

Quarticles and the Identity of Indiscernibles

Huggett, Nick (2002) Quarticles and the Identity of Indiscernibles.

There is a more recent version of this eprint available. [Click here to view it.](#)

Full text available as:

[PDF](#) - Requires a viewer, such as [Adobe Acrobat Reader](#) or other PDF viewer.

Abstract

A number of commentators (especially French and Redhead, 1988, and Butterfield, 1993) have investigated the status of the principle of the identity of indiscernibles (PII) for bosons and fermions. In this paper I extend that investigation to the full range of quantum particles of any allowed kind of statistics -- 'quarticles', that is. I show that for any kind (except bosons and fermions) there are states in which PII is violated by every pair of particles, some pairs and not others, and by no pairs.

Keywords: permutations, statistics, quarticles, quantum mechanics, identity

[Specific Sciences: Physics: Fields and Particles](#)

Subjects:

[Specific Sciences: Physics: Quantum Field Theory](#)

[Specific Sciences: Physics: Quantum Mechanics](#)

[Specific Sciences: Physics: Statistical Mechanics/Thermodynamics](#)

Conferences and Volumes:

[\[2001\] Symmetries in Physics, New Reflections: Oxford Workshop \(Oxford, January 2001\)](#)

ID Code: 711

Deposited By: [Huggett, Nick](#)

Deposited On: 01 August 2002

Available Versions of this Item

- Quarticles and the Identity of Indiscernibles (deposited 01 August 2002) [**Currently Displayed**]
 - [Quarticles and the Identity of Indiscernibles \(deposited 13 August 2004\)](#)