Scalar, vector and tensor meson resonances in the mass region below 1.75 GeV.

A. Sarantsev[a]

[a] *PNPI, Gatchina, Russia and ISKP, Bonn, Germany*

The result of systematic study of meson resonances in the mass region below 1.75 GeV is presented. The main source of the information is the Crystal Barrel data from antiproton annihilation at rest on hydrogen (liquid and gaseous) and deuteron targets into final three meson states: $\pi\pi\pi$, $\pi\pi\eta$, $\pi\eta\eta$, $K\bar{K}\pi$ (with charged and neutral pions and kaons). The result of the combined analysis of the Crystal Barrel data with the two body production data obtained by other collaborations (CERN-Münich, E852, GAMS) is presented and contributions of different states into cross sections are investigated. The analysis provides an accurate determination of the properties of the scalar, vector and tensor states in this mass region. A classification scheme for scalar states is suggested and possible exotic contributions (glueball, t-channel sigma-meson) are discussed.