



**QUASICLASSICAL AND QUANTUM SYSTEMS OF ANGULAR
MOMENTUM. PART III.
GROUP ALGEBRA $\mathfrak{su}(2)$, QUANTUM ANGULAR MOMENTUM
AND QUASSICLASSICAL ASYMPTOTICS**

JAN J. SŁAWIANOWSKI, VASYL KOVALCHUK, AGNIESZKA MARTENS,
BARBARA GOŁUBOWSKA AND EWA E. ROŻKO

Presented by Jan J. Sławianowski

Abstract. This is the third part of our series “Quasiclassical and Quantum Systems of Angular Momentum”. In two previous parts we have discussed the methods of group algebras in formulation of quantum mechanics and certain quasiclassical problems. Below we specify to the special case of the group $SU(2)$ and its quotient $SO(3, \mathbb{R})$, and discuss just our main subject in this series, i.e., angular momentum problems. To be more precise, this is the purely $SU(2)$ -treatment, so formally this might also apply to isospin. However, it is rather hard to imagine realistic quasiclassical isospin problems.

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