

EASTER 2026 RELEASE

EX LUCEM VITA

A historical-biological hypothesis on Pope Pius XI, Guglielmo Marconi, and
the Vatican's first intimate wireless environment

An Easter appeal to Pope Leo XIV and the Holy See to choose life and
protect God's children

By John Coates - Founder, RF Safe

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"I have set before you life and death, blessing and cursing: therefore choose life."

Deuteronomy 30:19

What this paper argues in one sentence

The historical record does not exonerate the radio environment around Pope Pius XI; the convergence of chronology, proximity, withdrawal, re-exposure, comparative cardiovascular collapse, and modern RF toxicology is already strong enough to justify immediate precautionary action by the Holy See.

The trail of death is dark; the Church can bring life back into the light.

To His Holiness Pope Leo XIV, His Eminence Cardinal Pietro Parolin, Archbishop Paolo Rudelli, Archbishop Paul Richard Gallagher, Dr. Paolo Ruffini, Dr. Matteo Bruni, and Professor Joachim von Braun:

I write this as John Coates, founder of RF Safe, and as a man whose life has been shaped by loss, conscience, and a long refusal to look away from what I believe the wireless age has done to human biology.

This Easter I am asking the Holy See to confront a possibility that history has left in plain sight: the first Pope to live inside the intimate field of modern wireless may have been injured by it.

My thesis is direct. Pope Pius XI's decline tracks the arrival and intimate use of the Vatican's early radio and very-short-wave systems too closely, and too meaningfully, to be brushed away as coincidence. He was vigorous into his mid-seventies. Vatican Radio was inaugurated in 1931. By 1932 Marconi had installed a very-short-wave radiotelephone system between Vatican City and Castel Gandolfo, with antenna work in the Vatican gardens and later a car-based link for the travelling Pope. In 1935 Pius XI was still publicly described as in good health except for slight diabetes. By late 1936 came arteriosclerosis, gangrene, near-fatal collapse, immobility, and the abandonment of the garden walks that had defined his routine. After his surprising recovery in 1937, he returned to work but never truly recovered his former vitality. Marconi died in 1937. Pius XI followed in 1939.

I am not asking the Church to confess what no one measured perfectly in 1932. I am asking the Church to stop pretending the record clears the exposure. It does not. No responsible reading of the history permits that conclusion.

What I am asking the Holy See to do now

- Commission an independent historical, engineering, and medical review of the Pius XI case.
- Adopt a child-centered precautionary protocol for Church schools, clinics, orphanages, convents, monasteries, dormitories, retreat centers, and papal residences.
- Freeze new high-power RF leases on Church property near homes, schools, hospitals, and other long-stay sensitive populations until independent review is complete.
- Audit and disclose RF-emitting infrastructure on Church-owned properties worldwide, beginning with sites close to children.
- Launch a fiber-first and light-based pilot for sensitive interiors, including Vatican archives, studies, schools, and clinics.

1. The Vatican became one of the earliest intimate wireless environments on earth

The Vatican did not encounter wireless as an abstract infrastructure problem. It encountered it in the life of a Pope. Vatican Radio was inaugurated on 12 February 1931 with Pius XI and Guglielmo Marconi at its center. By 1932 Marconi had installed a very-short-wave radiotelephone system between Vatican City and Castel Gandolfo using waves as short as 55-60 centimetres. The Vatican gardens were part of the demonstration environment. Historical coverage also describes the later car-based link that let the Pope speak while travelling - what many now call a precursor to the mobile phone.

This matters because it means the Church did not merely host broadcasting at a distance. It placed intimate wireless inside a sovereign, lived, daily environment. The Pope walked the gardens. The Pope worked in the

palace. The Pope used the system. Before personal wireless became ordinary in family homes, it had already entered the daily world of the Holy See.

Period technical and photographic accounts describe the Castel Gandolfo link as a dedicated very-short-wave installation on the order of tens of watts, around 30 watts total electrical consumption. Whether one emphasizes 30 watts or nearby transmitter geometry, the core point does not change: this was not a trivial consumer environment. It was a pioneering, close-range wireless deployment integrated into the Pope's own life.

Source note: Vatican News on Vatican Radio's 1931 inauguration; Encyclopaedia Britannica on Marconi's 1932 Vatican-Castel Gandolfo radiotelephone using very short wavelengths; Marconi Review (1933) on the first regular micro-wave radio telephone service at 60 cm; period image captions describing the installation at roughly 30 watts; later historical coverage of the Vatican gardens installation and the car-based link.

2. The chronology that changed my mind

When I look at the sequence below, I do not see a random scrapbook of old age. I see a coherent pattern of metabolic trouble, vascular collapse, and heart failure emerging after intimate exposure begins and worsening over the next years.

Year	Documented event	Why it matters
1931	Vatican Radio is inaugurated by Pius XI and Marconi.	The modern Vatican wireless era begins inside the life of the Pope, not at a remote industrial perimeter.
1932-1933	Marconi installs and inaugurates the very-short-wave radiotelephone between Vatican City and Castel Gandolfo; garden demonstrations and later a mobile car link follow.	Wireless becomes intimate, mobile, and personal around the Pope's own routines.
1935	Pius XI is still described publicly as in good health except for slight diabetes.	This is the late pre-collapse baseline.
Late 1936	Arteriosclerosis, gangrene, severe collapse, and prolonged confinement follow.	The first major systemic breakdown becomes undeniable.
Easter 1937	The Pope makes a remarkable recovery, returns to work, but no longer takes his daily walks in the Vatican gardens and must often be carried.	Recovery coincides with a radically altered exposure pattern and the end of his former routine.
July 1937	Marconi dies after recurrent heart disease and repeated heart attacks.	The engineer closest to the transmitter side becomes the comparison case.
November	Pius XI suffers two major heart	The final decline is underway.

1938	attacks.	
10 February 1939	Pius XI dies after cardiac crisis on top of chronic vascular and respiratory burden.	The hypothesis reaches its historical end point.

Diabetes appears. Circulation fails. What contemporaries called cardiac asthma emerges. The legs gangrene. Recurrent heart crises follow. This is exactly why the case matters.

What I am arguing here is not that chronology proves mechanism all by itself. What I am arguing is that chronology makes dismissal irresponsible.

Source note: TIME, 'Secret Consistory' (1935), which described Pius XI as in good health except for slight diabetes; TIME, 'Medici Papae' (1938), which described the 1936 collapse, gangrene, recovery, and end of his garden walks; contemporary and historical coverage of his 1938 heart attacks and 1939 death.

3. What the 1937 recovery actually shows

The crucial point is often missed. I do not need to claim that someone ceremonially turned off every transmitter. Practical exposure can fall dramatically without a formal switch-off. Exposure is a question of proximity, routine, time in space, geometry, and use.

A bedridden Pope no longer walked the gardens. A crippled Pope no longer moved through the same outdoor spaces. A dying Pope did not use a radiotelephone like a vigorous administrator. A convalescent Pope living deeper inside the Apostolic Palace, carried rather than walking, experienced a different exposure geometry from the man who had previously inhabited the gardens and the open routes of travel.

Even the famous sealed glass conveyance used for public appearances, introduced as protection from cold air and crowds, changed the physical circumstances around his body. More important still, thick interior masonry would have altered the burden relative to open-air routines and line-of-sight exterior activity, even if it was not a perfect shield.

I read the 1937 recovery as history's warning. When his routine changed, his body got a reprieve. He improved after his practical exposure pattern changed. He declined again after returning to work inside an expanding radio environment. The record does not let me ignore that.

The withdrawal-and-re-exposure claim, plainly stated

I am not arguing that a century-old technician's log has survived proving every switch position. I am arguing something more visible and more important: once Pius XI was removed from the gardens, from normal movement through those spaces, from ordinary travel, and from direct engagement with the new wireless systems, his practical exposure burden was no longer the same. That change coincided with his great recovery. His return to active papal labour coincided with renewed decline.

Source note: period reporting on Pius XI's long bedridden period between late 1936 and Easter 1937, his carried appearances, the sealed glass enclosure used to protect him from the elements and crowds, and the historical record that he gave up his daily constitutional in the Vatican gardens after the collapse.

4. Marconi and the human cost of the transmitter side

I do not need Marconi to have been perfectly healthy for the comparison to matter. In fact, historical sources noting heart disease as early as 1927 make the comparison more morally urgent, not less. A man with cardiovascular vulnerability placed himself, year after year, in the most intense experimental RF environments of his age.

Marconi died in July 1937 at sixty-three after recurrent heart disease and repeated heart attacks. Some historical accounts place the count at nine. Whether one uses the minimal or the maximal wording, the pattern is severe.

The Pope was older, but the convergence remains striking: two productive public men, two lives bound to the same technological frontier, two severe cardiovascular arcs, one after another. This is not final proof. It is far too much historical signal to dismiss as noise.

Source note: Franklin Institute biography on Marconi's earlier heart disease and recurrent illness; additional historical accounts describing repeated later heart attacks before his death in 1937.

5. What modern RF science adds to the historical record

Modern science cannot tell me exactly what field intensity struck one room of the Apostolic Palace in 1936. It can do something else that matters: it can tell me that the heart, nerve tissue, oxidative balance, calcium signalling, autonomic control, and fertility are all biologically relevant targets in RF research, and that official safety frameworks remain deeply contested.

The NTP/NIEHS animal studies reported clear evidence of malignant schwannomas in the hearts of male rats exposed to 900 MHz radiofrequency radiation, together with increased cardiomyopathy. Some evidence also emerged for brain gliomas. Those findings do not retroactively solve the Pius XI case, but they destroy the lazy claim that the heart can be waved away as irrelevant to RF toxicology.

A 2026 paper in Environmental Health then applied standard toxicological risk-assessment math to experimental RF data and concluded that current public exposure limits are still far above values the authors judged protective. Depending on daily exposure duration, the paper argued that current public RF limits exceed cancer-protective levels by roughly 15-fold to 900-fold. In the eight-hour scenario discussed publicly around the paper, the gap was framed at no less than 200-fold. The same paper argued that limits were also several-fold too high for male reproductive protection.

I use the phrase low-fidelity biology to describe what this body of work suggests: biology driven off its coherent timing. More reactive oxygen species. More mitochondrial strain. More signalling error. More endothelial burden. More autonomic instability. Less repair. Less resilience. More noise imposed on living order.

I know the institutional world has not resolved these issues. IARC still classifies RF electromagnetic fields as possibly carcinogenic to humans. ICNIRP maintains that its 2020 guidelines protect against established harm. WHO continues its assessment work. None of that disagreement gives the Church moral cover to do nothing. If anything, it means the Church should be more protective than the market, not less.

Source note: NIEHS/NTP findings on heart schwannomas, cardiomyopathy, and brain tumours in exposed animals; Environmental Health (2026) on derived cancer-protective and reproductive-protective exposure levels; IARC Group 2B classification; ICNIRP 2020 guidelines; WHO's continuing review process.

6. The Church's own modern RF history already warned it

The Holy See cannot relegate this problem to a dead past. The 2002 Michelozzi study found higher-than-expected childhood leukemia incidence near the Vatican Radio station within six kilometres, with risk declining as distance increased. The authors were careful: that study alone could not establish causation. But it did establish something institutions too often evade - a pattern serious enough to warrant concern.

Years of public alarm and litigation followed. Italy's long-cited 6 V/m precautionary approach showed that society did not consider this issue frivolous. The fact that Italy raised its limit to 15 V/m in 2024 does not settle the biology; it only shows that regulatory lines move.

Meanwhile, Pope Francis' 2024 agrivoltaic decree for Santa Maria di Galeria did not abolish the transmission centre. It described an energy project meant to support the radio station there. Pope Leo XIV then visited the shortwave transmission centre in 2025. Vatican News continues to publish shortwave schedules. The issue is still present tense.

Source note: Michelozzi et al., American Journal of Epidemiology (2002); official Holy See and Vatican News materials on Santa Maria di Galeria; official and mainstream reporting on Italy's 2024 move from 6 V/m to 15 V/m.

7. Why I believe this is a moral and spiritual emergency

If the Church is serious about protecting children, the sick, the elderly, and the unborn, then it cannot hide behind compliance language while evidence of chronic biological stress remains unresolved. The body is not disposable hardware. The body is part of the person. The person bears the image of God.

When I speak of low-fidelity biology, I mean something both scientific and spiritual. I mean a human organism forced away from coherent order and toward noise, stress, breakdown, and diminished peace. In biochemical language that may mean ROS, calcium dysregulation, autonomic strain, endothelial injury, or impaired development. In theological language it means that the integrity of embodied life is being burdened by technologies we have been too quick to normalize.

The house of God should not be rented out as a platform for silent risk. The Church should lead the world in drawing a moral line around children and around spaces of prayer, study, healing, and rest.

A line I want the Church to hear clearly

The burden is not on children to prove harm after saturation. The burden is on institutions to show safety before imposing chronic exposure on the vulnerable.

8. The Easter actions I am asking the Holy See to take

1. Independent Pius XI Review

Commission a joint archival, engineering, and medical-historical inquiry under the Secretariat of State and the Pontifical Academy of Sciences, with access to Vatican radio records, architectural plans, correspondence, medical documentation, and contemporary reporting.

2. Child-Centered Precautionary Protocol

Adopt a Holy See protocol for schools, clinics, orphanages, monasteries, convents, retreat centres, dormitories, and papal residences that goes beyond minimum civil compliance wherever children or long-stay vulnerable populations are concerned.

3. Moratorium on New High-Power RF Leases

Suspend new leases for high-power RF installations on Church property near homes, schools, hospitals, playgrounds, or long-stay residential communities until independent review is complete.

4. Global Audit and Disclosure

Map and disclose RF-emitting infrastructure on Church-owned properties worldwide, starting with sites close to children and long-stay residents.

5. Sensitive-Site Retrofitting

Where connectivity is necessary, move to fiber-first design and deploy room-contained optical links - including LiFi where useful - in archives, studies, classrooms, libraries, and clinical settings.

6. Public Easter Declaration

State plainly that the protection of God's children takes precedence over convenience, coverage, lease revenue, and legacy assumptions about RF safety.

Why light-based networking belongs in the Vatican

- Fiber carries the backbone without normalizing RF in every room.
- Visible-light links can keep data physically bounded to a room because light does not pass through opaque walls.
- Stone is a feature, not a bug: architecture becomes containment rather than a leakage problem.
- Like any network, optical systems still require proper encryption and sound engineering.
- Archives, private studies, schools, libraries, and clinics are natural pilot spaces.

Holy Father, I believe the first intimate wound of the wireless age may have opened in the life of a Pope. I believe the Church now has the rarest kind of moral opportunity: to correct a century of denial not with panic, but with truth, humility, and protection.

Easter proclaims that death does not get the last word. That is why I ask you, urgently, to choose life. Investigate the Pius XI case honestly. Protect the children on Church lands. Remove avoidable RF burdens from the places where bodies sleep, pray, learn, heal, and grow. And where wireless is truly needed, move toward bounded, light-based alternatives that respect both privacy and biology.

The trail of death is dark. Bring life back into the light.

John Coates

Founder, RF Safe

Prepared for Easter 2026 release

Appendix A. Current Vatican recipients and public delivery routes

Roles verified from official Holy See and Pontifical Academy pages as of 4 April 2026.

Recipient	Current office	Public delivery route
Pope Leo XIV	Supreme Pontiff	Deliver via the Secretariat of State, 00120 Vatican City
Cardinal Pietro Parolin	Secretary of State	Secretariat of State, 00120 Vatican City
Archbishop Paolo Rudelli	Substitute for General Affairs	Secretariat of State, 00120 Vatican City
Archbishop Paul Richard Gallagher	Secretary for Relations with States	Secretariat of State, 00120 Vatican City
Dr. Paolo Ruffini	Prefect, Dicastery for Communication	Via della Conciliazione 5, 00120 Vatican City
Dr. Matteo Bruni	Director, Holy See Press Office	Via della Conciliazione 54, 00120 Vatican City
Prof. Joachim von Braun	President, Pontifical Academy of Sciences	Casina Pio IV, 00120 Vatican City

Public route notes: official Holy See pages list the Dicastery for Communication at Via della Conciliazione 5, the Holy See Press Office at Via della Conciliazione 54, and the Pontifical Academy of Sciences at Casina Pio IV. The Secretariat of State's structure page confirms the current officeholders named above.

Appendix B. Selected factual anchors and source trail

These are the principal sources used to anchor the historical, scientific, and institutional claims in this paper.

- 1. Vatican News.** Official confirmation that Vatican Radio was inaugurated on 12 February 1931 by Pius XI and Marconi.
- 2. Encyclopaedia Britannica on Guglielmo Marconi.** Confirms that in 1932 Marconi installed a radiotelephone system between Vatican City and Castel Gandolfo using very short wavelengths, and that he later demonstrated work at wavelengths as short as 55 cm.
- 3. Marconi Review, 1933.** Describes the first regular micro-wave radio telephone service between Vatican City and Castel Gandolfo operating at 60 cm wavelength and notes the Vatican garden obstruction problem in Marconi's own orbit.
- 4. Historical photographic captions and technical summaries.** Describe the Vatican ultra-short-wave installation at roughly 30 watts total electrical consumption and 57 cm wavelength.
- 5. TIME, 'Secret Consistory' (1935).** Describes Pius XI at seventy-seven as in good health except for a slight diabetic condition.

- 6. TIME, 'Medici Papae' (1938).** Describes the 1936 arteriosclerosis and gangrene, near-death episode, remarkable recovery, and abandonment of daily walks in the Vatican gardens.
- 7. Historical reporting on Easter 1937.** Records the use of a sealed glass enclosure to protect the convalescent Pope from the elements and crowds during public appearance.
- 8. Franklin Institute on Marconi.** Documents Marconi's earlier heart disease and helps establish that he was not a disease-free control subject.
- 9. NIEHS / National Toxicology Program.** Reports clear evidence of malignant schwannomas in the hearts of male rats exposed to 900 MHz radiofrequency radiation, together with increased cardiomyopathy and some evidence of brain tumours.
- 10. Environmental Health (2026).** Applies standard toxicological risk math to experimental RF evidence and argues that current public exposure limits are far above values estimated to be cancer-protective or reproductive-protective.
- 11. Michelozzi et al., American Journal of Epidemiology (2002).** Reports elevated childhood leukemia incidence near the Vatican Radio station, with risk declining with distance, while carefully refraining from causal conclusions.
- 12. Pope Francis, motu proprio 'Fratello Sole' (2024).** Shows that the agrivoltaic project at Santa Maria di Galeria was framed as supporting the radio station's energy supply, not abolishing the station.
- 13. Vatican News on Pope Leo XIV's 2025 visit.** Confirms that the shortwave transmission centre at Santa Maria di Galeria remained active and was visited by the current Pope.
- 14. Official Holy See and PAS pages.** Confirm the current offices of Pope Leo XIV, Cardinal Pietro Parolin, Archbishop Paolo Rudelli, Archbishop Paul Richard Gallagher, Dr. Paolo Ruffini, Dr. Matteo Bruni, and Professor Joachim von Braun, together with public delivery routes for relevant offices.

Appendix C. Why I keep returning to light

I am not proposing that the Church abandon communication. I am proposing that it stop assuming RF saturation is the default cost of modernity. The visible spectrum lets the Church carry data where the light falls, while fiber carries the backbone where walls and distance demand it. In the Vatican, stone is not a bug. It is a feature. Light respects walls. Rooms keep their boundaries. Sensitive communication becomes physically more containable. Proper encryption is still necessary, but the architecture finally starts helping rather than leaking.

That is why I believe the right long-term answer is not technological retreat. It is a return to bounded, biologically gentler communication forms wherever possible - especially in the spaces where people pray, study, heal, sleep, and grow.