



東工大 基礎・物性物理学専攻「物理学リーダーシップ」  
FGIP: Foreign Graduate Student Invitation Program  
外国人博士課程大学院生の短期招待・共同研究  
FGIP-Student Forum セミナー

## Adam Garry Tuff

(Univ. of York, United Kingdom)

日時: 2010年2月10日(水) 14:00~15:00

場所: 本館 H115 講義室

### “Resonant states in breakout from the hot-CNO cycle studied through inelastic proton scattering of $^{21}\text{Na}$ in inverse kinematics”

Abstract: The  $^{18}\text{Ne}(\alpha, p)^{21}\text{Na}$  reaction is considered a crucial process governing breakout conditions from the Hot-CNO cycle at temperatures of around 1 GK, leading to energy generation and further nucleosynthesis in X-Ray Bursters. Attempts to directly measure reaction rates in similar energy regions of interest have been met with difficulty, including the requirement for high beam currents. Using a radioactive  $^{21}\text{Na}$  beam and scattering protons from a hydrogen-rich target, it is possible to study the properties of the states of the compound nucleus  $^{22}\text{Mg}$  above the alpha-particle reaction threshold of  $^{18}\text{Ne}$ . Discussed are some preliminary analysis of data taken using the TIGRESS and BAMBINO detector arrays at TRIUMF, Vancouver, along with the evolution and current state of the analysis software code.



教員、修士課程大学院生の参加も歓迎します。

担当 河田鷹介(内線 2729)