

S 「21世紀COE物質階層融合科学セミナー」

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SENDAI NUCLEAR SCIENCE COLLOQUIUM

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日時: 2004年10月8日(金)14:00~15:30

場所: 東北大学理学研究科総合棟 743 号室

タイトル: Spontaneous formation of chirality in rotating triaxially deformed nuclei

要旨: A two-state system having either left- or right-handed geometry in a rotating nucleus

occurs when three angular momenta are coupled mutually perpendicular as a result of an energy minimization. Formation of this handedness or "chirality" is a recently recognized form of spontaneous symmetry breaking in nuclei resulting from the fact that the Hamiltonian is invariant under an exchange of the handedness and yet there exist degenerate solutions that violate this invariance. Nuclear chirality can manifest itself in two rotational bands of the same single-particle configuration which become degenerate at moderate spin. At present, the candidate chiral doublet bands are systematically identified in the A~130 as well as the A~100 odd-odd and odd-A transitional nuclei, in which triaxial deformation plays a crucial role in bringing out the chiral geometry. An overview of this relatively new theme in nuclear structure studies will be given. An emphasis will be placed on the underlining physics of spontaneous formation of handedness rather than technical details.

* 13:45 より茶菓を用意いたします。

連絡先

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