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First direct determination of the superallowed  $\beta$ -decay QECvalue for O-14 via Penning trap mass spectrometry at the LEBIT facility<sup>1</sup> RYAN RINGLE, NSCL/FRIB, GEORG BOLLEN, NSCL/FRIB, Michigan State Univ., MAXIME BRODEUR, University of Notre Dame, KORTNEY COOPER, Michigan State Univ., MARTIN EIBACH, University of Greifswald, KERIM GU-LYUZ, NSCL/FRIB, CHRIS IZZO, Michigan State Univ., DAVID MORRISSEY, NSCL/FRIB, Michigan State Univ. , MATTHEW REDSHAW, Central Michigan Univ., RACHEL SANDLER, Michigan State Univ., STEFAN SCHWARZ, CHANDANA SUMITHRARACHCHI, NSCL/FRIB, ADRIAN VALVERDE, Michigan State Univ. , ANTONIO VILLARI, NSCL/FRIB — Low-Z, superallowed  $\beta$ emitters like O-14 are particularly significant for setting limits on the existence of scalar currents in the electroweak interaction. While the Conserved Vector Current (CVC) hypothesis states that Ft should be the same for all superallowed 0+ $\rightarrow$  $0+\beta$ -decays, if there is a scalar interaction, an additional term approximately inversely proportional to QEC would be present in Ft. As QEC-values are smaller for lower-Z isotopes, these isotopes would be most sensitive to the presence of a scalar current, showing the largest deviation in Ft. To date, 14 Ft values are used to calculate the world average. Of these 14 decays, only O-14 had not been measured in a Penning trap, despite multiple attempts at other facilities. At LEBIT we have performed the first direct measurement of the ground state  $\beta$ -decay QEC value. This measurement provides an order of magnitude improvement in precision, and it no longer makes a significant contribution to the uncertainty of its associated Ft value.

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Ryan Ringle NSCL/FRIB

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