

$^{40}\text{Ca}(^{40}\text{Ca},\text{X})$  2010Sc21

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Ninel Nica, John Cameron and Balraj Singh		NDS 113, 1 (2012)	31-Dec-2011

Observation of emission of  $\alpha$  cluster from the breakup of the target.

50 MeV/nucleon  $^{40}\text{Ca}$  beam produced at the GANIL facility. A self-supported 0.2-mg/cm<sup>2</sup> natural Ca target. Ejectiles identified in the focal plane of the SPEG spectrometer in coincidence with the light charged particles detected in the INDRA 4 $\pi$  array of 240 CsI(Tl) detectors. FWHM=350 keV. Measured  $E\alpha$  and  $\alpha(\theta)$  from  $\alpha$ -emission through the nuclear breakup. Deduced missing energy spectrum of  $^{36}\text{Ar}$  in the excitation range of 20-50 MeV.

 $^{36}\text{Ar}$  Levels

E(level)	J $\pi$ <sup>†</sup>
0	0 <sup>+</sup>
1970	2 <sup>+</sup>
4414	4 <sup>+</sup>

<sup>†</sup> From Adopted Levels.