Abstract Submitted for the MAR17 Meeting of The American Physical Society

Phase diagram determination of α -Uranium under pressure by single crystal x-ray diffraction WILLIAM CONIGLIO, AUDREY GROCK-OWIAK, National High Magnetic Field Laboratory, GASTON GARBARINO, European Synchrotron Radiation Facility, MALCOLM MCMAHON, University of Edinburgh, STAN TOZER, National High Magnetic Field Laboratory — We grew single crystal α -Uranium and studied its crystallographic properties at pressures up to 1.3 GPa using the ID-27 beam-line at the European Synchronon Radiation Facility. At low temperatures and pressures, we observed clear satellite peaks on the orthorhombic α structure, indicating one or more transitions into the charge-modulated phases.

¹NNSA SSAA DE-NA0001979, European Synchrotron Radiation Facility

William Coniglio National High Magnetic Field Laboratory

Date submitted: 18 Nov 2016 Electronic form version 1.4