第12回TRIACセミナーのご案内

第12回 TRIAC セミナーを以下の要領で開催致します。奮って御参加下さい。

高エネルギー加速器研究機構 素粒子原子核研究所物理第四研究系 宮武 宇也 (029-284-4867)

講演題目 荷電交換反応によるガモフテラー遷移の研究と天体核物理 Charge-exchange reaction as a tool to study Gamow-Teller transitions and their role in astrophysics
講演者 藤田 佳孝 氏 (阪大理)
日時 2008年10月20日(月)13:30~15:30
場所 日本原子力研究開発機構 先端基礎交流棟 第1会議室

講演要旨

Gamow-Teller (GT) transition is one of the most popular nuclear weak processes of spin-isospin ($\sigma\tau$) type. It is of interest not only in the study of nuclear physics, but also in astrophysics; it plays important roles, for example, in supernova-explosion or nuclear synthesis. Relatively limited information can directly be obtained through the study of weak processes, such as β decay or neutrino induced reactions. However, it was found that charge-exchange reactions at intermediate incoming energies (E > 100 MeV) and at 0° could selectively excite GT transitions, which extended the region of excitation energy to be studied. With ≈ 30 keV energy resolution in (³He,t) measurements at 140 MeV/nucleon, fine structures of GT excitations, even those of GT giant resonances, can now be studied. Determination of GT transition strengths for pf-shell nuclei with astrophysical interest is discussed [1]. We show that quantum number "isospin" plays an important role in such studies.

[1] Y. Fujita *et al.*, Phys. Rev. Lett. **95** (2005) 212501. * 講演は日本語で行なわれます。

連絡先

高エネルギー加速器研究機構 東海キャンパス 今井 伸明 (nobuaki.imai@kek.jp) TEL/FAX:029-284-4461/4868