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## The Lawrence Livermore National Laboratory's CAMS Accelerator Facility

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The Lawrence Livermore National Laboratory's CAMS Accelerator Facility (CAMS) has been in operation since the late 1980's. CAMS currently encompasses three electrostatic tandem-type accelerators with pelletron charging systems, and one elevated deck AMS system. Over the years, CAMS has established AMS measurement capabilities for  $^3\text{H}$ ,  $^7\text{Be}$ ,  $^{10}\text{Be}$ ,  $^{14}\text{C}$ ,  $^{26}\text{Al}$ ,  $^{36}\text{Cl}$ ,  $^{41}\text{Ca}$ ,  $^{63}\text{Ni}$ ,  $^{90}\text{Sr}$ ,  $^{99}\text{Tc}$ ,  $^{129}\text{I}$ , and various actinides, including  $^{233-238}\text{U}$ ,  $^{236-237}\text{Np}$ , and  $^{239-244}\text{Pu}$ . CAMS has also established capabilities in high-energy ion implantation for materials modification and radiation damage studies, and in isotope production and nuclear physics experiments.

Since the last published description of CAMS, a significant number of hardware additions to our facility have been made, and further additions are in the process of being installed or planned. The additions completed and in operation include 1) a heavy isotope AMS beamline that allows the transport of ions up to actinide masses and also allows fast bouncing between those heavy isotopes 2) a high mass resolution low-energy injection magnet with a large pole face gap, which allows clear transport of high mass negative ions with high mass resolution, and 3) a beamline designed for and dedicated to high energy ion implantation work involving projectile ions ranging from protons to actinides, and to isotope production and nuclear physics experiments. The most significant in-progress addition to the CAMS facility is the installation of a Gas-Filled Magnet (GFM) beamline which has been designed to allow useful isobaric resolution up to at least the transition metal elements.

Aspects of the current operations and capabilities of the CAMS Accelerator Facility will be presented, and similar aspects of the in-progress and intended systems will also be discussed.

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### Student Submission

No

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