



独立行政法人理化学研究所 仁科加速器研究センター
第16回RIBF核物理セミナー

RIKEN Nishina Center for Accelerator Based Science
The 16th RIBF Nuclear Physics Seminar

Dimension of the single- j shell configurations and
sum rules of angular momentum recoupling coefficients.

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In my seminar I wish to talk about our recent works on dimension of the single- j shell configurations and sum rules of angular momentum recoupling coefficients [1]. These results were developed as by-products of our research along the line of many-body systems in the presence of random interactions [2]. There are mainly three parts in my talk: firstly, I wish to mention very briefly regularities of many-body systems under random forces, on which we made intensive efforts in recent years. Then I concentrate on our motivation to study the number of states and sum-rules of angular momentum couplings and main results that we have obtained in some-what details, based on some parts of Reference [1]. In third part, I wish to talk quickly about our current efforts about nucleon pair approximations of the shell model and main interest in the next few years.

[1] Y. M. Zhao and A. Arima, Phys. Rev. C72, 064333; *ibid.* C72, 054307;
ibid. C71, 047304; *ibid.* C68, 044310; *ibid.* C70, 034306;

Y. M. Zhao, A. Arima, J. N. Ginocchio, and N. Yoshinaga, Phys. Rev. C68, 044320.

[2] For a review, see Y. M. Zhao, A. Arima, and N. Yoshinaga, Physics Reports, Vol. 400, 1 (2004).

Apr. 7 (Fri), 2006 15:00-
RIBF Conf. Hall, RIBF Bldg. 2F

The seminar will be given in English

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