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Upgrades for the Project 8 Phase II Apparatus WALTER PETTUS, Univ of Washington, PROJECT 8 COLLABORATION — Project 8 employs the Cyclotron Radiation Emission Spectroscopy (CRES) technique towards the ultimate goal of a high precision tritium endpoint measurement. Following the successful first demonstration of CRES, the collaboration has pursued a number of improvements to the apparatus and has recently commissioned its second phase. A new cell design and gas handling system will allow the first measurement of molecular tritium with this setup. New data acquisition systems have been implemented providing greater trigger flexibility and scalability towards future multi-antenna phases. We will highlight the hardware and instrumentation advances defining this new experimental phase of Project 8.

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