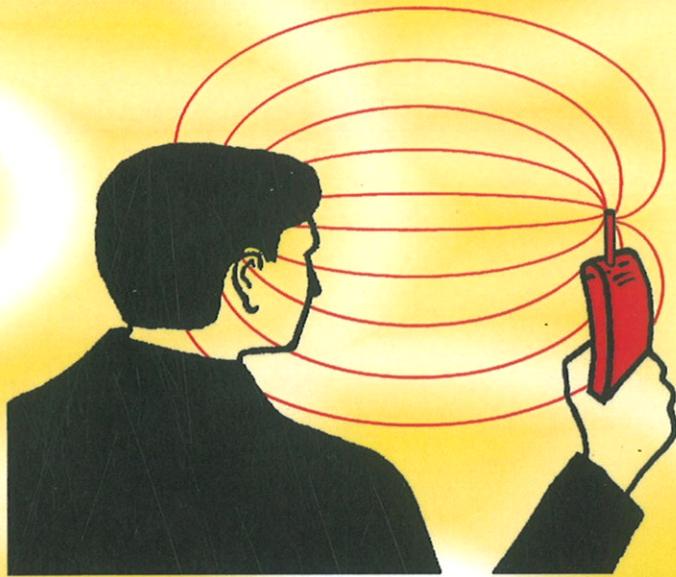


**Konstantin Meyl**

# **Scalar waves**



From an extended vortex and field theory  
to a technical, biological and historical use  
of longitudinal waves.

Edition belonging to the lecture and seminar  
„Electromagnetic Environmental Compatibility”



**Edition belonging to the seminar (part 1 - 3)  
„Electromagnetic Environmental Compatibility”  
by Prof. Dr. Konstantin Meyl**

From Maxwell's field equations only the well-known (transverse) Hertzian waves can be derived, whereas the calculation of longitudinal scalar waves gives zero as a result. This is a flaw of the field theory, since scalar waves exist for all particle waves, like e.g. as plasma wave, as photon- or neutrino radiation. Starting from Faraday's discovery, instead of the formulation of the law of induction according to Maxwell, an extended field theory is derived, which goes beyond the Maxwell theory with the description of potential vortices (noise vortices) and their propagation as a scalar wave, but contains the Maxwell theory as a special case. With that the extension is allowed and doesn't contradict textbook physics.

Besides the mathematical calculation of scalar waves this book contains a voluminous material collection concerning the information technical use of scalar waves, if the useful signal and the usually interfering noise signal change their places, if a separate modulation of frequency and wavelength makes a parallel image transmission possible, if it concerns questions of the environmental compatibility for the sake of humanity (bio resonance, among others) or to harm humanity (electro smog).

**From an extended vortex and field theory  
to a technical, biological and historical use  
of longitudinal waves.**

**INDEL GmbH, Verlagsabteilung  
ISBN 3-9802542-4-0**

## Table of contents

	Page
Preface to the Lecture, 1 <sup>st</sup> Edition 1996 .....	III
Table of contents .....	IV

### Part 1 edition belonging to lecture “Electromagnetic environmental compatibility”

<b>1. Introduction .....</b>	<b>1</b>
1.1 Discussion about limits .....	3
1.2 Wireless telephones .....	5
1.3 Absorption of waves .....	7
1.4 Overlap effect .....	9
<b>2. Tasks .....</b>	<b>11</b>
2.1 Tasks of the electromagnetic environmental compatibility .....	11
2.2 Tasks of the electromagnetic compatibility (EMC) .....	13
2.3 Declaration of conformity .....	15
2.4 EMC-techniques to measure the emission of interference .....	17
2.5 Electro smog .....	19
2.6 EMC-techniques to measure the stability against interference .....	21
2.7 Tasks of the biological compatibility .....	23
2.8 Natural fields .....	25
2.9 Electricity of the air .....	27
2.10 Biological effects .....	29
2.11 Artificial fields .....	33
2.12 Protection against artificial fields .....	35
2.13 Unsolved tasks .....	37
<b>3. Approach .....</b>	<b>39</b>
3.1 Principle of causality .....	41
3.2 Field-theoretical approach .....	43
3.3 Duality .....	45
3.4 Flow vortices .....	47
3.5 Rankine vortex .....	49
3.6 Vortices and anti-vortices .....	51
<b>4. Properties .....</b>	<b>53</b>
4.1 Concentration effect .....	53
4.2 Duality of the vortex properties .....	55
4.3 Derivation of the electron as an elementary vortex .....	57
4.4 Quanta as field vortices .....	59
4.5 The photon .....	61
4.6 Pair creation .....	63
4.7 Noise .....	65
4.8 Condenser losses .....	67
4.9 Vortex lines and vortex streets .....	69

	Page
4.10 Water colloids as vortex balls .....	71
4.11 Transport phenomenon .....	73
<b>5. Derivation and interpretation .....</b>	<b>75</b>
5.1 Fundamental field equation .....	77
5.2 Mathematical interpretation .....	79
5.3 Physical interpretation .....	81
5.4 Phenomenological interpretation .....	83
5.5 Atomistic interpretation .....	85
5.6 Derivation of the Klein-Gordon equation .....	87
5.7 Derivation of the time dependent Schrödinger equation .....	89
5.8 Derivation of the time independent Schrödinger equation .....	91
5.9 Interpretation of the Schrödinger equation .....	93
<b>6. Theory of objectivity .....</b>	<b>95</b>
6.1 Proof .....	95
6.2 Law of conservation of energy .....	97
6.3 Radius of the electron .....	99
6.4 Maxwell's field equations .....	101
6.5 Transformation equations .....	103
6.6 Field overlap .....	105
6.7 Field dependent curvature of space .....	107
6.8 Electromagnetic interaction .....	109
6.9 Gravitation .....	111
6.10 Field dependent speed of light .....	113
6.11 Universality .....	115
6.12 Aether .....	117
6.13 Spin and tunnel effect .....	119
6.14 Interpretation of the measured faster than light speed .....	121
6.15 Definition of the speed of light .....	123
6.16 Relativity and objectivity .....	125
6.17 Transformation .....	127
6.18 Transformation table .....	129
6.19 Interpretation of the transformation table .....	131
6.20 Particle decay .....	133
<b>7. Proof .....</b>	<b>135</b>
7.1 Elementary vortices .....	137
7.2 Matter and anti-matter .....	139
7.3 Positronium .....	141
7.4 Dipole moment .....	143
7.5 Myon .....	145
7.6 Calculation of the vortex fields .....	147
7.7 Calculation of the proton .....	149
7.8 Strong interaction .....	151
7.9 Magnetic moment of the proton .....	151

	Page
7.10 Structure of the neutron .....	153
7.11 Calculation of the neutron .....	155
7.12 $\beta$ -decay .....	157
7.13 "Weak interaction" .....	159
7.14 Tau particle .....	161
7.15 Pions .....	163
7.16 Table of vortices of the Mesons .....	165
7.17 Table of vortices of the Baryons .....	167
<b>8. Unified theory .....</b>	<b>169</b>
8.1 Structure of the field theory .....	171
8.2 Unification of the interactions .....	173
8.3 Temperature .....	175
8.4 Heat .....	177
8.5 Sound .....	179
8.6 Basic principle of cybernetics .....	181
8.7 Structure of adaptive regulatory circuits .....	183
8.8 Information .....	185
8.9 Philosophy of nature .....	187
<b>9. Usage .....</b>	<b>189</b>
9.1 Longitudinal electromagnetic waves .....	191
9.2 Medical technical usage .....	193
9.3 Flying objects .....	195
9.4 Electro gravitation? .....	197
9.5 Free energy? .....	199
9.6 Nerve conduction and action potential .....	201
9.7 Wireless energy transmission technology .....	203
9.8 Measuring and switching technique of Nikola Tesla .....	205
9.9 Energy technical usage .....	207
9.10 Environmental compatibility .....	209
9.11 Ecologically fair usage .....	211
9.12 Claims concerning the environmental compatibility .....	213
<b>9.13 Epilogue belonging to the lecture (part 1) .....</b>	<b>215</b>
Abstract belonging to scalar waves, part 1 .....	218

---

<b>Part 2, edition belonging to the energy technical seminar .....</b>	<b>219</b>	
10.0	Preface to the seminar, part 2 .....	220
<b>10. Oscillating interaction .....</b>	<b>221</b>	
10.1	Kepler's laws .....	221
10.2	Unknown interaction .....	223
10.3	Harmony of the alternating current engineers .....	225
10.4	Four fundamental interactions .....	227
10.5	Resonating interaction .....	229
<b>11. The growing globe .....</b>	<b>231</b>	
11.1	Long-distance effect of the neutrinos .....	231
11.2	Model of expansion .....	233
11.3	Ancient Egyptian legend of Genesis .....	235
11.4	Inner structure of the earth .....	237
11.5	Earth's core as a converter of neutrinos .....	239
11.6	Speed of growth .....	241
11.7	Conservation of angular momentum .....	243
11.8	Set of difficulties concerning the change of magnetization .....	245
11.9	The weakly damped moon .....	247
11.10	Calculation of celestial mechanics .....	249
11.11	The biblical age .....	251
<b>12. New cosmology .....</b>	<b>253</b>	
12.1	Concerning the formation of our solar system .....	253
12.2	The birth of the planets .....	255
12.3	The derivation of the Titius-Bode law .....	257
12.4	The hollow planet .....	259
12.5	Concerning the formation of the universe .....	261
12.6	Counter examples concerning the 2nd law of thermodynamics .....	263
12.7	Entropy destroying potential vortices .....	265
<b>13. Recording of space and time .....</b>	<b>267</b>	
13.1	The measuring technical debacle .....	269
13.2	The clock paradox .....	271
13.3	The Tamarack mines experiment .....	273
13.4	Field dependent linear measure .....	275
13.5	Experiences from space travel .....	277
13.6	Spherical aberration .....	279
13.7	Step by step understanding of the measuring technique .....	281
13.8	Discussion of the cosmological insights .....	283
<b>14. The way towards free energy .....</b>	<b>285</b>	
14.1	The liberalization of the energy markets .....	285

	Page
14.2 The consequences of the liberalization .....	287
14.3 The chances of the wind energy .....	289
14.4 The chances of being self-sufficient concerning energy .....	289
14.5 The space energy technology of nature .....	291
14.6 The gap in the energy balance of man .....	293
14.7 Carl Freiherr von Reichenbach .....	293
14.8 Cold fusion and Genesis .....	295
14.9 Photosynthesis .....	297
14.10 How nature materializes .....	299
14.11 Lightning .....	301
14.12 Ball-lightning .....	303
14.13 Discussion concerning the neutrino conversion .....	305
 <b>15. Principle of functioning of space energy .....</b>	<b>307</b>
15.1 The course of the field lines .....	307
15.2 Gravitation .....	309
15.3 Systematizing the interactions .....	311
15.4 Magnetic force converter .....	313
15.5 The railgun .....	315
15.6 Unipolar induction .....	317
15.7 Tendency to instability .....	319
15.8 Unipolar field configuration .....	321
15.9 The Testatika .....	323
15.10 The secret of the Testatika .....	325
15.11 The key to free energy .....	327
 <b>16. Space energy technology (SET) .....</b>	<b>329</b>
16.1 The unipolar generator .....	329
16.2 Derivation of Maxwell's field equations .....	331
16.3 SET-devices with rotating magnetic fields .....	333
16.4 Commentary concerning magnetic SET-devices .....	335
16.5 RQM and the space quanta manipulator .....	337
16.6 SET-devices with pulsed magnetic fields .....	339
16.7 SET-devices with Möbius winding .....	341
16.8 Möbius converter of Seike and Coler .....	343
16.9 Tesla's flat coil .....	345
16.10 The secret of the flat coil .....	347
16.11 Discussion concerning the technology of the neutrino collectors .....	349
 <b>17. Technical use of the weak interaction .....</b>	<b>351</b>
17.1 Radioactivity caused by neutrinos .....	351
17.2 Nikola Tesla, the discoverer of the neutrino radiation .....	353
17.3 Transmutation and reduction of radioactivity .....	355
17.4 The Patterson Power Cell .....	357
17.5 Report concerning the cold fusion .....	359
17.6 Water-Fuel-Cell technology .....	361
17.7 Unconventional electrolysis .....	363

	Page	
17.8	Materialization of neutrinos .....	365
17.9	Oscillation of size and luminescence .....	367
17.10	Phosphorescence and sonoluminescence .....	369
17.11	Discussion concerning the use of the weak interaction .....	371
<b>18.</b>	<b>Physical phenomena .....</b>	<b>373</b>
18.1	Water as a catalytic converter for neutrinos .....	373
18.2	Background and zero point radiation .....	375
18.3	The Casimir effect .....	377
18.4	Effects under high tension .....	379
18.5	Flying discs .....	381
18.6	Propulsion with neutrinos .....	383
18.7	Antigravitation or levitation .....	385
18.8	Discussion concerning the effect of closed field lines .....	387
18.9	Concerning the determination of the stand of today's energy technique .....	389
<b>19.</b>	<b>Own experiments .....</b>	<b>391</b>
19.1	Concerning the rating of experimental physics .....	391
19.2	The charge amplifier from the workshop of handicrafts .....	393
19.3	Interpretation of the observations with the charge amplifier .....	395
19.4	High-tension experiments in the laboratory for performance electronics .....	397
19.5	Measurement of dielectric capacitor losses in the HF laboratory .....	399
19.6	Analysis of the measured capacitor losses .....	401
19.7	Microwave oven for testing in the laboratory of electrical engineering .....	401
19.8	Microwave heating by decay of vortices .....	403
19.9	The Tesla coil from the workshop of handicrafts .....	405
19.10	Biological effectiveness of the Tesla coil .....	407
19.11	Wrestling for measuring technical insight in the Transfer Centre .....	409
19.12	Neutrinolysis, the alternative splitting of water .....	411
<b>20.</b>	<b>Cosmic experiments .....</b>	<b>413</b>
20.1	Millions of voluntary test subjects at 11 August 1999 .....	413
20.2	Model of calculation for the cosmic experiment .....	415
20.3	Physical technical consequences .....	417
20.4	Biological consequences .....	419
20.5	Epilogue to 11 August 1999 .....	421
20.6	Dropping of the neutrino radiation .....	423
20.7	Analysis and comparison of the occurrences .....	425
20.8	Radioactive decontamination with the help of a supernova .....	427
20.9	Free energy from the Orion constellation .....	429
20.10	Interaction of the neutrinos with the core of the earth .....	431
20.11	Changing of polarity and apocalypse .....	433
20.12	Scalar wave gauges for the prediction of earthquakes .....	435
20.13	Calculation of future occurrences .....	437
<b>20.14</b>	<b>Epilogue belonging to the energy technical seminar (part 2) .....</b>	<b>439</b>
	Abstract belonging to scalar waves, part 2 .....	442

---

<b>Part 3, edition belonging to the information technical seminar .....</b>	<b>443</b>	
21.0	Prefaces to the seminar, part 3 .....	444
<b>21.</b>	<b>Derivation of the scalar wave .....</b>	<b>447</b>
21.1	Lord Kelvin in a delicate mission .....	449
21.2	Helmholtzian ring-like vortices in the aether .....	451
21.3	Taking apart of the wave equation .....	453
21.4	Derivation of the scalar wave equation .....	455
21.5	Derivation of a plasma wave .....	457
21.6	Mistakes of the HF technology .....	459
21.7	Coupling of the wave parts .....	461
21.8	Set of difficulties of the near-field .....	463
21.9	Transition to the far-field .....	465
21.10	Scalar wave model .....	467
21.11	Double-frequent oscillation of size .....	469
21.12	Electric and magnetic scalar wave .....	471
<b>22.</b>	<b>Properties of scalar waves .....</b>	<b>473</b>
22.1	Wave-particle compromise .....	473
22.2	Concerning the measurement of light .....	475
22.3	Comparison of the parts of Tesla and Hertz .....	477
22.4	Noise, a scalar wave phenomenon .....	479
22.5	Neutrino radiation .....	481
22.6	Parallel instead of serial image transmission .....	483
22.7	Comparison of the properties .....	485
<b>23.</b>	<b>Research of scalar waves .....</b>	<b>487</b>
23.1	Frequency diagram .....	487
23.2	The reverse of the HF medal .....	489
23.3	Radiesthesia .....	491
23.4	Prediction of earthquakes with the help of scalar waves .....	493
23.5	Searching water with the help of scalar waves .....	495
23.6	Receiving scalar waves with the Lecher antenna .....	497
23.7	Assignment according to wavelength .....	499
<b>24.</b>	<b>Medicine of oscillation .....</b>	<b>501</b>
24.1	Mediation of information with the help of scalar waves .....	501
24.2	Systems with positive feedback .....	503
24.2.1	The Synchrometer .....	503
24.2.2	The sound therapy .....	503
24.2.3	The colour therapy .....	505
24.2.4	The aroma therapy .....	505
24.2.5	The gem therapy .....	505
24.2.6	Meditation and self-therapy .....	505

	Page
24.3 Systems with negative feedback .....	507
24.3.1 The homeopathy .....	507
24.3.2 The bioresonance .....	507
24.3.3 The frequency therapy .....	509
24.4 The Zapper .....	511
24.5 Discussion concerning the medicine of oscillation .....	513
<b>25. Contributions to the discussion concerning the information technical use</b> .....	<b>515</b>
25.1 Window of the sensuous perception .....	515
25.2 The sense organs (nose, eye, tongue) .....	517
25.3 The nerve conduction .....	519
25.4 The brain, a scalar wave computer .....	521
25.5 Concerning signal engineering .....	523
25.6 Stability against interference and repair mechanisms .....	525
25.7 The microwave window .....	527
25.8 Discussion concerning scalar wave medicine .....	529
<b>26. Recapitulation from the viewpoint of textbook physics</b> .....	<b>531</b>
26.1 Common misinterpretation of the antenna losses .....	531
26.2 Wave damping by field vortices .....	533
26.3 Laplace versus Maxwell .....	535
26.4 Error term in the wave equation .....	537
26.5 Interim result .....	539
26.6 Failure of the Maxwell theory .....	541
26.7 Concerning the evidence situation .....	543
<b>27. Faraday versus Maxwell</b> .....	<b>545</b>
27.1 Energy out of the field .....	545
27.2 Vortex and anti-vortex .....	547
27.3 Vortices in the microcosm and macrocosm .....	549
27.4 Faraday's law and Maxwell's formulation .....	551
27.5 The discovery of Faraday .....	553
27.6 Different formulation of the law of induction .....	555
27.7 Contradictory opinions in textbooks .....	557
27.8 The field-theoretical approach .....	559
27.9 Derivation of Maxwell's field equations .....	559
27.10 Derivation of the potential vortices .....	563
27.11 Derivation of the „fundamental field equation“ .....	565
27.12 The Maxwell field as a derived special case .....	567
27.13 Derivation of the wave equation .....	569
27.14 The new field approach in synopsis .....	571
<b>28. Objectivity versus relativity</b> .....	<b>573</b>
28.1 The question concerning the aether .....	573
28.2 Vortices, an overlap of the overlap .....	575
28.3 Field overlap .....	577

	Page	
28.4	The derivation of the length contraction .....	579
28.5	The dependence of the Lorentz contraction on the field .....	581
28.6	Boscovich and the respiration of the Earth .....	583
28.7	Derivation of the gravitation .....	585
28.8	From subjectivity to objectivity .....	587
28.9	The objective standpoint .....	589
<b>29</b>	<b>Mathematical gleanings .....</b>	<b>591</b>
29.1	General and special theory of relativity .....	591
29.2	Transformation table .....	593
29.3	Discussion concerning the root of Lorentz .....	595
29.4	Mathematical derivation of the neutrino .....	597
29.5	Universal constants and constants of nature .....	599
29.6	The fundamental number e .....	601
29.7	The pentacle .....	603
29.8	The vortex, which is rolling up .....	605
29.9	The Golden Proportion .....	607
<b>30.</b>	<b>Scalar wave technology in antiquity .....</b>	<b>609</b>
30.1	Thesis .....	609
30.2	Prerequisites .....	611
30.3	Approach .....	613
30.4	Circumstantial evidence .....	615
30.5	Radio technical concepts .....	617
30.6	Wireless telegraphy .....	619
30.7	AM temple technology .....	621
30.8	Modulation of acoustic signals .....	623
30.9	Broadband FM broadcasting technology .....	625
<b>30.10</b>	<b>Epilogue .....</b>	<b>627</b>
	Contacting address and information .....	634
	<b>Table of formula symbols .....</b>	<b>635</b>
	<b>References .....</b>	<b>636</b>
A:	Publications concerning the theory of objectivity (primary literature) .....	637
B:	Publications about the theory of objectivity (secondary literature) .....	641
C:	Literature concerning physics in general .....	643
D:	Literature concerning geophysics, geology, geography and astronomy .....	644
E:	Literature concerning the EMC and biological compatibility .....	644
F:	Literature concerning Tesla and criticism of textbook physics .....	644
G:	Literature concerning free energy .....	645
H:	Literature concerning medicine, biology and chemistry .....	646
J:	Literature concerning history and more peripheral subjects .....	646
	<b>Appendix .....</b>	<b>647</b>