# $\beta$-decay feeding from $^{69,71}$Co determined from total absorption spectroscopy measurements

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The $r$ process is known to produce roughly half of the abundance of the isotopes of heavy elements. Models of the $r$ process depend upon theoretical calculations of various nuclear properties such as those from QRPA and Hauser-Feshbach. Sensitivity studies have shown that the final abundance distributions of $r$-process nuclei are greatly impacted by uncertainties in nuclear masses, neutron-capture rates, as well as $\beta$-decay properties. More specifically, $\beta$-decay half-lives and $\beta$-delayed neutron branching ratios depend on an accurate knowledge of the $\beta$-decay strength function. For this reason, $\beta$-decay intensities for $^{69,71}$Co were determined using the technique of total absorption spectroscopy at the National Superconducting Cyclotron Laboratory at Michigan State University. This technique allows us to overcome the so-called "pandemonium effect," which can cause $\beta$-feeding intensities to high-lying excitation energies to be missed in traditional $\beta$-decay studies. The high Q-values of both $^{69}$Co and $^{71}$Co allow for the study of $\beta$-decay properties over a broad energy range. The resultant $\beta$-decay intensities and deduced Gamow-Teller strength distributions will be presented and compared to theoretical calculations, including QRPA.