

$^{12}\text{C}(^{32}\text{Na}, ^{32}\text{Na}'\gamma)$ 2010Do05

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Christian Ouellet, Balraj Singh		NDS 112, 2199 (2011)	24-Aug-2011

Isotopes of interest produced by projectile fragmentation of $^{48}\text{Ca}^{18+}$ primary beam at E=345 MeV/nucleon on a 20 mm thick rotating Be target at the Radioactive Ion beam Factory (RIBF) at RIKEN. Fragmentation products selected and separated using the B ρ - Δ E-b ρ method using BigRIPS separator and incident on a 2.54 g/cm² carbon target at E=230-250 MeV/nucleon. A NaI(Tl) based array (DALI2) with an efficiency of 15% at E γ =1332.5 keV, for detecting the γ -rays and a spectrometer (ZeroDegree) for detecting and identifying the reaction products. Measured E γ , p γ -coin. Deduced level energy of an excited state in ^{32}Na for the first time.

 ^{32}Na Levels

E(level)	J $^{\pi}$	Comments
0 569 12	(3 ⁻ ,4 ⁻)	J $^{\pi}$: from Adopted Levels.

 $\gamma(^{32}\text{Na})$

E $_{\gamma}$	E $_i$ (level)	E $_f$	J $_f^{\pi}$
569 12	569	0	(3 ⁻ ,4 ⁻)

 $^{12}\text{C}(^{32}\text{Na}, ^{32}\text{Na}'\gamma)$ 2010Do05Level Scheme