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Studies of exotic nuclear reactions at the RESOLUT facility¹

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The RESOLUT facility at Florida State University's accelerator laboratory produces beams of short-lived nuclei using the in-flight method. Beams such as ${}^6\text{He}$, ${}^7\text{Be}$, ${}^8\text{Li}$, ${}^8\text{B}$, ${}^{17}\text{F}$, ${}^{19}\text{O}$, ${}^{18}\text{Ne}$ and ${}^{25}\text{Al}$ have been successfully used in experiments. The facility has been used to develop innovative experimental techniques, such as the low-energy neutron detector RESONEUT, and the active-target detector ANASEN, which has been developed as a collaboration between FSU and LSU. These detectors have been employed in direct and indirect reaction measurements with impact on astrophysics. An Indiana-University led campaign studying fusion cross sections of exotic nuclei at RESOLUT has also been successful. The results from these three recent RIB campaigns at RESOLUT will be summarized.

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