

GRAVITY RESEARCH FOUNDATION  
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SELECTED ESSAYS FOR 1961

Avakian, Arra S., THE NATURE OF ELECTROMAGNETIC RADIATION, MATTER, AND GRAVITY. Spinning e.m. radiation is equivalent to matter; non-spinning e.m. radiation produces photons.

Basso, Michael J., THE ASSOCIATION OF ELEMENTARY PARTICLES WITH GRAVITATIONAL AND MAGNETIC PHENOMENA. Makes use of Blackett's magnetic moment and angular momentum.

Blum, Edward H., and Hitchcock, Robert B. GRAVITATIONAL REFRACTION. They suggest a means of generating gravity waves and simultaneously measuring the refraction of gravity and e.m.waves.

Bostick, Winston H., THE GRAVITATIONALLY-STABILIZED HYDROMAGNETIC MODEL OF THE ELEMENTARY PARTICLES. Shows how it is possible by means of Einstein's equations to have particles gravitationally stabilized.

Charon, J. E., THE COUPLING BETWEEN GRAVITATIONAL AND ELECTROMAGNETIC FIELDS. A unified theory using anti-gravitons (holes). Explains celestial gravitational fields.

Fiala, Harvey E., MEASURING THE PROPAGATION VELOCITY OF GRAVITATIONAL INTERACTION AND INDIRECTLY MEASURING GRAVITATIONAL RADIATION. Computes values of parameters for production and detection of gravity waves.

Forward, Robert L., DESIGN FOR A GRAVITATIONAL INDUCTION FIELD GENERATOR. Possible but no values given for expected effects.

Good, Myron L., THE K<sub>2</sub> AND THE EQUIVALENCE PRINCIPLE. Shows another verification of the equivalence principle.

Grahm, A. L., GEOTROPISM AND GEOELECTRIC EFFECT. Makes use of an ingenious method for measuring the geoelectric effect.

Gresky, Alan T., NEW UNDERSTANDING OF GRAVITATION VIA UNIFICATION OF NATURE'S LAWS. Valuable interrelations among fundamental units.

Halpern, Leopold E., GRAVITATIONAL EFFECTS OF CELESTIAL BODIES ON HIGH ENERGY ELEMENTARY PARTICLE PROCESSES. Delicate but just possible experiment.

Kaplan, Leonard M., PARITY AND GRAVITATION. Oriented atoms might indicate that gravitational forces are not invariant.

Kevane, Clement J., ANTIGRAVITY, RELATIVITY, AND EXPANSION OF THE UNIVERSE. Gravitational plasma model has negative binding energy.

Fosvic, Harvey, THE SYMMETRY OF THE ELECTROMAGNETIC FIELD. Four kinds of matter;  $\text{div}E \cdot \text{div}H = 0$ , antimatter, matter, cosmic rays.

Sciama, D. W., THE POLARIZATION OF RADIATION IN GENERAL RELATIVITY. Explores ways of evading null e.m. field by geometrical theory of spin.

Smith, Stephen B., ON THE NEUTRALIZATION OF GRAVITY BY USING A SPIN-GRAVITY TRANSFORMATION.

Stoner, John C. Jr., NEW INDICATIONS OF THE POSSIBILITY OF CONTROLING THE GRAVITATIONAL FIELD. Concerns liquid helium, Mach's Principle, and preferred coordinate frames.

Tasch, Paul, A CONTROLLED EVAPORATION-CONDENSATION SYSTEM FOR THE INDIRECT CONVERSION OF GRAVITY INTO ELECTRICAL ENERGY. Plausible but probably not economical.

Walker, E. H., A METHOD FOR THE DETECTION OF GRAVITATIONAL WAVES THAT CAN BE PRODUCED BY PRESENT TECHNIQUES. Makes use of superconductivity.

Wilson, Lawrence A., A NEW PARAGRAVITIC DISCOVERY 'THE THERMAL DEGRADATION ELEVATOR EFFECT'. Discovered in organic compounds, (e.g. Chloro trifluoro ethane).