



# IRAN BURNS

## Infrastructures under attack across the middle east

### SUNDAY

based on <https://www.hindustantimes.com/world-news/israel-strikes-tehran-oil-depots-massive-fire-turns-iran-skyline-orange-thick-smoke-videos-us-iran-war-101772940398077.html>

by

Aryan Mudgal

### Israel Strikes Tehran Oil Depots as Fires Light Up Iran’s Skyline

Israeli and U.S. strikes hit multiple oil storage facilities in Tehran and other parts of Iran on Saturday, marking the first reported attacks on the country’s oil infrastructure. Videos shared widely on social media showed huge fireballs and thick plumes of smoke rising into the night sky, casting an orange glow over parts of the capital.

Iran’s Ministry of Oil confirmed that several fuel storage depots in Tehran and the neighbouring province of Alborz had been targeted. In a statement, the Israeli military said it had struck fuel depots and energy complexes in Tehran that it claimed were being used by Iranian armed forces.

Residents across Tehran reported hearing powerful explosions late Saturday night. The blasts followed an earlier Israeli strike on Mehrabad Airport, Iran’s busiest domestic airport.

According to reports cited by The New York Times, the explosions from both the airport attack and a nearby fuel depot were strong enough to shake homes miles away, while smoke spread across surrounding neighbourhoods. Iranian state media said one of the storage facilities hit was located in the southern district of Shahr Rey, near Tehran’s main oil refinery.

Footage circulating online showed towering

flames rising from what appeared to be the Shahr Rey oil depot. Other videos captured a large fire at another storage site on the northern outskirts of Tehran, along a major highway leading toward the affluent suburb of Lavasan.

The Shahr oil depot in north western Tehran—previously targeted by Israel last June—was also struck again, sending a thick column of dark smoke into the sky. Iran’s oil ministry added that a fuel depot in the nearby city of Karaj, west of the capital, had also been hit.

According to Iran’s ambassador to the United Nations, Amir Saeid Iravani, Israeli and U.S. attacks have so far killed at least 1,332 Iranian civilians and injured thousands more. Iranian strikes in response have killed 10 people in Israel. At least six U.S. service members have also died; their remains arrived Saturday at a U.S. Air Force base in Delaware.

The escalating conflict has unsettled global markets. Oil prices have surged to multi-year highs as the Strait of Hormuz remains effectively closed.

Across the Gulf region, several countries reported missile and drone attacks on Sunday. Iran said it would continue striking neighbouring states as the regional conflict entered its second week.

Tehran residents are being urged to stay indoors due to heightened air pollution after US and Israeli strikes targeted an oil depot and refinery.

Tehran Under Toxic Cloud: Iran Warns of ‘Dangerous’ Acid Rain, Fumes After US-Israeli Strikes On Oil Depots

Authorities are monitoring air quality, warning of worsened conditions from pollutants.

Iranian authorities have advised residents of Tehran to remain indoors and limit outdoor activity after air pollution levels spiked following overnight strikes by the United States and Israel on the Iranian capital. Local officials said air quality in Tehran is being closely monitored and warned that conditions could worsen due to pollutants released from damaged industrial facilities causing harmful particles from the attacks to engulf parts of the city.

Clouds of black smoke covered sections of Tehran on Sunday morning, turning day into night, after strikes hit an oil depot and refinery overnight. The attack appeared to mark the first time a civilian industrial facility has been targeted in the ongoing conflict.

The Iranian Red Crescent also warned of potential acid rain caused by toxic chemicals released from fuel storage tanks struck during the attacks. According to Iran’s state broadcaster IRIB, the chemicals could cause chemical burns to the skin and severe respiratory damage if people are exposed. Authorities said they will continue monitoring the situation and provide updates through official channels if environmental conditions deteriorate further.

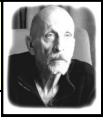
based on: <https://www.aljazeera.com/news/2026/3/8/how-targeting-of-desalination-plants-could-disrupt-water-supply-in-the-gulf>

By Priyanka Shankar

### Targeting Desalination Plants

### How attacks on desalination plants could disrupt water supply in the Gulf.

Military attacks on desalination plants present a serious threat to water security in the Gulf region, which is already one of the



most water-scarce areas in the world. Bahrain recently reported that an Iranian drone strike caused damage to a desalination facility, marking the first instance during the eight-day conflict between Iran, the United States, and Israel in which a Gulf country has said such infrastructure was

while blocking salts and other dissolved substances. The most widely used membrane technology is reverse osmosis. Many countries in the Gulf Cooperation Council (GCC) rely on reverse osmosis because it consumes less energy than other desalination methods.

water 70 percent of Saudi Arabia's drinking water Saudi Arabia is also the world's largest producer of desalinated water. Environmental researcher Naser Alsayed explained that desalination played a key role in the region's development. After oil was discovered in the late 1930s, population growth and economic expansion created water demands that natural freshwater sources could not meet. As a result, desalination plants became essential infrastructure. Alsayed noted that disruptions to desalination facilities could threaten both economic stability and everyday life in the Gulf.

In many GCC states—particularly smaller ones such as Bahrain, Kuwait, and Qatar—desalinated water is the main source of freshwater for households. Because this water is primarily used for drinking and daily consumption, attacks on desalination plants also have major humanitarian implications. Although Iran also uses desalination technology, particularly in coastal areas such as Qeshm Island, the country has access to rivers and dams. This means it is less dependent on desalination than many Gulf nations.

**What happens if a desalination plant is attacked?**

The Gulf's reliance on desalination infrastructure makes it vulnerable during times of conflict.

During the 1990–1991 Gulf War, Iraqi forces deliberately destroyed much of Kuwait's desalination capacity, causing severe damage to the country's water supply.

Hydrologist Raha Hakimdavar warned that attacks on desalination facilities could also have long-term consequences for food production. Agriculture in the region largely relies on groundwater resources.

If desalinated water supplies are disrupted, governments may divert groundwater toward domestic consumption instead of agriculture, placing further pressure on food systems. This is particularly concerning because the region already depends heavily on food imports and faces potential supply risks linked to



**The desalination plant**

targeted. The strike occurred shortly after Iranian Foreign Minister Abbas Araghchi stated that a freshwater desalination plant on Qeshm Island in southern Iran had been attacked by the United States. Writing on X, he said the incident had disrupted water supplies to around 30 villages and warned that attacks on Iran's infrastructure could have serious consequences.

Although Tehran has not officially commented on the incident in Bahrain, the event has highlighted the vulnerability of Gulf countries, many of which depend heavily on desalination for their water supply.

This raises important questions: How vital are desalination plants to the Gulf region, and can water security be maintained if military operations expand to include energy and civilian infrastructure?

**What are desalination plants?**

Desalination plants convert seawater into fresh water that can be used for drinking, irrigation, and industrial purposes.

The desalination process removes salt, algae, and other impurities from seawater. This is typically done using either thermal processes or membrane-based technologies.

According to the US Department of Energy, thermal desalination works by heating seawater until it evaporates into steam, leaving impurities behind. The steam is then condensed back into liquid water suitable for human use.

Membrane-based systems operate differently. In these systems, seawater is pushed through a semi-permeable membrane that allows water molecules to pass through

**Why are desalination plants crucial in the Gulf?**

Water scarcity is a defining challenge for the Gulf region due to its arid climate and limited rainfall. Natural freshwater resources are extremely limited.

According to a 2020 report by the Gulf Research Centre, groundwater and desalinated water together provide around 90 percent of the region's main water resources.

However, groundwater supplies have been deteriorating in recent years, partly because of climate change and overuse. As a result, Gulf countries increasingly depend on large-scale seawater desalination to meet their water needs.

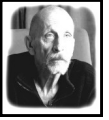
More than 400 desalination plants operate along the Arabian Gulf coastline, stretching from the United Arab Emirates to Kuwait, supplying water to millions of people in the region.

A 2023 study by the Arab Center Washington DC found that GCC countries account for approximately 60 percent of the world's desalination capacity and produce nearly 40 percent of global desalinated water.

Desalination provides around: 42 percent of the UAE's drinking water 90 percent of Kuwait's drinking water 86 percent of Oman's drinking



**location**



tensions around the Strait of Hormuz.

A 2010 report by the CIA similarly warned that disruptions to desalination infrastructure in Gulf countries could have greater consequences than the loss of any single industry or commodity.

However, the severity of the impact would vary by country.

Saudi Arabia, for example, has some resilience due to its geographic size and desalination plants on both the Arabian Gulf and the Red Sea. The United Arab Emirates has also developed contingency measures, including water storage capable of supplying the country for around 45 days under its Water Security Strategy 2036.

In contrast, smaller states such as Qatar, Bahrain, and Kuwait are far more vulnerable because they rely heavily on desalination

and have limited strategic water reserves.

Alsayed also noted that the psychological impact of such attacks could be significant. Since water is essential for survival, any perceived threat to supply could quickly trigger fear and public anxiety.

#### How can water security be protected?

As regional tensions continue and attacks expand to include energy and civilian infrastructure, experts argue that water security must be addressed collectively rather than individually by Gulf states.

Alsayed emphasised that stronger regional coordination among GCC countries is essential.

Although the GCC Unified Water Strategy 2035 called for member states to develop integrated national energy and water plans by 2020, this goal has yet to be fully

achieved.

Greater cooperation could include shared desalination networks, regional strategic water reserves, and diversification of water sources across the region.

Hakimdarav noted that desalination will remain the primary water source in the Gulf for the foreseeable future, as there are currently no viable large-scale alternatives.

However, countries can strengthen resilience by expanding strategic water storage systems and investing in smaller, decentralised desalination plants powered by renewable energy. Such measures could reduce reliance on a few large facilities and make water supply systems less vulnerable during conflicts.

## Home News

based on <https://www.theguardian.com/business/2026/mar/06/bailiffs-debt-recovery-homes-water-england-wales>

Helena Horton Environment reporter

### Water companies send debt collectors to tens of thousands of households for relatively small unpaid bills

New figures indicate that tens of thousands of households in England and Wales are visited each year by bailiffs acting on behalf of water companies to recover unpaid bills.



Data examined by the House of Commons Environment, Food and Rural Affairs (Efra) Committee shows that many of these visits relate to debts of less than £1,000.

Bailiffs are enforcement agents authorised by the courts to collect outstanding debts. They have the legal power to seize belongings such as vehicles, jewellery, or electrical equipment if payments are not made.

The data suggests that the likelihood of a bailiff being sent can vary significantly depending on where a customer lives. Some water companies make far greater use of enforcement agents than others. For example, Wessex Water reported that it has not used

bailiffs for a decade. By contrast, when population size is taken into account, the companies that relied most heavily on bailiffs in 2025 were South West Water, Southern Water and Yorkshire Water.

The number of enforcement visits by some companies has increased sharply over time. Yorkshire Water, for instance, instructed bailiffs to visit customers' homes 405 times during the 2016–17 financial year. By 2024–25, that number had risen dramatically to 6,124 visits.

Other companies have also seen peaks in the use of debt collectors. Severn Trent issued 11,574 bailiff instructions in 2022, while Southern Water recorded 15,707 in 2019.

Policies about when bailiffs are used differ widely between companies. Northumbrian Water told the committee that it avoids sending bailiffs to households where residents are known to receive means-tested benefits. In contrast, Southern Water stated that such customers could still face legal action. Severn Trent also confirmed it does not routinely check whether someone receives means

-tested benefits before pursuing enforcement. However, some restrictions do exist. Southern Water said it would not pursue legal action in cases where a customer is affected by conditions such as dementia or a serious illness.

The practice has drawn criticism from some politicians. Labour MP John McDonnell argued that it was unfair for water companies to pursue struggling households while executives face limited accountability for environmental breaches. He noted that only five water company directors have been prosecuted in the past three decades, compared with the large number of

individuals targeted by bailiff action each year.

McDonnell said the system appears more focused on pursuing families who are unable to pay their bills than holding company leaders responsible for pollution incidents and environmental damage.

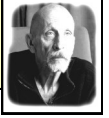
Water companies told the committee that enforcement action is intended primarily for customers who are believed to have the financial means to pay but refuse to do so.

The issue arises at a time when the water sector itself is facing major financial pressures. Companies operating in England and Wales collectively hold more than £80 billion in debt. In addition, they have incurred around £200 million in environmental penalties for offences such as unlawful sewage discharges.

Alistair Carmichael MP, chair of the Efra committee, said the figures highlighted both the scale of bailiff use and the inconsistent approaches taken by different providers. He added that the data should also be viewed against the backdrop of rising living costs affecting many households in recent years.

Carmichael emphasised that legal action can cause serious distress for individuals and families, urging water companies to review their policies and use enforcement measures only when absolutely necessary. The committee has passed the information to Citizens Advice and the Consumer Council for Water so the issue can be examined further. In response, Yorkshire Water said its priority is to identify vulnerable customers and provide assistance through early engagement, financial support programmes, clear communication and referrals to outside organisations for help with money problems. The company said enforcement measures are used only as a final option and only when customers are believed to have the ability to pay but choose not to.

Southern Water also stated that it offers support to customers facing financial hardship, including discounted tariffs for those on lower incomes. The company added that it is undertaking its largest investment programme to date, worth approximately £8.5 billion, aimed at improving services and protecting the environment.



South West Water said enforcement action is only considered after other support options have been explored, emphasising that helping customers who are struggling financially remains its main priority. Severn Trent said it has expanded financial assistance schemes and does not want customers to experience difficulty paying their bills. However, the company added that enforcement may still be used against a small number of customers who are believed to be able to pay but deliberately avoid doing so, and that bailiffs are never used against vulnerable individuals.

based on

<https://news.sky.com/story/face-of-unknown-man-found-dead-in-reservoir-revealed-for-the-first-time-in-facial-reconstruction-13516844>

Tom Parmenter

### Police appeal for help

Police ask for public assistance to identify unidentified man discovered in reservoir. Authorities are appealing for information that could help identify a man whose body was discovered wearing a wetsuit in a remote Welsh reservoir, a case that has puzzled investigators for more than a year. The mystery began shortly after 8am on 17 October 2024 when a dog walker discovered a body floating face down in the Claerwen Reservoir in Mid Wales. The man was wearing a wetsuit and had no identification or personal belongings with him.



Despite extensive investigations over the past 16 months, police have been unable to establish who he was. Detectives now hope that releasing a reconstructed image of the man's face could lead to someone recognising him.

Detective Inspector Anthea Ponting said the circumstances surrounding the case have left officers with very few clues. "There were no possessions nearby, nothing left on the shoreline and no vehicle in the area," she explained.

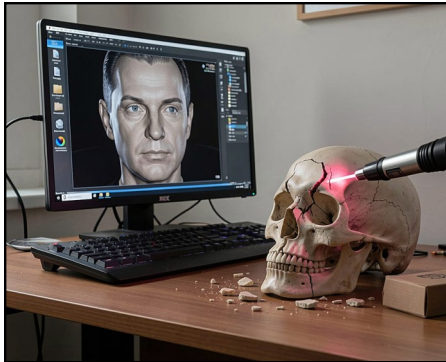
Large-scale searches of the surrounding area were carried out, including helicopter patrols, drones, officers checking the banks of the reservoir and specialist teams searching by boat. However, the searches produced no further evidence.

The only item linked to the man was a size XL Zone 3 Agile wetsuit he was wearing when

he was found.

Police have pursued numerous lines of inquiry. Officers reviewed missing persons reports, searched medical and criminal databases and even circulated information internationally through Interpol. Despite these efforts, his identity remains unknown.

To assist the investigation, forensic specialists from Face Lab at Liverpool John Moores University created a digital facial reconstruction using CT scans of the man's skull.



Professor Caroline Wilkinson, who led the reconstruction, said the man appeared to be middle-aged and had a distinctive dental feature that might help someone recognise him. His teeth did not meet fully when his mouth closed — a condition known as an open bite — which would likely have affected how his lips naturally rested.

Wilkinson said the reconstruction is a reliable representation of the man's appearance. She added that cases requiring forensic reconstruction are often particularly complex because the individual may not have been reported missing or could have been living in unusual circumstances.

Investigators believe the body had been in the water for around 12 weeks before it was discovered, suggesting the man may have entered the reservoir during the summer of 2024.

One possibility is that he had been swimming, potentially carrying personal items in a waterproof bag, though no evidence has been found to support that theory.

Claerwen Reservoir stretches for roughly four and a half miles, making a full search of the lakebed impractical. Authorities have ruled out draining the reservoir.

A post-mortem examination was unable to determine the cause of death.

Detectives say identifying the man remains the key to solving the case. DI Ponting said the main aim is to discover who he was so that relatives or friends can be located.

She said police want to ensure that the man can be given a respectful and proper burial once his identity is known.

Anyone who recognises the description or believes they may know who the man is — or knows someone who has gone missing

and may match him — is asked to contact Dyfed-Powys Police through the case's online reporting portal.

based on based on <https://www.bbc.co.uk/news/articles/cp81pe1p393o>

by Harry Whitehead, Guernsey and George Thorpe, Channel Islands

### Mother upset after receiving large fine for throwing away batteries

A mother has said clearer warnings are needed about battery disposal after she was given what she described as a "devastating" fine of £11,500.

Krystal Ogier explained that the batteries had been inside children's toys that were thrown away when her family moved house in Guernsey. In total, 23 AA batteries were unknowingly disposed of in a one-tonne waste bag she had ordered from a private waste company, Island Waste.

When the company informed her that the penalty was £500 for each battery discovered in the rubbish, Ogier said she was shocked and extremely distressed. The total fine initially came to £11,500, although the company later reduced the amount to £1,000. Despite the reduction, she said the cost would still have a significant impact on her finances.

Island Waste said strict rules about battery disposal are in place because of the serious fire risks they can pose. The company also said it had worked with Ogier to arrange manageable payment terms.

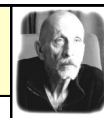
Ogier explained that she was aware loose batteries should not be placed in the large waste bags provided by the company. However, she said she did not realise the toys she had thrown away still contained batteries.

Although she accepts responsibility for the mistake, she said the situation left her extremely anxious. She recalled being overwhelmed when she first heard about the penalty.

"My head was spinning and I was crying on the phone," she said.

Ogier said she understood the company's need to discourage unsafe waste disposal but felt the penalties were far too high. She believes customers should receive clearer warnings about potential fines when booking





waste services online.

She suggested the information should be displayed prominently so people fully understand the consequences before placing orders.

Ogier added that her family had moved out of their previous home because living costs had become too expensive, and the additional financial burden had been extremely difficult to deal with.

Island Waste director Faye Grime said the company provides clear guidance on its website about disposing of batteries safely. Customers must also confirm they have checked their waste before collection by ticking a declaration box when placing an order.

Grime said Ogier had agreed to the company's waste disposal terms, which include details about penalties for prohibited items.

She added that batteries present a serious hazard if disposed of incorrectly. Fires at waste processing sites can spread quickly, putting workers at risk and causing damage to property and the surrounding environment.

## SCIENCE

based on <https://www.livescience.com/space/astronomy/exposed-cranium-leaks-its-gory-secrets-in-new-james-webb-telescope-images-space-photo-of-the-week>

By Jamie Carter

### NASA's James Webb Space Telescope Unveils New Infrared Views of the "Exposed Cranium" Nebula

NASA's James Webb Space Telescope (JWST) has captured remarkable new infrared images of the brain-like PMR 1 nebula, often nicknamed the "Exposed Cranium." This unusual object represents the final stage in the life of a dying star.

The images show a circular nebula made of glowing clouds of golden gas enclosed within a blue bubble. In one image, more background stars are visible through a translucent outer shell, while the second image shows a stronger yellow-green background and a deeper blue surrounding bubble.

The nebula was observed using two of Webb's instruments: the Near-Infrared Camera (NIRCam) on the left and the Mid-Infrared Instrument (MIRI) on the right.

(Image credit: NASA, ESA, CSA, STScI; Image Processing: Joseph DePasquale, STScI).

Object: PMR 1 nebula, also called the "Exposed Cranium"

Location: About 5,000 light-years away in the constellation Vela

Released: Feb. 25, 2026

The powerful telescope has revealed previously unseen details of this cosmic structure, which resembles a glowing brain inside a transparent skull.

PMR 1 is classified as a planetary nebula—an expanding shell of ionized gas and dust ejected by a star near the end of its life. When the star's nuclear fuel runs out, it sheds its outer layers, creating these luminous clouds. The nebula was originally detected in

2014 by the Spitzer Space Telescope, an earlier infrared observatory, but it has received little detailed study until now.

Its unusual appearance has earned it the nickname "Exposed Cranium," as the colorful gas cloud resembles a brain encased in a clear skull.

The new observations combine data from two different Webb instruments. Each observes infrared light at different wavelengths, allowing scientists to study features that would otherwise remain hidden.

In the NIRCam image, the outer bubble appears bright with a glowing white edge, while the inner clouds shine in shades of orange. A dark vertical band cuts through the center of the nebula, creating the illusion of two separate hemispheres—much like the two halves of a brain. Through the nebula's outer shell, distant stars and galaxies can also be seen.

The MIRI image reveals a different perspective. In mid-infrared light, the outer bubble appears bluish with hints of purple, while the inner gas clouds look denser and more intricate. The central dark lane is less obvious here because it is partly hidden by dust and gas.

This dark feature demonstrates the importance of Webb's ability to observe the universe at multiple wavelengths. While the lane stands out clearly in the NIRCam image, the MIRI view suggests it may be linked to two jets of gas extending from the top and bottom of the nebula. Together, the two observations provide astronomers with a more complete understanding of the processes shaping this striking cosmic "cranium."

The differences in what Webb's infrared instruments reveal and conceal within the PMR 1 "Exposed Cranium" nebula is apparent in this side-by-side view. More stars and background galaxies shine through the view of Webb's NIRCam (Near-Infrared Camera), while cosmic dust glows more prominently in the light captured by MIRI (Mid-Infrared Instrument).

The dark centre lane that contributes to this

nebula's distinctive brain-like appearance is more noticeable in NIRCam, but its apparent role in the ejection of material at the top and bottom of the nebula is seen more clearly in MIRI's view. Observing the cosmos in various wavelengths of light provides a more complete picture of how the universe works.

Press release from <https://www.seti.org/news/why-seti-might-have-been-missing-alien-signals/>

### Why SETI Might Have Been Missing Alien Signals

A new study by researchers at the SETI Institute suggests stellar "space weather" could make radio signals from extraterrestrial intelligence harder to detect. Stellar activity and plasma turbulence near a transmitting planet can broaden an otherwise ultra-narrow signal, spreading its power across more frequencies and making it more difficult to detect in traditional narrowband searches.

For decades, many SETI experiments have focused on identifying spikes in frequency—signals unlikely to be produced by natural astrophysical processes.

But the new research highlights an overlooked complication: even if an extraterrestrial transmitter produces a perfectly narrow signal, it may not remain narrow by the time it leaves its home system.

In most techno signature searches, scientists account for distortions that happen as radio waves travel across interstellar space. This study focuses on what can happen closer to the source. Plasma density fluctuations in stellar winds, as well as occasional eruptive events such as coronal mass ejections, can distort radio waves near their point of origin, effectively "smearing" the signal's frequency and reducing the peak strength that search pipelines rely on.

A planet's radio signal may begin as a sharp tone (left, white) but can be spread out by the star's surroundings plasma winds into a wider, fainter signal (right, green). The study suggests we may be missing signals by mostly looking for the sharp white shape instead of



The PMR 1 "Exposed Cranium" nebula as seen by Webb's NIRCam (left) and MIRI (right) instruments. (Image credit: NASA, ESA, CSA, STScI, Image Processing: Joseph DePasquale (STScI))



The truth is here, not out

# THE RAGGED-RAG

<http://ragged-rag.net>

the broader green one Turbulent plasma near distant stars could blur ultra-narrow signals before they leave their home star systems, making them difficult to detect. SETI searches are often optimized for extremely narrow signals. If a signal gets broadened by its own star's environment, it can slip below our detection thresholds, even if it's there, potentially helping explain some of the radio silence we've seen in techno signature searches," said Dr. Vishal Gajjar, Astronomer at the SETI Institute and lead author of the paper.

strategies that remain sensitive even when signals are not perfectly razor-thin. "By quantifying how stellar activity can reshape narrowband signals, we can design searches that are better matched to what actually arrives at Earth, not just what might be transmitted," said Grayce C. Brown, co-author of the study and research assistant at the SETI Institute. This project exemplifies the type of high-risk, high-impact research supported through the SETI Institute's STRIDE program (Support Technology, Research, Innovation, Development, and Education), which enables

government agencies, including NASA and NSF.

based on <https://www.theguardian.com/society/2026/mar/09/nhs-dental-crisis-private-dentist-patient-increase-england>  
 Denis Campbell Health policy editor

## More low-income households forced into private dentistry, watchdog says

A growing number of people in England are paying for private dental care because they cannot access NHS treatment, according to Healthwatch England. The patient watchdog found that the proportion of people using private dentists rose from 22% in 2023 to 32% last year. Among those who describe themselves as financially struggling, the figure has nearly

doubled from 14% to 27%.

Healthwatch warned that dental care is increasingly becoming a "one-tier" service, where private treatment is the only option for many patients. People on low incomes are particularly affected, facing what the watchdog calls a "double penalty".



Private treatment can cost far more than NHS care – for example, a routine check-up costing about £64 privately compared with £27.40 on the NHS.

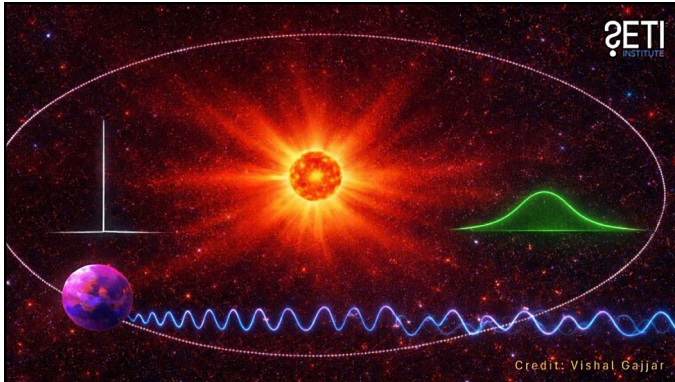
At the same time, some patients who should qualify for free NHS treatment cannot access it because they are unable to find an NHS dentist.

Rebecca Curtayne of Healthwatch said the shortage of NHS appointments is pushing vulnerable people into treatment they struggle to afford, while others go without care entirely.

Patient groups say the situation shows NHS dentistry is failing many people. The Patients Association warned that lack of affordable dental care can leave patients in severe pain and damage both physical and mental wellbeing.

Meanwhile, the Competition and Markets Authority has launched an investigation into the UK's £8.4bn private dental sector to examine costs, access and rising prices.

Dentists say the shortage of NHS care is largely due to underfunding, arguing that payments for some NHS treatments are so low they operate at a loss.



To quantify the effect, the team built on something we can measure directly: radio transmissions from spacecraft in our solar system. Using empirical measurements from solar system probes, they calibrated how turbulent plasma broadens narrowband signals and then extrapolated those measurements to a wide range of stellar environments.

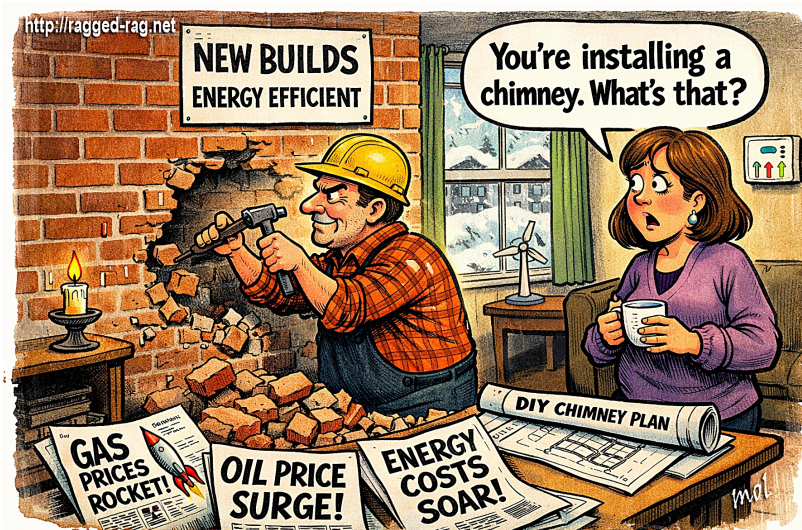
The result is a practical framework for estimating how much broadening could occur for different types of stars and observing frequencies—especially in the "space weather" conditions expected around active stars. The work points to a strong implication for target selection and search design. M-dwarf stars, which constitute about 75% of stars in the Milky Way, have the highest likelihood that any narrowband signals will get broadened before leaving the system. The authors argue that this motivates search

SETI Institute researchers to explore emerging questions and develop novel tools and techniques to test them. STRIDE is funded by the Franklin Antonio Bequest, created to accelerate breakthrough science and education efforts at the SETI Institute.

Paper: <https://iopscience.iop.org/article/10.3847/1538-4357/ae3d33>

### About the SETI Institute

Founded in 1984, the SETI Institute is a non-profit, multi-disciplinary research and education organization whose mission is to lead humanity's quest to understand the origins and prevalence of life and intelligence in the Universe and to share that knowledge with the world. Our research encompasses the physical and biological sciences and leverages expertise in data analytics, machine learning and advanced signal detection technologies. The SETI Institute is a distinguished research partner for industry, academia and



#53 - White mates in 2

