

On the meaning of symmetry breaking

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Abstract

This is the review paper for the section III ("Symmetry breaking") of the volume "Symmetries in physics: philosophical reflections", Cambridge University Press, 2003, edited by Katherine A. Brading and Elena Castellani.

The paper's sections are: 1. Preliminaries (I); 2. Symmetry breaking and Curie's analysis; 3. Preliminaries (II); 4. Symmetry breaking of physical laws (4.1. Explicit symmetry breaking; 4.2. Spontaneous symmetry breaking); 5. Symmetry breaking and philosophical questions.

Keywords: symmetry breaking, spontaneous symmetry breaking, Curie's principle

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