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Isotope shift calculations and the variation of fundamental constants JULIAN BERENGUT, VICTOR FLAMBAUM, University of New South Wales — We present recent *ab initio* calculations of isotope shift in many-electron atoms using a combination of configuration interaction and many-body perturbation theory. These calculations are necessitated by current searches for variation of fundamental constants in laboratory and astrophysical systems. We show that very good accuracy can be obtained for a variety of ions.

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