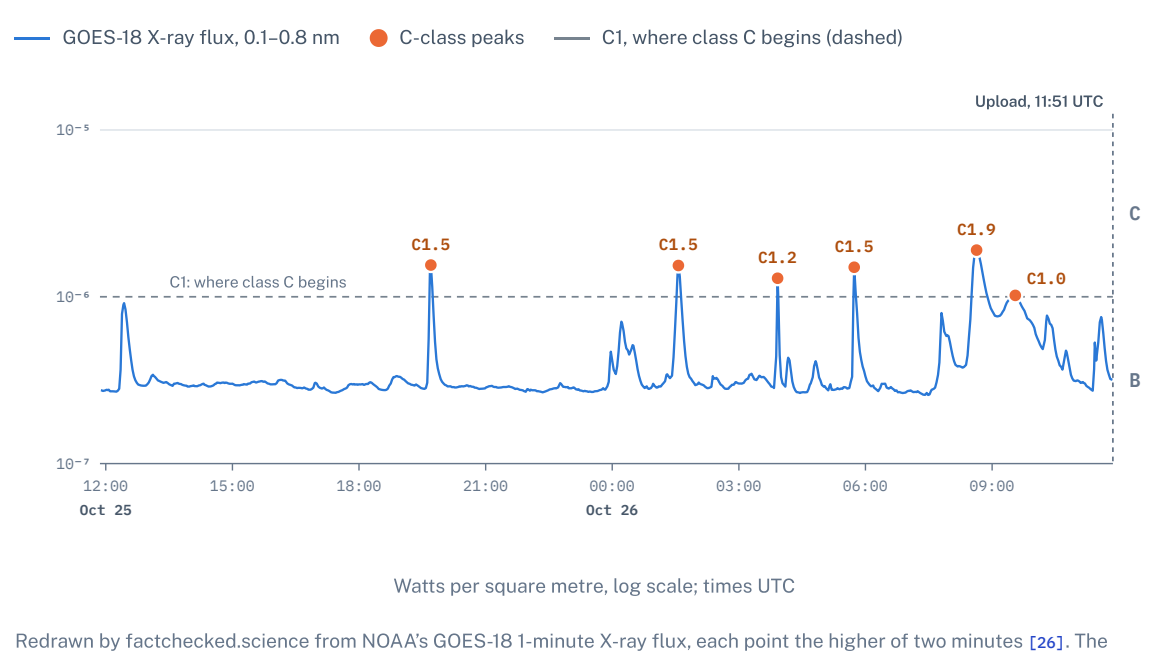
NEW SPOTTED REGIONS

2

Regions 4561 and 4562, numbered at 06:29 and 06:31 UTC on October 26, at 30 and 10 millionths of the Sun's visible hemisphere; Region 4560 was rotating off the west limb [27][24].

The Sun's X-ray output in the 24 hours before the episode

OUR ANALYSIS



Redrawn by factchecked.science from NOAA's GOES-18 1-minute X-ray flux, each point the higher of two minutes [26]. The marked peaks are the five C-class flares in GOES-18's list [26] and the C1.0 that the Center's edited events list as a separate event [25], which its discussion calls a secondary peak in the C1.9's decay [23]. NOAA's data are in the public domain; our extracts are listed under "Code and numbers" below.

OUR ANALYSIS

"No solar flares; a quiet star": Partly true

Most of the sentence holds. In the Center's words activity was "low", which here meant small C-class flares and no M-class flare [23][26]; the geomagnetic field was quiet and the X-ray background was B2.9 on October 25 [24]; and the spotted regions were few and small, one leaving the disk and two just numbered [24][27]. "No solar flares" does not hold. GOES-18 logged 14 flares in the 24 hours before the upload, five of them C-class, the largest a C1.9 at 08:38 UTC, three hours before it [26]; the Center tied a sixth, a C1.0 peak in its decay, to a CME first seen at 09:45 UTC [25][23]. The Center itself keeps the distinction: "very low levels … with few B-class flares" on October 25, "low levels" with C-class flares on October 26, and its last discussion before the episode named the C1.5 of 19:42 UTC [23]. The count does not hinge on when the presenter recorded: every 24 hours ending after 19:42 UTC on October 25 hold C-class flares, as does that whole day [26]. Our review of October 23 rated "No flares and no coronal holes" Partly true for another reason: there "no solar flares" came paired with "major eruptions" and was read as no significant flares, and the coronal-hole half failed. Here the presenter reports a check of "the last 24 hours" and says "we find no solar flares" outright, and the Center's own words separate a day with only B-class flares, "very low", from one with C-class flares, "low", as these 24 hours were [23].

OUR ANALYSIS

The rest of the sentence

"The plasma filaments remain stable" fits the record: the edited events list no disappearing filament for either day [25]. "Minor surges through the corona" is not the Center's term; it reported "Other coronal activity" near or beyond the north-east limb, and for the CME after the C1.0, "More data is necessary for the analysis of the trajectory of this CME" [23]. "No significant umbal cores under the bright spots" is a judgment. Region 4560, 150 millionths of the visible hemisphere with 12 spots at the end of October 25 [24], produced two of the C1.5 flares [25] and rotated beyond the west limb on the 26th [23]; the two new regions were small, 30 and 10 millionths [27].

A quiet Sun by the Center's measure, with no M-class flare; but 14 flares, 5 of them C-class, not none.

Code and numbers

PY **sun_window.py**
Counts the flares by class and finds the peak flux and the minutes at C level, for the 24 hours before the upload and three other windows, from the three NOAA extracts below · 5 KB

PY **frame_numbers.py**
Prints the time gaps, the field-strength ratios, the superchron's length and the other arithmetic on this page · 3 KB

CSV **goes18-xray-1min-2026-10-25-26.csv**
GOES-18 1-minute X-ray flux, 0.1–0.8 nm, October 25, 10:00, to October 26, 12:00 UTC, from NOAA's 3-day file · 49 KB

CSV **goes18-flares-2026-10-19-26.csv**
GOES-18's flare list for the 7 days to October 26 · 6 KB

CSV **swpc-xra-events-2026-10-25-26.csv**
The X-ray events in the Center's edited events of October 25 and 26 · 1 KB

Run them

Both scripts need only Python 3. Keep the three CSV files in the script's folder and run `python3 -I sun_window.py`; `python3 -I frame_numbers.py` needs no files. NOAA's 3-day and 7-day files roll over, so these extracts, made on October 26 at about 19:00 UTC, are the record we used [26][25].

5 · LIMITS

Where this check could be wrong

The papers, read for their own pages

The four links, the GJI paper [3], the student abstract [4], the Estonia paper [7] and the supernova release with its preprint [8][9], are checked on their own pages, and the cards above repeat those pages' verdicts. We could not read the GJI paper's full text ourselves: its publisher showed our tools a bot check, which we did not bypass. Its Summary comes from its Crossref record, and the quotations from its sections are as read in full, in a browser, for our check of the paper [3].

What the presenter showed

We could not see the animation at 00:02:17–00:03:13. He says "I didn't make this animation" [1 00:03:13], and the description does not credit it [1].

When he looked at the Sun

We do not know when the presenter recorded, so we counted the 24 hours before the upload; every 24-hour window ending after 19:42 UTC on October 25 holds C-class flares [26].

"5 years after we first said it"

We could not date the presenter's "5 years after we first said it had to be the galactic magnetic reversal at the current sheet local to the solar system" [1 00:01:24–00:01:30]; the galactic current sheet itself goes back at least to 1978 [16]. Not rated.

Fields side by side

The field strengths and distances are set side by side to show their size, not to model how an outside field could act on the core. The 2025 paper does stand in for one, with a current it imposes on its disks, and estimates the current's size with Ohm's law from the conductivity, velocity and field of the interstellar medium set against the core's [2 p. 97]; neither Tbilisi item models how such a field would cross the heliosphere and reach the core [2][4]. Voyager 1's value is the field just past the heliopause, not the undisturbed field farther out [19 §1], and the solar wind's is the Center's measure of conditions "near Earth", in space, not at the surface [23].

What would change these verdicts

01
A study that predicts reversal times from an independent record of the interstellar field, rather than feeding in the reversal record as the December paper did [2 Fig. 3], and passes a test against chance, as our tests of claimed correlations require.

02
An observed reversal of the interstellar field reaching the solar system, or a current sheet seen sweeping through it [18 Abstract][19 Abstract].

03
Revised GOES or Space Weather Prediction Center records for October 25–26 that remove the C-class flares [26][25].

Related checks

OVERSTATED A 2025 model of pole flips The Disaster Cycle, Fact-Checked

UNSUPPORTED The galactic current sheet The Disaster Cycle, Fact-Checked

MISREAD "Nova energy" and the galaxy's magnetic wave The Disaster Cycle, Fact-Checked

MISLEADING A solar-system-wide change, all at once? The Disaster Cycle, Fact-Checked

Sources

Bracketed numbers refer to this list. For the episode [1], times are positions in the video (hours:minutes:seconds), from the first to the last line of its automatically generated transcript that holds the words quoted. For the papers, Abstract, Summary or Conclusions names the part we used, § a section, p. a page as printed and Fig. a figure. NOAA's times are UTC; the episode went up at 11:51:41 UTC on October 26, 2026. We read the sources on October 26, 2026, between 19:00 and 21:00 UTC. Links checked October 26, 2026.

1 SpaceWeatherNews (S0) (October 26, 2026). Galactic Magnetic Reversal Flipping Earth Field | S0 News Oct.26.2026. YouTube video, https://www.youtube.com/watch?v=n5rwUyx_AHA, published 11:51 UTC, 4 minutes 18 seconds, with its description as read on October 26, 2026. Quoted from the automatically generated transcript; times are positions in the video.

2 Kharshiladze, O. A., Tsulukidze, L. K., Kezua, L. B., and Zilpimiani, D. O. (2025). Control of Inversions of the Earth's Magnetic Field with Rikitake's Model. *Journals of Georgian Geophysical Society* 28(2), 94–101, published December 23, 2025. No DOI; the journal's website describes no peer-review process, its first author is on the journal's editorial team, and the article's record gives December 23, 2025 for both submission and publication. CC BY-NC 4.0, as its article page shows. We read the full text and the journal's About and Editorial Team pages. Not linked by the episode: the paper behind its "super release at the end of last year", which our video check rated in "A 2025 model of pole flips".

3 Jánosi, D., and Herein, M. (2026). Grounding Rikitake-like conceptual dynamos in mean-field MHD: the derivation and geophysical scaling of the most basic reversal dynamo model. *Geophysical Journal International* 247(3), ggag390, published September 29, 2026. Open access, CC BY 4.0. The first of the episode's two links under "Rikitake". We read its Summary as deposited with Crossref; the publisher showed our tools a bot check, which we did not bypass, and quotations from its sections are as read in full, in a browser, for our check of the paper.

4 Kezua, L., and Tsulukidze, L.; supervisor Kharshiladze, O. (2026). Modelling of Earth's Magnetic Field Reversals in Modified Electromechanical Models. One-page abstract of a student talk at the TICMI Student's Minisymposium on Actual Topics of Applied Mathematics and Physics, I. Vekua Institute of Applied Mathematics, Ivane Javakhishvili Tbilisi State University, July 15, 2026; not peer reviewed. The second of the episode's two links under "Rikitake". We read it in full; checked on its own page.

5 Tbilisi International Centre of Mathematics and Informatics (TICMI), I. Vekua Institute of Applied Mathematics (2026). TICMI Student's Minisymposium on Actual Topics of Applied Mathematics and Physics, 15 July, 2026: Program. Read October 26, 2026.

6 Herein, M., Kuslits, L., and Jánosi, D. (2026). Effect of time-dependent forcing on pole reversals in a conceptual dynamo model. *Scientific Reports* 16, 18981, published April 24, 2026. CC BY 4.0. An earlier paper by the authors of [3] and Lukács Kuslits; we read the full text.

7 Saue, T. (2026). Changes in Thermal Growing-Season Characteristics in Estonia During 1965–2025: Regional Variability and Methodological Sensitivity. *International Journal of Climatology*, e70638, published online October 24, 2026. The episode's link "Longer Growing Season". Abstract, as deposited with Crossref; checked on its own page.

8 The University of Queensland (September 8, 2026). Big supernova dataset challenges dark energy theory. UQ News, news release; the episode's link "Dark Energy Changes". Read in full.

9 Camilleri, R., Lee, J., Davis, T. M., Rubin, D., et al. (2026). Supernovae Unite: Combining Pantheon+ and DES-SN5YR. arXiv:2609.05053, version 2, September 9, 2026; a preprint, submitted to the *Publications of the Astronomical Society of Australia*, not peer reviewed. Abstract only; checked on its own page.

10 The Observer Review. The Observer Review, product page. Read October 26, 2026, for the promotion only; the product is not rated.

11 Glatzmaier, G. A., and Roberts, P. H. (1995). A three-dimensional self-consistent computer simulation of a geomagnetic field reversal. *Nature* 377(6546), 203–209. Abstract only.

12 Glatzmaier, G. A., Coe, R. S., Hongre, L., and Roberts, P. H. (1999). The role of the Earth's mantle in controlling the frequency of geomagnetic reversals. *Nature* 401(6756), 885–890. Abstract only.

13 Olson, P., and Amit, H. (2015). Mantle superplumes induce geomagnetic superchrons. *Frontiers in Earth Science* 3, 38. CC BY 4.0. We read the full text; §1 is its Introduction.

14 Landeau, M., Fournier, A., Nataf, H.-C., Cébron, D., and Schaeffer, N. (2022). Sustaining Earth's magnetic dynamo. *Nature Reviews Earth & Environment* 3(4), 255–269. Abstract only.

15 British Geological Survey. Reversals: Magnetic Flip. Education page, as read for our guide to Earth's weakening field.

16 Alfvén, H., and Carlqvist, P. (1978). Interstellar clouds and the formation of stars. *Astrophysics and Space Science* 55(2), 487–509. Cited for the date of the idea, as in stop 14 of our video check; not read here.

17 Han, J. L. (2009). The magnetic structure of our Galaxy: a review of observations. *Proceedings of the International Astronomical Union* 4(S259), 455–466, the proceedings of IAU Symposium 259, *Cosmic Magnetic Fields: From Planets, to Stars and Galaxies*; preprint arXiv:0901.1165. Abstract only.

18 Burlaga, L. F., Ness, N. F., Berdichevsky, D. B., Park, J., Jian, L. K., Szabo, A., Stone, E. C., and Richardson, J. D. (2019). Magnetic field and particle measurements made by Voyager 2 at and near the heliopause. *Nature Astronomy* 3(11), 1007–1012. Abstract only.

19 Burlaga, L. F., and Ness, N. F. (2014). Interstellar magnetic fields observed by Voyager 1 beyond the heliopause. *The Astrophysical Journal Letters* 795(1), L19. We read the abstract and §1, its introduction, on the publisher's page.

20 Opher, M., Loeb, A., and Peek, J. E. G. (2024). A possible direct exposure of the Earth to the cold dense interstellar medium 2–3 Myr ago. *Nature Astronomy* 8(8), 983–990. CC BY 4.0. Abstract only.

21 Buffett, B. A. (2010). Tidal dissipation and the strength of the Earth's internal magnetic field. *Nature* 468(7326), 952–954. Abstract only.

22 Beggan, C. D., Kloss, C., Amblard, P., et al. (2026). International geomagnetic reference field: the fourteenth generation. *Earth, Planets and Space* 78, 127. CC BY 4.0. As read for our guide to Earth's weakening field; p. gives a page of the PDF.

23 NOAA Space Weather Prediction Center (October 25–26, 2026). Forecast Discussion, the issues of October 25 (0030 and 1230 UTC) and October 26 (0030 UTC, the last before the episode, and 1230 UTC), from the Center's archive (ftp.swpc.noaa.gov, pub/forecasts/discussion/). Read October 26, 2026.

24 NOAA Space Weather Prediction Center and US Air Force (October 25–26, 2026). Solar and Geophysical Activity Summary nos. 298–299 (data for October 24 and 25), Report and Forecast of Solar and Geophysical Activity no. 298 (October 25, 2200 UTC) and Solar Region Summaries nos. 298–299, from the archive (pub/forecasts/SGAS/, RSGA/ and SRS/). Read October 26, 2026.

25 NOAA Space Weather Prediction Center. Edited Events for October 25 and 26, 2026, from the archive (pub/indices/events/20261025events.txt and 20261026events.txt), as updated at 18:27 and 18:57 UTC on October 26; their X-ray events are in swpc-xra-events-2026-10-25-26.csv.

26 NOAA Space Weather Prediction Center. GOES-18 X-ray flare list, last 7 days (October 19, 22:10, to October 26, 17:36 UTC) and 1-minute X-ray flux, last 3 days, read October 26, 2026, 19:00 UTC; the parts used here are in goes18-flares-2026-10-19-26.csv and goes18-xray-1min-2026-10-25-26.csv.

27 NOAA Space Weather Prediction Center. Solar region list, the entries for regions 4560–4562, October 23–26, 2026. Read October 26, 2026.

METHOD

How this was checked

On October 26, 2026, we checked every statement, number and quotation on this page against its source: the episode's automatically generated transcript, quoted verbatim with its timestamps, and its description [1]; the December 2025 paper behind its frame, read in full [2]; its four links and our checks of them, with the student abstract read in full beside the minisymposium's program, the GJI paper in its Summary and as read in full for our check of it, the authors' earlier paper in full, the Estonia paper and the supernova preprint in their abstracts, the University of Queensland's release, and the promotion's product page [3]–[10]; for what drives reversals, three papers on geodynamo simulations and the mantle, a review and the British Geological Survey's page [11]–[15]; for the galaxy and the heliosphere, the 1978 current-sheet paper as cited by our video check, a review of the Galaxy's field, the two Voyager papers, the dense-cloud study, and the field inside the core and at the surface [16]–[22]; and for the Sun, the Space Weather Prediction Center's discussions, summaries, reports, region lists, edited events, GOES-18 flare list and 1-minute X-ray flux for October 25–26 [23]–[27]. In all, 133 quoted passages and fragments, and every number on the page. The four links are checked on their own pages; nothing here re-rates them.

The verdicts and the items tagged "Our analysis" are our own assessment, built on the cited sources: our reading of the December 2025 paper for the words it does and does not use; the counts of flares by class in the 24 hours before the upload and in three other windows, the peak X-ray flux, its time and the minutes at C level, from NOAA's files; the field strengths set side by side, from the galaxy's to the core's; the superchron's length; and the times from the flares, the CME and the new region to the upload. The X-ray chart is drawn from NOAA's 1-minute data, and the field chart from the cited values.

Re-run here: every flare count and time, with the hosted sun_window.py on NOAA's files as extracted on October 26, and every other number in the analyses, with frame_numbers.py. Not read in full here: the GJI paper, whose publisher showed our tools a bot check (its full text was read in a browser for our check of it, and the quotations from its sections are taken from there), and the papers marked "Abstract only". Not seen: the animation the presenter showed at 00:02:17–00:03:13, which he says he did not make. Not dated: the presenter's statement that S0 first named a galactic reversal as the cause five years ago.

After the page was built, a fresh reviewer who hadn't seen the drafting re-ran both hosted scripts, which reproduced every number, and checked every quotation, locator, source and sister-page verdict. The changes that followed: the page now says what the 2025 paper does model, an outside field stood in for by a current imposed on its disks and sized from values for interstellar gas, and what it doesn't, a galactic reversal, the heliosphere or the planets; the second claim quotes what our video check found at stop 14 instead of widening it; the 2025 paper's review status is stated; the first claim quotes the episode in full, as our check of the student abstract does; the GJI paper is said to give no Earth-like reversals with its Earth estimates, beside its authors' own caveats; one transcript locator was corrected and four were narrowed; and some twenty smaller fixes of wording, citations and labels.

This page was researched and written with Claude, an AI assistant made by Anthropic, and then re-checked against its sources in a separate verification pass.

The verdicts on this page

OVERSTATED	Has some basis but claims much more than the evidence supports.
MISREAD	Cites a real source but gets wrong what it says.
UNSUPPORTED	No evidence we could find backs it up, though it hasn't been strictly disproven.
PARTLY TRUE	Part of the claim holds up and part doesn't.

All ten verdicts, and how we check

CORRECTIONS

Corrections and changes

If we get something wrong, we fix it and record the change below with the date. If a correction changes a verdict, the log says what the old verdict was.

Change log

Oct 26, 2026	Published on factchecked.science after a full check against the sources. Built from the episode's transcript and description, the December 2025 paper behind its frame, its four links and our checks of them, the research on what drives reversals and how far the galaxy's field reaches, and the Space Weather Prediction Center's records of October 25–26, all read on October 26, 2026. A fresh review the same day changed no verdict: it led us to say what the 2025 paper does and does not model, to keep the second claim to what our video check found, to state that paper's review status, to quote the first claim in full and to correct one locator, with some twenty smaller fixes.

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Last updated Oct 26, 2026