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The Scientific Side of Radiesthesia: The Forgotten Research of Willem Busscher

Introduction

In the 1980s, Willem Busscher's pioneering research introduced the standard of scientific double-blind testing to radiesthesia for the first time. This made it possible to objectify results based on measurements rather than divining. So why is Busscher's extraordinary work so little known today? Why is his variably adjustable Air-Lecher-Line (‚Luft-Lecher-Leitung') no longer produced, despite its superiority being proven beyond doubt? Who was Willem Busscher, and what led him to conduct this research?

Who was Willem Busscher?

As a proven high-frequency expert with a lifetime of research experience, Busscher spent many years at a European electronics group responsible for researching, developing, and constructing of HF measuring devices, as well as producing special components for high-frequency technology. It was a stroke of luck that Dr Ernst Hartmann, founder of the „Forschungskreis für Geobiologie e.V." in Germany, was able to recruit this expert for a research project. This was because Busscher's research resolved a long-standing technical dispute.

The question was whether the dowsing rod effect was based on electromagnetic waves, a subject requiring specialised physical knowledge and mathematical formulas. Nevertheless, the results and practical consequences are easy to understand and communicate, even to non-scientists and experienced practitioners such as myself, who work as geobiological consultants.

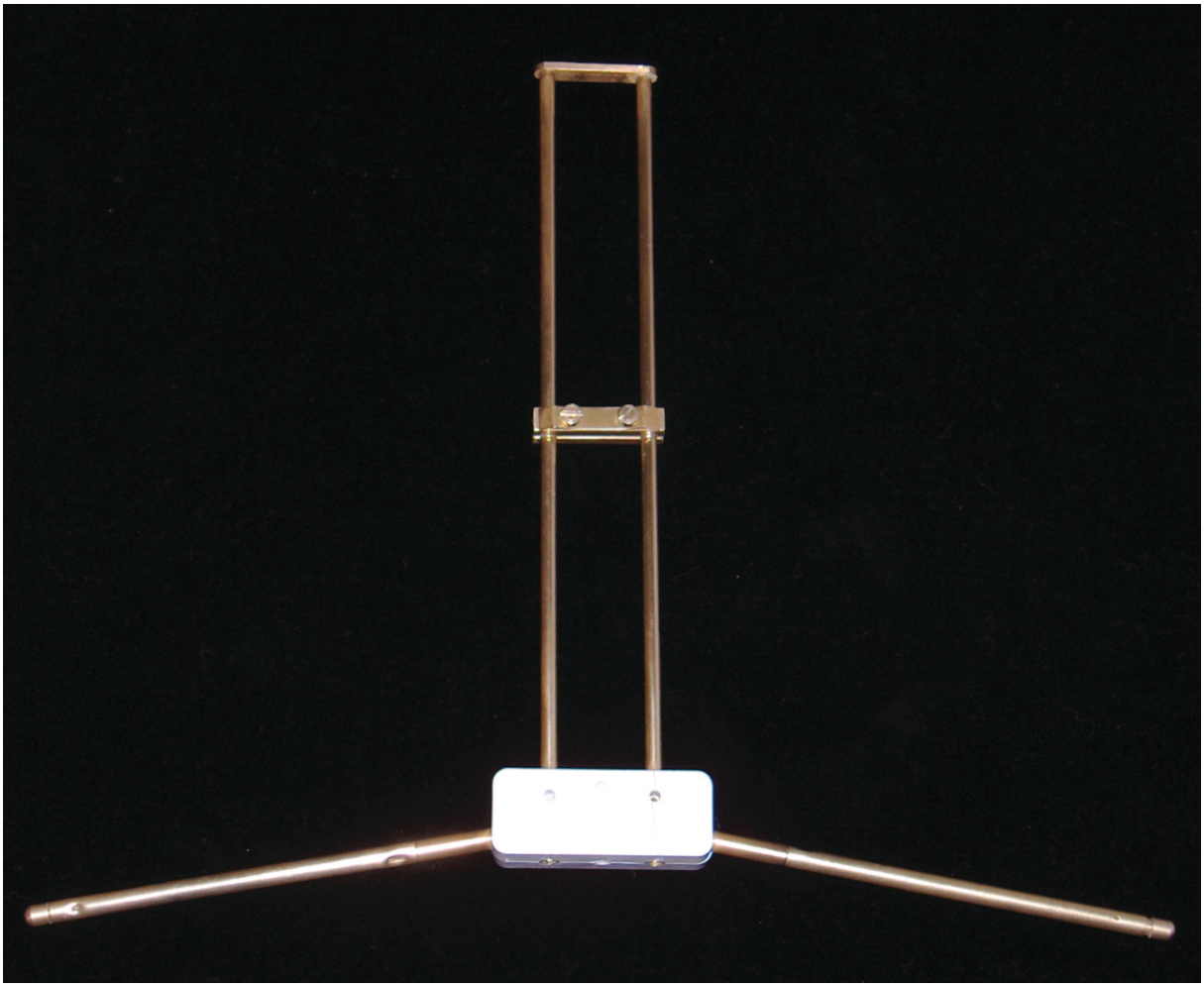
What led me to this topic?

My personal insight into the subject arose from a serious crisis at the beginning of the 1980s, which resulted in the possibility of completely abandoning dowsing. At that time, I mainly worked with Reinhard Schneider's „Lecher antenna", and very successfully at that. However, one day a lack of clarity prompted me to check whether these settings could be objectified and whether the resonance with the corresponding stimulus strips was real. These beliefs had long been firmly anchored in my mind, so it was a challenging endeavour. The underlying beliefs had to be loosened so that the resonance of the antenna alone could be proven or disproven. In short, the result was devastating. Only a few settings seemed to respond reasonably well; many seemed ‚spongy', i.e. unconvincing, and most led to no reaction at all. The fall could not have been deeper. Providing geobiological counselling to people seeking help was no longer feasible given this shattered trust.

If you tell someone not to think about green, they will reliably think about it, which should not happen here. Users of H3 or Schneider antennas really should not follow my example. They risk undermining the confidence they need in their work. It is undisputed that this method often produces excellent, valuable results. All you need to realise is that circuit board

models rely on mental programming, or ‚mental orientation'. In this respect, they do not differ in the slightest from traditional mental radiesthesia. However, Busscher proved that they are unsuitable for objectification and that double-blind tests cannot be conducted with them.

The fact that I was able to continue my radiesthesia journey is thanks to Busscher's Air-Lecher-Line (Lecher arial), which became my reliable working instrument around 1983 and was later joined more recently by the similar-in-design CEREB or ACMOS antenna. These fundamentally changed the way I worked mentally. There is normally no longer a mental search object, rather the role is to witness or observe whether the set value reacts or not. The resonance decides.



The Lecher arial by Willem Busscher (German: Luft-Lecher-Leitung, hence LLL, translated: Air-Lecher-Line)

The three directions of radiesthesia

There are actually three equal directions of radiesthesia: the „mental", the „physical" and the „scientific" in Busscher's sense. The first two differ in terms of the equipment used, but essentially employ identical mental working methods. The third uses an antenna with physical resonance and dispenses with ‚mental orientation' or a search object. All three approaches have their own special advantages and complement each other rather than competing. There are tasks in radiesthesia research and practice in which each approach is indispensable.

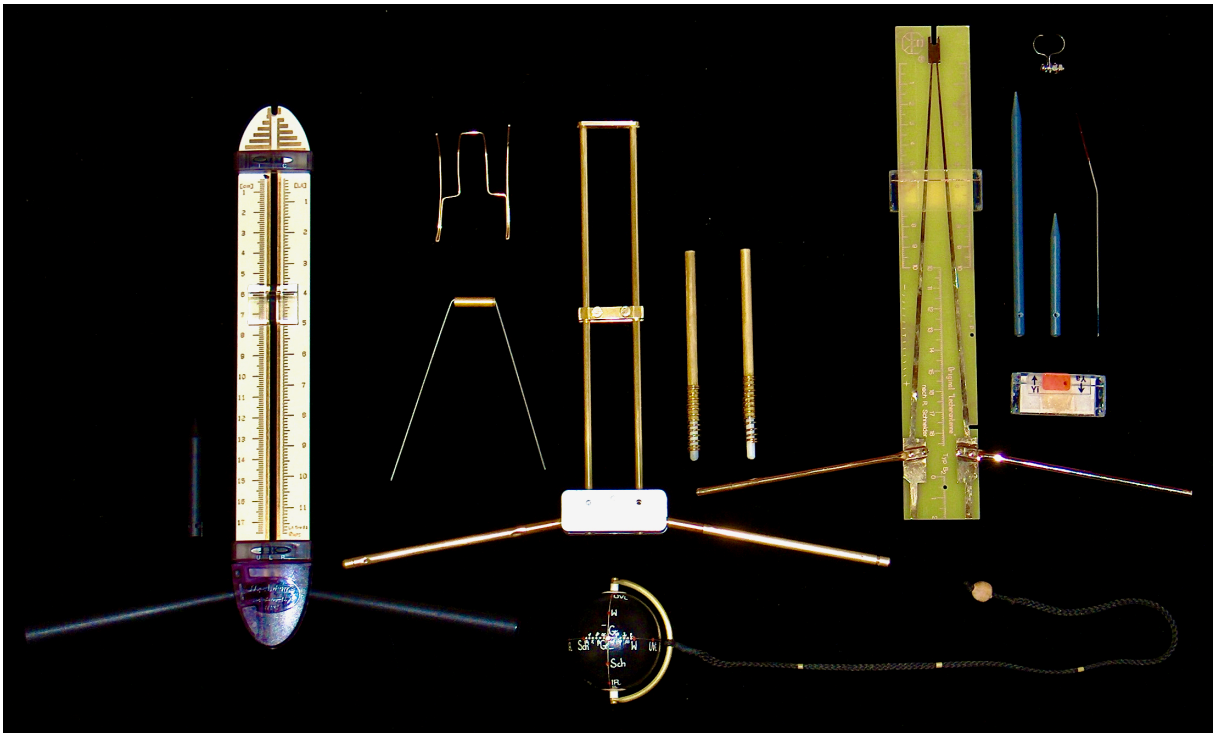
What did Busscher start his investigations with?
He started with the work of Dr Joseph wüst and Joseph Wimmer in 1934. They were already using the Lecher system, which was invented by the physicist Ernst Lecher (1856–1926) and was used for the first wavelength determination in high-frequency physics.

For his own research, Busscher built a Lecher line similar to Lecher's original test setup. Based on Ludwig Straniak's findings, busscher opted for brass for the parallel conductors and a fixed short-circuit at the upper end and the variable short-circuit slider („six-axis", radiating in all directions) and A.B.S. plastic („zero-axis") for the spacer at the base. Like Lecher, Busscher used air as the necessary insulator between the parallel conductors (hence the name of his antenna: the Air-Lecher-Line or LLL for short). The main dimensions are as follows: the diameter of the brass rods is 4 mm; the upper shorting bar is 2 mm; and the slider is 8 mm wide.

Wüst waves form the basis of the dowsing rod phenomenon
Busscher's research, aided by the LLL, confirmed the low-frequency nature of the stimulus strips, a finding first reported by wüst and Wimmer in 1934. However, the results of Wüst and Wimmer are often erroneously cited in support of the high-frequency theory. Busscher determined a propagation speed of approximately 9–10 m/s and wavelengths ranging from 1 cm to 100 cm for the dowsing rod phenomenon. He named these waves ‚Wüst waves' in recognition of his predecessor's contributions. He discovered that these can also be excited by low-frequency electrical oscillations (up to 1000 Hz), but not vice versa. For instance, the 50 Hz light grid causes a Wüst waves with a wavelength of 18 cm. Through exemplary measurements, Busscher (WBM 2002, issues 3+4, pp. 62 ff.) discovered that all physical phenomena are accompanied by radiesthetic waves, including those relating to electricity, sound, light, colour and high frequency. Direct proof of Wüst waves in physics has so far been impossible because a combination of a biological system and a physical aid is required. Busscher suspects that the biological effects are not due to the physical phenomena themselves, but rather to the accompanying low-frequency Wüst waves.

The fact that geobiological stimulus strips and the dowsing rod phenomenon are not based on high-frequency waves does not mean that Lecher systems are insensitive in this respect. HF technology (AM modulation) therefore offers various possibilities for testing and comparing different antenna systems in differentiated double-blind tests.

The comparison of LLL and Schneider antenna
Reinhard Schneider's achievements include recognising the V-rod as a physical resonance phenomenon for the first time, developing the handle length theory, and introducing the Lecher system to radiesthesia. He also used the ‚shortening factor', which Busscher also investigated. This term becomes clear when you understand that the distance between the resonance points on the LLL is always half a wavelength. However, the distance between the first resonance point and the upper end of the antenna (the fixed short circuit) is always shorter.



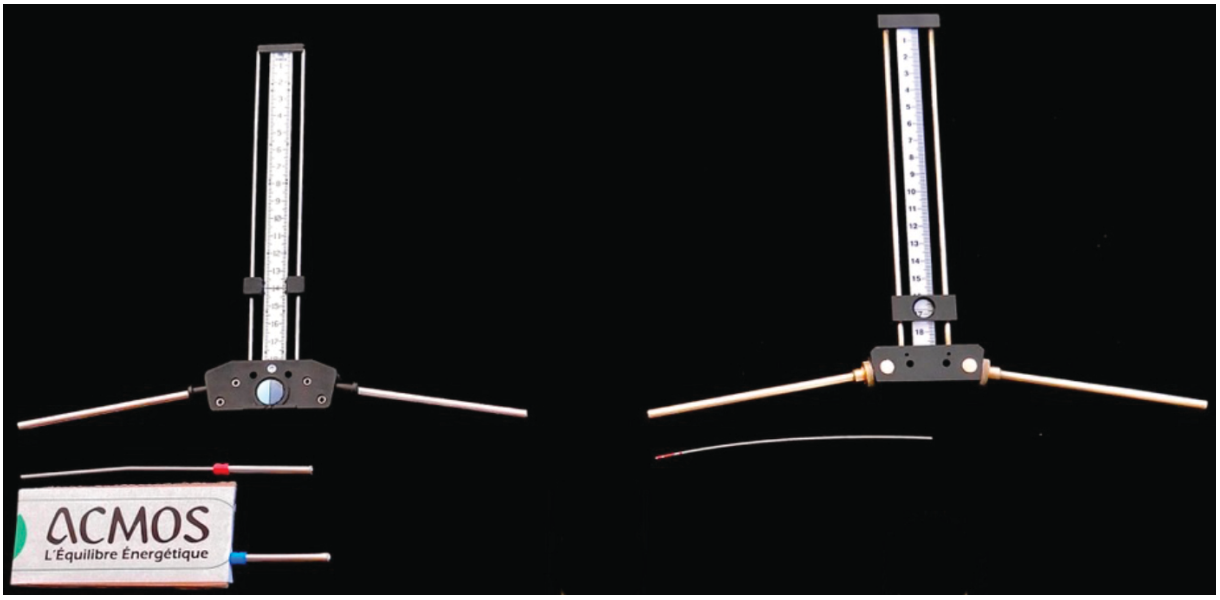
Left: H3 antenna by H. Lüdeling, Centre: LLL by W. Busscher, right: „Lecherantenne®“ by R. Schneider, bottom: Universal Pendulum by L. Chauméry / A. de Bélizal (also a physical radiesthesia instrument)

Busscher discovered that this shortening factor on the LLL makes it possible to distinguish whether the coupling wave is an HF, LF or a Wüst wave. In the first case, the shortening factor is 10 mm, and in the second case, it is 4 mm.

The LLL and the Schneider antenna differ significantly in their shortening factor. For the LLL, it is almost in the range of 1 and is therefore almost negligible; for the Schneider antenna, it is 1.95. This makes the LLL correspondingly more accurate by a factor of two. The high selectivity of the LLL is reflected in the accuracy of its wavelength and setting values, which can be as precise as 0.5 mm. According to Busscher, 80% of the difference between the two models is due to the circuit board. Unlike when air is used as an insulator, the circuit board does not completely surround the Lecher line (this also applies to Hartmut Lüdeling's H3 antenna). The dielectric constant of the PCB material was therefore measured to be 1.45, resulting in a shortening factor of 0.83 (WBM, 1988, Issue 23, pp. 2233–2234). In contrast to his LLL, Busscher concludes „... that he and others have not succeeded in conducting double-blind experiments with the Lecher antenna or copies of Reinhard Schneider's Lecher antenna.“ (WBM, 2002, 3–4, p. 54).

Results with other Lecher antennas

With copies of Reinhard Schneider's original Lecher antenna, Busscher found that the short-circuit slider sometimes does not allow for the inclusion of a short-circuit wire, meaning there is no contact with the Lecher wires. These models were found to be physically ineffective and, at best, only mentally useful.



Left: ACMOS antenna from SBJ International / Paris, right: CEREB antenna from Michel Lespagnard (No longer available)

The linearity of Busscher's LLL measurements or characteristic data cannnot be transferred to Air-Lecher-Lines with a plastic ruler between the parallel conductors. Although this is extremely practical, it inevitably leads to changes in the resonance behaviour. This observation was made on the basis of the ‚Kassel/yacht rod', with which I am not personally familiar, but which is described as being similar to the ACMOS antenna. The French Air-Lecher-models CEREB, ACMOS, EDD and others all use such a ruler between the Lecher wires. However, the consequences do not appear to call into question the reliability, provided that the resonance points have been correctly determined by measurement rather than calculation (author's note).

The conductive contact between the Lecher wires and handles has no significant influence on the models' suitability for double-blind tests. This is demonstrated by the outstanding results for the LLL, where this conductive contact is standard. Nevertheless, it is more advantageous for the user as it is less stressful not to be directly coupled to the resonant circuit via the hands. Today's H3 antennas take this knowledge into account, as do various French Air-Lecher-Models (author's note). Incidentally, different Lecher models always require different adjustment values, which must therefore be determined separately for each model.

Double-blind experiments against the Rosenthal effect

Busscher's scientific accuracy is documented not only by the detail and conscientiousness of his investigations, but also by his endeavours to exclude the Rosenthal effect, i.e. the falsification of results through expectations. This is a fundamentally relevant problem in all research, but of particular importance in radiesthesia, as ist instruments depend entirely on the mind — i.e. imagination, images, intentions and mental attitudes. This affects not only traditional radiesthesia, but also ‚physical' radiesthesia, which uses models of circuit boards, as Busscher demonstrated.

The selectivity of the LLL of half a millimetre and the absence of a plastic ruler between the parallel conductors make the antenna an ideal instrument for double-blind tests. This is because, in this method, neither the experimenter nor the test person or dowser should not know the antenna's setting value. The lack of a ruler is helpful in this respect. Here is Busscher's description of the five-rod test: One of the five LLL antennas is set to the correct value, while the other four are ‚detuned' by 1 or 2 mm upwards or downwards, respectively. These minimal differences are not visible to the naked eye. An observer makes the adjustments, mixing the antennas on a table and covering them with a cloth. The experimenter then gives the dowser, who is familiar with the LLL, the antennas one by one with the instruction to determine whether and where a reaction occurs on the test section. As there is no search target, the usual mental method is not possible. The rod reactions are noted, and at the end of each run, the setting values of the relevant rods are measured to assign them to the results.

Depending on the strength of the stimulus strip and the sensitivity of the dowser, weak or very weak reactions of the detuned rods cannot be completely ruled out. However, the intensity of the deflections is clearly graded enough that the correct setting value can be identified. Busscher used special forms to analyse and weigh up the results. His five-rod method fulfils objective statistical and scientific verification criteria. Results from double-blind tests are to be regarded as measurements once they have been confirmed by others.

Mental problems with printed circuit board (PCB) antennas

Although, as explained, board models are not suitable for objectifying physical resonances because they confirm the mental setting, they can still work reliably as long as the correct image is used. One example is oblique radiation, such as diffraction at a slit, a prism, or the profiles of underground water channels. This image works excellently when searching for water. However, if applied to a different kind of reality, it inevitably leads to false statements. For instance, in the case of the planetary lines described by the author, there is no oblique radiation; instead, the spectroids are arranged radially around a central line – in the same way that shielding or insulation surrounds the ‚core' of a coaxial cable, for example.

The problem of suggestiveness, or the Rosenthal or experimenter effect, increases with the complexity of the thought structure and the number of elements that appear to be confirmed. Lüdeling's theory of planetary lines, for example, is understood geologically and is therefore confirmed by oblique radiation and predominantly left-handed rotation. The occurrence of right-handed cult sites is stereotypically explained by artificial manipulation. Complex thought forms of this kind quickly become problematic without an objectifiable scientific approach, as there is too little resistance to the transition between reality and imagination. To a certain extent, the theory becomes overvalued, i.e. it becomes more convincing than the surmised results. Research that measures and gathers facts instead of trying to prove a theory is essential.

In contrast, the author's observations of planetary lines are based solely on measurements taken with the Busscher's Air-Lecher-Line, not theory. These observations are accessible to

objective verification if an antenna with real physical resonance and the specified setting values is used and the antenna's reaction is observed without the use of „mental images".

A challenge for radiesthesia associations

I hope that I have summarised busscher's research correctly and made it accessible to today's readers. Much has had to be shortened to ensure the content remains comprehensible for lay-people. In fact, Busscher's explanations are rich in detail and, despite their condensed form, relatively extensive, as can be seen from the enclosed bibliography.

I would be delighted if Busscher's work were recognised as a highlight of scientific radiesthesia research, and if radiesthesia associations were encouraged to conduct his double-blind experiments. This could perhaps initiate a new edition of Air-Lecher-Systems and include French manufactorers' Lecher antennas in objective tests. Such comparative investigations would be invaluable for all users. A future for radiesthesia without the critical and scientific approach established by Busscher would be unwise. Circuit board models have already gained a firm market share thanks to their elegance and capacitive setting capabilities. However, they should not replace traditional radiesthesia. Scientific radiesthesia, as established by Busscher, could open new doors for the practice today and gain acceptance within the scientific community.

The following works by Busscher were published in the geobiology journal Wetter-Boden-Mensch (WBM), edited and published by the Forschungskreis für Geobiologie Dr Hartmann e.V., with the office located at Freiherr-von-Drais-Str. The website can be found at www.geo-biologie.de. Freiherr-von-Drais-Str. 10, 69429 Waldbrunn-Waldkatzenbach. Email: info@geobiologie.de

Willem Busscher	„Wünschelrute und Wellentheorie I" (Dowsing Rods and Wave Theory I)	WBM No 18/1985, P. 1467 – 1491
The same	„Wünschelrute und Wellentheorie II" (Dowsing Rods and Wave Theory II)	WBM No 23/1988, P. 2218 – 2243
The same	„Wellenlängen und Frequenzen von radiästhetischen Reiszstreifen (Wüst-Wellen)" (Wavelengths and frequencies of radiesthetic stimulus strips (Wüst waves)	WBM No 02/1995, P. 8 – 33
The same	„Die Wechselwirkung von Radiästhesie und Physik, wissenschaftlich betrachtet" (The interaction between radiesthesia and physics, from a scientific perspective)	WBM No 3+4/2002, P. 51 – 78

Research/books by the author based on the Busscher antenna:

Rainer Höing, „The Fabric of the World - Geobiology, Feng Shui & Planetary Lines. Results from 40 years of research and consulting“, published: 2022. Revised version: October 2024. ISBN: 978-3-347-60485-8. Printing and distribution: tredition.com

2) Rainer Höing, „Practical Introduction to Physical Radiesthesia (Lecher Antenna & Universal Pendulum)“, published: 2022. Revised version: September 2024. ISBN: 978-3-347-72181-4. Printing and distribution: tredition.com

3) Rainer Höing, „Planetary Lines. In the Between of Spirit and Earth. Exploring a worldwide phenomenon“, published 2024. Revised version: July 2025, ISBN Softcover 978-3-384-16330-1. Printing and distribution: tredition.com

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