

$^9\text{Be}(^{76}\text{Ge},\text{X})$  2010Cr02

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Yang Dong, Huo Junde		NDS 121, 1 (2014)	20-Jun-2014

**2010Cr02:** E=130 MeV/nucleon,  $^{76}\text{Ge}$  beam provided by the NSCL cyclotrons K500 and K1200 at NSCL. Isotopes separated with A1900 fragment separator. Time-of-flight technique. Measured  $\beta$  particles using NSCL Beta Counting System of three Si PIN detectors, a double-sided silicon strip detector and six single sided silicon strip detectors. Detected prompt and delayed  $\gamma$  rays in coin with fragments using 16 Ge detectors of the Segmented Germanium array. Measured half-life of  $^{54}\text{Ca}$  by fitting the decay curve of  $(^{54}\text{Ca})\beta(247\gamma)$  correlated events.

**2008Ma01:** E=140 MeV/nucleon,  $^{76}\text{Ge}$  beam provided by the NSCL at Michigan State University. Isotopes separated with A1900 fragment separator. Time-of-flight technique. Measured  $\beta$  particles using Beta Counting System of three Si PIN detectors, a double-sided silicon strip detector and six single sided silicon strip detectors. Detected  $\gamma$  rays using 16 Ge detectors of the Segmented Germanium array. Measured half-life of  $^{54}\text{Ca}$  by fitting the decay curves to a function which included decay of the parent, growth and decay of daughter and a constant background. A 247-keV gamma ray was seen in correlation with  $\beta$  rays and assigned to the decay of  $^{54}\text{Ca}$ .

 $^{54}\text{Ca}$  Levels

E(level)	$J^\pi$	$T_{1/2}$	Comments
0	$0^+$	107 ms <i>14</i>	$T_{1/2}$ : From fitting the decay curve of $(^{54}\text{Ca})\beta(247\gamma)$ correlated events (2010Cr02). Earlier measurement from the same laboratory: 86 ms <i>7</i> (2008Ma01) agrees within one $\sigma$ .