

Oral contribution

Photoproduction of mesons off the deuteron: quasifree and coherent processes

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**摘要** Photoproduction of mesons off the deuteron has been investigated at a tagged photon beam of the Bonn ELSA accelerator with the combined Crystal Barrel - TAPS electromagnetic calorimeter for incident photon energies up to 2.5 GeV. The mesons have been detected in coincidence with recoil protons, neutrons and deuterons. This allow the measurement of meson production reactions off the quasifree nucleons bound in the deuteron, as well as the coherent production off the deuteron. The comparison of quasifree proton reactions to free proton reactions can confirm or invalidate possible nuclear effects on the extracted cross section reactions. Furthermore the isospin composition of a resonance can be estimated from the comparison of quasifree proton and neutron reactions. The quasifree photoproduction of the  $\eta'$  and  $\pi^0\eta$  mesons off nucleons and the coherent photoproduction of  $\pi^0\eta$ -pairs off the deuteron are discussed.

**关键词** [quasifree, coherent, photoproduction,  \$\eta'\$ ,  \$\pi^0\eta\$ , neutron, proton, deuteron](#)

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