

FIG. 5: (Color online) Left: normalized reduced neutron widths versus normalized resonance energies for  $^{114}$ Cd,  $^{166}$ Er, and  $^{232}$ Th resonances in the NDE. Red X's depict all resonances in the NDE whereas blue circles show resonances previously identified as being p wave or of uncertain parity. Right: Red X's depict  $\nu$  values from ML analyses versus thresholds used, for the same three nuclides. Error bars represent  $1\sigma$  confidence levels. Black dashed vertical lines correspond to thresholds depicted by black dashed curves in the left part of this figure. See text for details.

Second, that many of the NDE resonances are in fact p-wave is reinforced by the behavior of the  $\nu$  values from the ML analyses as functions of threshold, as shown in the right side of Fig. 5. In all three cases shown,  $\nu$  systematically increases with threshold before gradually stabilizing. This is just the behavior expected for a population of s-wave resonances contaminated by p-wave resonances. Similar fractions of previously identified p-wave resonances and trends in  $\nu$  with threshold are seen for several of the other NDE nuclides.