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Shell model approach for nuclei with mass around 220 YUKIKO KAIURA, NAOTAKA YOSHINAGA, Saitama University, KOJI HIGASHIYAMA, Chiba Institute of Technology — Ra and Th isotopes with mass around 220 belonging to a transitional region between spherical and deformed regions have fascinated our interest from the past. In particular, since a large number of negative parity states are observed in low-lying states, collective octupole correlations are supposed to be important. In this talk we report the nuclear structure of Po, Rn, Ra and Th isotopes in terms of the pair truncated shell model, the basic ingredients of which consist of nuclear collective models. The ^{208}Pb is considered as the doubly-magic core. The conventional pairing plus quadrupole interaction is employed. Energy levels and electric transitions are compared between theory and experiment.

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