

Mei Symmetry and Lie Symmetry of the Rotational Relativistic Variable Mass System

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Abstract: The Mei symmetry and the Lie symmetry of a rotational relativistic variable mass system are studied. The definitions and criteria of the Mei symmetry and the Lie symmetry of the rotational relativistic variable mass system are given. The relation between the Mei symmetry and the Lie symmetry is found. The conserved quantities which the Mei symmetry and the Lie symmetry lead to are obtained. An example is given to illustrate the application of the result.

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Key words: rotational relativity, variable mass system, Mei symmetry, Lie symmetry, conserved quantity

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