

# Formation of Gamow-Teller Resonance structure in $T_z=0$ , odd-odd f-shell nuclei

*Saturday, 20 November 2010 13:30 (20 minutes)*

We did  $\beta^-$ -type high-resolution ( $^3\text{He}, t$ ) experiment on  $T_z=1$  f-shell target nuclei with mass numbers  $A=42, 46, 50$  and  $54$  and studied the strength distribution of Gamow-Teller transitions in the final  $T_z=0$  nuclei.

The main strength moved from low-lying region to higher  $E_x$  region as a function of  $A$ , and a Resonance-like structure was formed in the  $A=54$  system. This suggests that the nature of the residual p-n interaction changed from attractive to repulsive.

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