### <sup>9</sup>Be(<sup>36</sup>Si,<sup>33</sup>Mgγ) 2001Yo03

History				
Туре	Author	Citation	Literature Cutoff Date	
Full Evaluation	Jun Chen and Balraj Singh	NDS 199,1 (2025)	30-Sep-2024	

2001Yo03 (also 2002Mo35): E=38 MeV/nucleon <sup>36</sup>Si beam was produced from fragmentation of a 95 MeV/nucleon primary <sup>40</sup>Ar beam from the RIKEN accelerator on a 462.5 mg/cm<sup>2</sup> <sup>9</sup>Be production target. Fragments were separated by the RIKEN projectile-fragment separator RIPS. The secondary target was 385 mg/cm<sup>2</sup> <sup>9</sup>Be. *γ* rays were detected using an array of 66 NaI(Tl) detectors and reaction products were detected and identified with a PPAC and four sets of ΔE-E counter telescopes each consisting of three layers of ion-implanted silicon detectors followed by a Si(Li) detector. Measured E*γ*, I*γ*, (particle)*γ*-coin.
Three *γ* rays are observed at 490, 900 and 1250 keV. The 490 and 1250 *γ* rays are close in energy to 484.1*γ* and 1242.8*γ* seen in

 $^{33}$ Na decay. The 900 $\gamma$  is not seen in  $^{33}$ Na decay.

#### <sup>33</sup>Mg Levels

 $\frac{\text{E(level)}^{\dagger}}{0}$ 490
1250

<sup>†</sup> From  $E\gamma$  data, based on level scheme in the Adopted Levels.

#### $\gamma(^{33}Mg)$

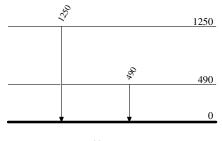
$E_{\gamma}^{\dagger}$	$E_i$ (level)	$E_f$
490	490	0
<sup>x</sup> 900		
1250	1250	0

<sup>†</sup> From 2001Yo03. Those transitions are not placed in 2001Yo03 and the placements here are from the Adopted Gammas.

 $x \gamma$  ray not placed in level scheme.

# <sup>9</sup>Be(<sup>36</sup>Si,<sup>33</sup>Mgγ) 2001Yo03

## Level Scheme



 $^{33}_{12}Mg_{21}$