A Modified Bogoliubov Approximation WILLIAM BASSICHIS, Texas A&M University — The Bogoliubov approximation has been used in nuclear physics, solid state and many other areas. Decades ago a soluble model for a Boson system was proposed which was amenable to an exact solution. The accuracy of the Bogoliubov approximation could then be determined at least for this model. Attempts have previously been made to improve upon the approximation with little success. Here a modification to the Bogoliubov approximation is obtained which results in results closer to the exact over a wide range of parameters.

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