



552nd ASRC Seminar



Date: 13:30 ~ , 21 May

Location: Meeting room 302, ASRC Building

Speaker: Dr. Takayasu Sekihara

(Research Center for Nuclear Physics,
Osaka University)

Title: Determination of Kbar N compositeness
of the $\Lambda(1405)$ resonance
from its radiative decay

In this talk we investigate the radiative decay of the $\Lambda(1405)$ resonance, $\Lambda(1405) \rightarrow \Lambda \gamma, \Sigma^0 \gamma$, from the viewpoint of compositeness. Here compositeness is defined as a two-body contribution to the normalization of the total wave function, $\langle \psi | \psi \rangle = 1$, and corresponds to the amount of two-body states composing resonances as well as bound states. In contrast to the usual decay, $\Lambda(1405) \rightarrow \pi \Sigma$, it is expected that the Kbar N component inside the $\Lambda(1405)$ mainly contributes to the radiative decay. We will construct a relation between the radiative decay width and the Kbar N compositeness for the $\Lambda(1405)$ and discuss the possibility to determine the compositeness of the $\Lambda(1405)$ from its radiative decay in experiments.

なお、今回のセミナーは、第33回「原子核ハドロン物理セミナー」を兼ねております。セミナー内容は http://silver.j-parc.jp/hadron/hadron_seminar/index.html でご覧になれます。



<Contact>

Kenichi Imai (81-3828)

Advanced Science Research Center

