

Abstract Submitted  
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**Spectroscopy of  ${}_{\Lambda}^{11}\text{B}$** <sup>1</sup> JOHN MILLENER, Brookhaven National Laboratory — Hypernuclear  $\gamma$ -ray transitions in  ${}_{\Lambda}^7\text{Li}$ ,  ${}_{\Lambda}^9\text{Be}$ ,  ${}_{\Lambda}^{10}\text{B}$ ,  ${}_{\Lambda}^{11}\text{B}$ ,  ${}_{\Lambda}^{15}\text{N}$ , and  ${}_{\Lambda}^{16}\text{O}$  have been studied with the Hyperball Ge array in a series of experiments at KEK and BNL. Comparison of the observed transition energies with shell-model calculations using a basis of  $\Lambda$  and  $\Sigma$  states with the hyperon in the lowest s orbit have led to a determination of the strengths of the spin-spin, spin-orbit, antisymmetric spin-orbit, and tensor components of the  $\Lambda\text{N}$  effective interaction from the data on  ${}_{\Lambda}^7\text{Li}$ ,  ${}_{\Lambda}^9\text{Be}$ , and  ${}_{\Lambda}^{16}\text{O}$ . Here, the strength of the  $\Lambda$ - $\Sigma$  coupling (essentially an effective central  $\Lambda\text{N}$ - $\Sigma\text{N}$  interaction) has been fixed by theory and other data but it could be varied. The observed transitions in other hypernuclei then serve as consistency checks on the parametrization of the  $\text{YN}$  interaction. Specifically, six transitions in  ${}_{\Lambda}^{11}\text{B}$  have been observed and their interpretation will be discussed.

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