

Ni(${}^{24}\text{Mg}$, ${}^{20}\text{Mg}$) [1995Pi03](#)

| Type | Author | Citation | Literature Cutoff Date |
|-----------------|--------------------------|----------|------------------------|
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[1995Pi05](#): States in ${}^{20}\text{Na}$ were studied by analyzing the β^+ decay of ${}^{20}\text{Mg}$. A beam of ${}^{20}\text{Mg}$ ions was produced by fragmenting a 95 MeV/nucleon ${}^{24}\text{Mg}$ beam in ${}^{\text{nat.}}\text{Ni}$ target. The ${}^{20}\text{Mg}$ beam was purified in the LISE3 spectrometer and implanted near the middle of a 300 μm thick Si Strip detector. The strip detector was surrounded by two 500 μm segmented Si β -ray detectors and three 70% HPGe detectors. Hence the delayed proton energy in the implantation detector could be correlated with β particles and delayed γ -rays. The coincidence data were analyzed to deduce the decay branches. The $\% \beta^+ \text{p} = 30.3\%$ *I2* was deduced. The half-life of ${}^{20}\text{Mg}$ was determined by analyzing the rate of two delayed protons, $E_p = 802$ and 1675 keV. $T_{1/2} = 95$ ms *I3* is deduced and compared with prior results; the measurement ([1992Go10](#)) is suggested as having systematic errors.

 ${}^{20}\text{Mg}$ Levels

| E(level) | $T_{1/2}$ | Comments |
|----------|-----------------|---|
| 0 | 95 ms <i>I3</i> | $\% \beta^+ \text{p} = 30.3\%$ <i>I2</i> (1995Pi03) |