

Abstract Submitted  
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**Atomic Parity Non Conservation with Francium atoms in the FrPNC collaboration**<sup>1</sup> JIEHANG ZHANG, University of Maryland, SETH AUBIN, College of William and Mary, JOHN A. BEHR, TRIUMF, Canada, ROBERT COLLISTER, University of Manitoba, VICTOR V. FLAMBAUM, University of New South Wales, EDUARDO GOMEZ, Universidad Autonoma de San Luis Potosi, GERALD GWINNER, University of Manitoba, DAN MELCONIAN, Texas A&M University, LUIS A. OROZCO, Joint Quantum Institute and University of Maryland, MATT R. PEARSON, TRIUMF, Canada, OLIVIER SHELBYA, McGill University, GENE D. SPROUSE, Stony Brook University, MICHAEL TANDECKI, University of Manitoba, ANNIKA VOSS, University of Manchester — The FrPNC collaboration is dedicated to the study of the nuclear weak interaction through measurements of Parity Violation in francium atoms. We are preparing to measure both the nuclear spin independent part of the interaction that results in the determination of the weak charge and the nuclear spin dependent part dominated by the anapole moment. The experiment has moved to TRIUMF in a room carefully shielded from RF noise. The Fr production at TRIUMF is on the isotope range of  $A=203-229$  with yields up to  $10^8 \text{ s}^{-1}$ , giving us access to both the neutron deficient and rich sides. An ion optics system at the end of the beam line delivers the Fr ions to the neutralizer. The trapping side has been successfully tested with rubidium. The complete system delivers cold and trapped atomic Fr in a robust way to the science chamber where the measurements will take place.

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