EVIDENCE REVIEW · S0 NEWS, 23 OCTOBER 2026

S0 News, October 23, 2026: no rapid pole shift confirmed, and Phoenix's hail came first

On October 23, 2026, S0 News titled its episode "Rapid Pole Shifts Confirmed", said "the geomagnetic excursions like we're in now happen quickly" and called the present "the disaster cycle for the biosphere" [1 00:02:30–00:03:12]. Our two paper checks cover the papers themselves. This page checks the premise against today's field and what the paper measured [2 p. 14][10], and the episode's other items: the Sun [21], a magnitude-7 earthquake in Tibet [30], a sequence north of Sicily that the presenter placed "a little close to" Campi Flegrei [1 00:01:12–00:01:14][38], NASA's rainfall-anomaly map [5], and the Phoenix hail he said his warning foresaw [44].

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OUR ANALYSIS marks our own reasoning and calculations, and the verdicts are our assessment. Everything else comes from the numbered sources. For the episodes [1] and [43], times are positions in the video; for the papers, p. gives a page, § a section, and Abstract, Fig. and Table name the part we used; for NOAA's and the USGS's products, times are UTC unless marked MST or MDT.

Real earthquakes and a real El Niño; the pole shift and the hail timing fail

OUR ASSESSMENT

226 km

Our analysis: from the Sicily sequence's main shock, 30 km north-west of Alicudi [38], to the Solfatara at Campi Flegrei; 234 km from the USGS epicentre [37][36].

13½ h

Our analysis: from the first of 18 Phoenix hail reports, at 3:25 PM MST on October 21 [44], to the October 22 episode whose warning the presenter says explains it, published at 4:55 AM MST [43].

50–75

Our analysis: generations, at 25–30 years each, in the 1,500–1,900 years the Laschamp dipole took to decay at the paper's Table 1 rates, its fastest event; the episode said "two or three" [2 Table 1][1 00:02:57–00:03:07].

THE EPISODE'S CLAIMS

FALSE

An excursion is under way now

"the geomagnetic excursions like we're in now happen quickly" [1 00:02:42–00:02:48]

An excursion is a spell when the field weakens and its pole strays at least 40–45° from the geographic pole [15 §1][13 §1]. Today the axial dipole is about 9% weaker than in 1840 [10], the dipole axis is tilted 9.21° [7 §1.6 p. 20], and the north dip pole, within 4.2° of the geographic pole, is slowing [9][6 §3]. Past excursions began with the dipole near half strength [12 §4.4][14]; the field is "probably not reversing" [11]. The paper the episode cites calls a dipole of 4 ×10^{22} A m^2 "a reasonable threshold for defining transitional geomagnetic events" [2 p. 14]; today's, about 8 ×10^{22} A m^2 in its normalisation, is twice that [2 p. 5]. See section 2.

MISREAD

Rapid pole shifts confirmed

The episode's title, "Rapid Pole Shifts Confirmed" [1]; "it's nice and terrible to finally see a paper stated as plainly as can be" [1 00:02:30–00:02:36]

The paper measures how fast the dipole weakened and recovered in four field models, and an index that adds direction [2 p. 5]. The asymmetry is weaker in that index, which the authors read as a sign that it "is caused by the (axial) dipole evolution and not a characteristic of directional field changes", adding that this "might also support previous findings that directional field changes seem to play no or a minor role in driving excursions and reversals" [2 p. 14]. It confirms nothing about pole motion, and its fastest event, the Laschamp, decayed over about 1,500–1,900 years at its Table 1 rates (our arithmetic) [2 Table 1]. Our check of the paper rates its claims. See section 2.

TRUE

Tibet M 7.0 killed at least 16

"the seven-pointer that struck the Tibetan plateau, killing at least 16 people and causing significant damage to the local areas, which included several towns. The shaking was shallow and very severe." [1 00:00:47–00:00:58]

The USGS lists an M 7.0 at 14:33 UTC on October 22, 191 km east-north-east of Nagqu, 18 km deep, "as the result of normal faulting within the Tibetan Plateau"; its ShakeMap reaches intensity VIII, "Severe", and "Approximately 111,000 people experienced Moderate (MMI V) to Severe (MMI VIII) shaking" [30]. Reports before the episode gave 16 dead and 32 injured [31], then 54 [32] and "at least 50" [33]; by October 24 the count stood at 16 dead, 76 injured and 339 houses collapsed or damaged [34][35]. See section 4.

MISLEADING

Sicily quakes near Campi Flegrei

"I was already perked up when a 4.9 struck that rare region, but a few minutes later, 5.7. Okay, Italy, that's a little close to campy Flegree for my liking." [1 00:01:05–00:01:14]

The quakes are real: USGS M 4.9 at 09:51 UTC and M 5.7 at 10:19, 28 minutes apart, which INGV gives as Mw 4.8 and Mw 5.5, in the southern Tyrrhenian Sea about 30 km north-west of Alicudi; INGV puts the main shock 9 km deep, where the USGS fixed 10 km [36][37][38]. The zone is not rare: INGV calls its seismicity frequent at magnitude 4 and above, with Mw 5.2–5.7 earthquakes there in 1957 and 1980 [38]. Campi Flegrei lies 226–234 km away across the sea (our analysis), and its own earthquakes are 3 km deep or less, under Pozzuoli [40]. See section 4.

TRUE

El Niño pattern for four months

"this is the Immerg precipitation anomaly map for June 1 to now. You can see how the Pacific is most impacted by El Nino … Expect that to continue through the next four months." [1 00:01:18–00:01:30]

NASA's page describes the map as anomalies "from June 1, 2026, to the present", "a distinct visual footprint of El Niño's disruption of normal weather patterns", with above-average rain "migrating into the central and eastern equatorial Pacific" [5]. NOAA's Climate Prediction Center has an El Niño Advisory in force, with "a strong-to-very strong El Niño likely through January-March 2027 (remaining greater than an 83% chance)" and El Niño expected to persist through March–May [41][42]. See section 5.

MISLEADING

The warning foresaw Phoenix hail

"there's a reason I mentioned yesterday hail and tornado risk in Arizona. Did you see what hit Phoenix?" [1 00:01:32–00:01:39]

Phoenix was hit, and the warning did cover it: the Storm Prediction Center's 15% hail area for October 22, the episode's "areas of yellow", listed Phoenix, Mesa and Glendale, and a severe thunderstorm watch covered the county that morning [57][53]. But the hail had fallen first: 18 reports of 0.75 to 2 inches between 3:25 and 4:05 PM MST on Wednesday, October 21, after hail of up to 2 inches in Mesa the night before [44], 13½ hours before the October 22 episode went up at 4:55 AM MST [43]. On October 22 itself Maricopa County had radar-indicated warnings but no storm report [45][46]; the day's 26 reports fell elsewhere in Arizona and New Mexico, with one each in Nevada and California [55]. See section 6.

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1 · THE EPISODE

Two papers, a map, and the same premise

The episode of October 23, 2026, ran three and three-quarter minutes and linked three items: a peer-reviewed article on how fast the dipole changed during past excursions and reversals [2], a university press release about a peer-reviewed article on one eclogite [4][3], and a NASA map of rainfall anomalies [5]. Around them the presenter placed the Sun, two earthquakes, the weather, and the premise he made the day before, that an excursion is under way, now called "the disaster cycle for the biosphere" [1 00:02:42–00:03:12].

In the episode's words

Quoted from the automatically generated transcript. "cron" is its rendering of chron, "campy Flegree" of Campi Flegrei, "Immerg" of IMERG and "El Nino" of El Niño; "a Ryer instigation" we could not resolve.

> *"today we're taking a look at some earthquakes, some weather with another warning. We've got a micro particle doing crazy things and a reminder of why Earth's magnetic changes we're seeing are so bad."*
>
> S0 News [1 00:00:17–00:00:26]

> *"And our top story, folks, it's nice and terrible to finally see a paper stated as plainly as can be. Not only do full cron magnetic reversals of Earth's field take thousands of years, but they occur slowly. However, the geomagnetic excursions like we're in now happen quickly."*
>
> S0 News [1 00:02:30–00:02:48]

> *"This is why these excursions, which are only about 80 to 90% as bad as full reversals, are way worse for the life on Earth. If 500 generations of a species take a gradual change, that's not the same as almost that entire same amount of change hitting only two or three generations. It's not even close. What we're in now is the disaster cycle for the biosphere, the life on Earth."*
>
> S0 News [1 00:02:48–00:03:12]

The two papers and the map, and what the episode made of them

Rates of field change during excursions and reversals

WHAT IT IS

A peer-reviewed article in *Journal of Geophysical Research: Solid Earth*, open access, by Shinu, Mahgoub and Korte of GFZ Potsdam, published October 21, 2026: it reads the rates of dipole decay and recovery, and of a secular-variation index, out of four published field models (LSMOD.2, GGFSS70, GGFMB and PADM2M) across 13 excursions and the Matuyama–Brunhes reversal of the last 1.6 million years [2 Abstract][2 §2].

WHAT THE AUTHORS CLAIM

That the reversal shows "A sawtooth pattern of gradual dipole decay followed by rapid recovery", while "we observed an opposite behavior of fast dipole decay and slow recovery during most of the studied excursions, suggesting the possibility that excursions may be governed by a mechanism distinct from that of reversals" [2 Abstract]. "Fast" is in kiloyears: the reversal's decay ran about 30,000 years, the Laschamp's about 1,500–1,900 at the Table 1 rates (our arithmetic) [2 Table 1][2 §4.1].

WHAT THE EPISODE SAID

That the paper confirms rapid pole shifts [1], that excursions "like we're in now happen quickly", are "only about 80 to 90% as bad as full reversals" yet "way worse for the life on Earth", and hit "only two or three generations" [1 00:02:42–00:03:07].

In our check of Shinu, Mahgoub and Korte (2026): "Reversals happen slowly" True; "Excursions happen quickly" Misleading; "80 to 90% as bad as a reversal" Unsupported; "Hits two or three generations" False; "Way worse for life on Earth" Unsupported; "Excursions: fast fall, slow rise" True.

A warm-then-cold path recorded in one eclogite

WHAT IT IS

A peer-reviewed article in *Nature Geoscience*, open access, by Schönig and colleagues, published October 1, 2026 [3], reached by the episode through the University of Göttingen's release "Two kinds of subduction recorded in one rock" [4]. Garnets in one eclogite lens from Goodenough Island, Papua New Guinea, hold coesite inclusions as small as about 0.8 micrometres in their middle growth zone and only quartz in their cores, recording a warm path to about 45 km and then a cold, fast descent to ultrahigh pressure by about 4.4 million years ago [3][3 Fig. 2].

WHAT THE AUTHORS CLAIM

"We propose that high geothermal gradients at shallow levels of deep subduction systems might be common, challenging the use of peak metamorphic conditions as indicator for subduction zone thermal structures" [3 Abstract]; the deep conditions, they add, agree with the thermal models of mature subduction zones [3].

WHAT THE EPISODE SAID

"your entire concept of rock solid subduction, temperature by depth, gets beat like they're the Miami Dolphins by a tiny freckle on a micro crystal. Oof. Hard to be a scientist these days. They really don't know what's going on beneath our feet any more than they do in the vastness of space." [1 00:02:12–00:02:30]

In our check of Schönig et al. (2026): "Speck beats a century of science" Overstated; "No idea what's beneath our feet" Overstated; "One-micrometre coesite speck" True; "Hard to be a scientist today" Context; "Warm, then cold: one rock's path" True; "Contradicts the thermal models" Partly true.

The IMERG rainfall-anomaly map

WHAT IT IS

A visualization from NASA's Scientific Visualization Studio, released October 21, 2026, of accumulated precipitation anomalies from the IMERG satellite product, "from June 1, 2026, to the present", drawn by Alex Kekesi with scientific consulting by George Huffman of NASA Goddard and Jason West; not a paper, and not checked on its own page [5].

WHAT THE EPISODE SAID

"this is the Immerg precipitation anomaly map for June 1 to now. You can see how the Pacific is most impacted by El Nino, but also the familiar land patterns are showing up. Expect that to continue through the next four months." [1 00:01:18–00:01:30]

Rated here, in section 5: "El Niño pattern for four months" True.

"An excursion is under way now" carries the same label and verdict as on our review of the October 22 episode, where the sources behind it are set out; this page reuses them. The two paper pages rate what the episode said about the papers; this page rates the episode's own statements and the premise.

2 · THE PREMISE

The paper measures how fast the dipole weakened in the past; it says nothing about now, about pole motion or about life

An excursion is a spell when the field weakens sharply and its pole strays at least 40–45° from the geographic pole, short of a full reversal [15 §1][13 §1]; during a transition the field at the surface falls "to about 10% of its current value" [17 Abstract]. The episode asserts one "now" [1 00:02:42–00:02:48], as the day before, and calls it "the disaster cycle for the biosphere" [1 00:03:10–00:03:12]. Here is where today's field stands, what the paper measured, and what the site has already found about excursions and life.

STRENGTH: LOST SINCE 1840

9%

The axial dipole's decline over 175 years, from 1840 to about 2015, roughly 5% a century [10]. Past excursions began when the dipole had fallen to about half its usual strength [12 §4.4][14]; at Laschamp's low it was 2–5% of today's [12 §4.2][13 §3].

DIRECTION: THE DIPOLE'S TILT

9.21°

Between the dipole axis and the rotation axis in 2025, with the geomagnetic north pole at 80.85°N, 72.76°W [7 §1.6 p. 20]. The north dip pole lies within 4.2° of the geographic pole [9].

MOTION: THE NORTH DIP POLE

36 km/yr

Its speed from 2025 to 2026, down from a peak of 56 km a year in 2002 and forecast to slow to 31 in 2027 [8 p. 3][8 p. 12][6 §3]. None of the three 2025 reports describes a reversal, an excursion or a pole shift [6][7][8].

What the paper measured, in its words

The Matuyama–Brunhes reversal, in the GGFMB model, shows "a prolonged decay phase beginning at approximately 809 ka, during which the dipole moment decreased gradually from ~6 × 10^{22} Am^2 to a minimum value of 0.3 × 10^{22} Am^2 around 779 ka, followed by a recovery to values close to ~6 × 10^{22} Am^2 by approximately 766 ka" [2 §4.1]: a decay rate of 0.17 ×10^{22} A m^2 per thousand years against a recovery of 0.53 [2 Table 1]. The Laschamp, in the two century-resolution models, decayed at 3.0–3.9 ×10^{22} A m^2 per thousand years and recovered at 0.8–0.9 [2 Table 1]. On direction, the authors write that the asymmetry "is caused by the (axial) dipole evolution and not a characteristic of directional field changes. This might also support previous findings that directional field changes seem to play no or a minor role in driving excursions and reversals" [2 p. 14]. It also follows an index, Pi, that "provides a combined measure of the local deviation from both the axial dipole field direction and the modern dipole strength", normalised by "the present day dipole moment", about 8 ×10^{22} A m^2 [2 p. 5]; "Although less pronounced than in the dipole moment, the PSV index also exhibits an opposite asymmetric pattern during excursions and reversals" [2 Abstract]. The paper uses no word for life, extinction, humans or generations (our check of the paper).

OUR ANALYSIS

Two or three generations, against fifty

The episode's arithmetic is its own. Take the paper's fastest event, the Laschamp: at its Table 1 rates the decay took about 1,500–1,900 years (our arithmetic), which at 25–30 years a generation is 50–75 generations, not "two or three"; the reversal's decay, about 30,000 years, is about a thousand generations [2 Table 1][2 §4.1]. For "almost that entire same amount of change", the reversal's fall from about 6 to 0.3 ×10^{22} A m^2, to come within two or three generations, 50–90 years, the dipole would have to fall 13–23 times faster than the steepest rate in the paper, about 4.9 ×10^{22} A m^2 per thousand years in its sliding-window analysis of the Laschamp, read by eye from its Fig. 6c; the arithmetic is that of our check of the paper [2 Fig. 6c][2 §4.1]. The models themselves resolve no finer than "in the order of centuries" [2 §2.1]. The present dipole, 7.7–8 ×10^{22} A m^2, sits at the top of the paper's scale, twice the 4 ×10^{22} A m^2 the authors call "a reasonable threshold for defining transitional geomagnetic events" [2 p. 14]; losing 9% in 175 years [10] is secular variation, not the start of one of its events. "Rapid Pole Shifts Confirmed" names a finding the paper does not contain. It measures how fast the dipole weakened and recovered, and an index that adds direction; it finds the asymmetry weaker in that index, takes that to mean the dipole's strength rather than its direction drives it, and cites previous findings that directional change plays "no or a minor role" in driving excursions and reversals [2 p. 5][2 Abstract][2 p. 14]. That is Misread. The "80 to 90%", the generations and "way worse for the life on Earth" are rated on the paper's page.

OUR ANALYSIS

"The disaster cycle for the biosphere"

The closing sentence bundles three claims the site has rated. That an excursion is under way: False, above. That excursions take out much of life: False on our review of the October 22 episode, because reviews find "no currently demonstrable relationship" between extinctions and reversals [16 Abstract] and "no clear picture of a geomagnetic link" [17 Abstract]; the one argued case, Laschamp, is contested by two formal comments, one of which found the coincidence "highly questionable" [18][60], its own authors call the events "only temporally associated" [19], the Blake excursion passed "without apparent serious effects" [18], and the last reversal, about 773,000 years ago [20], is followed by no demonstrable extinction [16 Abstract]. That excursions come round on a cycle: False on our review of today's field ("Excursions recur about every 6,000 years"), on our review of when the next excursion is due ("Excursions recur on a regular cycle", False, beside "No excursion likely for centuries", True), on our cycle test and on our timeline review ("Excursions line up with catastrophes"). We rate "What we're in now is the disaster cycle for the biosphere" False on those findings; it is not in the panel above because it restates them. The eclogite paper's framing, that a micrometre speck beats "a century of science" and that geologists "really don't know what's going on beneath our feet" [1 00:02:07–00:02:30], is rated on that paper's page; the speck is real and about 0.8 micrometres across [3 Fig. 2], the generalisation is the episode's.

The dipole has lost 9%; the paper's transitions start below half of today's value and take centuries to millennia, not generations.

3 · THE SUN

Low activity, as the episode said; but a coronal hole was facing Earth, and its stream was already forecast

"As a reminder, we expect no major upticks until next year when a Ryer instigation kicks back in. We've had no solar flares or major eruptions and we've got no equatorial coronal holes either" [1 00:00:33–00:00:43]. NOAA's Space Weather Prediction Center describes the same two days in its own terms.

In the Space Weather Prediction Center's words

From the twice-daily Forecast Discussion; times are UTC. "CH HSS" is a coronal-hole high-speed stream.

> *"Solar activity continued at low levels. … Region 4560 (N13W42, Eai/beta-gamma) was the primary driver of flaring, producing the largest event of the period-a C3.5 flare at 22/0309 UTC. … No new Earth-directed CMEs were observed in available coronagraph imagery."*
>
> Forecast Discussion, October 23, 0030 UTC, the last before the episode [21]

> *"Solar wind parameters reflected positive polarity CH HSS influence. … A return to disturbed conditions is expected on 24 Oct due to negative polarity CH HSS onset. … The geomagnetic field was at quiet to G1 (Minor) storm levels due to CH HSS activity."*
>
> Forecast Discussion, October 22, 1230 UTC [21]

> *"A return to active levels, with a chance for geomagnetic storming, is expected on 25 Oct due to low-confidence combined effects from a recently emerged negative polarity coronal hole and potential glancing CME impacts."*
>
> Forecast Discussion, October 23, 0030 UTC [21]

LARGEST FLARE, 24 HOURS BEFORE THE UPLOAD

OUR ANALYSIS

C3.3

At 05:42 UTC on October 23, from Region 4560; the GOES-18 list holds eight C-class flares in that day and none above it, four C-class flares on October 22 to C3.5, and no M-class flare since an M1.6 on October 19 [24][25]. SWPC's summaries for both days read "low levels", with the X-ray background at B5.5 and B5.3 [22][23].

EARTH-DIRECTED EJECTIONS, OCTOBER 22–23

0

"No new Earth-directed CMEs were observed" on either day [21]. Two ejections had left the Sun on October 21, the first from a dimming near N28E05, the second from "similar dimming in the northern hemisphere", and the first "has potential for a weak glancing blow to Earth on 25 or 26 Oct. However, confidence is low in this outcome" [21][26].

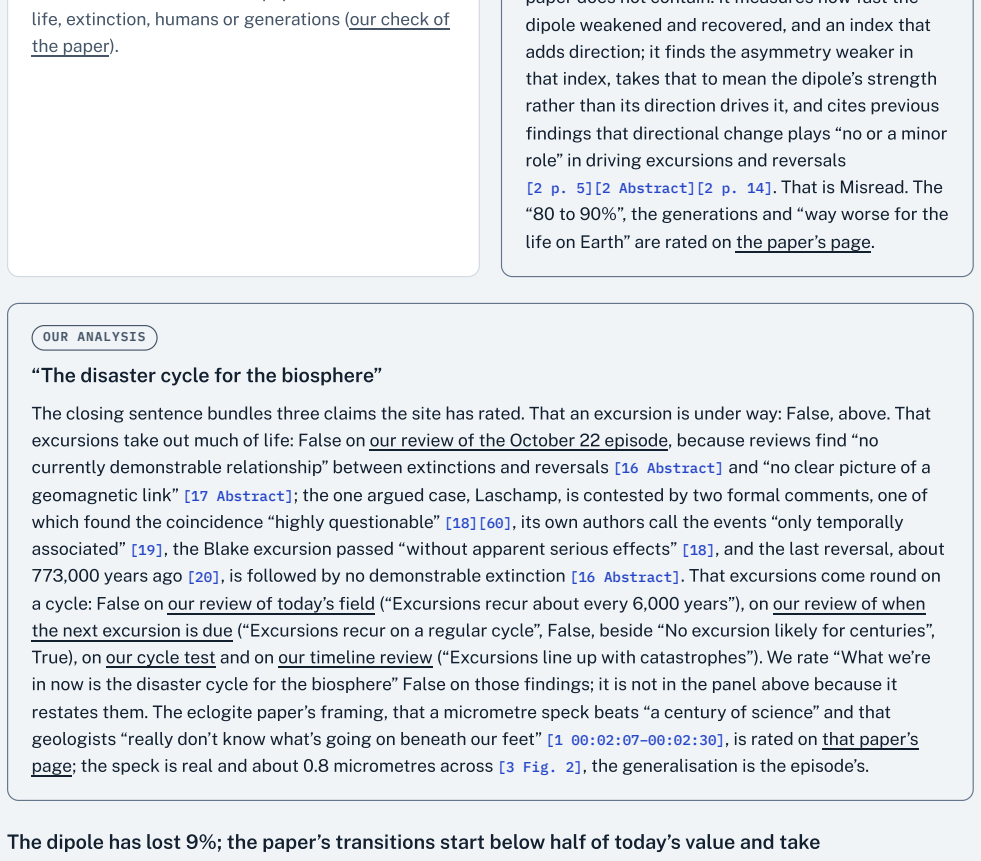
CORONAL-HOLE STREAMS

OUR ANALYSIS

2

One blowing on Earth as he spoke, the positive-polarity stream that gave a G1 storm on October 21–22 and active conditions on the 23rd [21][22][23]; one forecast for October 24–25 from "a recently emerged negative polarity coronal hole" [21][26], which must have faced Earth on about October 21–23 to arrive then.

Sunspot number, observed and as NOAA predicts it, January 2026 to December 2027



Observed monthly mean sunspot numbers, January–September 2026, and NOAA's predicted values, April 2026 to December 2027, from the curve fit that replaced the 2019 panel prediction, both as NOAA served them on October 24, 2026 [27]. The prediction is a smoothed curve, so single months scatter around it: from April to September the observed means ran from 60 to 102, the prediction from 87 to 92. The smoothed number peaked at 160.9 in October 2024 [27]. The values are in the table below.

OUR ANALYSIS

"No flares and no coronal holes": Partly true

In the Center's vocabulary the episode is half right. "Low levels" means C-class flares and nothing bigger, and that is what both days had: a dozen C-class flares, the largest C3.5 and C3.3, eight of them in the 24 hours before the upload, none of M-class, and no Earth-directed ejection [21][24][25]; two ejections from October 21 were outside the window and might graze Earth days later [21]. The coronal-hole sentence fails. A coronal-hole stream was already at Earth, strong enough for a minor storm on October 21–22 and active conditions on the 23rd, and the Center had named the next hole, "recently emerged", whose stream it expected on October 24–25 [21][22][23][26]. Its text places holes by polarity, not latitude; in the SDO 193 Å images of October 22 and 23 we find a small dark hole south-west of the disk's centre on the 22nd and farther west on the 23rd, rotating with the Sun, within about 10° of the solar equator by our measurement, besides both polar holes [28], which fits the forecast. On that reading the disk had an equatorial coronal hole when the presenter said it had none; the stream already at Earth and the one forecast are what the Center's record shows.

OUR ANALYSIS

"No major upticks until next year": Unsupported

The sentence has two halves. The first, no major upticks for now, agrees with NOAA's near-term products: the 27-day outlook holds the 10.7 cm flux at 85–105 to November 14, and the weekly forecast expects activity "predominately low with M-class flare probabilities ranging between a slight chance to a chance" [26]. The second, an uptick "next year when a Ryer instigation kicks back in", has nothing behind it. We could not identify the mechanism; if it means a Rieger-type periodicity, the 154-day quasi-period in flare occurrence reported in 1984 [29], the episode does not say so. NOAA's cycle prediction, the only one of its products that reaches 2027, holds the monthly sunspot number near 88 to the end of 2026 and lowers it through 2027 to 61 by December, with no rise in 2027 [27]. Nothing published forecasts an uptick next year, though nothing rules out a flare either. We rate the forecast Unsupported.

4 · THE EARTHQUAKES

A real M 7.0 in Tibet; a real sequence north of Sicily, 226 km from Campi Flegrei

Both earthquakes are in the catalogues as the episode described them. What the episode added, that the Tyrrhenian sequence struck a "rare region" and sits "a little close to" Campi Flegrei [1 00:01:05–00:01:14], is what the record does not support.

Tibet, October 22

USGS, EVENT US6000U43G

M 7.0

At 14:33:40 UTC on October 22, 10:33 PM in Beijing time, 191 km east-north-east of Nagqu, at 32.38°N 93.78°E, 18 km deep by the USGS's waveform modelling, 10 km by China's earthquake centre [30][31]; moment magnitude from 78 stations, reviewed [30].

SHAKING

MMI VIII

The ShakeMap's maximum intensity, 8.2, "Severe" on the scale; PAGER's exposure puts 2,652 people at VIII, 3,696 at VII and 41,873 at VI, and the USGS wrote that "Approximately 111,000 people experienced Moderate (MMI V) to Severe (MMI VIII) shaking" [30].

THE TOLL, OCTOBER 24

16 dead, 76 injured

Unchanged at 16 dead since the first night; reports gave 32 injured [31], then 54 [32] and "at least 50" [33], and 76 by October 24 [34][35]. 339 houses collapsed or damaged, more than 12,000 people moved to safety, 413 aftershocks counted by China's earthquake centre [35][34].

The USGS's tectonic summary

"The October 22, 2026, M7.0 earthquake in central China occurred as the result of normal faulting within the Tibetan Plateau. Moment tensor solutions indicate the earthquake occurred on a crustal fault moderately dipping either to the northwest or southeast." The plateau "currently extends to the east and west due to high gravitational potential energy", and the normal faulting "is consistent with this east-west oriented extension". "Since 1900, 29 earthquakes of magnitude 7.0 or larger have occurred within the Tibetan Plateau and along its bounding regions"; the M 6.9 of April 13, 2010, "only 272 km to the east northeast of this October 22, 2026 earthquake, resulted in over 2500 fatalities" [30]. PAGER's alert: "Orange alert for economic losses. Significant damage is likely and the disaster is potentially widespread" and "Yellow alert for shaking-related fatalities. Some casualties are possible" [30].

The toll as it was reported

The Associated Press, citing official media on the night of the quake: "killing at least 16 people, injuring 32 and collapsing hundreds of homes", with 11 of the injured in serious condition and "at least 339 homes" collapsed [31]. By the morning of October 23, before the episode went up at 11:08 UTC, Outlook India had 16 killed and 54 injured [32] and the ABC had 16 dead and "injuring at least 50 others" [33]. On October 24 the ABC reported that "The number of people injured … has risen to 76, according to local government authorities, while the death count remains unchanged at 16", with "More than 12,000 residents in the region … evacuated" [34]; Dawn, from the same news conference, added 413 aftershocks, a level-III emergency response and the epicentre in Maru township of Baqen County [35]; Outlook India and the ABC reported rockfalls that closed a stretch of National Highway 317 [32][34]. The episode's "at least 16", "shallow" and "very severe" match the record; "several towns" is fair for a township office whose walls cracked and a county seat with power and telecoms disrupted [32].

The southern Tyrrhenian Sea, October 23

The sequence's main shocks, in two catalogues

TIME, UTC	USGS	INGV	WHERE
Oct 20, 21:38	—	ML 3.8, 31 km	Southern Tyrrhenian Sea, the night the sequence began [37][38]
Oct 22, 03:37	—	ML 3.7, 14 km	Southern Tyrrhenian Sea [37]
Oct 23, 08:02	—	Mw 4.0, 25 km	Southern Tyrrhenian Sea [37]
Oct 23, 09:51	M 4.9 (mb), 10 km	Mw 4.8, 24 km	53 km WNW of Leni, Salina [36][37]
Oct 23, 10:19	**M 5.7 (Mww), 10 km**	**Mw 5.5 (ML 5.0), 9 km**	**61 km WNW of Leni; about 30 km NW of Alicudi [36][37][38]**
Oct 23, 10:24	—	ML 4.0, 8 km	Southern Tyrrhenian Sea [37][38]
Oct 23, 13:55	M 5.2 (Mww), 10 km	Mw 5.0, 8 km	50 km WNW of Malfa, Salina [36][37]
Oct 23, 15:32	M 4.7 (mb), 10 km	Mw 4.3, 7 km	52 km WNW of Malfa [36][37]

USGS depths of 10 km are operator-assigned; INGV's are computed. The USGS magnitudes are the ones the episode used; the gap from the 4.9 to the 5.7 is 27 minutes 37 seconds in both catalogues [36][37]. INGV had located 29 earthquakes of the sequence by 14:20 local time on October 23 [38].

INGV's account of the zone

"Dalla notte del 20 ottobre 2026 la Rete Sismica Nazionale ha registrato una serie di eventi sismici nel Mar Tirreno Meridionale, circa 30 km a nord-ovest di Alicudi, Isole Eolie" [since the night of October 20 the national network has recorded a series of earthquakes in the southern Tyrrhenian Sea, about 30 km north-west of Alicudi, Aeolian Islands]. On the record since 1985: "in quest'area la sismicità è frequente con numerosi eventi di magnitudo superiore a 4.0, come quelli del 7 febbraio 2025 (Mw 4.7) e 7 settembre 2009 (Mw 4.7)" [in this area seismicity is frequent, with numerous events above magnitude 4.0, such as those of February 7, 2025, and September 7, 2009]; a sequence of just over 50 earthquakes about 15 km west of Alicudi in March 2026 reached Mw 4.7. On the historical catalogue: "i terremoti del 28 maggio 1980 (Mw 5.7), 20 maggio 1957 (Mw 5.2) e 21 maggio 1957 (Mw 5.3); il terremoto del 1980 provocò danni pari a VI-VII grado MCS all'Isola di Alicudi" [the earthquakes of May 28, 1980, Mw 5.7, and May 20 and 21, 1957, Mw 5.2 and 5.3; the 1980 earthquake caused damage of intensity VI–VII on Alicudi]. The zone is near the Aeolian Islands, a "regione caratterizzata da pericolosità sismica alta" [a region of high seismic hazard] on the national map. INGV's ShakeMap estimated shaking up to intensity V MCS in the islands and across northern Sicily, and questionnaires show the shock "fortemente risentito" [strongly felt] there [38]. INGV's tsunami centre sent an information message four minutes after the shock, raised it to an orange "Advisory" at 12:29 local time, and cancelled it at 13:22 after the tide gauges at Strombolicchio and Ginostra showed no tsunami [39].

OUR ANALYSIS

Not rare, and not near the caldera

"That rare region" has the catalogue against it: INGV calls the zone's seismicity frequent, lists M 4.7 shocks there in 2009, 2025 and March 2026, and M 5.2–5.7 ones in 1957 and 1980 [38]. In INGV's catalogue for a box around the sequence (37.8–39.6°N, 12.5–15.5°E, 1985 to October 22, 2026) we count 22 earthquakes of magnitude 4.5 or more, 7 of them shallower than 50 km, and 6 of magnitude 5 or more, five of them 220–481 km deep in the subducting slab and one shallow, the ML 5.6 off Palermo on September 6, 2002 [37]. A shallow Mw 5.5 is uncommon here, the largest near Alicudi since 1980 on INGV's list; the ML 5.6 off Palermo in 2002, 55–60 km away, was comparable [37][38]. The Aeolian sector is, in INGV's words, a region of high seismic hazard [38]. "A little close to Campi Flegrei": the main shock lies 226 km from the Solfatara at Pozzuoli by INGV's epicentre and 234 km by the USGS's, about 222–230 km from the caldera's southern rim, 229–237 km from the centre of Naples; Alicudi is 26–32 km away and Palermo 96–103 km (the script in Code and numbers). Campi Flegrei's own earthquakes come from inside the caldera, 3 km deep or less: the Md 4.7 (Mw 4.4) of July 31, 2026, between Pozzuoli and Quarto, was about 3 km deep, and the swarm around it 0.4–2.9 km [40]. INGV's account of the sequence does not mention the caldera, and nothing in the record connects a crustal earthquake under the Tyrrhenian Sea to it. The quakes are real and the magnitudes are the USGS's; the impression left, of a threat to Campi Flegrei, is Misleading.

Code and numbers

PY **distances.py**

Prints the distances in the table above and the time gaps quoted on this page · 3 KB

Run it

Needs only Python 3: `python3 -I distances.py`. The epicentres are the catalogue values [36][37]; change the coordinates at the top to test other places.

5 · THE IMERG MAP

The map is NASA's, the pattern is El Niño's, and NOAA expects it to last the season

The map on screen is the Scientific Visualization Studio's "Currrent IMERG Accumulated Anomaly" (the title is the page's), released October 21 and annotated "Jun 01 2026 - Oct 22 2026" in its latest form [5]. The episode read it right; the question is the four months.

What NASA says the map shows

"The IMERG accumulated precipitation anomalies from June 1, 2026, to the present represent the total deviation of global rainfall from historical averages over this specific period, serving as a distinct visual footprint of El Niño's disruption of normal weather patterns. … In the context of an El Niño event, this visualization typically illustrates a massive shift in atmospheric circulation, characterized by significant precipitation deficits (negative anomalies depicted in browns) over regions like Indonesia, northern Australia, and parts of the Amazon, contrasted with intense, above-average rainfall (positive anomalies depicted in cyan) migrating into the central and eastern equatorial Pacific" [5]. The brightest feature of the image is that band along the equatorial Pacific; the browns sit over the Maritime Continent, South Asia, the Sahel and the Amazon (our reading of the image) [5].

What NOAA says about El Niño

The Climate Prediction Center's discussion of October 8: "ENSO Alert System Status: El Niño Advisory"; "El Niño continues to strengthen, with a strong-to-very strong El Niño likely through January-March 2027 (remaining greater than an 83% chance)". Sea-surface anomalies exceeded +4.0 °C in parts of the eastern equatorial Pacific in September, with Niño-3.4 at +2.1 °C, Niño-3 at +3.0 °C and Niño-1+2 at +3.9 °C, and "Chances remain high for a historic event that would exceed the strength of previous El Niño events dating back to 1950 (+2.5°C or more for a 3-month RONI value): the chance is 54% for September-November, 83% for October-December, and 70% for November-January" [41]. The weekly update of October 19 gives Niño-3.4 at +2.4 °C and repeats the outlook; its probabilistic outlook has "El Niño is expected to persist through March-May 2027" [42].

OUR ANALYSIS

"June 1 to now" is the map's own period; "the Pacific is most impacted by El Niño" is how its makers describe it; "the familiar land patterns" are the deficits NASA names over Indonesia, northern Australia and the Amazon [5]. "Expect that to continue through the next four months" rests on NOAA's outlook: better than 83% odds of a strong-to-very strong El Niño through January–March and persistence into spring [41][42], which covers November to February. The one thing to keep straight is that the Center forecasts the state of the ocean and atmosphere, not this map; the rainfall pattern follows from the state, as NASA's description says. True.

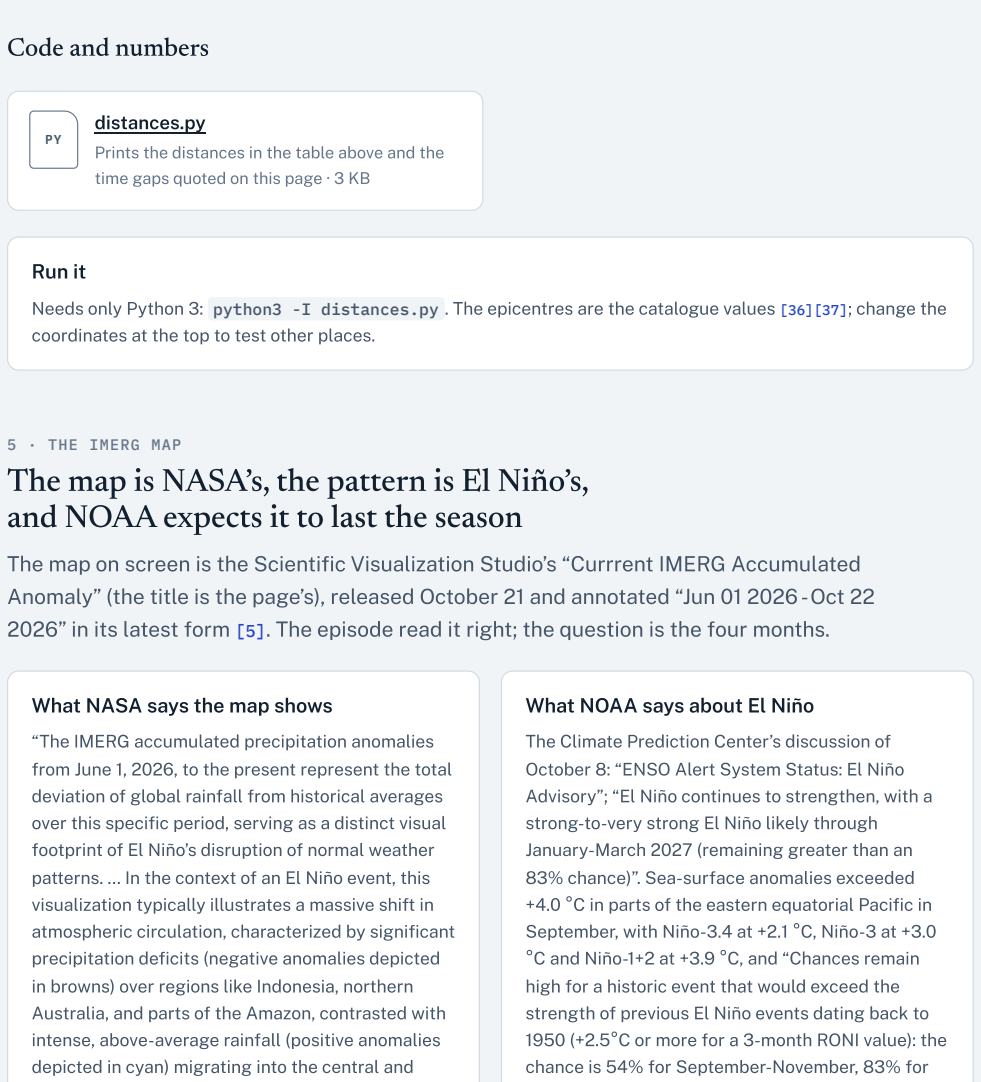
6 · THE WEATHER

The warning covered Phoenix, but the Phoenix hail had fallen the afternoon before; the risk then moved into New Mexico

"Also, folks, there's a reason I mentioned yesterday hail and tornado risk in Arizona. Did you see what hit Phoenix? That same line and potential energy shift has slid only slightly east towards New Mexico. Hopefully tonight's worst bits hit the unoccupied desert areas" [1 00:01:32–00:01:49]. The "yesterday" is the October 22 episode, published at 11:55 UTC, 4:55 AM in Arizona [43], whose forecast our review of that episode rated. That forecast did take in Phoenix. Here is what hit Phoenix, and when.

Three days in Arizona and New Mexico, in Arizona time (MST)

OUR ANALYSIS



Times from NWS Phoenix's storm reports and warnings [44][45], NWS Flagstaff's tornado survey [59], the Storm Prediction Center's outlook, watches and storm reports [57][53][55][58], the Iowa Environmental Mesonet's archive of NWS storm reports [46], and the two episodes' publication times [43][1]. The report spans run from the first to the last report of each day's log.

What hit Phoenix, in NWS Phoenix's reports

Eighteen hail reports from Maricopa County on Wednesday, October 21, between 3:25 and 4:05 PM MST, from 0.75 to 2 inches, 16 of them an inch or more, from Peoria and Glendale to Deer Valley and Carefree; the largest, 2.00 inches 4 miles north-east of Glendale ("Photo of a few hail stones with the largest estimated at 2 inches in diameter"), with a 60 mph gust 4 miles east-south-east of Glendale at 3:30 PM [44][58]. The night before, between 10:05 and 10:25 PM on October 20, the office logged hail of half an inch to 2 inches in Chandler, Gilbert and Mesa ("Photo of a pile of hail stones with diameters around 1-2 inches"), with power lines down in Mesa [44][58]. KTAR, on the morning of October 22, quoted the Weather Service's Sean Benedict on the October 21 storm: "We were seeing hailstones up to an inch and a half to 2 inches", and described it as "a day after large hail damaged cars and strong winds knocked down trees in parts of the city" [48]; AZFamily reported "golf-ball-sized hail pounding an apartment complex near 19th and Dunlap avenues for 10 to 20 minutes Wednesday afternoon" [49], and KYMA that "Hail pounded the Phoenix metropolitan area Wednesday" [50]. On October 22 the county had three radar-indicated Severe Thunderstorm Warnings, at 1:20, 4:20 and 7:56 AM MST (the second for its eastern edge, with Gila and Pinal counties), a Special Weather Statement and a Flood Advisory for the Scottsdale area [45]; no storm report was filed for Maricopa County that day [46][55], and Sky Harbor recorded no rain on October 21 or 22 [47].

OUR ANALYSIS

Why Misleading

The sentence's force is "my warning explains what you saw". The warning did cover Phoenix: the Storm Prediction Center's 0600 UTC outlook for October 22, which the episode relayed, put a Slight risk "FROM CENTRAL AND EASTERN ARIZONA INTO WESTERN NEW MEXICO", and its 15% hail area, the episode's "areas of yellow" [43 00:01:25–00:01:30], listed Phoenix, Tucson, Mesa, Glendale and Chandler among its towns; the 1300 UTC update kept it and added Phoenix to a 2% tornado area [57]. Severe Thunderstorm Watch 692, from 3:55 to 11 AM, named Maricopa County among its counties [53]. But what hit Phoenix had already fallen: 18 hail reports between 3:25 and 4:05 PM on October 21, 13½ hours before the episode went up at 4:55 AM on October 22, and hail of up to 2 inches in Mesa the night before [44][43]. Two tornadoes struck Arizona on October 21 as well, EF1s near Walker in the morning and through Heber-Overgaard in the evening [59][58]. On October 22 itself Phoenix had radar warnings for quarter-size hail and 60 mph gusts and up to an inch of rain in the Scottsdale area [45], nothing that reached a storm report; the day's 26 reports fell elsewhere, 24 of them in central, northern, eastern and southern Arizona and in New Mexico, with hail to 3 inches near Page Springs in Yavapai County and Rio Rico in Santa Cruz County and gusts to 73 mph in Arizona, and no tornado came despite a Tornado Watch from 10:10 AM that named "A couple tornadoes possible" [55][53]. So Phoenix was hit and the warning covered it, but the hail came first: Misleading. "Slid only slightly east towards New Mexico" is right, as the next box shows; "hopefully tonight's worst bits hit the unoccupied desert areas" is a hope, and the day's worst was already under way in Farmington and Bloomfield.

In the Storm Prediction Center's words, for October 23

Times are UTC; Arizona is seven hours behind, New Mexico six.

> *"THERE IS A SLIGHT RISK OF SEVERE THUNDERSTORMS ACROSS MUCH OF NEW MEXICO … the higher dewpoint solutions suggest overall profiles supportive of very large hail (i.e. greater than 2"+) and tornadoes."*
>
> Day 2 Convective Outlook, October 22, 1730 UTC [51]

> *"THERE IS A SLIGHT RISK OF SEVERE THUNDERSTORMS ACROSS PORTIONS OF NEW MEXICO … Severe thunderstorms with hail, damaging gusts and a tornado or two are possible across portions of New Mexico and southern Colorado today into tonight."*
>
> Day 1 Convective Outlook, October 23, 0600 UTC, the last before the episode [52]

> *"Severe Thunderstorm Watch for portions of Central and Western New Mexico, Far West Texas … Scattered large hail and isolated very large hail events to 3 inches in diameter possible. Scattered damaging wind gusts to 70 mph possible"*
>
> Severe Thunderstorm Watch 696, issued 12:55 PM MDT [53]

OCTOBER 22, THE DAY WARNED ABOUT

19 hail, 7 wind, 0 tornado

SPC's preliminary log for the convective day, re-read on October 24 and 25: hail to 3 inches near Page Springs and Rio Rico, 2 inches at Linden, a 73 mph gust near Safford; 24 of the 26 reports in Arizona or New Mexico, none in Maricopa County [55].

OCTOBER 23, "TONIGHT"

2 hail, 0 tornado

In the risk area: 1.00 inch 6 miles north of Jemez Pueblo, New Mexico, at 2245 UTC and 1.75 inches at Fort Bliss, El Paso, at 0000 UTC ("Golf Ball sized hail damaged the greens on a golf course"), plus a Florida report; no wind report, no tornado, as of October 25 [55]. NWS reports add 0.75 to 1.00 inch near Fenton Lake and in El Paso, and non-thunderstorm gusts of 62–71 mph in southern New Mexico and El Paso [46].

THE FLOODING THE HOPE LEFT OUT

~1,500 homes

NWS Albuquerque's report at 1615 UTC on October 23: "Multiple evacuations ongoing along the San Juan River due to flooding. As many as 1500 homes and buildings are estimated to be impacted by flooding. Over 60 water rescues are estimated to have taken place, primarily between Farmington and Bloomfield since Thursday afternoon" (the archive writes the comma as an underscore); street flooding in Grants and Gallup too [46].

The 0600 UTC outlook drew a 2% tornado probability over 59,718 square miles and a 15% hail probability, the chance of severe hail within 25 miles of a point, over 51,725 [52][56], with a CIGI area over 53,414: the first of SPC's two hail "intensity levels", used since March 3, 2026, when intensity in the outlooks became "conditional, meaning if a tornado/wind gust/hail report occurs, the expected strength/intensity/size will be represented", replacing the old "SIGN" label [61]; the outlook's own words were "Large hail (some 2+ inch) is possible" [52]. The 1630 UTC update narrowed the Slight risk to "CENTRAL NEW MEXICO AND FAR WEST TEXAS" and raised the wind probability to 15% [52], and the afternoon discussions expected "very large hail" from supercells and, in the south, "perhaps a brief tornado" [54]. The shift east that the episode described is in all of them.

7 · LIMITS

Where this check could be wrong

The papers, read for their own pages

The full texts of the JGR and Nature Geoscience articles were read for our check of the first and of the second; the quotations and the Table 1 rates here come from those readings and the abstracts [2][3]. The generation arithmetic is our own, made the same way on our check of the JGR paper.

The coronal hole's position

The Space Weather Prediction Center names coronal holes by polarity and does not archive its synoptic drawings; our placing of a small hole south-west of the disk's centre, within about 10° of the solar equator, is our measurement of three SDO images, with the Sun's tilt toward Earth taken into account [28], and the forecast of its stream is the evidence that carries the verdict [21][26]. "A Ryer instigation" remains unresolved.

Preliminary numbers

The Tibet casualty figures are the local authorities' as reported on October 24 [34][35]; the Storm Prediction Center's logs are preliminary: the October 22 log grew between our first reads, and on October 25 the October 23 log gave the Fort Bliss hail as 1.75 inches [55]. China's own magnitude and depth are known through news reports [31][33].

Our own distances and counts

The distances use approximate coordinates for the named places and the catalogue epicentres, which differ by 8 km between the two agencies [36][37]; the count of earthquakes near the sequence is for a box of our choosing in INGV's catalogue, not a formal study of the zone, and the statement that a shallow Mw 5.5 is the largest near Alicudi since 1980 rests on INGV's historical list for the Aeolian area, beside a comparable ML 5.6 off Palermo in 2002 [38][37].

The October 21 episode

We have no transcript of the episode of October 21, published at 4:56 AM MST that day, after the Mesa hail and before the afternoon storm; its one link concerned superflares [62]. If it warned of Arizona storms, that warning preceded the October 21 hail, though it is not the one the presenter cited, which came on October 22 [43].

What would change these verdicts

01 A passage in the JGR paper, or a statement by its authors, that today's field is in an excursion or that pole motion was measured; or a measured dipole decline many times faster than today's, about 5% a century, sustained over decades [10].

02 An INGV or Osservatorio Vesuviano statement linking the Tyrrhenian sequence to Campi Flegrei, or a damage survey showing severe weather in Phoenix on October 22 that the storm reports missed.

03 A Climate Prediction Center outlook ending El Niño before spring, or a NOAA cycle update that puts a rise in sunspot number in 2027.

The two True verdicts rate what was said on the day; later revisions of the Tibet toll or the storm logs would be recorded in the change log, not re-rated.

Related checks

- FALSE Every 6,000 years? The Disaster Cycle, Fact-Checked
- UNSUPPORTED A magnetic pole flip in the 2040s? The Disaster Cycle, Fact-Checked
- FALSE Ringless trees and frozen mammoths The Disaster Cycle, Fact-Checked
- FALSE 55% of the field gone? The Disaster Cycle, Fact-Checked

Sources

Bracketed numbers refer to this list. For the episodes [1] and [43], times are positions in the video (hours:minutes:seconds). For the papers [2] and [3], p. gives a page of the article, § a section, and Abstract, Fig. and Table name the part we used; for the reports [7] and [8], p. gives a page of the PDF. For NOAA's products and the USGS records, times are UTC unless marked MST (Arizona) or MDT (New Mexico); INGV's catalogue gives UTC and its posts Italian time (UTC+2). Quotations from INGV are in the original Italian, with our translation in brackets. Links checked October 24, 2026.

1 SpaceWeatherNews (S0) (October 23, 2026). Rapid Pole Shifts Confirmed, Micro-Disruptor | S0 News Oct.23.2026. YouTube video, published 11:08 UTC. Quoted from the automatically generated transcript; times are positions in the video.

2 Shinu, S., Mahgoub, A. N., and Korte, M. (2026). Rates of Geomagnetic Field Change During Excursions and Reversals. *Journal of Geophysical Research: Solid Earth* 131(10), e2025JB033422. CC BY 4.0. Read in full for our check of the paper, from the version of record in GFZ Potsdam's repository; quoted here from that reading and from the abstract. p. gives the article's page.

3 Schönig, J., Ferrero, S., Gresky, K., Sorger, D., Schmitt, A. K., Wunder, B., Baldwin, S. L., and Holt, A. F. (2026). Geothermal gradient change during subduction recorded by ultrahigh-pressure eclogite. *Nature Geoscience*, published October 1, 2026. CC BY 4.0. Read in full for our check of the paper; quoted here from its abstract and that reading.

4 University of Göttingen (October 7, 2026). Two kinds of subduction recorded in one rock. Press release No. 132, the episode's link; read in full for our check of the paper.

5 NASA Scientific Visualization Studio (October 21, 2026). Current IMERG Accumulated Anomaly (SVS 5682; the title is the page's). Visualization by Alex Kekesi (ADNET Systems); scientific consulting by George Huffman (NASA/GSFC) and Jason West (eMITS). The annotated image is labelled "Jun 01 2026 - Oct 22 2026". Read October 24, 2026.

6 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 review of the October 22 episode.

7 Chulliat, A., Brown, W., Nair, M., et al. (2025). The US/UK World Magnetic Model for 2025–2030: Technical Report. NOAA National Centers for Environmental Information.

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

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17 Glassmeier, K.-H., and Vogt, J. (2010). Magnetic Polarity Transitions and Biospheric Effects. *Space Science Reviews* 155(1–4), 387–410. Abstract only.

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25 NOAA Space Weather Prediction Center (October 22 and 23, 2026). Edited Events for October 22 and 23, 2026, from the archive (pub/indices/events/20261022events.txt and 20261023events.txt).

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48 O'Sullivan, S., KTAR News (October 22, 2026, 7:58 AM MST; updated 12:19 PM). Phoenix under severe thunderstorm watch with potential hail; eastern Arizona faces tornado risk.

49 AZFamily (October 22, 2026, 22:52 UTC). Neighbors describe Phoenix hailstorm as 'war zone'.

50 KYMA (October 22, 2026, 18:23 UTC). Massive hailstones cause damages in Phoenix.

51 NOAA/NWS Storm Prediction Center (October 22, 2026). Day 2 Convective Outlook, 0600 UTC (Squitieri) and 1730 UTC (Mosier), valid October 23, 1200 UTC, to October 24, 1200 UTC.

52 NOAA/NWS Storm Prediction Center (October 23, 2026). Day 1 Convective Outlook, 0600 UTC issuance (Lyons/Thornton; archived under its 1200 UTC valid time), 1300 UTC (Hart/Dean), 1630 UTC (Thompson/Halbert) and 2000 UTC (Chalmers).

53 NOAA/NWS Storm Prediction Center. Severe Thunderstorm Watch 692, issued 3:55 AM MST on October 22, 2026, in effect until 11:00 AM MST, with its county list, which names Maricopa County; Tornado Watch 693, issued 10:10 AM MST on October 22, in effect until 8:00 PM MST; and Severe Thunderstorm Watch 696, issued 12:55 PM MDT on October 23, 2026, in effect until 9:00 PM MDT.

54 NOAA/NWS Storm Prediction Center. Mesoscale Discussions 2399 and 2402 (October 22, 2026) and 2404, 2405 and 2406 (October 23, 2026).

55 NOAA/NWS Storm Prediction Center. Storm reports for October 23, 2026 and for October 22, 2026 (each 1200 UTC to 1159 UTC the next day; preliminary), with their filtered and tornado CSV files. Read October 24, 2026, 14:58 UTC, and October 25, 15:43 UTC, when the October 22 log was unchanged and the October 23 log gave the Fort Bliss hail as 1.75 inches.

56 NOAA/NWS Storm Prediction Center. SPC Probabilistic Outlook Information. Read October 24, 2026.

57 NOAA/NWS Storm Prediction Center (October 22, 2026). Day 1 Convective Outlook, 0600 UTC issuance (Lyons/Jirak; archived under its 1200 UTC valid time) and 1300 UTC update (Gleason/Kerr), with their tables of risk areas and the larger population centres in each. Read October 25, 2026.

58 NOAA/NWS Storm Prediction Center. Storm reports for October 20, 2026 and for October 21, 2026 (each 1200 UTC to 1159 UTC the next day; preliminary), with their filtered and tornado CSV files. Read October 25, 2026.

59 NWS Flagstaff (October 24, 2026). Public Information Statement: NWS Damage Survey for 10/21/26 Tornado Event (PNSFGZ), issued 3:48 PM MST, from the Iowa Environmental Mesonet's text-product archive; "preliminary and subject to change pending final review". Read October 25, 2026.

60 Hawks, J. (2021). Comment on "A global environmental crisis 42,000 years ago". *Science* 374(6570), eabh1878. As read for our timeline review.

61 NOAA/NWS Storm Prediction Center. Conditional Intensity in SPC Convective Outlooks, on the changes to the outlooks of March 3, 2026. Read October 25, 2026.

62 SpaceWeatherNews (S0) (October 21, 2026). Predicting the Sun's Super Flare | S0 News Oct.21.2026. YouTube video, published 11:56 UTC (4:56 AM MST); no transcript in our records.

METHOD

How this was checked

On October 24, 2026, we checked every statement, number and quotation on this page against its source, and after a fresh review on October 25 we re-read the storm records and added those of October 20–21: the episode's automatically generated transcript, quoted verbatim with its timestamps [1]; the two papers' abstracts and Crossref records, with their full texts as read for our checks of them, and the Göttingen release [2][3][4]; the NASA page behind the IMERG map and its images [5]; the IGRF-14 paper, the World Magnetic Model 2025 report, the December 2025 State of the Geomagnetic Field and thirteen sources on excursions, today's field and extinctions, reused with their locators from our review of the October 22 episode and our timeline review [6]–[20][60]; the Space Weather Prediction Center's forecast discussions, daily summaries, reports, event lists, flare lists, outlooks and cycle prediction for October 19–24, with three SDO images and one Crossref record [21]–[29]; the USGS records of the Tibet and Sicily earthquakes, INGV's catalogue extracts and four INGV posts, and five news reports for the casualty figures [30]–[40]; the Climate Prediction Center's ENSO discussion and weekly update [41][42]; and, for the weather, the publication times of the October 21 and 22 episodes, NWS Phoenix's storm reports for October 20–22, warnings, statements and climate reports, NWS Flagstaff's tornado survey, the Iowa Environmental Mesonet's archive of storm reports, three news reports, and the Storm Prediction Center's outlooks, watches, mesoscale discussions, storm reports for October 20–23, definitions and notes on conditional intensity [43]–[59][61][62]. About 150 items in all. The two papers 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: the distances from the Sicily epicentres to Campi Flegrei and other places, by the haversine formula, with the script hosted in section 4; the time gaps between the earthquakes, the Phoenix hail, the two episodes and the forecasts; the count of the Phoenix hail reports; the count of flares in the 24 hours before the upload; the count of shallow and deep earthquakes in INGV's catalogue for a box around the sequence; the generation arithmetic in section 2, whose multiple is the arithmetic of our check of the JGR paper; and the position of the coronal hole that NOAA's text describes by polarity only, measured on three SDO images.

Re-run here: the distances and time gaps, with the hosted script, and the storm logs, re-read on October 25 (the Storm Prediction Center's October 22 log unchanged, its October 23 log revised). Not read in full here: the two papers, whose full texts were read for their own pages and are quoted from those readings; the news reports, used only for the casualty figures and the Phoenix hail; the Göttingen release, read in full for the eclogite page; and the October 21 episode, which has no transcript in our records. The storm logs and the Tibet casualty figures are preliminary as of October 25; later revisions are to be recorded in the change log.

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.
MISREAD	Cites a real source but gets wrong what it says.
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 26, 2026	Corrected: the 9% decline of the axial dipole that Finlay and colleagues report is over 175 years, from 1840 to about 2015, not "about 185 years"; the 9% and the rate of roughly 5% a century are unchanged.
Oct 24, 2026	Published on factchecked.science after a full check against the sources. Built from the episode's transcript, the two papers' abstracts and our checks of their full texts, NASA's IMERG page, the site's existing reviews of excursions and today's field, the Space Weather Prediction Center's products for October 19–24, the USGS and INGV earthquake records and INGV's posts, the Climate Prediction Center's ENSO products, NWS Phoenix's storm reports and warnings, and the Storm Prediction Center's products and storm reports for October 22–23, 2026, all read on October 24.

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