Fact-Checked Science

EVIDENCE REVIEW · FORECASTING THE MAGNETIC FIELD

When is the next magnetic excursion due?

An excursion is a spell when Earth's magnetic field weakens and its pole strays at least 40–45° from the geographic pole, short of a full reversal [20 §1][6 §1]. Three kinds of evidence can be pushed into dating the next one: the spacing of past excursions, the field's current decline, and the judgment of the geomagnetists who study it. Here is what each says when taken at its word, and how much weight it can bear.

By Fact-Checked Science · Published October 12, 2026

OUR ANALYSIS marks our own reasoning, and the verdicts are our assessment. Everything else comes from the numbered sources. Ages count back from AD 1950, as the sources do.

No clock, no countdown

OUR ASSESSMENT

THE CLAIMS ABOUT THE NEXT ONE

FALSE

Excursions recur on a regular cycle, so one is due now

The Disaster Cycle video puts the cycle at about 6,000 years: "We're perfectly due in time" (our check)

Across the 11 excursions in our catalog for the last 211,000 years, the gaps are as irregular as random dates, though older excursions are more likely to be missing from the record. The one even run, six events in the last 45,000 years, is spaced about 6,800 years apart, not 6,000, and four of its events are disputed, possibly local or from a single record [23 p. 5][25][20 §6][19]. A 6,800-year cycle would also mean over 100 excursions since the last reversal; reviews list 12 to 17 [14]. A straight line through the run gives a 95% range of about ±2,930 years, and the older excursions are dated too loosely to test whether a comb fitted to it runs back in time. See section 2.

FALSE

Extrapolating today's decline puts an excursion or pole flip within decades

The Disaster Cycle video expects a magnetic pole shift "sometime in the 2040s" (our check)

Each of our five extrapolations of the measured decline puts the dipole's halving, the level at which past excursions began [18 §4.4][29], centuries away: AD 2640–3190 on straight lines at measured or forecast paces, about AD 3380 for steady exponential decay, and AD 2280 even for a speed-up that doubles the pace every 70 years [1][2]. Laschamp's 5% low [6 §3] would come later still (AD 2340–7900). Halving by 2045 would take about 730 nT a year, 58 times the pace forecast for 2025–30, and the decline has slowed to about half its 1980 pace [1 p. 2][2]. Our check of the video rates its whole claim, "extinction-level" included, as Unsupported; here we test only the extrapolation, which the numbers contradict. See section 3.

TRUE

No excursion is likely for at least the next few centuries

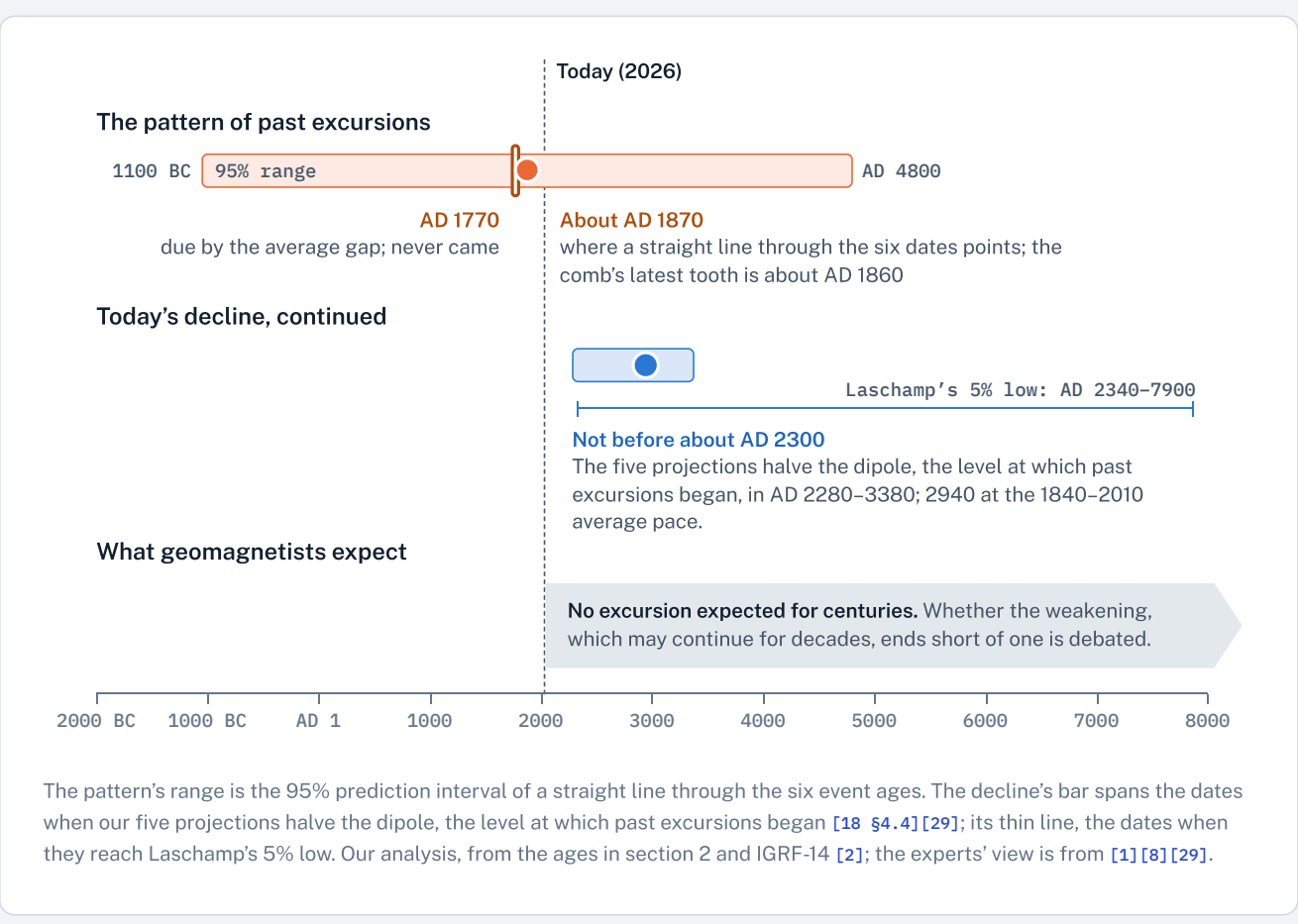
Researchers who reconstruct the field's past [8][29] and model Laschamp's effects [7]

Brown and colleagues found field states comparable to today's, 49,000 and 46,000 years ago, that didn't develop into an excursion or reversal, and take that to suggest today's weakened field will also recover without one [8]. Others read the speed of the decline and the growing South Atlantic Anomaly as possible early signs of a transition [29][30], but the one such study that gives a timescale expects no excursion or reversal for 500 to 1,000 years [29]. Today's dipole is strong by long-term standards [10][11], and the Oulu team that modelled Laschamp's effects calls such excursions "not likely in the near future" [7]. Whether the weakening, which may continue for decades [1], ends in an excursion later is debated. See section 4.

1 · THREE FORECASTS, ONE TIMELINE

One forecast says now, one says centuries from now, and one gives no date

When the next excursion would come under each forecast, in years AD. Bars show the range each one allows; dots mark its central answer. Ages from the sources count back from AD 1950.



The pattern's range is the 95% prediction interval of a straight line through the six event ages. The decline's bar spans the dates when our five projections halve the dipole, the level at which past excursions began [18 §4.4][29]; its thin line, the dates when they reach Laschamp's 5% low. Our analysis, from the ages in section 2 and IGRF-14 [2]; the experts' view is from [1][8][29].

2 · THE PATTERN

The pattern: due about now, give or take 3,000 years

Six dated events from the last 45,000 years that have been proposed as excursions are unusually evenly spaced, though four of them are disputed [23 p. 5][25][20 §6][19]. We extended their run to see where it puts the next one.

The six events, with the ages we use

EVENT	YEARS BEFORE 1950	HOW FIRM IT IS
Tianchi Changbaishan volcano, China and North Korea	**7,000 ± 450** The lava dates to 7,000 ± 900 years at 95% confidence [23]	Known from one volcano; it may be a local feature [23 p. 5]
Gothenburg Sweden	**14,450 ± 250*** The type section's "12,400–12,350 years BP" [24] are radiocarbon years; calibrated, 14,450 (95%: 14,095–14,925) [27]	First reported in 1971 [31], the type record was challenged soon after [25]; another record that bears the name dates to 12,500–13,100 years [26]
Hilina Pali first found in Hawaiian lavas	**19,500 ± 1,000*** From the best-dated record, varve-counted lake sediments in Arctic Russia: 19,000–20,300 [20]. The Hawaiian lavas were dated 19,300 ± 1,600 in an earlier calibration of their radiocarbon ages [23 p. 5]	In the best-dated record the pole stayed above 55°N, short of an excursion, though its authors conclude Hilina Pali was a global weakening of the dipole [20 §6]; a Black Sea record shows pronounced secular variation at about 18,500 years, probably the same feature, also short of an excursion [21]
Rockall northeast Atlantic	**26,500 ± 500*** 26,350–26,700 [19]	Found in a single sediment core [19]
Mono Lake also called Mono Lake/Auckland	**34,500 ± 1,000*** About 34,500 in several records [16][17][28]; global field models show lows near 34,000 and 31,000 [18]	Seen in several regions, but the record at Mono Lake itself is now attributed to Laschamp [17]
Laschamp also spelled Laschamps	**41,100 ± 350** 41,100 ± 350, from cave deposits dated by uranium–thorium [15]	Global: the dipole fell to about 5% of today's strength [18][6 §3]

Ages count back from AD 1950, as in the sources. The ± values are the one-sigma uncertainties our analysis uses: Tianchi's is half its published ±900-year 95% interval, Laschamp's is the published ±, used as one sigma, and those marked * are our own estimates. Hilina Pali's published ages run from about 17,000 to 21,500 years [20 Table 1]; the often-quoted 17,000 also came from the Tianchi lava's argon age [22], which a later study overturned [23]. No excursion younger than Mono Lake is accepted as well documented [20 §1][19 §8].

OUR ANALYSIS

How we fitted the comb

STEP 1

Lay a comb

Picture a comb laid along the timeline, its teeth a fixed number of years apart. For every spacing from 3,000 to 60,000 years, we slid it to where its teeth sit closest to the six events.

STEP 2

Score the fit

Each spacing gets a score for how tightly the events bunch around its teeth, giving more weight to precisely dated events. Statisticians call it the length of the mean resultant.

STEP 3

Keep the best

The best spacing is 6,800 years. Its teeth fall 87 years before 1950, around AD 1860, then 6,890 years before 1950, and every 6,800 years back from there.

STEP 4

Draw a line

Separately, a straight line through the six ages in order, extended one step, points to about AD 1870. Its 95% prediction interval is ±2,930 years.

LATEST COMB TOOTH

OUR ANALYSIS

AD 1860

The 6,800-year comb that best fits the six events, giving more weight to precisely dated ones, has its latest tooth around AD 1860. The tooth before it falls about 7,000 years ago, beside Tianchi; the next one after it, around AD 8700.

95% RANGE

OUR ANALYSIS

±2,930 years

The range for the next event from a straight line through the six dates, centred on about AD 1870: roughly 1100 BC to AD 4800. It spans most of a cycle.

DUE BY THE AVERAGE GAP

OUR ANALYSIS

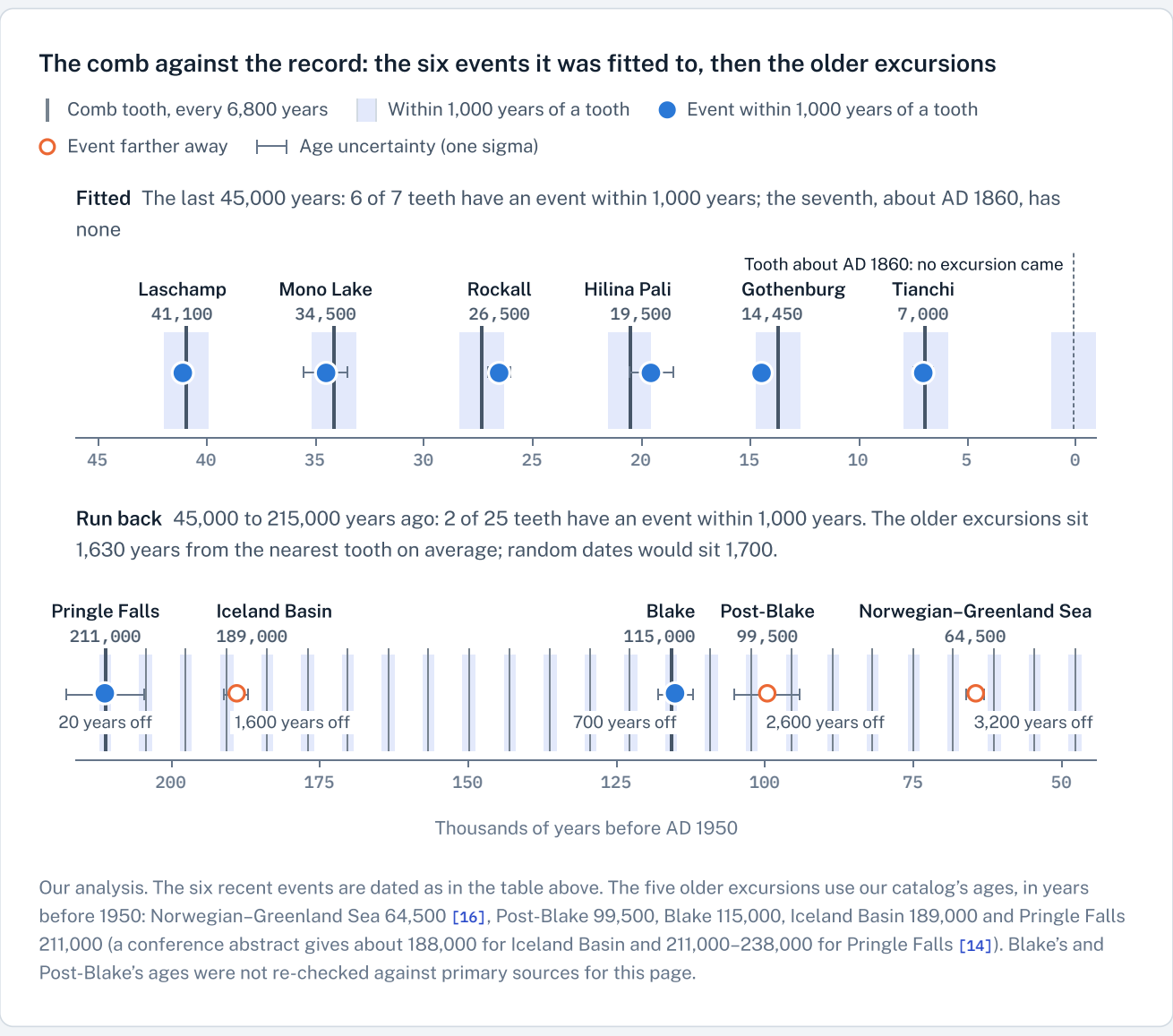
AD 1770

When the next one was due if you add the 6,800-year average gap to Tianchi, the last event, about 7,000 years ago (7,000 ± 900 years [23]). Nothing came.

OUR ANALYSIS

With the best-supported ages, the six dates say an excursion was due about 160 to 260 years ago, whether you count from the fitted comb (about AD 1860) or from the last event (AD 1770). None has come in more than 400 years of direct observation [3 p. 900]. The answer also hangs on single disputed dates: using Gothenburg's other published age [26] instead of its type-section age moves the comb's tooth to about AD 2700.

The comb against the record: the six events it was fitted to, then the older excursions



Our analysis. The six recent events are dated as in the table above. The five older excursions use our catalog's ages, in years before 1950: Norwegian–Greenland Sea 64,500 [16], Post-Blake 99,500, Blake 115,000, Iceland Basin 189,000 and Pringle Falls 211,000 (a conference abstract gives about 188,000 for Iceland Basin and 211,000–238,000 for Pringle Falls [14]). Blake's and Post-Blake's ages were not re-checked against primary sources for this page.

Unusually even, but no clock

SPACING VARIABILITY

OUR ANALYSIS

0.15

The gaps vary by about 15% around their 6,800-year average. Six random dates in 45,000 years typically score about 0.75.

CHANCE OF SPACING THIS EVEN

OUR ANALYSIS

About 0.1%

For six random dates: about once in a thousand tries. Typically 0.26% once dating errors are allowed for, and 3–8% if excursions can't recur within 4,000–5,000 years.

THE OLDER RECORD

OUR ANALYSIS

$p = 0.44$

The five older excursions sit 1,630 years from the nearest tooth on average; random dates would sit 1,700 years away. That can't tell a cycle from none: even if each sat on a tooth, dating errors alone would leave them about 1,550 years away.

Built mostly on weak events

Four of the six events are disputed, possibly local, or seen in a single record. Tianchi may be a local feature [23 p. 5]. Gothenburg's type record was challenged soon after it was reported [25]. Hilina Pali's pole did not stray far enough to count as an excursion in the best-dated record or in the Black Sea [20 §6][21]. Rockall comes from one sediment core [19]. Even the record at Mono Lake itself is now attributed to Laschamp, though a separate event about 34,500 years ago appears elsewhere [17][16].

OUR ANALYSIS

Hangs on single dates

Swapping one published age for another moves the comb's tooth anywhere between about AD 1100 and 3700: Tianchi at the 8,100 years once inferred indirectly, partly from its ash [23 p. 1], puts it near AD 1100, Gothenburg at 12,800 years [26] near AD 2700, and Hilina Pali at the 17,000 years of one lake record [20 Table 1] near AD 3700. How unusual the spacing looks hangs on Hilina Pali too: random dates are that even 0.04% of the time with it at 20,500 years, 0.5% at 18,500 and about 3% at 17,000.

OUR ANALYSIS

Chosen after looking

This run was picked out because it looked regular, which makes its evenness less surprising than the odds suggest. Across all 11 excursions in our catalog for the last 211,000 years, the spacing is as irregular as random dates (variability 0.99, against 0.85), though older excursions are more likely to be missing from the record. And a 6,000-year cycle counted from today fits the six no better than chance: random dates sit at least as close to its marks 65% of the time.

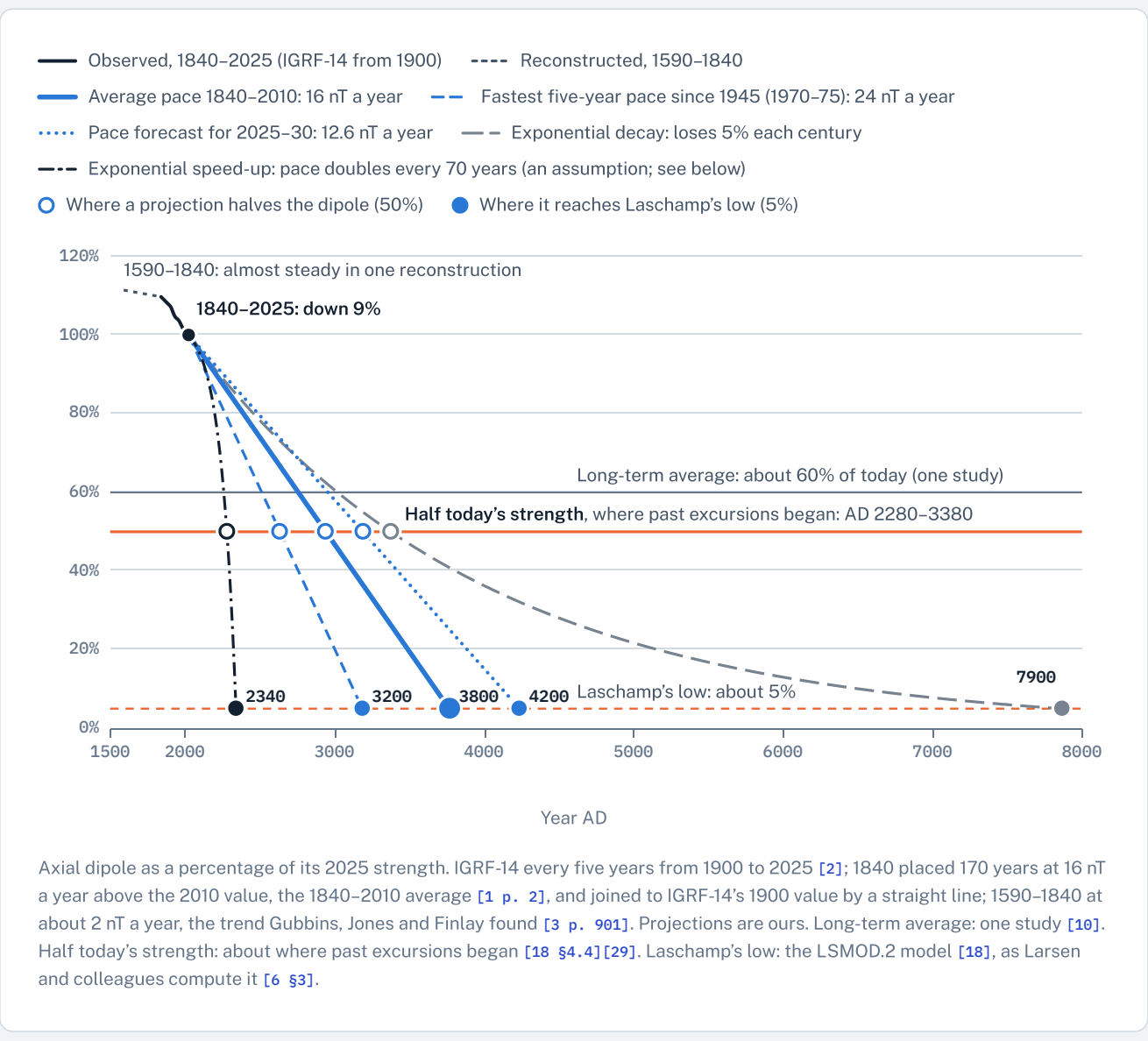
OUR ANALYSIS

How much weight it bears: very little. Four of the six events are disputed, possibly local, or seen in a single record; a single published age moves the date by centuries; the older record is dated too loosely to test the comb; and a 6,800-year cycle would mean over 100 excursions since the last reversal, where reviews list 12 to 17 [14].

3 · THE DECLINE

The decline: no excursion before about AD 2300 on any projection

The axial dipole, the main part of Earth's field, as a share of its 2025 strength: from IGRF-14 since 1900 [2], with 1840 set by the 1840–2010 average rate [1] and a reconstruction before that [3], then extended five ways: three straight lines and two exponential curves. Past excursions began when the dipole had fallen to about half its usual strength [18 §4.4][29]; at Laschamp's deepest point it was about 5% of today's [6 §3].



Axial dipole as a percentage of its 2025 strength. IGRF-14 every five years from 1900 to 2025 [2]; 1840 placed 170 years at 16 nT a year above the 2010 value, the 1840–2010 average [1 p. 2], and joined to IGRF-14's 1900 value by a straight line; 1590–1840 at about 2 nT a year, the trend Gubbins, Jones and Finlay found [3 p. 901]. Projections are ours. Long-term average: one study [10]. Half today's strength: about where past excursions began [18 §4.4][29]. Laschamp's low: the LSMOD.2 model [18], as Larsen and colleagues compute it [6 §3].

LOST SINCE 1840

9%

Strength the axial dipole has lost since 1840, about 5% per century [1][3].

AVERAGE PACE, 1840–2010

16 nT a year

Its average loss, in nanotesla. Kept up from today's value, that would take it to zero in about 1,830 years, around AD 3860 ("within 1,900 years," as Finlay and colleagues put it [1 p. 2]).

WHERE EXCURSIONS BEGAN

About half

Laschamp's directions began to change when the dipole had fallen to about half its usual strength [29], and one global-model study flags excursions at about half today's [18 §4.4]. The average-pace line halves today's dipole around AD 2940, and reaches Laschamp's 5% low around AD 3800.

The straight line is the weak link

Direct measurements of the field's strength go back only to about 1840. One reconstruction, combining directions from ships' logbooks with strengths from lava flows and archaeological samples, found the dipole almost steady from 1590 to 1840 [3][4]; another re-analysis argues the decline began well before 1840 [5]. Since 1945 its pace has swung between 7.6 and 24 nT a year over five-year spans [2], and the South Atlantic Anomaly, the weak region linked to much of the decline [1], has grown by an area nearly half the size of continental Europe since 2014 [12][13].

OUR ANALYSIS

Swap the line for a curve

Over the measured years, exponential decay is almost indistinguishable from a straight line, yet losing a steady 5% each century it would not halve the dipole until about AD 3380, or reach Laschamp's low until about AD 7900. An exponential speed-up, with the pace doubling every 70 years, halves it by about AD 2280 and reaches the low by about 2340. The 70 years is our own construct: what a smooth curve through two long-term averages implies, about 2 nT a year before 1840, statistically indistinguishable from zero [3 p. 901], and 16 nT a year after [1]. The recent record leans against the speed-up: the dipole is losing strength about half as fast as it did around 1980 [1 p. 2][2], though the pace has picked up since 2015–20, from 7.6 to 10.7 nT a year, with 12.6 forecast [2].

OUR ANALYSIS

What the 2040s would take

To halve by 2045, the dipole would have to lose about 730 nT a year: 58 times the pace forecast for 2025–30 [2] and about 30 times the fastest five-year pace since 1945. Reaching Laschamp's low by then would take about 1,400 nT a year. Even the speed-up curve leaves it at 99% of today's strength in 2045. The 12.6 nT a year in the chart is IGRF-14's forecast pace for 2025–30, not a measured one.

OUR ANALYSIS

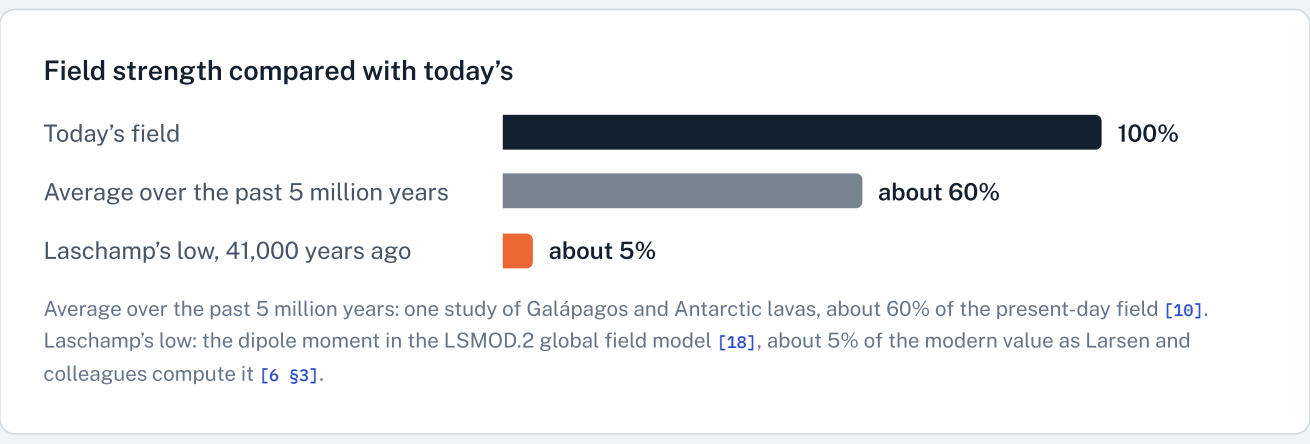
How much weight it bears: little. It can't date an excursion, only rule one out for centuries. The same 185 years of measurements halve the dipole anywhere from AD 2280 to 3380, depending on the curve drawn through them, and the pace has never held steady for long. Halving makes an excursion possible, not certain: between 71,600 and 68,000 years ago the field fell by 60–65% with no change of direction [29].

4 · THE EXPERTS

The experts: no excursion in sight, and no date

What researchers who reconstruct the field's history expect from the current weakening.

Field strength compared with today's



Average over the past 5 million years: one study of Galápagos and Antarctic lavas, about 60% of the present-day field [10]. Laschamp's low: the dipole moment in the LSMOD.2 global field model [18], about 5% of the modern value as Larsen and colleagues compute it [6 §3].

It has looked like this before

A global reconstruction shows the field comparable to today's 49,000 and 46,000 years ago, each time with a weak region like today's South Atlantic Anomaly (the authors' university called these anomalies "much stronger," that is, deeper, than today's [9]). Neither turned into an excursion or reversal, which the authors take to suggest that today's weakened field will also recover without one, though in their model the global dipole barely weakened 46,000 years ago [8].

It is coming down from a high

Today's field is strong by long-term standards [11]. One study puts its average over the past 5 million years at about 60% of the present value, so a fall toward that level may simply be "a return to a more average magnitude rather than a harbinger of a polarity reversal" [10].

The decline may run for decades

The current decay looks set to continue for at least the next few decades, and forecasting further ahead is "presently difficult" [1]. A substantial drop toward the long-term average without a reversal would not be surprising [11].

OUR ANALYSIS

Nobody can date the next one

Excursions come irregularly. Reviews list 12 to 17 since the last full reversal about 780,000 years ago, only about 7 of them well recorded [14]; our own catalog has 11 in the last 211,000 years, four of them disputed. Treating excursions as randomly timed, the odds of one starting in any given century are roughly 0.1 to 0.5%: 0.09% for 7 in 780,000 years, 0.15% for 12, 0.22% for 17, and 0.52% for our 11 in 211,000 years.

Not everyone agrees

Some geomagnetists read today's field as a possible early stage of a transition. Comparing its decline with the run-up to Laschamp, Laj and Kissel found it "tempting to interpret the very high rate of decrease since 1590 AD as an indication that at least an attempt to a geomagnetic transition may have started" [29]. Pavón-Carrasco and De Santis found that patches of reversed field at the top of the core beneath the South Atlantic, together with the long time since the last reversal, "agree with an upcoming transition of the Earth's magnetic field," though today's dipole "is not so low" next to the last 12,000 or 800,000 years [30]. Even so, Laj and Kissel "tentatively suggest that, whilst irreversible processes that will drive the geodynamo into a polarity change may have already started, a reversal or an excursion should not be expected before 500–1000 years" [29].

OUR ANALYSIS

How much weight it bears: the most of the three, because it rests on how the field has actually behaved, and even the study that sees a transition possibly under way expects nothing for at least 500 years [29]. But it is a judgment, not a date, and whether the weakening ends in an excursion later is debated.

5 · WHAT HOLDS UP

Only the experts' view holds up: nothing for centuries, and no date

The pattern says an excursion was due about now, give or take 3,000 years, so it can't tell early from overdue; extending the decline rules one out for centuries but can't date it.

WEIGHT OF THE PATTERN

OUR ANALYSIS

Very little

About now, give or take 3,000 years, from six mostly disputed events; the older record is dated too loosely to test the cycle.

WEIGHT OF THE DECLINE

OUR ANALYSIS

Little

Not before about AD 2300: the dipole halves, where past excursions began, anywhere from AD 2280 to 3380, depending on the curve drawn through 185 years of measurements. Halving makes an excursion possible, not certain.

WEIGHT OF THE EXPERTS' VIEW

OUR ANALYSIS

The most

None expects an excursion for centuries; whether today's weakening ends in one later is debated. They give no date.

What would change these verdicts

01

For a cycle: firm, worldwide ages for the disputed events that keep them evenly spaced, and older excursions, dated to within a few hundred years, that land on the comb's teeth more often than random dates would.

02

For a countdown: a loss far faster than anything measured since 1840. Halving the dipole by 2045 would take about 730 nT a year; the forecast for 2025–30 is 12.6.

03

Against the experts' view: a dipole falling toward half today's strength within a few centuries.

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

6 · HOW THESE WERE WORKED OUT

Every number here comes from two scripts you can run

Our two calculations, the code that reproduces them, and every number on this page, so you can check our work or try other ages and paces.

Dates

Ages in the sources count back from AD 1950, the "present" of radiocarbon and calibrated ages, and we convert them the same way [15][27]: 7,000 years before present is about 5050 BC. Counting back from 2026 instead, as the original infographic did, shifts every date by 76 years.

The pattern

The six events and the ages we use are Tianchi 7.0, Gothenburg 14.45, Hilina Pali 19.5, Rockall 26.5, Mono Lake 34.5 and Laschamp 41.1 thousand years before 1950 [23][24][27][20][19][16][15]. The comb is the period whose teeth line the six up best, each event weighted by how precisely it is dated (the strength of the "mean resultant" of the events' phases, scanned from 3,000 to 60,000 years): 6,800 years, with a tooth around AD 1860. The ±2,930-year range is the 95% prediction interval of a least-squares line through the six dates, one step ahead; the line itself points to about AD 1870. Chance levels come from 100,000 random catalogues of six dates over the last 45,000 years. To check the run back, we put each older excursion on its nearest tooth and shifted it by a random dating error of its one-sigma size, 2,000 times: the excursions ended up about 1,550 years from a tooth on average, against 1,700 for random dates, and the test reached $p < 0.05$ only about 10% of the time.

The decline

Axial dipole from IGRF-14 (1900–2025) and its 2025–2030 forecast rate [2]; the 16 nT a year average for 1840–2010 from Finlay, Aubert and Gillet [1 p. 2], which also sets the 1840 value (the 2010 value plus 170 years at that rate); the 1590–1840 trend, 2.3 ± 2.7 nT a year, from Gubbins, Jones and Finlay [3 p. 901]. Projections start in 2025 and run to 5% of the 2025 value, Laschamp's low in the LSMOD.2 global field model [18], as Larsen, Usoskin and colleagues at the University of Oulu compute it [6]; we also mark where each halves the dipole, about where past excursions began [18 §4.4][29]. The straight lines use 24, 16 and 12.6 nT a year; exponential decay loses 5% of its value each century; the exponential speed-up starts at 12.6 nT a year and doubles every 70 years, the average speed-up from 1590–1840 (about 2 nT a year) to 1840–2010 (16 nT a year). The 1590–1840 rate is not statistically different from zero, so the doubling time is loosely constrained.

The experts and the counts

Experts: Brown and colleagues [8]; Laj and Kissel [29]; Pavón-Carrasco and De Santis [30]; Wang, Kent and Rochette [10]; Finlay, Aubert and Gillet [1]; Constable and Korte [11]; the European Space Agency's Swarm team [12]. Excursion counts: Channell [14], a conference abstract. Our per-century odds treat excursions as randomly timed (a Poisson process) at each count.

Read it yourself

PY **decline.py**

The decline: reads IGRF-14, downloading it from NOAA if it isn't beside the script, and gives the loss since 1840, every five-year pace, when each projection halves the dipole and reaches Laschamp's low, what the 2040s would need and the chart's series · 14 KB [2]

PY **pattern.py**

The pattern: the comb, the straight line and its 95% range, the run back to 215,000 years ago, the evenness tests, the odds per century, the single-age variants and a check of the run-back test's power · 20 KB

JSON **next-excursion-numbers.json**

Every number on this page, with the script output, age convention and source behind it · 23 KB

Run it

Put the two scripts in one folder and run `python3 decline.py` and `python3 pattern.py`. decline.py needs only Python 3; the first time, it downloads the IGRF-14 coefficient file from NOAA [2] and checks it is the one we used. pattern.py needs NumPy and SciPy and takes under a minute. Each prints its results and writes a JSON file. The random draws use a fixed seed, so the numbers match this page exactly; change an age or a pace in the script to see how the answer moves.

Related checks

- FALSE Every 6,000 years? The Disaster Cycle, Fact-Checked
- FALSE 15% gone, ten times faster? 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; § marks a section, p. a page and Table a table of the cited work. Links checked October 12, 2026.

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METHOD

How this was checked

On October 12, 2026, we checked every statement, number, chart value and source on this page against its source, about 58 items in all, and re-ran both of our own analyses: the decline projections, from the official IGRF-14 coefficient file [2], and the pattern analysis, with the method behind the original infographic. With the infographic's own inputs, every number reproduced. We also checked the six event ages against primary sources [15][16][17][19][20][23][24][27], which changed the pattern's answer: four of the six ages moved, and counting them back from 1950, as the sources do, turned the infographic's "AD 2500, give or take 2,500 years" into about AD 1870, give or take 2,930. The change log lists every correction.

After the page was built, a second, independent reviewer re-ran both scripts, reproduced every number and chart position, and read the page against its sources. Two changes followed. Our expert verdict had rested mainly on one modelling study [8] and left out geomagnetists who read today's field as a possible early stage of a transition [29][30]; the third claim is now that no excursion is likely for at least the next few centuries, which Laj and Kissel, the one of them to give a timescale, also expect [29]. And we had dated the decline by Laschamp's deepest point, 5% of today's strength, rather than by the halving at which past excursions began [18 §4.4][29]; the projections now mark both. We also added how far single published ages move the pattern, and a check of whether the run back could detect a cycle at all. The change log lists the rest.

The verdicts, the items tagged "Our analysis," the comb and straight-line fits, the evenness tests, the check of the run back's power, the five projections and the odds per century are our own work, built on the cited sources. So are the uncertainties for Gothenburg, Hilina Pali, Rockall and Mono Lake, and the 70-year doubling time. The 1840 value is derived from the 1840–2010 average rate [1], not read from a field model.

The two scripts in section 6 reproduce every number from our own analyses except the calibration of Gothenburg's radiocarbon ages against IntCal20 [27], which we ran separately. Not verified here: the full text of Brown and colleagues' paper, which we know from its abstract and the university's release [8][9]; the full text of Suttie and colleagues [5]; several papers we read only in abstract [17][21][22][25][26][31]; whether Mörner's ages come from material that needs a marine reservoir correction [24], which would make Gothenburg about 13,900 years old and move the comb's tooth to about AD 2100; and the ages of Blake and Post-Blake, which come from our catalog.

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.
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 12, 2026	Published on factchecked.science after a full check against the sources and a second, independent check of the finished page. The main changes from the infographic: The pattern's ages. With the six event ages checked against primary sources and counted back from 1950, as the sources do, rather than from 2026, Tianchi is about 7,000 years old, not 7,500; Gothenburg's type section about 14,450 (the 12,800 the infographic used belongs to another record); Hilina Pali about 19,500, not 20,000; Mono Lake about 34,500, not 34,000. The forecast went from "AD 2500, give or take 2,500 years" to about AD 1870, give or take 2,930 (roughly 1100 BC to AD 4800); the comb from 6,880 to 6,800 years, with its latest tooth around AD 1860 and the next around AD 8700, instead of a next tooth at AD 2500; "due by the average gap" from AD 1250 to AD 1770; and the run back from 5 of 31 teeth near an event, all in the fitted stretch, to 8 of 32. Single published ages move the comb's tooth anywhere between about AD 1100 and 3700, and the older excursions are dated too loosely to test whether the comb runs back in time. The decline's threshold. The infographic dated Laschamp's deepest point, 5% of today's strength, but past excursions began when the dipole had roughly halved. Our five projections halve it in AD 2280–3380, so the decline's answer is now "not before about AD 2300" instead of AD 3800 (2340–7900), and halving it by 2045 would take about 730 nT a year, 58 times the pace forecast for 2025–30. The expert view. The infographic had the experts expecting the weakening to "ease off"; in fact none expects an excursion for centuries, some read today's field as a possible early stage of a transition, and whether the weakening ends in one later is debated. The third claim is now "No excursion is likely for at least the next few centuries" (True). Other fixes: the near-steady field from 1590 to 1840 is one reconstruction, and another disputes it; the 70-year doubling is our own construct; Brown and colleagues' weak regions are described as their abstract describes them, not as "far larger" than the South Atlantic Anomaly; the 5% Laschamp figure is credited to the LSMOD.2 field model and to Larsen, Usoskin and colleagues (2026), who computed it as a share of today's; "fastest recent pace" is now the fastest five-year pace since 1945, and "today's pace" the pace forecast for 2025–30; "zero within about 1,900 years" is Finlay and colleagues' phrase, and from today's value it is about 1,830 years; Hilina Pali stays short of an excursion in its best-dated record and in a Black Sea record. The page now explains the comb method itself. Restated the verdicts on our standard scale: the infographic weighed the three forecasts ("very little," "little" and "the most of the three"); the page rates the claims they bear on as False, False and True.
Sep 30, 2026	Analysis compiled as an infographic, from IGRF-14, published decline rates and an excursion catalog, with ages counted back from 2026.

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Last updated Oct 12, 2026