Systematics of Odd Pm Nuclei
Lj. Udovičić, S. Brant, V. Paar, Prirodoslovno-matematički fakultet, University of Zagreb and "Rudjer Bošković" Institute, Zagreb, Yugoslavia
A. Pakkanen, M. Kortelahti, M. Piiparinen, T. Komppa and R. Komu, Department of Physics, University of Jyväskylä, Jyväskylä, Finland

The level structure of odd Pm isotopes is studied using in-beam γ-ray electron spectroscopy in (p,2nγ) reactions. The results of the CVM calculations as a function of the particle-vibration coupling strength are shown in fig. 1.

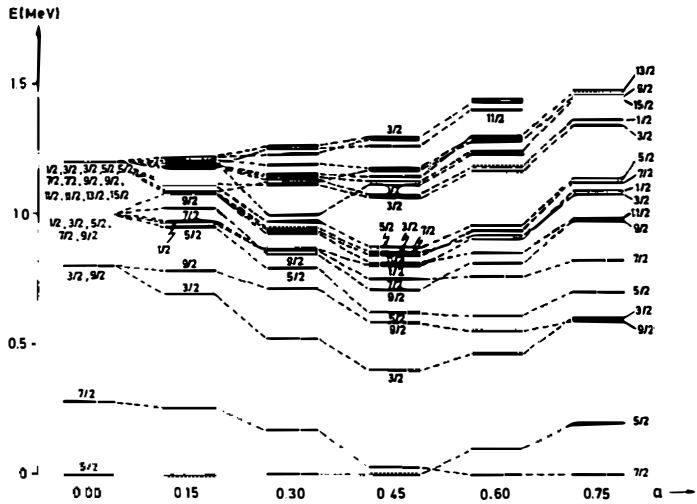

Fig. 1

Comparison of the calculated and experimental spectra shows that for a≈0.4 the theoretical results qualitatively resemble $^{141}_{61}Pm_{80}$ and $^{145}_{61}Pm_{84}$ and for a≈0.7 they resemble $^{147}_{61}Pm_{66}$. Qualitatively, such a situation is expected, because in going away from the N=82 shell-closure the collectivity increases, and therefore the coupling strength a increases. Detailed analysis shows that the spectra and electromagnetic properties are consistent with $|a(N=80)| > |a(N=82)| < |a(N=84)| < |a(N=86)| < |a(N=88)|$; and $|a(N=84)| > |a(N=80)|$.