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Beta decay directly to continuum

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The beta-delayed deuteron decay of the halo nucleus 6He is thought of as proceeding directly to continuum states, and it appears that the corresponding decay of 11Li behaves in the same manner [1]. The present contribution discusses evidence that beta decays directly into continuum states may happen more generally. Experimental indications come from extended R-matrix fits to beta-delayed alpha decays of 12N [2] and 8B [3] measured at JYFL and KVI. In both cases acceptable fits with a moderate number of resonances only occur for unrealistic parameter values of the resonances. I shall - after presenting the experimental data - argue that transitions directly into the continuum should be considered as an alternative decay route, explain how this conceptually ties in with the R-matrix fits and illustrate this via simplified model calculations.
[1] R. Raabe et al, Phys.Rev.Lett. 101 (2008) 212501.
[2] S. Hyldegaard et al, Phys. Rev. C81 (2010) 024303.
[3] O. Kirsebom, S. Hyldegaard et al, in preparation.

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