Core nucleus dynamics in $\Lambda$ hypernuclei

We develop a Thomas Fermi theory to study the core polarization effects in $\Lambda$ hypernuclei. Nuclei in the range of $^{10}$B to $^{243}$Am are included. Core polarization energies and changes in rms radii due to presence of $\Lambda$ are calculated. It is shown that core polarization effects depend crucially on the effective compression modulus of the nucleus rather than on the compression modulus of the corresponding infinite nuclear matter.