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### Title

Shell Model Calculation of Po212

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Abstract

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Shell Model Calculation of  $Po^{212}$ . \* Norman K. Glendenning and Kichinosuke Harada<sup>†</sup>,  
Lawrence Radiation Laboratory, Berkeley.--So far there are a few shell model calculations<sup>1-3</sup> on  $Po^{212}$ , but unfortunately their results are more or less different from each other, owing to the use of different residual forces. A more realistic shell model calculation based on Glendenning's method is done for the lower lying levels and the high-spin isomer of  $Po^{212}$ . In this calculation we use the residual p-p, n-n and p-n interactions which are so determined as to reproduce the experimental  $Po^{210}$ ,  $Pb^{210}$  and  $Bi^{210}$  spectra, and adopt different size parameters for proton- and neutron-oscillator potentials. The results will be discussed and compared with those of the previous works.

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<sup>†</sup> On leave of absence from Japan Atomic Energy Research Institute.

<sup>1</sup> I. M. Band, L. A. Sliv and Yu, I. Kharitonov, Nuclear Physics 35, 136 (1962).

<sup>2</sup> N. K. Glendenning, Phys. Rev. 127, 923 (1962).

<sup>3</sup> K. Harada, JAERI-Memo No. 1183 (1963).