Coupled channel analysis of three meson final states from $p\bar{p}$ annihilation at rest at different densities

The results of the coupled channel analysis of the annihilation reactions $p\bar{p} \to \pi^+\pi^-\pi^0$, $K^+K^-\pi^0$, $K^\pm K^0\pi^\mp$ at three different hydrogen densities are presented. The obtained description is consistent with $\pi\pi$, πK and $K\bar{K}$ scattering data also included in the analysis. Masses, total widths, $\pi\pi$ and $K\bar{K}$ partial widths of $J^P = 1^-$,0^+ and 2^+ resonances are measured and their branching-ratios determined from each partial wave of $p\bar{p}$ system. The main results concern the study of the dynamical selection rules in S and P-wave $p\bar{p}$ annihilation at rest, the determination of the mass position of a_0 and the determination of $\Gamma_{K\bar{K}}/\Gamma_{\pi\pi}$ ratio for the $f_0(1370)$ and $f_0(1500)$.