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Neutron capture by hook or by crook

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The neutron capture reaction is a topic of fundamental interest for both heavy element ($A \gtrsim 60$) nucleosynthesis and applications in such fields as nuclear energy and defense. The full suite of interesting isotopes ranges from stable nuclei to the most exotic, and it is not possible to directly measure all the relevant reaction rates. The DANCE instrument at Los Alamos provides direct access to the neutron capture reaction for stable and long-lived nuclei, while Apollo coupled to HELIOS at Argonne has been developed as an indirect probe for cases where a direct measurement is impossible. The basic techniques and their implications will be presented, and the status of ongoing experimental campaigns to address neutron capture in the $A=60$ and $A=100$ mass regions will be discussed.