

SOVIET PHYSICS USPEKHI

A Translation of Uspekhi Fizicheskikh Nauk

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PROBLEMS RELATED TO THE VIOLATION OF CP INVARIANCE

Between January 22 and 26, 1968 an International Seminar on the Problems of Violation of CP Invariance was held in Moscow. All talks delivered at this seminar were of review character, which allowed to encompass a wide array of questions related to the violation of CP invariance. The proceedings of this seminar are being published in "Uspekhi Fizicheskikh Nauk" (Soviet Physics-USpekhi) and in the July, 1968 issue of "Yadernaya Fizika" (Sov. J. Nucl. Phys., vol. 8, No. 1 (1969)).

Here is the program of the seminar:

C. Rubbia, "Violation of CP Invariance in Decays of K^0 Mesons."

L. Wolfenstein, "Phenomenology of CP Violation."

G. A. Leksin, "Phase Shifts for Pion-Pion Scattering in States with $T = 0$ and $T = 2$."*

V. V. Anisovich, "CP Nonconservation in $K \rightarrow 3\pi$ Decay."

B. Aubert, "Three-particle Decays of K Mesons."

M. Veltman, "Models for the Violation of CP Symmetry."*

B. A. Arbuzov, "Models for the Violation of CP Invariance."

A. T. Filippov, "CP Violation in Weak Radiative Decays."*

G. Finocchiaro, "Tests of C Invariance in Strong and Electromagnetic Interactions of Elementary Particles."*

C. Baglin, "Searches for C-Noninvariance in η -Decays."†

B. G. Erozolimskii, L. N. Bondarenko, Yu. A. Mostovoi, B. A. Obinyakov, V. P. Zakharova, and V. A. Titov, "A Search for Violation of T Parity in the Beta Decay of Polarized Neutrons."*

F. L. Shapiro, "The Electric Dipole Moments of Elementary Particles."‡

I. S. Shapiro, "Parity-Nonconserving Nuclear Forces."†

P. Miller, "Search for the Neutron Electric Dipole Moment."

N. A. Burgov, "On the Detection of Violation of Time-Parity by Use of the Mössbauer Effect."*

L. I. Lapidus, "Consequences of CPT Invariance and the Experiment."

V. Ya. Faĭnberg, "Theoretical Foundations of the CPT Theorem."

S. M. Bilen'kiĭ, L. I. Lapidus, and R. M. Ryndin, "Polarization Experiments for Testing T and CPT Invariance in Nucleon-nucleon and Nucleon-antinucleon Scattering."

L. B. Okun', "Violation of CP Invariance."

Tables of experimental data related to the problem of CP violation and a review of data on $\mu \rightarrow e$ decay, by I. I. Gurevich and B. A. Nikol'skiĭ, were prepared for the Seminar. These materials are published in the present issue of our Journal.

The Editors

*This talk is being published in the July, 1968 issue of the journal "Yadernaya Fizika" (Sov. J. Nucl. Phys. 8, #1 (1969))

† This talk will be published in the following issue of the journal "Uspekhi Fizicheskikh Nauk" (vol. 95, #4, August, 1968)

‡ This review was published in the May issue of "Uspekhi Fizicheskikh Nauk" (vol. 95, p. 145 (1968)) [Sov. Phys. Uspekhi 11 345(1969)].