EVIDENCE REVIEW · S0 NEWS AND THE FIELD

Ben Davidson’s field-loss figures: the field is weakening, but by 0.5% a decade, not 5%

Since at least 2023, Ben Davidson, who presents S0 News, has said that Earth’s magnetic field lost 10% by 2000 and 15% by 2010 [2 00:02:08–00:02:16], that the loss sped up from 5% a century to 5% a decade [1 00:38:30–00:38:34], that about 30% is now gone [5 00:03:15–00:03:22], and that a pole shift is due “sometime in the 2040s” [1 00:45:51]. We traced each figure to its source and set it against the field models built from observatory and satellite measurements since 1840 [26][23]. His figures start from real NASA, ESA and journal sources, but most were read as something they are not: measured, the field’s main part, its axial dipole, is about 9% weaker than in 1840 [28 p. 1], and the dipole has lost about half a percent a decade since Swarm’s satellites went up in 2013 (our analysis) [25].

By Fact-Checked Science · Published October 27, 2026

OUR ANALYSIS marks our own reasoning and calculations, including our runs of the IGRF-14, CHAOS-8.7, COV-OBS.x2 and WMM2025 field models and of the published data behind the Antarctic record, and the verdicts are our assessment: four restate the site’s earlier checks and two are new. Everything else comes from the numbered sources. For his videos and episodes, times are positions in the video; for papers and reports, p. gives a page, § a section, Fig. a figure, and Abstract or Conclusions the part we read; for web pages, ¶ gives a paragraph.

The weakening is real; his rates for it are not

OUR ASSESSMENT

9.5%
how much Earth’s dipole has weakened since 1859 in field models built from observatory and satellite measurements; he puts the loss at about 30% (our analysis) [26][23]

0.46%
the dipole’s loss per decade over the Swarm era, 2014–2026, in IGRF-14 and CHAOS-8.7, against his 5% a decade (our analysis) [23][25]

0%
of Earth’s surface lost field at 5% a decade over 2014–2025; the largest local loss anywhere was 3.8% in all (our analysis) [23]

THE CLAIMS

TRUE

The field is weakening

“the weakening magnetic field of Earth” (S0 News, October 24, 2026) [11 00:01:51–00:01:53]

It is, slowly. Earth’s axial dipole is about 9% weaker than in 1840 [28 p. 1]; in IGRF-14 the full dipole moment fell 7.6% from 1900 to 2025, about 6% a century, and is forecast to keep falling (our analysis) [23][24 p. 17]. The South Atlantic Anomaly has deepened and spread since 2014 [20 Abstract]. As in our guide, only this premise is rated here. See section 7.

FALSE

ESA’s Swarm found 15% of the field gone by 2010, and a loss ten times faster

“We’re now down to 15% total field loss according to the ESA Swarm mission.” (the Disaster Cycle video) [1 00:38:44–00:38:47] (our check)

The 15% is real, but it predates Swarm and covers 150 years: ESA’s Swarm brochure of 2012–13 gave it for the last 150 years [13 p. 4], about the span over which NASA had said 10% [12], and Swarm launched only in November 2013 [19]. So it is not a further 5% lost in 2000–2010. The “5 percent per decade, or 10 times faster” is a reporter’s sentence, though the story does paraphrase the mission manager on the field weakening faster [16 ¶5][16 ¶6]. Since 2014 the dipole has lost 0.46% a decade (our analysis) [23][25]. The same verdict as stop 6 of our video check. See section 2.

FALSE

About 55% of the field has been lost since the 1600s

“we have lost 55% since the 1600s, going from 1 down to 0.45” (S0 News, December 15, 2025) [7 00:02:23–00:02:31]; a chart “would seem to suggest” that “we’ve lost about 55% of the field” (the video) [1 00:37:25–00:37:36] (our check)

A real record, but not a measure of a 55% loss. The chart is from a 2026 study of Antarctic sea-floor sediments, and its 0.45 is the youngest sample of one core’s relative paleointensity, a proxy “scaled to unit maximum”, so that 1 is the record’s own peak [21 §3][22]. At that site the field in COV-OBS.x2, a model built from observatory and satellite measurements, fell about 7% from 1840 to 2000 while the core’s value halved (our analysis) [26][22]. The same verdict as extra x2 of our video check. See section 5.

MISLEADING

The loss is accelerating

“then we accelerated to 5% per decade. How we have continued accelerating even though they have not given us new marks on how much we have lost.” (the video) [1 00:45:04–00:45:13]

Lately, a little: in CHAOS-8.7 the dipole’s decline has picked up since 2018, from 3.7% to about 5% a century, back to its pace of 2000–2014 (our analysis) [25]. That is not the acceleration he describes. There was no jump in 2006, nothing near 5% a decade, and since 2014 the pace has averaged about half that of the early 1980s [28 p. 2][23]. Over the long run the decline is not speeding up, as our guide found. See section 4.

FALSE

Extrapolating today’s decline puts a pole shift in the 2040s

“So the yellow line sometime in the 2040s appears to be when we should be expecting to have this magnetic pole shift.” (the video) [1 00:45:51–00:46:00] (our check)

Halving the dipole by 2045 would take about 730 nT a year, 58 times the pace IGRF-14 forecasts for 2025–30, and none of the extrapolations on our page on the next excursion halves it before about AD 2280 [23]. Even his own stated paces leave over half the field in place until about 2052 (our analysis). Forecasters expect the decay to continue at about today’s pace, with no excursion for centuries [24 p. 17][31 Abstract]. Our check of the video still rates the whole claim, “extinction level” included, as Unsupported. See section 6.

FALSE

About 30% of the field is gone

“we should be down by about 30% now” (September 22, 2025) [5 00:03:19–00:03:22]; “we’ve only lost about 30% since the 1800s” (S0 News, December 15, 2025) [7 00:02:18–00:02:20]

The dipole has lost about 9.5% since 1859, and 1.0% in the last two decades (our analysis) [26][23]. His 30% adds his 15% for 2010 to an 8% loss for 2014–2025, his overall estimate from colour-mapping a paper’s maps [5 00:02:56–00:03:01]. The paper’s own numbers amount to changes of 0.4–1.5% at the regional extremes, and the average field at the surface fell 0.38% (our analysis) [20 Abstract][23]. His own inputs also add up to 25–26%, not 30%. See section 3.

1 · HIS FIGURES

Since 2023, one story: 10%, then 15%, then ten times faster, then 30%

Ben Davidson, who presents S0 News and made the Disaster Cycle video, has told the same story about Earth’s magnetic field since at least April 2023 [2 00:02:08–00:02:16]. These are the field-loss figures we found in his own words, with the sources he names for them.

His figures, in his words

WHEN	WHAT HE SAID	WHAT IT IS ABOUT	THE SOURCE HE GIVE
April 10, 2023	“Earth had lost 10 percent of the magnetic field from about 1859 to the year 2000 but that number was updated to 15 in just 2010” [2 00:02:08–00:02:16]; and “something that has been said to have been increasing from five percent loss per Century to five percent loss per decade” [2 00:02:34–00:02:42]	The field as a whole; the rate of loss	“a study in NASA” [2 0 and “the esa swarm p [2 00:02:44]; the vide description links NAS story as “10% Down” page “Our protective s “15% Down” [2]
April 10, 2023	A pole shift “between the 2030s and 2040s” [2 00:04:04–00:04:07]	A date	His own projections
December 12, 2024	“we expect the pole shift micronova and next age of Earth to come in the 2040s” [3 00:04:39–00:04:43]	A date	His timeline chart
September 21, 2025	The South Atlantic Anomaly’s “darkest patch is increased in size by about 50%” [4 00:01:46–00:01:49]	The area of the weak region’s deepest part, 2014–2025	Finlay, Kloss and Gille linked in the episode’s [4]
September 22, 2025	The 10% lost by 2000 was “revised up to 15% field loss in the year 2010” [5 00:00:37–00:00:40], with ESA’s Swarm mission manager saying, by his account, “that we were on the verge of a magnetic pole shift” [5 00:00:50–00:00:52]	The field; a date	ESA’s Swarm mission
September 22, 2025	“The Siberian lobe increased field strength by about 2% and the North American lobe lost about 5%.” [5 00:02:07–00:02:12]	Field strength in two regions, 2014 against 2025	“two different AI base mapping and analysis applied to the same p [5 00:02:00–00:02:03]
September 22, 2025	The anomaly is “losing about 15% of its strength” [5 00:02:44–00:02:46]; “we have an estimate of 8% field loss over these last 11 years” [5 00:02:56–00:03:01], the Americas “losing about 12% of their field protection” [5 00:03:02–00:03:06]	The anomaly’s strength; the field at the surface, 2014–2025	His reading of the san
September 22, 2025	“if we were down by 15% in 2010, we should be down by about 30% now” [5 00:03:15–00:03:22], which “comports with our estimation at the beginning of the year” [5 00:03:22–00:03:27]; a slide: “Current Field Loss +30%” [5 00:03:28]	The field since the 1850s	His own sum
October 10, 2025	“2006 was the year of the largest acceleration in magnetic field loss” [6 00:00:31–00:00:33]; in 2023, “another field loss acceleration event had taken place” [6 00:01:00–00:01:02]	The rate of loss	A story “from a few w a 2006 “core density traced) [6 00:00:15–0
December 15, 2025	“we’ve only lost about 30% since the 1800s, half in the last two decades” and “we have lost 55% since the 1600s, going from 1 down to 0.45” [7 00:02:18–00:02:31]	The field; one chart of Antarctic sediment records	Sagnotti and colleagu linked in the episode’s [7]
January 31, 2026	A chart “would seem to suggest that the modern magnetic pole shift actually began about three or 400 years ago and we’ve lost about 55% of the field” [1 00:37:25–00:37:36]; but that is “coming down off of the peak that you see there” [1 00:37:42–00:37:44], and the loss began, he adds, in 1859 [1 00:37:44–00:37:54]	The same chart	“a paper recently” [1 00:36:55–00:36:57]
January 31, 2026	“And we had lost 10% of Earth’s magnetic field in only about 150 years.” [1 00:38:12–00:38:18]; in 2006, “We go from 5% loss per century to 5% per decade.” [1 00:38:30–00:38:34]; by 2010, “15% total field loss according to the ESA Swarm mission” [1 00:38:44–00:38:47]	The field; the rate of loss	ESA’s Swarm mission, mission manager, who “came out and said” th gone to “5% every de that “We’re losing Ear magnetic field 10 tim [1 00:38:50–00:39:01]
January 31, 2026	After 5% a decade, “How we have continued accelerating even though they have not given us new marks on how much we have lost.” [1 00:45:06–00:45:13]; a pole shift “sometime in the 2040s” [1 00:45:51]	The rate of loss; a date	His chart (below)
July 7, 2026	“we went from losing 5% of Earth’s magnetic field per century to 5% every decade” [8 00:02:10–00:02:14]	The rate of loss	—
July 7, 2026	“350 years, and then this is the same thing lost in a in 80 years” [8 00:06:27–00:06:30], “actually maybe even more” [8 00:06:43–00:06:45]; and in “the next 5 to 10 years, that’s when we dive off a cliff” [8 00:08:00–00:08:03]	The loss in the last 80 years against the 350 before (tested in section 3, not rated); a date	An IGRF chart that sta [8 00:03:39–00:03:48] extends back before 1 identified)
October 20–24, 2026	“Earth’s magnetic field is tanking” [9 00:02:17–00:02:19]; “We’re less than 25 years away, by the way.” [10 00:03:45–00:03:47]	The trend; a date	—

Quoted from each video’s automatically generated captions; times are positions in the video. We found no other field-loss figure in these videos or in the S0 News episodes of October 2026 that we searched. The episodes of October 20 and 22 are rated on our page for October 20 and our page for October 22.

His charts, in words

We viewed these frames only to identify them and saved none. Values read off them by eye are marked so.

“Ongoing magnetic field weakening” (the video, 00:45:00–00:45:52)

Field strength from 0 to 100% against the years 1850–2050. The legend credits the purple stretch, the 1800s to 2000, to “NASA/WDC” and the blue, 2000–2010, to ESA’s Swarm, though Swarm launched in 2013 [19]. Three curves continue it: green, a continued loss of 5% a decade; yellow, an accelerating loss fitted to 1800–2010; red, a further acceleration to 5% a year. Read by eye, purple falls to about 90% and blue to about 85%; red reaches zero around 2025 and yellow nears zero by 2050, while green stays well above zero. He says the green and red lines “create the boundaries of what is possible” [1 00:45:45–00:45:48] and that “the yellow is quite likely” [1 00:45:20–00:45:22]. His 2040s pole shift is the yellow curve nearing zero field.

“Modern Geomagnetic Weakening” (September 22, 2025, about 00:03:36)

Field strength from 1800 to 2050, with a dashed line at about 70%, his 30% loss. Of its five projections, three fall to zero between about 2030 and 2050, and two end near half the field in 2050 (read by eye). He says “those lines crashing out at the end of the 2040s appear to be supported by the data” [5 00:03:34–00:03:38]. The slide before it lists “1850–2000: Lost 10%”, “2010 Update: Lost 15%”, “5%/Decade (10x Accel)” and “Current Field Loss +30%” [5 00:03:28].

The chart behind 55% (the video, 00:37:22–00:37:39)

Figure 9a of Sagnotti and colleagues’ 2026 paper: relative paleointensity, “normalized to max”, for three Antarctic sediment cores and their stack over the last 10,000 years [21 Fig. 9]. He had introduced the paper on S0 News on December 15, 2025 as “a new paleointensity stack” [7 00:01:45–00:01:47]. We describe the figure rather than reproduce it; section 5 charts the published data.

His timeline (the video, 00:38:24–00:39:20)

A slide beside NOAA’s page on the World Magnetic Model’s out-of-cycle update. Its legible lines repeat 1859, the 10% of 2000, a major acceleration in 2006 and the 15% of 2010 (read at about 00:38:40). Stop 9 of our video check covers the model update itself.

2 · THEIR SOURCES

Real sources, mostly read as something they aren’t

All but one of his figures trace to a real NASA, ESA, news or journal source; the 30% is his own sum. What the source measured, and over what period, is rarely what he uses it for.

The 10%: NASA, December 2003

“And globally the magnetic field has weakened 10% since the 19th century.” The story names no start year and no quantity, and in the same story, according to University of California professor Gary Glatzmaier, “the ongoing 10% decline doesn’t mean that a reversal is imminent”; the dipole moment, it adds, is “twice the million-year average” [12]. He links this story as “10% Down” [2]. Measured, the dipole moment fell 8.3% from 1859 to 2000, close to NASA’s round figure (our analysis) [26].

The 15%: ESA, 2012–13

“Over the last 150 years, the magnetic field has lost about 15% of its strength,” says ESA’s brochure for the Swarm mission, first published in October 2012 [13 p. 4]; ESA’s web page “Our protective shield” carries the same sentence [14 ¶5], and he links it as “15% Down” [2]. So ESA’s 15% covers roughly the same period as NASA’s 10%, about 1860 to 2012: it is not an extra 5% lost in 2000–2010, and it predates Swarm, launched on November 22, 2013 [19]. In 2025 he called it a revision, “revised up to 15% field loss in the year 2010” [5 00:00:37–00:00:40]. ESA did publish it, beside concerns that the field “may even be on the verge of reversing polarity”, adding that “we are now overdue for a reversal” [13 p. 4][14 ¶9]. His “on the verge of a magnetic pole shift”, which he gives the mission manager [5 00:00:50–00:00:52], echoes that outreach wording, not anything the mission manager is quoted as saying. ESA’s later figure is “around 9%” over 200 years [18 ¶4], and the dipole moment fell 8.8% from 1859 to 2010 (our analysis) [26].

The 5% a decade: Live Science, July 2014

Reporting Swarm’s first six months, Live Science wrote that earlier estimates had the field weakening about 5% a century, but that new data showed “5 percent per decade, or 10 times faster than thought” [16 ¶5]. That is the reporter’s sentence. The story paraphrases the mission manager, Rune Floberghagen, on a possible flip, and quotes him on how long one would take, “many hundred if not a few thousand years”, and on a field “weakening over the American continent” [16 ¶4][16 ¶10]. It also paraphrases him as hoping more data will show why the field is weakening faster now, but it gives no rate in his name [16 ¶6]. ESA’s own release quoted him on Swarm’s “excellent performance” and reported “the most dramatic declines over the Western Hemisphere”, with strengthening elsewhere [15 ¶3][15 ¶8]; NASA’s Earth Observatory gave the global decay as “about 5 percent globally over the past century” [17]. We found no source for the words he gives the mission manager.

The 8%, and his regions: Finlay, Kloss and Gillet, 2025

The paper he linked reports how the field changed at Earth’s surface from 2014.0 to 2025.0: the weak area below 26,000 nT over the South Atlantic grew by 0.9% of Earth’s surface and its minimum fell from 22,430 to 22,094 nT; Canada’s maximum fell from 58,832 to 58,031 nT, and Siberia’s rose from 61,359 to 61,619 nT [20 Abstract]. As percentages, that is −1.5%, −1.4% and +0.4% (our arithmetic). His readings of the paper’s maps were −15% for the anomaly’s strength and 8% overall [5 00:02:44–00:03:01], and −5% and +2% for the two northern lobes [5 00:02:07–00:02:12], which he read by “AI based color mapping” [5 00:02:00–00:02:03]. ESA’s release on the same results speaks of an anomaly grown by “an area nearly half the size of continental Europe since 2014” [19].

The 55%: Sagnotti and colleagues, 2026

A study of sea-floor sediment cores from the Ross Sea and the Wilkes Land basin off Antarctica. Its relative paleointensity, a proxy from the cores’ magnetism, is “scaled to unit maximum”, so that 1 is the highest value in the record [21 §3]. Core AV43 runs from 1.00 at 14 cm, about AD 1725, to 0.44 in its top sample, at 2 cm, about AD 2000 [22]; the “1 down to 0.45” he read. The authors offer their stack as “a novel tool to support high-resolution correlation between sedimentary cores and the development of detailed age models” [21 Abstract]; they do not say the field lost 55%. See section 5.

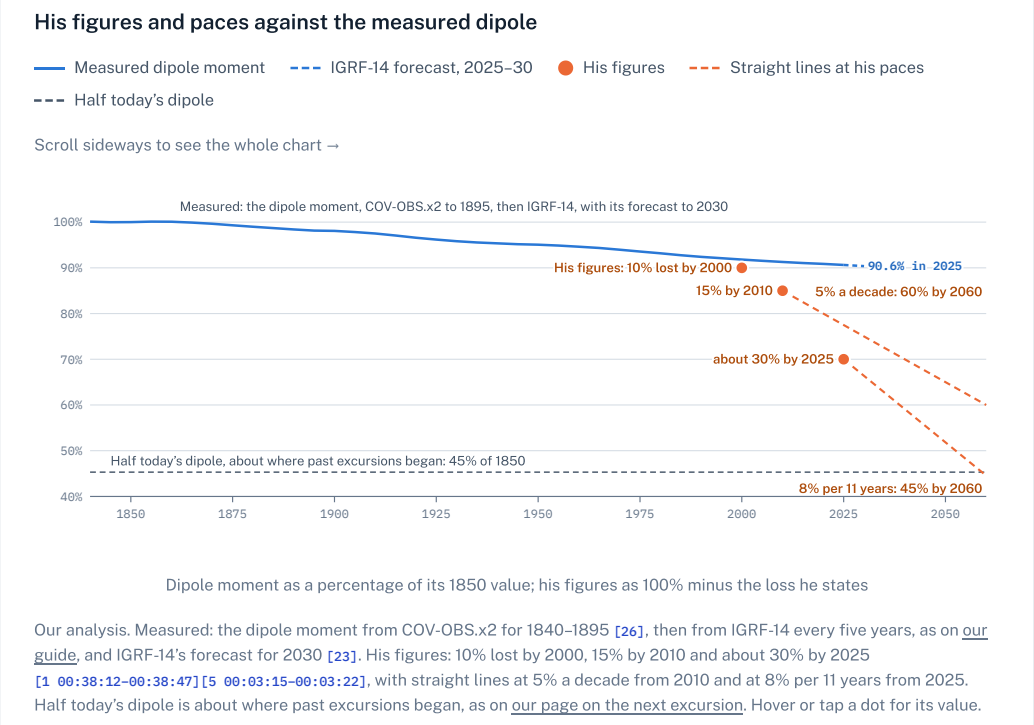
The 30%: his own sum

No source gives it. He adds his 15% for 2010 to the 8% he read off the 2025 maps: “if we were down by 15% in 2010, we should be down by about 30% now” [5 00:03:15–00:03:22]. He adds that this “comports with our estimation at the beginning of the year” [5 00:03:22–00:03:27]. Taken at face value, 15% plus 5% a decade to 2014 plus 8% comes to 25%, and 15% plus 8% per 11 years for 2010–2025 to about 26% (our arithmetic). In December he said “we’ve only lost about 30% since the 1800s” [7 00:02:18–00:02:20].

3 · WHAT THEY IMPLY

Taken at his word, his figures sit far below the measured field, and even his own paces outlast the 2040s

Counting losses as shares of the 1850s field, as he does, each of his figures implies a pace and a field today. Here they are against the dipole as measured since 1840 [26][23].



Our analysis. Measured: the dipole moment from COV-OBS.x2 for 1840–1895 [26], then from IGRF-14 every five years, as on our guide, and IGRF-14’s forecast for 2030 [23]. His figures: 10% lost by 2000, 15% by 2010 and about 30% by 2025 [1 00:38:12–00:38:47][5 00:03:15–00:03:22], with straight lines at 5% a decade from 2010 and at 8% per 11 years from 2025. Half today’s dipole is about where past excursions began, as on our page on the next excursion. Hover or tap a dot for its value.

What each figure implies, and what was measured

HIS FIGURE	THE PACE IT IMPLIES	THE FIELD IT IMPLIES	MEASURED (OUR ANALYSIS)
10% lost from the 1850s to 2000	0.67% a decade (0.71% from 1859)	90% of the 1850s field in 2000	91.8% in 2000; 8.3% lost from 1859
15% lost by 2010	5% a decade in 2000–2010	85% in 2010	91.3% in 2010; 0.56% lost in 2000–2010
5% a decade from 2010	50% a century	77% in 2026	0.46% a decade over 2014–2026
8% lost in 2014–2025	7.3% a decade	—	0.38% lost by the average field at the surface; 0.50% by the dipole moment
About 30% lost by 2025	—	70% in 2025	90.6% in 2025; 9.5% lost from 1859
Half of the 30% “in the last two decades”	7.5% a decade	—	1.0% lost in 2005–2025
55% since the 1600s, “from 1 down to 0.45”	14–16% a century	A field in the 1600s 2.2 times today’s	About 1.1 times today’s in one reconstruction, almost steady from 1590 to 1840 [29]; about 1.2 times even if the 1840–2010 pace had held since 1590
As much lost in the last 80 years as in the 350 before, “maybe even more” (July 2026)	—	—	About 0.6 times as much: 1,244 nT in 1945–2025 against 2,113 nT in 1595–1945; the last 100 years, 0.9 times the 335 before them

Measured values are the dipole moment from COV-OBS.x2 and IGRF-14 [26][23], except where the surface is named. The last two rows use the axial dipole as our page on the next excursion builds it: IGRF-14 from 1900, 16 nT a year back to 1840, the 1840–2010 average [28 p. 2], and 2 nT a year from 1590 to 1840, the trend of one reconstruction [29]. A re-analysis that starts the decline well before 1840 would make the earlier losses larger [33][31 Introduction]: at 16 nT a year since 1590, the last 80 years lost only about a fifth as much as the 350 before them. His paces are his figures divided by the years they cover; his July chart is not identified, so we test the claim, not the chart.

OUR ANALYSIS

His own paces, carried forward

Drawn as straight lines through his own figures, his paces leave much of the field in place through the 2040s. From his 2010 figures, 15% lost and then 5% a decade, the loss reaches 23% in 2026 and 32.5% in 2045; half the field would be gone around 2080 and all of it around 2180. From his September 2025 figures, 30% lost and then 8% every 11 years, the loss reaches 44.5% in 2045, half around 2052 and all of it around 2121; the 7.5% a decade his December figures imply gives about the same. Only the further accelerations drawn on his chart reach zero by then, and when those would come, he says, “no human could actually answer” [1 00:45:38–00:45:41].

OUR ANALYSIS

What the 2040s would take

From his own 70% in 2025, reaching zero by 2040, 2045 or 2049 would mean losing 47, 35 or 29 points a decade. Measured, halving the axial dipole, 29,350 nT in 2025, by those years would take 978, 734 or 612 nT a year: 78, 58 or 49 times the 12.6 nT a year IGRF-14 forecasts for 2025–30, and a third to a fifth of today’s value each decade [23]. That reproduces the 730 nT a year on our page on the next excursion and our page for October 22. We give these as lines through his figures; he states no formula, and we attribute none to him.

4 · THE SWARM ERA

Since Swarm launched, the dipole has lost about half a percent, not 6%

Swarm’s three satellites launched on November 22, 2013 [19]. Over 2014–2026, the field models built from their data and from observatories on the ground, IGRF-14 and CHAOS-8.7, show the dipole losing 0.46% a decade: under a tenth of his 5% [23][25].

DIPOLE MOMENT, 2014–2026
OUR ANALYSIS
−0.56%
in IGRF-14, and −0.55% in CHAOS-8.7; 5% a decade would have taken 6.0% [23][25]

AVERAGE FIELD AT THE SURFACE, 2014–2025
OUR ANALYSIS
−0.38%
from 42,363 to 42,202 nT in IGRF-14, against his 8% [23]

LARGEST LOCAL LOSS, 2014–2025
OUR ANALYSIS
−3.8%
at 36.5°S 2.5°E, in the South Atlantic south-west of Africa, 3.5% a decade; nowhere lost 5% a decade [23]

The dipole moment, against 5% a decade

×10²² A M²	IGRF-14	CHAOS-8.7	AT 5 DECA
2014.0	7.7286	7.7283	7.72
2025.0	7.6897 (−0.50%)	7.6902 (−0.49%)	7.30
2026.0	7.6855 (−0.56%)	7.6861 (−0.55%)	7.26
A decade	−0.465%	−0.455%	−5%

Our analysis [23][25]. The axial dipole, its main part, fell 0.39% over 2014–2026, from 29,452 to 29,337 nT in IGRF-14; CHAOS-8.5, the release our page on geomagnetic jerks re-ran, gives the same −0.55% for the dipole moment.

His readings of the maps, against the models

2014–2025	HE SAID	IGRF-14 (OUR ANALYSIS)
Canada’s strong-field maximum	−5%	59,108 → 58,304 nT, −1.4%
Siberia’s maximum	+2%	61,658 → 61,910 nT, +0.4%
The southern maximum	about −1%, “Maybe less”	66,993 → 66,953 nT, −0.06%
The South Atlantic Anomaly’s minimum	−15%	22,413 → 22,071 nT, −1.5%
The Americas	−12%	−1.8% on average, −3.2% at worst
The whole surface, on average	−8%	42,363 → 42,202 nT, −0.38%

His figures from September 22, 2025 [5 00:02:07–00:03:06]. The paper’s own values for the first, second and fourth rows are in section 2; ours differ at the poles by about 300 nT because we evaluate the field on the WGS84 ellipsoid, but the changes agree to within about 10 nT [20 Abstract][23]. “The Americas” is a box from 60°S to 75°N and 170°W to 30°W, oceans included.

Where a 5%-a-decade fall might have come from

OUR ANALYSIS

The fastest local falls are smaller, and cover little ground

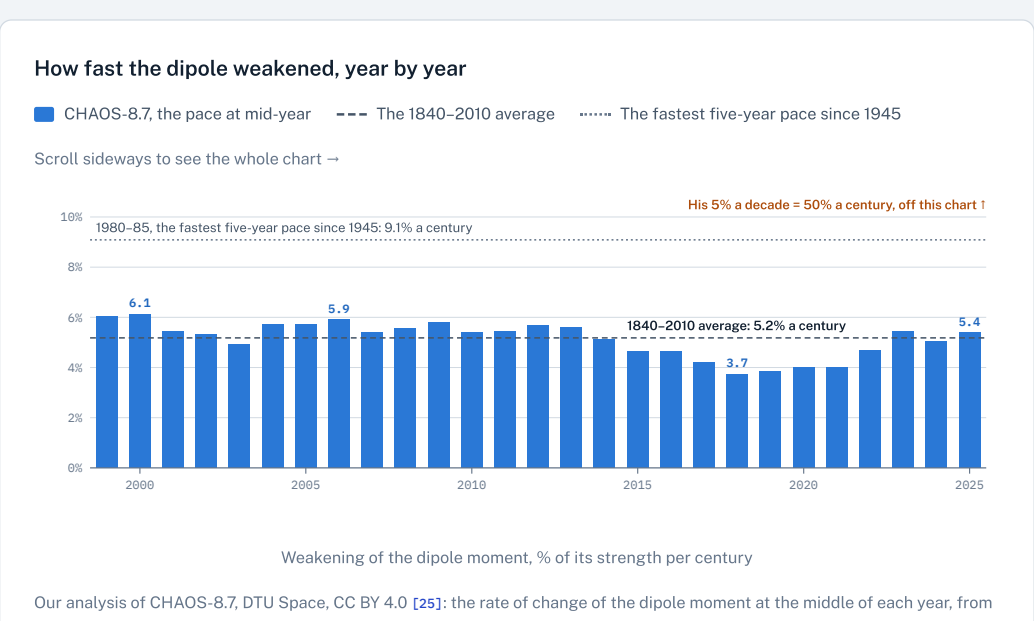
Nowhere on Earth’s surface was the field falling at 5% a decade in mid-2014, at the start of 2026 or in IGRF-14’s forecast for 2025–30. The fastest relative falls were 3.2–4.5% a decade, over north-western South America in 2014 and the South Atlantic south-west of Africa since, and less than 2% of the surface was falling at 3% a decade or more. The largest falls in nanotesla, 120–129 nT a year over the south-eastern and central United States, are only 2.4–2.7% a decade, because the field there is strong [23][25].

OUR ANALYSIS

Swarm’s first six months

From January 1 to June 30, 2014, the period of the 2014 stories, CHAOS-8.7 has the field falling by up to 60 nT over the south-eastern United States, 0.12% of the field there, and rising by up to 52 nT in the southern Indian Ocean, as ESA reported [25][15 ¶4]. The largest relative fall, 0.16% over north-western South America, works out at 3.3% a decade. So the steepest local weakening was within a factor of two of the reporter’s 5%, while the global rate was ten times smaller. The same story quotes the mission manager on a field “weakening over the American continent” [16 ¶10]; a local rate reported as a global one would explain the figure, but we found nothing to show that it happened.

Is the loss accelerating?



Our analysis of CHAOS-8.7, DTU Space, CC BY 4.0 [25]: the rate of change of the dipole moment at the middle of each year, from the model’s splines. The 1840–2010 average is from COV-OBS.x2 [26]; the 1980–85 pace is from IGRF-14, as on our guide [23]. Hover or tap a bar for its value.

OUR ANALYSIS

No jump in 2006; a pickup since 2018

Year by year in CHAOS-8.7, the dipole weakened at 4.9–6.1% a century from 2000 to 2013, 5.9% in 2006, the year he names. The pace eased to 3.7% in 2018 and has since climbed back to 5.0–5.4%: an average of 5.6% a century for 2000–2013 and 4.6% for 2014–2025, with 5.4% forecast by IGRF-14 for 2025–30 [25][23]. That is about the 1840–2010 average of 5.2% a century [26], and about half the pace of 1980–85, 9.1% a century, when the dipole was weakening twice as fast as now [28 p. 2][23]. The average field at the surface was falling 15.8 nT a year in mid-2014 and 19.8 nT a year in 2026 [25]. Over the whole IGRF-14 record the five-year paces drift slightly down, not up, as our guide found. And the north magnetic pole, which he describes racing ahead [1 00:38:34–00:38:39], has slowed (stop 9 of our video check).

5 · THE ANTARCTIC RECORD

The 55% is one sediment core, on a scale set by its own peak

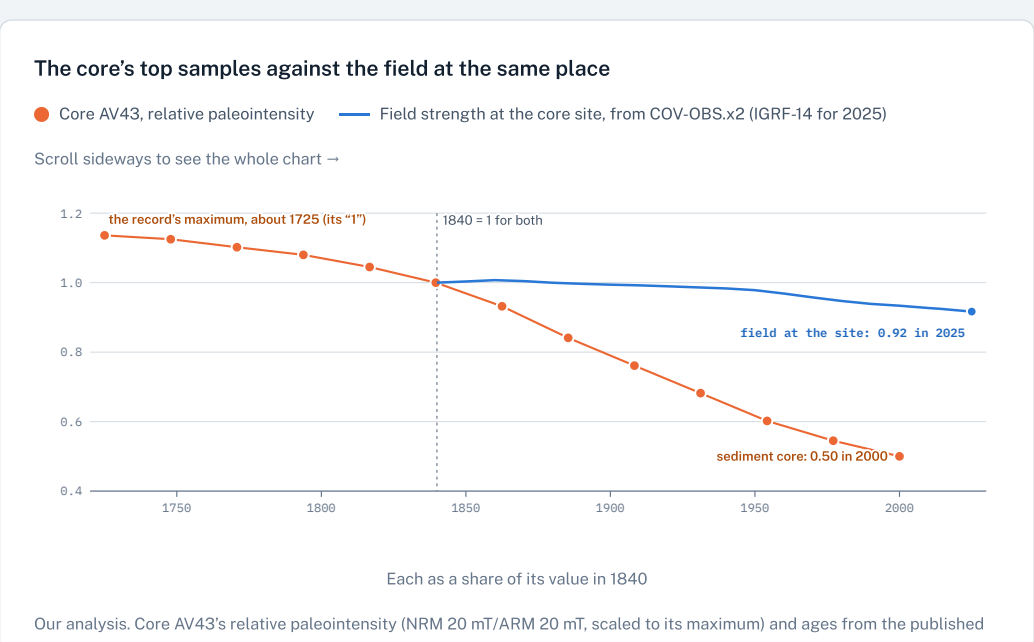
The 0.45 he read is the youngest sample of a relative record from the sea floor off Antarctica. At the core’s own site, the field in COV-OBS.x2, a model built from observatory and satellite measurements, fell a small fraction of what the core shows.

What the paper measured

Sagnotti and colleagues present a new record from core ANTA02-AV43, taken in the Ross Sea at 74.141°S 166.083°E, and combine it with two cores from the Wilkes Land basin into a stack, HOLOANTA, averaged over 200-year windows [21 §2][21 §4.2]. The record is a relative paleointensity: the cores’ natural magnetism divided by a laboratory-induced one, “scaled to unit maximum” [21 §3]. Its ages come from matching the record’s features to a global field model, CALS10k.2, with radiometric dates as tie-points, and count back from AD 2000 [21 §4.1]. The sedimentation rate is uniform through most of AV43, but rises sharply in its uppermost few centimetres [21 §4.1].

The numbers behind “1 down to 0.45”

In the published data, AV43 falls from 1.00 at 14 cm, dated about AD 1725, to 0.44 in its top sample at 2 cm, dated AD 2000. The stack’s youngest value is 0.58 ± 0.12 at the present, from six samples, after 0.89 two hundred years earlier and 0.99 four hundred years earlier [22]. The authors present the stack as a regional record of the field’s changes over the last 10,000 years and as a tool “to support high-resolution correlation between sedimentary cores” [21 Abstract].



Our analysis. Core AV43’s relative paleointensity (NRM 20 mT/ARM 20 mT, scaled to its maximum) and ages from the published data, Sagnotti and colleagues (2025), GFZ Data Services, CC BY 4.0 [22], divided by the sample dated nearest 1840. The field strength at 74.141°S 166.083°E from COV-OBS.x2 every ten years, 1840–2020 [26], and IGRF-14 for 2025 [23]. This is not the paper’s figure, which we do not reproduce [21]. Hover or tap a dot for its value.

OUR ANALYSIS

A relative proxy, not a measurement of field strength

At the core’s site, COV-OBS.x2 has the field falling from 69,188 nT in 1840 to 64,588 nT in 2000, 6.6%, and IGRF-14 has 63,417 nT in 2025 [26][23]. Over the same years the core’s values halve, from 0.88 to 0.44 [22]. The youngest samples do not track the modelled field at their own site, let alone the planet’s. Worldwide, the dipole has lost about 9.5% since 1859 [26][23]. Before 1840 the record is less certain: the field was almost steady from 1590 to 1840 in one reconstruction [29], while a re-analysis of the archaeointensity data’s errors argues that the decline began well before 1840, at about 11–15 nT a year since 1590, as Laj and Kissel sum it up [33][31 Introduction]. The 55% doesn’t hang on which is right. A 55% loss since the 1600s would need a field then about 2.2 times today’s; the reconstruction on our page on the next excursion has about 1.1 times, and even if the 1840–2010 pace of 16 nT a year had held since 1590, the 1590 field would be about 1.2 times today’s [28 p. 2][23]. Our video check rated the 55% False on the same grounds.

6 · THE FORECASTS

Forecasters expect the weakening to continue at about today’s pace, with no flip for centuries

The published forecasts of the dipole run from five years to a century ahead. None comes near halving it by the 2040s.

What the forecasts say

FORECAST	WHAT IT SAYS	THE PACE
IGRF-14, 2025–30	“The dipole field is forecast to continue to fall in strength over the next five years” [24 p. 17]: 7.690 to 7.669 ×10²² A m² (our analysis) [23]	0.54% a decade; the axial dipole 12.6 nT a year
World Magnetic Model 2025, 2025–30	7.690 to 7.670 ×10²² A m² (our analysis) [27]	0.52% a decade
Aubert (2015), to 2115	The axial dipole’s decay continues at a similar pace for the next century, losing a further 1.1 ± 0.3 μT by 2115, while the South Atlantic Anomaly deepens and drifts west [30]	About 11 nT a year, 3.7% a century (our arithmetic)
Finlay, Aubert and Gillet (2016)	The decay “looks set to continue, at least for the next few decades” [28 p. 1]	—
Laj and Kissel (2015)	At the present rate, about 1,000 years to halve the dipole; even at twice the rate, “an extreme upper limit to us”, some 500 years before its direction changes much [31 Conclusions]; “a reversal or an excursion should not be expected before 500–1000 years” [31 Abstract]	—
Brown and colleagues (2018)	From past excursions, they infer that today’s field is not in an early stage of a reversal or excursion [32]	—
Our five extrapolations	Halving the dipole in AD 2280–3380, on our page on the next excursion	Straight lines at 12.6–24 nT a year, 5% a century compounding, or a pace doubling every 70 years
His 2040s	A pole shift “sometime in the 2040s” [1 00:45:51]	**Halving by 2045 needs 734 nT a year, 58 times IGRF-14’s forecast (our analysis)**

OUR ANALYSIS

Where the experts differ, and where they agree

The researchers do not all read today’s field the same way. Laj and Kissel find it “tempting” to see the fast decline since 1590 as a sign that at least an attempt at a geomagnetic transition may have started, while Brown and colleagues see no sign of one [31 Conclusions][32]. But the one of them to put a timescale on it expects no reversal or excursion for 500 to 1,000 years [31 Abstract], and the forecast that runs a century ahead has the dipole losing about 4% in that time [30], not half of it in twenty years. Our check of the video rates the whole 2040s claim, “extinction level” included, as Unsupported (stop 10); here we test only the extrapolation, which the numbers contradict.

7 · WHAT HE GETS RIGHT

The premise holds, the weak spot is growing, and he hedges his dates

Much of what he says about the direction of change is right, and his figures start from real publications.

The field is weakening

The axial dipole is about 9% weaker than in 1840 [28 p. 1], and every forecast has it weakening further [24 p. 17][30]. Our guide rates this premise True, and so do we. His starting point, a loss of 5% a century before the jump he describes [1 00:38:30–00:38:34], is the measured long-run pace since 1840 [29].

The South Atlantic Anomaly is deepening and spreading

Its minimum fell 1.5% over 2014–2025 and its area below 26,000 nT grew by 0.9% of Earth’s surface [20 Abstract]. Its deepest part grew fastest: in IGRF-14 the area below 24,000 nT rose from 2.2% to 3.6% of the surface, about two-thirds larger (our analysis) [23], so his “darkest patch is increased in size by about 50%” is roughly right [4 00:01:46–00:01:49]. His 15% for the anomaly was for its strength [5 00:02:44–00:02:46], which fell 1.5%; its area below 26,000 nT grew by 14% in relative terms (our analysis) [23], so his figure is consistent with the anomaly’s growth, not with its weakening. IGRF-14’s authors put its deepening at about 150 nT in five years [24 p. 13].

Much of the weakening is over the Americas

ESA reported the sharpest declines over the Western Hemisphere in 2014 [15 ¶3]. Over 2014–2025 the field over the Americas fell 1.8% on average, nearly five times the global average, and the largest falls in nanotesla are over the United States (our analysis) [23]. He said, of the 2014–2025 maps, “the field over the Americas weakens considerably” [4 00:01:30–00:01:32]. How that bears on protection is rated on our page for October 20.

His 10% and 15% were published

NASA did write 10% in 2003 [12], and ESA wrote 15% in 2012 and still carries it on its Swarm pages [13 p. 4][14 ¶5]. Both describe the 150 years before each was written, and ESA’s more recent figure is about 9% over 200 years [18 ¶4]. And his October 2025 “another field loss acceleration event” in 2023–24 [6 00:01:00–00:01:02] is consistent with CHAOS-8.7’s yearly dipole pace, which rose from 4.0% to 5.4% a century between 2021.5 and 2023.5: within the range of past paces, and about a tenth of 5% a decade (our analysis) [25].

His own caveats

From the automatically generated captions; times are positions in the video.

> *“Those are questions that no human could actually answer.”*
>
> On when the next acceleration comes, the Disaster Cycle video [1 00:45:38–00:45:41]

> *“I don’t think that the green or the red are likely.”*
>
> On two of his three curves, the video [1 00:45:18–00:45:20]

> *“Is it 4 months later that the magnetic pole shift happens? I don’t know.”*
>
> July 7, 2026 [8 00:08:09–00:08:14], just after saying that in “the next 5 to 10 years, that’s when we dive off a cliff” [8 00:08:00–00:08:03]

8 · LIMITS

What this check could and couldn’t settle

Not everything he has said

He has posted thousands of videos. We read eight, found by searching his channel for field loss, field strength and pole-shift timelines, and thirteen S0 News episodes from October 2026, and found no 40–50% figure in what we read; an unread video might hold one. We did not read his 2025 book, his posts or his Patreon, and no source we could check quotes the book.

Captions, not a script

His words come from YouTube’s automatically generated captions. For seven of the videos we read each one’s own caption track; for the Disaster Cycle video and the three October 2026 episodes we used the transcripts behind our earlier pages, and the Disaster Cycle’s matches its track over every passage quoted. Captions can mishear words, so we quote short passages and give their times.

Charts read by eye

The values on his charts in section 1 are read by eye from the frames, which we viewed but did not save. We did not identify the chart in his July 2026 livestream.

Abstracts or less, for five papers

We read Finlay, Kloss and Gillet (2025) and Gubbins, Jones and Finlay (2006) in abstract only [20][29], and Aubert (2015) and Brown and colleagues (2018) likewise, so we paraphrase them [30][32]. Of Suttie and colleagues (2011) we read only the title, and give its finding as Laj and Kissel sum it up [33][31 Introduction]. Their full texts were paywalled or behind bot checks, which we did not try to get past.

The origin of “5 percent per decade”

Live Science gives no source for its figure, and neither ESA’s release nor NASA’s write-up of the same six months gives a rate per decade [15][17]. A local rate reported as a global one fits the numbers (section 4), but that is our conjecture.

Models of the measurements

IGRF-14, CHAOS-8.7 and COV-OBS.x2 are models fitted to observatory and satellite data, not raw readings. They agree on the Swarm era to within about 0.01 percentage points, and our code reproduces NOAA’s test values for WMM2025 to within 0.05 nT [27]. COV-OBS.x2 reaches back to 1840 on far fewer observations than today’s, so the early part of the chart in section 3 is the least certain.

What would change these verdicts

01
A primary source, a paper, a field model or an agency’s figure, showing the global field or the dipole losing anything near 5% a decade, or 30% since the 1850s.

02
A new release of IGRF or CHAOS in which the dipole’s loss over 2014–2026 is several percent rather than half a percent.

03
A published forecast from a geomagnetic model putting the dipole’s halving, or an excursion, within decades.

These are our own judgments of what would change the verdicts, not forecasts from the sources.

9 · HOW WE WORKED IT OUT

One script, the public field models, and every number on this page

Every number tagged “Our analysis” comes from one standard-library Python script that downloads the public model files and data, checks them, and writes its results to a JSON file.

The field models

IGRF-14, the international reference model, from 1900, with its secular variation carried forward after 2025 as the model defines [23][24]; CHAOS-8.7, from Swarm and other satellites with data to August 31, 2026, evaluated from its splines, with CHAOS-8.5 as a check [25]; COV-OBS.x2, from observatories and satellites since 1840 [26]; and WMM2025, whose 12 test values from NOAA we reproduce to within 0.05 nT [27]. The dipole moment is $4\pi a^3/\mu_0$ times the length of the degree-1 coefficients; the axial dipole is $|g_1^0|$.

The surface, his figures and the core

Field strength on a 1° grid at the WGS84 surface, to degree 13, area-weighted; regional extremes refined to 0.05°. His figures are taken as losses from the 1850s field, as he counts them, and his paces as straight lines. The core’s ages and values come from the published data [22]; the field at its site from COV-OBS.x2 and IGRF-14 [26][23].

PY **field_loss.py**
His figures’ arithmetic; the dipole and the surface over the Swarm era in IGRF-14 and CHAOS-8.7; the fastest local rates and Swarm’s first six months; the South Atlantic Anomaly’s areas; the yearly paces; the forecasts; the Antarctic core and its site; the July 2026 claim and the field in 1590; and the three charts’ series · 52 KB

JSON **field-loss-numbers.json**
Every number from our analysis on this page, as the script writes it · 44 KB

Run it

It needs only Python 3. Put it in a folder and run `python3 field_loss.py`. The first time, it downloads its inputs, about 1.8 MB in all: the IGRF-14 coefficients and the WMM2025 package from NOAA [23][27], CHAOS-8.7, CHAOS-8.5 and COV-OBS.x2 from DTU Space [25][26], and the Antarctic data from GFZ [22]. It checks each file against the SHA-256 of the copy we used, prints its results and writes `field-loss-numbers.json`.

Related checks

- FALSE 15% gone, ten times faster? The Disaster Cycle, Fact-Checked
- FALSE The 2025 model already failing? The Disaster Cycle, Fact-Checked
- UNSUPPORTED A magnetic pole flip in the 2040s? The Disaster Cycle, Fact-Checked
- FALSE 55% of the field gone? The Disaster Cycle, Fact-Checked

Sources

Bracketed numbers refer to this list. For his videos and the S0 News episodes, [1] to [11], times are positions in the video (hours:minutes:seconds), from the first to the last line of the automatically generated captions that hold the words quoted. For [2] to [8] we read each video’s own English caption track on October 27, 2026; for [1] we used the transcript behind our check of the video, which matches its track over every passage quoted, and for [9] to [11] the transcripts behind our pages for those episodes. For papers and reports, p. gives the printed page, § a section, Fig. a figure, and Abstract or Conclusions the part we read; for web pages, ¶ gives a paragraph. Licences are given where we quote; model and data files are charted as our own analysis, with credit. Links checked October 27, 2026.

1 SpaceWeatherNews (S0) (2026). THE DISASTER CYCLE – The Evidence. YouTube video, quoted from the transcript behind our check of the video; times are positions in the video.

2 SpaceWeatherNews (S0) (April 10, 2023). Magnetic Pole Shift | How Much Time Do We Have? YouTube video, with its description as read on October 27, 2026. Quoted from the automatically generated transcript; times are positions in the video.

3 SpaceWeatherNews (S0) (December 12, 2024). Magnetic Pole Shift – News & Timelines. YouTube video. Quoted from the automatically generated transcript; times are positions in the video.

4 SpaceWeatherNews (S0) (September 21, 2025). Magnetic Pole Shift: The Last 11 Years | S0 News Sep.21.2025. YouTube video, with its description as read on October 27, 2026. Quoted from the automatically generated transcript; times are positions in the video.

5 SpaceWeatherNews (S0) (September 22, 2025). Magnetic Pole Shift Update – Field Loss %. YouTube video. Quoted from the automatically generated transcript; times are positions in the video. The slide and chart we describe are on screen at about 00:03:28 and 00:03:36.

6 SpaceWeatherNews (S0) (October 10, 2025). Pole Shift Timeline – Narrowing Down The Disaster. YouTube video. Quoted from the automatically generated transcript; times are positions in the video.

7 SpaceWeatherNews (S0) (December 15, 2025). Pole Shift – 55% Loss, EM Plants, Solar Watch | S0 News Dec.15.2025. YouTube video, with its description as read on October 27, 2026. Quoted from the automatically generated transcript; times are positions in the video.

8 SpaceWeatherNews (S0) (July 7, 2026). Pole Shift Acceleration in the 2030s. YouTube video, an excerpt from a livestream. Quoted from the automatically generated transcript; times are positions in the video.

9 SpaceWeatherNews (S0) (October 20, 2026). Magnetic Pole Shift Brain Impact, Volcano Warning | S0 News Oct.20.2026. YouTube video. Quoted from the automatically generated transcript; times are positions in the video. Reviewed on our page for the episode.

10 SpaceWeatherNews (S0) (October 22, 2026). Magnetic Pole Shift & The Largest Extinction Ever | S0 News Oct.22.2026. YouTube video. Quoted from the automatically generated transcript; times are positions in the video. Reviewed on our page for the episode.

11 SpaceWeatherNews (S0) (October 24, 2026). Earth Field Chaos, Solar Storm Deaths | S0 News Oct.24.2026. YouTube video. Quoted from the automatically generated transcript; times are positions in the video. Reviewed on our page for the episode.

12 Phillips, T. (2003, December 29). Earth’s inconstant magnetic field. Science@NASA, as republished on nasa.gov (last updated January 7, 2004). We read the Internet Archive’s copy of January 9, 2004, because the original pages are no longer online. US government work.

13 Haagmans, R., Bock, R., and Rider, H. (2013). Swarm: ESA’s magnetic field mission. ESA BR-302, 2nd edition, September 2013; the 1st edition, of October 2012, has the same sentence on the same page. European Space Agency.

14 European Space Agency (undated). Our protective shield. Web page, read on October 27, 2026; its text mentions Swarm’s results of June 2014.

15 European Space Agency (2014, June 19). Swarm reveals Earth’s changing magnetism. News release, with its image page Magnetic field changes of the same day.

16 Dickerson, K. (2014, July 8). Earth’s magnetic field is weakening 10 times faster now. *Live Science.*

17 NASA Earth Observatory (2014, September 7). Measuring Earth’s magnetism. Image of the Day, caption by M. Carlowicz. US government work.

18 European Space Agency (2020, May 20). Swarm probes weakening of Earth’s magnetic field. News release.

19 European Space Agency (2025, October 13). Swarm reveals growing weak spot in Earth’s magnetic field. News release.

20 Finlay, C. C., Kloss, C., and Gillet, N. (2025). Core field changes from eleven years of Swarm satellite observations. *Physics of the Earth and Planetary Interiors* 368, 107447. CC BY 4.0. Abstract only, as in the record at DTU Orbit; the publisher’s page showed a bot check.

21 Sagnotti, L., Caricchi, C., Macri, P., Colizza, E., Del Carlo, P., Di Roberto, A., and Winkler, A. (2026). Improving the reconstruction of Holocene geomagnetic paleosecular variation in the Antarctic region. *Physics of the Earth and Planetary Interiors* 370, 107487. CC BY-NC-ND 4.0: quoted, not adapted. We read the full text in the University of Trieste’s repository.

22 Sagnotti, L., Caricchi, C., Macri, P., Colizza, E., Del Carlo, P., Di Roberto, A., and Winkler, A. (2025). New and compiled palaeomagnetic data from western Ross Sea (Antarctica) spanning the last ca. 10 ka. GFZ Data Services. Data set, CC BY 4.0, charted here as our own analysis.

23 IAGA Working Group V-MOD (2024). International Geomagnetic Reference Field, 14th generation (IGRF-14): Gauss coefficients 1900–2025 and secular variation 2025–2030. Data file, NOAA National Centers for Environmental Information; retrieved October 27, 2026, the same file, by its SHA-256, as for our guide.

24 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.

25 Kloss, C., Finlay, C. C., Olsen, N., Tøffner-Clausen, L., Gillet, N., and Grayver, A. (2026). The CHAOS-8 geomagnetic field model. *Earth, Planets and Space* 78, 21. CC BY 4.0. With the model files from DTU Space’s CHAOS-8 website: CHAOS-8.7, released September 30, 2026, with Swarm data to August 31, 2026 (doi:10.5281/zenodo.22959079), and CHAOS-8.5 (doi:10.5281/zenodo.18432111), both CC BY 4.0.

26 Huder, L., Gillet, N., Finlay, C. C., Hammer, M. D., and Tchoungui, H. (2020). COV-OBS.x2: 180 years of geomagnetic field evolution from ground-based and satellite observations. *Earth, Planets and Space* 72, 160. CC BY 4.0. With the model file COV-OBS.x2-int, 1840–2020, from DTU Space.

27 NOAA National Centers for Environmental Information and British Geological Survey (2024). World Magnetic Model 2025: coefficients and test values (WMM2025COF.zip). Data file.

28 Finlay, C. C., Aubert, J., and Gillet, N. (2016). Gyre-driven decay of the Earth’s magnetic dipole. *Nature Communications* 7, 10422. CC BY 4.0.

29 Gubbins, D., Jones, A. L., and Finlay, C. C. (2006). Fall in Earth’s magnetic field is erratic. *Science* 312(5775), 900–902. Abstract only, as in the record at DTU Orbit.

30 Aubert, J. (2015). Geomagnetic forecasts driven by thermal wind dynamics in the Earth’s core. *Geophysical Journal International* 203(3), 1738–1751. Abstract only, as in the HAL record insu-01308305; the publisher’s page and HAL’s copy of the file showed bot checks.

31 Laj, C., and Kissel, C. (2015). An impending geomagnetic transition? Hints from the past. *Frontiers in Earth Science* 3, 61. CC BY 4.0.

32 Brown, M., Korte, M., Holme, R., Wardinski, I., and Gunnarson, S. (2018). Earth’s magnetic field is probably not reversing. *Proceedings of the National Academy of Sciences* 115(20), 5111–5116. The Significance statement only, as deposited with Crossref; the publisher’s page showed a bot check.

33 Suttie, N., Holme, R., Hill, M. J., and Shaw, J. (2011). Consistent treatment of errors in archaeointensity implies rapid decay of the dipole prior to 1840. *Earth and Planetary Science Letters* 304, 13–21. Title only, from Crossref: the publisher’s page showed a CAPTCHA, which we did not attempt, and no abstract is deposited with Crossref, OpenAlex or Semantic Scholar, so we describe its finding as Laj and Kissel (2015) summarize it [31].

METHOD

How this was checked

On October 27, 2026, we checked every figure this page attributes to the presenter against his own words, in the automatically generated captions of eight of his videos, from April 2023 to July 2026, and of the S0 News episodes of October 20, 22 and 24, 2026; and every other number, quotation and citation against its source: the NASA, ESA and Live Science items behind his figures, the two papers he linked and the data behind one of them, four field models and five published forecasts, 259 references to 33 sources in all. We also searched thirteen S0 News episodes of October 2026 for other field-loss figures and found none.

The verdicts and the items tagged “Our analysis” are our own assessment, built on the cited sources: the paces and fields his figures imply and their straight-line projections, the Swarm-era changes of the dipole and of the field at the surface, the fastest local rates, the yearly paces, the field at the Antarctic core’s site, and our arithmetic on the forecasts. Four verdicts restate the site’s earlier checks: the premise as in our guide to Earth’s magnetic field, the 15% and the 55% as in our check of the Disaster Cycle video, and the 2040s as on our page on the next excursion. The two on acceleration and on the 30% are new.

Every number from our own analysis comes from field_loss.py, which downloads the IGRF-14, CHAOS-8.7, CHAOS-8.5, COV-OBS.x2 and WMM2025 model files and the GFZ data, checks each against the SHA-256 of the copy we used, and reproduces NOAA’s 12 test values for WMM2025 to within 0.05 nT. It also reproduces our guide’s IGRF-14 dipole series and five-year paces, the 0.5% for 2014–2024 on our page on when Earth’s field falters, and the 734 nT a year on our page on the next excursion, and it tests his July 2026 claim on that page’s series back to 1590. Not verified: the full texts of the four papers we read in abstract only, and of Suttie and colleagues (2011), of which we read only the title; where Live Science’s 5% a decade came from; the chart in his July 2026 livestream; and his 2025 book, posts and Patreon, which we did not read. Values on his charts are read by eye.

After the page was built, a fresh reviewer who hadn’t seen the drafting re-ran the hosted script, which reproduced every number, and checked every quotation, locator and source. The changes that followed: we added what the sources say in his favour, that Live Science also paraphrases the mission manager on a faster weakening and that ESA set its 15% beside a possible reversal; his hedges and his July 2026 claim of as much loss in 80 years as in the 350 before, which we test; that the field was almost steady before 1840 in one reconstruction only; the explicit quotation for the acceleration; model values at the Antarctic site, not measurements; five corrected locators; and about fifteen smaller fixes of wording and locators. No verdict changed.

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

FALSE	The evidence contradicts the claim.
MISLEADING	Contains something true but leaves a false impression, usually by leaving out key context.
TRUE	The evidence supports the claim.

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 27, 2026	Published on factchecked.science after a full check against the sources. The page is built from his own words in eight of his videos and three S0 News episodes of October 2026; the NASA, ESA, Live Science and journal sources behind his figures; and our runs of the IGRF-14, CHAOS-8.7, COV-OBS.x2 and WMM2025 field models and of the published data behind the Antarctic record. Four of its six verdicts restate the site’s earlier checks. A fresh review the same day changed no verdict: it led us to add what the sources say in his favour (Live Science’s paraphrase of the mission manager on a faster weakening, ESA’s own talk of a reversal beside its 15%), his hedges and his July 2026 claim of as much loss in 80 years as in the 350 before, which we test; to say that the field was almost steady before 1840 in one reconstruction only, citing a re-analysis that disagrees; to quote his explicit words on acceleration; to call the values at the Antarctic site model values; and to soften “his numbers” to “his rates” in the panel, with five locators corrected and about fifteen smaller fixes.

Fact-Checked Science is independent. It isn’t affiliated with the channels, presenters or authors whose claims it checks.

Last updated Oct 27, 2026