

MENTAL ACCESS WINDOW

**by
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Abstract

What if the ability to do remote viewing, PK, and other high performance mental techniques could be induced with high-tech means? There is some evidence that there is a mental access window (MAW) when the predominate frequency of an individual's electroencephalogram (EEG) is 7.81 to 7.83 Hz. This is the same frequency range in which slight oscillations in the earth's magnetic field occur, known as "Schumann Resonance". (Interestingly, this frequency also corresponds to REM sleep and hypnogogic imagery.) Houck first learned of the ideas from Dr. Bob Beck when he purchased a simple EEG biofeedback unit from Beck. The unit provides auditory feedback of brain activity to the user. Beck suggested that they make a recording of an input signal of exactly 7.81 Hz. Houck listened to the EEG unit attached to his head in one ear while simultaneously listening to the 7.81 Hz (using frequency modulation, the EEG signal is combined with a 2000 Hz tone so it can be heard) recording in the other ear. After a few minutes of relaxing, the two sounds became very similar, and then --- a full blown out-of-body experience. Of the 45 people who have tried this equipment, approximately one-half have reported either a full blown or partial out-of-body experience. This experience led to evaluating the frequency spectrum of people's EEGs, and has resulted in some correlations with the type of individual. For example, psychics and geniuses have strong components of their EEG frequency in the MAW, even in their awake state.

Introduction

For over twenty years, I have been interested in "Remote Viewing". Even though this phenomenon has been around since the beginning of man, only since the early 1970's has it been researched for training and application, originally by Targ and Puthoff at the Stanford Research Institute (SRI) International in Menlo Park, California¹. They coined the term "Remote Viewing" in an attempt to describe an individual's ability to have mental access to remote places and "see" what was there. In the metaphysical community this ability is known as clairvoyance.

In the late 1970's, I began to conduct experiments in an attempt to replicate some of the SRI experiments. I was sufficiently impressed by what I observed during these experiments that I concluded that humans really could send their minds out to remote places and not only "see", but all other body senses also have access to information at that remote location. This is why some research laboratories began calling the phenomenon "Remote Perception". In 1980, I wrote a paper² to document my thoughts about how, conceptually, the human brain/mind might be able to access information at locations where the viewer had never been. Some of the key points are listed below:

a. Each person has two complete sets of senses. One set is the familiar physical senses (vision, hearing, feeling, smelling, and taste). The other set I postulate is associated with the mind and accesses information which is not necessarily local to the physical body. The brain processes both sets of senses, as shown in Figure 1.

b. There is a central storage system where all information is stored, both past and possible future events. I call this the Space Time Unit (STU). The original acronym was intended to be funny --- you know, where everything is. Of course, engineers are not known for being great spellers, especially this one. The STU is probably located in another dimension, other than our normal space-time dimensions.

c. When the mind accesses a remote location, it scans in time until it locks onto a "peak emotional event" at that location. The information at that place and time is then available in all sensory detail to the individual because it is being processed by the brain. It was this idea that led to the metal bending experiments which have become known as PK Parties³. Figure 2 is an attempt to display the type of feedback loop that would have to occur, with the brain

Remote Viewing



Remote PK

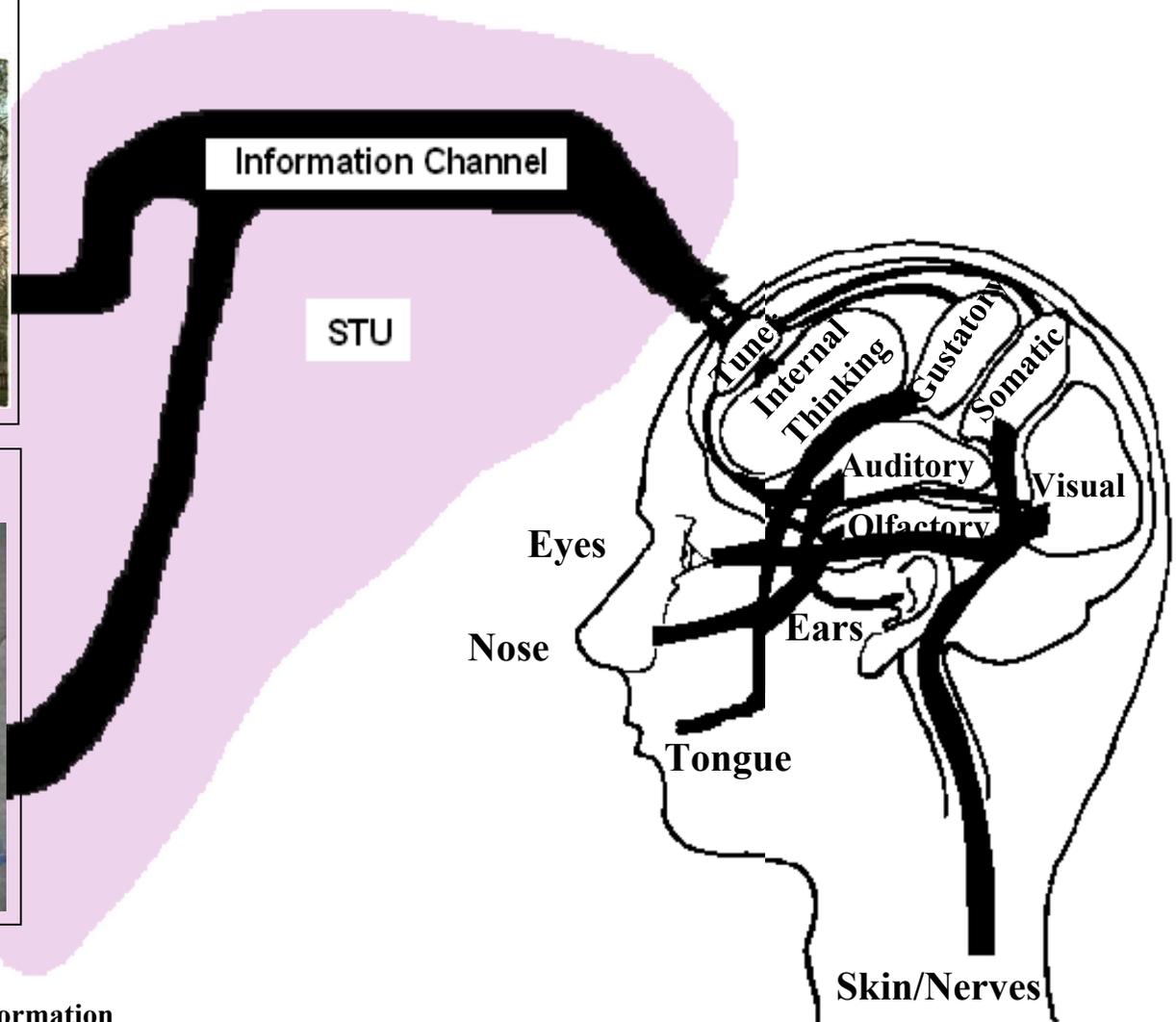


Figure 1. Mind/Brain access to remote information

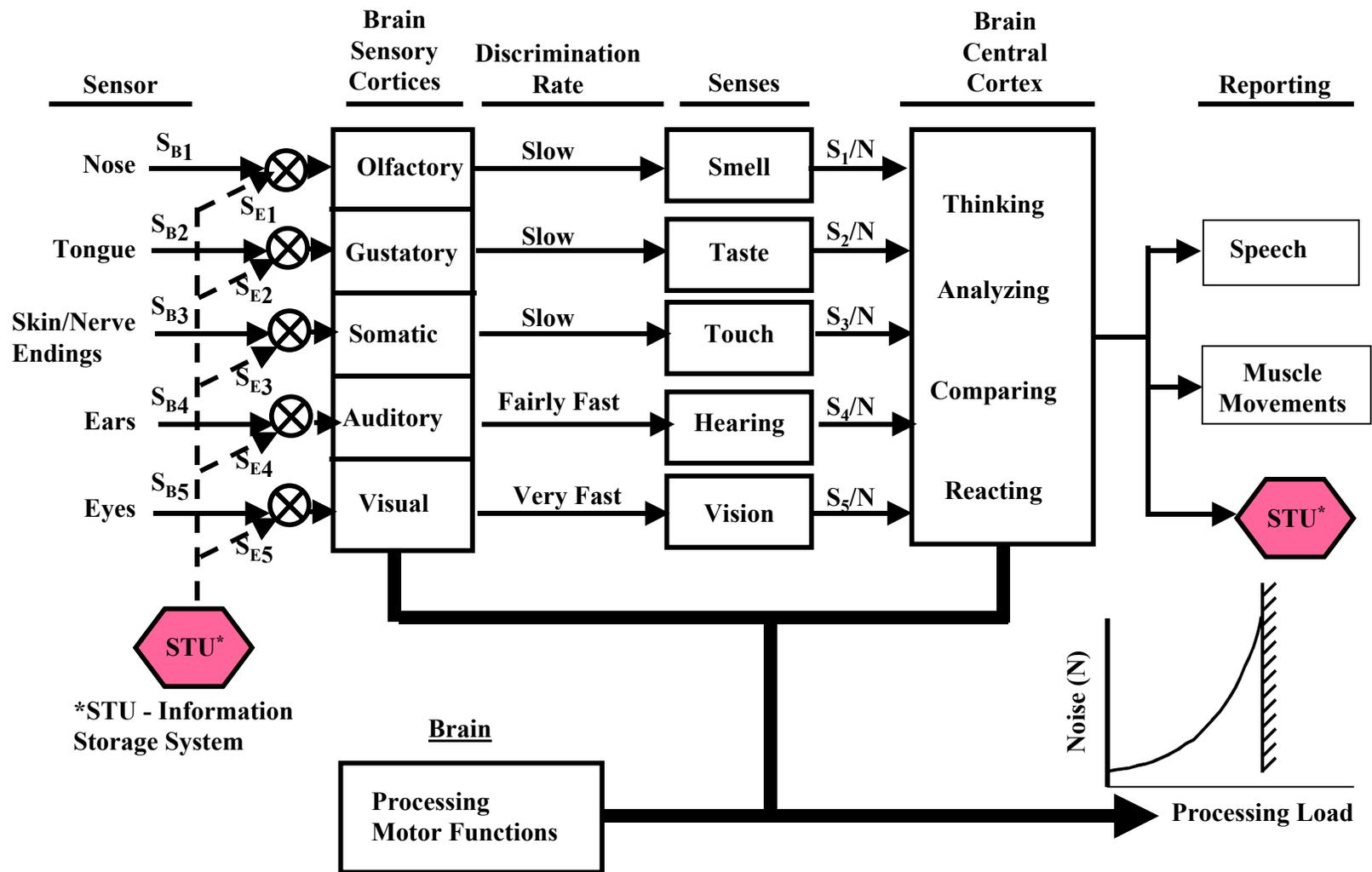


Figure 2. Model of human brain interaction with senses

constantly transmitting information into the STU and constantly receiving information both from the physical senses and the STU. The figure shows the information being added in each sensory type (body sensory signals represented by S_{Bj} where i is 1 through 5 for each of the senses, and external sensory signals represented by S_{Ej}) and processed by the appropriate cortex of the brain. The processed sensory signal (S_j) to brain background noise (N) is critical to the clarity with which a person perceives that sensory information. The background brain noise seems to be a function of the total brain processing load (the slow senses like taste and smell, do not contribute much background noise whereas hearing and vision require much more processing which results in more background noise). With this model, memory is stored in the STU. Normally, the sensory signals from an individual's physical senses are so strong, they overwhelm the signals from the external senses, and the individual is unaware of those signals. However, when the signals from the physical body are reduced to the point where the external signals are completely dominate, then the person has a full blown out-of-body experience or a dream which can combine data from memory and other information in the STU. The key point is that the brain is still processing the information, even though the individuals think they are at some remote location during an out-of-body experience.

While parameters for helping people learn how to do Remote Viewing are somewhat understood (e.g., deep relaxation, quiet surroundings, starting by accessing with the slow senses like smell), the transfer mechanism for the information access and the conditions which promote the brain processing of the remote senses are not well understood. This paper is an accumulation of my thoughts on a possible correlation of an individual's electroencephalograph (EEG) characteristics and the earth's magnetic field oscillations, known as Schumann resonance. Helping individuals to achieve their EEG at the proper frequency should then allow them to have better mental access to the STU, which in turn should improve their performance on any mental task.

Schumann Resonance

In 1952, a German mathematician, Schumann, postulated that the lightning bolts throughout the earth stimulate the cavity between the earth surface and ionosphere to resonate at extremely low frequencies (ELF), causing the earth's magnetic field to oscillate at these frequencies⁴. He suggested that these oscillations would be less than 11 Hz. The magnetic detection equipment

available at that time was not sufficiently sensitive to measure these oscillations. A refinement on his postulation was published in 1957⁵. In 1961 the National Bureau of Standards actually measured these magnetic field oscillations⁶, as shown in Figure 3.

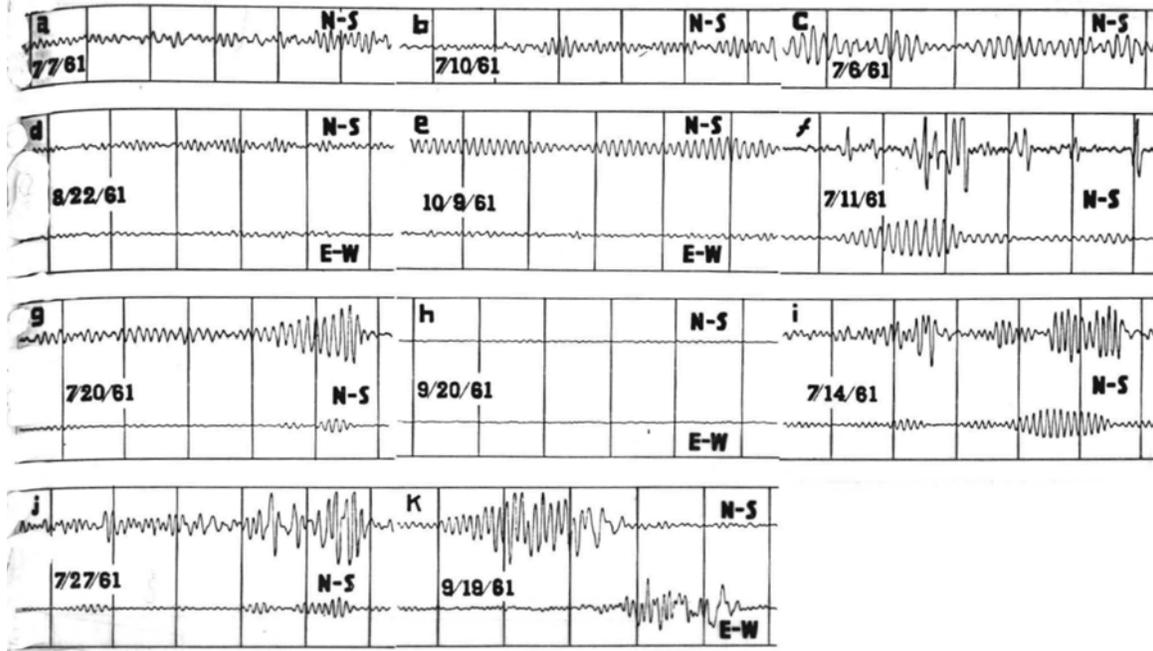


Figure 3. National Bureau of Standards ELF Measurements

The eleven samples shown have the associated date shown in the figure. There were two detection coils, one with the axis pointed north/south (N-S) and the other pointed east/west (E-W). Soon after, additional measurements were made and summarized in a frequency presentation, shown in Figure 4, as presented in a report done for the CIA⁷. Wortz suggested the primary Schumann oscillation was at 7.8 Hz, with harmonics at 14.1 and 20.3 Hz. Dr. Robert Beck observed that the Schumann resonances, often called waves, looked very much like the EEGs of humans. He also averaged his Schuman resonance measurements and compared these to EEG measurements taken from shamans, healers, Indian yogis, and psychics, and concluded that the primary mental access window (MAW) was between 7.81 and 7.83 Hz. I thought these researchers were indicating that the radiation caused by the lightning was traveling around the earth between the earth's surface and the ionosphere at the speed of light 7.81 to 7.83 times per second, depending on whether the path was around the poles or the equator, respectively. However, my calculations indicate it would be 7.49 to 7.51 Hz, if that was the correct model. Actually, the height of the ionosphere is constantly changing and these oscillations are affected by the sun spot activity as

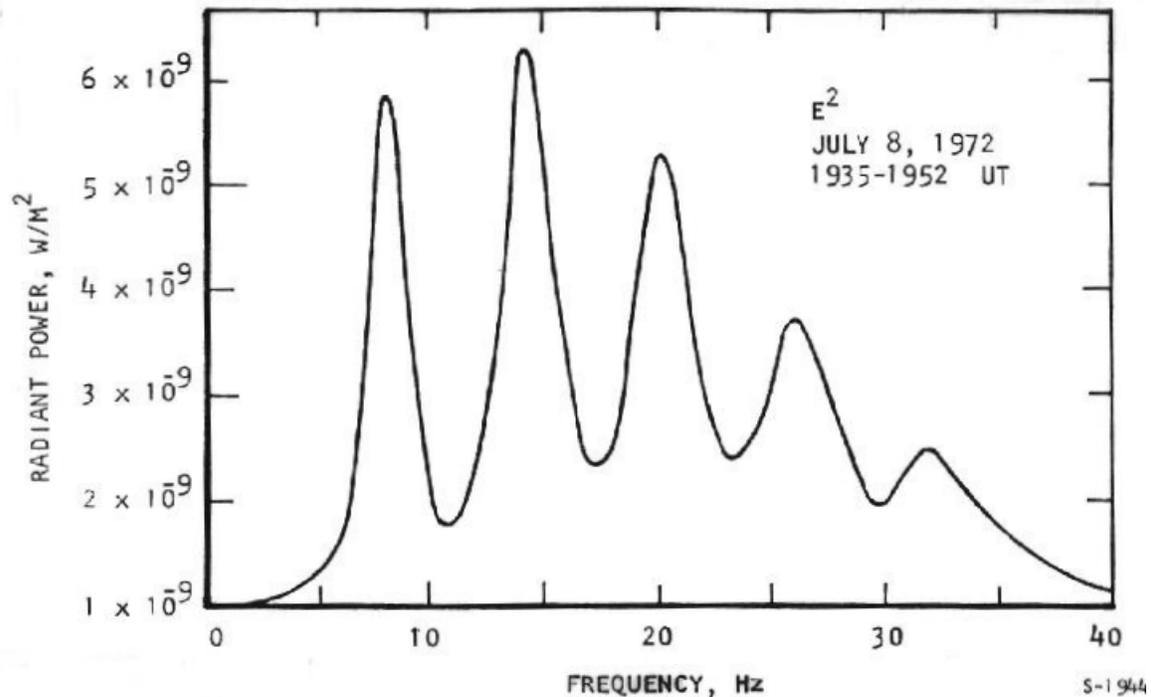


Figure 4. High-Resolution Measurement of Schuman-Wave Radiation Near Kingston, RI

well as magnetic storms. The general idea is that as long as the earth has been evolving, all things on the earth's surface have been exposed to these magnetic field oscillations and possibly, when an individual's EEG becomes the same frequency as the current Schumann resonance, his or her brain synchronizes with these oscillations and then the person's mind can easily access information throughout the world.

EEG Measurements

It was Dr. Beck who familiarized me with these ideas about the Schumann waves.⁸ I purchased an EEG biofeedback unit that he had designed and built. This particular unit has the following characteristics:

- a. Very small and thus very portable.
- b. Battery operated only.
- c. Primary feedback is auditory; the EEG signal is superimposed on a 2,000 Hz tone using a frequency modulation technique so that the ear can hear the oscillations. The signal amplitude is represented by a variation in the frequency spread of the superimposed signal, thus, it sounds more pronounced.

The ear can quickly be trained to recognize the frequency region (alpha, beta, theta) and the amplitude of the signal. The tone frequency range was chosen such that a standard cassette tape recorder could be used to record the data.

d. An additional output source is provided so the actual EEG signal can be displayed on a medical oscilloscope (i.e., isolated from the house current).

e. The input electrodes are sufficiently sensitive so that only salt water need be used to obtain a good electrical connection with the human head.

f. The unit has one channel with the electrodes placed on the head centerline (one electrode in the center of the forehead and the other electrode in the center of the back of the head, frontal to occipital-midline). This provides an average EEG signal between the right and left hemispheres. When both hemispheres are synchronized (in phase), the EEG signal is high. This helps the biofeedback trainees to train themselves to synchronize their brain hemispheres. A schematic of Beck's biofeedback EEG unit is shown in Figure 5. The definition I use for the frequencies corresponding to the various brain wave states are shown in the following table:

Frequency Band (Hz)	Brain Wave State
0 - 4	Delta (Δ)
4 - 8	Theta (Θ)
8 - 14	Alpha(α)
14 - and higher	Beta (β)

My personal experience using Beck's EEG biofeedback unit for three months, approximately 20 minutes per day, was that I developed the ability to relax quickly and to have some control over the frequency of my brain waves. I also discovered that it was a way for me to learn how to meditate, whereas otherwise I seemed to never find the time.

About that time my son had to do an eleventh grade physiology project. He wanted to do an experiment measuring people's EEGs. In order to present the data, I purchased an analog-to-digital (A/D) board for my Apple II+ home computer. We set up a system where he would record the brain waves of the subjects in his experiments on cassette tape. We would then feed that data into a discriminator (provided by Beck) which would remove the 2,000 Hz tone from the EEG data. We fed this data through the A/D converter in the computer. We wrote some software that would take 20 seconds of the digitized EEG data and

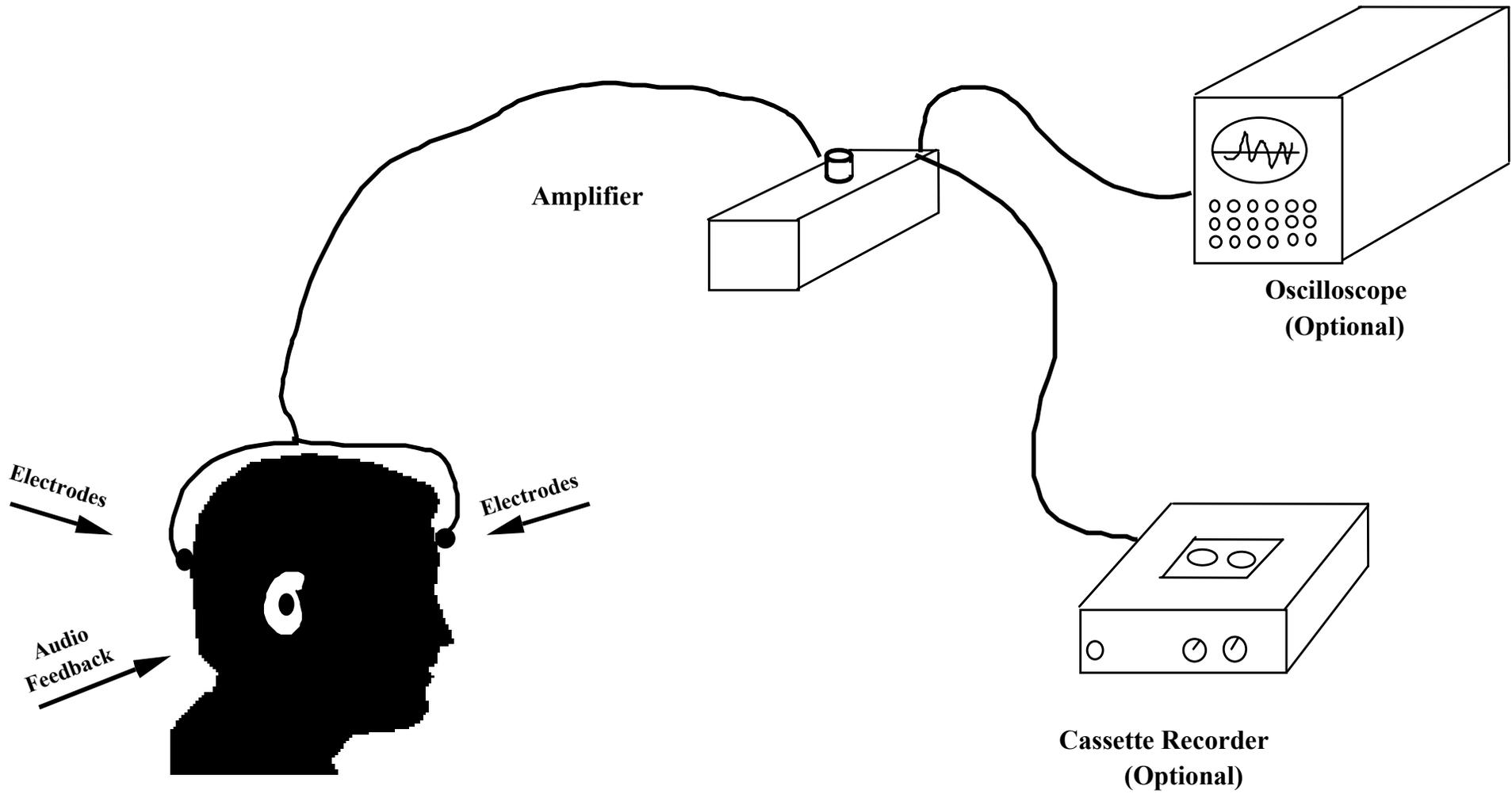


Figure 5. Beck's EEG biofeedback system

perform a 256 point fast Fourier transform (FFT) on each second of data, and present the results in a three-dimensional graphic display, which could be printed as shown in Figure 6. The input signal for this plot was a sine wave at 7.81 Hz. This shows that the processing system is very clean and free of external noise. Slight harmonics of the input frequency do show up in the figure. The three axes of the plot are frequency, amplitude (i.e., the amount of the total frequency components being produced at each frequency), and time with the FFT of the first second being shown in front and the FFT of the 20th second being shown toward the back in the plane of the frequency and amplitude axes. There is a vertical bar marking the MAW frequency that is used for reference on all similar plots. The bar also extends across the top at the MAW frequency along the time axis. A schematic of the EEG frequency processing equipment with Beck's EEG biofeedback equipment is shown in Figure 7. That first Apple based system took approximately 30 minutes of computations to prepare one plot. Today, my 66 MHz IBM computer system presents this data in almost real time.

Over the years, I have had the opportunity to measure the EEG patterns of many interesting people. I presented some of these data at the First Archaeus Congress in 1986⁹. Some interesting correlation's have emerged between these brain wave patterns and the type of individual. Several typical examples are shown in the following figures:

Figure 8 - EEG pattern of the author, typical of a very focused, trainer type individual. Note the single frequency ridge with a very narrow frequency bandwidth.

Figure 9 - EEG pattern of a skilled psychic individual. Note the extreme spread of simultaneous frequencies, with most occurring in the theta and alpha regions.

Figure 10 - EEG pattern of a millionaire. Note the apparent predominance of two simultaneous frequencies, one around 8 Hz and the other in the alpha region. This same dual frequency pattern appears on other millionaires. Is this pattern trainable?

Figure 11 - EEG pattern of a typical "psychic" healer.

Figure 12 - EEG pattern of a typical Remote Viewer. Note that the peak of their EEG is near the MAW frequency.

So-called normal people have many more high frequency components in their EEG pattern. The results from this limited study suggest that those individuals who seem to have better access to acquiring information outside of

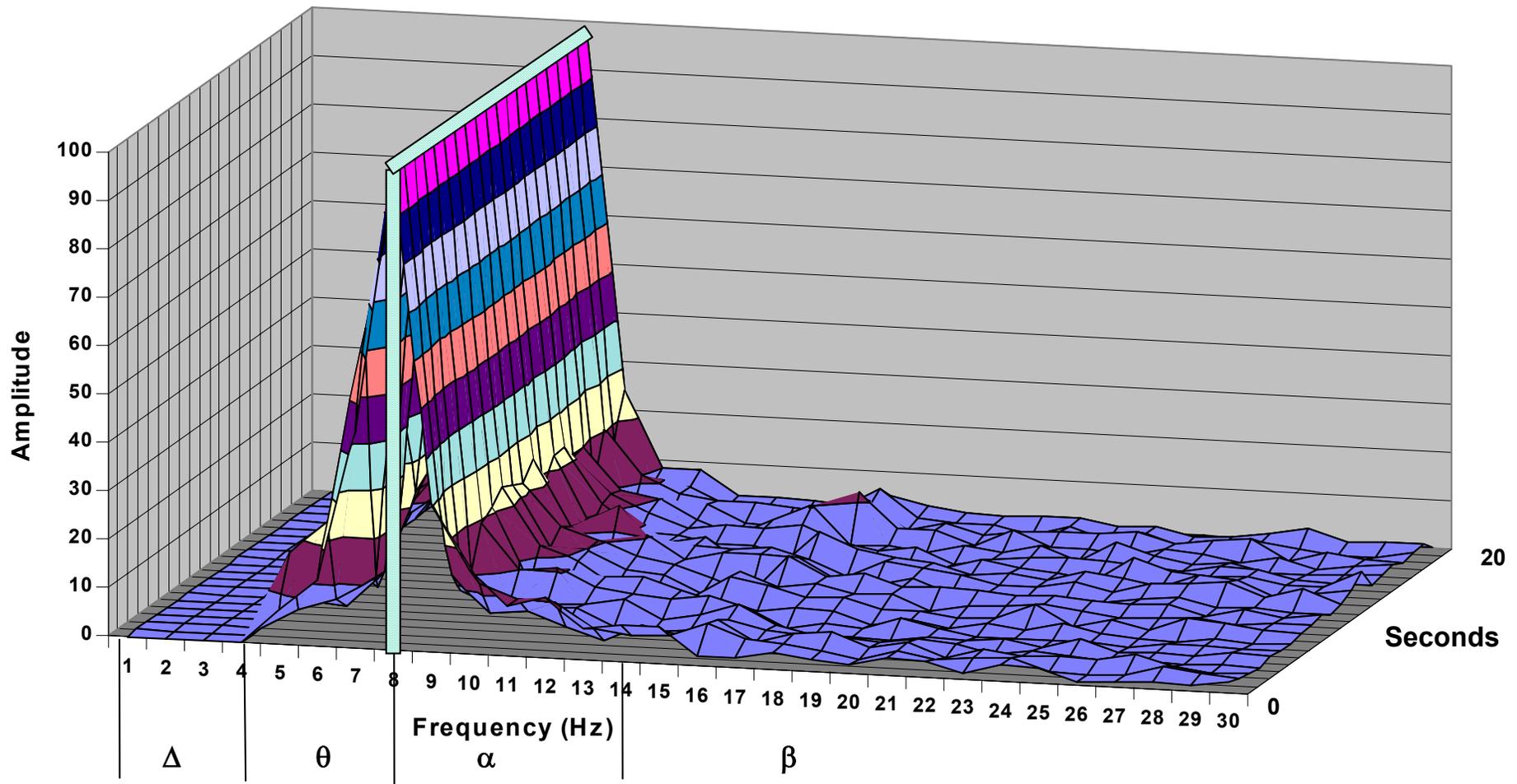


Figure 6. FFT of complete system with 7.81 Hz input signal

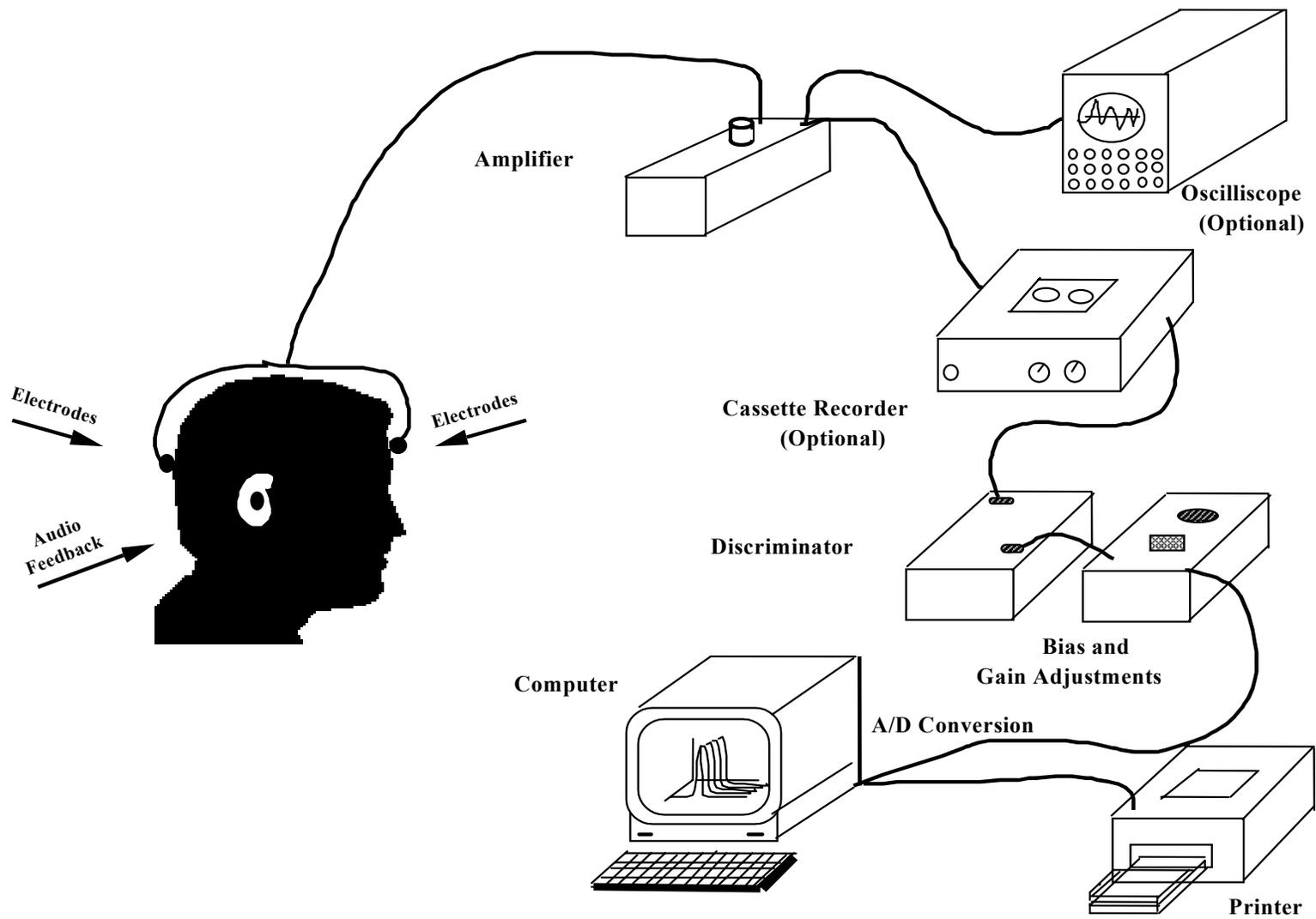


Figure 7. EEG frequency display system

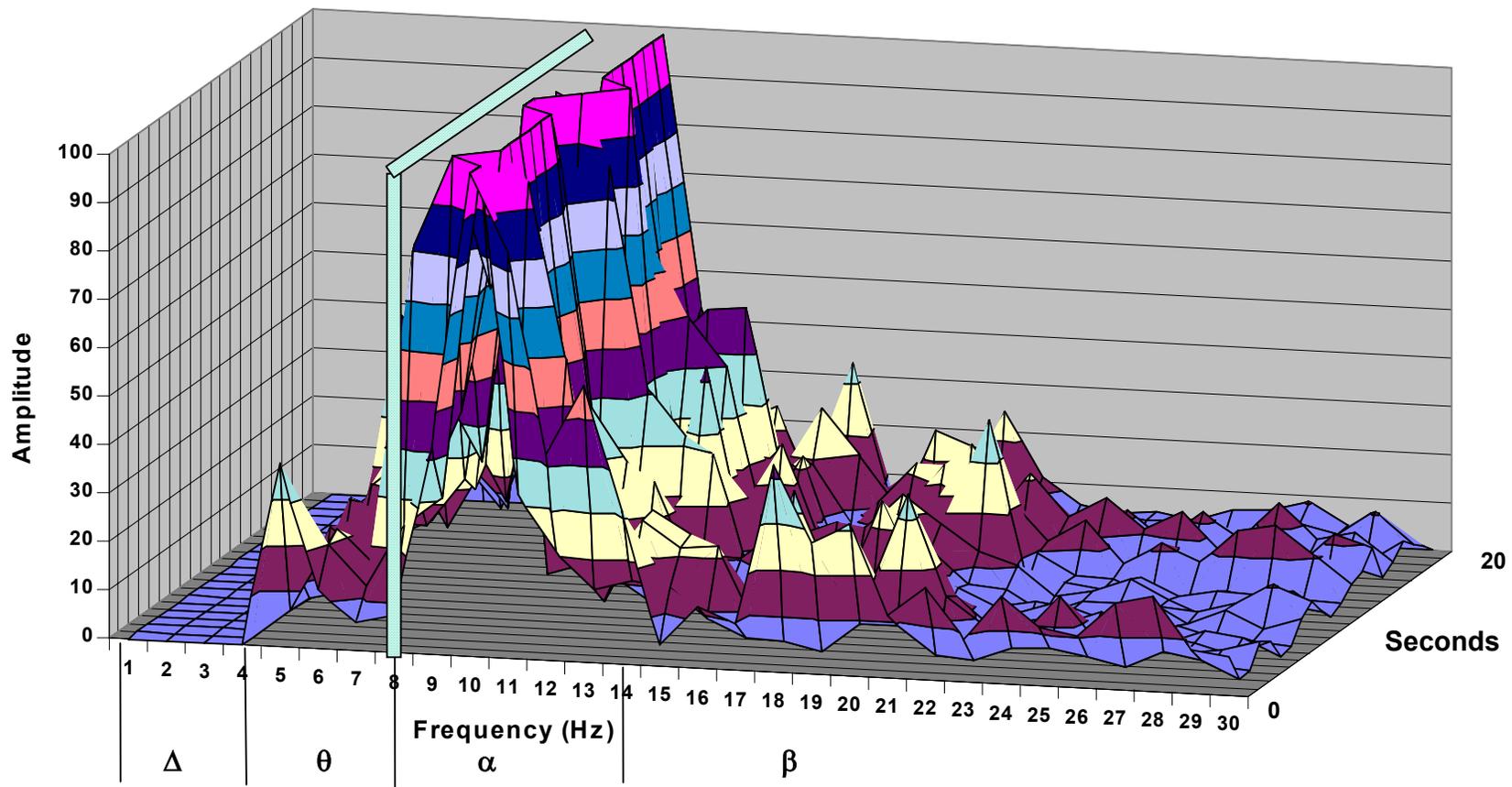


Figure 8. EEG pattern of focused engineer

Narrow Bandwidth

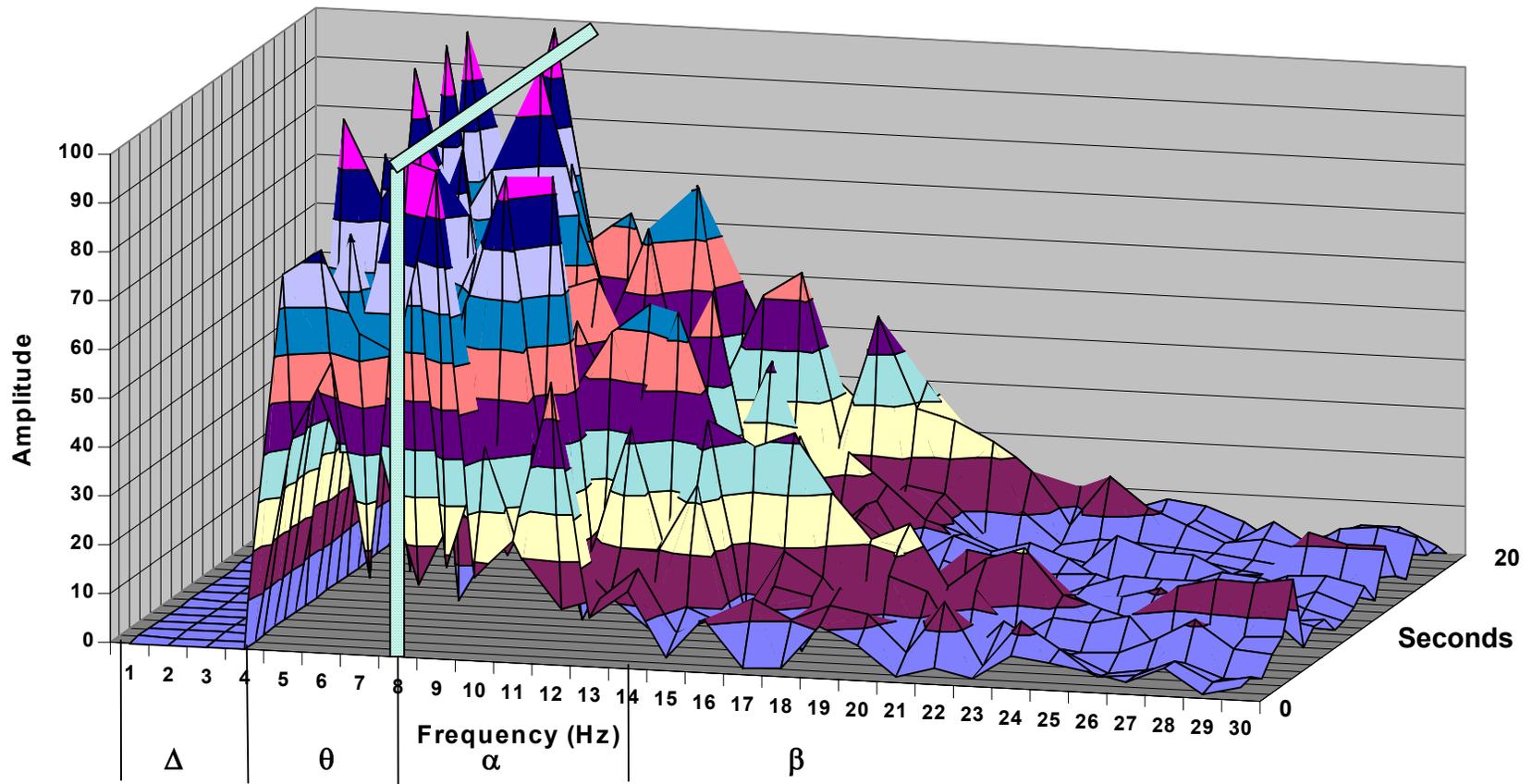


Figure 9. EEG pattern of psychic

Wide Bandwidth

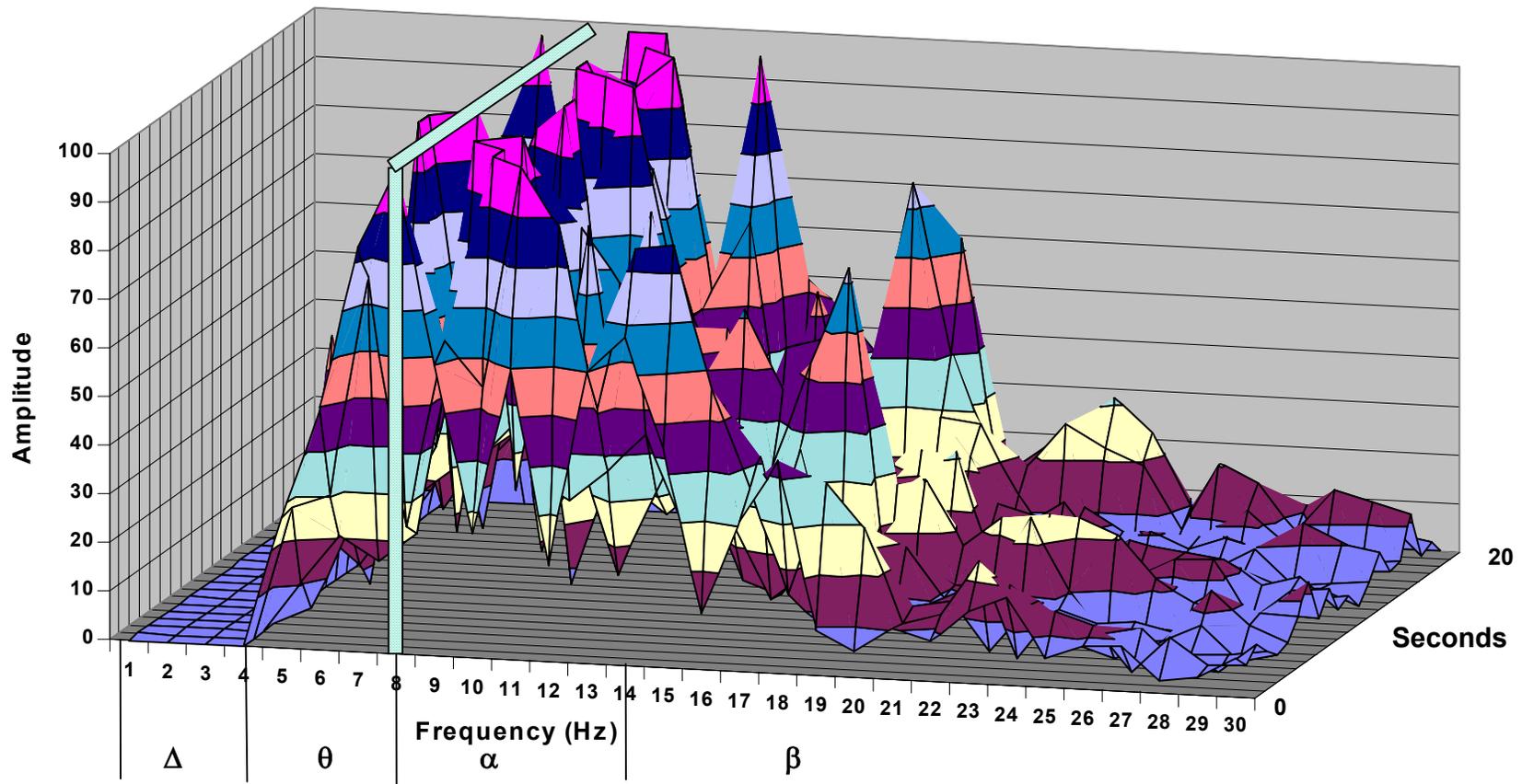


Figure 10. EEG display of millionaire

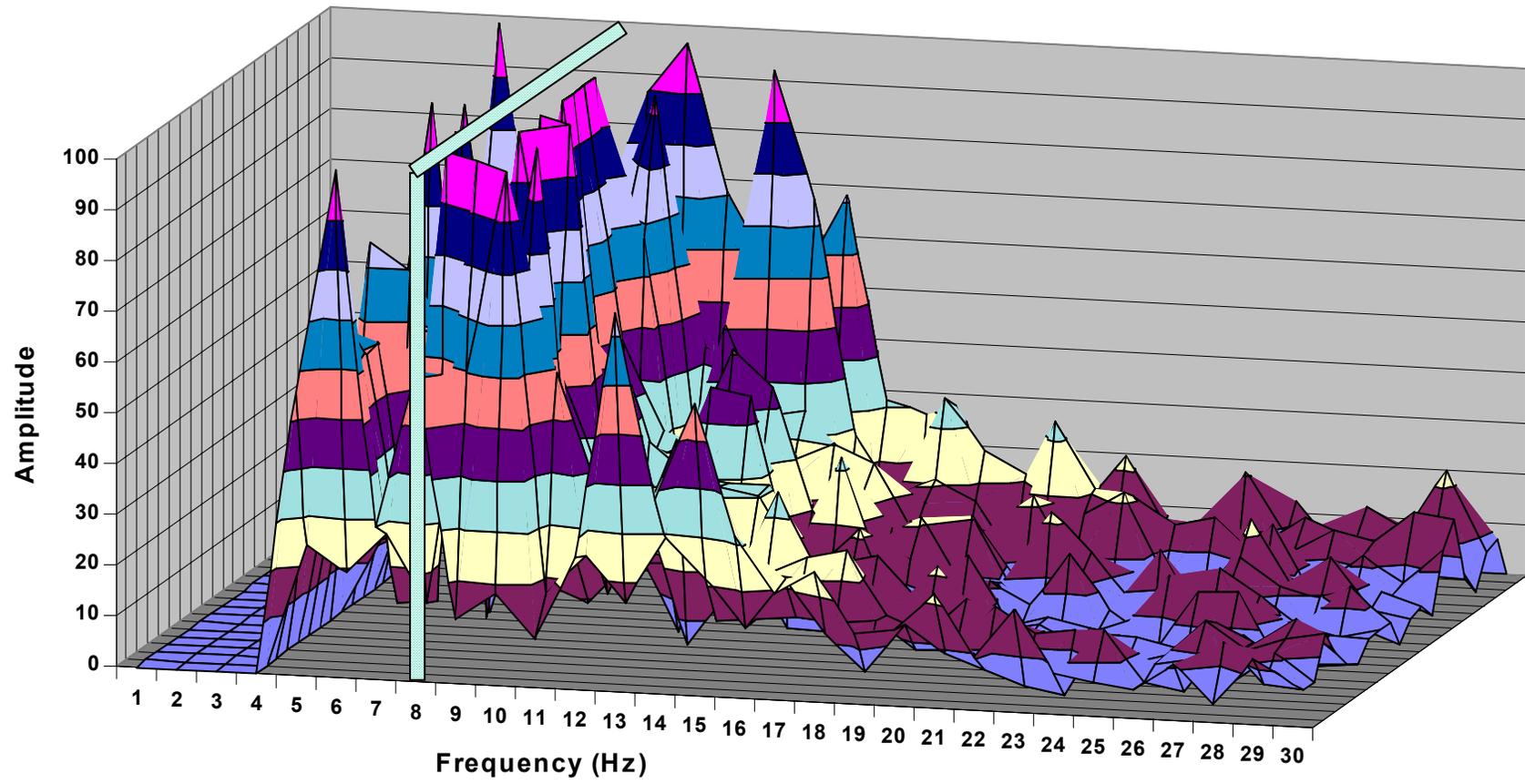


Figure 11. EEG pattern of healer

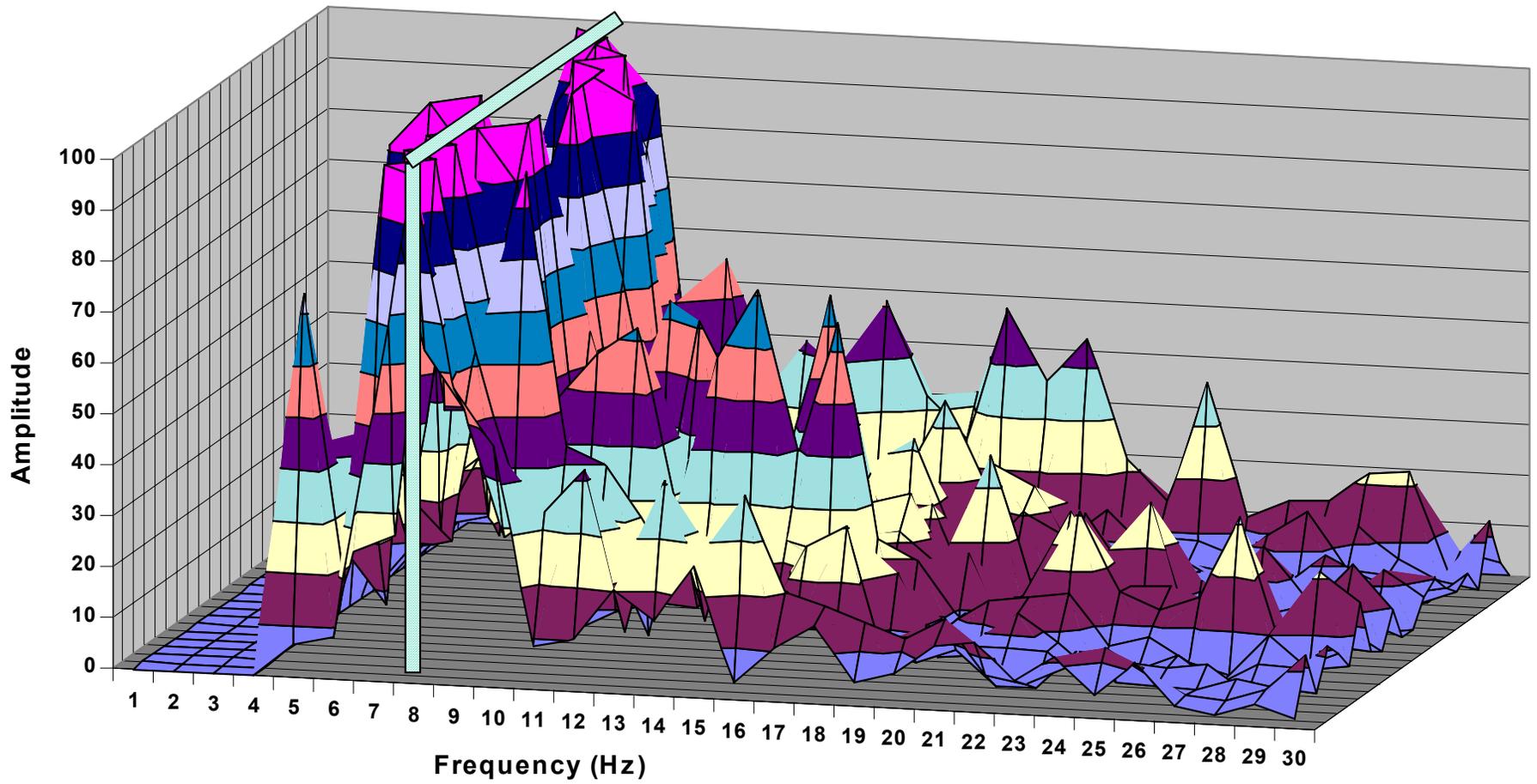


Figure 12. EEG pattern of Remote Viewer

their physical body have strong components of their EEG frequencies in the region of 8 Hz, amazingly close to the average Schumann resonance.

Nighttime Brain Activity

There has been extensive research on sleep and dreaming during the past thirty years. While I am no expert on these subjects, let me suggest how these areas may interact with the idea of there being a MAW. First, in Figure 13, an idealized history of an individual's nighttime EEG frequency is postulated. This would be from an individual who has a narrow band EEG frequency so that a single frequency as a function of time can be discussed. The time in this figure starts as a person in an excited state begins to go to sleep. As the person relaxes, the brain wave frequency begins to decrease, and eventually the person loses consciousness (falls asleep). This probably occurs around 9 Hz.

As the brain wave frequency continues to drop, it reaches the point where the first dream occurs, usually around 8 Hz. It could be at the time the brain waves become coincident with the Schuman resonance or move into the MAW. This is also when rapid eye movement (REM) occurs, as well as hypnogogic imagery. (Are we watching what we are accessing?) As mentioned earlier, dreams may combine data from our own memory with data accessed from remote locations, as is the case when data from memory and local objects is sometimes accidentally combined with the intended remote site during remote viewing.

As our hypothetical sleeping person in Figure 13 continues through the night, the EEG frequency continues to decrease through the first "deep sleep" cycle. When it again returns to approximately 8 Hz, the person probably has another dream. This Circadian rhythm continues through the night, but decreases in depth as morning approaches. For people whose threshold for consciousness is close to their MAW, the period of light sleep will produce an in-and-out of sleep state or hypnopompic imagery where accessing information is optimized. There should be a time for getting good ideas, remote travel, remote viewing, and remote healing.

Mental State Induction

Shortly after I did the EEG biofeedback training, Dr. Bob Beck suggested that we make an audio tape of what a person's EEG would sound like on his equipment when we input a pure sine wave at 7.81 Hz. His contribution was to

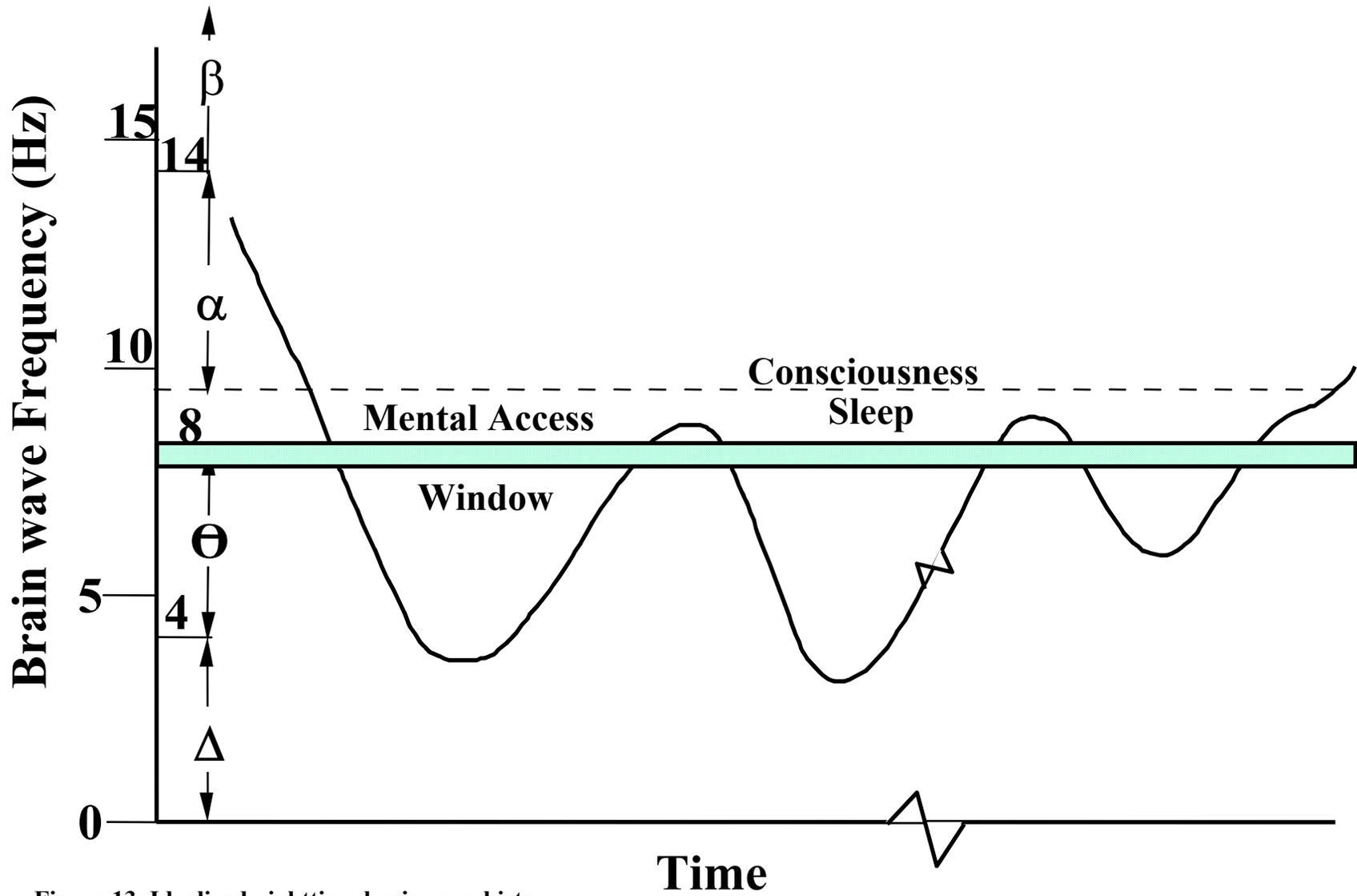


Figure 13. Idealized nighttime brainwave history

listen to this sound in one ear and listen to one's own brain waves in the other ear and see what would happen if the sounds became the same. A schematic of this equipment setup is shown in Figure 14. One day I decided to try this. With the biofeedback training, I was able to move my EEG frequency to the same frequency being produced by the tape recording. At the time, it seemed like I could even tell when the two sounds became like one --- in phase. At that moment, I found myself floating above a tennis court watching a tennis match as part of a full-blown out-of-body experience. This seemed to go on for some time before I had the sensation that the tennis ball was about to hit me in the face. I jumped, and instantly found myself in my own body, having jumped out of the chair I had been sitting in, with all the wires hanging from my head.

Whenever I have described this experience, people want to try it themselves. So, over the years, there have been about 45 people who have tried this system. None of them has EEG biofeedback training. Most have had fairly broadband frequency spectrums in their EEG. They would listen to 20 minutes of sounds being frequency modulated by 7.81 Hz from this cassette tape. About half of them have reported some degree of out-of-body experience. A few have fallen asleep. Others think it is "interesting". I have not made any attempt to further test these people. However, it is my opinion that this sound has the effect of lowering people's brain wave frequencies and for some, induced their EEG brain waves into the MAW. There are reported to be other techniques for inducing selective brain wave frequencies, such as flashing lights, other audio techniques (e.g., Monroe's Hemisync), and even electromagnetic "pacers".

Summary

Many studies could be done in these areas, if funding were available, to determine if Remote Viewing could be facilitated, general intelligence could be improved, and remote PK and healing could be enhanced. My contention is that there is great potential to enhance any mind/brain application by improving our understanding of the relationship between the earth's magnetic field oscillations (Schumann resonance) and the apparent mental access window. This understanding could then be used to develop techniques that move our EEGs into that window. I recommend research on the use of sensitive measurement equipment to determine the current local Schumann resonance prior to the entrainment of the individual's EEG brain to that frequency. I also recommend research to determine how much of the frequency bandwidth of an individual's

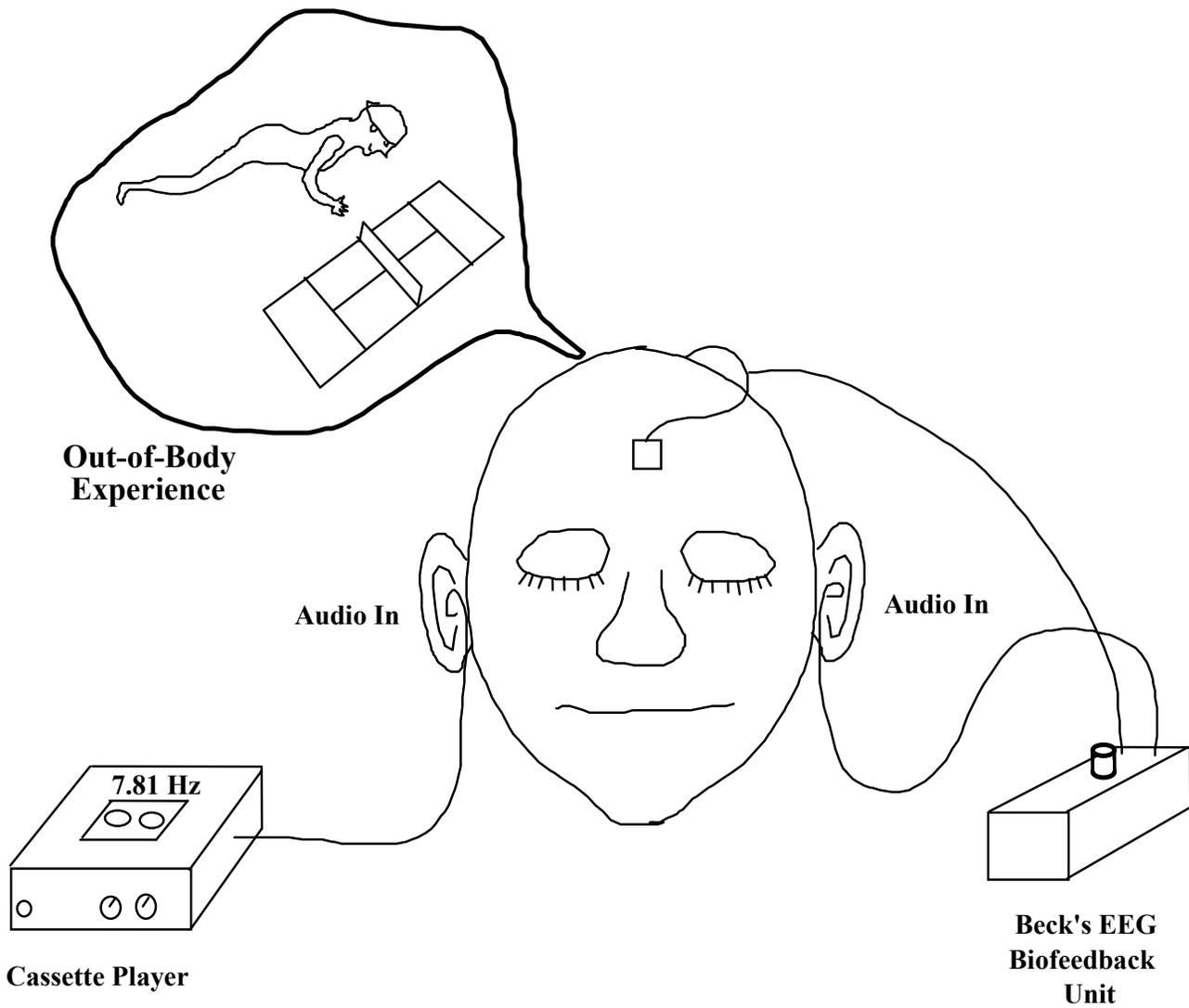


Figure 14. Induced out-of-body experience

brain waves must be in the mental access window for that person to achieve significant remote mental access.

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