159 Tb(19 F, 13 C), 154 Sm(16 O, 13 C) 1986So10

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1986So10: 159 Tb(19 F, 13 C) E=181 MeV at the ORNL/HHIRF; measured 13 C+ γ -coin for γ rays detected in the ORNL spin spectrometer and for 13 C detected in Si Δ E-E charged particle telescopes at θ =20° and 30°. Deduced particle-bound ejectile yields; excited state population. Discussed reaction temperature.

2022Ro09: 154 Sm(16 O, 13 C_{g.s.}) E=85 MeV; measured reaction products using a Δ E-E telescope at the Bhabha Atomic Research Centre in Mumbai. Obtained differential cross sections for $\theta_{c.m.} \approx 55^{\circ}$ to 75° . Discussed multi-nucleon transfer reaction mechanism.

¹³C Levels

[†] From 1986So10.

 γ (13C)

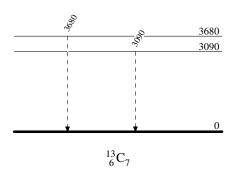
$$\frac{E_{\gamma}^{\dagger}}{(3090)}$$
 $\frac{E_{i}(\text{level})}{3090}$ $\frac{E}{0}$ (3680) 3680 0

Legend

 $\frac{^{159}\text{Tb}(^{19}\text{F},^{13}\text{C}),^{154}\text{Sm}(^{16}\text{O},^{13}\text{C})}{1986\text{So}10}$

Level Scheme

---- γ Decay (Uncertain)



[†] From level-energy difference.