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Vanishing in motivic stable stems

Recent work of Röndigs-Spitzweck-Østvær sharpens the connection between the slice and Novikov spectral sequences. Using classical vanishing lines for the E_2 -page of the Adams-Novikov spectral sequence and the work of Andrews-Miller on the α_1 -periodic ANSS, I will deduce some new vanishing theorems in the bigraded homotopy groups of the η -complete motivic sphere spectrum. In particular, I will show that the m -th η -complete Milnor-Witt stem is bounded above (by an explicit piecewise linear function) when $m \equiv 1$ or $2 \pmod{4}$, and then lift this result to integral Milnor-Witt stems (where an additional constraint on m appears). This is joint work with Oliver Röndigs and Paul Arne Østvær.