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The ORNL MIRF upgrade project[1] FRED W. MEYER, MARK E. BANNISTER, JERRY W. HALE, JIM W. JOHNSON, JOHN W. SINCLAIR, ORNL — A major facility upgrade of the ORNL Multicharged Ion Research Facility (MIRF) has recently been completed. It consists of the installation of a 250-kV high-voltage platform with a new all-permanent magnet ECR ion source, a new beamline switchyard for transporting the higher energy beams to on-line experiments, and reconfiguration of the present CAPRICE ECR ion source for injecting extracted beams into a floating beamline to permit deceleration to energies as low as a few eV x q upon entry into grounded experimental chambers. With the two sources, the range of energies available at MIRF has been expanded to more than five orders of magnitude. The new ECR ion source installed on the HV platform was designed and built at CEA Grenoble and operates in the frequency range 12.75 – 14.5 GHz. High-voltage-platform components and beamline components up to the various end-stations are controlled and monitored via Allen-Bradley ControlLogix programmable logic controllers (PLC's) that are integrated into a Linux-hosted, EPICS-based distributed control system. Additional design and performance details of the upgraded facility will be provided at the conference.

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