

Abstract Submitted  
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**Advances in the Francium Trapping Facility at TRIUMF<sup>1</sup>** J. ZHANG, M.J. KOSSIN, L.A. OROZCO, JQI, Physics, University of Maryland and NIST, College Park, MD, 20742, USA, R. COLLISTER, K.L. SHIELLS, G. GWINNER, Physics, University of Manitoba, Winnipeg, MB R3T 2N2, Canada, M. TANDECKI, A. GORELOV, J.A. BEHR, M.R. PEARSON, TRIUMF, Vancouver, BC V6T 2A3, Canada, E. GOMEZ, Instituto de Fisica, UASLP, San Luis Potosi 78290, Mexico, S. AUBIN, Physics, College of William and Mary, Williamsburg, VA 23197, USA, Y. ZHAO, Physics, Shanxi University, Taiyuan, China, FRPNC COLLABORATION — We report the current status of the Francium Trapping Facility (FTF) at TRIUMF. We have successfully commissioned the science chamber of the FTF by demonstrating transfer of Fr atoms from the capture MOT to the science chamber, where weak-interaction experiments on Fr will be performed. The modular design of the science chamber allows for microwave studies of the nuclear anapole moment and optical studies of the weak-charge of the nucleus using atomic parity non-conservation. The 46.5 GHz microwave cavity, necessary for the anapole measurements in  $^{210}\text{Fr}$ , uses patterned aluminum on glass-blanks to control the transmission of the mirrors. This design enables Q factors  $> 40,000$  in a Fabry-Perot configuration with mirrors separated by 12.5 cm.

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