# Observations of ELF EMF Activity Anomalies Correlated with an Atypical Depression Episode: A Self Reported Case Study from August 18-19, 2025

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### Abstract

This paper presents observations of Extremely Low Frequency (ELF) Electromagnetic Field (EMF) activity anomalies recorded during the night of August 18, 2025, through the morning of August 19, 2025. These anomalies are correlated with a personal episode of atypical depression experienced upon waking, spanning from approximately 5:00 AM to 9:30 AM, during which the subject struggled to get out of bed. Key anomalies include a prolonged artifact at midnight lasting 20 minutes with magnitudes up to 1.5  $\mu$ T, and two shorter but more intense artifacts not exceeding 15 minutes each, reaching up to 1.7  $\mu$ T in amplitude modulations. The study explores potential links between ELF EMF exposures and mood disturbances, using time-series data visualizations of magnitude in  $\mu$ T (Micro Tesla Units).

# 1 Introduction

Extremely Low Frequency (ELF) Electromagnetic Fields (EMFs) range as measured responsive from 0.1 to 300 Hz and are generated by various sources, including power lines, electrical appliances, and natural or man-made exotic phenomena. Recent interest has focused on their potential biological effects, particularly on human health and mood regulation. This case study documents anomalous ELF EMF activity observed in a residential setting and its temporal correlation with an atypical depression episode.

The observations span from the evening of Monday, August 18, 2025, through the morning of Tuesday, August 19, 2025. The subject reported a severe depressive state upon partial awakening at 5:00 AM, lasting until 9:30 AM, characterized by profound lethargy and difficulty in initiating daily activities. Concurrently, ELF EMF monitoring revealed distinct anomalies, including one at approximately midnight and two additional shorter events.

This report aims to describe the methodology of data collection, present the results with visual placeholders, and discuss possible implications for further research into EMF-mood interactions.

### 2 Methods

ELF EMF activity was monitored using a sensitive magnetometer device capable of detecting fields in the ELF range with microTesla ( $\mu$ T) resolution. Data was logged continuously at a sampling rate of 1 Hz from 8:00 PM on August 18, 2025, to 10:00 AM on August 19, 2025.

The monitoring setup was placed in the subject's bedroom environment. Anomalies were defined as deviations exceeding 1.0  $\mu$ T from baseline levels (typically below 0.3  $\mu$ T in the ambient setting). Subjective mood data was self-reported via a journal entry, noting the onset and duration of the depressive episode.

Data analysis involved time-series plotting of EMF magnitudes at 1 sec resolution, with anomalies high-lighted. Images presented are captures from the "Live EMF Plotter 3.0" by amfile.org, representing actual visualizations of the data.

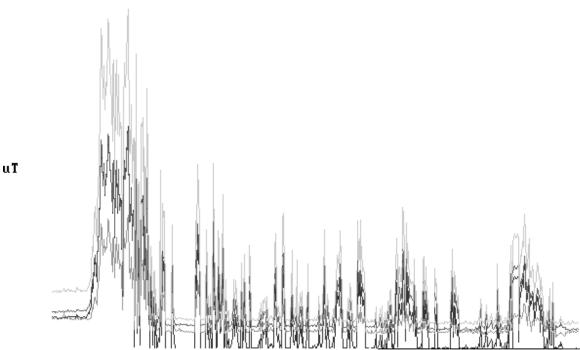
## 3 Results

The monitoring captured three notable ELF EMF anomalies:

- A prolonged artifact at approximately midnight (00:15 on August 19, 2025), lasting 20 minutes, with peak magnitudes of 1.5  $\mu$ T (see Figure 1).
- Two shorter artifacts, each not exceeding 15 minutes, with higher intensities up to 1.3  $\mu$ T and 1.7  $\mu$ T, characterized by amplitude modulations (see Figures 2 and 3).

These events occurred prior to or during the reported depressive episode from 5:00 AM to 9:30 AM. Figure 1 shows the time-series plot of the midnight anomaly.

Live EMF Plotter 3.0 by AmFile.org August 2025 Scope: 50271 to 51600 (8/19/2025 00:14:15 to 8/19/2025 00:36:24 )



Peak X: .931 Y: .931 Z: .568 M: 1.433 uT X: Dark Gray, Y: Medium Gray, Z: Light Gray, Mag: Lighter Gray [H]elp [P]rint Mode

Figure 1: ELF EMF time-series data showing the 20-minute anomaly at midnight (00:14:15 to 00:36:24) with a peak magnitude of 1.5  $\mu$ T on August 19, 2025.

Figure 2 represents one of the shorter, higher-intensity anomalies.

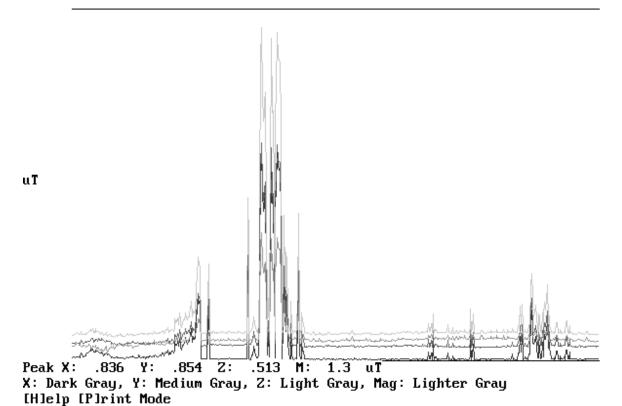
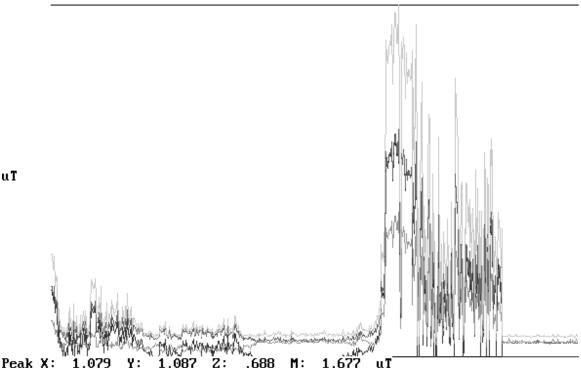


Figure 2: ELF EMF data of a short anomaly with a peak intensity of 1.3  $\mu$ T (01:23:16 to 01:45:25) on August 19, 2025.

The third artifect exhibited more intense features for about 5 minutes over 13 minutes of anomalous activity.



X: Dark Gray, Y: Medium Gray, Z: Light Gray, Mag: Lighter Gray [H]elp [P]rint Mode

Figure 3: ELF EMF data of a short anomaly with a peak intensity of 1.7  $\mu$ T (04:02:16 to 04:15:26) on August 19, 2025, approximately 40 minutes before the subject woke feeling depressed.

The depressive episode aligned temporally with the post-anomaly period, suggesting a possible delayed or accumulative effect.

### 4 Discussion

The observed ELF EMF anomalies may indicate external sources such as electrical surges, geomagnetic disturbances, or an exotic man-made phenomenon. The correlation with the atypical depression episode raises questions about potential neurobiological impacts, as ELF EMFs have been hypothesized to influence melatonin production, circadian rhythms, and mood-regulating brain regions.

Limitations include the single-subject nature of this case study and reliance on self-reported mood data. Future research should employ longitudinal and long-duration exposure to low-magnitude ELF/EMF controlled experiments with multiple participants and advanced neuroimaging to substantiate any causal links to natural or suspected exotic man-made emissions and human emotional condition response.

### 5 Conclusion

This report documents ELF EMF anomalies temporally associated with an atypical depression episode on August 19, 2025. While causation is not established, the observations warrant further investigation into environmental EMF/ELF influences on mental health.