Observation of a spin-4 meson decaying into $\eta\pi^-$

L.I.Sarycheva, M.A.Kostin
for the E852 collaboration

Institute for Nuclear Physics
Moscow State University

A mass dependent partial wave analysis of the reaction $\pi^- p \to p\eta\pi^-$ has been carried out in the $\eta\pi^-$ mass range 0.7 GeV/c^2 through 2.5 GeV/c^2. This analysis is based on the statistics of 60K events. The experimental data was collected with the E852 setup at AGS accelerator during the 1995 run. A resonance with $J^P = 4^+$ and $I^G = 1^-$ is observed in the G-wave. The mass and width of this resonance are 2027^{+18}_{-18} MeV/c^2 and 363^{+45}_{-40} MeV/c^2 respectively.